



Full wwPDB X-ray Structure Validation Report ⓘ

May 20, 2024 – 05:34 PM EDT

PDB ID : 4LFZ
Title : Crystal Structure of Frameshift Suppressor tRNA SufA6 Bound to Codon CCC-U in the Absence of Paromomycin
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2013-06-27
Resolution : 3.92 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

The following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtrriage (Phenix) : 1.13
EDS : 2.36.2
buster-report : 1.1.7 (2018)
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac : 5.8.0158
CCP4 : 7.0.044 (Gargrove)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.36.2

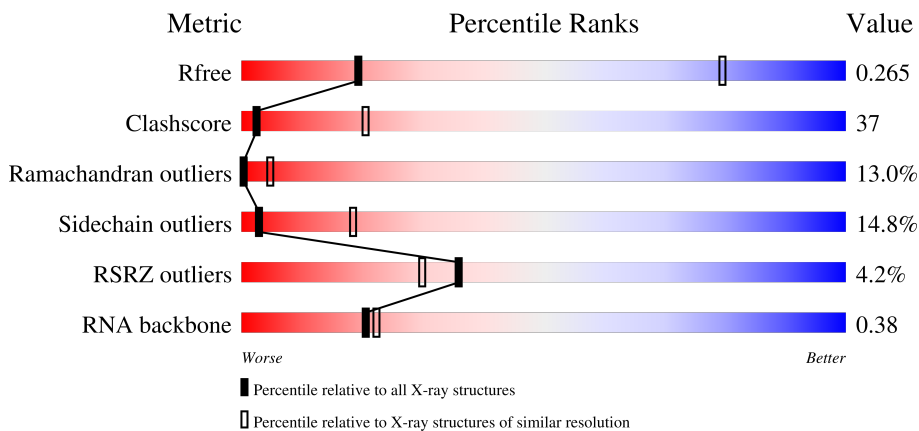
1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.92 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	130704	1019 (4.18-3.66)
Clashscore	141614	1016 (4.16-3.68)
Ramachandran outliers	138981	1039 (4.18-3.66)
Sidechain outliers	138945	1032 (4.18-3.66)
RSRZ outliers	127900	1002 (4.20-3.64)
RNA backbone	3102	1041 (4.84-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	QA	1522	
1	XA	1522	
2	QB	256	
2	XB	256	

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Mol	Chain	Length	Quality of chain
3	QC	239	8% 23% 53% 9% 14%
3	XC	239	2% 22% 53% 9% 14%
4	QD	209	% 26% 59% 13%
4	XD	209	2% 26% 60% 11%
5	QE	162	4% 27% 54% 12% 7%
5	XE	162	28% 52% 13% 7%
6	QF	101	3% 26% 58% 15%
6	XF	101	6% 24% 59% 16%
7	QG	156	6% 26% 63% 10%
7	XG	156	6% 29% 59% 11%
8	QH	138	% 28% 59% 12%
8	XH	138	% 27% 60% 12%
9	QI	128	9% 20% 66% 12%
9	XI	128	3% 19% 66% 14%
10	QJ	105	18% 18% 63% 12% 6%
10	XJ	105	10% 17% 64% 12% 6%
11	QK	129	6% 33% 48% 11% 8%
11	XK	129	3% 31% 50% 11% 8%
12	QL	132	6% 30% 48% 15% 5%
12	XL	132	% 28% 47% 17% 5%
13	QM	126	5% 19% 56% 20%
13	XM	126	% 21% 49% 23%
14	QN	61	11% 20% 52% 18% 8%
14	XN	61	16% 59% 18% 5%
15	QO	89	3% 33% 54% 12%

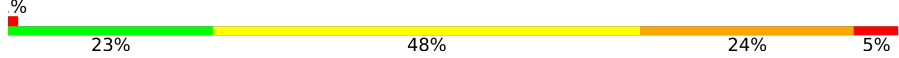
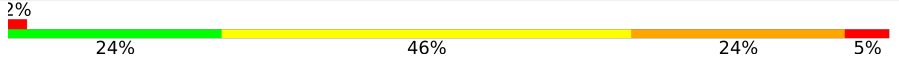


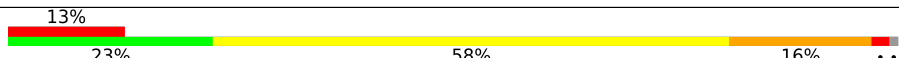
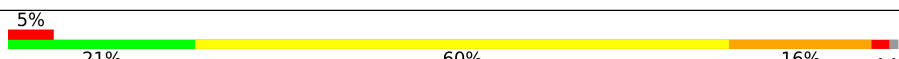
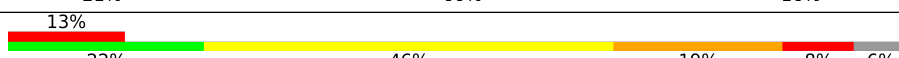
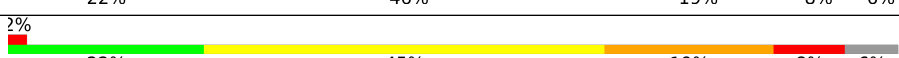
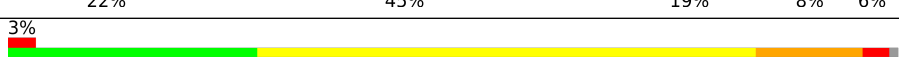
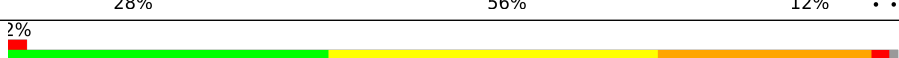
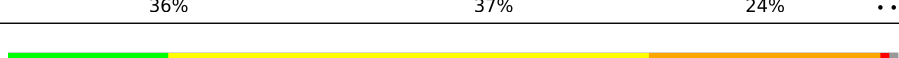
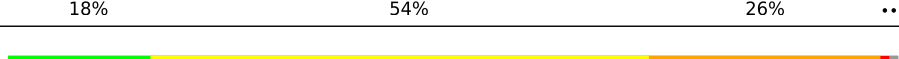



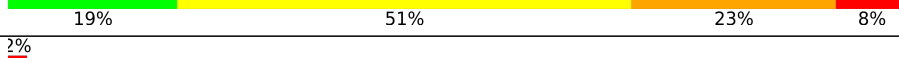
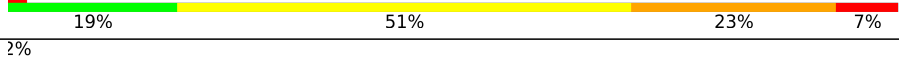
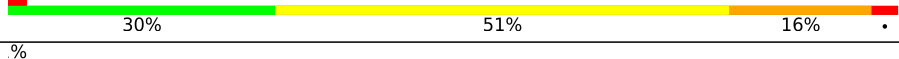
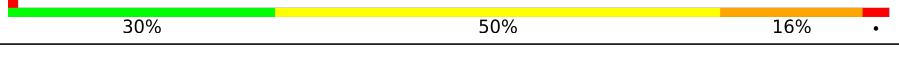
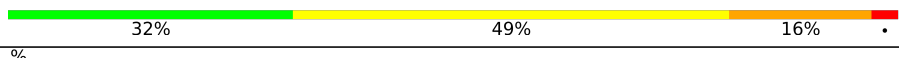

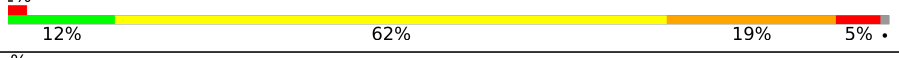
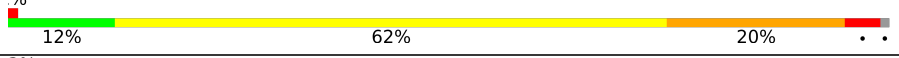
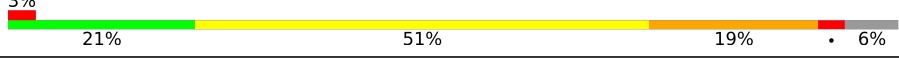
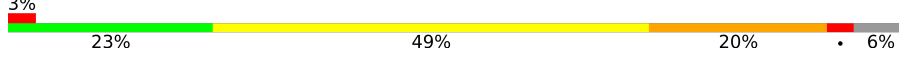
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Mol	Chain	Length	Quality of chain
15	XO	89	4% 31% 56% 11% .
16	QP	88	% 16% 61% 16% . 5%
16	XP	88	2% 17% 61% 15% . 5%
17	QQ	105	3% 36% 48% 11% 5%
17	XQ	105	3% 33% 50% 11% 5%
18	QR	88	% 24% 43% 11% . 20%
18	XR	88	% 24% 43% 11% . 20%
19	QS	93	25% 24% 40% 24% . 10%
19	XS	93	% 22% 42% 23% . 10%
20	QT	106	2% 25% 49% 19% . 7%
20	XT	106	5% 24% 50% 19% . 7%
21	QU	27	37% 19% 56% 19% 7%
21	XU	27	7% 22% 52% 19% 7%
22	QV	77	3% 27% 55% 17% .
22	XV	77	4% 32% 51% 16% .
23	QX	25	4% . . 24% 68%
23	XX	25	. 12% 12% 72%
24	QY	18	22% 28% 28% 22% 22%
24	XY	18	22% 22% 33% 22% 22%
25	RA	2916	5% 20% 40% 30% 9% .
25	YA	2916	4% 16% 38% 35% 10% .
26	RB	122	2% 15% 44% 32% 7% .
26	YB	122	2% 19% 38% 30% 12% .
27	RD	276	% 29% 52% 15% ..
27	YD	276	31% 51% 15% ..

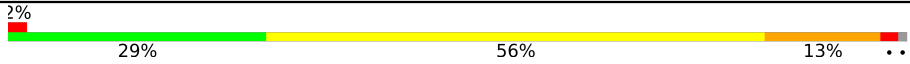
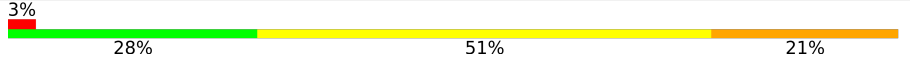
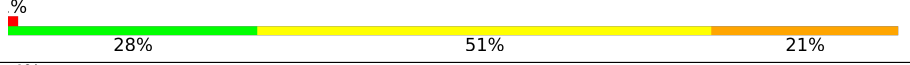
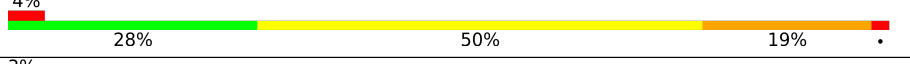
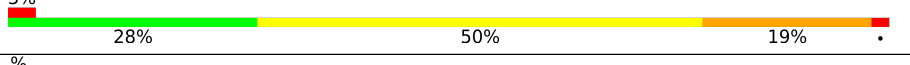
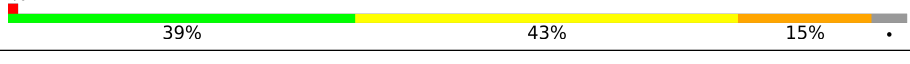
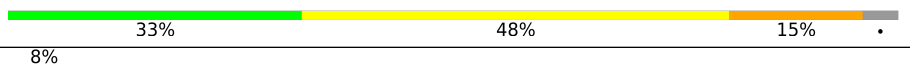
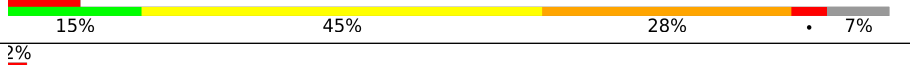
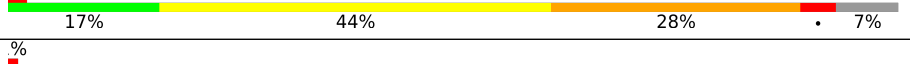
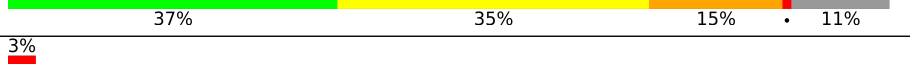
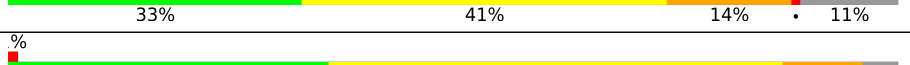

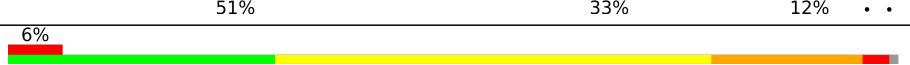
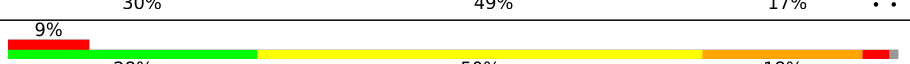
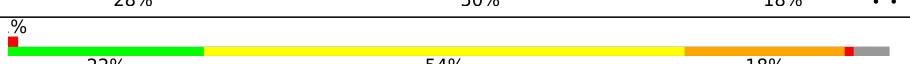
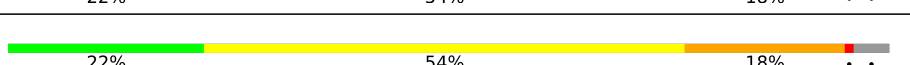
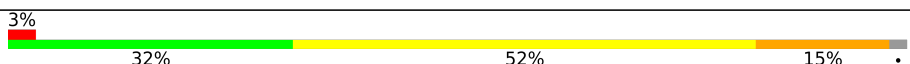
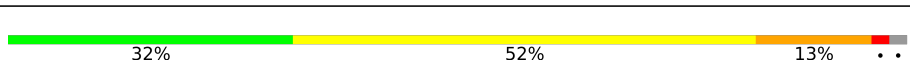


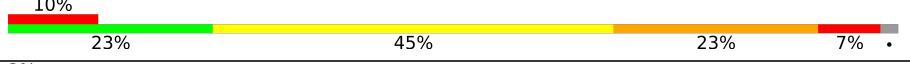
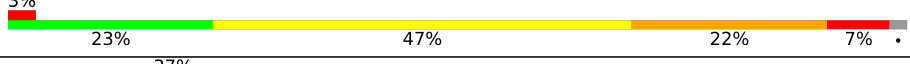



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Mol	Chain	Length	Quality of chain
28	RE	206	 % 23% 48% 24% 5%
28	YE	206	 2% 24% 46% 24% 5%
29	RF	210	 35% 47% 13% ..
29	YF	210	 34% 49% 12% ..
30	RG	182	 13% 23% 58% 16% ..
30	YG	182	 5% 21% 60% 16% ..
31	RH	180	 13% 22% 46% 19% 8% 6%
31	YH	180	 2% 22% 45% 19% 8% 6%
32	RI	148	 3% 28% 56% 12% ..
32	YI	148	 2% 36% 37% 24% ..
33	RN	140	 18% 54% 26% ..
33	YN	140	 16% 56% 26% ..
34	RO	122	 34% 55% 9% .
34	YO	122	 34% 55% 9% .
35	RP	150	 4% 19% 51% 23% 8%
35	YP	150	 2% 19% 51% 23% 7%
36	RQ	141	 2% 30% 51% 16% .
36	YQ	141	 % 30% 50% 16% .
37	RR	118	 32% 49% 16% .
37	YR	118	 % 33% 48% 16% .
38	RS	112	 2% 12% 62% 19% 5% .
38	YS	112	 % 12% 62% 20% ..
39	RT	146	 3% 21% 51% 19% . 6%
39	YT	146	 3% 23% 49% 20% . 6%
40	RU	118	 2% 33% 53% 12% ..

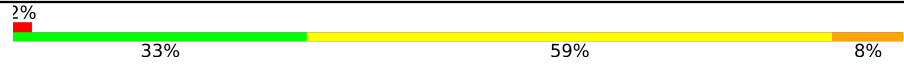

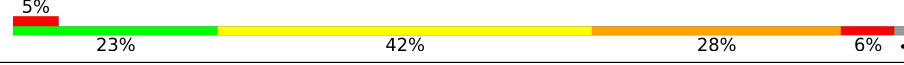
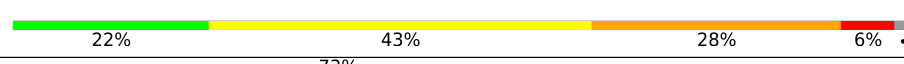

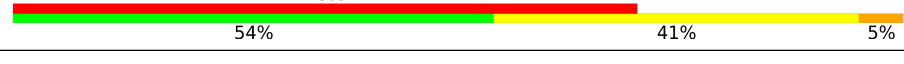
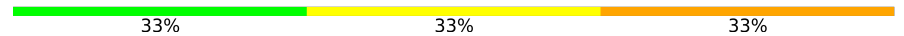
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Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4	71	
51	R5	60	
51	Y5	60	
52	R6	54	
52	Y6	54	

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Mol	Chain	Length	Quality of chain
53	R7	49	
53	Y7	49	
54	R8	65	
54	Y8	65	
55	R9	37	
55	Y9	37	
56	Z6	3	
56	Z8	3	

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QA	1629	-	-	-	X
57	MG	QA	1631	-	-	-	X
57	MG	QF	201	-	-	-	X
57	MG	QX	101	-	-	-	X
57	MG	RA	3003	-	-	-	X
57	MG	RA	3007	-	-	-	X
57	MG	RA	3049	-	-	-	X
57	MG	RA	3062	-	-	-	X
57	MG	RA	3138	-	-	-	X
57	MG	RA	3157	-	-	-	X
57	MG	RA	3173	-	-	-	X
57	MG	RA	3199	-	-	-	X
57	MG	RA	3213	-	-	-	X
57	MG	RA	3219	-	-	-	X
57	MG	RA	3227	-	-	-	X
57	MG	RA	3239	-	-	-	X
57	MG	RP	201	-	-	-	X
57	MG	XA	1642	-	-	-	X
57	MG	YA	3030	-	-	-	X
57	MG	YA	3076	-	-	-	X
57	MG	YA	3100	-	-	-	X
57	MG	YA	3121	-	-	-	X
57	MG	YA	3131	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	YA	3152	-	-	-	X
57	MG	YA	3172	-	-	-	X
57	MG	YA	3176	-	-	-	X
57	MG	YA	3183	-	-	-	X
57	MG	YA	3196	-	-	-	X
57	MG	YA	3207	-	-	-	X
57	MG	YA	3242	-	-	-	X
57	MG	YA	3250	-	-	-	X
57	MG	YA	3254	-	-	-	X

2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291868 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	QA	1500	Total 32247	C 14353	N 5981	O 10414	P 1499	0	0	0
1	XA	1500	Total 32249	C 14354	N 5984	O 10412	P 1499	0	0	0

- Molecule 2 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	QB	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0
2	XB	237	Total 1924	C 1228	N 344	O 347	S 5	0	0	0

- Molecule 3 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
3	QC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0
3	XC	205	Total 1605	C 1011	N 313	O 280	S 1	0	0	0

- Molecule 4 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
4	QD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0
4	XD	208	Total 1703	C 1066	N 339	O 291	S 7	0	0	0

- Molecule 5 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	QE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			
5	XE	151	Total	C	N	O	S	0	0	0
			1155	729	218	204	4			

- Molecule 6 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	QF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			
6	XF	101	Total	C	N	O	S	0	0	0
			843	531	155	154	3			

- Molecule 7 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	QG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			
7	XG	155	Total	C	N	O	S	0	0	0
			1257	781	252	218	6			

- Molecule 8 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	QH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			
8	XH	138	Total	C	N	O	S	0	0	0
			1116	705	215	193	3			

- Molecule 9 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
9	QI	127	Total	C	N	O	0	0	0
			1010	639	197	174			
9	XI	127	Total	C	N	O	0	0	0
			1010	639	197	174			

- Molecule 10 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	QJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
10	XJ	99	801	504	157	139	1	0	0	0

- Molecule 11 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	QK	119	885	549	168	165	3	0	0	0
11	XK	119	885	549	168	165	3	0	0	0

- Molecule 12 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	QL	125	975	614	196	164	1	0	0	0
12	XL	125	975	614	196	164	1	0	0	0

- Molecule 13 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
13	QM	121	964	597	199	166	2	0	0	0
13	XM	121	964	597	199	166	2	0	0	0

- Molecule 14 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
14	QN	60	492	312	104	72	4	0	0	0
14	XN	60	492	312	104	72	4	0	0	0

- Molecule 15 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	QO	88	734	459	147	126	2	0	0	0
15	XO	88	734	459	147	126	2	0	0	0

- Molecule 16 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	QP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			
16	XP	84	Total	C	N	O	S	0	0	0
			705	446	140	118	1			

- Molecule 17 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
17	QQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			
17	XQ	100	Total	C	N	O	S	0	0	0
			834	534	155	143	2			

- Molecule 18 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
18	QR	70	Total	C	N	O	0	0	0
			574	367	112	95			
18	XR	70	Total	C	N	O	0	0	0
			574	367	112	95			

- Molecule 19 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	QS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

- Molecule 20 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	QT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			
20	XT	99	Total	C	N	O	S	0	0	0
			763	470	162	129	2			

- Molecule 21 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	QU	25	Total	C	N	O	0	0	0
			217	134	52	31			
21	XU	25	Total	C	N	O	0	0	0
			217	134	52	31			

- Molecule 22 is a RNA chain called P-site tRNA fMet.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			
22	XV	77	Total	C	N	O	P	0	0	0
			1644	732	297	538	77			

- Molecule 23 is a RNA chain called A-site ASL SufA6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	8	Total	C	N	O	P	0	0	0
			167	75	28	56	8			
23	XX	7	Total	C	N	O	P	0	0	0
			145	65	23	50	7			

- Molecule 24 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	QY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			
24	XY	14	Total	C	N	O	P	0	0	0
			303	135	55	99	14			

- Molecule 25 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	RA	2882	Total	C	N	O	P	0	0	0
			62071	27627	11611	19952	2881			
25	YA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			

- Molecule 26 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	RB	120	Total	C	N	O	P	0	0	0
			2573	1146	476	832	119			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
26	YB	120	2573	1146	476	832	119	0	0	0

- Molecule 27 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
27	RD	272	2115	1335	420	357	3	0	0	0
27	YD	272	2115	1335	420	357	3	0	0	0

- Molecule 28 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
28	RE	205	1568	991	300	271	6	0	0	0
28	YE	205	1568	991	300	271	6	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
29	RF	202	1585	1011	297	275	2	0	0	0
29	YF	202	1585	1011	297	275	2	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
30	RG	181	1474	942	268	260	4	0	0	0
30	YG	181	1474	942	268	260	4	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
31	RH	170	1307	829	245	232	1	0	0	0
31	YH	170	1307	829	245	232	1	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
32	RI	146	Total 1136	C 726	N 201	O 208	S 1	0	0	0
32	YI	146	Total 1136	C 726	N 201	O 208	S 1	0	0	0

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
33	RN	138	Total 1104	C 712	N 206	O 182	S 4	0	0	0
33	YN	138	Total 1104	C 712	N 206	O 182	S 4	0	0	0

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
34	RO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0
34	YO	122	Total 933	C 588	N 171	O 170	S 4	0	0	0

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
35	RP	150	Total 1145	C 712	N 232	O 198	S 3	0	0	0
35	YP	150	Total 1145	C 712	N 232	O 198	S 3	0	0	0

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
36	RQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0
36	YQ	141	Total 1122	C 715	N 212	O 188	S 7	0	0	0

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	RR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			
37	YR	118	Total	C	N	O	S	0	0	0
			968	604	203	160	1			

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	RS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				
38	YS	111	Total	C	N	O	S	0	0	0
			882	556	176	150				

- Molecule 39 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	RT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			
39	YT	137	Total	C	N	O	S	0	0	0
			1141	710	234	196	1			

- Molecule 40 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			
40	YU	117	Total	C	N	O	S	0	0	0
			964	610	202	151	1			

- Molecule 41 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	RV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			
41	YV	101	Total	C	N	O	S	0	0	0
			779	501	142	135	1			

- Molecule 42 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	RW	113	Total	C	N	O	S	0	0	0
			900	566	177	155	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
42	YW	113	Total 900	C 566	N 177	O 155	S 2	0	0	0

- Molecule 43 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
			Total	C	N	O			
43	RX	92	Total 725	C 471	N 131	O 123	0	0	0
43	YX	92	Total 725	C 471	N 131	O 123	0	0	0

- Molecule 44 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
44	RY	102	Total 785	C 505	N 150	O 125	S 5	0	0	0
44	YY	102	Total 785	C 505	N 150	O 125	S 5	0	0	0

- Molecule 45 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
45	RZ	183	Total 1461	C 933	N 260	O 265	S 3	0	0	0
45	YZ	183	Total 1461	C 933	N 260	O 265	S 3	0	0	0

- Molecule 46 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
46	R0	82	Total 648	C 401	N 138	O 108	S 1	0	0	0
46	Y0	82	Total 648	C 401	N 138	O 108	S 1	0	0	0

- Molecule 47 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
47	R1	97	Total 763	C 481	N 150	O 131	S 1	0	0	0
47	Y1	97	Total 763	C 481	N 150	O 131	S 1	0	0	0

- Molecule 48 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	R2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			
48	Y2	69	Total	C	N	O	S	0	0	0
			581	358	118	104	1			

- Molecule 49 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
49	R3	59	Total	C	N	O	0	0	0
			469	298	90	81			
49	Y3	59	Total	C	N	O	0	0	0
			469	298	90	81			

- Molecule 50 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	R4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			
50	Y4	71	Total	C	N	O	S	0	0	0
			581	364	108	104	5			

- Molecule 51 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
51	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
51	Y5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			

- Molecule 52 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	R6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			
52	Y6	49	Total	C	N	O	S	0	0	0
			424	264	87	69	4			

- Molecule 53 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	R7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			
53	Y7	49	Total	C	N	O	S	0	0	0
			430	263	108	57	2			

- Molecule 54 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	R8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			
54	Y8	64	Total	C	N	O	S	0	0	0
			517	331	102	82	2			

- Molecule 55 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	R9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			
55	Y9	37	Total	C	N	O	S	0	0	0
			307	188	68	47	4			

- Molecule 56 is a RNA chain called tRNA acceptor end mimic.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
56	Z6	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			
56	Z8	3	Total	C	N	O	P	0	0	0
			74	40	13	19	2			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	64	Total	Mg	0	0
			64	64		
57	QF	1	Total	Mg	0	0
			1	1		
57	QH	1	Total	Mg	0	0
			1	1		
57	QM	1	Total	Mg	0	0
			1	1		
57	QV	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	QX	1	Total Mg 1 1	0	0
57	RA	239	Total Mg 239 239	0	0
57	RB	2	Total Mg 2 2	0	0
57	RD	1	Total Mg 1 1	0	0
57	RE	2	Total Mg 2 2	0	0
57	RF	1	Total Mg 1 1	0	0
57	RP	1	Total Mg 1 1	0	0
57	RR	2	Total Mg 2 2	0	0
57	R0	1	Total Mg 1 1	0	0
57	R5	1	Total Mg 1 1	0	0
57	R8	1	Total Mg 1 1	0	0
57	XA	72	Total Mg 72 72	0	0
57	XB	1	Total Mg 1 1	0	0
57	XM	1	Total Mg 1 1	0	0
57	XV	2	Total Mg 2 2	0	0
57	XX	1	Total Mg 1 1	0	0
57	YA	269	Total Mg 269 269	0	0
57	YB	3	Total Mg 3 3	0	0
57	YE	1	Total Mg 1 1	0	0
57	YP	1	Total Mg 1 1	0	0
57	YQ	1	Total Mg 1 1	0	0

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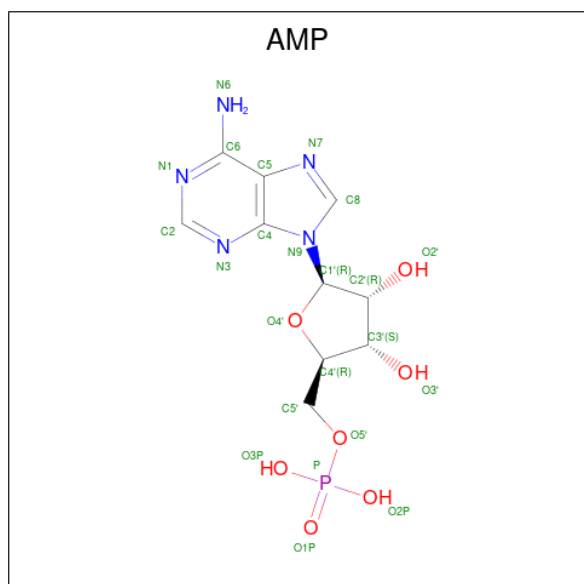
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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	Y5	1	Total Mg 1 1	0	0
57	Y7	1	Total Mg 1 1	0	0

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	QD	1	Total Zn 1 1	0	0
58	QN	1	Total Zn 1 1	0	0
58	R9	1	Total Zn 1 1	0	0
58	XD	1	Total Zn 1 1	0	0
58	XN	1	Total Zn 1 1	0	0
58	Y9	1	Total Zn 1 1	0	0

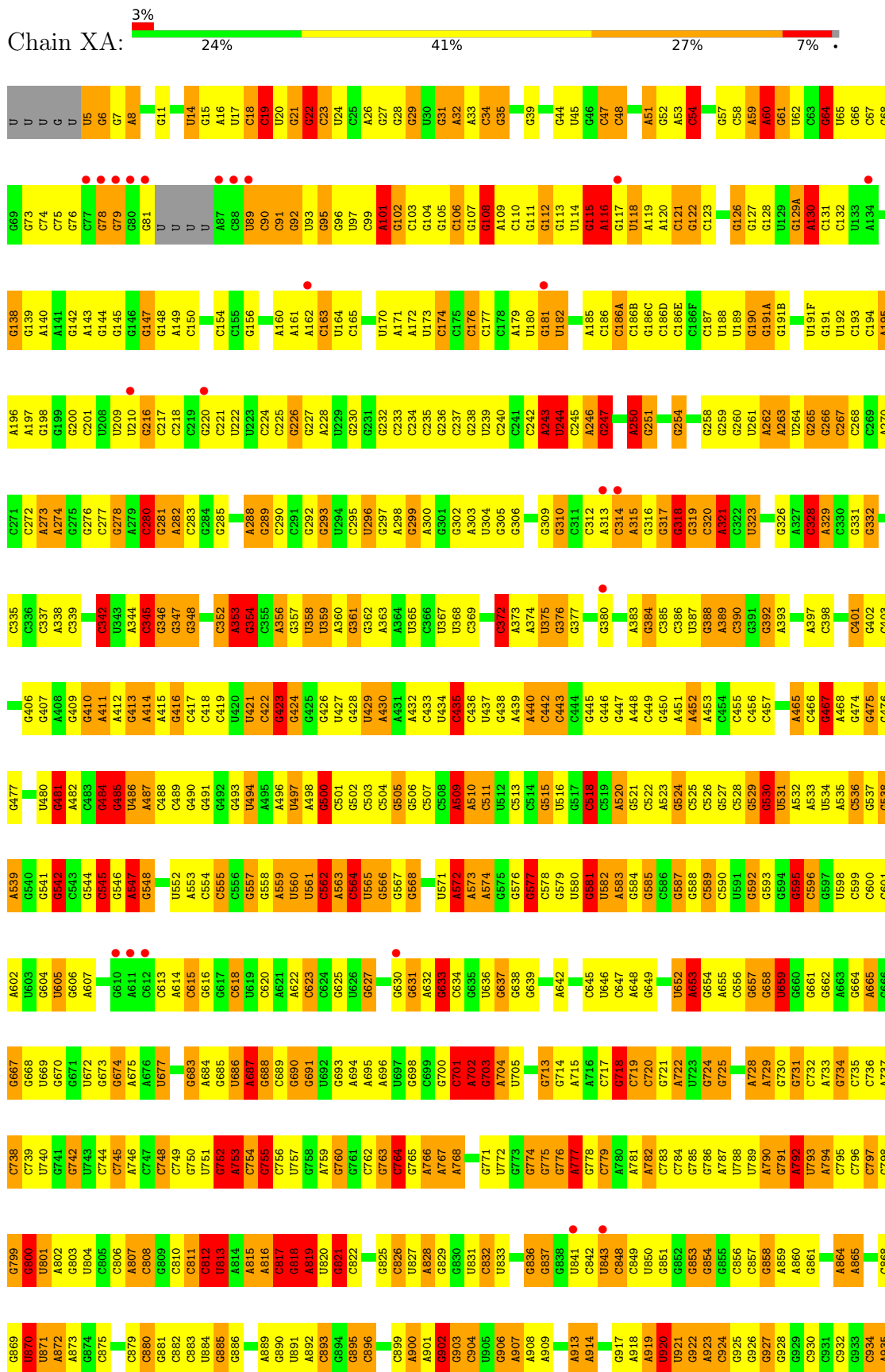
- Molecule 59 is ADENOSINE MONOPHOSPHATE (three-letter code: AMP) (formula: C₁₀H₁₄N₅O₇P).

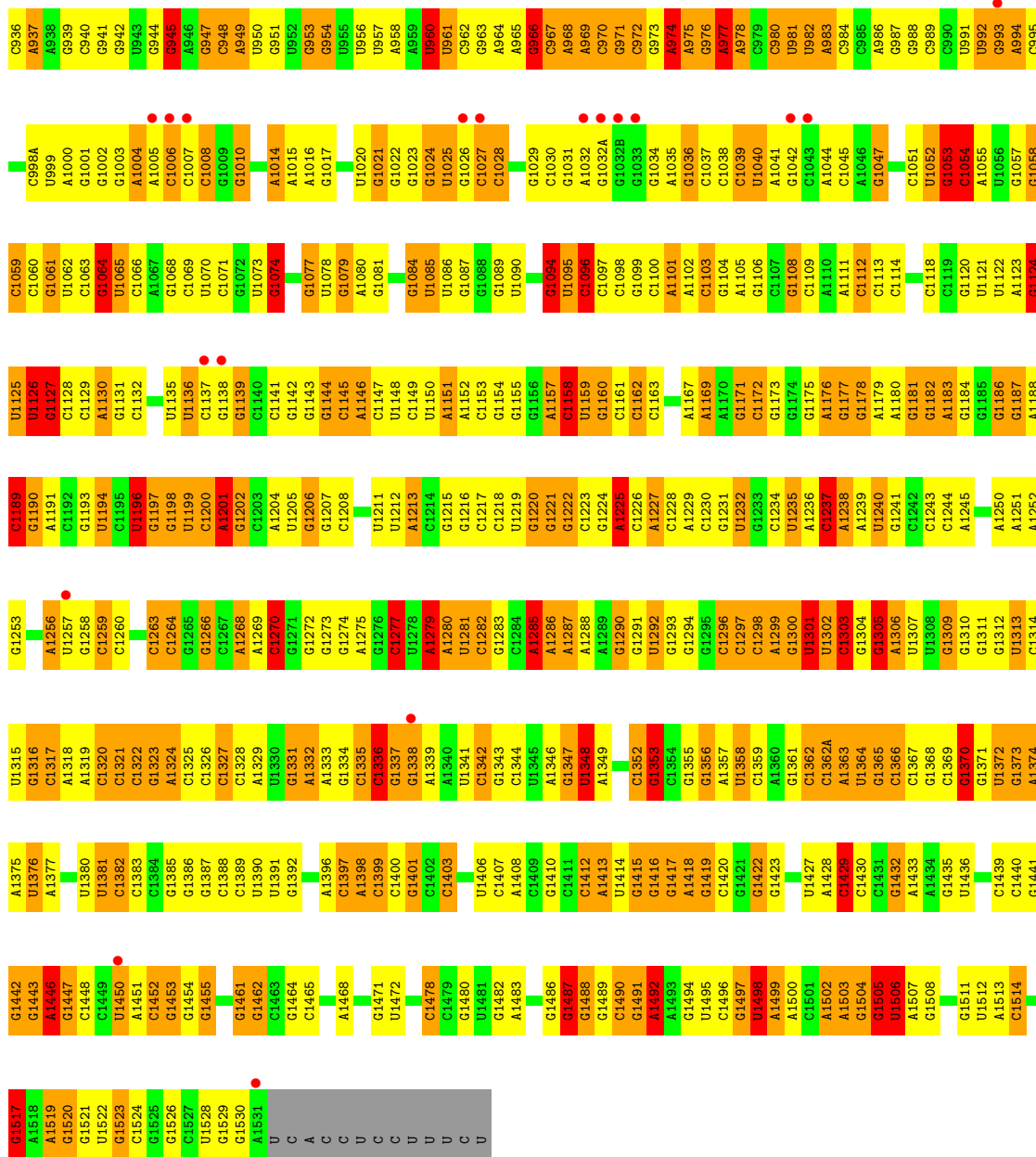


Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	XX	1	Total C N O P 22 10 5 6 1	0	0

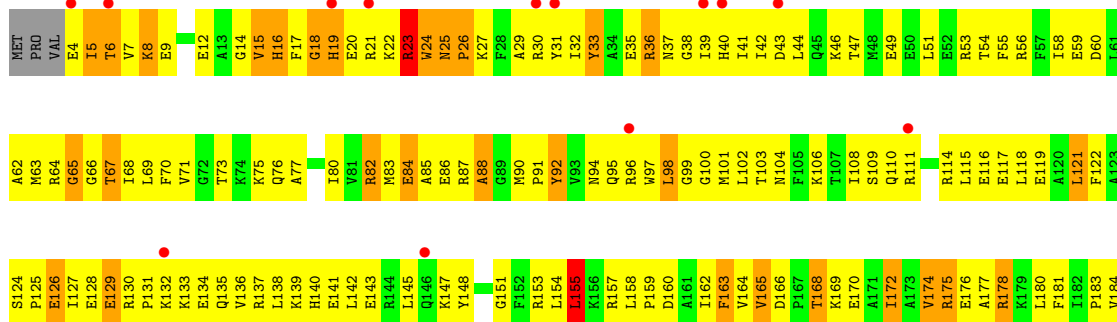
A1513	G1435	G1371	G1312	G1184	G1058	A994	C832	G869	G799	C736	G670
C1514	U1436	U1372	U1313	G1185	C1059	C995	A935	U870	G800	A737	G671
C1515	C1437	G1373	C1314	G1186	C1060	U999	C936	U871	G803	C738	U672
G1516	C1438	A1374	U1315	G1187	G1061	A1000	A937	A872	U804	C739	G673
G1517	C1439	A1375	G1316	C1188	U1062	A1001	A938	A873	U805	U740	G674
A1518	A1440	U1376	C1317	C1189	C1063	G1001	A939	C874	G939	A675	A675
A1519	G1441	A1377	A1318	G1190	C1064	G1002	C940	C875	C806	G742	A676
G1442	A1442	C1378	A1319	A1191	U1065	G1003	G941	G876	A807	U677	U677
G1443	G1443	G1379	C1320	C1192	C1066	A1004	G942	C877	C808	C745	U678
A1446	A1446	U1380	C1321	G1193	G1067	A1005	U943	C878	C811	A746	C679
G1447	G1447	U1381	C1322	G1194	G1068	G1006	G944	C879	A747	C747	A747
U1450	U1450	C1382	G1323	C1195	C1069	C1007	G945	C880	C812	G682	G682
G1525	A1451	G1383	A1324	U1196	U1070	U1008	G946	C881	U813	C748	G683
G1526	C1452	C1384	C1325	G1197	C1072	G1009	G947	C882	A814	G750	A684
G1527	G1453	G1385	C1326	U1198	U1073	A1014	C948	C883	A815	U751	G685
G1454	C1454	U1386	C1327	G1199	G1074	A1015	A949	U884	A816	G752	U686
G1529	G1455	C1387	C1328	U1200	U1075	A1016	U950	C885	A817	A753	A687
G1530	C1459	G1388	A1329	A1201	C1076	G1017	G951	C886	C818	C754	G688
A1531	U1459	U1389	U1330	G1202	G1081	U1018	U952	C887	A819	G755	C689
U	G1461	C1391	G1331	C1203	U1077	C1019	G953	A889	U820	U756	G690
C	A1462	G1392	A1332	G1204	U1078	U1025	G954	C890	G821	U757	G691
C	G1469	U1393	A1333	A1204	G1079	C1018	G955	C891	U822	U758	U692
A	G1470	A1394	G1334	U1205	U1080	U1020	U955	C892	C822	G759	G693
C	U1471	C1395	C1335	G1206	A1081	G1021	U956	A892	G823	A759	G694
C	U1472	A1396	C1336	G1207	G1082	U1022	U957	C893	C824	G760	A694
C	U1473	G1397	G1337	C1208	U1083	G1023	A958	C894	G825	G761	A695
C	A1474	U1398	G1338	C1209	U1084	G1024	A959	C895	C826	C762	A696
C	G1475	C1399	A1339	G1210	U1085	U1025	U960	A896	U827	G763	G701
U	G1476	A1400	G1340	U1211	U1086	U1026	U961	C898	A828	C764	A702
U	G1477	G1401	U1341	C1212	U1087	C1027	C962	C899	G829	A765	A703
C	U1478	C1402	C1342	A1213	G1088	U1028	G963	C900	C830	A766	A704
C	C1479	G1403	G1343	G1214	U1089	G1029	A964	A901	U833	A767	A705
C	U1480	C1404	U1344	G1215	U1090	C1030	A965	G902	C834	A768	U706
U	U1481	U1405	C1345	U1216	U1091	U1031	C967	C904	U835	A769	A707
U	U1485	G1409	G1346	C1217	U1092	A1032	A968	A909	C836	C770	C708
G1486	A1486	A1410	A1347	U1218	A1093	G1032A	A969	C837	G837	G771	C707
G1487	C1490	C1411	U1350	U1219	U1094	U1033	C970	U911	G838	G772	G709
G1491	A1491	U1413	C1352	G1220	G1095	G1034	C971	C912	U841	G773	G710
A1492	U1492	G1415	G1353	G1221	U1096	U1035	C972	C913	C842	G774	G711
G1497	G1497	G1416	C1354	A1222	C1098	U1040	A975	A915	C843	A777	G712
U1498	U1498	U1417	G1355	C1223	U1099	A1044	C979	A916	U844	A778	G713
A1499	A1499	A1418	U1356	G1224	U1100	C1045	C980	C920	U845	G779	A715
A1500	C1500	C1420	C1357	U1225	C1101	U1046	U981	U921	C848	A780	A716
C1501	A1501	A1299	A1358	G1226	C1102	G1047	U982	G922	C849	C779	A717
A1502	A1502	G1300	G1361	A1227	U1101	U1048	A983	A923	U850	A781	G718
A1503	U1425	U1301	C1362	C1228	C1103	G1049	C884	C924	C852	A782	C719
G1504	G1504	U1302	U1363	U1229	G1104	A1044	C985	C925	A859	C783	G720
G1505	U1427	C1303	C1364	A1230	A1105	C1045	U986	U926	C853	C784	G721
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A1507	C1429	U1305	G1366	U1232	C1107	G1047	U988	A928	C855	G786	U723
G1508	C1430	A1306	C1367	A1233	C1108	U1048	A989	C929	C856	A787	G724
C1509	G1431	U1307	G1368	G1234	C1109	G1049	C990	C930	C857	U788	G725
U1510	U1432	G1310	C1369	U1235	A1110	U1049	C991	C931	A859	U789	G726
G1511	A1433	U1311	G1370	C1236	C1111	G1050	A991	C932	C860	A790	A727
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				G1241	C1115	C1054	C990	C936	A865	A794	G731
				C1242	C1116	U1055	U991	C937	C866	C797	G732
				C1243	C1117	U1056	U992	C938	C867	G798	G733
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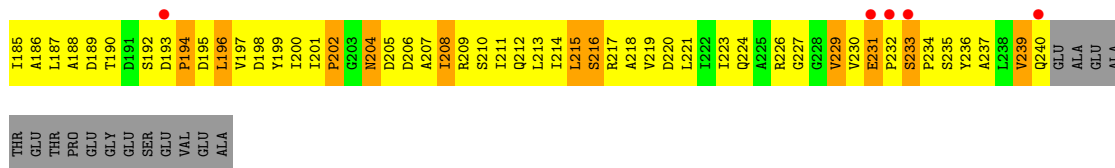
• Molecule 1: 16S rRNA



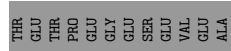
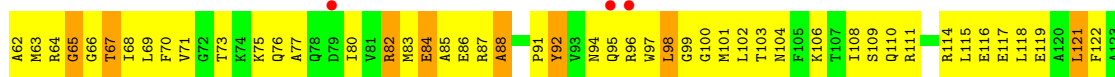


• Molecule 2: 30S ribosomal protein S2

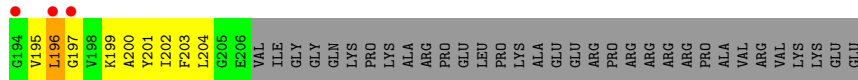
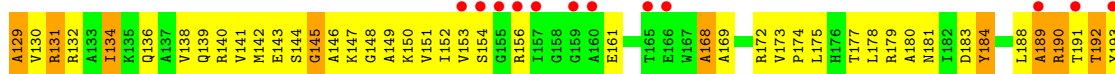
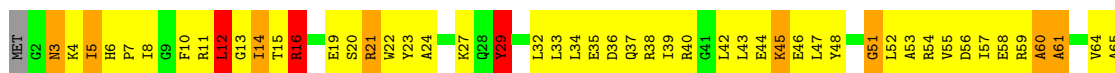




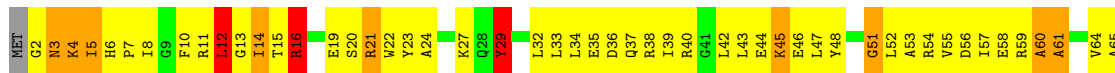
• Molecule 2: 30S ribosomal protein S2

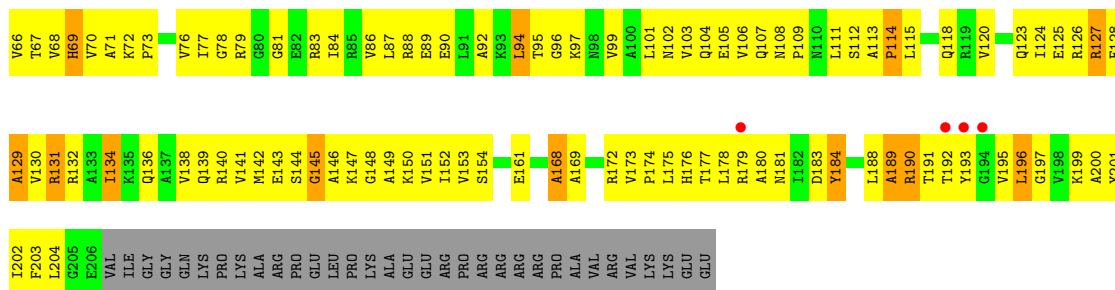


• Molecule 3: 30S ribosomal protein S3

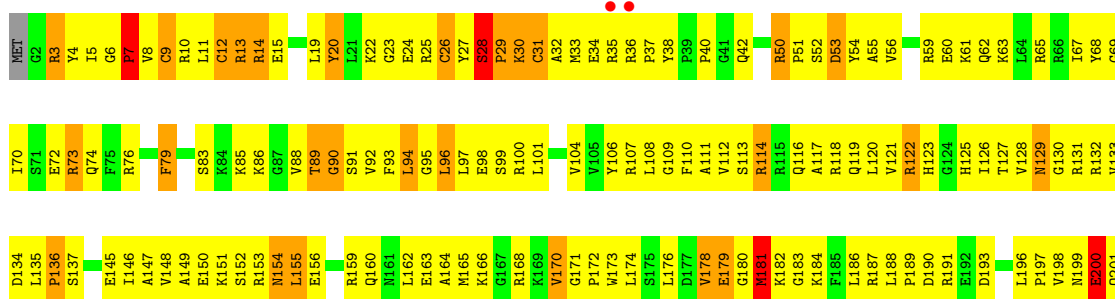


• Molecule 3: 30S ribosomal protein S3

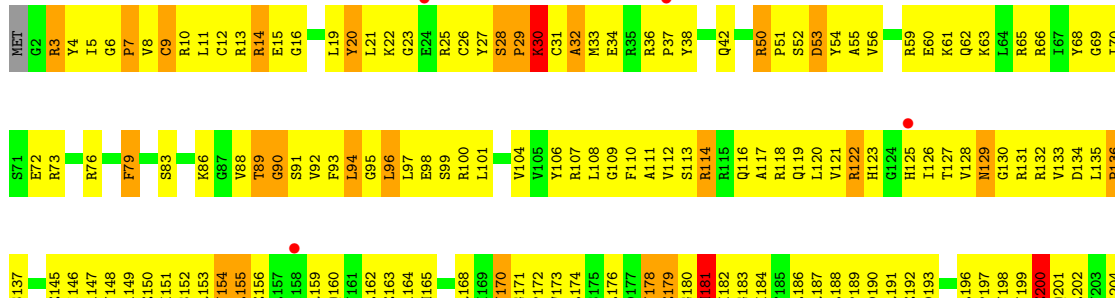




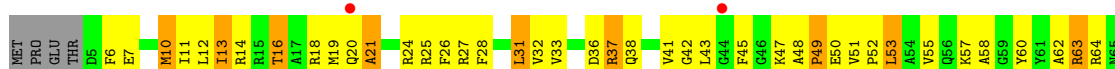
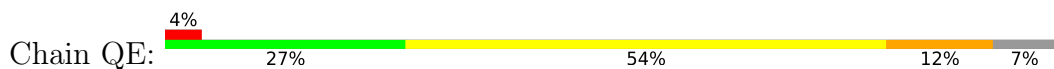
• Molecule 4: 30S ribosomal protein S4

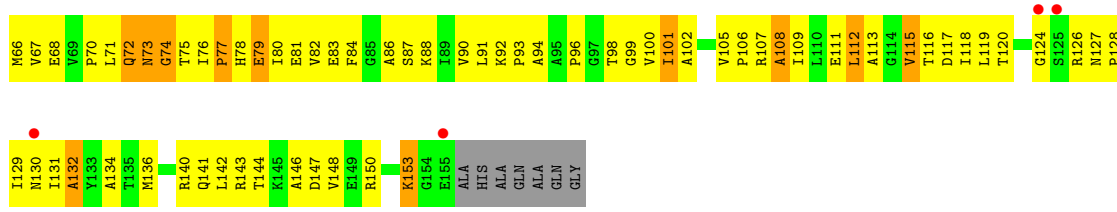


• Molecule 4: 30S ribosomal protein S4

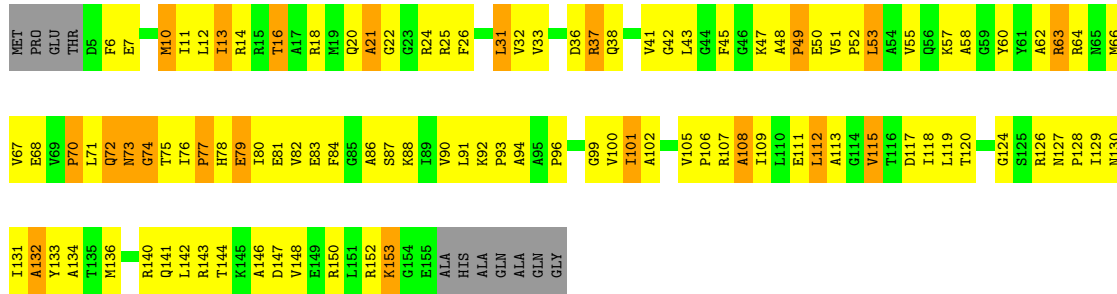
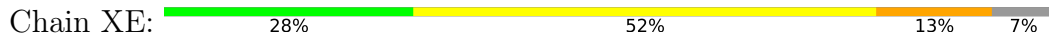


• Molecule 5: 30S ribosomal protein S5

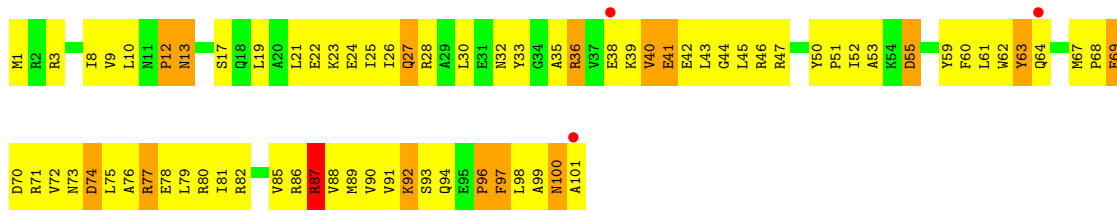




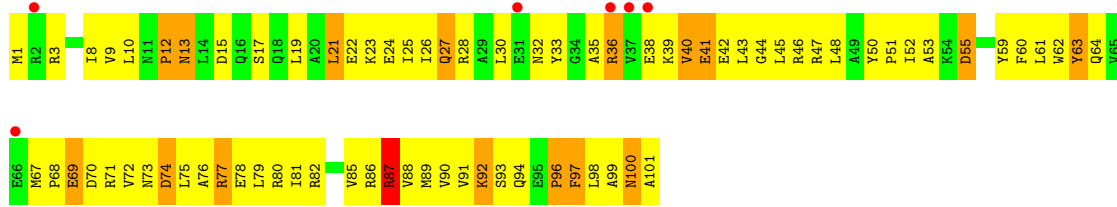
• Molecule 5: 30S ribosomal protein S5



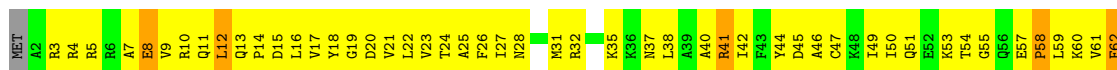
• Molecule 6: 30S ribosomal protein S6

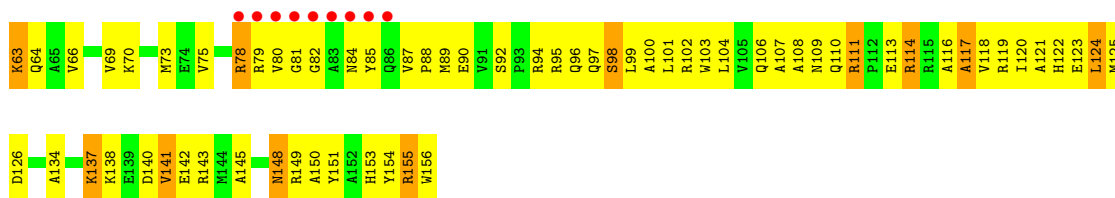


• Molecule 6: 30S ribosomal protein S6

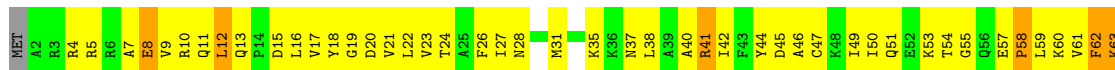


• Molecule 7: 30S ribosomal protein S7

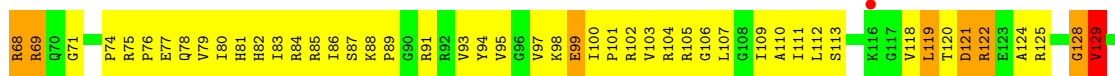
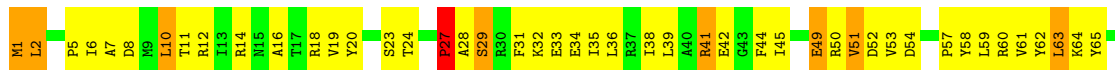




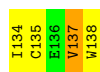
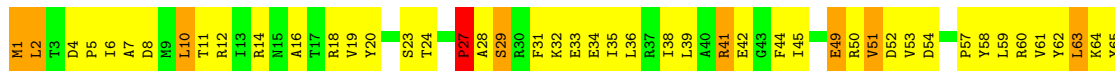
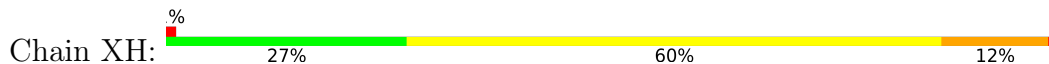
- Molecule 7: 30S ribosomal protein S7



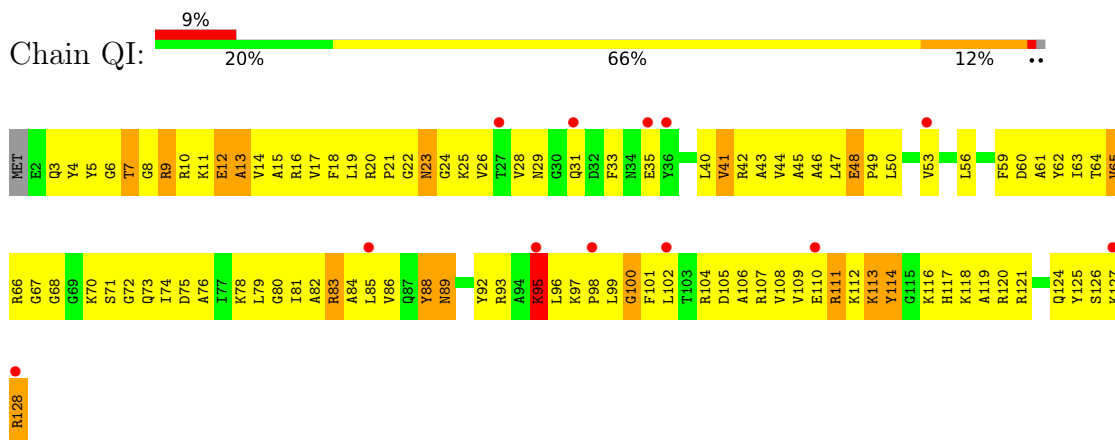
- Molecule 8: 30S ribosomal protein S8



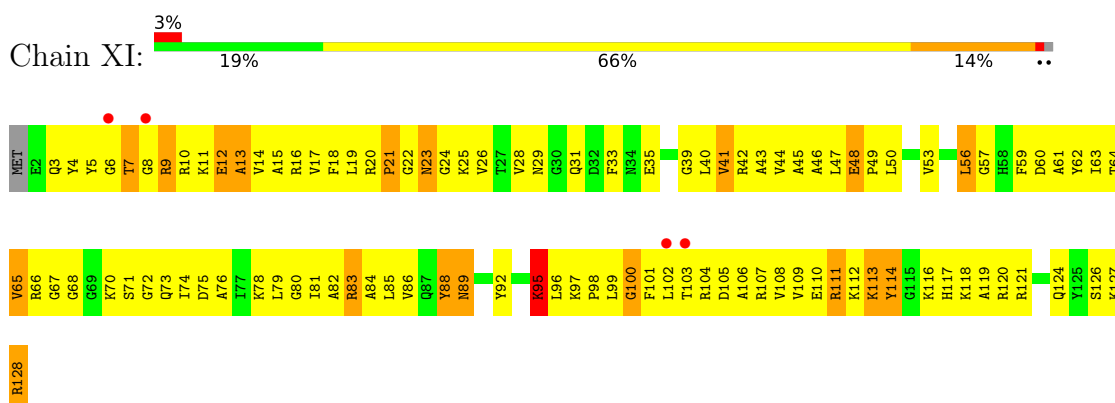
- Molecule 8: 30S ribosomal protein S8



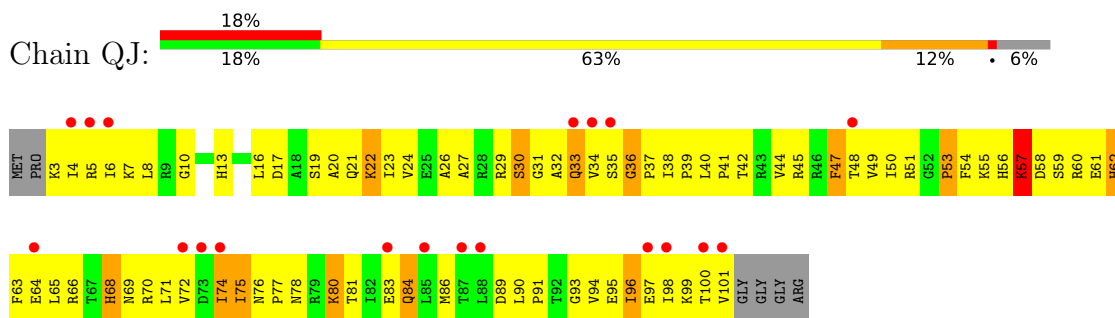
- Molecule 9: 30S ribosomal protein S9



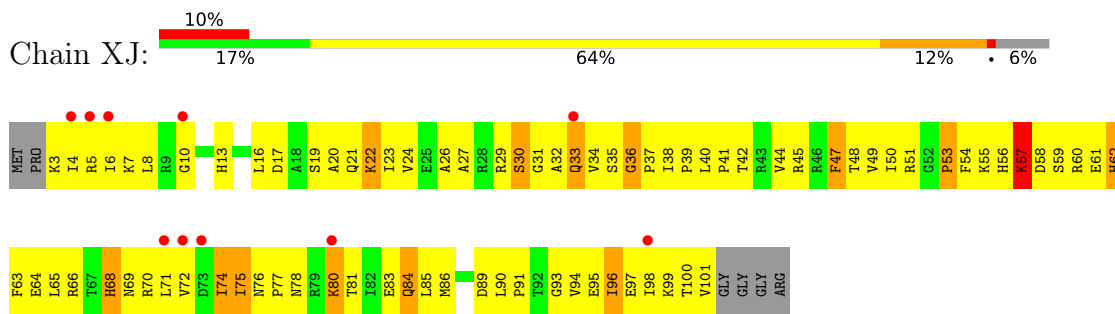
• Molecule 9: 30S ribosomal protein S9



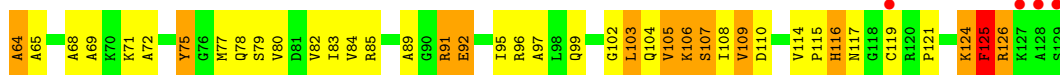
• Molecule 10: 30S ribosomal protein S10



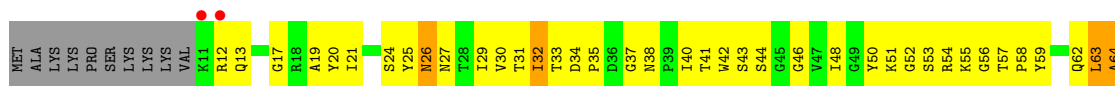
• Molecule 10: 30S ribosomal protein S10



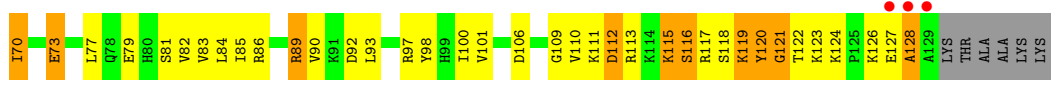
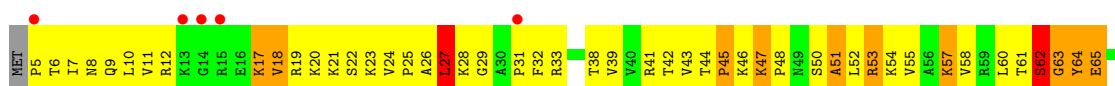
• Molecule 11: 30S ribosomal protein S11



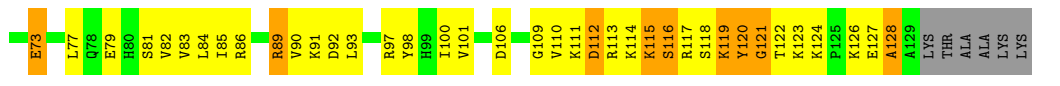
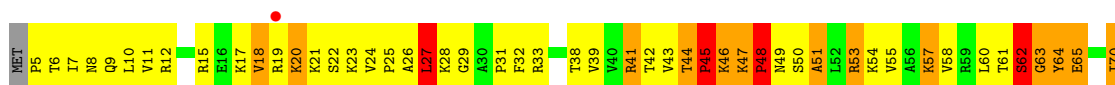
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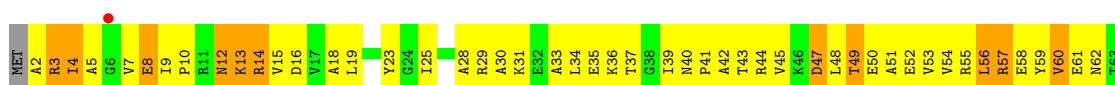
• Molecule 12: 30S ribosomal protein S12



• Molecule 12: 30S ribosomal protein S12



• Molecule 13: 30S ribosomal protein S13

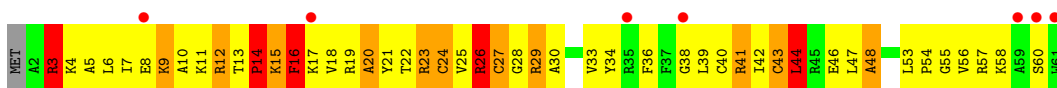
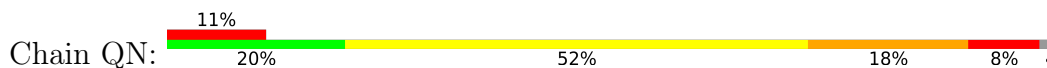




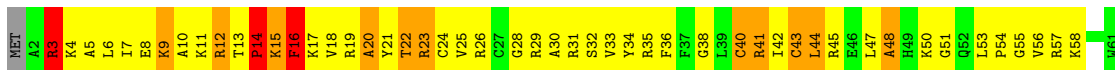
- Molecule 13: 30S ribosomal protein S13



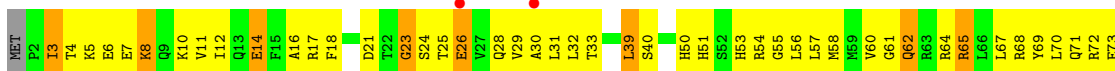
- Molecule 14: 30S ribosomal protein S14



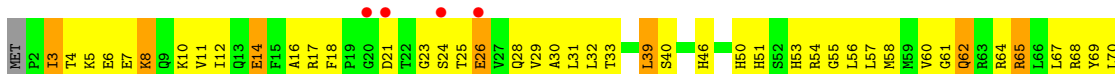
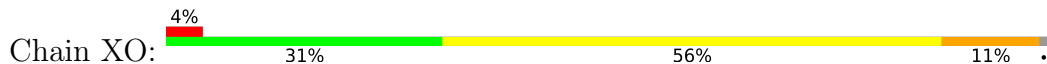
- Molecule 14: 30S ribosomal protein S14



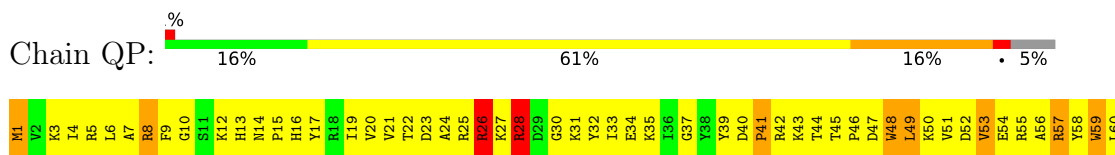
- Molecule 15: 30S ribosomal protein S15



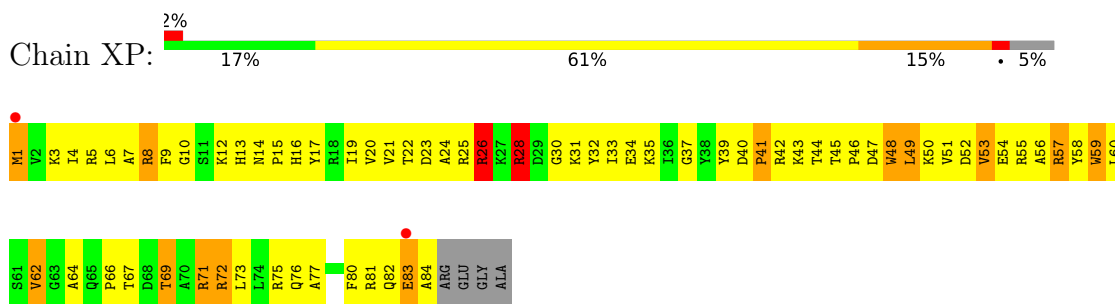
- Molecule 15: 30S ribosomal protein S15



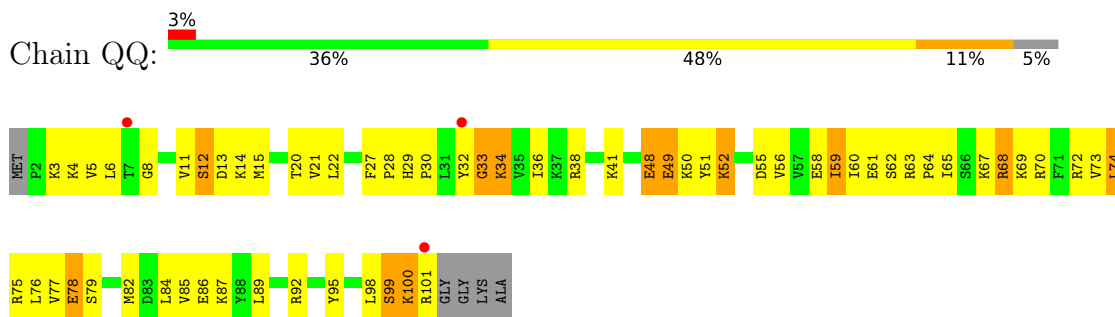
- Molecule 16: 30S ribosomal protein S16



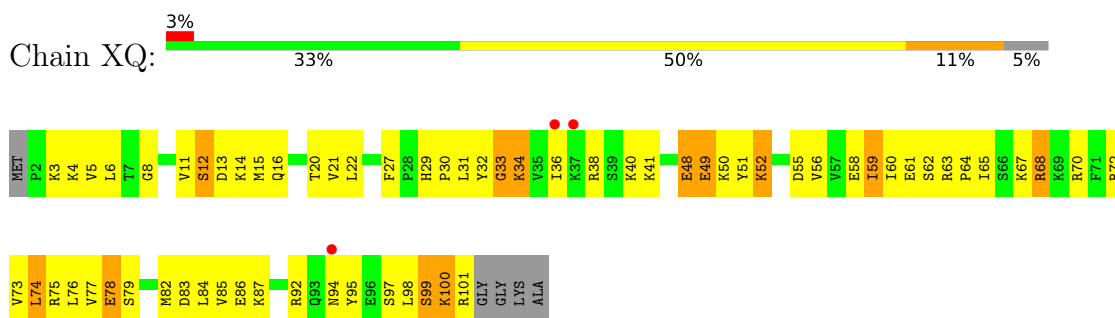
• Molecule 16: 30S ribosomal protein S16



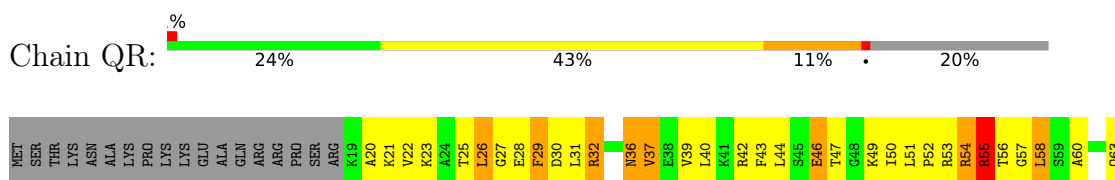
• Molecule 17: 30S ribosomal protein S17

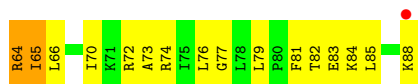


• Molecule 17: 30S ribosomal protein S17



• Molecule 18: 30S ribosomal protein S18

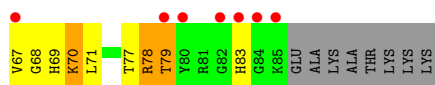
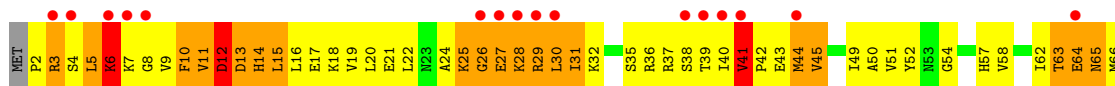
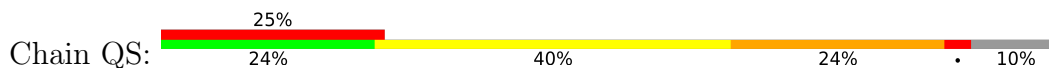




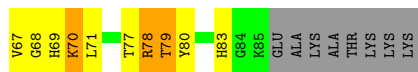
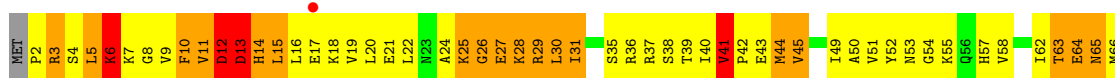
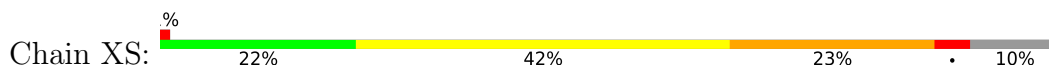
• Molecule 18: 30S ribosomal protein S18



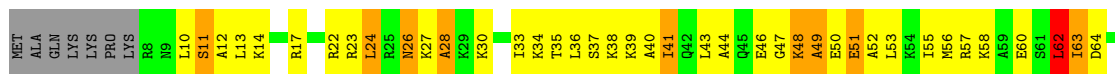
• Molecule 19: 30S ribosomal protein S19



• Molecule 19: 30S ribosomal protein S19

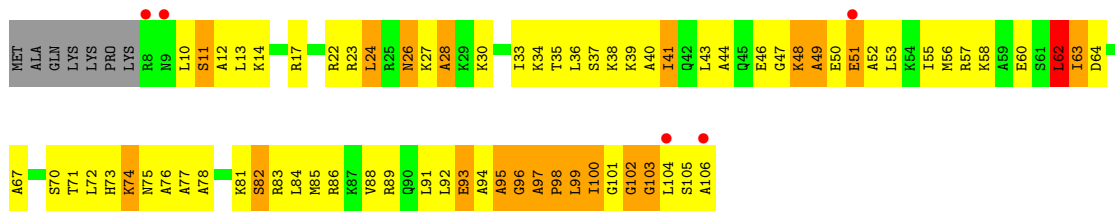


• Molecule 20: 30S ribosomal protein S20

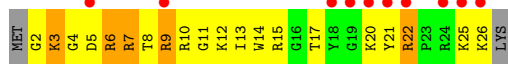


• Molecule 20: 30S ribosomal protein S20





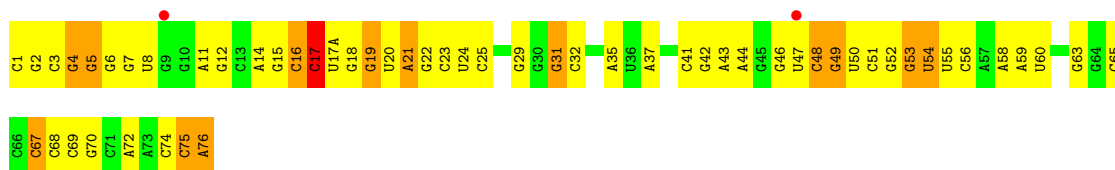
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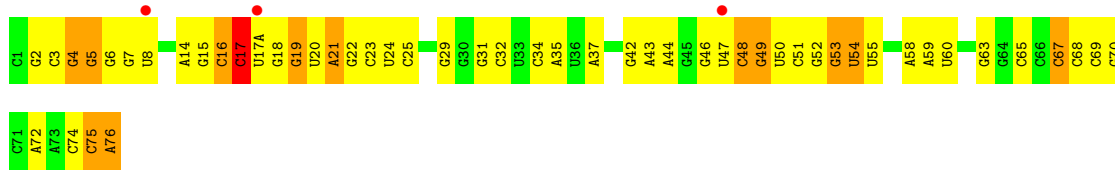
• Molecule 21: 30S ribosomal protein S21



• Molecule 22: P-site tRNA fMet



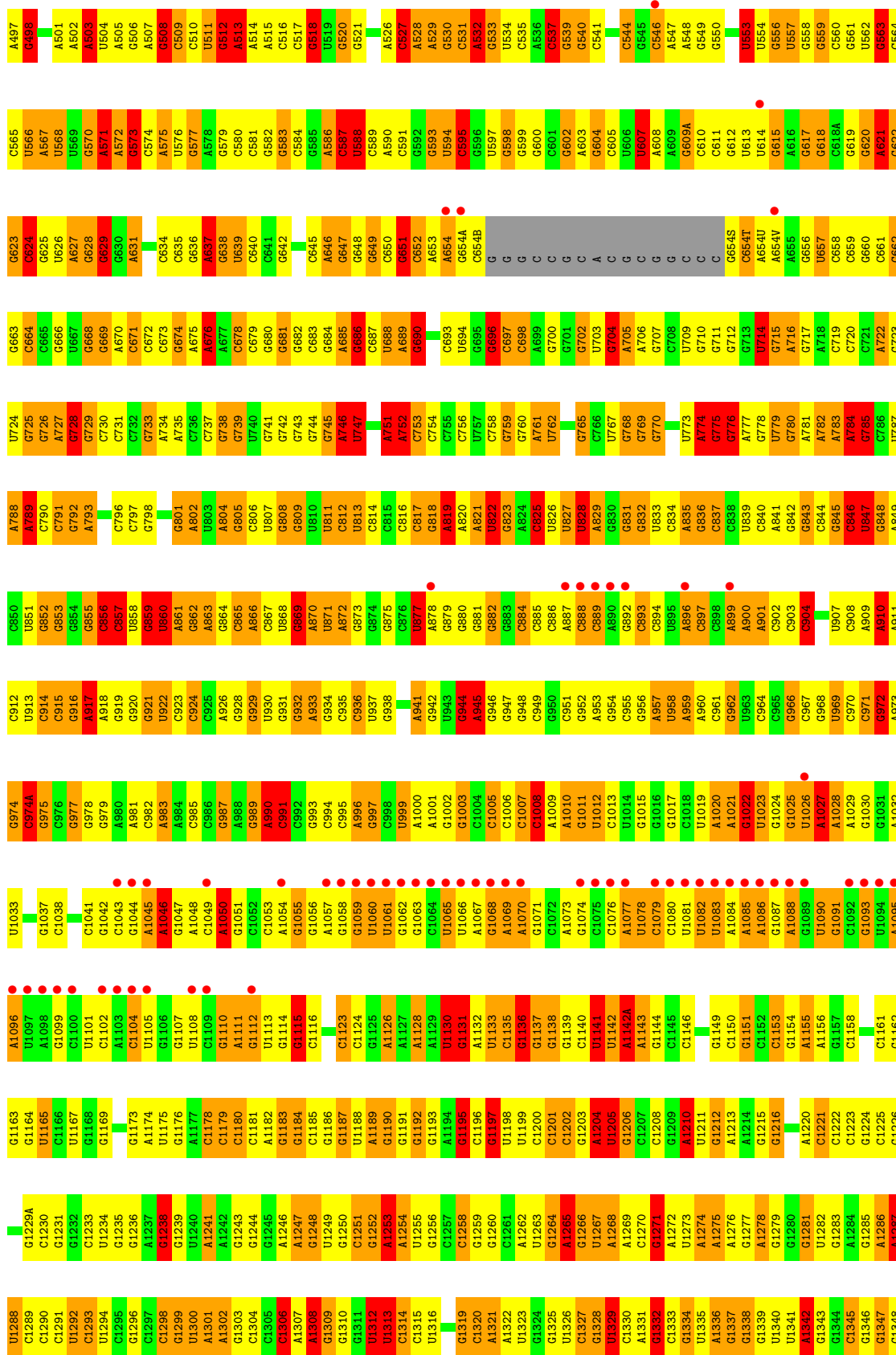
• Molecule 22: P-site tRNA fMet

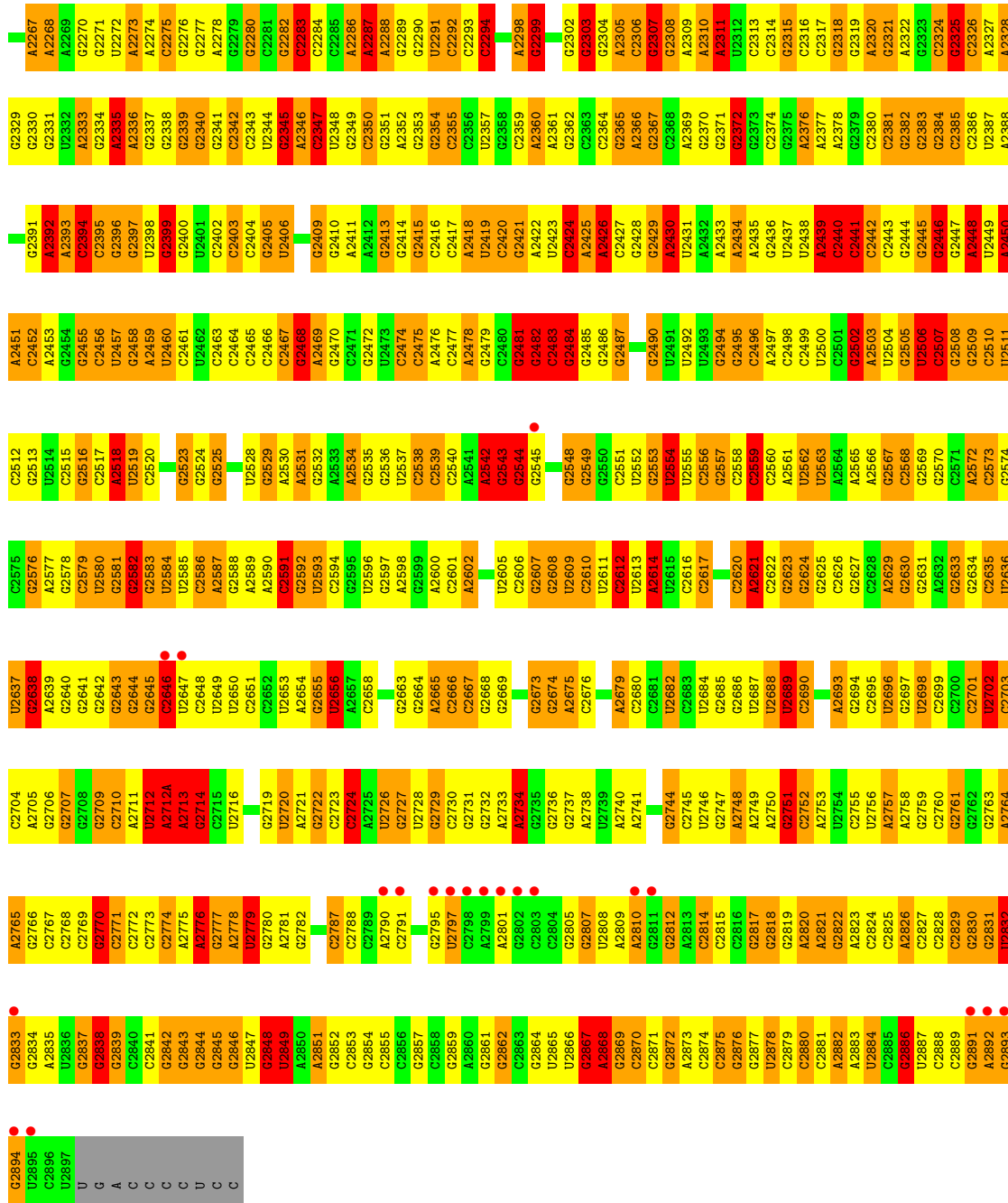


• Molecule 23: A-site ASL SufA6

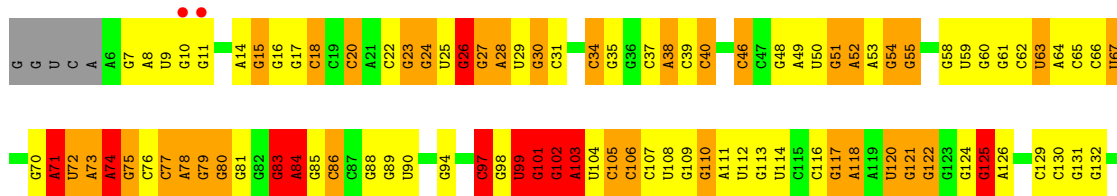
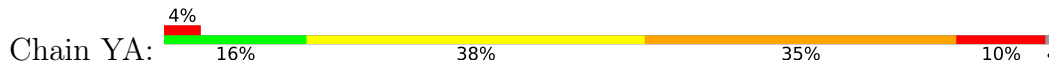


• Molecule 23: A-site ASL SufA6



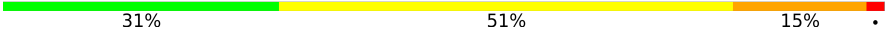


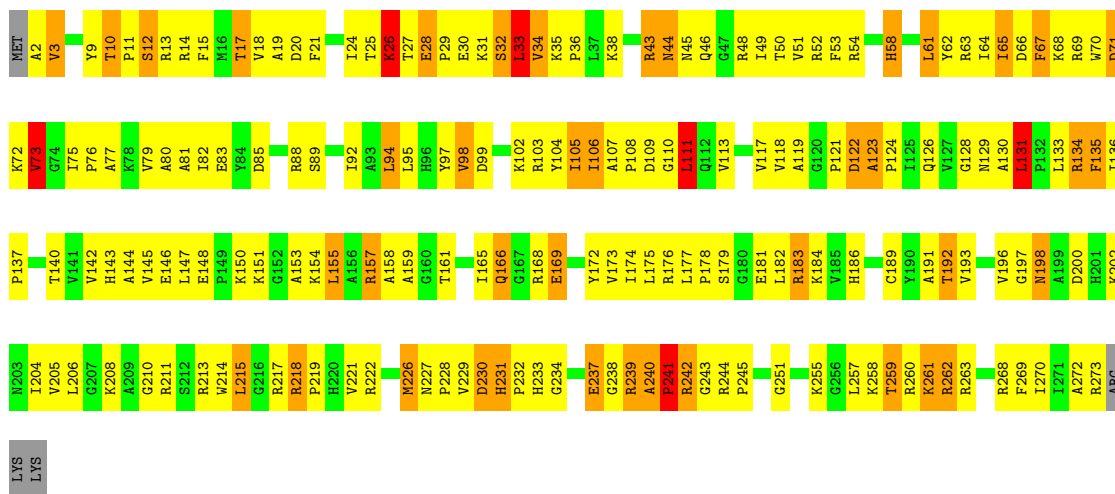
• Molecule 25: 23S rRNA



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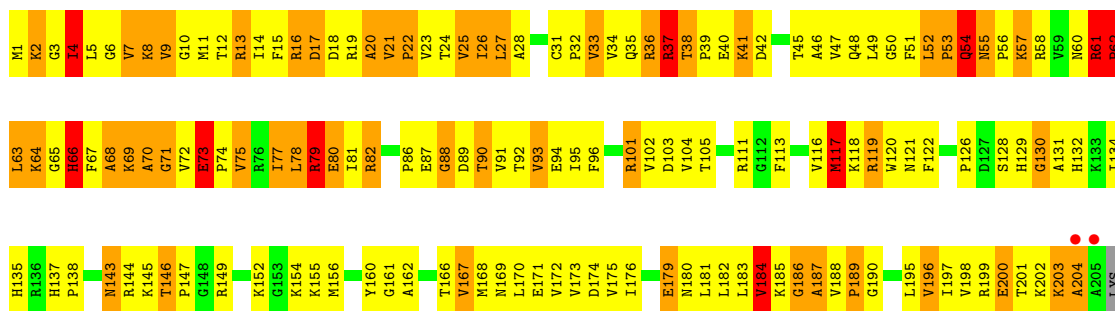
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Chain YD: 



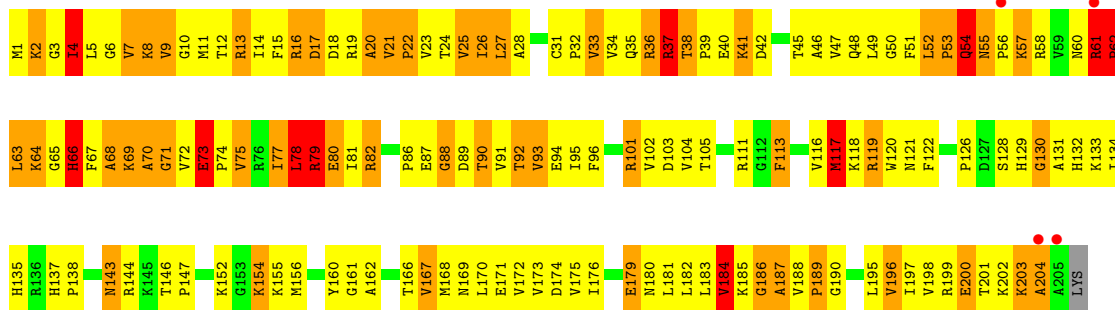
• Molecule 28: 50S ribosomal protein L3

Chain RE: 



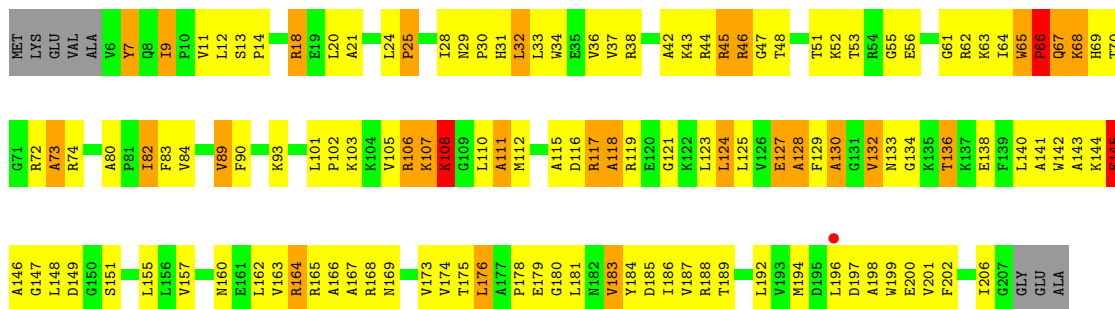
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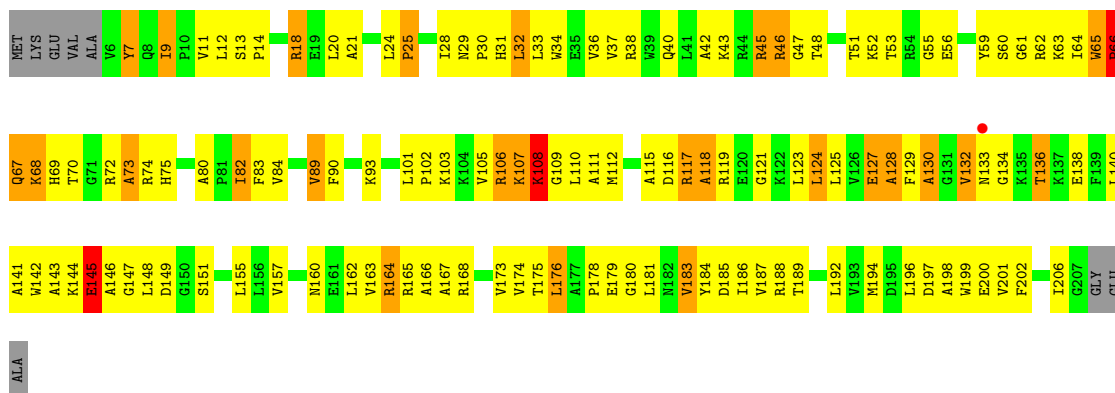


• Molecule 29: 50S ribosomal protein L4

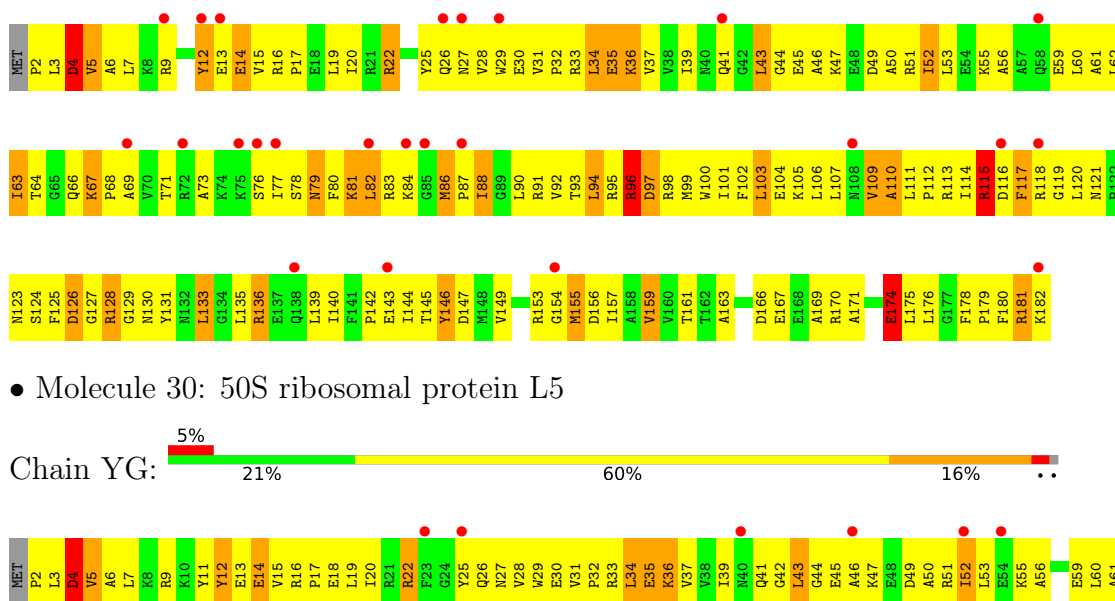
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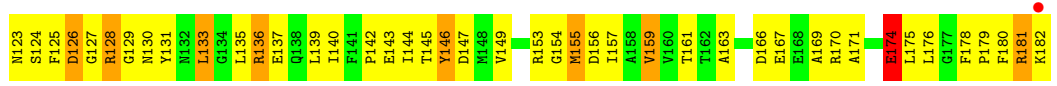


• Molecule 30: 50S ribosomal protein L5

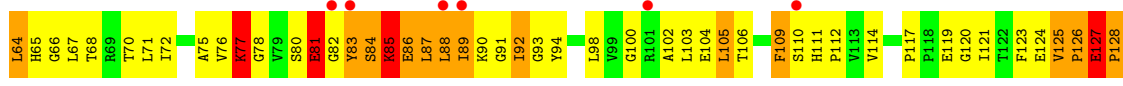
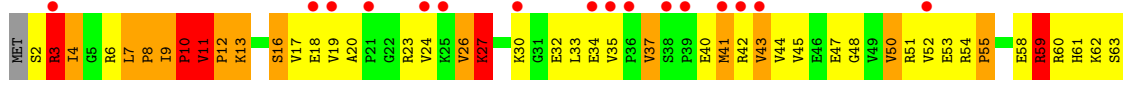
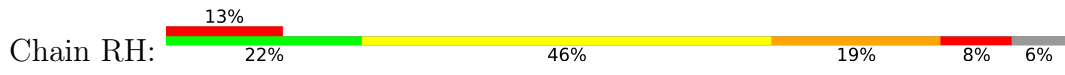


• Molecule 30: 50S ribosomal protein L5

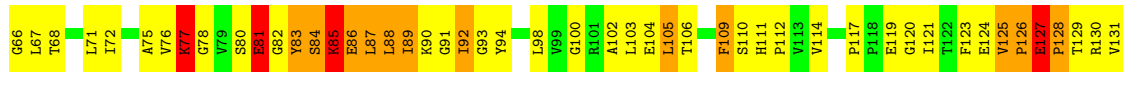
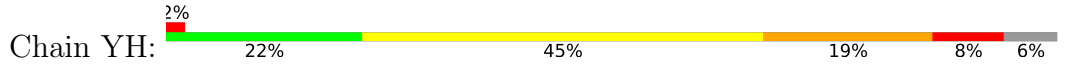




• Molecule 31: 50S ribosomal protein L6



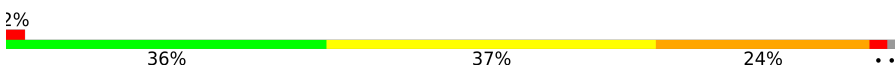
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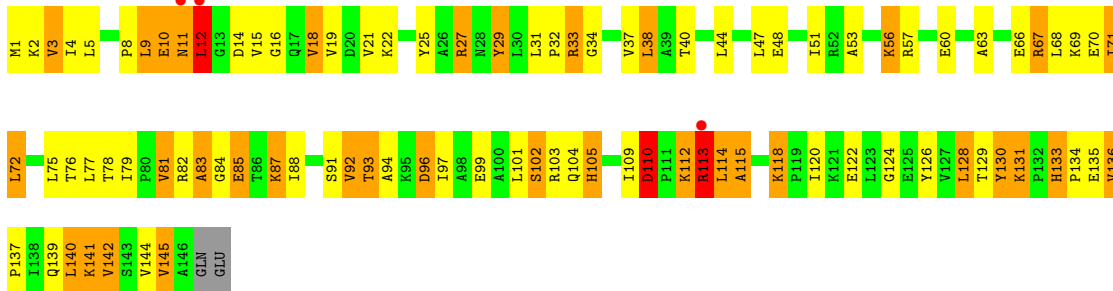


• Molecule 32: 50S ribosomal protein L9



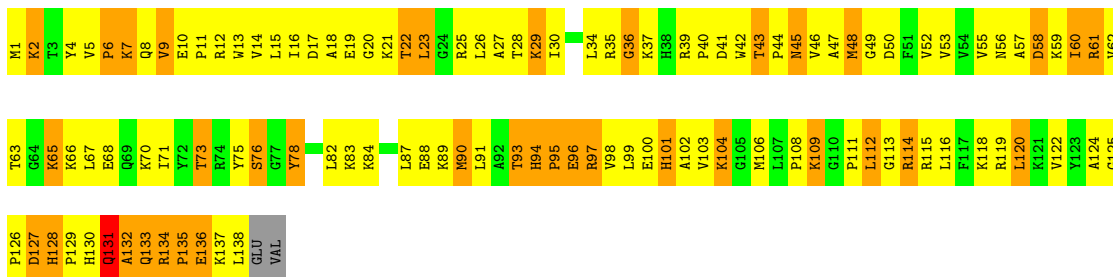
• Molecule 32: 50S ribosomal protein L9

Chain YI:  2% 36% 37% 24%




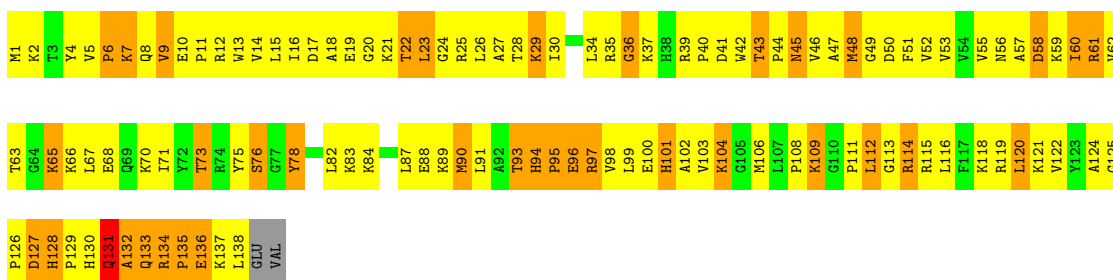
- Molecule 33: 50S ribosomal protein L13

Chain RN:  18% 54% 26%



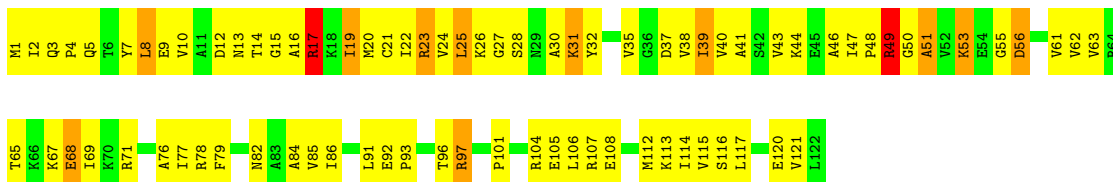
- Molecule 33: 50S ribosomal protein L13

Chain YN:  16% 56% 26%

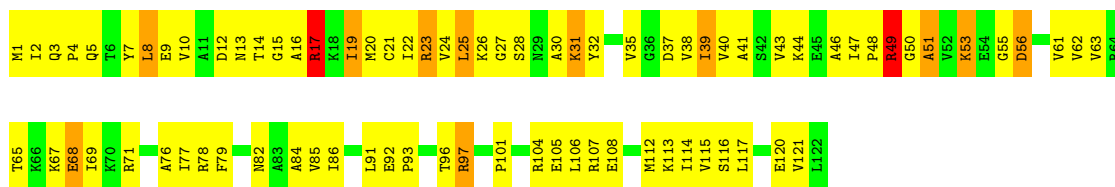
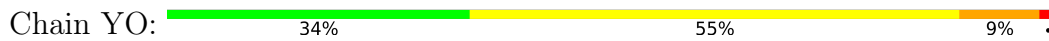


- Molecule 34: 50S ribosomal protein L14

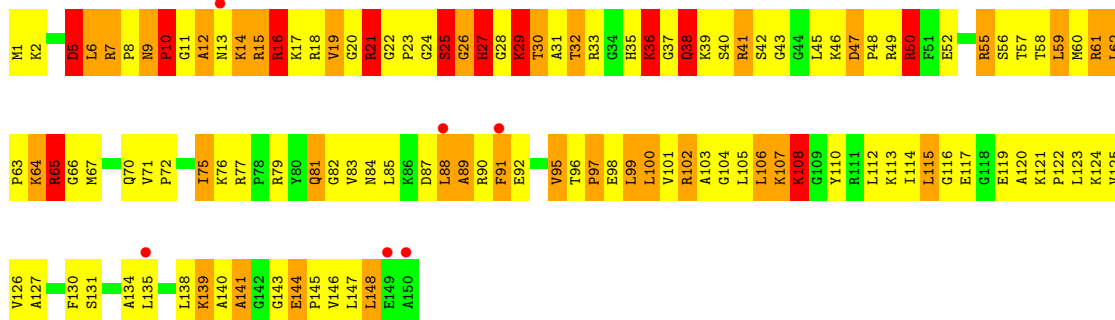
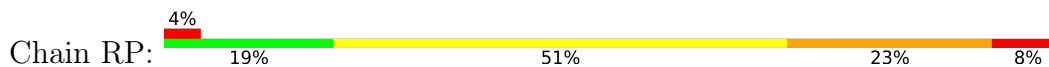
Chain RO:  34% 55% 9%



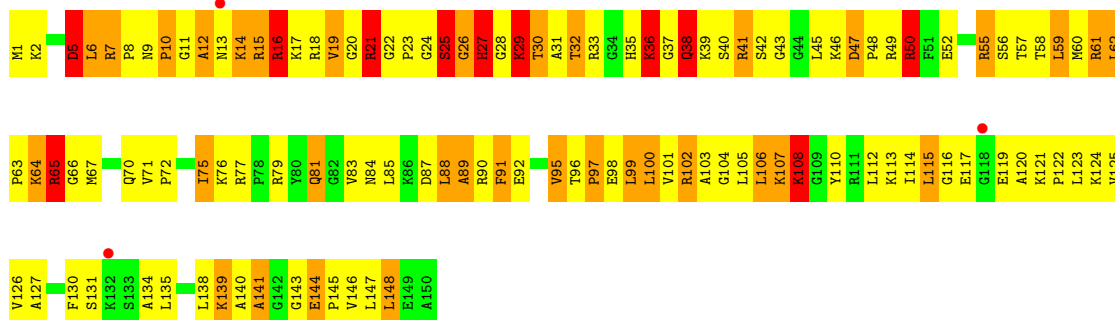
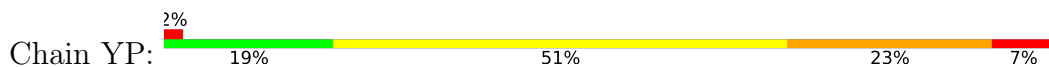
- Molecule 34: 50S ribosomal protein L14



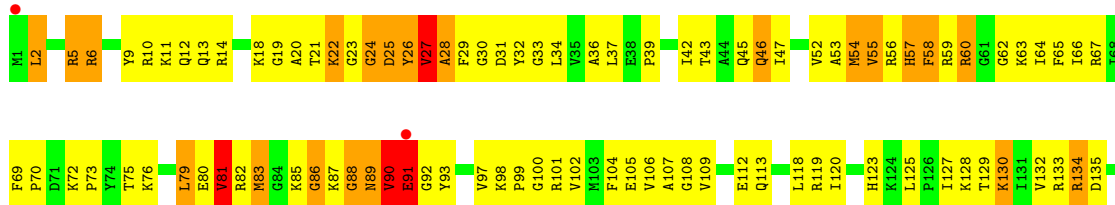
• Molecule 35: 50S ribosomal protein L15



• Molecule 35: 50S ribosomal protein L15

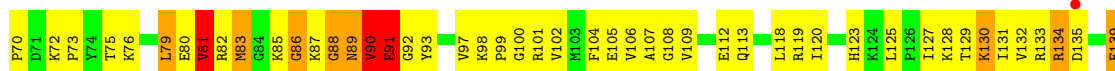


• Molecule 36: 50S ribosomal protein L16

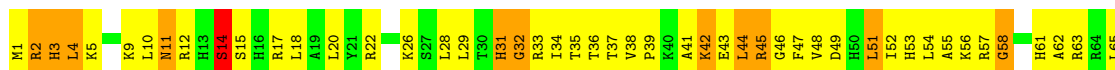




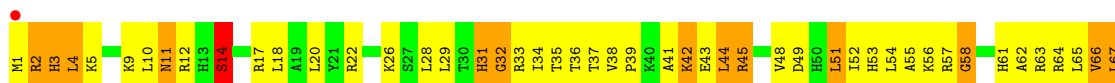
- Molecule 36: 50S ribosomal protein L16



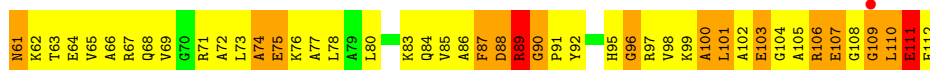
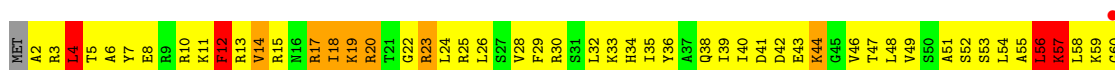
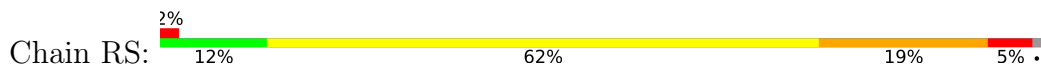
- Molecule 37: 50S ribosomal protein L17



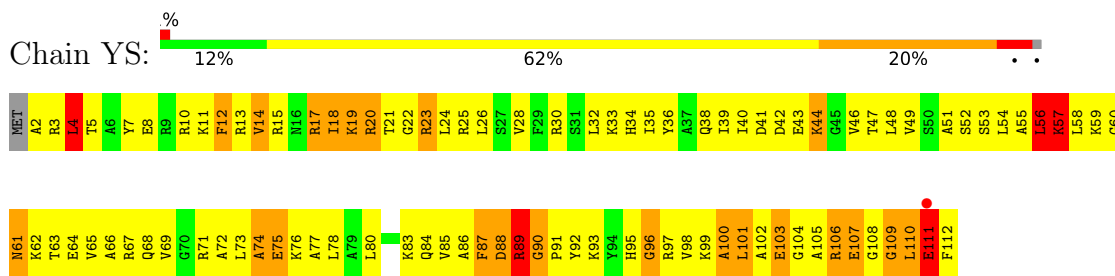
- Molecule 37: 50S ribosomal protein L17



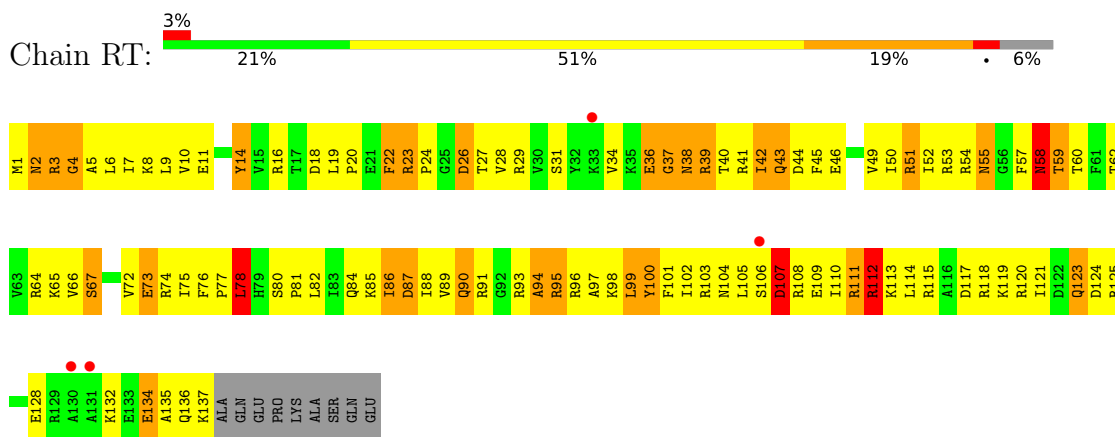
- Molecule 38: 50S ribosomal protein L18



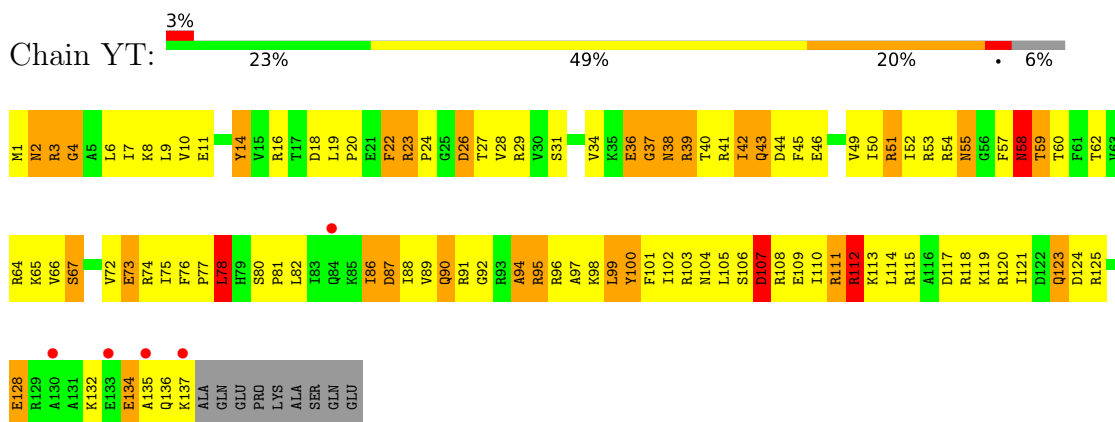
- Molecule 38: 50S ribosomal protein L18



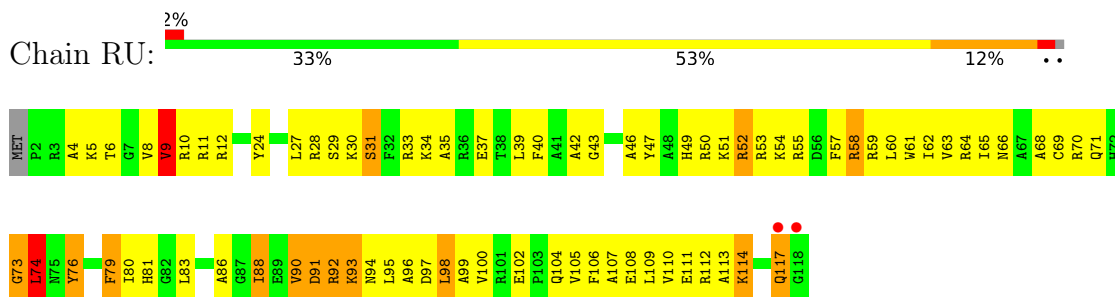
• Molecule 39: 50S ribosomal protein L19



• Molecule 39: 50S ribosomal protein L19

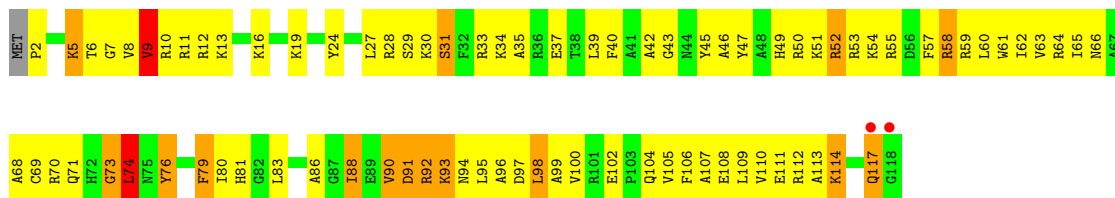


• Molecule 40: 50S ribosomal protein L20

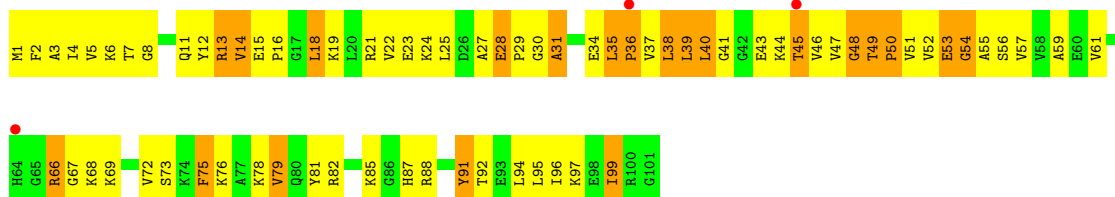


• Molecule 40: 50S ribosomal protein L20

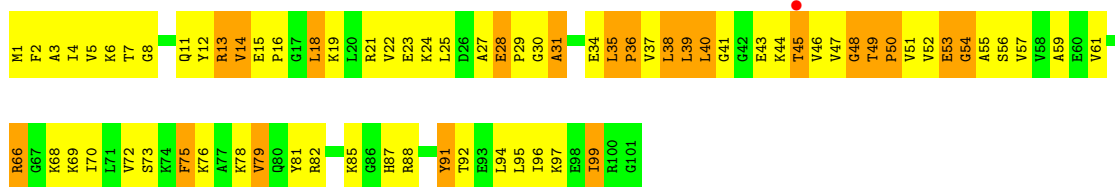




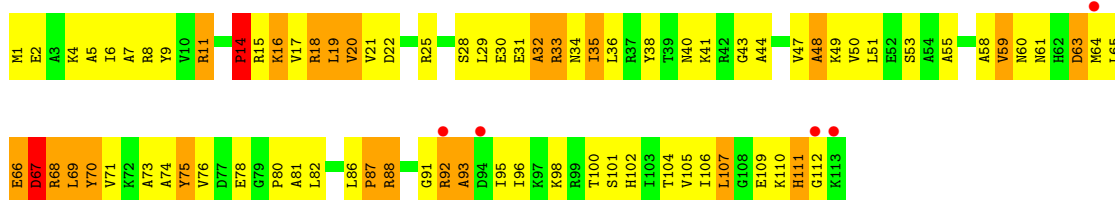
- Molecule 41: 50S ribosomal protein L21



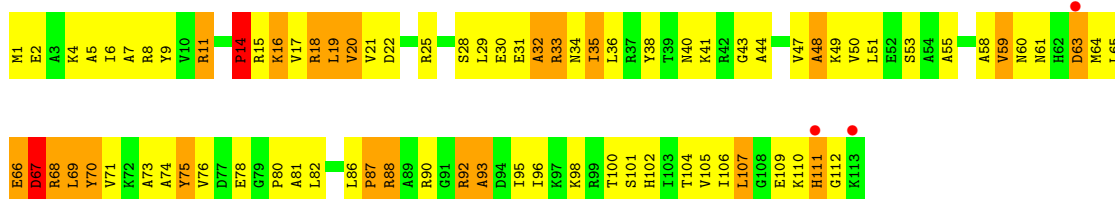
- Molecule 41: 50S ribosomal protein L21



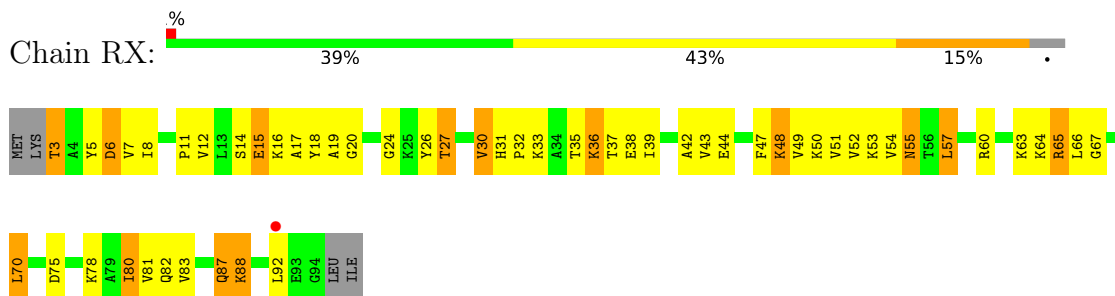
- Molecule 42: 50S ribosomal protein L22



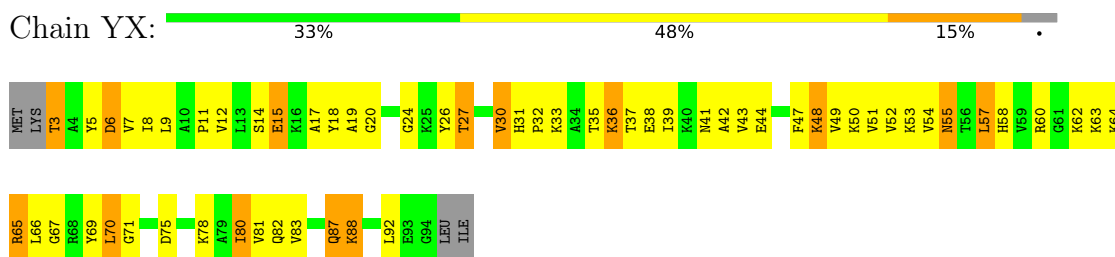
- Molecule 42: 50S ribosomal protein L22



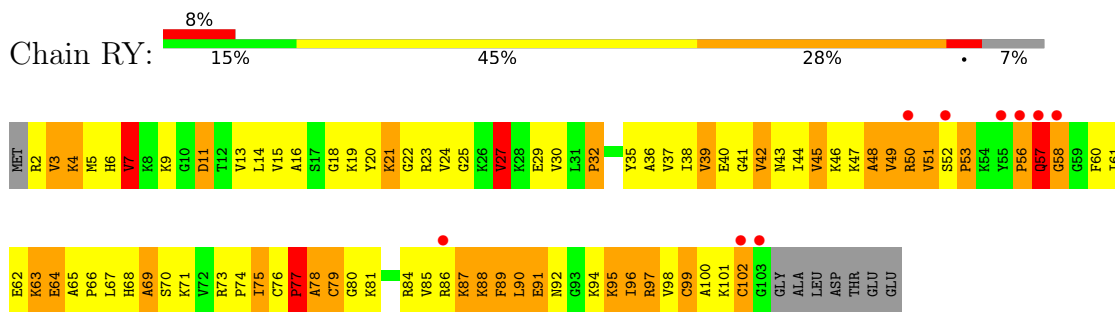
- Molecule 43: 50S ribosomal protein L23



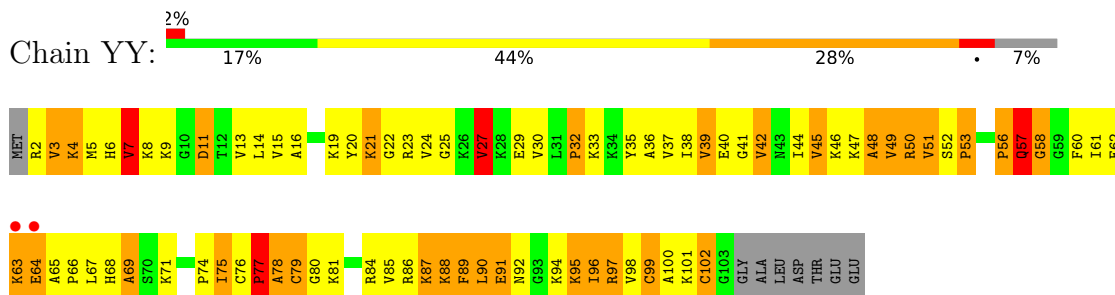
- Molecule 43: 50S ribosomal protein L23



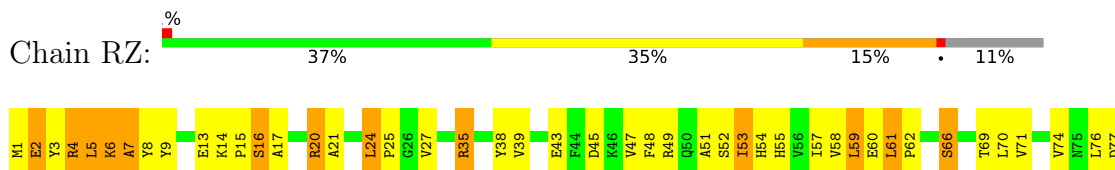
- Molecule 44: 50S ribosomal protein L24

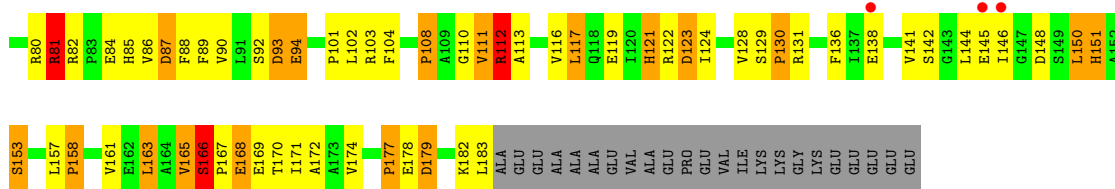


- Molecule 44: 50S ribosomal protein L24

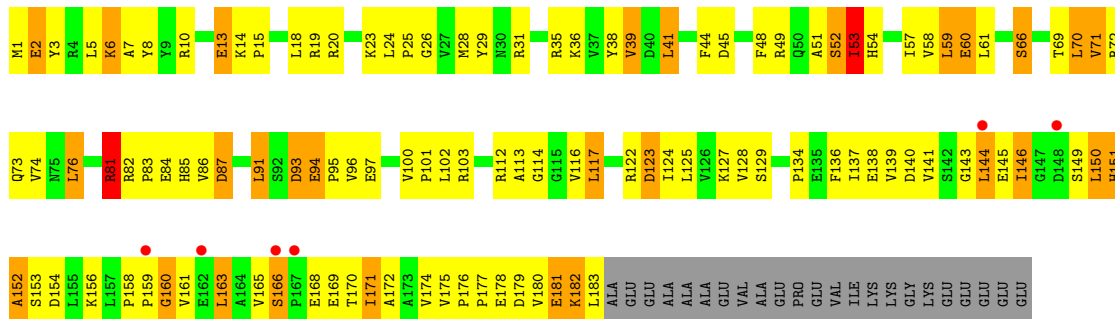


- Molecule 45: 50S ribosomal protein L25

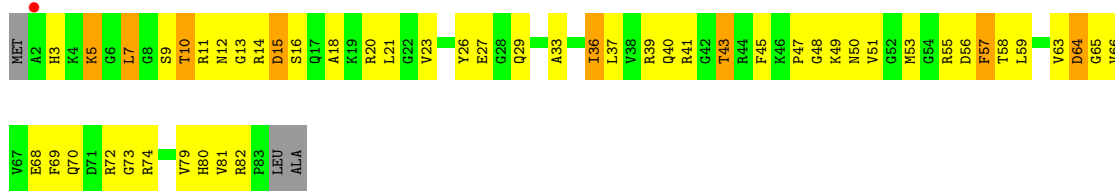




- Molecule 45: 50S ribosomal protein L25



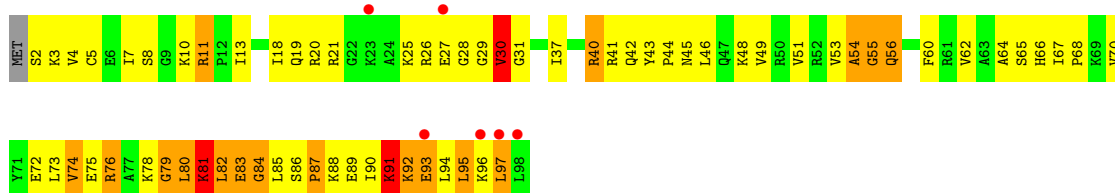
- Molecule 46: 50S ribosomal protein L27



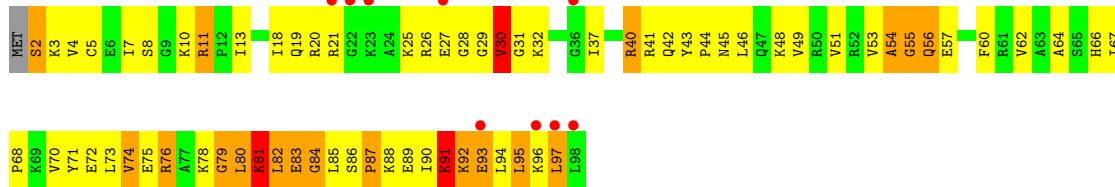
- Molecule 46: 50S ribosomal protein L27



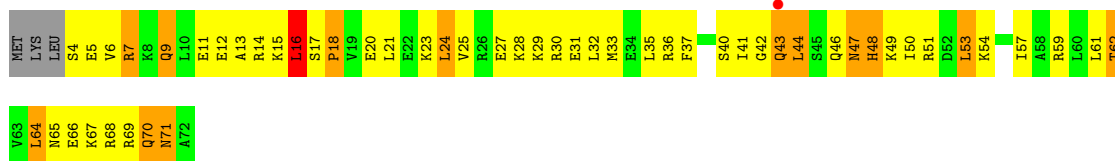
- Molecule 47: 50S ribosomal protein L28



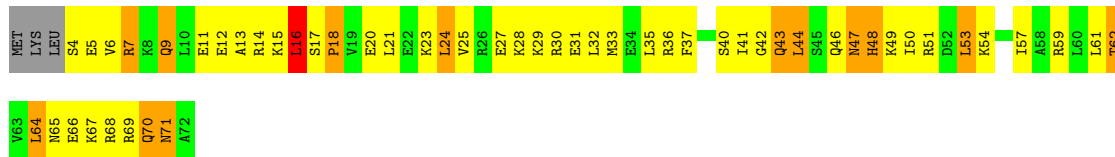
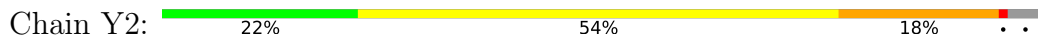
- Molecule 47: 50S ribosomal protein L28



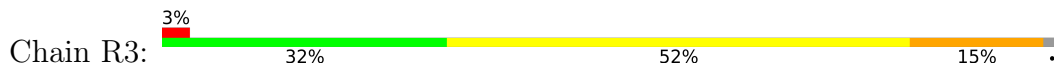
• Molecule 48: 50S ribosomal protein L29



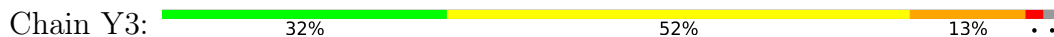
• Molecule 48: 50S ribosomal protein L29



• Molecule 49: 50S ribosomal protein L30

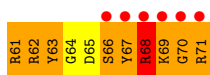


• Molecule 49: 50S ribosomal protein L30

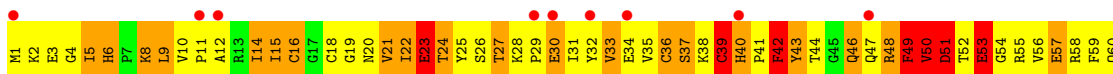
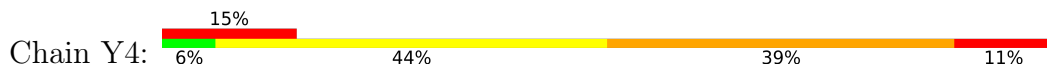


• Molecule 50: 50S ribosomal protein L31

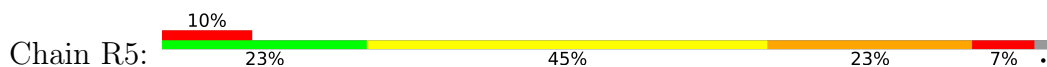




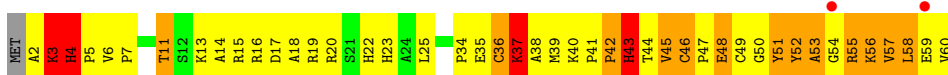
- Molecule 50: 50S ribosomal protein L31



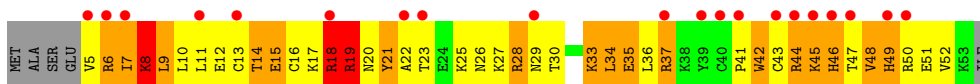
- Molecule 51: 50S ribosomal protein L32



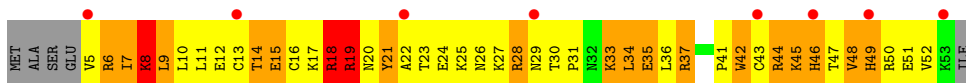
- Molecule 51: 50S ribosomal protein L32



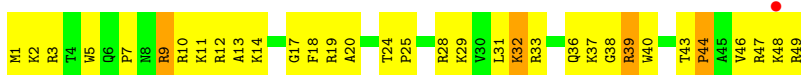
- Molecule 52: 50S ribosomal protein L33



- Molecule 52: 50S ribosomal protein L33



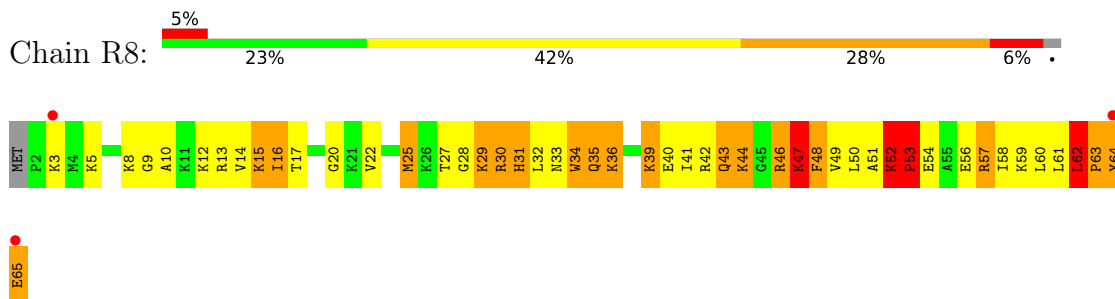
- Molecule 53: 50S ribosomal protein L34



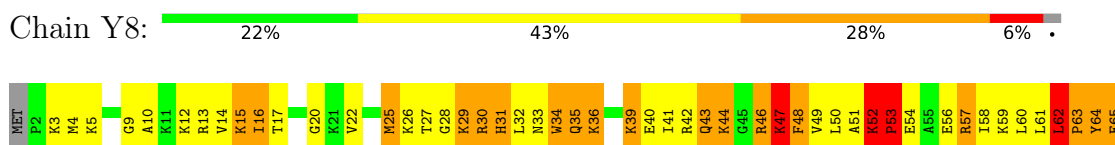
- Molecule 53: 50S ribosomal protein L34



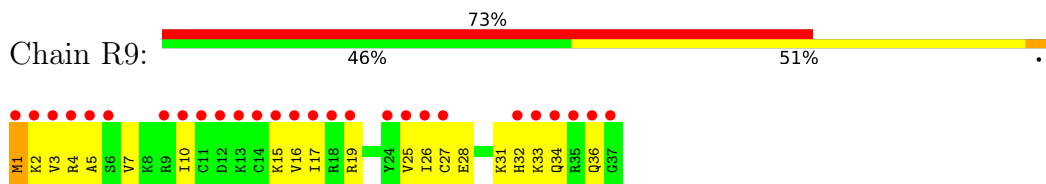
- Molecule 54: 50S ribosomal protein L35



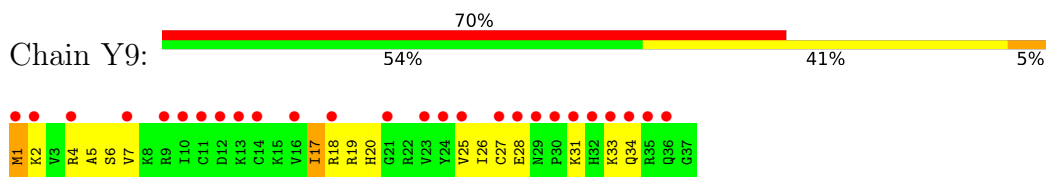
- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



- Molecule 56: tRNA acceptor end mimic



- Molecule 56: tRNA acceptor end mimic





4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.38Å 451.02Å 621.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.77 – 3.92 34.83 – 3.80	Depositor EDS
% Data completeness (in resolution range)	99.7 (34.77-3.92) 99.8 (34.83-3.80)	Depositor EDS
R_{merge}	0.34	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.60 (at 3.76Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.208 , 0.265 0.208 , 0.265	Depositor DCC
R_{free} test set	25594 reflections (4.46%)	wwPDB-VP
Wilson B-factor (Å ²)	94.6	Xtrriage
Anisotropy	0.150	Xtrriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 46.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.24$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	291868	wwPDB-VP
Average B, all atoms (Å ²)	57.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.62% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

²Theoretical values of $\langle |L| \rangle$, $\langle L^2 \rangle$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality i

5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: PPU, 1MG, ZN, AMP, MG

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	QA	0.84	19/36098 (0.1%)	1.59	747/56341 (1.3%)
1	XA	0.89	21/36101 (0.1%)	1.65	830/56346 (1.5%)
2	QB	0.35	0/1959	0.65	0/2642
2	XB	0.36	0/1959	0.65	0/2642
3	QC	0.36	0/1629	0.60	0/2195
3	XC	0.36	0/1629	0.60	0/2195
4	QD	0.41	0/1733	0.68	1/2318 (0.0%)
4	XD	0.44	0/1733	0.68	1/2318 (0.0%)
5	QE	0.38	0/1171	0.66	0/1576
5	XE	0.38	0/1171	0.66	0/1576
6	QF	0.43	0/856	0.68	0/1154
6	XF	0.43	0/856	0.68	0/1154
7	QG	0.37	0/1276	0.60	0/1709
7	XG	0.37	0/1276	0.60	0/1709
8	QH	0.40	0/1136	0.69	0/1527
8	XH	0.40	0/1136	0.69	0/1527
9	QI	0.36	0/1029	0.67	0/1379
9	XI	0.36	0/1029	0.67	0/1379
10	QJ	0.35	0/814	0.61	0/1095
10	XJ	0.36	0/814	0.61	0/1095
11	QK	0.40	0/900	0.67	0/1213
11	XK	0.40	0/900	0.67	0/1213
12	QL	0.47	0/991	0.79	2/1327 (0.2%)
12	XL	0.52	1/991 (0.1%)	0.83	4/1327 (0.3%)
13	QM	0.34	0/974	0.66	0/1303
13	XM	0.35	0/974	0.66	0/1303
14	QN	0.42	0/501	0.68	0/664
14	XN	0.52	0/501	0.67	0/664
15	QO	0.39	0/745	0.67	0/992
15	XO	0.40	0/745	0.67	0/992
16	QP	0.36	0/721	0.67	0/970
16	XP	0.37	0/721	0.67	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.37	0/847	0.68	0/1131
17	XQ	0.38	0/847	0.68	0/1131
18	QR	0.39	0/579	0.72	0/768
18	XR	0.39	0/579	0.72	0/768
19	QS	0.36	0/689	0.84	2/926 (0.2%)
19	XS	0.36	0/689	0.84	2/926 (0.2%)
20	QT	0.33	0/765	0.70	0/1007
20	XT	0.34	0/765	0.69	0/1007
21	QU	0.37	0/221	0.63	0/288
21	XU	0.37	0/221	0.63	0/288
22	QV	0.51	0/1836	1.00	6/2859 (0.2%)
22	XV	0.52	0/1836	0.99	6/2859 (0.2%)
23	QX	0.39	0/185	0.71	0/285
23	XX	0.51	0/160	0.76	0/246
24	QY	0.52	0/311	0.87	0/483
24	XY	0.52	0/311	0.89	0/483
25	RA	1.03	104/69521 (0.1%)	1.85	2693/108529 (2.5%)
25	YA	1.19	254/69543 (0.4%)	1.98	3497/108563 (3.2%)
26	RB	0.82	1/2878 (0.0%)	1.59	60/4490 (1.3%)
26	YB	0.86	1/2878 (0.0%)	1.72	76/4490 (1.7%)
27	RD	0.60	2/2165 (0.1%)	0.90	4/2919 (0.1%)
27	YD	0.56	1/2165 (0.0%)	0.90	4/2919 (0.1%)
28	RE	0.52	0/1601	0.91	2/2160 (0.1%)
28	YE	0.52	0/1601	0.91	2/2160 (0.1%)
29	RF	0.50	0/1620	0.76	0/2194
29	YF	0.50	0/1620	0.76	0/2194
30	RG	0.40	0/1499	0.66	0/2016
30	YG	0.40	0/1499	0.66	0/2016
31	RH	0.45	0/1332	0.85	3/1802 (0.2%)
31	YH	0.45	0/1332	0.85	4/1802 (0.2%)
32	RI	0.44	0/1151	0.77	1/1558 (0.1%)
32	YI	0.44	0/1151	0.76	0/1558
33	RN	0.46	0/1131	0.78	1/1525 (0.1%)
33	YN	0.46	0/1131	0.78	1/1525 (0.1%)
34	RO	0.54	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.95	3/1544 (0.2%)
35	YP	0.49	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.54	0/1143	0.91	3/1527 (0.2%)
36	YQ	0.54	0/1143	0.90	3/1527 (0.2%)
37	RR	0.45	0/982	0.80	1/1312 (0.1%)
37	YR	0.45	0/982	0.80	1/1312 (0.1%)
38	RS	0.46	0/892	0.82	1/1187 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YS	0.45	0/892	0.82	1/1187 (0.1%)
39	RT	0.47	0/1155	0.73	2/1542 (0.1%)
39	YT	0.47	0/1155	0.73	2/1542 (0.1%)
40	RU	0.48	0/982	0.78	0/1306
40	YU	0.48	0/982	0.78	0/1306
41	RV	0.47	0/790	0.82	0/1057
41	YV	0.47	0/790	0.82	0/1057
42	RW	0.45	0/911	0.75	0/1220
42	YW	0.45	0/911	0.75	0/1220
43	RX	0.56	0/739	0.77	0/993
43	YX	0.56	0/739	0.77	0/993
44	RY	0.52	0/798	0.80	0/1064
44	YY	0.52	0/798	0.80	0/1064
45	RZ	0.44	0/1493	0.70	0/2026
45	YZ	0.43	0/1493	0.70	0/2026
46	R0	0.52	0/657	0.73	0/874
46	Y0	0.55	0/657	0.80	1/874 (0.1%)
47	R1	0.49	0/770	0.85	1/1022 (0.1%)
47	Y1	0.49	0/770	0.85	1/1022 (0.1%)
48	R2	0.51	0/583	0.84	1/771 (0.1%)
48	Y2	0.51	0/583	0.83	1/771 (0.1%)
49	R3	0.47	0/474	0.71	0/635
49	Y3	0.43	0/474	0.71	0/635
50	R4	0.38	0/594	0.78	1/795 (0.1%)
50	Y4	0.38	0/594	0.78	1/795 (0.1%)
51	R5	0.51	0/473	0.74	0/639
51	Y5	0.51	0/473	0.74	0/639
52	R6	0.42	0/431	0.76	0/575
52	Y6	0.42	0/431	0.76	0/575
53	R7	0.56	0/438	0.76	0/575
53	Y7	0.56	0/438	0.76	0/575
54	R8	0.62	0/525	0.93	1/691 (0.1%)
54	Y8	0.62	0/525	0.93	1/691 (0.1%)
55	R9	0.35	0/310	0.59	0/407
55	Y9	0.37	0/310	0.61	0/407
56	Z6	0.78	0/40	1.78	1/60 (1.7%)
56	Z8	0.79	0/40	1.81	1/60 (1.7%)
All	All	0.89	404/316298 (0.1%)	1.59	7980/472872 (1.7%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
45	YZ	0	1

All (404) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	1201	A	C3'-C2'	12.06	1.66	1.52
1	XA	1054	C	C4'-C3'	11.40	1.65	1.53
25	YA	783	A	N7-C5	-11.18	1.32	1.39
25	YA	793	A	N7-C5	-10.74	1.32	1.39
25	YA	783	A	C5-C6	-10.48	1.31	1.41
25	RA	783	A	N7-C5	-10.47	1.32	1.39
25	YA	1378	A	N9-C4	-10.25	1.31	1.37
25	YA	793	A	N9-C4	-10.17	1.31	1.37
25	RA	783	A	C5-C6	-9.29	1.32	1.41
25	YA	686	G	N7-C5	-9.19	1.33	1.39
25	YA	776	G	N7-C5	9.02	1.44	1.39
25	YA	2060	A	N3-C4	-8.73	1.29	1.34
25	YA	783	A	N3-C4	-8.69	1.29	1.34
27	RD	236	GLY	C-N	8.54	1.53	1.34
1	XA	1054	C	C2'-O2'	8.51	1.52	1.41
25	YA	503	A	C6-N1	-8.49	1.29	1.35
25	YA	783	A	N9-C4	-8.48	1.32	1.37
25	YA	512	G	N7-C5	8.32	1.44	1.39
25	RA	1142(A)	A	N9-C4	-8.29	1.32	1.37
25	YA	686	G	N3-C4	-8.27	1.29	1.35
25	YA	2251	G	C6-N1	-8.13	1.33	1.39
25	RA	1274	A	N9-C4	-8.09	1.32	1.37
25	RA	1269	A	N9-C4	-8.05	1.33	1.37
25	YA	687	C	N1-C6	-7.99	1.32	1.37
25	YA	71	A	N9-C4	-7.97	1.33	1.37
25	YA	2542	A	N9-C4	-7.89	1.33	1.37
25	YA	1439	A	N9-C4	-7.72	1.33	1.37
25	YA	1543	A	C3'-C2'	7.69	1.61	1.52
25	RA	1786	A	N9-C4	-7.67	1.33	1.37
25	RA	2287	A	N9-C4	-7.67	1.33	1.37
1	XA	1054	C	C2'-C1'	-7.62	1.45	1.53
25	RA	783	A	N3-C4	-7.60	1.30	1.34
25	YA	745	G	N7-C5	-7.55	1.34	1.39
25	YA	2060	A	C5-C6	-7.45	1.34	1.41
25	YA	2067	G	N3-C4	-7.40	1.30	1.35
25	YA	686	G	C6-N1	-7.40	1.34	1.39
25	YA	2060	A	N9-C4	-7.36	1.33	1.37
25	YA	793	A	N3-C4	-7.34	1.30	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
26	RB	53	A	N9-C4	7.31	1.42	1.37
25	YA	1899	G	N9-C4	-7.26	1.32	1.38
25	YA	1247	A	N3-C4	-7.24	1.30	1.34
25	YA	1938	A	N9-C4	-7.21	1.33	1.37
1	XA	978	A	N9-C4	7.19	1.42	1.37
25	YA	575	A	N9-C4	-7.14	1.33	1.37
25	RA	2593	U	C4-O4	7.14	1.29	1.23
25	YA	2360	A	N9-C4	-7.12	1.33	1.37
25	YA	454	A	N9-C4	-7.09	1.33	1.37
1	QA	1499	A	N9-C4	-7.08	1.33	1.37
25	YA	793	A	C5-C6	-7.06	1.34	1.41
25	YA	2247	A	N7-C5	-7.05	1.35	1.39
25	YA	2060	A	N7-C5	-7.04	1.35	1.39
1	QA	1346	A	N9-C4	-7.04	1.33	1.37
25	YA	2062	A	N3-C4	7.04	1.39	1.34
25	YA	203	C	N1-C6	-7.03	1.32	1.37
25	RA	2776	A	N9-C4	7.00	1.42	1.37
25	YA	2227	A	N3-C4	-6.95	1.30	1.34
25	RA	1274	A	N3-C4	-6.93	1.30	1.34
25	YA	311	A	N9-C4	-6.92	1.33	1.37
25	YA	788	A	C5-C6	-6.91	1.34	1.41
25	RA	2450	A	N9-C4	6.90	1.42	1.37
25	YA	503	A	N3-C4	-6.90	1.30	1.34
25	YA	1789	A	N9-C4	-6.89	1.33	1.37
25	RA	74	A	N7-C5	-6.89	1.35	1.39
25	YA	2062	A	C5-C4	6.85	1.43	1.38
25	RA	1617	C	N1-C6	-6.84	1.33	1.37
25	YA	1247	A	N9-C4	-6.83	1.33	1.37
25	YA	528	A	N9-C4	-6.82	1.33	1.37
1	QA	1432	G	C5-C4	6.78	1.43	1.38
25	RA	2393	A	N9-C4	-6.78	1.33	1.37
25	YA	473	G	C5-C4	-6.77	1.33	1.38
25	RA	1785	A	N7-C5	-6.77	1.35	1.39
25	YA	687	C	N1-C2	-6.75	1.33	1.40
25	YA	1609	A	N9-C4	-6.71	1.33	1.37
25	YA	1251	C	N1-C6	-6.71	1.33	1.37
25	YA	1605	C	N1-C6	-6.70	1.33	1.37
25	YA	1021	A	N9-C4	-6.69	1.33	1.37
25	YA	1950	G	C2-N3	6.68	1.38	1.32
25	YA	1668	A	C6-N1	-6.67	1.30	1.35
25	RA	1931	U	N3-C4	-6.66	1.32	1.38
25	RA	2433	A	N7-C5	-6.65	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	2252	G	N7-C5	-6.63	1.35	1.39
25	YA	788	A	N9-C4	-6.63	1.33	1.37
25	YA	2432	A	C5-C6	-6.61	1.35	1.41
25	YA	1966	A	N9-C4	-6.60	1.33	1.37
1	QA	1064	G	C2'-C1'	6.59	1.60	1.53
25	RA	2227	A	N9-C4	-6.58	1.33	1.37
25	RA	802	A	N3-C4	-6.57	1.30	1.34
25	YA	2251	G	N3-C4	-6.55	1.30	1.35
25	RA	2031	A	N9-C4	6.52	1.41	1.37
1	XA	792	A	N9-C4	-6.50	1.33	1.37
25	RA	1890	A	N9-C4	-6.50	1.33	1.37
25	YA	2080	G	N7-C5	-6.49	1.35	1.39
25	YA	1899	G	N3-C4	-6.49	1.30	1.35
25	YA	246	C	N1-C6	-6.49	1.33	1.37
25	YA	2335	A	N9-C4	-6.48	1.33	1.37
25	YA	787	U	N1-C2	-6.48	1.32	1.38
25	YA	794	G	N7-C5	-6.48	1.35	1.39
25	YA	2227	A	N9-C4	-6.48	1.33	1.37
1	XA	563	A	C6-N6	6.45	1.39	1.33
25	YA	780	G	N7-C5	-6.43	1.35	1.39
25	YA	1571	A	N9-C4	-6.42	1.33	1.37
25	YA	2032	G	N9-C8	6.42	1.42	1.37
25	YA	515	A	N9-C4	-6.41	1.34	1.37
25	YA	1890	A	N9-C4	-6.41	1.34	1.37
25	YA	2452	C	N1-C6	-6.40	1.33	1.37
1	QA	299	G	C5-C4	6.37	1.42	1.38
25	YA	142	G	N9-C4	-6.37	1.32	1.38
25	RA	1342	A	N9-C4	-6.36	1.34	1.37
25	YA	1367	A	N7-C5	-6.35	1.35	1.39
25	YA	2611	U	C2-N3	-6.32	1.33	1.37
25	YA	1762	A	N9-C4	6.32	1.41	1.37
1	QA	189	U	C2'-C1'	6.30	1.60	1.53
25	RA	2062	A	N3-C4	6.29	1.38	1.34
25	YA	454	A	N7-C5	-6.29	1.35	1.39
25	YA	2450	A	N7-C5	-6.29	1.35	1.39
25	YA	216	A	N7-C5	-6.28	1.35	1.39
25	YA	1613	G	C8-N7	-6.27	1.27	1.30
25	RA	783	A	N9-C4	-6.26	1.34	1.37
25	YA	2450	A	N3-C4	-6.26	1.31	1.34
25	YA	761	A	C5-C6	-6.26	1.35	1.41
25	YA	1606	G	N9-C8	-6.25	1.33	1.37
25	YA	1770	G	N7-C5	-6.24	1.35	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	RA	2062	A	C5-C4	6.24	1.43	1.38
25	RA	2032	G	N9-C8	6.24	1.42	1.37
25	RA	1928	A	N9-C4	-6.24	1.34	1.37
25	YA	309	G	N9-C4	6.23	1.43	1.38
25	YA	469	G	C6-N1	-6.22	1.35	1.39
25	YA	1610	A	C5-C6	-6.22	1.35	1.41
1	QA	758	G	C8-N7	6.22	1.34	1.30
25	YA	1675	C	N3-C4	-6.21	1.29	1.33
25	RA	127	A	N9-C4	-6.20	1.34	1.37
25	YA	1626	G	N7-C5	-6.18	1.35	1.39
25	RA	1899	G	C2-N3	6.18	1.37	1.32
25	RA	654(T)	C	C1'-N1	6.17	1.58	1.48
25	RA	1665	A	N7-C5	-6.17	1.35	1.39
25	YA	2518	A	N9-C4	-6.16	1.34	1.37
25	YA	1380	G	N7-C5	-6.15	1.35	1.39
25	RA	2712(A)	A	N7-C5	-6.14	1.35	1.39
25	YA	687	C	C4-C5	-6.14	1.38	1.43
1	QA	299	G	N1-C2	6.11	1.42	1.37
25	YA	2432	A	N7-C5	-6.10	1.35	1.39
25	YA	563	G	C6-N1	-6.10	1.35	1.39
25	YA	1698	A	N7-C5	-6.09	1.35	1.39
25	YA	2430	A	N3-C4	-6.09	1.31	1.34
25	YA	766	C	N3-C4	-6.09	1.29	1.33
25	YA	2451	A	N7-C5	-6.08	1.35	1.39
25	YA	469	G	N7-C5	-6.07	1.35	1.39
25	RA	685	A	C5-C4	-6.07	1.34	1.38
25	YA	1774	C	N1-C2	-6.07	1.34	1.40
25	YA	1610	A	N7-C5	-6.05	1.35	1.39
25	RA	471	A	C5-C6	-6.04	1.35	1.41
25	YA	1203	G	N9-C4	6.03	1.42	1.38
25	YA	2059	A	N9-C4	-6.03	1.34	1.37
1	QA	1346	A	C3'-C2'	6.02	1.59	1.52
25	YA	818	G	N7-C5	-6.02	1.35	1.39
25	YA	2252	G	C5-C6	-6.01	1.36	1.42
25	YA	503	A	N7-C5	-6.00	1.35	1.39
25	RA	2032	G	N7-C5	6.00	1.42	1.39
25	YA	627	A	N9-C4	-5.99	1.34	1.37
25	RA	2490	G	C2-N3	5.99	1.37	1.32
25	YA	1543	A	C2'-C1'	-5.99	1.46	1.53
25	YA	1616	A	N9-C4	-5.99	1.34	1.37
25	YA	298	G	N9-C8	5.98	1.42	1.37
25	RA	2553	G	N3-C4	-5.98	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	XA	247	G	N9-C4	5.98	1.42	1.38
25	RA	776	G	N9-C4	-5.96	1.33	1.38
25	YA	216	A	C5-C6	-5.95	1.35	1.41
25	YA	1378	A	N3-C4	-5.94	1.31	1.34
25	YA	775	G	N7-C5	-5.93	1.35	1.39
25	YA	2686	G	N9-C4	5.93	1.42	1.38
25	YA	701	G	N3-C4	-5.93	1.31	1.35
25	YA	681	G	N3-C4	-5.92	1.31	1.35
25	YA	1571	A	N3-C4	-5.91	1.31	1.34
25	YA	574	C	N1-C6	-5.90	1.33	1.37
1	QA	195	A	N9-C4	5.89	1.41	1.37
1	XA	535	A	N9-C4	-5.89	1.34	1.37
25	YA	140	A	C5-C6	-5.88	1.35	1.41
25	YA	793	A	C5-C4	-5.88	1.34	1.38
25	YA	2621	A	N9-C4	-5.88	1.34	1.37
25	YA	682	G	N7-C5	-5.88	1.35	1.39
25	YA	782	A	N7-C5	-5.87	1.35	1.39
25	RA	1315	C	N3-C4	-5.86	1.29	1.33
25	YA	1771	C	N1-C6	-5.85	1.33	1.37
25	YA	2597	G	N3-C4	-5.84	1.31	1.35
25	YA	2577	A	N9-C4	-5.83	1.34	1.37
25	YA	960	A	N9-C4	-5.82	1.34	1.37
1	XA	1370	G	C5-C4	5.82	1.42	1.38
25	YA	512	G	C8-N7	5.81	1.34	1.30
25	YA	1690	A	N9-C4	-5.81	1.34	1.37
1	QA	353	A	N9-C4	-5.81	1.34	1.37
25	RA	2451	A	N9-C4	-5.81	1.34	1.37
25	RA	2251	G	N3-C4	-5.80	1.31	1.35
25	YA	820	A	N3-C4	-5.79	1.31	1.34
25	RA	789	A	N9-C4	-5.78	1.34	1.37
25	YA	2502	G	N7-C5	-5.78	1.35	1.39
25	YA	1972	A	N7-C5	-5.77	1.35	1.39
25	RA	1776	G	N7-C5	-5.74	1.35	1.39
25	YA	465	G	N9-C4	5.74	1.42	1.38
25	YA	502	A	N3-C4	-5.72	1.31	1.34
25	RA	2002	G	C8-N7	5.72	1.34	1.30
25	YA	966	G	N3-C4	-5.71	1.31	1.35
25	RA	1783	A	N9-C4	-5.71	1.34	1.37
25	YA	689	A	N7-C5	-5.70	1.35	1.39
25	YA	1783	A	N9-C4	-5.70	1.34	1.37
25	YA	2054	A	N7-C5	-5.70	1.35	1.39
25	YA	2062	A	C6-N1	5.70	1.39	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	2060	A	C5-C4	-5.70	1.34	1.38
25	YA	788	A	N7-C5	-5.69	1.35	1.39
1	QA	768	A	N9-C4	-5.69	1.34	1.37
25	YA	785	G	N7-C5	-5.68	1.35	1.39
1	XA	900	A	N9-C4	-5.68	1.34	1.37
25	RA	1786	A	N7-C5	-5.67	1.35	1.39
1	QA	1227	A	N9-C4	-5.66	1.34	1.37
25	RA	1308	A	N7-C5	-5.65	1.35	1.39
25	YA	1204	A	N9-C4	-5.65	1.34	1.37
1	XA	520	A	N9-C4	-5.64	1.34	1.37
25	YA	28	A	N7-C5	-5.64	1.35	1.39
25	YA	774	A	N9-C4	-5.64	1.34	1.37
25	YA	1621	U	N1-C2	-5.64	1.33	1.38
1	QA	347	G	N9-C4	-5.62	1.33	1.38
25	YA	2583	G	N7-C5	-5.61	1.35	1.39
25	RA	37	C	N3-C4	-5.60	1.30	1.33
25	RA	821	A	N3-C4	-5.59	1.31	1.34
25	RA	1328	G	N3-C4	5.59	1.39	1.35
25	YA	1607	C	N3-C4	5.59	1.37	1.33
25	YA	502	A	N7-C5	-5.58	1.35	1.39
25	YA	575	A	N3-C4	-5.57	1.31	1.34
25	RA	2062	A	P-O5'	-5.57	1.54	1.59
25	RA	1213	A	N9-C4	-5.56	1.34	1.37
25	YA	74	A	N3-C4	-5.55	1.31	1.34
25	YA	2450	A	C6-N1	-5.55	1.31	1.35
25	RA	607	U	N3-C4	-5.54	1.33	1.38
25	YA	701	G	N7-C5	-5.54	1.35	1.39
25	RA	2409	G	C5-C6	-5.54	1.36	1.42
25	YA	686	G	C5-C6	-5.54	1.36	1.42
1	QA	353	A	N3-C4	-5.53	1.31	1.34
25	RA	1786	A	C5-C6	-5.52	1.36	1.41
25	YA	473	G	C6-N1	-5.52	1.35	1.39
25	YA	1788	C	N1-C2	-5.52	1.34	1.40
25	YA	2062	A	P-O5'	-5.52	1.54	1.59
25	YA	1800	C	N1-C6	-5.51	1.33	1.37
25	YA	1956	U	C4-O4	5.51	1.28	1.23
25	YA	966	G	N9-C4	-5.51	1.33	1.38
25	YA	2441	C	N3-C4	-5.51	1.30	1.33
25	RA	727	A	N9-C4	5.50	1.41	1.37
25	RA	2713	A	N9-C4	-5.50	1.34	1.37
25	YA	450	G	C5-C4	5.50	1.42	1.38
1	XA	792	A	C5-C6	-5.50	1.36	1.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	1899	G	C2-N3	-5.49	1.28	1.32
25	YA	1602	U	C4-O4	5.49	1.28	1.23
25	YA	2432	A	N9-C4	-5.49	1.34	1.37
25	YA	1762	A	C5-C6	5.48	1.46	1.41
25	YA	2589	A	N9-C4	-5.48	1.34	1.37
25	YA	1328	G	C2-N3	5.48	1.37	1.32
25	RA	1566	A	N9-C4	-5.47	1.34	1.37
25	YA	1774	C	N1-C6	-5.47	1.33	1.37
25	RA	687	C	C4-C5	-5.46	1.38	1.43
25	YA	1607	C	N1-C2	5.45	1.45	1.40
25	YA	793	A	N9-C8	-5.45	1.33	1.37
25	RA	793	A	C5-C6	-5.45	1.36	1.41
25	RA	571	A	N9-C4	-5.45	1.34	1.37
25	RA	252	G	N3-C4	-5.45	1.31	1.35
25	RA	1809	A	N7-C5	-5.44	1.35	1.39
25	RA	1821	A	C5-C6	-5.44	1.36	1.41
25	YA	1829	A	N3-C4	-5.44	1.31	1.34
25	YA	2607	G	N7-C5	-5.44	1.35	1.39
25	YA	1256	G	C6-N1	-5.44	1.35	1.39
25	RA	686	G	N7-C5	-5.43	1.35	1.39
25	RA	2421	G	N9-C4	5.43	1.42	1.38
25	RA	2251	G	C6-N1	-5.43	1.35	1.39
25	YA	1613	G	C5-C6	-5.43	1.36	1.42
25	YA	1189	A	N9-C4	-5.43	1.34	1.37
25	RA	2433	A	N3-C4	-5.41	1.31	1.34
25	YA	2237	G	N9-C4	5.41	1.42	1.38
25	YA	2844	G	N7-C5	-5.40	1.36	1.39
25	YA	246	C	N1-C2	-5.40	1.34	1.40
25	YA	228	A	N9-C4	5.39	1.41	1.37
25	RA	680	G	C6-N1	-5.39	1.35	1.39
25	YA	774	A	C5-C6	-5.39	1.36	1.41
25	YA	1328	G	N9-C4	5.39	1.42	1.38
25	YA	1605	C	N3-C4	-5.39	1.30	1.33
25	YA	613	U	N1-C2	-5.38	1.33	1.38
25	YA	2014	A	C5-C6	-5.38	1.36	1.41
25	RA	195	A	N7-C5	5.38	1.42	1.39
25	YA	256	A	C5-C6	-5.38	1.36	1.41
25	YA	2550	G	N7-C5	-5.38	1.36	1.39
25	RA	793	A	N9-C4	-5.38	1.34	1.37
1	XA	864	A	N9-C4	5.37	1.41	1.37
25	RA	1021	A	N9-C4	-5.37	1.34	1.37
25	YA	1803	A	N9-C4	-5.37	1.34	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	QA	767	A	N9-C4	-5.35	1.34	1.37
25	YA	469	G	N3-C4	-5.35	1.31	1.35
25	YA	2446	G	N7-C5	-5.35	1.36	1.39
1	XA	1418	A	N9-C4	-5.34	1.34	1.37
25	YA	454	A	N3-C4	-5.33	1.31	1.34
25	YA	1367	A	C5-C6	-5.33	1.36	1.41
25	RA	2452	C	N1-C6	-5.33	1.33	1.37
25	YA	2587	A	N9-C4	-5.33	1.34	1.37
25	YA	2273	A	C5-C6	-5.32	1.36	1.41
25	YA	2450	A	C5-C4	-5.32	1.35	1.38
25	RA	307	G	N9-C4	5.31	1.42	1.38
25	YA	2758	A	N9-C4	-5.31	1.34	1.37
25	YA	686	G	N9-C8	-5.30	1.34	1.37
25	YA	205	G	N9-C8	-5.30	1.34	1.37
25	YA	1890	A	C5-C6	-5.29	1.36	1.41
25	RA	1638	C	N3-C4	-5.29	1.30	1.33
1	QA	758	G	N7-C5	5.29	1.42	1.39
25	YA	1606	G	C8-N7	-5.28	1.27	1.30
25	RA	774	A	N9-C4	-5.28	1.34	1.37
25	RA	747	U	N1-C2	-5.28	1.33	1.38
1	XA	901	A	C5-C6	-5.27	1.36	1.41
25	YA	457	A	N3-C4	-5.27	1.31	1.34
25	YA	457	A	N7-C5	-5.27	1.36	1.39
1	QA	498	A	N9-C4	-5.27	1.34	1.37
25	RA	2062	A	C6-N1	5.26	1.39	1.35
25	YA	2004	G	N7-C5	-5.25	1.36	1.39
25	YA	1190	G	N9-C4	-5.24	1.33	1.38
25	YA	575	A	N7-C5	-5.24	1.36	1.39
25	YA	74	A	C6-N1	-5.24	1.31	1.35
25	YA	450	G	C6-O6	5.24	1.28	1.24
25	YA	574	C	N1-C2	-5.23	1.34	1.40
25	YA	2712(A)	A	N7-C5	-5.23	1.36	1.39
25	RA	2048	G	C6-N1	-5.23	1.35	1.39
1	XA	423	G	N9-C4	5.22	1.42	1.38
25	YA	745	G	N3-C4	-5.22	1.31	1.35
25	RA	2553	G	C6-N1	-5.22	1.35	1.39
25	YA	2273	A	N7-C5	-5.22	1.36	1.39
25	YA	953	A	N9-C4	-5.21	1.34	1.37
25	YA	2502	G	N3-C4	-5.21	1.31	1.35
1	XA	1397	C	N1-C6	5.21	1.40	1.37
27	RD	241	PRO	N-CD	5.21	1.55	1.47
25	YA	1701	A	N7-C5	-5.21	1.36	1.39

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	YA	952	G	N7-C5	-5.21	1.36	1.39
25	YA	1903	G	N9-C4	-5.21	1.33	1.38
1	XA	535	A	N3-C4	-5.20	1.31	1.34
25	YA	1668	A	N3-C4	-5.20	1.31	1.34
25	YA	1824	G	N7-C5	-5.20	1.36	1.39
25	YA	972	G	C6-N1	-5.19	1.35	1.39
25	RA	1803	A	C5-C4	-5.19	1.35	1.38
25	YA	2441	C	C2-N3	-5.18	1.31	1.35
25	RA	751	A	N7-C5	-5.18	1.36	1.39
1	XA	274	A	N9-C4	-5.17	1.34	1.37
25	YA	138	G	N7-C5	5.17	1.42	1.39
25	RA	2409	G	N7-C5	-5.16	1.36	1.39
25	YA	2020	A	C6-N1	-5.16	1.31	1.35
25	YA	2247	A	C5-C6	-5.15	1.36	1.41
1	QA	782	A	N9-C4	-5.15	1.34	1.37
25	YA	2256	G	N1-C2	-5.13	1.33	1.37
25	YA	1567	A	N9-C4	-5.13	1.34	1.37
25	YA	1905	C	N1-C6	-5.13	1.34	1.37
25	RA	28	A	N3-C4	-5.13	1.31	1.34
25	RA	568	U	C4-O4	5.13	1.27	1.23
25	RA	2614	A	C6-N1	5.13	1.39	1.35
25	YA	1774	C	C2-N3	-5.13	1.31	1.35
25	YA	784	A	C5-C4	-5.12	1.35	1.38
25	RA	1613	G	N7-C5	-5.12	1.36	1.39
25	RA	462	C	N1-C6	-5.12	1.34	1.37
25	YA	764	A	N9-C4	-5.12	1.34	1.37
25	YA	1813	G	N7-C5	-5.12	1.36	1.39
25	YA	2073	C	N3-C4	-5.11	1.30	1.33
25	RA	761	A	N9-C4	-5.11	1.34	1.37
25	YA	317	G	C6-N1	-5.10	1.35	1.39
25	RA	776	G	N7-C5	5.10	1.42	1.39
1	XA	713	G	N9-C4	5.10	1.42	1.38
25	YA	78	A	C5-C6	-5.10	1.36	1.41
25	RA	572	A	C6-N1	-5.09	1.31	1.35
25	YA	1774	C	N3-C4	-5.09	1.30	1.33
25	RA	2837	G	C8-N7	5.08	1.33	1.30
25	YA	197	A	N9-C4	-5.08	1.34	1.37
25	YA	799	G	C6-N1	-5.08	1.35	1.39
26	YB	99	A	N9-C4	-5.08	1.34	1.37
25	YA	117	G	C6-N1	-5.08	1.35	1.39
25	YA	872	A	N9-C4	5.08	1.40	1.37
25	YA	2247	A	C6-N1	-5.07	1.31	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
25	RA	821	A	N7-C5	-5.07	1.36	1.39
25	RA	1307	A	N9-C4	-5.07	1.34	1.37
25	YA	1528	A	N7-C5	-5.06	1.36	1.39
25	YA	1613	G	N7-C5	-5.06	1.36	1.39
25	YA	2601	C	C4-N4	-5.06	1.29	1.33
25	RA	1299	G	N9-C4	-5.05	1.33	1.38
25	RA	687	C	N1-C6	-5.05	1.34	1.37
25	YA	1902	C	N1-C6	-5.05	1.34	1.37
25	RA	761	A	N7-C5	5.05	1.42	1.39
25	RA	689	A	N9-C4	-5.05	1.34	1.37
25	YA	452	G	N1-C2	-5.05	1.33	1.37
25	YA	1773	A	N3-C4	-5.05	1.31	1.34
25	YA	625	G	N9-C4	-5.04	1.33	1.38
25	YA	2587	A	N7-C5	-5.04	1.36	1.39
25	YA	799	G	N7-C5	-5.03	1.36	1.39
25	YA	216	A	C5-C4	-5.03	1.35	1.38
25	YA	1816	G	C6-N1	5.03	1.43	1.39
25	RA	216	A	C5-C6	-5.03	1.36	1.41
25	RA	1969	A	N3-C4	-5.02	1.31	1.34
25	YA	1270	C	N1-C6	-5.02	1.34	1.37
25	YA	1477	A	N7-C5	-5.02	1.36	1.39
12	XL	48	PRO	N-CD	5.01	1.54	1.47
25	RA	471	A	N9-C4	-5.01	1.34	1.37
25	RA	607	U	C2-N3	-5.01	1.34	1.37
25	YA	282	A	N3-C4	-5.01	1.31	1.34
27	YD	241	PRO	N-CD	5.01	1.54	1.47
25	RA	768	G	C6-N1	-5.00	1.36	1.39
25	YA	505	A	N9-C4	-5.00	1.34	1.37
25	YA	1254	A	N3-C4	-5.00	1.31	1.34
25	YA	1953	A	N9-C4	-5.00	1.34	1.37

All (7980) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	761	A	N1-C6-N6	19.13	130.07	118.60
25	RA	2490	G	C6-C5-N7	-18.87	119.08	130.40
25	RA	783	A	C6-C5-N7	-17.19	120.27	132.30
25	RA	783	A	N1-C6-N6	16.89	128.74	118.60
25	YA	783	A	N1-C6-N6	16.68	128.61	118.60
25	RA	2490	G	C4-C5-N7	16.43	117.37	110.80
25	YA	783	A	C6-C5-N7	-15.94	121.15	132.30
25	YA	450	G	C5-C6-N1	-15.52	103.74	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2490	G	N3-C4-N9	15.10	135.06	126.00
25	YA	783	A	C5-N7-C8	-14.97	96.41	103.90
25	YA	761	A	C6-C5-N7	-14.60	122.08	132.30
1	XA	1412	C	C6-N1-C2	14.60	126.14	120.30
25	YA	761	A	C5-N7-C8	-14.24	96.78	103.90
25	RA	2490	G	C5-C6-O6	-14.24	120.06	128.60
25	YA	701	G	N1-C6-O6	13.79	128.17	119.90
25	YA	2506	U	N3-C2-O2	-13.79	112.55	122.20
25	RA	2490	G	C4-N9-C1'	13.75	144.38	126.50
25	RA	2556	C	N1-C2-O2	13.62	127.07	118.90
25	RA	1899	G	C6-C5-N7	-13.57	122.26	130.40
25	YA	570	G	C5-C6-N1	-13.47	104.77	111.50
25	RA	2490	G	N1-C6-O6	13.40	127.94	119.90
25	YA	701	G	C6-C5-N7	-13.38	122.37	130.40
25	YA	842	G	N1-C6-O6	13.35	127.91	119.90
25	YA	1190	G	C5-N7-C8	-13.17	97.71	104.30
25	RA	2593	U	N3-C4-C5	-13.16	106.70	114.60
25	YA	761	A	C4-C5-N7	13.02	117.21	110.70
25	YA	1204	A	C2-N3-C4	-13.02	104.09	110.60
25	YA	783	A	C4-C5-N7	12.96	117.18	110.70
25	YA	613	U	N1-C2-O2	-12.93	113.75	122.80
25	RA	791	C	C6-N1-C2	12.89	125.46	120.30
25	YA	783	A	N7-C8-N9	12.87	120.23	113.80
25	YA	2681	C	C6-N1-C2	-12.84	115.17	120.30
25	YA	265	A	O4'-C1'-N9	12.79	118.44	108.20
25	YA	2432	A	N1-C6-N6	12.76	126.26	118.60
25	RA	2490	G	C8-N9-C1'	-12.76	110.42	127.00
25	RA	2450	A	C8-N9-C4	-12.72	100.71	105.80
25	RA	567	A	O5'-P-OP2	-12.71	94.27	105.70
25	RA	783	A	C5-N7-C8	-12.66	97.57	103.90
1	XA	299	G	C5-C6-N1	-12.64	105.18	111.50
25	YA	945	A	N1-C6-N6	12.62	126.17	118.60
25	YA	2542	A	C2-N3-C4	-12.62	104.29	110.60
25	RA	1795	C	C6-N1-C2	-12.56	115.28	120.30
25	YA	2576	G	O5'-P-OP2	-12.45	94.50	105.70
25	YA	1899	G	N3-C4-N9	-12.44	118.53	126.00
25	RA	1786	A	C2-N3-C4	-12.44	104.38	110.60
25	RA	733	G	C5-N7-C8	-12.43	98.08	104.30
25	RA	2490	G	N9-C4-C5	-12.41	100.44	105.40
1	XA	812	C	N1-C2-O2	12.41	126.34	118.90
25	RA	856	C	C5-C6-N1	12.40	127.20	121.00
1	QA	299	G	C5-C6-N1	-12.39	105.31	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	450	G	C4-C5-C6	12.37	126.22	118.80
25	YA	2451	A	C8-N9-C4	-12.35	100.86	105.80
25	RA	2447	G	C6-C5-N7	-12.29	123.03	130.40
25	YA	662	G	C6-C5-N7	-12.24	123.06	130.40
25	RA	1698	A	C2-N3-C4	-12.12	104.54	110.60
25	RA	783	A	C4-C5-C6	12.12	123.06	117.00
25	RA	2614	A	C6-N1-C2	-12.11	111.34	118.60
25	RA	2421	G	N3-C4-N9	12.09	133.25	126.00
25	RA	2614	A	C5-C6-N1	11.99	123.69	117.70
25	RA	1899	G	N3-C4-N9	11.97	133.18	126.00
25	RA	783	A	C4-C5-N7	11.95	116.68	110.70
25	RA	1437	C	C6-N1-C2	-11.86	115.56	120.30
22	XV	17	C	C2-N1-C1'	11.85	131.84	118.80
25	YA	338	G	N3-C4-C5	-11.84	122.68	128.60
25	YA	1228	G	N1-C6-O6	11.83	127.00	119.90
25	RA	1617	C	C6-N1-C2	11.82	125.03	120.30
25	YA	2544	G	N1-C6-O6	11.81	126.99	119.90
25	RA	1776	G	C6-C5-N7	-11.80	123.32	130.40
22	QV	17	C	C2-N1-C1'	11.80	131.78	118.80
25	YA	761	A	C5-C6-N6	-11.76	114.29	123.70
25	YA	1606	G	N3-C4-N9	11.72	133.03	126.00
25	RA	1624	G	N1-C6-O6	11.65	126.89	119.90
25	YA	2712(A)	A	N7-C8-N9	11.61	119.61	113.80
25	RA	2053	G	O5'-P-OP1	-11.61	95.26	105.70
25	YA	140	A	N1-C6-N6	11.60	125.56	118.60
25	RA	856	C	C6-N1-C2	-11.59	115.66	120.30
25	YA	1647	G	O5'-P-OP1	-11.59	95.27	105.70
25	YA	1776	G	O5'-P-OP1	-11.59	95.27	105.70
25	RA	2394	C	N1-C2-O2	11.58	125.85	118.90
25	RA	676	A	N7-C8-N9	11.55	119.58	113.80
25	RA	450	G	C5-C6-N1	-11.52	105.74	111.50
25	RA	780	G	C8-N9-C4	-11.48	101.81	106.40
25	RA	527	C	N1-C2-O2	11.47	125.78	118.90
1	QA	1301	U	N3-C2-O2	-11.45	114.19	122.20
25	RA	2712(A)	A	C8-N9-C4	-11.44	101.22	105.80
25	YA	1899	G	C2-N3-C4	-11.44	106.18	111.90
25	YA	1158	C	C6-N1-C2	11.43	124.87	120.30
25	YA	2712	U	C5-C4-O4	11.41	132.75	125.90
25	YA	1899	G	N3-C4-C5	11.40	134.30	128.60
25	RA	2032	G	C5-N7-C8	-11.39	98.61	104.30
25	RA	382	G	N1-C6-O6	11.36	126.72	119.90
25	YA	1409	C	C6-N1-C2	11.34	124.83	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2544	G	N1-C6-O6	11.29	126.67	119.90
25	RA	2506	U	N3-C2-O2	-11.27	114.31	122.20
25	YA	967	C	C6-N1-C2	11.25	124.80	120.30
25	YA	2000	G	C6-C5-N7	-11.24	123.66	130.40
25	YA	385	C	C6-N1-C2	-11.17	115.83	120.30
25	YA	1602	U	C6-N1-C2	-11.15	114.31	121.00
1	XA	729	A	N1-C6-N6	11.15	125.29	118.60
25	RA	2584	U	C5-C4-O4	11.15	132.59	125.90
25	RA	1899	G	N3-C2-N2	11.14	127.70	119.90
25	YA	1869	G	N3-C4-C5	-11.14	123.03	128.60
25	YA	1763	G	O5'-P-OP2	-11.12	95.69	105.70
1	QA	758	G	C5-N7-C8	-11.11	98.75	104.30
25	YA	246	C	C6-N1-C2	11.10	124.74	120.30
25	YA	761	A	N7-C8-N9	11.10	119.35	113.80
26	YB	82	G	C5-C6-N1	-11.10	105.95	111.50
25	YA	465	G	N3-C4-C5	-11.09	123.06	128.60
25	YA	342	G	O5'-P-OP2	-11.07	95.73	105.70
25	YA	512	G	O4'-C1'-N9	11.06	117.05	108.20
25	YA	140	A	C5-N7-C8	-11.05	98.37	103.90
25	RA	1786	A	N1-C6-N6	11.04	125.23	118.60
25	YA	1228	G	C5-C6-N1	-11.04	105.98	111.50
25	YA	1327	C	C6-N1-C2	-11.03	115.89	120.30
1	XA	328	C	C6-N1-C2	-11.02	115.89	120.30
25	RA	2870	C	C6-N1-C2	-11.01	115.90	120.30
25	RA	1190	G	C8-N9-C4	-10.97	102.01	106.40
25	RA	733	G	N7-C8-N9	10.97	118.58	113.10
25	YA	972	G	N1-C6-O6	-10.96	113.32	119.90
25	RA	783	A	N7-C8-N9	10.96	119.28	113.80
1	QA	1238	A	O5'-P-OP1	-10.95	95.85	105.70
25	YA	1403	C	N3-C2-O2	-10.94	114.24	121.90
1	QA	1064	G	C1'-O4'-C4'	10.93	118.64	109.90
25	YA	783	A	C8-N9-C4	-10.91	101.44	105.80
25	YA	1243	G	N1-C6-O6	10.90	126.44	119.90
25	YA	2393	A	C8-N9-C4	-10.89	101.44	105.80
25	RA	1786	A	C5-N7-C8	-10.87	98.46	103.90
25	YA	1979	C	C6-N1-C2	-10.85	115.96	120.30
25	YA	1190	G	C4-C5-N7	10.83	115.13	110.80
25	YA	309	G	N3-C4-C5	-10.83	123.19	128.60
25	RA	733	G	C8-N9-C4	-10.81	102.08	106.40
1	XA	691	G	C6-C5-N7	-10.81	123.92	130.40
25	YA	1204	A	C5-C6-N1	-10.80	112.30	117.70
25	RA	1821	A	N1-C6-N6	10.79	125.08	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2409	G	C4-C5-N7	10.78	115.11	110.80
25	YA	1840	G	C2-N3-C4	-10.77	106.52	111.90
25	YA	2490	G	C4-C5-N7	10.74	115.10	110.80
25	RA	676	A	C8-N9-C4	-10.74	101.50	105.80
25	RA	2584	U	C6-N1-C2	-10.73	114.56	121.00
1	XA	247	G	N3-C4-C5	-10.72	123.24	128.60
25	RA	116	C	C6-N1-C2	-10.71	116.01	120.30
25	RA	791	C	C5-C6-N1	-10.70	115.65	121.00
25	YA	142	G	N3-C4-C5	10.68	133.94	128.60
25	RA	1698	A	N1-C6-N6	10.65	124.99	118.60
25	YA	2544	G	C5-C6-O6	-10.64	122.21	128.60
25	RA	2032	G	N3-C4-C5	10.63	133.92	128.60
25	RA	2490	G	C5-N7-C8	-10.63	98.98	104.30
25	RA	1688	U	C6-N1-C2	-10.62	114.62	121.00
25	RA	74	A	C5-C6-N1	-10.58	112.41	117.70
25	YA	1332	G	C4-N9-C1'	10.58	140.25	126.50
25	YA	2032	G	N3-C4-C5	10.58	133.89	128.60
26	YB	79	C	C6-N1-C2	-10.57	116.07	120.30
25	RA	2011	U	N3-C2-O2	10.56	129.59	122.20
25	RA	391	G	N1-C6-O6	10.55	126.23	119.90
25	YA	1258	C	C6-N1-C2	10.54	124.52	120.30
25	RA	247	G	N1-C6-O6	-10.52	113.59	119.90
25	RA	915	C	C6-N1-C2	-10.52	116.09	120.30
25	RA	2614	A	C5-C6-N6	-10.51	115.29	123.70
25	YA	140	A	C4-C5-N7	10.50	115.95	110.70
25	YA	568	U	N3-C4-C5	-10.50	108.30	114.60
25	YA	2839	G	N1-C6-O6	10.48	126.19	119.90
25	YA	1271	G	C5-C6-N1	-10.47	106.27	111.50
25	YA	2712(A)	A	C8-N9-C4	-10.46	101.62	105.80
25	RA	1328	G	N3-C4-N9	10.45	132.27	126.00
25	YA	701	G	C5-C6-N1	-10.42	106.29	111.50
25	YA	1950	G	N3-C2-N2	10.41	127.19	119.90
25	YA	487	C	C6-N1-C2	-10.40	116.14	120.30
25	YA	1021	A	C2-N3-C4	-10.39	105.41	110.60
25	YA	1984	G	C5-C6-N1	-10.39	106.31	111.50
25	YA	2294	C	C6-N1-C2	-10.38	116.15	120.30
25	RA	1142(A)	A	C2-N3-C4	-10.37	105.41	110.60
1	XA	1054	C	C3'-C2'-C1'	10.37	109.79	101.50
25	YA	1840	G	C5-C6-N1	-10.35	106.33	111.50
25	RA	1022	G	N1-C6-O6	-10.35	113.69	119.90
25	RA	1931	U	C5-C4-O4	10.34	132.11	125.90
25	YA	1158	C	C5-C6-N1	-10.33	115.84	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	RB	54	G	C8-N9-C4	-10.31	102.28	106.40
25	YA	2518	A	N1-C6-N6	10.31	124.78	118.60
25	RA	1647	G	O5'-P-OP1	-10.29	96.44	105.70
1	QA	372	C	C5-C6-N1	10.29	126.14	121.00
25	YA	1888	G	C2-N3-C4	10.28	117.04	111.90
25	RA	733	G	C4-C5-N7	10.26	114.90	110.80
25	YA	2432	A	C2-N3-C4	-10.25	105.47	110.60
25	YA	1891	G	N1-C6-O6	10.23	126.04	119.90
25	RA	307	G	N3-C4-C5	-10.22	123.49	128.60
25	YA	2820	A	N1-C6-N6	10.21	124.73	118.60
1	XA	691	G	N3-C4-N9	10.21	132.13	126.00
25	YA	209	C	C6-N1-C2	10.21	124.38	120.30
25	RA	783	A	C2-N3-C4	-10.21	105.50	110.60
25	YA	2054	A	C8-N9-C4	-10.21	101.72	105.80
25	RA	2430	A	C5-C6-N1	-10.19	112.61	117.70
1	XA	1237	C	C6-N1-C2	-10.19	116.23	120.30
25	YA	481	G	O5'-P-OP2	-10.18	96.54	105.70
1	XA	808	C	C6-N1-C2	-10.18	116.23	120.30
25	RA	1698	A	C5-C6-N1	-10.17	112.61	117.70
1	XA	315	A	C8-N9-C4	10.17	109.87	105.80
25	RA	450	G	C4-C5-C6	10.16	124.90	118.80
1	XA	791	G	C5-C6-N1	-10.16	106.42	111.50
25	YA	662	G	C5-C6-N1	-10.16	106.42	111.50
25	RA	783	A	C5-C6-N1	-10.16	112.62	117.70
25	RA	1931	U	O5'-P-OP1	-10.15	96.56	105.70
25	RA	2421	G	N3-C4-C5	-10.14	123.53	128.60
25	RA	1665	A	C4-C5-C6	10.12	122.06	117.00
28	YE	21	VAL	C-N-CD	-10.10	98.38	120.60
25	RA	1940	U	C6-N1-C2	-10.10	114.94	121.00
25	RA	1786	A	C4-C5-N7	10.09	115.74	110.70
25	YA	783	A	C2-N3-C4	-10.08	105.56	110.60
25	RA	2004	G	N1-C6-O6	10.07	125.94	119.90
25	YA	2254	C	N1-C2-O2	-10.07	112.86	118.90
28	RE	21	VAL	C-N-CD	-10.07	98.45	120.60
25	YA	1613	G	N9-C4-C5	-10.06	101.38	105.40
25	RA	1786	A	C6-C5-N7	-10.05	125.26	132.30
25	YA	1786	A	C5-C6-N1	-10.04	112.68	117.70
25	YA	1613	G	C6-C5-N7	-10.04	124.37	130.40
1	QA	26	A	C8-N9-C4	10.04	109.82	105.80
25	YA	928	G	C8-N9-C4	-10.04	102.39	106.40
25	YA	1606	G	C8-N9-C4	10.02	110.41	106.40
1	XA	792	A	N1-C6-N6	10.01	124.61	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	701	G	C4-C5-C6	10.01	124.81	118.80
1	XA	1108	G	C5-C6-N1	-10.00	106.50	111.50
25	YA	1699	G	N9-C4-C5	9.99	109.40	105.40
25	RA	1623	G	N1-C6-O6	9.97	125.88	119.90
25	RA	1899	G	N1-C2-N2	-9.97	107.23	116.20
25	RA	929	G	C6-C5-N7	-9.97	124.42	130.40
25	RA	2446	G	O5'-P-OP2	-9.97	96.73	105.70
25	RA	2455	G	N1-C6-O6	9.96	125.88	119.90
25	YA	852	G	O5'-P-OP2	-9.96	96.73	105.70
25	YA	697	C	C6-N1-C2	-9.93	116.33	120.30
25	YA	1606	G	C8-N9-C1'	-9.93	114.09	127.00
25	RA	2516	G	N1-C6-O6	-9.93	113.94	119.90
25	RA	2712(A)	A	N7-C8-N9	9.92	118.76	113.80
1	XA	1201	A	C1'-O4'-C4'	-9.92	101.96	109.90
25	YA	2251	G	N1-C2-N3	9.92	129.85	123.90
25	YA	338	G	N3-C4-N9	9.92	131.95	126.00
25	RA	1269	A	C2-N3-C4	-9.91	105.64	110.60
26	YB	64	C	C6-N1-C2	9.91	124.26	120.30
25	RA	956	G	C5-C6-N1	-9.91	106.55	111.50
1	XA	1204	A	N1-C6-N6	9.90	124.54	118.60
25	RA	676	A	C5-N7-C8	-9.89	98.95	103.90
25	RA	2325	G	N1-C6-O6	9.89	125.84	119.90
25	YA	1613	G	N3-C4-N9	9.89	131.94	126.00
25	RA	1128	A	O5'-P-OP2	-9.89	96.80	105.70
25	YA	2080	G	C6-C5-N7	-9.88	124.47	130.40
1	QA	189	U	C1'-O4'-C4'	9.88	117.80	109.90
25	YA	2032	G	C5-N7-C8	-9.88	99.36	104.30
25	YA	1311	G	N9-C4-C5	-9.87	101.45	105.40
1	QA	1432	G	N7-C8-N9	9.87	118.03	113.10
25	YA	2237	G	N3-C4-N9	9.87	131.92	126.00
25	RA	1786	A	C5-C6-N1	-9.86	112.77	117.70
25	YA	1607	C	N1-C2-O2	9.85	124.81	118.90
1	QA	1301	U	N1-C2-O2	9.83	129.68	122.80
25	RA	1791	A	O5'-P-OP1	-9.83	96.85	105.70
1	QA	789	U	C6-N1-C2	-9.83	115.10	121.00
25	YA	1840	G	N1-C6-O6	9.83	125.80	119.90
25	RA	2048	G	C8-N9-C4	-9.82	102.47	106.40
25	RA	697	C	C6-N1-C2	-9.82	116.37	120.30
25	RA	1698	A	C6-C5-N7	-9.82	125.43	132.30
25	RA	1619	G	C5-C6-O6	-9.82	122.71	128.60
25	RA	1304	C	N3-C4-C5	9.80	125.82	121.90
25	RA	2490	G	N7-C8-N9	9.80	118.00	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2231	C	C6-N1-C2	-9.79	116.38	120.30
1	XA	1235	U	C5-C6-N1	9.79	127.59	122.70
25	YA	63	U	C6-N1-C2	-9.78	115.14	121.00
25	YA	458	G	C4-C5-N7	-9.78	106.89	110.80
25	YA	393	C	C6-N1-C2	9.77	124.21	120.30
26	YB	81	G	C4-C5-N7	9.77	114.71	110.80
1	XA	895	G	N1-C6-O6	9.76	125.76	119.90
25	YA	1404	C	O5'-P-OP1	-9.76	96.92	105.70
25	RA	252	G	N9-C4-C5	9.74	109.30	105.40
25	RA	694	U	O5'-P-OP2	-9.74	96.93	105.70
25	RA	1130	U	P-O3'-C3'	9.74	131.39	119.70
25	YA	696	G	N1-C6-O6	9.73	125.74	119.90
25	YA	613	U	N3-C2-O2	9.73	129.01	122.20
25	YA	863	A	O5'-P-OP2	-9.71	96.96	105.70
25	YA	662	G	N1-C6-O6	9.71	125.73	119.90
25	YA	1947	C	C6-N1-C2	-9.70	116.42	120.30
25	RA	2430	A	C2-N3-C4	-9.68	105.76	110.60
25	YA	1950	G	C4-N9-C1'	9.68	139.09	126.50
25	RA	330	A	N1-C6-N6	9.68	124.41	118.60
26	RB	43	C	C6-N1-C2	-9.67	116.43	120.30
1	QA	789	U	N3-C2-O2	-9.66	115.44	122.20
25	YA	780	G	C8-N9-C4	-9.66	102.54	106.40
25	YA	2432	A	C6-C5-N7	-9.65	125.54	132.30
25	RA	2032	G	C4-C5-N7	9.65	114.66	110.80
25	YA	568	U	N1-C2-O2	-9.64	116.05	122.80
25	RA	929	G	C4-N9-C1'	9.64	139.03	126.50
25	YA	2682	U	OP1-P-OP2	-9.64	105.14	119.60
25	RA	1776	G	N1-C6-O6	9.64	125.68	119.90
25	RA	184	C	C6-N1-C2	9.62	124.15	120.30
25	RA	2073	C	N1-C2-O2	-9.61	113.13	118.90
25	RA	2287	A	C2-N3-C4	-9.60	105.80	110.60
1	QA	372	C	C2-N1-C1'	9.60	129.36	118.80
25	YA	1259	G	C5-C6-O6	-9.59	122.84	128.60
25	RA	184	C	C5-C6-N1	-9.59	116.21	121.00
25	YA	1613	G	C8-N9-C1'	-9.58	114.55	127.00
25	YA	1602	U	N3-C4-C5	-9.58	108.85	114.60
25	RA	1236	G	N1-C6-O6	9.57	125.64	119.90
25	RA	2437	U	N1-C2-N3	9.57	120.64	114.90
25	YA	1776	G	C4-N9-C1'	9.56	138.93	126.50
25	RA	1021	A	C2-N3-C4	-9.55	105.82	110.60
25	YA	867	C	C6-N1-C2	-9.56	116.48	120.30
1	XA	691	G	C4-C5-C6	9.55	124.53	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1306	C	C6-N1-C2	-9.54	116.48	120.30
1	XA	1200	C	N1-C2-O2	9.54	124.62	118.90
25	YA	2588	G	O5'-P-OP2	-9.51	97.14	105.70
25	YA	836	G	C4-C5-N7	9.50	114.60	110.80
25	RA	929	G	N3-C4-C5	-9.49	123.86	128.60
25	YA	2590	A	N1-C6-N6	9.49	124.29	118.60
25	RA	140	A	C5-N7-C8	-9.48	99.16	103.90
1	QA	703	G	N3-C4-N9	9.48	131.69	126.00
25	RA	1190	G	N7-C8-N9	9.47	117.84	113.10
25	RA	2503	A	C8-N9-C4	-9.47	102.01	105.80
25	YA	1956	U	N3-C4-C5	-9.47	108.92	114.60
1	XA	1412	C	C5-C6-N1	-9.47	116.27	121.00
25	RA	673	C	C6-N1-C2	-9.46	116.52	120.30
25	YA	637	A	C8-N9-C4	-9.46	102.02	105.80
25	RA	2516	G	C5-C6-N1	9.45	116.23	111.50
25	YA	1021	A	N7-C8-N9	9.44	118.52	113.80
25	YA	2430	A	C5-C6-N1	-9.44	112.98	117.70
25	RA	205	G	N3-C4-N9	9.43	131.66	126.00
25	YA	785	G	O5'-P-OP1	-9.42	97.22	105.70
25	YA	287	C	O4'-C1'-N1	9.42	115.74	108.20
25	RA	401	A	N1-C6-N6	-9.41	112.95	118.60
25	RA	1271	G	C5-C6-N1	-9.40	106.80	111.50
25	YA	465	G	C4-C5-C6	9.40	124.44	118.80
25	YA	38	A	N1-C6-N6	9.40	124.24	118.60
25	YA	2573	C	N1-C2-O2	9.39	124.54	118.90
25	YA	1776	G	C8-N9-C1'	-9.39	114.80	127.00
25	RA	1834	U	N3-C2-O2	-9.39	115.63	122.20
25	YA	1528	A	C8-N9-C4	-9.38	102.05	105.80
25	YA	1130	U	P-O3'-C3'	9.38	130.95	119.70
25	YA	379	G	N9-C4-C5	-9.37	101.65	105.40
25	YA	776	G	N7-C8-N9	9.37	117.79	113.10
25	RA	2592	G	O5'-P-OP2	-9.37	97.27	105.70
25	YA	1931	U	N1-C2-N3	9.37	120.52	114.90
25	RA	2468	G	C4-N9-C1'	9.37	138.68	126.50
25	RA	776	G	C5-N7-C8	-9.36	99.62	104.30
25	RA	2509	G	C6-C5-N7	-9.36	124.78	130.40
25	YA	1665	A	N1-C6-N6	9.36	124.22	118.60
1	QA	328	C	C2-N1-C1'	9.36	129.09	118.80
25	RA	2685	G	C5-C6-N1	-9.35	106.83	111.50
25	YA	783	A	C4-C5-C6	9.34	121.67	117.00
25	RA	929	G	N3-C4-N9	9.34	131.60	126.00
25	RA	1332	G	C2-N3-C4	-9.34	107.23	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1899	G	C4-N9-C1'	9.34	138.64	126.50
25	RA	1791	A	N1-C6-N6	-9.33	113.00	118.60
1	XA	293	G	N1-C6-O6	9.33	125.50	119.90
26	RB	70	C	C6-N1-C2	-9.33	116.57	120.30
25	YA	450	G	N1-C6-O6	9.33	125.50	119.90
25	YA	662	G	C2-N3-C4	-9.32	107.24	111.90
1	XA	1172	C	C6-N1-C2	-9.32	116.57	120.30
1	XA	186(A)	C	C6-N1-C2	-9.32	116.57	120.30
25	YA	140	A	N7-C8-N9	9.32	118.46	113.80
1	XA	808	C	N3-C4-C5	-9.31	118.17	121.90
25	YA	1647	G	C6-C5-N7	-9.30	124.82	130.40
25	RA	393	C	C6-N1-C2	-9.30	116.58	120.30
25	YA	327	G	C6-C5-N7	-9.30	124.82	130.40
25	YA	1383	C	C2-N1-C1'	9.30	129.03	118.80
25	YA	1021	A	C5-N7-C8	-9.29	99.26	103.90
25	RA	2002	G	C5-N7-C8	-9.28	99.66	104.30
25	YA	2655	G	C4-N9-C1'	-9.28	114.44	126.50
25	RA	1239	G	N1-C6-O6	9.27	125.46	119.90
25	YA	1786	A	C2-N3-C4	-9.27	105.97	110.60
1	QA	1499	A	C8-N9-C4	9.27	109.51	105.80
25	YA	1950	G	N7-C8-N9	9.25	117.73	113.10
25	RA	382	G	C5-C6-N1	-9.25	106.88	111.50
25	RA	2468	G	C6-C5-N7	-9.24	124.85	130.40
25	RA	2439	A	N7-C8-N9	9.24	118.42	113.80
26	RB	53	A	C8-N9-C4	-9.23	102.11	105.80
25	RA	2593	U	C6-N1-C2	-9.23	115.46	121.00
25	RA	2848	G	P-O3'-C3'	9.23	130.77	119.70
25	YA	2420	C	O5'-P-OP1	-9.23	97.39	105.70
25	RA	762	U	N3-C2-O2	9.22	128.65	122.20
26	YB	94	C	C6-N1-C2	-9.22	116.61	120.30
25	YA	1253	A	C4-C5-C6	-9.21	112.39	117.00
25	YA	568	U	N3-C4-O4	9.21	125.85	119.40
25	RA	1187	G	C5-C6-N1	-9.20	106.90	111.50
25	RA	1821	A	C5-C6-N6	-9.20	116.34	123.70
1	XA	691	G	N3-C4-C5	-9.18	124.01	128.60
25	YA	956	G	N9-C4-C5	-9.18	101.73	105.40
25	YA	473	G	N1-C6-O6	-9.17	114.40	119.90
25	YA	1342	A	C8-N9-C4	-9.17	102.13	105.80
25	YA	2217	G	N1-C6-O6	9.17	125.41	119.90
25	YA	1699	G	C4-C5-N7	-9.16	107.13	110.80
25	RA	2447	G	N1-C6-O6	9.16	125.40	119.90
25	YA	27	G	C4-C5-C6	9.16	124.30	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2681	C	N3-C4-C5	-9.16	118.24	121.90
25	RA	1835	G	N3-C4-C5	-9.15	124.02	128.60
25	RA	2211	G	N7-C8-N9	9.15	117.68	113.10
25	YA	1332	G	C8-N9-C1'	-9.15	115.11	127.00
1	XA	1054	C	C4'-C3'-C2'	-9.15	93.45	102.60
1	XA	529	G	C5-C6-O6	-9.14	123.11	128.60
1	XA	372	C	C2-N1-C1'	9.14	128.85	118.80
1	XA	792	A	C2-N3-C4	-9.14	106.03	110.60
25	YA	1881	C	C6-N1-C2	-9.14	116.64	120.30
25	YA	2251	G	C4-N9-C1'	9.13	138.37	126.50
25	RA	863	A	O5'-P-OP2	-9.13	97.48	105.70
25	RA	2584	U	N1-C2-N3	9.13	120.38	114.90
25	YA	1383	C	N1-C2-O2	9.12	124.37	118.90
25	YA	379	G	N3-C4-N9	9.12	131.47	126.00
25	YA	512	G	C8-N9-C1'	9.12	138.86	127.00
1	XA	1336	C	C6-N1-C2	-9.12	116.65	120.30
25	YA	791	C	C6-N1-C2	9.12	123.95	120.30
25	RA	2544	G	C6-C5-N7	-9.12	124.93	130.40
25	RA	22	C	N3-C4-C5	9.11	125.54	121.90
25	YA	27	G	N1-C2-N3	9.10	129.36	123.90
25	YA	1606	G	N9-C4-C5	-9.10	101.76	105.40
25	RA	1665	A	N1-C6-N6	9.10	124.06	118.60
25	YA	681	G	C2-N3-C4	-9.09	107.35	111.90
1	QA	337	C	C6-N1-C2	-9.09	116.66	120.30
25	YA	2237	G	N3-C4-C5	-9.09	124.06	128.60
25	YA	1763	G	N1-C6-O6	-9.09	114.45	119.90
25	YA	1311	G	C4-C5-N7	9.09	114.43	110.80
25	YA	2049	G	C2-N3-C4	-9.08	107.36	111.90
25	YA	1351	C	C6-N1-C2	-9.08	116.67	120.30
25	YA	662	G	C4-C5-C6	9.08	124.25	118.80
25	YA	2849	U	C5-C6-N1	-9.07	118.16	122.70
25	YA	494	G	C6-C5-N7	-9.07	124.96	130.40
1	XA	115	G	P-O3'-C3'	9.07	130.58	119.70
25	RA	484	C	C2-N1-C1'	9.07	128.77	118.80
25	YA	568	U	C6-N1-C2	-9.07	115.56	121.00
25	RA	74	A	C2-N3-C4	-9.06	106.07	110.60
25	RA	2069	G	O5'-P-OP1	-9.06	97.55	105.70
25	YA	2821	A	O5'-P-OP1	-9.06	97.55	105.70
25	RA	67	U	C5-C6-N1	9.05	127.23	122.70
25	YA	1311	G	N1-C6-O6	9.05	125.33	119.90
25	YA	2249	U	N3-C4-C5	-9.05	109.17	114.60
25	YA	240	G	C5-C6-N1	-9.05	106.98	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2073	C	C6-N1-C2	-9.05	116.68	120.30
25	YA	2258	C	N3-C2-O2	-9.04	115.57	121.90
25	RA	1204	A	C2-N3-C4	-9.04	106.08	110.60
25	YA	2487	G	C2-N3-C4	-9.04	107.38	111.90
25	RA	2409	G	C5-C6-O6	-9.04	123.18	128.60
1	XA	792	A	N9-C4-C5	-9.03	102.19	105.80
25	YA	570	G	C4-C5-N7	-9.03	107.19	110.80
25	YA	639	U	C5-C4-O4	9.03	131.32	125.90
1	XA	1380	U	C5-C6-N1	-9.01	118.19	122.70
25	YA	1328	G	N3-C4-C5	-9.01	124.09	128.60
25	RA	1496	A	N7-C8-N9	9.01	118.31	113.80
25	YA	1694	C	P-O3'-C3'	9.01	130.51	119.70
25	RA	2409	G	C6-C5-N7	-9.01	125.00	130.40
25	YA	863	A	C8-N9-C4	9.01	109.40	105.80
25	RA	745	G	N3-C4-N9	9.00	131.40	126.00
25	YA	567	A	O5'-P-OP2	-8.99	97.61	105.70
25	YA	1228	G	C6-C5-N7	-8.99	125.01	130.40
26	RB	54	G	N7-C8-N9	8.99	117.59	113.10
25	RA	130	C	C6-N1-C2	8.98	123.89	120.30
25	YA	1416	G	C8-N9-C4	8.98	109.99	106.40
1	XA	812	C	P-O3'-C3'	8.97	130.47	119.70
25	RA	944	G	N1-C2-N3	8.97	129.28	123.90
25	YA	621	A	N1-C6-N6	8.97	123.98	118.60
25	RA	397	G	C5-C6-N1	-8.97	107.02	111.50
1	XA	557	G	N3-C4-N9	8.97	131.38	126.00
25	YA	2490	G	C5-N7-C8	-8.97	99.82	104.30
25	RA	1829	A	O5'-P-OP2	-8.96	97.63	105.70
25	YA	582	G	C5-C6-O6	-8.96	123.22	128.60
1	XA	529	G	C4-C5-N7	8.96	114.38	110.80
25	YA	450	G	C4-N9-C1'	8.95	138.13	126.50
25	YA	1203	G	C8-N9-C4	-8.94	102.82	106.40
25	YA	1203	G	N3-C4-C5	-8.92	124.14	128.60
25	RA	28	A	C8-N9-C4	-8.91	102.23	105.80
25	YA	29	U	N3-C4-O4	8.91	125.64	119.40
25	RA	1817	G	N1-C6-O6	8.91	125.25	119.90
25	RA	2452	C	N3-C4-N4	8.91	124.24	118.00
25	YA	141	A	C5-N7-C8	-8.91	99.45	103.90
25	YA	142	G	C4-N9-C1'	-8.90	114.92	126.50
25	YA	2767	C	N1-C2-O2	8.90	124.24	118.90
25	RA	917	A	C2-N3-C4	-8.90	106.15	110.60
25	RA	2439	A	N1-C6-N6	8.90	123.94	118.60
25	YA	1950	G	C8-N9-C4	-8.89	102.84	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1206	G	C6-C5-N7	-8.88	125.07	130.40
25	RA	2583	G	N1-C6-O6	-8.87	114.58	119.90
25	YA	63	U	C5-C4-O4	8.87	131.22	125.90
25	RA	301	G	C8-N9-C4	8.86	109.94	106.40
25	RA	621	A	C2-N3-C4	-8.85	106.17	110.60
25	YA	1699	G	C5-C6-O6	8.85	133.91	128.60
1	XA	1201	A	O4'-C1'-C2'	8.85	115.56	107.60
25	RA	2421	G	C8-N9-C1'	-8.84	115.50	127.00
25	YA	1269	A	C8-N9-C4	-8.84	102.26	105.80
25	YA	768	G	N1-C6-O6	8.84	125.20	119.90
25	YA	2088	G	C2-N3-C4	-8.84	107.48	111.90
25	YA	1008	C	C6-N1-C2	8.83	123.83	120.30
25	YA	2032	G	C4-C5-N7	8.83	114.33	110.80
26	YB	13	A	N1-C6-N6	-8.83	113.30	118.60
1	XA	1370	G	C5-C6-N1	-8.83	107.09	111.50
25	RA	1899	G	C4-C5-N7	8.82	114.33	110.80
25	RA	198	C	N3-C4-N4	8.82	124.17	118.00
25	YA	856	C	O5'-P-OP1	-8.82	97.77	105.70
1	QA	1322	C	N1-C2-O2	8.81	124.19	118.90
25	RA	2439	A	C6-C5-N7	-8.81	126.13	132.30
25	YA	741	G	N3-C4-C5	-8.81	124.19	128.60
25	YA	2677	G	N3-C4-C5	-8.81	124.19	128.60
25	YA	696	G	C6-C5-N7	-8.81	125.11	130.40
25	RA	2843	G	N1-C6-O6	8.80	125.18	119.90
25	YA	1791	A	C8-N9-C4	-8.80	102.28	105.80
25	YA	2051	A	C8-N9-C4	8.80	109.32	105.80
25	RA	1266	G	C8-N9-C4	8.80	109.92	106.40
25	YA	786	C	C6-N1-C2	-8.79	116.78	120.30
25	YA	1869	G	C8-N9-C4	-8.79	102.88	106.40
25	YA	1774	C	N1-C2-O2	-8.79	113.62	118.90
25	YA	1296	G	O5'-P-OP2	-8.79	97.79	105.70
25	YA	2036	C	C6-N1-C2	-8.79	116.79	120.30
25	YA	2432	A	N9-C4-C5	-8.78	102.29	105.80
25	RA	768	G	N3-C4-C5	-8.78	124.21	128.60
25	RA	1371	G	N1-C6-O6	8.78	125.17	119.90
25	RA	450	G	C6-C5-N7	-8.78	125.13	130.40
25	YA	1930	G	C4-C5-N7	-8.78	107.29	110.80
25	YA	686	G	C6-C5-N7	-8.78	125.14	130.40
25	RA	2095	C	C6-N1-C2	-8.77	116.79	120.30
25	YA	2051	A	N9-C4-C5	-8.77	102.29	105.80
25	YA	972	G	C5-C6-O6	8.77	133.86	128.60
22	XV	17	C	C6-N1-C1'	-8.77	110.28	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	804	A	N1-C6-N6	-8.77	113.34	118.60
1	QA	1432	G	C8-N9-C4	-8.76	102.90	106.40
25	RA	379	G	N1-C6-O6	8.76	125.15	119.90
25	RA	1899	G	N9-C4-C5	-8.75	101.90	105.40
25	YA	2839	G	C5-C6-N1	-8.75	107.12	111.50
1	QA	1527	C	C6-N1-C2	8.75	123.80	120.30
1	QA	690	G	N1-C6-O6	8.74	125.15	119.90
25	RA	1204	A	O4'-C1'-N9	8.74	115.19	108.20
1	XA	314	C	C6-N1-C2	-8.74	116.80	120.30
25	YA	192	C	C6-N1-C2	8.74	123.80	120.30
25	YA	1190	G	N3-C4-C5	8.74	132.97	128.60
25	YA	2593	U	C6-N1-C2	-8.74	115.75	121.00
25	RA	1332	G	C6-C5-N7	-8.73	125.16	130.40
25	YA	83	G	C8-N9-C4	8.73	109.89	106.40
25	RA	530	G	N3-C2-N2	8.73	126.01	119.90
25	RA	2468	G	C4-C5-N7	8.73	114.29	110.80
25	YA	1695	G	C4-N9-C1'	8.73	137.84	126.50
25	RA	508	G	C4-C5-N7	8.72	114.29	110.80
25	RA	857	C	C6-N1-C2	-8.72	116.81	120.30
25	RA	1805	U	N1-C2-N3	8.72	120.13	114.90
36	YQ	81	VAL	CB-CA-C	-8.72	94.83	111.40
25	YA	613	U	C2-N1-C1'	-8.72	107.24	117.70
25	YA	2002	G	C5-N7-C8	-8.72	99.94	104.30
1	XA	226	G	C8-N9-C4	8.71	109.89	106.40
25	YA	2712	U	O4'-C1'-N1	8.71	115.17	108.20
25	RA	2591	C	N3-C2-O2	8.71	128.00	121.90
1	QA	778	G	N3-C4-C5	-8.71	124.25	128.60
25	YA	2032	G	N1-C6-O6	8.71	125.12	119.90
25	RA	674	G	C8-N9-C4	-8.71	102.92	106.40
25	YA	2031	A	O4'-C1'-N9	8.71	115.16	108.20
22	QV	17	C	C6-N1-C1'	-8.70	110.36	120.80
25	RA	2421	G	C4-N9-C1'	8.70	137.80	126.50
25	YA	1257	C	N1-C2-O2	-8.70	113.68	118.90
26	YB	81	G	C6-C5-N7	-8.69	125.19	130.40
25	RA	1623	G	C5-C6-O6	-8.69	123.39	128.60
25	YA	220	G	N1-C6-O6	8.69	125.11	119.90
25	YA	776	G	C5-N7-C8	-8.69	99.96	104.30
25	YA	2422	A	N1-C2-N3	-8.69	124.96	129.30
1	QA	686	U	N3-C2-O2	-8.68	116.12	122.20
25	YA	2593	U	N3-C4-C5	-8.68	109.39	114.60
26	YB	30	C	C6-N1-C2	-8.68	116.83	120.30
25	YA	523	C	C6-N1-C2	-8.67	116.83	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1595	G	N1-C6-O6	8.67	125.10	119.90
25	YA	461	C	N1-C2-O2	-8.67	113.70	118.90
25	YA	141	A	N7-C8-N9	8.66	118.13	113.80
25	YA	415	A	C8-N9-C4	8.66	109.26	105.80
1	QA	1470	G	N1-C6-O6	8.65	125.09	119.90
25	RA	573	G	C4-N9-C1'	8.65	137.75	126.50
25	RA	252	G	C8-N9-C4	-8.65	102.94	106.40
25	RA	2702	U	C5-C6-N1	8.65	127.03	122.70
25	YA	1192	G	N1-C6-O6	8.65	125.09	119.90
25	RA	2593	U	N3-C4-O4	8.65	125.45	119.40
36	RQ	81	VAL	CB-CA-C	-8.65	94.97	111.40
25	RA	2519	U	O5'-P-OP1	-8.64	97.92	105.70
25	YA	928	G	N7-C8-N9	8.64	117.42	113.10
25	YA	2422	A	C8-N9-C4	8.64	109.25	105.80
25	YA	974	G	C8-N9-C4	-8.64	102.94	106.40
25	YA	818	G	C4-N9-C1'	8.63	137.72	126.50
1	QA	1435	G	C2-N3-C4	-8.62	107.59	111.90
25	RA	1699	G	C4-C5-N7	-8.61	107.35	110.80
25	YA	452	G	N3-C4-C5	-8.61	124.29	128.60
25	YA	295	G	N1-C6-O6	8.61	125.06	119.90
25	YA	554	U	N3-C2-O2	-8.61	116.17	122.20
25	YA	774	A	N1-C6-N6	8.61	123.77	118.60
25	YA	1311	G	C6-C5-N7	-8.61	125.23	130.40
25	RA	382	G	C8-N9-C4	8.61	109.84	106.40
25	YA	338	G	C2-N3-C4	8.61	116.20	111.90
25	RA	512	G	N3-C4-N9	-8.60	120.84	126.00
25	RA	2383	G	C6-C5-N7	-8.60	125.24	130.40
25	YA	2686	G	O5'-P-OP2	-8.60	97.96	105.70
1	QA	1435	G	C5-C6-N1	-8.60	107.20	111.50
25	YA	1903	G	O5'-P-OP2	-8.60	97.97	105.70
25	RA	702	G	C4-N9-C1'	8.59	137.67	126.50
25	RA	932	G	N3-C4-N9	-8.59	120.84	126.00
25	RA	1471	A	C8-N9-C4	-8.59	102.36	105.80
25	RA	1624	G	C6-C5-N7	-8.59	125.25	130.40
25	RA	205	G	C5-C6-N1	8.58	115.79	111.50
25	RA	1678	G	N3-C4-N9	-8.58	120.85	126.00
1	XA	691	G	N1-C6-O6	8.58	125.05	119.90
25	YA	2767	C	N3-C2-O2	-8.58	115.89	121.90
1	XA	893	C	N1-C2-O2	8.58	124.05	118.90
1	QA	792	A	P-O3'-C3'	8.57	129.99	119.70
1	QA	1307	U	C5-C6-N1	8.57	126.98	122.70
25	YA	1950	G	N1-C6-O6	-8.56	114.76	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1619	G	C4-C5-N7	8.56	114.22	110.80
25	YA	1964	G	C5-C6-O6	-8.55	123.47	128.60
25	YA	944	G	C5-C6-N1	-8.54	107.23	111.50
25	YA	2430	A	C2-N3-C4	-8.54	106.33	110.60
25	YA	1496	A	N7-C8-N9	8.53	118.07	113.80
25	YA	1621	U	N3-C2-O2	8.54	128.18	122.20
25	YA	2688	U	C5-C4-O4	8.53	131.02	125.90
1	QA	895	G	N1-C6-O6	8.53	125.02	119.90
25	RA	52	A	C8-N9-C4	-8.53	102.39	105.80
25	YA	1560	G	N1-C6-O6	8.53	125.02	119.90
25	YA	642	G	C8-N9-C4	-8.53	102.99	106.40
25	RA	1899	G	C8-N9-C1'	-8.52	115.92	127.00
25	RA	140	A	C4-C5-N7	8.52	114.96	110.70
25	YA	1332	G	C6-C5-N7	-8.52	125.29	130.40
25	RA	1208	C	C6-N1-C2	8.51	123.71	120.30
25	YA	140	A	C6-C5-N7	-8.51	126.34	132.30
25	RA	2584	U	N3-C4-C5	-8.51	109.50	114.60
25	YA	503	A	N1-C2-N3	8.50	133.55	129.30
25	RA	1223	C	N1-C2-O2	-8.50	113.80	118.90
25	RA	129	C	C6-N1-C2	8.50	123.70	120.30
25	YA	982	C	C6-N1-C2	-8.50	116.90	120.30
25	YA	2712	U	N3-C4-O4	-8.49	113.45	119.40
25	RA	1190	G	C5-N7-C8	-8.49	100.05	104.30
25	YA	1439	A	C2-N3-C4	-8.49	106.35	110.60
25	YA	2227	A	N9-C4-C5	8.48	109.19	105.80
25	RA	662	G	C2-N3-C4	-8.48	107.66	111.90
25	RA	2731	G	N1-C6-O6	8.48	124.99	119.90
1	XA	1108	G	C5-C6-O6	8.48	133.69	128.60
25	YA	1776	G	N3-C4-N9	8.48	131.09	126.00
25	YA	1782	C	O5'-P-OP1	-8.48	98.07	105.70
25	YA	2258	C	O5'-P-OP1	-8.48	98.07	105.70
25	YA	2215	G	C6-C5-N7	-8.48	125.31	130.40
25	YA	2505	G	C8-N9-C4	-8.48	103.01	106.40
25	YA	526	A	C8-N9-C4	-8.48	102.41	105.80
25	RA	198	C	C6-N1-C2	-8.47	116.91	120.30
25	RA	1332	G	C5-C6-N1	-8.47	107.27	111.50
25	YA	1981	A	C5-N7-C8	-8.47	99.66	103.90
25	RA	1821	A	N9-C4-C5	-8.47	102.41	105.80
1	QA	26	A	N7-C8-N9	-8.47	109.57	113.80
25	RA	852	G	O5'-P-OP2	-8.47	98.08	105.70
25	RA	1473	G	N1-C6-O6	8.46	124.98	119.90
26	YB	90	C	C6-N1-C2	8.46	123.69	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1396	U	N1-C2-O2	8.46	128.72	122.80
25	YA	856	C	C5-C6-N1	8.46	125.23	121.00
1	QA	226	G	C8-N9-C4	8.46	109.78	106.40
25	YA	287	C	N3-C4-C5	8.46	125.28	121.90
25	RA	270(X)	G	C5-C6-N1	-8.45	107.27	111.50
25	RA	2052	G	N1-C6-O6	8.45	124.97	119.90
25	RA	1271	G	C2-N3-C4	-8.45	107.68	111.90
25	RA	2482	G	C4-N9-C1'	8.45	137.48	126.50
25	YA	676	A	C2-N3-C4	-8.44	106.38	110.60
25	YA	836	G	C5-C6-O6	-8.44	123.54	128.60
1	XA	121	C	C6-N1-C2	-8.44	116.93	120.30
25	YA	2251	G	C8-N9-C4	-8.44	103.03	106.40
25	RA	2346	A	C2-N3-C4	-8.43	106.38	110.60
25	RA	27	G	N3-C4-C5	8.43	132.81	128.60
25	RA	74	A	C6-C5-N7	-8.43	126.40	132.30
1	XA	31	G	C8-N9-C1'	-8.43	116.04	127.00
25	YA	713	G	N1-C6-O6	8.43	124.96	119.90
25	YA	1309	G	N1-C6-O6	8.43	124.96	119.90
25	YA	2389	G	C4-C5-N7	8.43	114.17	110.80
25	YA	1332	G	N3-C4-N9	8.42	131.05	126.00
25	YA	1930	G	C6-C5-N7	8.42	135.45	130.40
25	YA	247	G	C5-C6-N1	8.42	115.71	111.50
25	RA	2556	C	N3-C2-O2	-8.42	116.01	121.90
25	YA	1141	U	O4'-C1'-N1	8.42	114.94	108.20
25	YA	1241	A	C2-N3-C4	-8.42	106.39	110.60
25	YA	2178	C	C6-N1-C2	-8.42	116.93	120.30
25	RA	247	G	N3-C2-N2	8.41	125.79	119.90
25	YA	1979	C	C5-C4-N4	-8.41	114.31	120.20
25	RA	1665	A	C6-C5-N7	-8.41	126.41	132.30
25	YA	1814	G	C5-C6-N1	-8.41	107.29	111.50
25	RA	1681	G	N1-C6-O6	8.41	124.94	119.90
1	XA	563	A	C5-C6-N1	-8.41	113.50	117.70
25	RA	300	A	N1-C6-N6	8.40	123.64	118.60
25	RA	1734	C	C6-N1-C2	-8.40	116.94	120.30
25	RA	1937	A	C8-N9-C4	8.40	109.16	105.80
25	RA	2049	G	O5'-P-OP1	-8.40	98.14	105.70
25	YA	2506	U	N1-C2-O2	8.40	128.68	122.80
25	RA	2584	U	N3-C2-O2	-8.40	116.32	122.20
1	QA	729	A	C8-N9-C4	-8.39	102.44	105.80
25	RA	945	A	C4-C5-N7	8.39	114.90	110.70
25	RA	1653	G	P-O3'-C3'	8.39	129.77	119.70
25	RA	2612	C	C6-N1-C2	8.39	123.66	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1471	A	C4-C5-C6	8.39	121.19	117.00
25	YA	1289	C	C6-N1-C2	-8.39	116.94	120.30
25	RA	2035	G	C8-N9-C4	8.39	109.76	106.40
25	YA	2655	G	C8-N9-C1'	8.38	137.90	127.00
25	RA	1479	G	O5'-P-OP2	-8.38	98.16	105.70
25	YA	793	A	O5'-P-OP2	-8.37	98.17	105.70
25	RA	2383	G	N1-C6-O6	8.37	124.92	119.90
25	YA	570	G	C4-C5-C6	8.37	123.82	118.80
25	YA	2088	G	C5-C6-N1	-8.37	107.31	111.50
25	RA	221	A	C8-N9-C4	-8.37	102.45	105.80
25	RA	1496	A	C8-N9-C4	-8.37	102.45	105.80
25	YA	1698	A	C6-C5-N7	-8.37	126.44	132.30
1	QA	496	A	N1-C6-N6	-8.36	113.58	118.60
25	YA	1988	C	N1-C2-O2	-8.36	113.88	118.90
25	YA	1763	G	C6-C5-N7	8.36	135.42	130.40
25	YA	2271	G	N3-C4-N9	8.36	131.01	126.00
25	RA	2570	G	N1-C6-O6	8.35	124.91	119.90
25	RA	761	A	O5'-P-OP2	-8.35	98.18	105.70
25	YA	2259	G	C4-C5-N7	8.35	114.14	110.80
25	YA	1926	U	N3-C2-O2	-8.35	116.36	122.20
25	YA	2073	C	N1-C2-O2	-8.35	113.89	118.90
25	YA	2558	C	N3-C4-C5	8.34	125.24	121.90
25	YA	1207	C	C6-N1-C2	8.34	123.64	120.30
25	YA	2515	C	C6-N1-C2	8.34	123.64	120.30
25	RA	600	G	C8-N9-C4	8.33	109.73	106.40
25	YA	2242	G	C8-N9-C4	-8.33	103.07	106.40
1	XA	1323	G	N1-C6-O6	8.32	124.89	119.90
25	YA	673	C	N1-C2-O2	8.32	123.89	118.90
25	RA	1896	G	C6-C5-N7	-8.31	125.41	130.40
25	RA	242	G	P-O3'-C3'	8.31	129.67	119.70
25	YA	827	U	N3-C2-O2	-8.31	116.38	122.20
25	YA	2849	U	C2-N1-C1'	-8.30	107.73	117.70
25	RA	1809	A	C4-C5-C6	8.29	121.15	117.00
25	RA	330	A	C5-N7-C8	-8.29	99.75	103.90
25	YA	322	A	N1-C6-N6	-8.29	113.62	118.60
25	RA	2593	U	C4-C5-C6	8.29	124.67	119.70
25	YA	512	G	C5-N7-C8	-8.29	100.15	104.30
25	YA	2731	G	N1-C6-O6	8.29	124.88	119.90
25	YA	1559	G	N3-C4-C5	8.29	132.75	128.60
25	YA	1614	A	C5-N7-C8	-8.29	99.76	103.90
1	QA	739	C	C6-N1-C2	8.29	123.61	120.30
25	YA	187	G	C8-N9-C1'	-8.29	116.23	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	63	U	N1-C2-N3	8.29	119.87	114.90
25	YA	1613	G	C4-C5-N7	8.29	114.11	110.80
25	RA	673	C	N3-C2-O2	-8.28	116.10	121.90
25	YA	783	A	C5-C6-N6	-8.28	117.07	123.70
25	YA	2711	A	C2-N3-C4	-8.28	106.46	110.60
1	QA	1470	G	C5-C6-O6	-8.28	123.63	128.60
25	RA	2868	A	O5'-P-OP1	-8.28	98.25	105.70
25	YA	943	U	N3-C4-C5	-8.28	109.63	114.60
25	YA	2032	G	N3-C4-N9	-8.28	121.03	126.00
25	YA	2381	C	C6-N1-C2	8.28	123.61	120.30
1	QA	347	G	N3-C4-C5	8.27	132.74	128.60
25	RA	1602	U	C6-N1-C2	-8.27	116.04	121.00
25	YA	1528	A	N7-C8-N9	8.27	117.94	113.80
25	YA	1668	A	N1-C6-N6	-8.27	113.64	118.60
25	RA	2437	U	N3-C4-C5	-8.27	109.64	114.60
26	RB	54	G	C6-C5-N7	-8.27	125.44	130.40
25	YA	242	G	P-O3'-C3'	8.27	129.62	119.70
25	YA	1979	C	C2-N1-C1'	8.27	127.90	118.80
25	RA	1131	G	C8-N9-C4	-8.27	103.09	106.40
25	RA	1336	A	N1-C6-N6	-8.27	113.64	118.60
1	XA	791	G	C4-C5-C6	8.27	123.76	118.80
25	YA	768	G	C6-C5-N7	-8.27	125.44	130.40
1	QA	1322	C	C2-N1-C1'	8.26	127.89	118.80
1	QA	1470	G	C6-C5-N7	-8.26	125.44	130.40
25	RA	929	G	C4-C5-C6	8.26	123.76	118.80
25	RA	1699	G	C5-C6-O6	8.26	133.56	128.60
25	YA	512	G	C4-C5-C6	-8.26	113.84	118.80
25	YA	2301	C	C6-N1-C2	-8.26	117.00	120.30
25	RA	1763	G	O5'-P-OP2	-8.26	98.27	105.70
25	YA	1992	G	P-O3'-C3'	8.25	129.60	119.70
25	YA	945	A	C6-C5-N7	-8.25	126.53	132.30
25	YA	2237	G	N1-C2-N2	-8.24	108.78	116.20
25	RA	216	A	N1-C6-N6	8.24	123.54	118.60
25	RA	1624	G	C2-N3-C4	-8.24	107.78	111.90
25	RA	330	A	C4-C5-N7	8.24	114.82	110.70
25	YA	503	A	C8-N9-C4	-8.24	102.50	105.80
25	RA	1338	G	C6-C5-N7	-8.24	125.46	130.40
1	QA	522	C	C6-N1-C2	8.23	123.59	120.30
25	RA	727	A	N1-C6-N6	-8.22	113.67	118.60
25	RA	2714	G	C6-C5-N7	-8.22	125.47	130.40
25	YA	2377	A	C8-N9-C4	8.22	109.09	105.80
25	RA	1800	C	O5'-P-OP1	-8.22	98.30	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	995	C	C2-N1-C1'	8.22	127.84	118.80
1	QA	1487	G	C2-N3-C4	-8.21	107.79	111.90
25	YA	827	U	N1-C2-O2	8.22	128.55	122.80
25	YA	1287	A	N1-C6-N6	8.22	123.53	118.60
25	YA	780	G	N7-C8-N9	8.21	117.21	113.10
25	YA	1343	G	C8-N9-C4	-8.21	103.11	106.40
1	QA	812	C	P-O3'-C3'	8.21	129.56	119.70
25	YA	1891	G	C5-C6-O6	-8.21	123.67	128.60
25	YA	2000	G	N3-C4-N9	8.21	130.93	126.00
25	RA	1678	G	N3-C2-N2	-8.21	114.16	119.90
25	YA	1925	C	N1-C2-O2	-8.21	113.98	118.90
25	YA	2312	U	C5-C6-N1	8.20	126.80	122.70
25	YA	2694	G	C5-C6-O6	-8.19	123.68	128.60
25	RA	2490	G	N3-C4-C5	-8.19	124.50	128.60
25	YA	1852	C	N3-C2-O2	-8.19	116.17	121.90
25	YA	2537	U	N3-C4-C5	-8.19	109.69	114.60
26	RB	43	C	N3-C2-O2	-8.19	116.17	121.90
25	RA	1931	U	N1-C2-N3	8.19	119.81	114.90
1	XA	1059	C	C6-N1-C2	-8.19	117.03	120.30
25	RA	568	U	N3-C4-C5	-8.19	109.69	114.60
1	QA	1347	G	C4-C5-N7	-8.18	107.53	110.80
25	RA	2292	C	N3-C4-C5	8.18	125.17	121.90
25	YA	1243	G	C6-C5-N7	-8.18	125.49	130.40
1	XA	1178	G	C8-N9-C4	-8.18	103.13	106.40
25	YA	1788	C	N1-C2-O2	-8.18	113.99	118.90
25	YA	512	G	N1-C6-O6	-8.17	115.00	119.90
25	RA	2437	U	C5-C4-O4	8.17	130.80	125.90
25	RA	1022	G	P-O3'-C3'	8.16	129.50	119.70
1	QA	1347	G	O4'-C1'-N9	8.16	114.73	108.20
25	YA	1613	G	C4-N9-C1'	8.16	137.11	126.50
25	RA	1776	G	C4-C5-N7	8.16	114.06	110.80
25	YA	195	A	N1-C6-N6	8.16	123.49	118.60
25	YA	841	A	C2-N3-C4	-8.16	106.52	110.60
25	RA	248	G	C2-N3-C4	-8.15	107.82	111.90
1	QA	1441	G	C5-C6-N1	-8.15	107.42	111.50
25	RA	27	G	C4-N9-C1'	-8.15	115.91	126.50
25	YA	2463	C	N1-C2-O2	-8.15	114.01	118.90
25	YA	2450	A	C8-N9-C4	-8.15	102.54	105.80
25	RA	205	G	N3-C4-C5	-8.14	124.53	128.60
25	RA	2644	G	C5-C6-N1	-8.14	107.43	111.50
25	RA	2371	G	C5-C6-N1	-8.14	107.43	111.50
25	YA	772	C	C6-N1-C2	-8.14	117.04	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2512	C	C6-N1-C2	8.14	123.56	120.30
25	YA	1695	G	C6-C5-N7	-8.14	125.52	130.40
25	YA	2217	G	C6-C5-N7	-8.14	125.52	130.40
25	RA	954	G	N3-C4-C5	-8.13	124.53	128.60
1	XA	529	G	N1-C6-O6	8.13	124.78	119.90
1	XA	541	G	N1-C6-O6	8.13	124.78	119.90
25	YA	1869	G	N3-C4-N9	8.13	130.88	126.00
25	YA	1982	C	C6-N1-C2	8.13	123.55	120.30
25	RA	1815	A	N1-C6-N6	-8.13	113.72	118.60
1	XA	691	G	C4-N9-C1'	8.13	137.07	126.50
25	RA	1989	G	N3-C2-N2	-8.13	114.21	119.90
25	RA	2845	G	O5'-P-OP1	8.12	120.45	110.70
1	XA	812	C	C2-N1-C1'	8.12	127.74	118.80
1	QA	372	C	C4-C5-C6	-8.12	113.34	117.40
25	RA	2447	G	C4-C5-N7	8.12	114.05	110.80
25	YA	681	G	C5-C6-N1	-8.12	107.44	111.50
25	YA	1647	G	C4-N9-C1'	8.12	137.06	126.50
25	YA	1317	A	O5'-P-OP2	-8.12	98.39	105.70
25	YA	1563	G	C6-C5-N7	-8.12	125.53	130.40
25	YA	1626	G	C8-N9-C4	-8.12	103.15	106.40
25	YA	299	A	OP2-P-O3'	8.11	123.05	105.20
25	YA	1265	A	O5'-P-OP1	-8.11	98.40	105.70
1	QA	890	G	O4'-C1'-N9	8.11	114.69	108.20
25	YA	142	G	N3-C4-N9	-8.11	121.13	126.00
25	RA	2005	A	O5'-P-OP2	-8.11	98.40	105.70
25	YA	636	G	N1-C6-O6	8.11	124.76	119.90
25	YA	1654	A	N1-C6-N6	-8.11	113.74	118.60
25	RA	1792	G	C6-C5-N7	-8.10	125.54	130.40
25	RA	2713	A	N1-C6-N6	8.10	123.46	118.60
1	XA	1417	G	C4-C5-C6	8.10	123.66	118.80
26	YB	82	G	C4-C5-C6	8.10	123.66	118.80
25	RA	55	G	N3-C4-C5	-8.10	124.55	128.60
25	YA	2107	C	C6-N1-C2	-8.10	117.06	120.30
1	QA	1223	C	N1-C2-O2	8.09	123.76	118.90
25	YA	2593	U	N3-C4-O4	8.09	125.06	119.40
1	QA	723	U	C2-N1-C1'	8.09	127.41	117.70
25	RA	258	G	N1-C6-O6	8.09	124.75	119.90
25	RA	745	G	C8-N9-C1'	-8.09	116.49	127.00
25	YA	788	A	N9-C4-C5	-8.09	102.56	105.80
25	YA	2407	G	C4-N9-C1'	8.09	137.01	126.50
25	YA	1271	G	C4-C5-C6	8.09	123.65	118.80
25	YA	2818	G	N1-C6-O6	8.09	124.75	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1869	G	C4-N9-C1'	8.08	137.01	126.50
25	YA	74	A	C4-C5-C6	8.08	121.04	117.00
25	RA	671	C	C6-N1-C2	-8.07	117.07	120.30
1	XA	31	G	C4-N9-C1'	8.07	137.00	126.50
25	YA	527	C	N1-C2-O2	8.07	123.74	118.90
25	YA	701	G	C2-N3-C4	-8.07	107.86	111.90
1	XA	1201	A	P-O3'-C3'	8.07	129.38	119.70
25	YA	2250	G	O5'-P-OP2	-8.07	98.44	105.70
25	YA	1956	U	C6-N1-C1'	8.07	132.50	121.20
25	RA	2722	G	C8-N9-C1'	-8.07	116.51	127.00
25	YA	327	G	C4-N9-C1'	8.07	136.99	126.50
25	YA	1332	G	N3-C4-C5	-8.06	124.57	128.60
25	YA	1613	G	N1-C6-O6	8.06	124.74	119.90
25	YA	2490	G	N1-C6-O6	8.06	124.74	119.90
26	YB	100	G	C8-N9-C4	8.06	109.62	106.40
1	QA	1158	C	C2-N1-C1'	8.06	127.67	118.80
1	QA	1235	U	C5-C6-N1	8.05	126.73	122.70
25	RA	1941	C	O5'-P-OP1	-8.05	98.45	105.70
25	YA	450	G	C6-C5-N7	-8.05	125.57	130.40
25	YA	2390	U	O5'-P-OP1	-8.05	98.45	105.70
25	RA	2452	C	C2-N1-C1'	8.05	127.66	118.80
25	YA	1506	C	C6-N1-C2	-8.05	117.08	120.30
25	RA	465	G	C4-C5-C6	8.05	123.63	118.80
25	RA	2556	C	C2-N1-C1'	8.05	127.65	118.80
1	QA	771	G	N3-C4-N9	-8.05	121.17	126.00
25	YA	788	A	N1-C6-N6	8.04	123.43	118.60
1	XA	562	C	N3-C4-C5	8.04	125.12	121.90
25	YA	818	G	C6-C5-N7	-8.04	125.57	130.40
1	QA	1336	C	C2-N1-C1'	8.04	127.64	118.80
25	RA	2490	G	N3-C2-N2	8.04	125.53	119.90
25	YA	2607	G	C6-C5-N7	-8.04	125.58	130.40
25	RA	1619	G	N1-C6-O6	8.03	124.72	119.90
25	YA	554	U	C5-C4-O4	8.03	130.72	125.90
25	RA	2246	G	N1-C6-O6	8.03	124.72	119.90
25	RA	1264	G	C8-N9-C4	-8.02	103.19	106.40
25	YA	2318	G	N1-C6-O6	8.02	124.71	119.90
25	YA	2059	A	C2-N3-C4	-8.02	106.59	110.60
25	RA	533	G	N3-C4-N9	8.01	130.81	126.00
25	YA	1372	U	C5-C6-N1	8.01	126.71	122.70
25	YA	1141	U	N3-C2-O2	-8.01	116.59	122.20
25	YA	1279	G	N1-C6-O6	-8.01	115.09	119.90
1	XA	970	C	N1-C2-O2	8.01	123.70	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1666	G	N1-C6-O6	8.01	124.70	119.90
25	RA	74	A	N1-C6-N6	8.01	123.40	118.60
25	YA	576	U	N3-C2-O2	8.01	127.80	122.20
25	YA	1742	C	O5'-P-OP2	-8.01	98.50	105.70
25	YA	2451	A	N7-C8-N9	8.01	117.80	113.80
25	YA	1699	G	N1-C6-O6	-8.00	115.10	119.90
25	YA	2550	G	N1-C6-O6	8.00	124.70	119.90
25	YA	625	G	N3-C4-N9	-8.00	121.20	126.00
1	QA	537	G	O5'-P-OP2	8.00	120.30	110.70
25	RA	74	A	C4-C5-C6	8.00	121.00	117.00
25	RA	1328	G	C5-C6-O6	-8.00	123.80	128.60
25	YA	782	A	C4-C5-C6	7.99	121.00	117.00
1	XA	753	A	P-O3'-C3'	7.99	129.28	119.70
25	RA	1931	U	C6-N1-C2	-7.99	116.21	121.00
25	YA	452	G	C8-N9-C4	-7.99	103.21	106.40
25	RA	1356	G	C8-N9-C4	-7.98	103.21	106.40
25	RA	2246	G	C6-C5-N7	-7.98	125.61	130.40
25	YA	1158	C	C2-N1-C1'	-7.97	110.03	118.80
25	RA	2862	G	C6-C5-N7	-7.97	125.62	130.40
25	RA	308	G	N1-C6-O6	-7.97	115.12	119.90
25	YA	1950	G	N3-C4-C5	-7.97	124.61	128.60
25	YA	1259	G	C4-C5-N7	7.97	113.99	110.80
1	QA	1336	C	N1-C2-O2	7.97	123.68	118.90
25	RA	974(A)	C	N3-C2-O2	-7.97	116.32	121.90
1	XA	1417	G	C5-C6-N1	-7.97	107.52	111.50
25	YA	2393	A	C4-C5-C6	7.97	120.98	117.00
1	QA	1347	G	N9-C4-C5	7.96	108.59	105.40
25	RA	140	A	N1-C6-N6	7.96	123.38	118.60
1	QA	789	U	C5-C4-O4	7.96	130.68	125.90
26	YB	90	C	N3-C4-C5	7.96	125.08	121.90
25	RA	450	G	N1-C6-O6	7.96	124.68	119.90
1	QA	1301	U	C2-N1-C1'	7.96	127.25	117.70
25	YA	530	G	N3-C2-N2	7.96	125.47	119.90
1	QA	1204	A	N1-C6-N6	7.96	123.37	118.60
1	XA	785	G	N1-C6-O6	7.96	124.67	119.90
1	XA	112	G	C5-C6-O6	-7.95	123.83	128.60
25	YA	1311	G	C5-C6-O6	-7.95	123.83	128.60
25	YA	2697	G	N3-C4-C5	-7.95	124.62	128.60
25	YA	1818	U	N1-C2-N3	7.95	119.67	114.90
25	YA	2321	G	C8-N9-C4	-7.95	103.22	106.40
25	YA	59	U	N3-C2-O2	-7.95	116.64	122.20
25	RA	270(C)	C	C5-C6-N1	7.94	124.97	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2523	G	C5-C6-O6	-7.94	123.84	128.60
25	YA	2432	A	C4-C5-N7	7.94	114.67	110.70
25	RA	130	C	N3-C4-C5	7.93	125.07	121.90
25	RA	945	A	C5-N7-C8	-7.93	99.93	103.90
25	RA	1681	G	C5-C6-N1	-7.93	107.54	111.50
25	RA	2624	G	N1-C6-O6	7.93	124.66	119.90
25	YA	1228	G	C2-N3-C4	-7.93	107.94	111.90
25	RA	1781	C	C2-N1-C1'	7.93	127.52	118.80
25	YA	686	G	C4-C5-C6	7.93	123.56	118.80
25	RA	687	C	C6-N1-C2	-7.92	117.13	120.30
25	RA	246	C	N1-C2-O2	-7.92	114.15	118.90
25	RA	2490	G	C4-C5-C6	7.92	123.55	118.80
25	YA	2542	A	N1-C2-N3	7.92	133.26	129.30
1	QA	397	A	C8-N9-C4	-7.91	102.64	105.80
25	YA	245	G	O5'-P-OP1	-7.91	98.58	105.70
25	YA	2448	A	N1-C6-N6	7.91	123.35	118.60
25	RA	2420	C	O5'-P-OP1	-7.91	98.58	105.70
25	YA	688	U	N1-C2-O2	-7.91	117.26	122.80
25	YA	74	A	N1-C2-N3	7.90	133.25	129.30
25	RA	1869	G	C8-N9-C4	-7.90	103.24	106.40
1	XA	320	C	C6-N1-C2	7.90	123.46	120.30
25	YA	431	U	N3-C2-O2	7.90	127.73	122.20
25	YA	1542	G	N3-C4-C5	-7.90	124.65	128.60
25	YA	1362	C	C6-N1-C2	-7.90	117.14	120.30
25	YA	1015	G	C8-N9-C4	-7.89	103.24	106.40
25	YA	1343	G	N3-C4-C5	-7.89	124.65	128.60
25	YA	2487	G	N1-C2-N3	7.89	128.63	123.90
25	YA	662	G	C4-N9-C1'	7.88	136.75	126.50
25	YA	1190	G	N7-C8-N9	7.88	117.04	113.10
25	YA	2829	C	C6-N1-C2	7.88	123.45	120.30
25	YA	1761	C	C5-C6-N1	-7.88	117.06	121.00
25	RA	2549	G	C4-C5-C6	7.88	123.53	118.80
25	YA	1705	G	C6-C5-N7	-7.88	125.67	130.40
25	RA	1975	G	N1-C6-O6	7.87	124.62	119.90
25	RA	1210	A	C8-N9-C4	-7.87	102.65	105.80
1	XA	299	G	C2-N3-C4	-7.87	107.97	111.90
1	QA	904	C	O5'-P-OP1	-7.87	98.62	105.70
25	RA	248	G	N1-C6-O6	7.86	124.62	119.90
25	RA	2495	G	O5'-P-OP2	-7.86	98.63	105.70
25	RA	1332	G	C4-C5-C6	7.86	123.52	118.80
25	RA	2568	C	N3-C4-C5	7.86	125.04	121.90
1	XA	901	A	C2-N3-C4	-7.86	106.67	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	356	A	C4-C5-C6	-7.86	113.07	117.00
25	RA	977	G	C5-C6-N1	7.86	115.43	111.50
25	YA	1698	A	N1-C6-N6	7.86	123.31	118.60
25	YA	1647	G	O5'-P-OP2	7.85	120.12	110.70
26	YB	56	G	C8-N9-C4	-7.85	103.26	106.40
25	RA	2516	G	N3-C4-C5	-7.85	124.67	128.60
25	YA	1187	G	C5-C6-N1	-7.85	107.58	111.50
1	QA	778	G	N3-C4-N9	7.84	130.71	126.00
25	RA	676	A	O4'-C1'-N9	7.84	114.47	108.20
25	RA	1610	A	C8-N9-C4	-7.84	102.66	105.80
25	YA	188	G	C6-C5-N7	-7.84	125.69	130.40
1	QA	529	G	C5-C6-O6	-7.84	123.90	128.60
25	RA	1682	G	N1-C6-O6	7.84	124.60	119.90
25	RA	974(A)	C	C6-N1-C2	-7.84	117.17	120.30
25	RA	1138	G	C5-C6-O6	-7.83	123.90	128.60
25	RA	2450	A	N3-C4-C5	-7.83	121.31	126.80
25	RA	789	A	C5-C6-N6	7.83	129.97	123.70
25	YA	1665	A	N9-C4-C5	-7.83	102.67	105.80
47	R1	79	GLY	N-CA-C	-7.83	93.52	113.10
25	YA	474	G	N1-C6-O6	7.83	124.60	119.90
25	YA	2252	G	N1-C6-O6	7.83	124.60	119.90
25	RA	533	G	N3-C4-C5	-7.82	124.69	128.60
25	RA	2000	G	C8-N9-C4	-7.82	103.27	106.40
25	YA	1698	A	C4-C5-C6	7.82	120.91	117.00
25	YA	58	G	C4-C5-C6	7.82	123.49	118.80
25	RA	2731	G	C6-C5-N7	-7.82	125.71	130.40
25	YA	473	G	C5-C6-N1	7.82	115.41	111.50
25	RA	788	A	O5'-P-OP1	-7.82	98.66	105.70
47	Y1	79	GLY	N-CA-C	-7.82	93.56	113.10
25	RA	1975	G	C6-C5-N7	-7.82	125.71	130.40
25	RA	2880	C	C6-N1-C2	-7.82	117.17	120.30
25	YA	1658	C	O5'-P-OP2	-7.82	98.67	105.70
25	YA	2839	G	C6-C5-N7	-7.81	125.71	130.40
25	YA	1613	G	C5-C6-O6	-7.81	123.92	128.60
1	QA	1259	C	C6-N1-C2	-7.81	117.18	120.30
25	RA	1614	A	C8-N9-C4	-7.81	102.68	105.80
25	YA	27	G	N3-C2-N2	-7.81	114.44	119.90
25	YA	240	G	C4-C5-C6	7.81	123.48	118.80
25	YA	570	G	C5-C6-O6	7.80	133.28	128.60
25	RA	738	G	C4-C5-N7	-7.80	107.68	110.80
25	YA	991	C	OP1-P-OP2	-7.80	107.90	119.60
1	QA	1528	U	P-O3'-C3'	7.80	129.06	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1385	G	O4'-C1'-N9	7.80	114.44	108.20
25	RA	2399	G	N3-C4-C5	-7.80	124.70	128.60
25	YA	662	G	N1-C2-N3	7.80	128.58	123.90
25	YA	1381	G	N3-C4-C5	-7.80	124.70	128.60
25	YA	602	G	N1-C6-O6	7.80	124.58	119.90
25	RA	2712(A)	A	C5-N7-C8	-7.79	100.00	103.90
25	RA	2004	G	C5-C6-N1	-7.79	107.60	111.50
25	RA	2031	A	C2-N3-C4	7.79	114.50	110.60
25	RA	2439	A	P-O3'-C3'	7.79	129.05	119.70
25	YA	397	G	N3-C4-N9	-7.79	121.32	126.00
25	YA	979	G	O5'-P-OP1	-7.79	98.69	105.70
25	RA	637	A	C8-N9-C4	-7.79	102.68	105.80
1	XA	1200	C	N3-C2-O2	-7.79	116.45	121.90
1	QA	1066	C	C5-C6-N1	7.79	124.89	121.00
25	RA	791	C	C2-N3-C4	-7.79	116.00	119.90
25	RA	382	G	N9-C4-C5	-7.79	102.28	105.40
25	RA	2665	A	C8-N9-C4	-7.79	102.68	105.80
25	YA	945	A	N9-C4-C5	-7.79	102.68	105.80
25	YA	2231	C	N1-C2-N3	7.79	124.65	119.20
25	YA	512	G	C4-N9-C1'	-7.79	116.38	126.50
1	XA	1372	U	C5-C6-N1	7.78	126.59	122.70
25	YA	585	G	OP2-P-O3'	7.78	122.32	105.20
25	RA	444	C	OP2-P-O3'	7.78	122.31	105.20
25	RA	1338	G	N1-C6-O6	7.78	124.57	119.90
25	RA	2506	U	N1-C2-O2	7.78	128.25	122.80
25	YA	2004	G	C6-C5-N7	-7.78	125.73	130.40
25	RA	391	G	C5-C6-N1	-7.77	107.61	111.50
25	YA	2080	G	N1-C6-O6	7.77	124.56	119.90
25	YA	956	G	C8-N9-C4	7.77	109.51	106.40
1	QA	1149	C	C6-N1-C2	-7.77	117.19	120.30
25	YA	465	G	N3-C4-N9	7.77	130.66	126.00
25	YA	820	A	C8-N9-C4	-7.77	102.69	105.80
25	YA	1369	G	C5-C6-O6	-7.77	123.94	128.60
1	QA	48	C	N1-C2-O2	7.77	123.56	118.90
25	YA	842	G	C5-C6-O6	-7.77	123.94	128.60
25	YA	309	G	C8-N9-C4	-7.76	103.30	106.40
25	YA	1701	A	O5'-P-OP1	-7.76	98.71	105.70
25	RA	465	G	C5-C6-N1	-7.76	107.62	111.50
1	XA	1200	C	C6-N1-C2	-7.76	117.20	120.30
25	YA	2250	G	C8-N9-C4	-7.76	103.30	106.40
25	YA	585	G	N3-C4-C5	-7.76	124.72	128.60
25	YA	820	A	C5-C6-N6	7.75	129.90	123.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1313	U	C5-C6-N1	7.75	126.58	122.70
25	RA	450	G	N1-C2-N3	7.75	128.55	123.90
25	YA	676	A	C5-N7-C8	-7.75	100.02	103.90
1	XA	577	G	C4-C5-N7	7.75	113.90	110.80
25	RA	1896	G	N1-C6-O6	7.74	124.55	119.90
25	YA	141	A	C4-C5-N7	7.74	114.57	110.70
25	YA	193	U	OP2-P-O3'	7.74	122.23	105.20
25	RA	75	G	N3-C4-C5	-7.73	124.73	128.60
25	RA	1688	U	C5-C6-N1	7.73	126.57	122.70
25	YA	195	A	C5-N7-C8	-7.73	100.03	103.90
1	XA	372	C	C5-C6-N1	7.73	124.86	121.00
25	YA	728	G	C8-N9-C1'	-7.73	116.95	127.00
25	YA	870	A	C8-N9-C4	7.73	108.89	105.80
25	YA	1353	A	C2-N3-C4	7.73	114.46	110.60
25	YA	327	G	C8-N9-C1'	-7.72	116.96	127.00
25	YA	585	G	C6-C5-N7	-7.72	125.77	130.40
25	YA	2395	C	N3-C4-C5	-7.72	118.81	121.90
25	YA	2340	G	O5'-P-OP2	-7.72	98.75	105.70
25	RA	1653	G	N3-C4-C5	-7.72	124.74	128.60
25	YA	2439	A	N7-C8-N9	7.72	117.66	113.80
1	XA	713	G	C8-N9-C4	-7.72	103.31	106.40
25	YA	2035	G	C8-N9-C1'	7.72	137.03	127.00
25	YA	2466	C	N3-C4-C5	7.72	124.99	121.90
1	QA	372	C	C6-N1-C1'	-7.71	111.55	120.80
25	YA	1368	G	N3-C4-C5	-7.71	124.75	128.60
25	YA	2251	G	C5-C6-O6	7.71	133.23	128.60
25	RA	2238	G	C8-N9-C4	-7.71	103.32	106.40
1	QA	558	G	O5'-P-OP1	7.70	119.94	110.70
1	QA	1338	G	N3-C4-C5	-7.70	124.75	128.60
1	QA	1149	C	C5-C6-N1	7.70	124.85	121.00
25	RA	1253	A	C4-C5-C6	-7.70	113.15	117.00
1	XA	423	G	C4-N9-C1'	7.70	136.51	126.50
25	YA	494	G	C8-N9-C4	-7.70	103.32	106.40
25	YA	493	G	N1-C6-O6	7.70	124.52	119.90
25	YA	177	G	N1-C6-O6	-7.70	115.28	119.90
25	YA	684	G	C5-C6-N1	7.70	115.35	111.50
1	QA	789	U	N1-C2-N3	7.70	119.52	114.90
25	RA	1992	G	C5-C6-N1	7.70	115.35	111.50
25	YA	2532	G	C6-C5-N7	-7.69	125.78	130.40
25	YA	139	G	N3-C4-C5	-7.69	124.75	128.60
25	YA	1520	U	C5-C4-O4	7.69	130.52	125.90
25	RA	487	C	C6-N1-C2	-7.69	117.22	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	921	G	C6-C5-N7	-7.69	125.79	130.40
25	RA	2709	G	N1-C6-O6	7.68	124.51	119.90
25	YA	2060	A	N1-C6-N6	7.68	123.21	118.60
25	RA	1236	G	C5-C6-N1	-7.68	107.66	111.50
25	RA	1899	G	C4-C5-C6	7.68	123.41	118.80
25	YA	798	G	N1-C6-O6	7.68	124.51	119.90
25	RA	1776	G	C5-C6-O6	-7.68	123.99	128.60
25	RA	1950	G	C4-C5-N7	7.68	113.87	110.80
25	YA	1496	A	C5-N7-C8	-7.68	100.06	103.90
1	QA	328	C	N1-C2-O2	7.67	123.50	118.90
1	QA	1158	C	N1-C2-O2	7.67	123.50	118.90
25	RA	1521	G	C6-C5-N7	-7.67	125.80	130.40
25	RA	1799	G	C5-C6-O6	7.67	133.21	128.60
25	YA	1424	G	C6-C5-N7	-7.67	125.80	130.40
25	RA	1786	A	N7-C8-N9	7.67	117.64	113.80
1	XA	1502	A	C4-C5-N7	7.67	114.53	110.70
25	YA	1908	C	C6-N1-C2	-7.67	117.23	120.30
25	RA	2032	G	N3-C4-N9	-7.67	121.40	126.00
26	RB	30	C	C6-N1-C2	-7.67	117.23	120.30
25	RA	929	G	C8-N9-C1'	-7.66	117.04	127.00
25	RA	330	A	C6-C5-N7	-7.66	126.94	132.30
25	RA	921	G	C5-C6-N1	-7.66	107.67	111.50
25	RA	2468	G	N7-C8-N9	7.66	116.93	113.10
25	YA	1611	C	C6-N1-C2	7.66	123.36	120.30
25	RA	588	U	C2-N1-C1'	7.66	126.89	117.70
25	YA	196	A	N1-C6-N6	7.66	123.19	118.60
25	RA	203	C	C6-N1-C2	7.66	123.36	120.30
1	XA	1370	G	N1-C6-O6	7.65	124.49	119.90
25	RA	397	G	N1-C6-O6	7.65	124.49	119.90
25	RA	1215	G	N1-C6-O6	7.65	124.49	119.90
25	YA	1358	G	C4-N9-C1'	7.65	136.45	126.50
25	YA	2238	G	OP1-P-OP2	7.65	131.08	119.60
25	YA	2413	G	C2-N3-C4	-7.65	108.07	111.90
25	RA	761	A	C5-N7-C8	-7.65	100.08	103.90
25	RA	2722	G	C4-N9-C1'	7.65	136.44	126.50
25	RA	2392	A	C5-C6-N1	-7.65	113.88	117.70
1	XA	792	A	C4-C5-N7	7.65	114.52	110.70
25	YA	2681	C	P-O3'-C3'	7.64	128.88	119.70
25	RA	1396	U	C2-N1-C1'	7.64	126.87	117.70
1	XA	1051	C	C6-N1-C2	-7.64	117.24	120.30
25	YA	1506	C	C5-C6-N1	7.64	124.82	121.00
25	YA	2366	A	C8-N9-C4	-7.64	102.74	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	787	U	N1-C2-O2	-7.64	117.45	122.80
1	XA	416	G	C4-C5-C6	7.64	123.38	118.80
25	RA	1601	G	N9-C4-C5	-7.63	102.35	105.40
25	RA	1215	G	C6-C5-N7	-7.63	125.82	130.40
1	QA	1527	C	C5-C6-N1	-7.63	117.18	121.00
25	RA	2450	A	C2-N3-C4	7.63	114.42	110.60
1	XA	865	A	N1-C6-N6	7.63	123.18	118.60
1	XA	702	A	O5'-P-OP2	-7.63	98.83	105.70
25	YA	818	G	C8-N9-C1'	-7.63	117.08	127.00
25	YA	844	C	C5-C6-N1	-7.63	117.19	121.00
25	YA	1956	U	C5-C4-O4	7.63	130.48	125.90
1	QA	398	C	C6-N1-C2	7.62	123.35	120.30
25	RA	2843	G	C5-C6-O6	-7.62	124.03	128.60
25	YA	1984	G	C2-N3-C4	-7.62	108.09	111.90
25	RA	140	A	N7-C8-N9	7.62	117.61	113.80
25	YA	2869	G	C5-C6-N1	-7.62	107.69	111.50
1	QA	1314	C	C6-N1-C2	-7.61	117.25	120.30
25	RA	1940	U	C5-C6-N1	7.61	126.51	122.70
25	RA	58	G	C8-N9-C4	-7.61	103.36	106.40
1	XA	130	A	O4'-C1'-N9	7.61	114.29	108.20
25	YA	1381	G	C4-N9-C1'	7.61	136.39	126.50
25	YA	2729	G	N3-C4-C5	7.61	132.41	128.60
25	YA	995	C	N3-C2-O2	-7.61	116.57	121.90
25	YA	2360	A	C2-N3-C4	-7.61	106.80	110.60
1	QA	990	C	C6-N1-C2	-7.61	117.26	120.30
25	YA	1806	C	N1-C2-O2	-7.61	114.34	118.90
25	RA	2639	A	C2-N3-C4	-7.61	106.80	110.60
25	RA	533	G	C8-N9-C1'	-7.60	117.12	127.00
25	YA	177	G	C8-N9-C4	-7.60	103.36	106.40
25	YA	1763	G	C4-C5-N7	-7.60	107.76	110.80
25	YA	2830	G	C4-N9-C1'	7.60	136.38	126.50
25	YA	1642	G	C5-C6-N1	-7.60	107.70	111.50
1	QA	355	C	C6-N1-C2	-7.60	117.26	120.30
1	XA	280	C	C6-N1-C2	7.60	123.34	120.30
25	YA	752	A	P-O3'-C3'	7.60	128.82	119.70
25	RA	265	A	O4'-C1'-N9	7.60	114.28	108.20
25	YA	1944	U	C5-C6-N1	-7.60	118.90	122.70
25	YA	741	G	N3-C4-N9	7.60	130.56	126.00
1	QA	1338	G	N1-C6-O6	-7.59	115.34	119.90
25	RA	2468	G	C5-C6-O6	-7.59	124.04	128.60
1	XA	31	G	N3-C4-N9	7.59	130.56	126.00
25	YA	820	A	N9-C4-C5	7.59	108.84	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2437	U	C6-N1-C2	-7.59	116.44	121.00
25	YA	102	G	P-O3'-C3'	7.59	128.81	119.70
25	RA	533	G	C4-N9-C1'	7.59	136.37	126.50
25	RA	1694	C	P-O3'-C3'	7.59	128.81	119.70
25	YA	728	G	C6-C5-N7	-7.59	125.84	130.40
25	YA	2000	G	N3-C4-C5	-7.59	124.80	128.60
1	QA	31	G	N3-C4-N9	7.59	130.55	126.00
26	RB	54	G	C4-N9-C1'	7.59	136.37	126.50
25	YA	1906	G	C5-C6-N1	-7.58	107.71	111.50
25	YA	1929	G	C4-C5-N7	7.58	113.83	110.80
25	RA	1429	G	N1-C6-O6	7.58	124.45	119.90
25	RA	2324	C	C6-N1-C2	7.58	123.33	120.30
25	YA	832	G	C6-C5-N7	-7.58	125.85	130.40
25	RA	624	C	C5-C6-N1	7.58	124.79	121.00
25	YA	1395	A	O4'-C1'-N9	7.58	114.26	108.20
25	RA	2441	C	C2-N1-C1'	-7.58	110.47	118.80
25	YA	2451	A	N9-C4-C5	7.58	108.83	105.80
25	YA	450	G	C8-N9-C4	-7.57	103.37	106.40
25	YA	2393	A	N7-C8-N9	7.57	117.59	113.80
25	RA	962	G	N3-C4-N9	-7.57	121.46	126.00
25	YA	272	G	N3-C4-N9	-7.57	121.46	126.00
25	YA	1647	G	N7-C8-N9	7.57	116.88	113.10
25	YA	952	G	C8-N9-C4	-7.56	103.38	106.40
25	YA	1950	G	N1-C2-N2	-7.56	109.39	116.20
25	YA	791	C	C5-C6-N1	-7.56	117.22	121.00
25	RA	573	G	C8-N9-C1'	-7.56	117.18	127.00
25	RA	2702	U	C2-N1-C1'	7.56	126.77	117.70
25	YA	1790	C	N1-C2-O2	7.56	123.43	118.90
25	RA	372	G	O4'-C1'-N9	7.55	114.24	108.20
25	YA	772	C	N3-C4-C5	-7.55	118.88	121.90
25	YA	1820	U	C5-C6-N1	-7.55	118.92	122.70
25	RA	2002	G	C4-C5-N7	7.55	113.82	110.80
1	XA	1303	C	C6-N1-C2	-7.55	117.28	120.30
25	RA	1703	G	C8-N9-C4	7.55	109.42	106.40
25	YA	88	G	C6-C5-N7	-7.55	125.87	130.40
1	QA	372	C	N1-C2-O2	7.55	123.43	118.90
1	XA	729	A	C6-C5-N7	-7.54	127.02	132.30
25	YA	58	G	C4-N9-C1'	7.54	136.31	126.50
25	RA	450	G	C2-N3-C4	-7.54	108.13	111.90
25	YA	1894	C	C6-N1-C2	-7.54	117.28	120.30
25	YA	494	G	N7-C8-N9	7.54	116.87	113.10
25	RA	22	C	C2-N3-C4	-7.54	116.13	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	703	G	N3-C4-C5	-7.54	124.83	128.60
1	QA	1113	C	C6-N1-C2	-7.54	117.28	120.30
25	YA	1336	A	C5-C6-N1	7.54	121.47	117.70
25	RA	1654	A	N1-C6-N6	-7.53	114.08	118.60
1	XA	1204	A	C4-C5-N7	7.53	114.47	110.70
25	RA	2645	G	C5-C6-N1	-7.53	107.73	111.50
25	YA	797	C	C6-N1-C2	-7.53	117.29	120.30
25	YA	916	G	N3-C4-C5	-7.52	124.84	128.60
25	RA	211	A	C2-N3-C4	-7.51	106.84	110.60
25	YA	774	A	C2-N3-C4	-7.51	106.84	110.60
25	YA	2389	G	O5'-P-OP1	-7.51	98.94	105.70
25	YA	2869	G	C4-C5-C6	7.51	123.31	118.80
25	RA	783	A	C8-N9-C4	-7.51	102.80	105.80
25	YA	1251	C	C6-N1-C2	7.51	123.31	120.30
25	YA	832	G	C4-N9-C1'	7.51	136.26	126.50
25	YA	1840	G	C6-C5-N7	-7.51	125.89	130.40
25	RA	2439	A	C5-N7-C8	-7.51	100.15	103.90
25	YA	1777	U	N3-C2-O2	-7.50	116.95	122.20
25	YA	327	G	N3-C4-N9	7.50	130.50	126.00
25	YA	1956	U	N1-C2-O2	-7.50	117.55	122.80
25	RA	1970	A	O4'-C1'-N9	-7.50	102.20	108.20
25	RA	813	U	O5'-P-OP2	-7.50	98.95	105.70
25	RA	2817	G	N3-C4-C5	-7.50	124.85	128.60
25	YA	701	G	N1-C2-N3	7.50	128.40	123.90
25	RA	944	G	C5-C6-O6	7.49	133.09	128.60
25	RA	621	A	C5-C6-N1	-7.49	113.95	117.70
25	RA	1332	G	N1-C2-N3	7.49	128.40	123.90
25	YA	2617	C	C6-N1-C2	7.49	123.30	120.30
1	QA	865	A	N7-C8-N9	7.49	117.54	113.80
25	RA	1624	G	C5-C6-N1	-7.49	107.76	111.50
1	XA	725	G	C8-N9-C4	-7.49	103.40	106.40
1	QA	325	A	N1-C6-N6	-7.49	114.11	118.60
25	RA	2770	G	N3-C4-C5	-7.49	124.86	128.60
25	YA	1573	G	C8-N9-C4	7.49	109.39	106.40
25	YA	1929	G	C6-C5-N7	-7.49	125.91	130.40
25	RA	396	G	C8-N9-C4	-7.49	103.41	106.40
25	YA	2445	G	N9-C4-C5	7.48	108.39	105.40
1	QA	758	G	N7-C8-N9	7.48	116.84	113.10
25	RA	819	A	C8-N9-C4	-7.48	102.81	105.80
25	RA	1857	G	C5-C6-N1	-7.48	107.76	111.50
1	QA	1230	C	C5-C6-N1	7.48	124.74	121.00
1	XA	362	G	N3-C4-C5	7.48	132.34	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	379	G	C8-N9-C1'	-7.48	117.28	127.00
25	YA	1614	A	N7-C8-N9	7.48	117.54	113.80
25	YA	676	A	N7-C8-N9	7.48	117.54	113.80
25	YA	2728	U	C5-C4-O4	-7.48	121.41	125.90
25	YA	2779	U	C2-N1-C1'	7.48	126.67	117.70
25	RA	570	G	C8-N9-C4	-7.48	103.41	106.40
1	XA	423	G	N1-C6-O6	7.47	124.38	119.90
25	YA	2655	G	O4'-C1'-N9	7.47	114.18	108.20
25	YA	2686	G	N3-C4-C5	-7.47	124.86	128.60
25	YA	1678	G	C2-N3-C4	-7.47	108.16	111.90
25	YA	1632	A	O5'-P-OP1	-7.47	98.98	105.70
1	QA	541	G	N1-C6-O6	7.47	124.38	119.90
25	YA	728	G	N3-C4-N9	7.46	130.48	126.00
25	YA	2710	C	N3-C2-O2	-7.46	116.67	121.90
25	RA	1903	G	C8-N9-C1'	-7.46	117.30	127.00
25	RA	391	G	C6-C5-N7	-7.46	125.92	130.40
25	RA	2867	G	C8-N9-C4	7.46	109.38	106.40
25	YA	974	G	N7-C8-N9	7.46	116.83	113.10
25	YA	2227	A	N1-C6-N6	-7.46	114.12	118.60
1	XA	545	C	N3-C2-O2	-7.46	116.68	121.90
25	YA	667	U	N1-C2-O2	-7.45	117.58	122.80
25	YA	2463	C	C5-C6-N1	-7.45	117.28	121.00
1	QA	960	U	N3-C2-O2	-7.45	116.99	122.20
25	RA	2484	G	C6-C5-N7	-7.45	125.93	130.40
25	RA	1315	C	N3-C2-O2	-7.45	116.69	121.90
25	YA	793	A	C2-N3-C4	-7.45	106.88	110.60
25	YA	2622	C	C6-N1-C2	7.45	123.28	120.30
25	RA	2549	G	C6-C5-N7	-7.44	125.93	130.40
25	RA	55	G	C5-C6-N1	7.44	115.22	111.50
25	RA	1204	A	N1-C2-N3	7.44	133.02	129.30
1	XA	1301	U	N1-C2-O2	7.44	128.01	122.80
1	XA	1480	G	N3-C4-C5	7.44	132.32	128.60
25	RA	1517	G	N1-C6-O6	-7.44	115.44	119.90
25	RA	2468	G	C8-N9-C1'	-7.44	117.33	127.00
25	YA	1196	C	C6-N1-C2	-7.44	117.32	120.30
1	QA	138	G	N1-C6-O6	7.44	124.36	119.90
25	RA	2570	G	C6-C5-N7	-7.44	125.94	130.40
1	QA	119	A	C8-N9-C4	7.43	108.77	105.80
25	RA	27	G	N3-C4-N9	-7.43	121.54	126.00
25	RA	2393	A	C8-N9-C4	7.43	108.77	105.80
25	YA	397	G	N3-C4-C5	7.43	132.32	128.60
25	YA	1382	G	C2-N3-C4	-7.43	108.18	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1929	G	OP1-P-O3'	7.43	121.55	105.20
25	YA	713	G	C6-C5-N7	-7.43	125.94	130.40
25	YA	776	G	C5-C6-O6	7.43	133.06	128.60
25	YA	792	G	O5'-P-OP2	-7.43	99.01	105.70
25	YA	1017	G	N1-C6-O6	7.43	124.36	119.90
25	YA	621	A	C5-N7-C8	-7.43	100.19	103.90
25	YA	2215	G	N3-C4-N9	7.43	130.46	126.00
1	QA	377	G	N3-C4-N9	7.43	130.46	126.00
25	RA	676	A	C4-C5-N7	7.43	114.41	110.70
25	RA	2776	A	C8-N9-C4	-7.42	102.83	105.80
25	YA	2458	G	N1-C6-O6	7.42	124.35	119.90
25	YA	2818	G	C2-N3-C4	-7.42	108.19	111.90
25	YA	2728	U	N3-C2-O2	7.42	127.39	122.20
25	YA	761	A	C4-C5-C6	7.42	120.71	117.00
25	RA	2350	C	N1-C2-O2	7.41	123.35	118.90
1	XA	557	G	C6-C5-N7	-7.41	125.95	130.40
25	YA	2422	A	C6-N1-C2	7.41	123.05	118.60
25	YA	836	G	N9-C4-C5	-7.41	102.44	105.40
25	YA	2292	C	C6-N1-C2	-7.41	117.34	120.30
25	RA	1624	G	N9-C4-C5	-7.41	102.44	105.40
1	XA	789	U	C6-N1-C2	-7.41	116.56	121.00
25	YA	1786	A	C6-C5-N7	-7.41	127.12	132.30
25	YA	2252	G	C5-C6-O6	-7.41	124.16	128.60
25	RA	1657	C	N1-C2-O2	7.40	123.34	118.90
25	RA	1848	A	C5-C6-N1	7.40	121.40	117.70
25	YA	1819	A	P-O3'-C3'	7.40	128.58	119.70
25	RA	300	A	C5-C6-N1	-7.40	114.00	117.70
25	YA	1701	A	C8-N9-C4	-7.40	102.84	105.80
25	YA	1734	C	C6-N1-C2	-7.40	117.34	120.30
25	YA	2407	G	C6-C5-N7	-7.40	125.96	130.40
25	RA	1437	C	C5-C6-N1	7.40	124.70	121.00
25	YA	74	A	P-O3'-C3'	7.40	128.58	119.70
25	YA	2000	G	C4-C5-C6	7.40	123.24	118.80
1	QA	577	G	C4-C5-N7	7.39	113.76	110.80
25	RA	553	U	C5-C4-O4	7.39	130.34	125.90
1	XA	1332	A	C8-N9-C4	-7.39	102.84	105.80
25	RA	2617	C	C6-N1-C2	7.39	123.26	120.30
25	YA	2063	C	O5'-P-OP2	-7.39	99.05	105.70
25	RA	743	G	N1-C6-O6	7.39	124.33	119.90
25	RA	1899	G	N3-C4-C5	-7.39	124.91	128.60
25	YA	1307	A	C8-N9-C4	-7.39	102.84	105.80
25	YA	1829	A	N9-C4-C5	7.39	108.75	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	557	G	C8-N9-C1'	-7.38	117.40	127.00
25	RA	1931	U	N3-C4-O4	-7.38	114.23	119.40
25	RA	2447	G	C5-N7-C8	-7.38	100.61	104.30
25	YA	2215	G	C8-N9-C1'	-7.38	117.40	127.00
1	QA	758	G	C4-C5-N7	7.38	113.75	110.80
25	YA	1950	G	O4'-C1'-N9	7.38	114.11	108.20
25	RA	1353	A	C8-N9-C4	-7.38	102.85	105.80
25	YA	966	G	C2-N3-C4	-7.38	108.21	111.90
25	YA	979	G	N7-C8-N9	7.38	116.79	113.10
1	XA	226	G	N9-C4-C5	-7.38	102.45	105.40
1	XA	584	G	N3-C4-C5	-7.38	124.91	128.60
25	YA	1249	U	O5'-P-OP2	-7.38	99.06	105.70
25	YA	670	A	N1-C6-N6	-7.37	114.18	118.60
25	YA	929	G	C5-C6-N1	-7.37	107.81	111.50
25	RA	741	G	C5-C6-O6	-7.37	124.18	128.60
25	RA	2383	G	C4-C5-N7	7.37	113.75	110.80
25	YA	1786	A	C4-C5-C6	7.37	120.68	117.00
25	RA	761	A	C4-C5-C6	-7.37	113.32	117.00
25	YA	1381	G	C4-C5-C6	7.37	123.22	118.80
1	QA	328	C	C6-N1-C1'	-7.36	111.96	120.80
25	RA	2035	G	N7-C8-N9	-7.36	109.42	113.10
25	YA	1774	C	C2-N3-C4	-7.36	116.22	119.90
25	RA	2507	C	N1-C2-O2	-7.36	114.48	118.90
25	YA	203	C	C6-N1-C2	7.36	123.25	120.30
25	YA	146	G	N1-C6-O6	7.36	124.32	119.90
25	YA	1929	G	N1-C6-O6	7.36	124.32	119.90
25	YA	298	G	C4-C5-C6	-7.36	114.39	118.80
25	RA	1987	G	N1-C2-N3	7.36	128.31	123.90
25	YA	2537	U	C6-N1-C2	-7.36	116.59	121.00
25	RA	2437	U	C4-C5-C6	7.35	124.11	119.70
25	YA	979	G	C8-N9-C4	-7.35	103.46	106.40
25	RA	1022	G	C6-C5-N7	7.35	134.81	130.40
25	RA	1187	G	C8-N9-C4	-7.35	103.46	106.40
25	YA	2487	G	C5-C6-N1	-7.35	107.82	111.50
1	QA	299	G	C4-C5-N7	-7.35	107.86	110.80
25	RA	307	G	C2-N3-C4	7.35	115.57	111.90
25	RA	702	G	C4-C5-C6	7.35	123.21	118.80
25	YA	2607	G	C4-C5-C6	7.35	123.21	118.80
25	YA	2705	A	N1-C6-N6	-7.35	114.19	118.60
1	QA	171	A	C8-N9-C4	-7.34	102.86	105.80
25	YA	1616	A	O4'-C1'-N9	7.34	114.08	108.20
25	YA	2607	G	C4-N9-C1'	7.34	136.05	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	244	U	N1-C2-N3	-7.34	110.50	114.90
25	RA	1661	G	C8-N9-C4	7.34	109.34	106.40
22	XV	17	C	N1-C2-O2	7.34	123.31	118.90
25	YA	1835	G	N3-C4-C5	-7.34	124.93	128.60
25	YA	2524	G	C8-N9-C4	-7.34	103.46	106.40
1	XA	1189	C	C6-N1-C2	7.34	123.24	120.30
1	XA	247	G	N3-C4-N9	7.34	130.40	126.00
25	YA	684	G	C6-N1-C2	-7.34	120.70	125.10
1	XA	913	A	P-O3'-C3'	7.33	128.50	119.70
1	XA	484	G	N3-C4-C5	-7.33	124.93	128.60
25	YA	270(Y)	G	C8-N9-C4	-7.33	103.47	106.40
25	YA	1021	A	C8-N9-C4	-7.33	102.87	105.80
25	RA	297	C	N3-C2-O2	-7.33	116.77	121.90
25	RA	2004	G	C2-N3-C4	-7.33	108.23	111.90
25	YA	818	G	C4-C5-C6	7.33	123.20	118.80
25	YA	943	U	C6-N1-C2	-7.33	116.60	121.00
25	YA	2434	A	N1-C6-N6	7.33	123.00	118.60
26	YB	82	G	C8-N9-C4	-7.33	103.47	106.40
25	YA	622	G	C5-C6-N1	-7.33	107.83	111.50
25	RA	1773	A	C4-C5-C6	7.33	120.66	117.00
25	YA	2251	G	C4-C5-C6	7.33	123.20	118.80
25	RA	1899	G	N7-C8-N9	7.33	116.76	113.10
1	XA	328	C	C2-N1-C1'	7.33	126.86	118.80
25	RA	1601	G	N3-C4-N9	7.32	130.40	126.00
1	XA	615	C	C6-N1-C2	-7.32	117.37	120.30
25	YA	1298	C	C6-N1-C2	-7.32	117.37	120.30
25	YA	1829	A	N1-C6-N6	-7.32	114.21	118.60
25	YA	24	G	N1-C6-O6	7.32	124.29	119.90
25	RA	470	A	N1-C6-N6	-7.32	114.21	118.60
25	RA	1604	C	N1-C2-O2	-7.32	114.51	118.90
25	RA	1653	G	N1-C6-O6	-7.32	115.51	119.90
25	YA	713	G	C5-C6-N1	-7.32	107.84	111.50
25	RA	1929	G	C8-N9-C4	7.32	109.33	106.40
25	RA	2495	G	C4-C5-N7	7.32	113.73	110.80
1	XA	1113	C	C6-N1-C2	-7.31	117.38	120.30
25	YA	259	G	N1-C6-O6	7.31	124.29	119.90
25	YA	1187	G	C4-C5-N7	-7.31	107.88	110.80
25	YA	1502	C	C6-N1-C2	-7.31	117.38	120.30
25	YA	2816	C	C6-N1-C2	7.31	123.22	120.30
25	YA	2515	C	N3-C4-C5	7.31	124.82	121.90
25	RA	479	A	N9-C4-C5	7.31	108.72	105.80
25	RA	2482	G	C8-N9-C1'	-7.31	117.50	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1192	G	C5-C6-N1	-7.31	107.84	111.50
25	YA	1776	G	N3-C4-C5	-7.31	124.95	128.60
25	YA	258	G	O5'-P-OP2	-7.31	99.12	105.70
25	YA	791	C	C2-N1-C1'	-7.31	110.76	118.80
25	YA	1287	A	C2-N3-C4	-7.31	106.95	110.60
22	QV	17	C	N1-C2-O2	7.30	123.28	118.90
25	RA	2083	G	N1-C6-O6	7.30	124.28	119.90
25	RA	2509	G	N1-C6-O6	7.30	124.28	119.90
25	YA	142	G	C8-N9-C1'	7.30	136.49	127.00
25	YA	613	U	C6-N1-C1'	7.30	131.42	121.20
25	YA	121	G	C2-N3-C4	7.30	115.55	111.90
25	YA	1383	C	C6-N1-C1'	-7.30	112.04	120.80
25	YA	2732	G	C4-C5-N7	7.30	113.72	110.80
25	YA	2275	C	C6-N1-C2	7.30	123.22	120.30
25	RA	37	C	C2-N3-C4	-7.30	116.25	119.90
25	RA	1241	A	O4'-C1'-N9	7.30	114.04	108.20
25	YA	2032	G	C2-N3-C4	-7.29	108.25	111.90
25	RA	2499	C	N3-C2-O2	-7.29	116.79	121.90
1	XA	1301	U	N3-C2-O2	-7.29	117.09	122.20
1	QA	284	G	C8-N9-C4	7.29	109.32	106.40
25	YA	828	U	C6-N1-C2	-7.29	116.63	121.00
25	RA	270(Z)	U	O4'-C1'-N1	7.29	114.03	108.20
25	RA	662	G	C5-C6-N1	-7.29	107.86	111.50
1	XA	1290	G	C8-N9-C4	-7.29	103.48	106.40
25	YA	621	A	C2-N3-C4	-7.29	106.96	110.60
25	RA	2325	G	C6-C5-N7	-7.29	126.03	130.40
1	QA	1322	C	C6-N1-C1'	-7.28	112.06	120.80
25	RA	1698	A	C5-N7-C8	-7.28	100.26	103.90
1	XA	362	G	N3-C4-N9	-7.28	121.63	126.00
1	XA	807	A	C8-N9-C4	-7.28	102.89	105.80
25	YA	1049	C	N1-C2-O2	7.28	123.27	118.90
1	QA	685	G	N3-C4-N9	-7.28	121.63	126.00
25	YA	2698	U	O5'-P-OP2	-7.28	99.15	105.70
1	QA	356	A	C5-C6-N1	7.28	121.34	117.70
25	RA	2031	A	N3-C4-C5	-7.28	121.70	126.80
26	RB	38	C	C6-N1-C2	-7.28	117.39	120.30
25	YA	2547	U	N1-C2-N3	7.28	119.27	114.90
1	QA	703	G	C8-N9-C1'	-7.28	117.54	127.00
25	RA	2365	G	N3-C4-C5	-7.28	124.96	128.60
25	YA	1142(A)	A	C2-N3-C4	-7.28	106.96	110.60
1	QA	410	G	P-O3'-C3'	7.27	128.43	119.70
1	XA	423	G	C6-C5-N7	-7.27	126.04	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	979	G	C5-N7-C8	-7.27	100.67	104.30
25	RA	2509	G	C2-N3-C4	-7.27	108.27	111.90
1	XA	949	A	N1-C6-N6	-7.27	114.24	118.60
25	YA	487	C	N3-C2-O2	-7.27	116.81	121.90
25	YA	587	C	P-O3'-C3'	7.27	128.42	119.70
25	RA	1328	G	N9-C4-C5	-7.27	102.49	105.40
25	RA	2508	G	C6-C5-N7	-7.27	126.04	130.40
25	RA	503	A	N1-C2-N3	7.26	132.93	129.30
25	RA	512	G	N3-C4-C5	7.26	132.23	128.60
25	RA	680	G	N3-C4-N9	7.26	130.36	126.00
1	XA	416	G	C6-C5-N7	-7.26	126.04	130.40
1	QA	703	G	C4-N9-C1'	7.26	135.94	126.50
25	YA	795	C	C5-C6-N1	-7.26	117.37	121.00
25	YA	2326	C	N1-C2-O2	7.26	123.26	118.90
25	RA	1365	A	C8-N9-C4	-7.26	102.89	105.80
25	YA	663	G	C8-N9-C1'	-7.26	117.56	127.00
25	YA	794	G	C6-C5-N7	-7.26	126.04	130.40
1	QA	416	G	N3-C4-C5	-7.26	124.97	128.60
35	RP	59	LEU	N-CA-C	-7.26	91.40	111.00
35	YP	59	LEU	N-CA-C	-7.26	91.40	111.00
25	RA	1517	G	C2-N3-C4	7.26	115.53	111.90
25	RA	2032	G	C8-N9-C1'	7.26	136.43	127.00
25	YA	642	G	N7-C8-N9	7.26	116.73	113.10
25	YA	2051	A	N1-C6-N6	7.26	122.95	118.60
25	YA	570	G	O5'-P-OP2	7.25	119.41	110.70
25	YA	1773	A	N1-C6-N6	-7.25	114.25	118.60
25	YA	1988	C	C2-N1-C1'	-7.25	110.82	118.80
25	RA	145	G	N3-C4-C5	7.25	132.23	128.60
1	XA	691	G	C8-N9-C1'	-7.25	117.57	127.00
25	YA	1029	A	N1-C6-N6	-7.25	114.25	118.60
25	RA	2468	G	N1-C6-O6	7.25	124.25	119.90
25	YA	270(T)	G	OP1-P-OP2	-7.25	108.73	119.60
25	YA	585	G	C4-N9-C1'	7.25	135.92	126.50
25	RA	1634	A	C4-C5-N7	-7.25	107.08	110.70
25	YA	1906	G	C2-N3-C4	-7.25	108.28	111.90
1	QA	937	A	C8-N9-C4	-7.24	102.90	105.80
25	YA	1381	G	C6-C5-N7	-7.24	126.05	130.40
25	RA	380	U	N3-C4-O4	7.24	124.47	119.40
1	QA	449	C	C6-N1-C2	-7.24	117.40	120.30
25	RA	2776	A	P-O3'-C3'	7.24	128.39	119.70
25	YA	1763	G	N9-C4-C5	7.24	108.30	105.40
25	YA	2073	C	N1-C2-N3	7.24	124.27	119.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2620	C	O5'-P-OP1	-7.24	99.18	105.70
25	YA	2655	G	N3-C4-N9	-7.24	121.66	126.00
25	RA	74	A	N7-C8-N9	7.24	117.42	113.80
1	QA	705	U	N1-C2-N3	7.24	119.24	114.90
25	YA	269	U	C2-N1-C1'	7.24	126.38	117.70
25	YA	1691	C	C6-N1-C2	-7.24	117.41	120.30
25	YA	1256	G	C4-N9-C1'	7.23	135.91	126.50
25	RA	2503	A	N1-C6-N6	-7.23	114.26	118.60
25	YA	1931	U	C5-C4-O4	7.23	130.24	125.90
25	YA	1742	C	C5-C6-N1	7.23	124.61	121.00
1	XA	1503	A	P-O3'-C3'	7.23	128.37	119.70
1	QA	31	G	C4-N9-C1'	7.23	135.90	126.50
1	XA	701	C	OP2-P-O3'	7.23	121.10	105.20
1	XA	792	A	C5-C6-N1	-7.22	114.09	117.70
25	YA	2389	G	C5-C6-O6	-7.22	124.27	128.60
25	RA	1929	G	OP1-P-O3'	7.22	121.09	105.20
25	RA	2211	G	C8-N9-C4	-7.22	103.51	106.40
25	YA	2844	G	C6-C5-N7	-7.22	126.07	130.40
25	RA	1336	A	C5-C6-N1	7.22	121.31	117.70
25	RA	706	A	N1-C6-N6	7.22	122.93	118.60
25	YA	831	G	O5'-P-OP2	-7.22	99.20	105.70
25	RA	1792	G	N1-C6-O6	7.21	124.23	119.90
25	YA	153	C	C6-N1-C2	-7.21	117.41	120.30
25	YA	974(A)	C	C5-C4-N4	7.21	125.25	120.20
25	YA	2407	G	N7-C8-N9	7.21	116.71	113.10
25	YA	2495	G	C8-N9-C4	7.21	109.29	106.40
25	RA	974(A)	C	P-O3'-C3'	7.21	128.35	119.70
25	RA	1471	A	N1-C2-N3	7.21	132.91	129.30
25	YA	221	A	N9-C1'-C2'	-7.21	104.07	112.00
25	YA	592	G	N3-C4-C5	-7.21	125.00	128.60
25	RA	1351	C	C6-N1-C2	-7.21	117.42	120.30
1	XA	677	U	C6-N1-C2	-7.21	116.67	121.00
25	YA	2055	C	N1-C2-O2	-7.21	114.58	118.90
25	RA	2499	C	C6-N1-C2	-7.21	117.42	120.30
1	XA	752	G	N3-C4-N9	7.21	130.32	126.00
1	XA	1200	C	C2-N1-C1'	7.21	126.73	118.80
25	YA	2446	G	C6-C5-N7	-7.21	126.08	130.40
25	YA	1279	G	C5-C6-N1	7.20	115.10	111.50
25	YA	1402	C	C5-C6-N1	7.20	124.60	121.00
25	YA	1142(A)	A	N1-C2-N3	7.20	132.90	129.30
25	YA	1269	A	N7-C8-N9	7.20	117.40	113.80
25	YA	1614	A	C4-C5-N7	7.20	114.30	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	227	A	P-O3'-C3'	7.20	128.34	119.70
25	RA	783	A	C4-N9-C1'	7.20	139.26	126.30
25	RA	2829	C	C6-N1-C2	7.20	123.18	120.30
25	YA	2711	A	N1-C2-N3	7.20	132.90	129.30
25	YA	2779	U	O4'-C1'-N1	7.20	113.96	108.20
25	RA	141	A	N7-C8-N9	7.20	117.40	113.80
25	YA	333	G	C4-C5-N7	7.20	113.68	110.80
25	YA	780	G	C5-N7-C8	-7.20	100.70	104.30
25	YA	1831	G	N3-C4-N9	7.20	130.32	126.00
25	YA	1906	G	N1-C6-O6	7.20	124.22	119.90
25	YA	1964	G	N1-C6-O6	7.20	124.22	119.90
26	YB	94	C	N3-C4-C5	-7.20	119.02	121.90
25	RA	2194	G	C4-N9-C1'	7.20	135.86	126.50
1	XA	960	U	N3-C2-O2	-7.20	117.16	122.20
25	YA	1997	G	C2-N3-C4	-7.20	108.30	111.90
25	YA	1728	G	N3-C4-N9	7.19	130.32	126.00
25	YA	141	A	C8-N9-C4	-7.19	102.92	105.80
25	RA	1593	G	C8-N9-C4	-7.19	103.52	106.40
25	YA	58	G	N1-C2-N3	7.19	128.22	123.90
25	YA	2237	G	C4-N9-C1'	7.19	135.85	126.50
25	YA	2655	G	C6-C5-N7	7.19	134.71	130.40
25	RA	177	G	C5-C6-N1	7.19	115.09	111.50
25	RA	1811	G	C4-C5-N7	7.19	113.67	110.80
25	RA	2433	A	C4-C5-C6	7.19	120.59	117.00
25	YA	731	C	C5-C4-N4	-7.19	115.17	120.20
25	YA	794	G	C4-C5-C6	7.19	123.11	118.80
25	YA	1328	G	N3-C4-N9	7.19	130.31	126.00
25	YA	296	C	N3-C4-N4	-7.19	112.97	118.00
25	RA	1657	C	N3-C2-O2	-7.18	116.87	121.90
25	RA	2409	G	N1-C6-O6	7.18	124.21	119.90
1	XA	760	G	C8-N9-C4	-7.18	103.53	106.40
25	RA	1291	C	C6-N1-C2	7.18	123.17	120.30
25	YA	2785	C	C6-N1-C2	-7.18	117.43	120.30
25	RA	860	U	N3-C2-O2	-7.18	117.17	122.20
25	RA	1818	U	N3-C4-C5	-7.18	110.29	114.60
25	RA	2251	G	C4-N9-C1'	7.18	135.83	126.50
26	RB	36	C	C6-N1-C2	7.18	123.17	120.30
25	YA	132	G	C5-C6-N1	-7.18	107.91	111.50
25	YA	259	G	C5-C6-N1	-7.18	107.91	111.50
25	YA	974(A)	C	N3-C2-O2	-7.18	116.87	121.90
25	RA	198	C	C5-C6-N1	7.18	124.59	121.00
1	XA	766	A	O5'-P-OP1	-7.18	99.24	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2318	G	O4'-C1'-N9	7.18	113.94	108.20
25	YA	1256	G	C8-N9-C4	-7.18	103.53	106.40
1	QA	243	A	P-O3'-C3'	7.17	128.31	119.70
1	QA	785	G	C2-N3-C4	-7.17	108.31	111.90
25	RA	715	G	N3-C4-C5	-7.17	125.01	128.60
25	RA	2393	A	C2-N3-C4	-7.17	107.01	110.60
1	XA	713	G	N3-C4-C5	-7.17	125.01	128.60
1	QA	575	G	OP1-P-O3'	7.17	120.98	105.20
26	RB	43	C	N1-C2-O2	7.17	123.20	118.90
25	RA	55	G	C2-N3-C4	7.17	115.48	111.90
25	RA	789	A	N3-C4-N9	-7.17	121.66	127.40
25	YA	624	C	C2-N1-C1'	7.17	126.69	118.80
1	QA	316	G	C5-C6-O6	-7.17	124.30	128.60
25	RA	689	A	C8-N9-C4	7.17	108.67	105.80
25	YA	222	A	P-O3'-C3'	7.17	128.30	119.70
25	YA	761	A	N9-C4-C5	-7.17	102.93	105.80
25	YA	1899	G	C8-N9-C1'	7.17	136.31	127.00
1	QA	960	U	N1-C2-O2	7.17	127.82	122.80
25	RA	307	G	C8-N9-C4	-7.17	103.53	106.40
25	RA	2490	G	N1-C2-N2	-7.17	109.75	116.20
25	RA	921	G	N1-C6-O6	7.16	124.20	119.90
25	RA	1834	U	C6-N1-C2	-7.16	116.70	121.00
25	YA	692	C	N3-C4-C5	7.16	124.77	121.90
25	YA	28	A	C4-C5-C6	7.16	120.58	117.00
25	YA	2728	U	N3-C4-O4	7.16	124.41	119.40
26	YB	98	G	C8-N9-C4	7.16	109.27	106.40
1	XA	934	C	P-O3'-C3'	7.16	128.29	119.70
25	YA	67	U	N3-C4-O4	7.16	124.41	119.40
1	QA	910	C	C6-N1-C2	7.16	123.16	120.30
25	RA	1779	U	C2-N1-C1'	7.16	126.29	117.70
25	RA	2503	A	N9-C4-C5	7.16	108.66	105.80
25	RA	1982	C	C6-N1-C2	7.16	123.16	120.30
25	YA	1666	G	N9-C4-C5	-7.16	102.54	105.40
25	RA	129	C	C5-C6-N1	-7.15	117.42	121.00
25	RA	145	G	C4-N9-C1'	-7.15	117.20	126.50
25	YA	493	G	C5-C6-O6	-7.15	124.31	128.60
25	YA	2686	G	C2-N3-C4	7.15	115.48	111.90
25	YA	2776	A	P-O3'-C3'	7.15	128.28	119.70
25	YA	624	C	C5-C6-N1	7.15	124.58	121.00
25	YA	1767	C	N3-C4-C5	7.15	124.76	121.90
25	RA	1557	C	C6-N1-C2	7.15	123.16	120.30
1	XA	423	G	N3-C4-N9	7.15	130.29	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1187	G	C4-C5-C6	7.15	123.09	118.80
25	RA	1998	G	C8-N9-C4	7.15	109.26	106.40
25	YA	226	G	O4'-C1'-N9	7.15	113.92	108.20
25	YA	512	G	C5-C6-N1	7.15	115.07	111.50
25	RA	508	G	N1-C6-O6	7.15	124.19	119.90
25	YA	1306	C	N3-C4-C5	7.14	124.76	121.90
25	YA	388	G	C8-N9-C4	-7.14	103.54	106.40
25	RA	270(C)	C	C6-N1-C2	-7.14	117.44	120.30
25	RA	465	G	C6-C5-N7	-7.14	126.12	130.40
25	YA	295	G	C6-C5-N7	-7.14	126.12	130.40
1	XA	5	U	O4'-C1'-N1	7.14	113.91	108.20
25	YA	2228	G	C6-C5-N7	-7.14	126.12	130.40
25	RA	2087	G	N1-C6-O6	7.13	124.18	119.90
25	RA	2640	G	N1-C6-O6	7.13	124.18	119.90
25	YA	734	A	N1-C6-N6	7.13	122.88	118.60
25	RA	1653	G	C5-C6-O6	7.13	132.88	128.60
25	YA	1869	G	N7-C8-N9	7.13	116.67	113.10
1	QA	1346	A	O4'-C1'-C2'	7.13	114.02	107.60
25	YA	842	G	C6-C5-N7	-7.13	126.12	130.40
25	RA	2032	G	C4-N9-C1'	-7.12	117.24	126.50
25	RA	2516	G	C2-N3-C4	7.12	115.46	111.90
25	YA	27	G	N9-C4-C5	7.12	108.25	105.40
25	YA	681	G	C6-C5-N7	-7.12	126.13	130.40
25	YA	952	G	C6-C5-N7	-7.12	126.13	130.40
25	YA	1358	G	C8-N9-C1'	-7.12	117.74	127.00
25	YA	2506	U	C5-C4-O4	7.12	130.17	125.90
25	RA	1627	G	N1-C6-O6	7.12	124.17	119.90
1	QA	352	C	N3-C4-C5	-7.12	119.05	121.90
25	YA	391	G	N1-C6-O6	7.12	124.17	119.90
25	YA	58	G	N3-C4-C5	-7.12	125.04	128.60
25	YA	1216	G	N1-C6-O6	7.12	124.17	119.90
25	YA	2321	G	N7-C8-N9	7.12	116.66	113.10
25	YA	2558	C	C2-N3-C4	-7.12	116.34	119.90
1	QA	108	G	C4-N9-C1'	7.11	135.75	126.50
25	YA	583	G	O5'-P-OP2	-7.11	99.30	105.70
1	QA	299	G	N3-C2-N2	-7.11	114.92	119.90
25	RA	2544	G	C5-C6-O6	-7.11	124.33	128.60
25	YA	1906	G	C6-C5-N7	-7.11	126.13	130.40
1	XA	1323	G	C4-C5-N7	7.11	113.64	110.80
25	YA	1369	G	N1-C6-O6	7.11	124.17	119.90
25	YA	728	G	C4-N9-C1'	7.11	135.74	126.50
25	YA	1468	C	N1-C2-O2	7.11	123.17	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2051	A	C2-N3-C4	-7.11	107.05	110.60
1	XA	564	C	C6-N1-C2	-7.10	117.46	120.30
25	RA	1602	U	N3-C4-C5	-7.10	110.34	114.60
1	XA	901	A	C4-C5-N7	7.10	114.25	110.70
25	YA	63	U	N3-C4-C5	-7.10	110.34	114.60
25	RA	2867	G	N3-C4-C5	7.10	132.15	128.60
25	YA	434	U	N1-C2-O2	-7.10	117.83	122.80
25	YA	867	C	C5-C6-N1	7.10	124.55	121.00
25	RA	252	G	C5-C6-O6	7.10	132.86	128.60
25	RA	2032	G	C4-C5-C6	-7.10	114.54	118.80
25	YA	2422	A	O5'-P-OP2	-7.10	99.31	105.70
1	XA	186(A)	C	C2-N1-C1'	7.10	126.61	118.80
25	YA	544	C	N1-C2-O2	7.10	123.16	118.90
25	YA	636	G	C5-C6-O6	-7.10	124.34	128.60
25	YA	2550	G	C6-C5-N7	-7.10	126.14	130.40
25	YA	2518	A	N9-C4-C5	-7.10	102.96	105.80
1	XA	372	C	N1-C2-O2	7.09	123.16	118.90
1	XA	1114	C	C6-N1-C2	-7.09	117.46	120.30
25	YA	2292	C	N3-C2-O2	-7.09	116.94	121.90
25	RA	573	G	O4'-C1'-N9	-7.09	102.53	108.20
25	RA	775	G	N3-C4-C5	-7.09	125.05	128.60
25	YA	391	G	N9-C4-C5	-7.09	102.56	105.40
25	RA	2556	C	C6-N1-C1'	-7.09	112.29	120.80
25	RA	444	C	C6-N1-C2	7.09	123.14	120.30
25	RA	2421	G	N3-C2-N2	7.08	124.86	119.90
1	XA	557	G	N9-C4-C5	-7.08	102.57	105.40
25	YA	2820	A	C6-C5-N7	-7.08	127.34	132.30
1	QA	778	G	C4-N9-C1'	7.08	135.71	126.50
25	RA	2597	G	C5-C6-N1	-7.08	107.96	111.50
1	XA	372	C	C6-N1-C1'	-7.08	112.30	120.80
25	YA	338	G	C4-N9-C1'	7.08	135.71	126.50
25	YA	741	G	C4-N9-C1'	7.08	135.71	126.50
25	RA	51	G	N3-C4-N9	7.08	130.25	126.00
25	RA	1404	C	N3-C2-O2	-7.08	116.94	121.90
25	RA	2751	G	C8-N9-C4	-7.08	103.57	106.40
1	QA	1518	A	C5-C6-N1	-7.08	114.16	117.70
25	RA	141	A	C5-N7-C8	-7.08	100.36	103.90
25	RA	2196	C	C6-N1-C2	-7.08	117.47	120.30
25	YA	1241	A	C5-C6-N1	-7.08	114.16	117.70
25	YA	2570	G	C8-N9-C4	7.08	109.23	106.40
25	RA	917	A	C5-C6-N1	-7.08	114.16	117.70
25	RA	85	G	N3-C4-C5	-7.08	125.06	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	966	G	O5'-P-OP2	-7.08	99.33	105.70
25	YA	1401	G	C5-C6-N1	-7.08	107.96	111.50
1	XA	1323	G	C5-C6-O6	-7.07	124.36	128.60
1	XA	1416	G	C8-N9-C4	-7.07	103.57	106.40
25	YA	2818	G	C6-C5-N7	-7.07	126.16	130.40
1	QA	226	G	C2-N3-C4	-7.07	108.36	111.90
25	RA	726	G	C4-C5-N7	-7.07	107.97	110.80
25	YA	658	C	O5'-P-OP2	-7.07	99.34	105.70
25	YA	701	G	C4-N9-C1'	7.07	135.69	126.50
25	YA	1256	G	N3-C4-C5	-7.07	125.06	128.60
25	RA	958	U	N3-C2-O2	-7.07	117.25	122.20
25	YA	788	A	C8-N9-C4	7.07	108.63	105.80
25	RA	511	U	O5'-P-OP1	-7.07	99.34	105.70
25	YA	1280	G	C2-N3-C4	7.07	115.43	111.90
1	QA	106	C	C6-N1-C2	-7.07	117.47	120.30
25	RA	860	U	C4-C5-C6	7.07	123.94	119.70
25	RA	1779	U	C5-C6-N1	7.07	126.23	122.70
25	RA	1949	G	C6-C5-N7	-7.07	126.16	130.40
25	RA	2455	G	C5-C6-O6	-7.07	124.36	128.60
25	RA	1985	G	N3-C4-C5	-7.06	125.07	128.60
25	YA	1657	C	OP1-P-O3'	7.06	120.74	105.20
25	RA	2426	A	C8-N9-C4	-7.06	102.97	105.80
25	YA	2215	G	N9-C4-C5	-7.06	102.58	105.40
25	YA	2420	C	O5'-P-OP2	7.06	119.17	110.70
26	YB	41	U	N1-C2-O2	7.06	127.74	122.80
25	RA	1328	G	C6-C5-N7	-7.06	126.16	130.40
25	YA	1799	G	P-O3'-C3'	7.06	128.17	119.70
25	YA	1259	G	N1-C6-O6	7.06	124.13	119.90
25	RA	2857	G	C6-C5-N7	-7.05	126.17	130.40
25	YA	1695	G	N3-C4-N9	7.05	130.23	126.00
25	RA	1835	G	N3-C4-N9	7.05	130.23	126.00
25	YA	209	C	N3-C4-C5	7.05	124.72	121.90
25	YA	465	G	C4-N9-C1'	7.05	135.67	126.50
25	YA	1753	G	C8-N9-C4	-7.05	103.58	106.40
25	RA	707	G	N3-C4-N9	7.05	130.23	126.00
25	RA	1471	A	N7-C8-N9	7.05	117.33	113.80
36	RQ	81	VAL	N-CA-C	7.05	130.04	111.00
25	YA	1049	C	N3-C2-O2	-7.05	116.96	121.90
25	YA	911	A	C5-C6-N1	-7.05	114.18	117.70
25	YA	1424	G	C4-C5-C6	7.05	123.03	118.80
25	YA	1614	A	O4'-C1'-N9	7.05	113.84	108.20
25	YA	2518	A	C8-N9-C4	7.05	108.62	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1705	G	C8-N9-C1'	-7.05	117.84	127.00
1	QA	377	G	C4-N9-C1'	7.05	135.66	126.50
25	RA	1314	C	O5'-P-OP1	-7.04	99.36	105.70
25	RA	1840	G	N1-C6-O6	7.04	124.13	119.90
25	YA	2224	G	C4-C5-N7	-7.04	107.98	110.80
25	RA	791	C	N3-C4-C5	7.04	124.72	121.90
25	RA	1950	G	C5-N7-C8	-7.04	100.78	104.30
25	YA	480	A	OP1-P-O3'	7.04	120.70	105.20
25	YA	974(A)	C	N3-C4-N4	-7.04	113.07	118.00
25	YA	2445	G	C8-N9-C4	-7.04	103.58	106.40
25	YA	2665	A	N1-C6-N6	7.04	122.83	118.60
1	XA	919	A	N1-C6-N6	-7.04	114.38	118.60
25	YA	2463	C	N1-C2-N3	7.04	124.13	119.20
1	XA	960	U	C2-N1-C1'	7.04	126.15	117.70
36	YQ	81	VAL	N-CA-C	7.04	130.01	111.00
1	QA	377	G	N3-C4-C5	-7.04	125.08	128.60
25	RA	530	G	N1-C6-O6	-7.04	115.68	119.90
25	YA	1496	A	N1-C6-N6	7.04	122.82	118.60
1	XA	1352	C	N3-C2-O2	-7.04	116.97	121.90
25	YA	2732	G	N1-C6-O6	7.04	124.12	119.90
1	QA	191	G	N3-C4-C5	-7.04	125.08	128.60
1	QA	778	G	C6-C5-N7	-7.04	126.18	130.40
25	RA	745	G	C4-N9-C1'	7.04	135.65	126.50
25	RA	2211	G	C5-N7-C8	-7.04	100.78	104.30
25	RA	184	C	C2-N3-C4	-7.03	116.38	119.90
1	XA	1419	G	C2-N3-C4	-7.03	108.38	111.90
25	RA	137	C	C6-N1-C2	-7.03	117.49	120.30
25	RA	1614	A	N7-C8-N9	7.03	117.31	113.80
25	YA	2246	G	C5-C6-N1	7.03	115.02	111.50
25	YA	228	A	C8-N9-C4	-7.03	102.99	105.80
1	QA	557	G	C6-C5-N7	-7.03	126.18	130.40
1	XA	808	C	N3-C4-N4	7.03	122.92	118.00
25	RA	250	G	O5'-P-OP1	-7.03	99.38	105.70
25	YA	270(Y)	G	C5-C6-O6	7.03	132.81	128.60
25	YA	2490	G	C6-C5-N7	-7.03	126.19	130.40
1	QA	754	C	N1-C2-O2	7.02	123.11	118.90
25	RA	2674	G	N3-C4-C5	7.02	132.11	128.60
25	YA	300	A	O5'-P-OP2	-7.02	99.38	105.70
25	RA	382	G	N3-C4-C5	7.02	132.11	128.60
25	RA	1269	A	O5'-P-OP1	-7.02	99.38	105.70
25	RA	2325	G	C5-C6-N1	-7.02	107.99	111.50
25	RA	2419	U	N3-C2-O2	-7.02	117.29	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2450	A	N7-C8-N9	7.02	117.31	113.80
25	RA	297	C	N1-C2-O2	7.01	123.11	118.90
25	RA	991	C	O5'-P-OP1	-7.01	99.39	105.70
25	RA	1210	A	C4-C5-C6	7.01	120.51	117.00
1	XA	1523	G	N1-C6-O6	7.01	124.11	119.90
1	QA	137	C	C6-N1-C2	7.01	123.11	120.30
25	YA	2458	G	C6-C5-N7	-7.01	126.19	130.40
25	RA	1698	A	C4-C5-N7	7.01	114.21	110.70
25	YA	976	C	C6-N1-C2	-7.01	117.50	120.30
25	RA	1903	G	O5'-P-OP2	-7.01	99.39	105.70
25	RA	1681	G	C6-C5-N7	-7.00	126.20	130.40
25	YA	1192	G	C6-C5-N7	-7.00	126.20	130.40
25	YA	2458	G	C5-C6-N1	-7.00	108.00	111.50
25	RA	2346	A	N1-C2-N3	7.00	132.80	129.30
25	YA	27	G	C8-N9-C4	-7.00	103.60	106.40
25	YA	73	A	N1-C6-N6	-7.00	114.40	118.60
25	YA	385	C	C5-C6-N1	7.00	124.50	121.00
25	RA	2049	G	C2-N3-C4	-7.00	108.40	111.90
25	YA	129	C	C6-N1-C2	7.00	123.10	120.30
25	YA	379	G	C6-C5-N7	-7.00	126.20	130.40
1	QA	145	G	C8-N9-C4	-7.00	103.60	106.40
25	YA	84	A	N7-C8-N9	7.00	117.30	113.80
1	QA	869	G	N3-C4-N9	-7.00	121.80	126.00
25	RA	1264	G	N3-C4-C5	-7.00	125.10	128.60
25	RA	1636	C	N1-C2-O2	7.00	123.10	118.90
25	YA	141	A	C6-C5-N7	-7.00	127.40	132.30
25	RA	1241	A	N1-C2-N3	6.99	132.80	129.30
25	YA	2458	G	C2-N3-C4	-6.99	108.40	111.90
1	QA	1206	G	N3-C4-C5	-6.99	125.11	128.60
25	RA	1786	A	N9-C4-C5	-6.99	103.00	105.80
25	RA	2508	G	C8-N9-C1'	-6.99	117.92	127.00
25	YA	140	A	C5-C6-N6	-6.99	118.11	123.70
1	QA	244	U	C6-N1-C2	6.99	125.19	121.00
25	RA	1896	G	C4-C5-N7	6.99	113.59	110.80
25	RA	2468	G	O4'-C1'-N9	6.99	113.79	108.20
1	XA	1419	G	C5-C6-N1	-6.99	108.01	111.50
25	YA	1497	U	N1-C2-O2	6.99	127.69	122.80
25	YA	2622	C	C5-C6-N1	-6.99	117.51	121.00
25	RA	1645	G	C5-C6-O6	-6.99	124.41	128.60
1	XA	328	C	N3-C2-O2	-6.99	117.01	121.90
25	YA	298	G	N3-C4-N9	-6.99	121.81	126.00
25	YA	2576	G	N1-C6-O6	-6.99	115.71	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	63	U	C6-N1-C1'	6.98	130.98	121.20
25	RA	2509	G	N1-C2-N3	6.98	128.09	123.90
25	YA	2315	G	O5'-P-OP1	-6.98	99.42	105.70
25	YA	2360	A	C8-N9-C4	6.98	108.59	105.80
25	RA	72	U	C5-C6-N1	-6.98	119.21	122.70
25	RA	1678	G	C8-N9-C4	-6.98	103.61	106.40
25	RA	2456	C	N3-C4-N4	6.98	122.89	118.00
1	XA	1519	A	O5'-P-OP1	-6.98	99.42	105.70
1	XA	755	G	C6-C5-N7	-6.98	126.21	130.40
25	YA	1930	G	C5-N7-C8	6.98	107.79	104.30
25	YA	153	C	C5-C6-N1	6.98	124.49	121.00
25	YA	202	U	C5-C4-O4	6.98	130.09	125.90
25	YA	1956	U	C2-N1-C1'	-6.98	109.33	117.70
25	RA	57	C	C6-N1-C2	-6.98	117.51	120.30
25	YA	741	G	C4-C5-C6	6.98	122.98	118.80
25	YA	1770	G	C6-C5-N7	-6.97	126.22	130.40
25	YA	2677	G	C4-N9-C1'	6.97	135.57	126.50
25	RA	860	U	N1-C2-N3	6.97	119.08	114.90
1	XA	435	C	C6-N1-C2	-6.97	117.51	120.30
25	YA	1834	U	N3-C2-O2	-6.97	117.32	122.20
25	YA	2080	G	C2-N3-C4	-6.97	108.41	111.90
25	YA	2320	A	C8-N9-C4	-6.97	103.01	105.80
25	YA	2656	U	OP1-P-OP2	-6.97	109.14	119.60
1	QA	117	G	C4-C5-N7	6.97	113.59	110.80
25	YA	259	G	C6-C5-N7	-6.97	126.22	130.40
25	YA	2838	G	C8-N9-C4	-6.97	103.61	106.40
25	RA	2056	G	C5-N7-C8	-6.97	100.82	104.30
25	YA	663	G	C4-N9-C1'	6.97	135.56	126.50
25	YA	2706	G	C8-N9-C4	6.96	109.19	106.40
25	YA	327	G	N1-C6-O6	6.96	124.08	119.90
25	RA	1238	G	N3-C4-C5	6.96	132.08	128.60
25	RA	2318	G	C8-N9-C4	-6.96	103.62	106.40
25	YA	2694	G	N1-C6-O6	6.96	124.08	119.90
25	YA	2712	U	N1-C2-N3	6.96	119.08	114.90
1	XA	872	A	C8-N9-C4	-6.96	103.02	105.80
25	YA	144	C	N3-C2-O2	-6.96	117.03	121.90
25	YA	290	G	C8-N9-C4	6.96	109.18	106.40
25	YA	503	A	C4-C5-C6	6.96	120.48	117.00
25	YA	916	G	C8-N9-C4	-6.96	103.62	106.40
25	RA	530	G	N1-C2-N2	-6.96	109.94	116.20
1	XA	902	G	C5-C6-O6	-6.95	124.43	128.60
25	YA	975	G	OP1-P-OP2	-6.95	109.17	119.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2431	U	N3-C4-C5	-6.95	110.43	114.60
25	YA	1266	G	C8-N9-C4	6.95	109.18	106.40
25	YA	1603	A	C8-N9-C4	-6.95	103.02	105.80
25	YA	2053	G	C5-C6-O6	-6.95	124.43	128.60
25	RA	1440	G	N1-C6-O6	6.95	124.07	119.90
25	YA	2616	C	C6-N1-C2	6.95	123.08	120.30
25	RA	637	A	O5'-P-OP1	-6.95	99.45	105.70
25	RA	2787	C	N1-C2-O2	6.95	123.07	118.90
1	QA	865	A	C8-N9-C4	-6.94	103.02	105.80
25	RA	1162	G	C5-C6-O6	-6.94	124.43	128.60
1	QA	377	G	C8-N9-C1'	-6.94	117.97	127.00
25	RA	484	C	C6-N1-C1'	-6.94	112.47	120.80
25	RA	1634	A	C5-N7-C8	6.94	107.37	103.90
1	XA	283	C	N1-C2-O2	6.94	123.06	118.90
25	YA	585	G	N3-C4-N9	6.94	130.16	126.00
25	YA	1695	G	C8-N9-C1'	-6.94	117.98	127.00
25	RA	768	G	C8-N9-C4	-6.94	103.62	106.40
25	RA	1300	U	N3-C4-C5	-6.94	110.44	114.60
25	RA	2311	A	C2-N3-C4	-6.94	107.13	110.60
25	RA	2656	U	N3-C4-O4	6.94	124.26	119.40
25	YA	1930	G	C2-N3-C4	6.94	115.37	111.90
26	RB	22	U	C6-N1-C2	-6.94	116.84	121.00
25	RA	2366	A	O5'-P-OP2	-6.93	99.46	105.70
1	XA	1158	C	N1-C2-O2	6.93	123.06	118.90
1	QA	331	G	C8-N9-C4	-6.93	103.63	106.40
25	RA	2772	C	C6-N1-C2	6.93	123.07	120.30
1	QA	934	C	P-O3'-C3'	6.93	128.01	119.70
25	RA	777	A	C2-N3-C4	6.93	114.06	110.60
25	RA	1022	G	C4-C5-N7	-6.93	108.03	110.80
1	XA	221	C	C6-N1-C2	-6.93	117.53	120.30
25	YA	1017	G	C4-C5-N7	6.93	113.57	110.80
25	YA	2258	C	N1-C2-O2	6.93	123.06	118.90
25	YA	2548	G	C6-C5-N7	-6.93	126.24	130.40
25	RA	1903	G	C4-N9-C1'	6.93	135.51	126.50
25	RA	71	A	N1-C6-N6	6.92	122.75	118.60
1	XA	328	C	C5-C6-N1	6.92	124.46	121.00
25	YA	1203	G	C5-C6-O6	6.92	132.75	128.60
25	YA	2567	G	O5'-P-OP1	-6.92	99.47	105.70
25	YA	787	U	N3-C2-O2	6.92	127.04	122.20
25	YA	1028	A	C8-N9-C4	-6.92	103.03	105.80
25	YA	1141	U	N1-C2-N3	6.92	119.05	114.90
25	RA	848	G	N1-C6-O6	-6.92	115.75	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1929	G	N9-C4-C5	-6.92	102.63	105.40
25	YA	1186	G	N1-C6-O6	-6.92	115.75	119.90
25	YA	1606	G	C4-N9-C1'	6.92	135.49	126.50
26	RB	104	A	O5'-P-OP2	-6.92	99.47	105.70
1	QA	525	C	C5-C6-N1	6.92	124.46	121.00
25	YA	2395	C	C2-N3-C4	6.92	123.36	119.90
25	RA	2393	A	N1-C6-N6	6.91	122.75	118.60
25	YA	400	G	N3-C4-N9	-6.91	121.85	126.00
25	YA	1369	G	C4-C5-N7	6.91	113.57	110.80
25	RA	1612	C	N3-C4-C5	6.91	124.66	121.90
25	YA	2228	G	O5'-P-OP2	-6.91	99.48	105.70
25	RA	2452	C	N3-C4-C5	-6.91	119.14	121.90
25	YA	1183	G	N1-C6-O6	6.91	124.05	119.90
25	YA	2035	G	C4-N9-C1'	-6.91	117.52	126.50
1	QA	31	G	C8-N9-C1'	-6.91	118.02	127.00
25	RA	1667	G	O4'-C1'-N9	6.91	113.73	108.20
25	YA	866	A	N1-C6-N6	6.91	122.74	118.60
1	QA	104	G	C5-C6-N1	-6.91	108.05	111.50
25	YA	2022	U	C2-N1-C1'	-6.91	109.41	117.70
25	YA	1776	G	C6-C5-N7	-6.90	126.26	130.40
25	RA	1602	U	N3-C2-O2	-6.90	117.37	122.20
25	RA	1769	G	C6-C5-N7	-6.90	126.26	130.40
25	RA	954	G	C8-N9-C4	-6.90	103.64	106.40
25	YA	705	A	O5'-P-OP1	-6.90	99.49	105.70
25	YA	2432	A	C5-C6-N1	-6.90	114.25	117.70
25	RA	1471	A	C6-C5-N7	-6.89	127.47	132.30
26	RB	22	U	C5-C6-N1	6.89	126.15	122.70
1	XA	23	C	N3-C4-C5	-6.89	119.14	121.90
1	XA	1200	C	P-O3'-C3'	6.89	127.97	119.70
25	YA	989	G	N9-C4-C5	-6.89	102.64	105.40
25	RA	15	G	N3-C4-N9	-6.89	121.86	126.00
25	YA	1950	G	C8-N9-C1'	-6.89	118.04	127.00
25	RA	1623	G	C4-C5-N7	6.89	113.56	110.80
25	YA	2367	G	C6-C5-N7	-6.89	126.27	130.40
25	RA	1299	G	N3-C4-C5	6.89	132.04	128.60
25	RA	1858	G	C8-N9-C4	-6.89	103.64	106.40
25	YA	27	G	C4-C5-N7	-6.89	108.05	110.80
25	RA	533	G	C4-C5-C6	6.89	122.93	118.80
25	RA	877	U	C5-C6-N1	6.89	126.14	122.70
1	XA	812	C	C6-N1-C1'	-6.89	112.54	120.80
25	YA	1854	A	C8-N9-C4	6.89	108.56	105.80
25	RA	1142(A)	A	C5-C6-N1	-6.88	114.26	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1429	G	C6-C5-N7	-6.88	126.27	130.40
25	RA	1779	U	C5-C4-O4	-6.88	121.77	125.90
25	YA	2235	G	C2-N3-C4	-6.88	108.46	111.90
25	YA	510	C	OP1-P-OP2	6.88	129.92	119.60
25	RA	307	G	N1-C6-O6	-6.88	115.77	119.90
25	RA	1196	C	C6-N1-C2	-6.88	117.55	120.30
25	RA	1816	G	C2-N3-C4	6.88	115.34	111.90
25	RA	2018	G	C6-C5-N7	-6.88	126.27	130.40
25	YA	388	G	N9-C4-C5	6.88	108.15	105.40
25	YA	563	G	N1-C6-O6	-6.88	115.77	119.90
25	YA	928	G	C5-N7-C8	-6.88	100.86	104.30
25	YA	51	G	N1-C2-N3	6.88	128.03	123.90
25	RA	776	G	N3-C4-C5	6.87	132.04	128.60
25	YA	636	G	C8-N9-C4	-6.87	103.65	106.40
25	RA	1647	G	N3-C4-C5	6.87	132.04	128.60
25	RA	2447	G	C4-C5-C6	6.87	122.92	118.80
1	XA	423	G	C8-N9-C1'	-6.87	118.07	127.00
1	XA	812	C	C5-C6-N1	6.87	124.44	121.00
1	XA	1502	A	C5-N7-C8	-6.87	100.47	103.90
25	YA	845	G	C4-C5-N7	6.87	113.55	110.80
25	YA	2752	C	C2-N1-C1'	6.87	126.36	118.80
25	YA	301	G	N3-C4-C5	-6.87	125.17	128.60
25	YA	1929	G	C5-N7-C8	-6.87	100.87	104.30
25	YA	774	A	C5-C6-N1	-6.87	114.27	117.70
25	RA	932	G	C5-C6-N1	-6.87	108.07	111.50
25	YA	469	G	C6-C5-N7	-6.87	126.28	130.40
1	XA	1144	G	N3-C4-N9	-6.86	121.88	126.00
25	YA	284	U	C5-C6-N1	6.86	126.13	122.70
25	YA	465	G	C6-C5-N7	-6.86	126.28	130.40
25	RA	15	G	C8-N9-C1'	6.86	135.92	127.00
25	RA	268	C	C5-C6-N1	6.86	124.43	121.00
25	RA	2581	G	C8-N9-C4	-6.86	103.66	106.40
25	YA	246	C	C5-C6-N1	-6.86	117.57	121.00
25	YA	388	G	C5-C6-O6	6.86	132.72	128.60
25	YA	777	A	C6-N1-C2	-6.86	114.48	118.60
25	YA	1944	U	C6-N1-C2	6.86	125.12	121.00
25	YA	2012	G	C4-C5-N7	6.86	113.54	110.80
25	YA	2544	G	C6-C5-N7	-6.86	126.28	130.40
25	RA	508	G	C5-C6-O6	-6.86	124.48	128.60
1	XA	1380	U	O5'-P-OP2	-6.86	99.53	105.70
25	RA	1447	G	N1-C6-O6	6.86	124.01	119.90
25	RA	2005	A	N1-C6-N6	-6.86	114.49	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2333	A	C2-N3-C4	6.86	114.03	110.60
25	YA	1989	G	C5-C6-N1	-6.86	108.07	111.50
25	RA	982	C	C2-N3-C4	6.85	123.33	119.90
25	YA	1978	A	N1-C2-N3	6.85	132.73	129.30
25	YA	2251	G	N1-C2-N2	-6.85	110.03	116.20
25	YA	1997	G	N3-C4-C5	6.85	132.03	128.60
1	QA	232	G	C6-C5-N7	-6.85	126.29	130.40
25	RA	1298	C	C6-N1-C2	-6.85	117.56	120.30
25	RA	2042	A	C2-N3-C4	-6.85	107.18	110.60
25	YA	729	G	C5-C6-O6	-6.85	124.49	128.60
25	YA	2544	G	N9-C4-C5	-6.85	102.66	105.40
1	XA	797	C	N3-C4-C5	6.84	124.64	121.90
25	YA	83	G	N7-C8-N9	-6.84	109.68	113.10
25	YA	1559	G	C4-C5-N7	6.84	113.54	110.80
25	RA	785	G	O5'-P-OP1	-6.84	99.54	105.70
25	YA	259	G	C2-N3-C4	-6.84	108.48	111.90
25	YA	662	G	C8-N9-C1'	-6.84	118.11	127.00
25	YA	1904	G	N3-C4-N9	6.84	130.10	126.00
25	YA	2307	G	O4'-C1'-N9	6.84	113.67	108.20
25	YA	2389	G	O5'-P-OP2	6.84	118.91	110.70
1	QA	1382	C	C6-N1-C2	-6.84	117.56	120.30
25	RA	1949	G	C4-C5-C6	6.84	122.90	118.80
25	RA	2512	C	N3-C2-O2	6.84	126.69	121.90
1	XA	799	G	C6-C5-N7	-6.84	126.30	130.40
25	RA	512	G	C8-N9-C1'	6.84	135.89	127.00
25	RA	1353	A	C4-C5-C6	6.84	120.42	117.00
25	YA	433	C	C5-C6-N1	-6.83	117.58	121.00
25	YA	1279	G	N9-C4-C5	6.83	108.13	105.40
1	XA	1323	G	C6-C5-N7	-6.83	126.30	130.40
25	RA	1756	G	C5-C6-N1	-6.83	108.08	111.50
25	YA	2383	G	C4-N9-C1'	6.83	135.38	126.50
25	RA	780	G	N7-C8-N9	6.83	116.51	113.10
26	RB	90	C	N1-C2-O2	6.83	123.00	118.90
25	YA	554	U	C5-C6-N1	-6.83	119.29	122.70
25	YA	2436	G	C4-C5-N7	-6.83	108.07	110.80
25	YA	2820	A	C4-C5-N7	6.83	114.11	110.70
25	RA	1123	C	N3-C2-O2	6.82	126.68	121.90
25	YA	2028	U	N3-C4-O4	6.82	124.18	119.40
1	XA	293	G	C5-C6-O6	-6.82	124.51	128.60
25	YA	2870	C	C6-N1-C2	-6.82	117.57	120.30
25	RA	1774	C	C6-N1-C2	-6.82	117.57	120.30
25	YA	1021	A	N1-C2-N3	6.82	132.71	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1187	G	C4-N9-C1'	6.82	135.37	126.50
25	YA	2079	U	O5'-P-OP1	-6.82	99.56	105.70
25	YA	55	G	N3-C4-N9	6.82	130.09	126.00
25	RA	1617	C	C5-C6-N1	-6.82	117.59	121.00
25	RA	1896	G	C5-C6-O6	-6.82	124.51	128.60
25	YA	1043	C	C6-N1-C2	-6.82	117.57	120.30
25	RA	2043	C	C5-C6-N1	6.81	124.41	121.00
25	RA	2832	U	P-O3'-C3'	6.81	127.88	119.70
25	YA	1450	C	N3-C2-O2	-6.81	117.13	121.90
25	YA	1869	G	C4-C5-C6	6.81	122.89	118.80
25	RA	1624	G	C8-N9-C4	6.81	109.12	106.40
25	YA	822	U	C5-C4-O4	6.81	129.98	125.90
25	YA	1813	G	N1-C6-O6	6.81	123.98	119.90
25	RA	1829	A	C5-C6-N1	6.81	121.10	117.70
25	YA	835	A	C8-N9-C4	-6.81	103.08	105.80
25	YA	2037	G	C5-C6-O6	-6.81	124.52	128.60
25	RA	673	C	N1-C2-O2	6.80	122.98	118.90
25	RA	1795	C	N3-C2-O2	-6.80	117.14	121.90
25	YA	327	G	C4-C5-C6	6.80	122.88	118.80
25	YA	512	G	N7-C8-N9	6.80	116.50	113.10
25	YA	1620	G	C6-C5-N7	-6.80	126.32	130.40
1	QA	705	U	C6-N1-C2	-6.80	116.92	121.00
25	YA	1606	G	N3-C4-C5	-6.80	125.20	128.60
25	YA	1332	G	N3-C2-N2	6.80	124.66	119.90
25	YA	1446	C	C6-N1-C2	-6.80	117.58	120.30
25	YA	1665	A	C8-N9-C4	6.80	108.52	105.80
25	YA	2064	C	C6-N1-C2	-6.80	117.58	120.30
1	QA	161	A	C8-N9-C4	-6.80	103.08	105.80
25	RA	1698	A	N7-C8-N9	6.80	117.20	113.80
25	YA	557	U	C5-C6-N1	-6.80	119.30	122.70
25	YA	576	U	N1-C2-O2	-6.80	118.04	122.80
25	YA	1437	C	C6-N1-C2	-6.80	117.58	120.30
25	YA	2434	A	C5-C6-N6	-6.80	118.26	123.70
25	YA	2029	G	C5-C6-N1	-6.80	108.10	111.50
1	QA	318	G	C2-N3-C4	6.80	115.30	111.90
1	XA	807	A	N7-C8-N9	6.80	117.20	113.80
25	YA	1528	A	C6-C5-N7	-6.80	127.54	132.30
25	YA	1705	G	C4-C5-C6	6.79	122.88	118.80
25	RA	1429	G	C4-C5-C6	6.79	122.88	118.80
25	YA	526	A	N9-C4-C5	6.79	108.52	105.80
25	YA	916	G	C4-N9-C1'	6.79	135.33	126.50
1	QA	1356	G	C8-N9-C4	-6.79	103.68	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1779	U	N3-C4-O4	6.79	124.15	119.40
25	YA	29	U	C5-C4-O4	-6.79	121.83	125.90
25	YA	269	U	C6-N1-C1'	-6.79	111.69	121.20
25	YA	138	G	C2-N3-C4	6.79	115.30	111.90
25	YA	530	G	N1-C6-O6	-6.79	115.83	119.90
25	YA	1857	G	C4-C5-C6	6.79	122.87	118.80
25	YA	2025	C	N3-C4-C5	-6.79	119.18	121.90
26	YB	30	C	C5-C6-N1	6.79	124.39	121.00
25	YA	199	A	C8-N9-C4	6.79	108.51	105.80
25	YA	979	G	C5-N7-C8	-6.79	100.91	104.30
1	XA	273	A	C6-C5-N7	-6.78	127.55	132.30
25	YA	1907	G	N3-C2-N2	-6.78	115.15	119.90
25	RA	2394	C	N3-C4-C5	6.78	124.61	121.90
1	QA	266	G	C6-C5-N7	-6.78	126.33	130.40
25	RA	1338	G	C5-C6-O6	-6.78	124.53	128.60
1	XA	1058	G	C8-N9-C4	6.78	109.11	106.40
25	RA	2483	C	C6-N1-C2	-6.78	117.59	120.30
25	YA	1559	G	C5-N7-C8	-6.78	100.91	104.30
25	YA	1891	G	N9-C4-C5	-6.78	102.69	105.40
1	QA	328	C	N3-C2-O2	-6.78	117.16	121.90
1	QA	1419	G	C6-C5-N7	-6.78	126.33	130.40
25	RA	1998	G	O5'-P-OP2	-6.78	99.60	105.70
25	RA	2071	A	C5-C6-N6	-6.78	118.28	123.70
25	RA	2827	C	C6-N1-C2	6.77	123.01	120.30
25	YA	2237	G	N3-C2-N2	6.77	124.64	119.90
25	RA	309	G	N1-C6-O6	6.77	123.96	119.90
25	RA	944	G	C5-C6-N1	-6.77	108.11	111.50
25	RA	2770	G	N3-C4-N9	6.77	130.06	126.00
25	YA	568	U	N1-C2-N3	6.77	118.96	114.90
25	YA	783	A	C5-C6-N1	-6.77	114.31	117.70
25	RA	249	C	O4'-C1'-N1	6.77	113.62	108.20
25	YA	2029	G	C4-C5-C6	6.77	122.86	118.80
25	YA	2049	G	C5-C6-N1	-6.77	108.12	111.50
25	YA	2329	G	C8-N9-C4	6.77	109.11	106.40
25	RA	2441	C	C6-N1-C1'	6.77	128.92	120.80
25	YA	585	G	C4-C5-C6	6.77	122.86	118.80
25	YA	973	A	C5-C6-N1	-6.77	114.32	117.70
25	RA	27	G	C8-N9-C1'	6.76	135.79	127.00
25	RA	760	G	C8-N9-C1'	-6.76	118.20	127.00
25	RA	2508	G	N1-C6-O6	6.76	123.96	119.90
25	RA	738	G	N9-C4-C5	6.76	108.10	105.40
25	RA	760	G	C4-N9-C1'	6.76	135.29	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	735	A	N1-C6-N6	6.76	122.66	118.60
25	YA	1931	U	C6-N1-C2	-6.76	116.94	121.00
25	YA	2500	U	OP2-P-O3'	6.76	120.08	105.20
1	QA	52	G	N9-C4-C5	-6.76	102.70	105.40
1	XA	718	G	O5'-P-OP1	-6.76	99.62	105.70
1	XA	980	C	N3-C2-O2	-6.76	117.17	121.90
25	YA	324	A	O5'-P-OP1	-6.76	99.62	105.70
25	RA	1601	G	C4-C5-N7	6.76	113.50	110.80
1	XA	698	G	N3-C4-N9	6.76	130.06	126.00
25	RA	745	G	N3-C4-C5	-6.76	125.22	128.60
25	YA	687	C	N1-C2-O2	-6.76	114.85	118.90
25	YA	2655	G	P-O3'-C3'	6.76	127.81	119.70
25	RA	791	C	C2-N1-C1'	-6.75	111.37	118.80
25	RA	1857	G	C6-C5-N7	-6.75	126.35	130.40
25	YA	658	C	O5'-P-OP1	6.75	118.81	110.70
25	YA	859	G	N3-C4-C5	6.75	131.98	128.60
25	YA	2088	G	N1-C2-N3	6.75	127.95	123.90
25	YA	2291	U	N3-C4-C5	-6.75	110.55	114.60
1	QA	1470	G	N3-C4-N9	6.75	130.05	126.00
25	RA	2251	G	C8-N9-C1'	-6.75	118.23	127.00
25	YA	130	C	N3-C4-C5	6.75	124.60	121.90
25	YA	2272	U	O5'-P-OP2	-6.75	99.63	105.70
1	XA	895	G	C5-C6-N1	-6.75	108.13	111.50
25	YA	1403	C	C6-N1-C2	-6.75	117.60	120.30
25	YA	2032	G	C5-C6-O6	-6.75	124.55	128.60
25	YA	1695	G	N3-C4-C5	-6.75	125.23	128.60
25	RA	307	G	C5-C6-N1	6.74	114.87	111.50
1	XA	1266	G	N3-C4-C5	6.74	131.97	128.60
1	XA	1342	C	N3-C4-C5	6.74	124.60	121.90
25	YA	1833	U	N1-C2-N3	6.74	118.94	114.90
25	RA	28	A	C4-C5-C6	6.74	120.37	117.00
25	RA	962	G	O5'-P-OP2	-6.74	99.64	105.70
25	RA	2646	C	O5'-P-OP2	-6.74	99.64	105.70
25	YA	2490	G	C5-C6-O6	-6.74	124.56	128.60
1	QA	53	A	C8-N9-C4	-6.74	103.11	105.80
1	QA	741	G	C5-C6-N1	-6.74	108.13	111.50
25	RA	439	G	N1-C6-O6	6.74	123.94	119.90
25	RA	651	G	N3-C4-C5	-6.74	125.23	128.60
25	RA	1189	A	OP1-P-O3'	6.74	120.02	105.20
25	YA	995	C	N1-C2-O2	6.74	122.94	118.90
1	QA	916	G	C2-N3-C4	6.73	115.27	111.90
25	RA	253	C	N3-C4-C5	6.73	124.59	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1328	G	N3-C4-C5	-6.73	125.23	128.60
25	RA	1698	A	C4-C5-C6	6.73	120.37	117.00
25	RA	1776	G	C4-N9-C1'	6.73	135.25	126.50
25	RA	2393	A	C5-C6-N1	-6.73	114.33	117.70
1	XA	299	G	N3-C4-N9	-6.73	121.96	126.00
1	XA	528	C	N3-C4-C5	6.73	124.59	121.90
1	XA	924	C	C6-N1-C2	-6.73	117.61	120.30
25	YA	1203	G	C4-C5-N7	-6.73	108.11	110.80
25	YA	1496	A	C4-C5-N7	6.73	114.07	110.70
25	YA	1522	G	C8-N9-C4	-6.73	103.71	106.40
25	YA	1899	G	N1-C6-O6	6.73	123.94	119.90
25	RA	672	C	C6-N1-C2	-6.73	117.61	120.30
1	XA	1380	U	C2-N1-C1'	-6.73	109.62	117.70
25	YA	458	G	C5-C6-O6	6.73	132.64	128.60
25	YA	71	A	C8-N9-C4	6.73	108.49	105.80
25	RA	508	G	C5-N7-C8	-6.72	100.94	104.30
25	RA	1374	G	C6-C5-N7	-6.72	126.37	130.40
25	YA	1049	C	C6-N1-C2	-6.72	117.61	120.30
1	QA	113	G	C4-C5-N7	-6.72	108.11	110.80
25	RA	439	G	C6-C5-N7	-6.72	126.37	130.40
25	YA	696	G	C5-C6-O6	-6.72	124.57	128.60
1	QA	44	G	C4-N9-C1'	6.72	135.24	126.50
25	RA	2689	U	P-O3'-C3'	6.72	127.77	119.70
25	YA	2463	C	C2-N3-C4	-6.72	116.54	119.90
25	YA	2731	G	C6-C5-N7	-6.72	126.37	130.40
1	QA	1206	G	C6-C5-N7	-6.72	126.37	130.40
25	YA	639	U	N3-C4-C5	-6.72	110.57	114.60
1	QA	919	A	N1-C6-N6	-6.71	114.57	118.60
1	QA	1420	C	C6-N1-C2	-6.71	117.61	120.30
25	RA	747	U	O5'-P-OP2	-6.71	99.66	105.70
25	YA	2093	G	C6-C5-N7	-6.71	126.37	130.40
25	RA	247	G	N1-C2-N2	-6.71	110.16	116.20
25	RA	2381	C	C6-N1-C2	-6.71	117.61	120.30
25	RA	929	G	N7-C8-N9	6.71	116.46	113.10
1	XA	1519	A	C4-C5-C6	6.71	120.36	117.00
25	YA	2859	G	C4-C5-N7	-6.71	108.12	110.80
25	RA	676	A	C6-C5-N7	-6.71	127.60	132.30
1	XA	1079	G	C5-C6-N1	-6.71	108.14	111.50
25	YA	1344	G	O5'-P-OP2	-6.71	99.66	105.70
25	YA	1694	C	N1-C2-O2	6.71	122.93	118.90
25	YA	1653	G	P-O3'-C3'	6.71	127.75	119.70
1	QA	416	G	N3-C4-N9	6.71	130.02	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	258	G	C8-N9-C4	-6.71	103.72	106.40
25	YA	1325	G	N3-C4-N9	-6.71	121.98	126.00
25	YA	1699	G	C8-N9-C4	-6.71	103.72	106.40
25	YA	2732	G	C5-C6-O6	-6.71	124.58	128.60
1	QA	792	A	C4-C5-N7	6.70	114.05	110.70
1	XA	819	A	C5-C6-N1	-6.70	114.35	117.70
1	XA	974	A	O4'-C1'-N9	6.70	113.56	108.20
1	XA	1381	U	N1-C2-O2	6.70	127.49	122.80
25	YA	298	G	C8-N9-C1'	6.70	135.71	127.00
25	YA	1422	G	N3-C4-N9	-6.70	121.98	126.00
25	YA	2054	A	N7-C8-N9	6.70	117.15	113.80
25	RA	379	G	C5-C6-O6	-6.70	124.58	128.60
25	RA	2549	G	C4-N9-C1'	6.70	135.21	126.50
1	QA	135	C	C6-N1-C2	-6.70	117.62	120.30
1	QA	1297	C	P-O3'-C3'	6.70	127.74	119.70
25	RA	1278	A	C8-N9-C4	6.70	108.48	105.80
25	YA	2284	C	O5'-P-OP2	-6.70	99.67	105.70
25	YA	2686	G	N3-C4-N9	6.70	130.02	126.00
1	QA	1231	G	N3-C4-N9	-6.70	121.98	126.00
25	RA	503	A	N1-C6-N6	-6.70	114.58	118.60
25	RA	2060	A	N1-C6-N6	-6.70	114.58	118.60
25	RA	2228	G	N9-C4-C5	-6.70	102.72	105.40
1	XA	541	G	C4-C5-N7	6.70	113.48	110.80
25	YA	1790	C	N3-C2-O2	-6.70	117.21	121.90
25	YA	2399	G	C8-N9-C4	6.70	109.08	106.40
25	YA	842	G	C5-C6-N1	-6.70	108.15	111.50
25	YA	2474	C	C6-N1-C2	-6.70	117.62	120.30
26	YB	8	U	C5-C6-N1	6.70	126.05	122.70
1	XA	112	G	C4-C5-N7	6.69	113.48	110.80
1	QA	1372	U	C5-C6-N1	6.69	126.05	122.70
25	RA	821	A	C4-C5-C6	6.69	120.35	117.00
25	RA	1846	G	C8-N9-C4	-6.69	103.72	106.40
1	XA	776	G	C5-C6-N1	-6.69	108.15	111.50
25	YA	676	A	C8-N9-C4	-6.69	103.12	105.80
25	YA	2060	A	C6-C5-N7	-6.69	127.61	132.30
1	QA	1338	G	C5-C6-O6	6.69	132.61	128.60
25	YA	97	C	N3-C2-O2	-6.69	117.22	121.90
25	YA	760	G	C2-N3-C4	-6.69	108.56	111.90
25	RA	1882	C	C2-N1-C1'	6.69	126.16	118.80
25	YA	105	C	O5'-P-OP2	-6.69	99.68	105.70
25	YA	441	U	N1-C2-O2	-6.69	118.12	122.80
25	YA	804	A	OP1-P-O3'	6.68	119.91	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2688	U	N3-C2-O2	-6.68	117.52	122.20
1	XA	1263	C	C6-N1-C2	6.68	122.97	120.30
25	YA	1022	G	P-O3'-C3'	6.68	127.72	119.70
25	YA	2548	G	N1-C6-O6	6.68	123.91	119.90
25	RA	370	G	N3-C4-N9	6.68	130.01	126.00
25	YA	2251	G	N7-C8-N9	6.68	116.44	113.10
25	RA	743	G	C8-N9-C4	6.68	109.07	106.40
25	RA	861	A	C8-N9-C4	-6.68	103.13	105.80
26	YB	102	G	O5'-P-OP2	-6.68	99.69	105.70
25	YA	117	G	N3-C4-C5	-6.68	125.26	128.60
25	RA	1433	U	C5-C6-N1	6.68	126.04	122.70
25	RA	2255	G	C6-C5-N7	-6.68	126.39	130.40
25	RA	127	A	C8-N9-C4	6.67	108.47	105.80
25	YA	1571	A	C2-N3-C4	-6.67	107.26	110.60
25	YA	1741	C	C5-C6-N1	6.67	124.34	121.00
25	RA	1046	A	C2-N3-C4	6.67	113.94	110.60
25	YA	1017	G	C6-C5-N7	-6.67	126.40	130.40
25	YA	1831	G	C8-N9-C1'	-6.67	118.33	127.00
1	QA	1223	C	C5-C6-N1	6.67	124.34	121.00
25	RA	1379	A	O4'-C1'-N9	6.67	113.54	108.20
1	XA	1373	G	N3-C4-C5	-6.67	125.26	128.60
25	YA	2532	G	C4-C5-C6	6.67	122.80	118.80
25	YA	2712	U	P-O3'-C3'	6.67	127.70	119.70
25	RA	195	A	C5-N7-C8	-6.67	100.56	103.90
25	RA	1429	G	C5-C6-N1	-6.67	108.17	111.50
1	XA	801	U	C5-C6-N1	-6.67	119.36	122.70
25	YA	1899	G	C5-C6-N1	-6.67	108.17	111.50
25	YA	2690	C	N1-C2-O2	-6.67	114.90	118.90
25	RA	1757	U	C5-C6-N1	-6.67	119.37	122.70
1	XA	273	A	N1-C6-N6	6.67	122.60	118.60
1	XA	574	A	O5'-P-OP1	-6.67	99.70	105.70
1	XA	1127	G	N3-C4-N9	-6.67	122.00	126.00
1	XA	1417	G	C8-N9-C4	-6.67	103.73	106.40
25	YA	62	C	C6-N1-C2	6.67	122.97	120.30
25	YA	694	U	N3-C2-O2	-6.67	117.53	122.20
25	YA	379	G	N1-C6-O6	6.67	123.90	119.90
25	YA	1698	A	C5-C6-N1	-6.67	114.37	117.70
56	Z8	74	C	N1-C2-O2	6.67	122.90	118.90
1	QA	913	A	P-O3'-C3'	6.66	127.70	119.70
25	RA	2442	C	N3-C2-O2	-6.66	117.24	121.90
25	YA	1228	G	C4-C5-C6	6.66	122.80	118.80
25	YA	2217	G	C2-N3-C4	-6.66	108.57	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2318	G	N7-C8-N9	6.66	116.43	113.10
25	YA	1786	A	N7-C8-N9	6.66	117.13	113.80
25	YA	2335	A	C8-N9-C4	6.66	108.46	105.80
25	RA	1258	C	C6-N1-C2	6.66	122.96	120.30
25	RA	1809	A	C8-N9-C4	-6.66	103.14	105.80
1	XA	970	C	N3-C2-O2	-6.66	117.24	121.90
25	YA	117	G	N3-C4-N9	6.66	130.00	126.00
25	YA	298	G	N3-C4-C5	6.66	131.93	128.60
25	YA	1362	C	N3-C4-C5	-6.66	119.24	121.90
25	YA	2012	G	C5-C6-O6	-6.66	124.61	128.60
25	YA	2237	G	C8-N9-C1'	-6.66	118.34	127.00
1	QA	52	G	N1-C6-O6	6.66	123.89	119.90
1	XA	1417	G	N3-C4-C5	-6.66	125.27	128.60
25	YA	342	G	O5'-P-OP1	6.66	118.69	110.70
1	QA	557	G	C4-N9-C1'	6.65	135.15	126.50
25	RA	871	U	O5'-P-OP1	-6.65	99.71	105.70
25	RA	2054	A	C8-N9-C4	-6.65	103.14	105.80
25	RA	2591	C	N3-C4-C5	-6.65	119.24	121.90
25	YA	192	C	OP1-P-OP2	-6.65	109.62	119.60
25	YA	2215	G	C4-N9-C1'	6.65	135.15	126.50
25	YA	2544	G	C4-C5-N7	6.65	113.46	110.80
1	XA	792	A	N9-C1'-C2'	6.65	122.64	114.00
25	RA	932	G	N3-C4-C5	6.65	131.92	128.60
25	YA	2619	C	N3-C2-O2	6.65	126.55	121.90
1	QA	882	C	N3-C2-O2	-6.65	117.25	121.90
25	RA	75	G	C8-N9-C4	-6.65	103.74	106.40
1	XA	1260	C	C6-N1-C2	-6.65	117.64	120.30
25	YA	1919	A	C8-N9-C4	-6.65	103.14	105.80
25	YA	593	G	C2-N3-C4	-6.64	108.58	111.90
25	YA	1424	G	C8-N9-C1'	-6.64	118.36	127.00
25	RA	1815	A	C5-N7-C8	6.64	107.22	103.90
25	YA	2607	G	C8-N9-C1'	-6.64	118.36	127.00
25	RA	1950	G	C5-C6-O6	-6.64	124.62	128.60
25	YA	1022	G	N3-C4-C5	-6.64	125.28	128.60
25	YA	450	G	C8-N9-C1'	-6.64	118.37	127.00
25	YA	1869	G	C6-C5-N7	-6.64	126.42	130.40
25	RA	726	G	N9-C4-C5	6.64	108.06	105.40
25	RA	2298	A	C8-N9-C4	6.64	108.45	105.80
1	QA	25	C	C6-N1-C2	6.64	122.95	120.30
25	YA	1676	A	N7-C8-N9	6.64	117.12	113.80
25	RA	770	G	C8-N9-C4	-6.63	103.75	106.40
25	RA	1263	U	C6-N1-C2	-6.63	117.02	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	805	G	N3-C4-C5	-6.63	125.28	128.60
25	YA	1356	G	C8-N9-C4	-6.63	103.75	106.40
25	RA	1022	G	C5-C6-O6	6.63	132.58	128.60
25	RA	1262	A	N1-C6-N6	-6.63	114.62	118.60
25	RA	2011	U	N1-C2-N3	-6.63	110.92	114.90
25	YA	602	G	C5-C6-N1	-6.63	108.19	111.50
25	YA	1678	G	N3-C4-C5	6.63	131.91	128.60
1	QA	31	G	N3-C4-C5	-6.63	125.29	128.60
1	QA	400	C	C6-N1-C2	6.63	122.95	120.30
1	QA	792	A	N1-C6-N6	6.63	122.58	118.60
25	YA	1668	A	C5-C6-N6	6.63	129.00	123.70
25	YA	1925	C	C2-N1-C1'	-6.63	111.51	118.80
25	RA	1937	A	N7-C8-N9	-6.63	110.49	113.80
25	RA	2088	G	C8-N9-C1'	-6.63	118.39	127.00
25	RA	2774	C	C6-N1-C2	6.63	122.95	120.30
25	YA	1423	G	C8-N9-C4	6.63	109.05	106.40
25	RA	1627	G	C5-C6-N1	-6.62	108.19	111.50
1	XA	1505	G	N3-C2-N2	-6.62	115.26	119.90
25	YA	1698	A	C2-N3-C4	-6.62	107.29	110.60
25	YA	2049	G	N1-C2-N3	6.62	127.88	123.90
1	QA	518	C	N3-C2-O2	-6.62	117.26	121.90
25	RA	398	G	C8-N9-C4	6.62	109.05	106.40
25	RA	1281	G	C5-C6-N1	6.62	114.81	111.50
25	RA	1328	G	C4-C5-N7	6.62	113.45	110.80
1	QA	1469	G	C6-C5-N7	-6.62	126.43	130.40
25	RA	2534	A	C5-N7-C8	-6.62	100.59	103.90
25	YA	539	G	C6-C5-N7	-6.62	126.43	130.40
25	YA	2820	A	C5-N7-C8	-6.62	100.59	103.90
25	YA	1216	G	C5-C6-O6	-6.62	124.63	128.60
25	YA	1311	G	C8-N9-C1'	-6.62	118.39	127.00
25	RA	2252	G	N1-C6-O6	6.62	123.87	119.90
25	RA	2542	A	C8-N9-C4	6.62	108.45	105.80
25	YA	793	A	O5'-P-OP1	6.62	118.64	110.70
25	YA	1814	G	N3-C2-N2	-6.62	115.27	119.90
25	YA	1929	G	C2-N3-C4	-6.62	108.59	111.90
25	RA	917	A	N1-C2-N3	6.62	132.61	129.30
56	Z6	74	C	N1-C2-O2	6.62	122.87	118.90
1	QA	882	C	N3-C4-C5	6.62	124.55	121.90
25	RA	560	C	C6-N1-C2	6.62	122.95	120.30
25	YA	1829	A	C8-N9-C4	-6.62	103.15	105.80
25	RA	2720	U	N3-C2-O2	-6.61	117.57	122.20
1	XA	948	C	C6-N1-C2	6.61	122.94	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	621	A	C6-C5-N7	-6.61	127.67	132.30
25	YA	1203	G	C4-C5-C6	6.61	122.77	118.80
25	YA	1332	G	C4-C5-C6	6.61	122.77	118.80
25	RA	958	U	N1-C2-O2	6.61	127.43	122.80
25	YA	271(B)	G	P-O3'-C3'	6.61	127.63	119.70
1	QA	690	G	C5-C6-N1	-6.61	108.20	111.50
1	QA	155	C	C5-C6-N1	6.61	124.30	121.00
1	QA	419	C	C6-N1-C2	6.61	122.94	120.30
25	RA	2665	A	O4'-C1'-N9	6.61	113.48	108.20
26	RB	13	A	O5'-P-OP2	-6.61	99.75	105.70
25	YA	187	G	C4-N9-C1'	6.61	135.09	126.50
25	YA	220	G	C5-C6-N1	-6.61	108.20	111.50
25	YA	828	U	N1-C2-N3	6.61	118.86	114.90
25	RA	2286	A	O5'-P-OP2	-6.61	99.75	105.70
25	YA	253	C	C4-C5-C6	6.61	120.70	117.40
25	YA	1325	G	C8-N9-C1'	6.61	135.59	127.00
25	YA	1614	A	N1-C6-N6	6.61	122.56	118.60
25	YA	1815	A	C4-C5-N7	-6.61	107.40	110.70
25	RA	2083	G	C5-C6-O6	-6.60	124.64	128.60
1	QA	1335	C	O5'-P-OP2	-6.60	99.76	105.70
25	RA	1238	G	C4-N9-C1'	-6.60	117.92	126.50
25	YA	511	U	O5'-P-OP2	6.60	118.62	110.70
25	YA	1984	G	N1-C6-O6	6.60	123.86	119.90
25	RA	1776	G	N3-C4-N9	6.60	129.96	126.00
1	QA	180	U	C5-C6-N1	6.60	126.00	122.70
1	QA	772	U	O5'-P-OP2	-6.60	99.76	105.70
1	XA	190	G	C4-N9-C1'	6.60	135.08	126.50
1	XA	320	C	N3-C2-O2	6.60	126.52	121.90
1	XA	1336	C	C5-C6-N1	6.60	124.30	121.00
25	YA	450	G	O5'-P-OP1	-6.60	99.76	105.70
25	RA	944	G	C2-N3-C4	-6.60	108.60	111.90
25	YA	2443	C	C6-N1-C2	-6.60	117.66	120.30
25	RA	1553	A	N1-C2-N3	6.60	132.60	129.30
25	RA	2062	A	O5'-P-OP2	-6.60	99.76	105.70
25	YA	424	G	C5-C6-N1	6.60	114.80	111.50
1	QA	957	U	N3-C2-O2	-6.59	117.58	122.20
25	RA	1940	U	N3-C2-O2	-6.59	117.58	122.20
25	RA	2665	A	C4-C5-C6	6.59	120.30	117.00
25	YA	2677	G	N3-C4-N9	6.59	129.96	126.00
25	RA	836	G	C4-C5-N7	6.59	113.44	110.80
1	QA	785	G	N1-C6-O6	6.59	123.86	119.90
25	RA	869	G	C5-C6-N1	-6.59	108.20	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1961	C	C6-N1-C2	6.59	122.94	120.30
25	YA	2830	G	N3-C4-C5	-6.59	125.30	128.60
25	RA	330	A	N7-C8-N9	6.59	117.09	113.80
25	RA	512	G	C4-N9-C1'	-6.59	117.93	126.50
1	XA	623	C	C6-N1-C2	-6.59	117.66	120.30
25	YA	782	A	O5'-P-OP1	-6.59	99.77	105.70
25	YA	1835	G	C4-N9-C1'	6.59	135.07	126.50
25	YA	1903	G	OP1-P-OP2	6.59	129.49	119.60
25	YA	1647	G	C8-N9-C1'	-6.59	118.44	127.00
1	QA	646	U	C5-C4-O4	6.59	129.85	125.90
1	QA	690	G	C2-N3-C4	-6.59	108.61	111.90
1	XA	587	G	N1-C6-O6	6.59	123.85	119.90
12	XL	44	THR	C-N-CD	6.59	142.23	128.40
25	YA	226	G	C8-N9-C1'	6.59	135.56	127.00
25	YA	1543	A	C4'-C3'-C2'	-6.59	96.01	102.60
25	YA	2502	G	C6-C5-N7	-6.59	126.45	130.40
25	YA	2616	C	C2-N1-C1'	-6.59	111.56	118.80
25	YA	1768	U	C5-C4-O4	6.58	129.85	125.90
25	RA	690	G	C6-C5-N7	-6.58	126.45	130.40
25	RA	702	G	C8-N9-C4	-6.58	103.77	106.40
25	RA	22	C	C6-N1-C2	6.58	122.93	120.30
25	RA	595	C	C4-C5-C6	-6.58	114.11	117.40
25	RA	822	U	C2-N1-C1'	-6.58	109.80	117.70
25	YA	253	C	N3-C4-C5	-6.58	119.27	121.90
25	YA	1609	A	C8-N9-C4	6.58	108.43	105.80
25	YA	2315	G	O5'-P-OP2	6.58	118.60	110.70
1	QA	821	G	N3-C4-C5	-6.58	125.31	128.60
25	RA	1011	G	N3-C4-N9	-6.58	122.05	126.00
25	RA	1276	A	C5-N7-C8	-6.58	100.61	103.90
25	RA	1819	A	P-O3'-C3'	6.58	127.59	119.70
25	RA	2504	U	C5-C4-O4	-6.58	121.95	125.90
1	XA	1126	U	N1-C2-O2	6.58	127.41	122.80
25	YA	2375	G	N1-C6-O6	6.58	123.85	119.90
25	RA	1784	A	O5'-P-OP1	-6.58	99.78	105.70
25	RA	2409	G	N9-C4-C5	-6.58	102.77	105.40
25	YA	137(A)	G	N1-C6-O6	6.58	123.84	119.90
25	YA	676	A	C5-C6-N1	-6.58	114.41	117.70
25	YA	2251	G	C8-N9-C1'	-6.58	118.45	127.00
1	QA	1183	A	C8-N9-C4	6.57	108.43	105.80
25	YA	385	C	C2-N1-C1'	6.57	126.03	118.80
1	QA	1189	C	N1-C2-O2	6.57	122.84	118.90
25	YA	2550	G	C5-C6-O6	-6.57	124.66	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	742	G	N1-C6-O6	6.57	123.84	119.90
1	QA	970	C	N1-C2-O2	6.57	122.84	118.90
25	RA	2441	C	C5-C4-N4	6.57	124.80	120.20
25	RA	2451	A	N3-C4-N9	-6.57	122.14	127.40
25	YA	205	G	P-O3'-C3'	6.57	127.58	119.70
25	RA	2439	A	C4-C5-C6	6.57	120.28	117.00
25	YA	866	A	C6-C5-N7	-6.57	127.70	132.30
25	RA	1989	G	C8-N9-C4	-6.57	103.77	106.40
1	QA	117	G	C5-C6-O6	-6.56	124.66	128.60
1	QA	1470	G	C4-C5-N7	6.56	113.43	110.80
25	YA	23	G	N1-C6-O6	6.56	123.84	119.90
1	QA	1206	G	C8-N9-C4	-6.56	103.78	106.40
25	YA	397	G	C2-N3-C4	-6.56	108.62	111.90
25	YA	1857	G	N3-C4-C5	-6.56	125.32	128.60
25	YA	2782	G	C4-N9-C1'	6.56	135.03	126.50
1	XA	968	A	C8-N9-C4	6.56	108.42	105.80
25	YA	681	G	N1-C2-N3	6.56	127.84	123.90
1	QA	953	G	N1-C6-O6	-6.56	115.97	119.90
25	RA	51	G	C2-N3-C4	6.56	115.18	111.90
25	RA	465	G	C8-N9-C4	-6.56	103.78	106.40
25	RA	637	A	N7-C8-N9	6.56	117.08	113.80
25	RA	1246	A	N1-C6-N6	-6.56	114.67	118.60
25	RA	2294	C	C6-N1-C2	-6.56	117.68	120.30
1	XA	315	A	N7-C8-N9	-6.56	110.52	113.80
1	XA	1074	G	N9-C4-C5	-6.56	102.78	105.40
25	YA	639	U	C4-C5-C6	6.56	123.64	119.70
25	YA	728	G	C4-C5-C6	6.56	122.74	118.80
25	YA	1264	G	OP2-P-O3'	6.56	119.63	105.20
25	YA	1686	C	C6-N1-C2	-6.56	117.68	120.30
26	YB	111	U	C5-C4-O4	6.56	129.83	125.90
1	QA	921	U	N1-C2-N3	6.56	118.83	114.90
1	XA	734	G	C6-C5-N7	-6.56	126.47	130.40
25	YA	1307	A	C6-N1-C2	-6.56	114.67	118.60
1	QA	667	G	C5-C6-O6	-6.55	124.67	128.60
25	RA	2597	G	C4-C5-N7	-6.55	108.18	110.80
1	XA	719	C	C4-C5-C6	6.55	120.68	117.40
25	YA	718	A	C8-N9-C4	-6.55	103.18	105.80
25	YA	2014	A	C5-C6-N6	-6.55	118.46	123.70
25	YA	1328	G	N1-C6-O6	-6.55	115.97	119.90
25	YA	1773	A	N9-C4-C5	6.55	108.42	105.80
25	YA	55	G	N3-C4-C5	-6.55	125.33	128.60
25	YA	842	G	N3-C2-N2	-6.55	115.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	833	U	N1-C2-O2	-6.55	118.22	122.80
25	RA	956	G	C2-N3-C4	-6.55	108.63	111.90
1	XA	1200	C	OP2-P-O3'	6.54	119.60	105.20
1	QA	814	A	C8-N9-C4	6.54	108.42	105.80
25	RA	567	A	O5'-P-OP1	6.54	118.55	110.70
25	YA	753	C	N3-C4-N4	6.54	122.58	118.00
25	YA	1756	G	C5-C6-N1	-6.54	108.23	111.50
25	RA	953	A	N1-C6-N6	6.54	122.52	118.60
25	RA	58	G	C6-C5-N7	-6.54	126.48	130.40
25	RA	687	C	N1-C2-O2	-6.54	114.98	118.90
25	YA	541	C	C6-N1-C2	-6.54	117.69	120.30
25	YA	1192	G	C4-C5-C6	6.54	122.72	118.80
25	YA	1934	C	N3-C4-N4	6.54	122.58	118.00
25	YA	2252	G	C6-C5-N7	-6.54	126.48	130.40
25	RA	2194	G	C8-N9-C1'	-6.53	118.50	127.00
25	RA	2468	G	C5-N7-C8	-6.53	101.03	104.30
25	YA	568	U	C4-C5-C6	6.53	123.62	119.70
27	YD	131	LEU	CA-CB-CG	6.53	130.32	115.30
25	RA	735	A	C8-N9-C4	6.53	108.41	105.80
25	YA	1237	A	N9-C4-C5	6.53	108.41	105.80
25	RA	1756	G	N1-C6-O6	6.53	123.82	119.90
25	YA	287	C	C5-C4-N4	-6.53	115.63	120.20
1	QA	1430	C	C5-C6-N1	6.53	124.27	121.00
25	RA	508	G	C6-C5-N7	-6.53	126.48	130.40
25	RA	1216	G	N3-C4-C5	-6.53	125.34	128.60
27	RD	131	LEU	CA-CB-CG	6.53	130.31	115.30
25	YA	1381	G	N3-C4-N9	6.53	129.92	126.00
25	RA	689	A	N7-C8-N9	-6.53	110.54	113.80
1	XA	745	C	C6-N1-C2	-6.53	117.69	120.30
25	YA	1818	U	C6-N1-C2	-6.53	117.08	121.00
25	YA	2263	C	C6-N1-C2	-6.53	117.69	120.30
25	YA	2681	C	C2-N1-C1'	6.53	125.98	118.80
25	RA	2383	G	C5-C6-O6	-6.52	124.69	128.60
1	QA	1409	C	C6-N1-C2	6.52	122.91	120.30
1	XA	577	G	C5-N7-C8	-6.52	101.04	104.30
25	YA	2712(A)	A	C4-C5-C6	6.52	120.26	117.00
1	QA	169	C	C5-C6-N1	6.52	124.26	121.00
1	XA	703	G	C4-C5-N7	-6.52	108.19	110.80
25	RA	1359	A	N9-C4-C5	-6.52	103.19	105.80
25	YA	2404	C	O5'-P-OP1	-6.52	99.83	105.70
25	RA	2447	G	N7-C8-N9	6.52	116.36	113.10
25	YA	650	C	C6-N1-C2	-6.52	117.69	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	226	G	N3-C4-N9	6.51	129.91	126.00
1	XA	299	G	N1-C6-O6	6.51	123.81	119.90
1	XA	755	G	N3-C4-N9	6.51	129.91	126.00
25	YA	2569	G	C4-N9-C1'	6.51	134.97	126.50
25	YA	1377	G	N3-C4-C5	-6.51	125.34	128.60
26	YB	56	G	N3-C4-C5	-6.51	125.34	128.60
1	QA	1487	G	C5-C6-N1	-6.51	108.24	111.50
1	QA	52	G	C5-C6-O6	-6.51	124.69	128.60
1	XA	807	A	C5-N7-C8	-6.51	100.65	103.90
25	RA	1543	A	C5-C6-N1	-6.51	114.45	117.70
1	QA	259	G	N1-C6-O6	6.51	123.80	119.90
1	QA	771	G	N3-C2-N2	-6.51	115.34	119.90
1	QA	1325	C	N1-C2-O2	6.51	122.80	118.90
1	XA	449	C	C6-N1-C2	-6.51	117.70	120.30
25	YA	741	G	C8-N9-C1'	-6.51	118.54	127.00
25	YA	1926	U	C6-N1-C2	-6.51	117.10	121.00
25	RA	1123	C	N1-C2-O2	-6.50	115.00	118.90
1	QA	191	G	C8-N9-C4	-6.50	103.80	106.40
25	RA	2002	G	N7-C8-N9	6.50	116.35	113.10
25	RA	2020	A	C4-C5-C6	6.50	120.25	117.00
25	RA	2431	U	C5-C4-O4	6.50	129.80	125.90
25	RA	2712	U	N1-C2-N3	6.50	118.80	114.90
1	XA	541	G	C6-C5-N7	-6.50	126.50	130.40
1	QA	729	A	N7-C8-N9	6.50	117.05	113.80
25	YA	2294	C	N3-C2-O2	-6.50	117.35	121.90
25	RA	623	G	N1-C6-O6	6.50	123.80	119.90
25	RA	2053	G	C5-N7-C8	-6.50	101.05	104.30
25	RA	1616	A	O4'-C1'-N9	6.50	113.40	108.20
25	RA	2591	C	C2-N3-C4	6.50	123.15	119.90
25	YA	1907	G	C2-N3-C4	-6.50	108.65	111.90
25	YA	1639	U	N3-C4-O4	-6.50	114.85	119.40
1	XA	755	G	C4-N9-C1'	6.50	134.94	126.50
25	RA	479	A	N1-C6-N6	-6.49	114.70	118.60
25	RA	688	U	C6-N1-C2	-6.49	117.10	121.00
25	RA	1300	U	C4-C5-C6	6.49	123.60	119.70
25	YA	941	A	N1-C2-N3	6.49	132.55	129.30
25	YA	1621	U	N3-C4-O4	6.49	123.95	119.40
25	YA	2523	G	C4-C5-N7	6.49	113.40	110.80
1	QA	106	C	N3-C2-O2	-6.49	117.36	121.90
25	RA	69	C	O5'-P-OP2	-6.49	99.86	105.70
25	RA	501	A	C2-N3-C4	-6.49	107.35	110.60
25	RA	702	G	C8-N9-C1'	-6.49	118.56	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2586	C	C5-C6-N1	6.49	124.25	121.00
25	RA	268	C	C2-N1-C1'	6.49	125.94	118.80
25	RA	780	G	N9-C4-C5	6.49	108.00	105.40
25	RA	2644	G	C6-C5-N7	-6.49	126.51	130.40
25	YA	247	G	C5-C6-O6	-6.49	124.71	128.60
25	YA	1287	A	C5-C6-N1	-6.49	114.45	117.70
25	RA	1348	G	C4-C5-N7	6.49	113.39	110.80
25	RA	1891	G	C5-C6-N1	-6.49	108.26	111.50
25	YA	2814	C	C6-N1-C2	-6.49	117.70	120.30
1	XA	1232	U	N1-C2-N3	6.49	118.79	114.90
25	RA	74	A	P-O3'-C3'	6.49	127.48	119.70
25	RA	1891	G	C2-N3-C4	-6.49	108.66	111.90
25	YA	745	G	C4-C5-C6	6.49	122.69	118.80
25	YA	1835	G	C2-N3-C4	6.49	115.14	111.90
25	YA	957	A	C8-N9-C4	6.48	108.39	105.80
25	RA	39	C	C6-N1-C2	-6.48	117.71	120.30
25	RA	527	C	N1-C2-N3	-6.48	114.66	119.20
1	XA	690	G	N7-C8-N9	6.48	116.34	113.10
1	XA	1517	G	N3-C4-N9	6.48	129.89	126.00
25	YA	138	G	C5-C6-N1	6.48	114.74	111.50
1	QA	812	C	N3-C2-O2	-6.48	117.36	121.90
25	RA	1496	A	C6-C5-N7	-6.48	127.76	132.30
1	XA	1417	G	C4-N9-C1'	6.48	134.92	126.50
25	YA	27	G	N3-C4-C5	-6.48	125.36	128.60
25	YA	295	G	C2-N3-C4	-6.48	108.66	111.90
25	YA	1190	G	N1-C6-O6	6.48	123.79	119.90
25	YA	1997	G	O5'-P-OP2	6.48	118.48	110.70
25	YA	2590	A	C5-C6-N6	-6.48	118.52	123.70
25	RA	450	G	C8-N9-C4	-6.48	103.81	106.40
25	YA	845	G	N9-C4-C5	-6.48	102.81	105.40
25	RA	2540	C	N3-C2-O2	-6.48	117.37	121.90
25	YA	414	C	C5-C6-N1	-6.48	117.76	121.00
25	RA	2011	U	C6-N1-C2	6.47	124.89	121.00
25	RA	2439	A	C8-N9-C4	-6.47	103.21	105.80
25	YA	1788	C	C6-N1-C2	6.47	122.89	120.30
25	RA	2453	A	C5-C6-N1	6.47	120.94	117.70
1	XA	832	C	C6-N1-C2	-6.47	117.71	120.30
1	XA	1204	A	C5-N7-C8	-6.47	100.66	103.90
25	YA	311	A	C2-N3-C4	-6.47	107.36	110.60
25	YA	1742	C	C6-N1-C2	-6.47	117.71	120.30
25	YA	193	U	N3-C4-C5	-6.47	110.72	114.60
25	YA	450	G	C4-C5-N7	-6.47	108.21	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1894	C	O5'-P-OP2	-6.47	99.88	105.70
26	RB	18	G	N3-C4-C5	6.47	131.84	128.60
1	XA	293	G	C6-C5-N7	-6.47	126.52	130.40
25	YA	681	G	C4-C5-C6	6.47	122.68	118.80
25	YA	1632	A	C5-N7-C8	-6.47	100.67	103.90
25	YA	1824	G	C4-C5-C6	6.47	122.68	118.80
25	YA	248	G	OP1-P-O3'	6.47	119.43	105.20
25	YA	1347	G	C5-C6-N1	-6.47	108.27	111.50
25	RA	51	G	N3-C4-C5	-6.47	125.37	128.60
25	RA	2504	U	OP1-P-OP2	-6.47	109.90	119.60
25	YA	2427	C	N3-C4-N4	-6.47	113.47	118.00
25	YA	2777	G	C2-N3-C4	-6.47	108.67	111.90
25	RA	216	A	N9-C4-C5	-6.46	103.21	105.80
1	XA	719	C	C5-C6-N1	-6.46	117.77	121.00
25	YA	1017	G	N7-C8-N9	6.46	116.33	113.10
25	RA	1728	G	N3-C4-N9	6.46	129.88	126.00
1	XA	117	G	N1-C6-O6	6.46	123.78	119.90
1	XA	764	C	N1-C2-O2	6.46	122.78	118.90
25	RA	836	G	C5-C6-O6	-6.46	124.72	128.60
25	RA	1621	U	N3-C2-O2	6.46	126.72	122.20
25	RA	2509	G	C4-C5-C6	6.46	122.68	118.80
25	YA	637	A	N7-C8-N9	6.46	117.03	113.80
25	YA	2447	G	C5-N7-C8	-6.46	101.07	104.30
25	YA	254	G	N9-C4-C5	6.46	107.98	105.40
25	YA	541	C	N3-C2-O2	-6.46	117.38	121.90
25	YA	1937	A	N1-C6-N6	6.46	122.47	118.60
25	RA	804	A	O4'-C1'-N9	6.46	113.36	108.20
1	XA	1413	A	C5-C6-N1	6.46	120.93	117.70
25	RA	37	C	N3-C2-O2	-6.46	117.38	121.90
25	RA	393	C	N3-C2-O2	-6.46	117.38	121.90
25	YA	443	A	C5-C6-N1	-6.46	114.47	117.70
25	YA	1635	G	OP2-P-O3'	6.46	119.40	105.20
25	RA	1698	A	N1-C2-N3	6.45	132.53	129.30
1	XA	1225	A	N9-C4-C5	-6.45	103.22	105.80
1	XA	1103	C	N3-C4-C5	6.45	124.48	121.90
25	YA	530	G	O4'-C1'-N9	6.45	113.36	108.20
25	YA	961	C	C2-N1-C1'	6.45	125.89	118.80
25	YA	2825	C	N3-C2-O2	-6.45	117.38	121.90
25	RA	482	A	C5-C6-N1	6.45	120.92	117.70
25	RA	2367	G	N3-C4-N9	6.45	129.87	126.00
1	XA	106	C	N3-C4-C5	-6.45	119.32	121.90
25	RA	2088	G	C4-N9-C1'	6.45	134.88	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2691	C	C6-N1-C2	6.45	122.88	120.30
1	QA	769	G	N3-C4-C5	-6.45	125.38	128.60
25	RA	1623	G	C6-C5-N7	-6.45	126.53	130.40
25	RA	2831	G	C5-C6-N1	-6.45	108.28	111.50
25	YA	917	A	C4-C5-C6	6.45	120.22	117.00
25	YA	1777	U	C5-C4-O4	6.45	129.77	125.90
25	YA	1857	G	C4-N9-C1'	6.45	134.88	126.50
25	RA	1814	G	C4-C5-C6	6.44	122.67	118.80
25	YA	234	C	C6-N1-C2	-6.44	117.72	120.30
25	RA	789	A	N1-C6-N6	-6.44	114.73	118.60
25	RA	962	G	N3-C2-N2	-6.44	115.39	119.90
25	RA	1761	C	C2-N1-C1'	-6.44	111.71	118.80
25	YA	469	G	C4-C5-C6	6.44	122.67	118.80
25	YA	577	G	C6-C5-N7	-6.44	126.53	130.40
25	YA	2439	A	C6-C5-N7	-6.44	127.79	132.30
25	YA	2549	G	C4-C5-C6	6.44	122.67	118.80
25	YA	2766	G	N1-C6-O6	6.44	123.77	119.90
25	RA	1137	G	N1-C6-O6	6.44	123.77	119.90
1	XA	1237	C	C5-C6-N1	6.44	124.22	121.00
25	YA	15	G	C8-N9-C4	-6.44	103.82	106.40
25	YA	2243	U	OP2-P-O3'	6.44	119.36	105.20
1	QA	1079	G	C5-C6-N1	-6.44	108.28	111.50
25	RA	2028	U	N3-C4-O4	6.44	123.91	119.40
1	XA	1074	G	N1-C6-O6	6.44	123.76	119.90
25	YA	1906	G	C4-C5-C6	6.44	122.66	118.80
25	RA	1547	C	N3-C4-C5	-6.44	119.33	121.90
26	RB	89	G	C4-N9-C1'	6.44	134.87	126.50
25	YA	701	G	N3-C2-N2	-6.44	115.39	119.90
25	YA	51	G	C4-C5-N7	-6.43	108.23	110.80
25	YA	197	A	OP2-P-O3'	6.43	119.35	105.20
25	YA	1211	U	N3-C2-O2	6.43	126.70	122.20
1	QA	522	C	C5-C6-N1	-6.43	117.78	121.00
25	RA	1816	G	C5-C6-O6	-6.43	124.74	128.60
1	XA	791	G	C4-C5-N7	-6.43	108.23	110.80
25	YA	733	G	C5-N7-C8	-6.43	101.08	104.30
25	YA	974(A)	C	C6-N1-C2	-6.43	117.73	120.30
25	YA	2495	G	O5'-P-OP2	-6.43	99.91	105.70
25	RA	686	G	C6-C5-N7	-6.43	126.54	130.40
25	RA	936	C	C6-N1-C2	6.43	122.87	120.30
25	RA	2679	A	C8-N9-C4	6.43	108.37	105.80
1	XA	1306	A	O5'-P-OP2	-6.43	99.91	105.70
25	RA	1521	G	C4-C5-N7	6.43	113.37	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1621	U	N1-C2-O2	-6.43	118.30	122.80
25	RA	2879	C	C6-N1-C2	6.43	122.87	120.30
26	RB	43	C	C2-N1-C1'	6.43	125.87	118.80
25	YA	2020	A	N1-C2-N3	6.43	132.51	129.30
25	YA	2542	A	C5-C6-N1	-6.43	114.49	117.70
25	YA	2825	C	C6-N1-C2	-6.43	117.73	120.30
25	YA	2506	U	N1-C2-N3	6.43	118.76	114.90
1	QA	9	G	C6-C5-N7	-6.43	126.54	130.40
25	RA	198	C	C2-N1-C1'	6.43	125.87	118.80
25	RA	216	A	C4-C5-N7	6.43	113.91	110.70
25	RA	2843	G	C6-C5-N7	-6.43	126.54	130.40
25	YA	2665	A	C6-C5-N7	-6.43	127.80	132.30
25	YA	2685	G	C5-C6-N1	-6.43	108.29	111.50
25	YA	2818	G	C4-C5-N7	6.43	113.37	110.80
25	RA	1332	G	N7-C8-N9	6.42	116.31	113.10
25	YA	582	G	N1-C6-O6	6.42	123.75	119.90
25	YA	1186	G	OP2-P-O3'	6.42	119.33	105.20
25	YA	2239	G	C6-C5-N7	-6.42	126.55	130.40
1	XA	484	G	P-O3'-C3'	6.42	127.41	119.70
1	XA	808	C	C5-C6-N1	6.42	124.21	121.00
25	RA	825	C	N1-C2-O2	-6.42	115.05	118.90
1	XA	362	G	C5-N7-C8	-6.42	101.09	104.30
1	XA	811	C	C5-C6-N1	-6.42	117.79	121.00
25	YA	1195	G	C6-C5-N7	-6.42	126.55	130.40
25	YA	1257	C	OP2-P-O3'	6.42	119.33	105.20
25	RA	618	G	N3-C4-C5	-6.42	125.39	128.60
25	YA	1979	C	N3-C4-N4	6.42	122.49	118.00
25	YA	2429	G	OP2-P-O3'	6.42	119.32	105.20
25	RA	307	G	N3-C4-N9	6.42	129.85	126.00
25	RA	707	G	C8-N9-C1'	-6.42	118.66	127.00
25	YA	1638	C	C6-N1-C2	-6.42	117.73	120.30
25	RA	1253	A	C5-C6-N1	6.42	120.91	117.70
25	RA	2430	A	N1-C6-N6	6.42	122.45	118.60
25	RA	2612	C	N1-C2-N3	-6.42	114.71	119.20
1	XA	1492	A	C8-N9-C4	-6.42	103.23	105.80
25	YA	701	G	N7-C8-N9	6.42	116.31	113.10
25	YA	1339	G	O5'-P-OP1	-6.42	99.92	105.70
25	YA	256	A	N1-C6-N6	6.42	122.45	118.60
1	QA	566	G	C4-C5-N7	-6.41	108.23	110.80
1	QA	1059	C	C5-C6-N1	6.41	124.21	121.00
1	XA	948	C	C5-C6-N1	-6.41	117.79	121.00
25	YA	2002	G	N7-C8-N9	6.41	116.31	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	802	A	C4-C5-C6	6.41	120.21	117.00
25	RA	2403	C	C6-N1-C2	-6.41	117.73	120.30
25	YA	121	G	N3-C4-C5	-6.41	125.39	128.60
25	YA	1358	G	C6-C5-N7	-6.41	126.55	130.40
25	RA	97	C	N1-C2-O2	6.41	122.75	118.90
25	RA	1487	G	N3-C4-N9	6.41	129.85	126.00
1	XA	1380	U	C6-N1-C2	6.41	124.85	121.00
25	RA	639	U	C5-C6-N1	-6.41	119.50	122.70
1	XA	792	A	C6-C5-N7	-6.41	127.81	132.30
25	YA	74	A	C4-N9-C1'	6.41	137.84	126.30
25	YA	1158	C	N3-C4-N4	-6.41	113.52	118.00
25	YA	1970	A	O5'-P-OP2	-6.41	99.93	105.70
25	YA	2822	G	N3-C4-C5	6.41	131.80	128.60
25	RA	1940	U	C2-N1-C1'	6.41	125.39	117.70
25	YA	774	A	C5-N7-C8	-6.41	100.70	103.90
25	RA	1236	G	C4-C5-N7	6.41	113.36	110.80
25	RA	2219	G	N1-C6-O6	6.41	123.74	119.90
25	RA	2357	U	N1-C2-N3	-6.41	111.06	114.90
25	YA	2256	G	C8-N9-C4	-6.41	103.84	106.40
25	RA	2287	A	C8-N9-C4	6.40	108.36	105.80
25	RA	1801	G	C6-C5-N7	-6.40	126.56	130.40
25	RA	2071	A	C5-C6-N1	6.40	120.90	117.70
25	RA	2490	G	O4'-C1'-N9	6.40	113.32	108.20
25	YA	2571	C	C6-N1-C2	-6.40	117.74	120.30
1	QA	991	U	C5-C6-N1	6.40	125.90	122.70
25	RA	862	G	N3-C4-C5	-6.40	125.40	128.60
25	RA	2421	G	C2-N3-C4	6.40	115.10	111.90
25	RA	2484	G	N1-C6-O6	6.40	123.74	119.90
25	YA	989	G	C4-C5-N7	6.40	113.36	110.80
25	YA	1528	A	O4'-C1'-N9	6.40	113.32	108.20
1	QA	316	G	N1-C6-O6	6.40	123.74	119.90
1	QA	1433	A	C8-N9-C4	-6.40	103.24	105.80
25	RA	2211	G	O4'-C1'-N9	6.40	113.32	108.20
1	XA	317	G	N3-C4-N9	6.40	129.84	126.00
25	RA	870	A	C8-N9-C4	6.40	108.36	105.80
25	RA	1791	A	C5-C6-N6	6.40	128.82	123.70
25	RA	2496	C	C4-C5-C6	-6.40	114.20	117.40
25	YA	820	A	C5-C6-N1	-6.40	114.50	117.70
25	YA	1956	U	C4-C5-C6	6.40	123.54	119.70
25	YA	2776	A	C8-N9-C4	-6.40	103.24	105.80
12	QL	47	LYS	C-N-CD	6.40	141.83	128.40
25	RA	1291	C	O5'-P-OP2	-6.40	99.94	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1939	U	N3-C4-O4	-6.40	114.92	119.40
25	RA	102	G	O4'-C1'-N9	6.39	113.31	108.20
25	YA	1676	A	C8-N9-C4	-6.39	103.24	105.80
1	QA	226	G	N3-C4-C5	6.39	131.80	128.60
25	RA	929	G	C8-N9-C4	-6.39	103.84	106.40
25	YA	1675	C	C2-N3-C4	-6.39	116.70	119.90
25	YA	2219	G	N1-C6-O6	6.39	123.73	119.90
25	RA	573	G	N7-C8-N9	6.39	116.30	113.10
1	XA	633	G	N1-C6-O6	6.39	123.73	119.90
25	RA	1496	A	C5-N7-C8	-6.39	100.70	103.90
25	RA	2345	G	N3-C4-N9	-6.39	122.17	126.00
1	XA	793	U	C6-N1-C2	-6.39	117.17	121.00
1	XA	1222	G	C5-C6-N1	-6.39	108.31	111.50
25	YA	1979	C	N3-C2-O2	-6.39	117.43	121.90
25	YA	2726	U	C5-C4-O4	6.39	129.73	125.90
25	RA	962	G	N9-C4-C5	6.39	107.95	105.40
25	RA	1265	A	O5'-P-OP1	-6.39	99.95	105.70
1	XA	1316	G	C4-N9-C1'	-6.39	118.20	126.50
25	YA	570	G	N9-C4-C5	6.39	107.95	105.40
25	RA	743	G	N3-C4-C5	6.38	131.79	128.60
25	RA	1239	G	C5-C6-O6	-6.38	124.77	128.60
25	YA	263	C	N3-C2-O2	-6.38	117.43	121.90
25	YA	1214	A	N1-C6-N6	-6.38	114.77	118.60
25	YA	1243	G	C4-C5-N7	6.38	113.35	110.80
25	YA	18	C	C2-N3-C4	-6.38	116.71	119.90
25	YA	531	C	N3-C4-C5	-6.38	119.35	121.90
25	RA	2394	C	N3-C2-O2	-6.38	117.43	121.90
25	YA	577	G	C2-N3-C4	-6.38	108.71	111.90
25	YA	704	G	N1-C2-N2	-6.38	110.46	116.20
25	YA	842	G	C2-N3-C4	-6.38	108.71	111.90
26	RB	89	G	N7-C8-N9	6.38	116.29	113.10
25	YA	827	U	C5-C4-O4	6.38	129.73	125.90
1	QA	24	U	O5'-P-OP2	-6.38	99.96	105.70
25	RA	715	G	N1-C6-O6	-6.38	116.07	119.90
25	RA	2712	U	N3-C2-O2	-6.38	117.73	122.20
1	XA	690	G	C5-N7-C8	-6.38	101.11	104.30
1	XA	729	A	C5-C6-N6	-6.38	118.60	123.70
25	YA	2228	G	C4-N9-C1'	6.38	134.79	126.50
25	YA	2569	G	C8-N9-C1'	-6.38	118.71	127.00
1	QA	557	G	N3-C4-N9	6.38	129.82	126.00
25	RA	2227	A	N3-C4-C5	6.38	131.26	126.80
25	YA	177	G	N9-C4-C5	6.38	107.95	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1705	G	C4-N9-C1'	6.38	134.79	126.50
25	RA	249	C	C2-N3-C4	-6.38	116.71	119.90
25	YA	2608	G	C4-C5-N7	6.38	113.35	110.80
25	RA	513	A	C8-N9-C4	-6.37	103.25	105.80
25	RA	2048	G	C6-C5-N7	-6.37	126.58	130.40
1	XA	243	A	P-O3'-C3'	6.37	127.35	119.70
25	YA	99	U	P-O3'-C3'	6.37	127.35	119.70
25	YA	1557	C	C6-N1-C2	6.37	122.85	120.30
25	RA	450	G	C4-N9-C1'	6.37	134.78	126.50
25	RA	982	C	C5-C6-N1	6.37	124.19	121.00
25	YA	2751	G	C4-C5-N7	6.37	113.35	110.80
25	RA	1857	G	C4-C5-C6	6.37	122.62	118.80
25	RA	1886	C	N1-C2-O2	-6.37	115.08	118.90
25	RA	608	A	C8-N9-C4	-6.37	103.25	105.80
25	RA	1643	G	O5'-P-OP1	-6.37	99.97	105.70
25	YA	1568	G	N1-C6-O6	-6.37	116.08	119.90
25	YA	1669	A	C5-N7-C8	-6.37	100.72	103.90
25	YA	1916	A	C5-C6-N1	-6.37	114.52	117.70
1	QA	1206	G	C4-N9-C1'	6.37	134.78	126.50
25	RA	1239	G	C6-C5-N7	-6.37	126.58	130.40
25	RA	2849	U	C5-C6-N1	-6.37	119.52	122.70
25	YA	372	G	O4'-C1'-N9	6.37	113.29	108.20
25	YA	1560	G	C5-C6-O6	-6.37	124.78	128.60
25	YA	2383	G	C8-N9-C1'	-6.37	118.73	127.00
25	RA	586	A	N1-C6-N6	-6.36	114.78	118.60
25	RA	2087	G	C5-C6-O6	-6.36	124.78	128.60
25	YA	265	A	N1-C6-N6	-6.36	114.78	118.60
25	YA	323	G	C5-C6-N1	-6.36	108.32	111.50
25	YA	780	G	C6-C5-N7	-6.36	126.58	130.40
25	RA	1776	G	C4-C5-C6	6.36	122.62	118.80
1	XA	729	A	N9-C4-C5	-6.36	103.25	105.80
25	RA	195	A	C4-C5-C6	-6.36	113.82	117.00
25	RA	2862	G	C4-C5-C6	6.36	122.62	118.80
25	YA	1831	G	N1-C2-N2	-6.36	110.47	116.20
1	XA	899	C	C6-N1-C2	6.36	122.84	120.30
25	YA	1241	A	N1-C6-N6	6.36	122.42	118.60
25	YA	2694	G	N3-C4-N9	6.36	129.81	126.00
25	RA	1634	A	C2-N3-C4	6.36	113.78	110.60
25	RA	2460	U	O5'-P-OP1	-6.36	99.98	105.70
25	YA	1015	G	C5-C6-N1	6.36	114.68	111.50
25	YA	1219	G	O5'-P-OP2	-6.36	99.98	105.70
25	YA	1439	A	N3-C4-C5	6.36	131.25	126.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2447	G	C6-C5-N7	-6.36	126.59	130.40
25	RA	1680	U	C5-C4-O4	6.36	129.71	125.90
25	RA	2468	G	N3-C4-N9	6.36	129.81	126.00
25	RA	2714	G	C4-C5-C6	6.36	122.61	118.80
25	YA	1602	U	N1-C2-N3	6.36	118.71	114.90
25	YA	218	A	N1-C6-N6	-6.35	114.79	118.60
25	YA	1795	C	C6-N1-C2	-6.35	117.76	120.30
25	RA	1581	G	C8-N9-C4	-6.35	103.86	106.40
25	YA	59	U	C6-N1-C2	-6.35	117.19	121.00
25	YA	1015	G	N7-C8-N9	6.35	116.28	113.10
25	YA	2839	G	C4-C5-C6	6.35	122.61	118.80
25	RA	1799	G	C4-C5-N7	-6.35	108.26	110.80
1	XA	1074	G	C8-N9-C4	6.35	108.94	106.40
25	YA	1204	A	N1-C2-N3	6.35	132.48	129.30
25	RA	1950	G	C6-C5-N7	-6.35	126.59	130.40
1	XA	1335	C	C6-N1-C2	6.35	122.84	120.30
25	YA	305	U	C2-N1-C1'	6.35	125.32	117.70
25	YA	990	A	N1-C2-N3	6.35	132.47	129.30
25	YA	427	U	N3-C2-O2	-6.35	117.76	122.20
25	YA	696	G	C4-C5-N7	6.35	113.34	110.80
25	YA	1122	G	C8-N9-C4	-6.35	103.86	106.40
25	YA	2573	C	N3-C2-O2	-6.35	117.46	121.90
25	RA	124	G	N1-C6-O6	6.35	123.71	119.90
25	YA	1862	G	N3-C4-N9	-6.35	122.19	126.00
25	YA	1511	A	N1-C6-N6	-6.34	114.79	118.60
1	XA	1517	G	C6-C5-N7	-6.34	126.59	130.40
25	YA	974(A)	C	P-O3'-C3'	6.34	127.31	119.70
25	YA	204	A	N1-C6-N6	-6.34	114.80	118.60
25	YA	554	U	C4-C5-C6	6.34	123.50	119.70
25	YA	745	G	C6-C5-N7	-6.34	126.59	130.40
25	YA	2394	C	C2-N1-C1'	6.34	125.78	118.80
25	RA	462	C	C5-C6-N1	-6.34	117.83	121.00
25	RA	2326	C	N3-C4-C5	-6.34	119.36	121.90
25	RA	2593	U	N1-C2-N3	6.34	118.70	114.90
1	XA	299	G	N3-C2-N2	-6.34	115.46	119.90
25	YA	832	G	C8-N9-C1'	-6.34	118.76	127.00
25	RA	1695	G	N3-C4-N9	6.34	129.80	126.00
25	YA	382	G	C5-C6-O6	-6.34	124.80	128.60
25	RA	471	A	N1-C6-N6	6.34	122.40	118.60
25	RA	1784	A	C4-C5-C6	6.34	120.17	117.00
1	XA	467	G	N3-C4-C5	-6.34	125.43	128.60
25	YA	636	G	N7-C8-N9	6.34	116.27	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1326	U	N3-C2-O2	6.34	126.64	122.20
25	RA	454	A	C8-N9-C4	6.33	108.33	105.80
1	XA	1348	U	N1-C2-N3	6.33	118.70	114.90
25	YA	530	G	N1-C2-N2	-6.33	110.50	116.20
25	RA	780	G	N3-C4-C5	-6.33	125.43	128.60
25	RA	789	A	C2-N3-C4	-6.33	107.43	110.60
25	RA	2456	C	C5-C4-N4	-6.33	115.77	120.20
25	RA	2620	C	C6-N1-C2	6.33	122.83	120.30
25	RA	2624	G	C5-C6-O6	-6.33	124.80	128.60
25	YA	1258	C	N3-C4-C5	6.33	124.43	121.90
26	YB	29	A	C8-N9-C4	-6.33	103.27	105.80
25	RA	177	G	N1-C6-O6	-6.33	116.10	119.90
1	XA	119	A	C8-N9-C4	-6.33	103.27	105.80
25	YA	1424	G	C4-N9-C1'	6.33	134.73	126.50
25	YA	2217	G	C5-C6-N1	-6.33	108.34	111.50
25	YA	2555	U	C5-C4-O4	6.33	129.70	125.90
1	QA	753	A	P-O3'-C3'	6.33	127.29	119.70
25	YA	574	C	C6-N1-C2	6.33	122.83	120.30
25	YA	2428	G	C5-C6-N1	-6.33	108.34	111.50
1	QA	541	G	C5-C6-O6	-6.33	124.81	128.60
25	RA	762	U	C2-N1-C1'	-6.33	110.11	117.70
25	RA	1184	G	N1-C6-O6	6.33	123.69	119.90
1	QA	1187	G	C8-N9-C4	-6.32	103.87	106.40
1	QA	1198	G	N3-C4-C5	-6.32	125.44	128.60
25	RA	2073	C	N1-C2-N3	6.32	123.63	119.20
25	YA	28	A	C8-N9-C4	-6.32	103.27	105.80
25	YA	1676	A	C5-N7-C8	-6.32	100.74	103.90
25	YA	1761	C	C2-N3-C4	-6.32	116.74	119.90
25	RA	1654	A	C8-N9-C4	-6.32	103.27	105.80
25	YA	1193	G	C8-N9-C4	6.32	108.93	106.40
25	YA	1228	G	O5'-P-OP1	-6.32	100.01	105.70
25	YA	1606	G	N7-C8-N9	-6.32	109.94	113.10
1	QA	938	A	N1-C6-N6	6.32	122.39	118.60
25	RA	141	A	C8-N9-C4	-6.32	103.27	105.80
25	RA	301	G	N9-C4-C5	-6.32	102.87	105.40
25	RA	471	A	C4-C5-N7	6.32	113.86	110.70
25	RA	566	U	C6-N1-C2	6.32	124.79	121.00
25	RA	783	A	C5-C6-N6	-6.32	118.64	123.70
1	QA	1435	G	N3-C4-C5	6.32	131.76	128.60
25	RA	1236	G	C6-C5-N7	-6.32	126.61	130.40
25	RA	809	G	N3-C4-C5	-6.32	125.44	128.60
25	RA	1628	G	C4-C5-C6	6.32	122.59	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1814	G	C5-C6-O6	6.32	132.39	128.60
25	YA	58	G	C8-N9-C4	-6.32	103.87	106.40
25	YA	326	G	N1-C6-O6	6.32	123.69	119.90
25	YA	2407	G	C8-N9-C4	-6.32	103.87	106.40
25	RA	560	C	O5'-P-OP2	-6.32	100.02	105.70
25	RA	2499	C	C2-N1-C1'	6.32	125.75	118.80
25	YA	1243	G	C5-C6-O6	-6.32	124.81	128.60
25	YA	1951	U	O5'-P-OP2	-6.31	100.02	105.70
25	RA	126	A	C5-C6-N1	-6.31	114.54	117.70
25	RA	1769	G	N7-C8-N9	6.31	116.26	113.10
1	XA	792	A	C3'-C2'-C1'	-6.31	96.45	101.50
25	RA	1959	G	N3-C4-C5	-6.31	125.44	128.60
25	YA	1031	G	N1-C6-O6	-6.31	116.11	119.90
25	RA	209	C	C6-N1-C2	6.31	122.82	120.30
25	RA	2004	G	C6-C5-N7	-6.31	126.61	130.40
1	XA	465	A	C5-N7-C8	6.31	107.06	103.90
25	YA	1647	G	C4-C5-N7	6.31	113.32	110.80
25	YA	753	C	C2-N1-C1'	6.31	125.74	118.80
25	YA	1413	G	C5-C6-O6	-6.31	124.81	128.60
25	YA	1915	U	C6-N1-C2	-6.31	117.22	121.00
25	RA	139	G	C4-C5-N7	-6.30	108.28	110.80
25	RA	621	A	N1-C2-N3	6.30	132.45	129.30
25	RA	716	A	C2-N3-C4	-6.30	107.45	110.60
25	RA	1332	G	C8-N9-C4	-6.30	103.88	106.40
1	XA	901	A	N1-C6-N6	6.30	122.38	118.60
25	YA	917	A	C2-N3-C4	-6.30	107.45	110.60
25	YA	956	G	N1-C6-O6	6.30	123.68	119.90
25	YA	2025	C	C6-N1-C2	-6.30	117.78	120.30
25	YA	1422	G	N9-C4-C5	6.30	107.92	105.40
25	RA	1678	G	N9-C4-C5	6.30	107.92	105.40
25	YA	1544	C	N1-C2-O2	6.30	122.68	118.90
25	RA	1699	G	N1-C6-O6	-6.30	116.12	119.90
25	RA	1964	G	N3-C4-C5	-6.30	125.45	128.60
25	YA	2080	G	C4-C5-N7	6.30	113.32	110.80
1	QA	792	A	N9-C4-C5	-6.30	103.28	105.80
1	QA	978	A	C8-N9-C4	-6.30	103.28	105.80
25	RA	1136	G	C2-N3-C4	6.30	115.05	111.90
25	RA	2028	U	N1-C2-O2	-6.30	118.39	122.80
1	XA	856	C	N3-C4-C5	-6.30	119.38	121.90
25	YA	788	A	C4-C5-N7	6.30	113.85	110.70
25	YA	1606	G	N3-C2-N2	6.30	124.31	119.90
25	YA	1786	A	N9-C1'-C2'	6.30	122.19	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	901	A	C5-N7-C8	-6.29	100.75	103.90
25	YA	680	G	N1-C2-N3	6.29	127.68	123.90
25	YA	820	A	C2-N3-C4	-6.29	107.45	110.60
1	XA	869	G	C5-N7-C8	-6.29	101.15	104.30
25	YA	945	A	C5-C6-N1	-6.29	114.55	117.70
25	RA	15	G	N3-C4-C5	6.29	131.75	128.60
25	RA	2455	G	C6-C5-N7	-6.29	126.62	130.40
25	YA	74	A	C6-C5-N7	-6.29	127.90	132.30
25	YA	270(R)	G	N3-C4-C5	-6.29	125.45	128.60
25	YA	1897	G	C6-C5-N7	-6.29	126.62	130.40
25	YA	2299	G	N1-C6-O6	6.29	123.67	119.90
25	YA	2661	G	N3-C4-C5	-6.29	125.45	128.60
1	QA	416	G	C6-C5-N7	-6.29	126.63	130.40
25	YA	792	G	N1-C2-N2	-6.29	110.54	116.20
25	YA	1825	A	N9-C4-C5	6.29	108.32	105.80
25	YA	2068	U	C6-N1-C2	6.29	124.77	121.00
25	YA	2391	G	C5-C6-O6	-6.29	124.83	128.60
25	RA	2048	G	N7-C8-N9	6.29	116.24	113.10
1	QA	226	G	C5-C6-N1	-6.29	108.36	111.50
25	RA	2365	G	N3-C4-N9	6.29	129.77	126.00
1	XA	690	G	C8-N9-C4	-6.29	103.89	106.40
25	YA	311	A	N1-C6-N6	6.29	122.37	118.60
25	YA	577	G	C5-C6-N1	-6.29	108.36	111.50
25	YA	1595	G	C5-C6-N1	-6.29	108.36	111.50
25	YA	2675	A	C5-C6-N1	6.29	120.84	117.70
26	YB	49	C	C6-N1-C2	-6.29	117.78	120.30
25	RA	2447	G	N3-C4-N9	6.28	129.77	126.00
25	YA	636	G	C4-C5-N7	6.28	113.31	110.80
25	YA	2447	G	OP1-P-O3'	6.28	119.02	105.20
25	RA	2597	G	C4-C5-C6	6.28	122.57	118.80
1	XA	1054	C	N3-C4-C5	6.28	124.41	121.90
25	YA	465	G	C8-N9-C4	-6.28	103.89	106.40
25	YA	1787	A	O4'-C1'-N9	-6.28	103.17	108.20
25	YA	1187	G	C5-C6-O6	6.28	132.37	128.60
25	RA	932	G	C8-N9-C1'	6.28	135.16	127.00
25	RA	1619	G	N9-C4-C5	-6.28	102.89	105.40
25	YA	1734	C	N3-C4-C5	-6.28	119.39	121.90
26	YB	8	U	O5'-P-OP2	-6.28	100.05	105.70
1	XA	1077	G	C4-C5-N7	6.28	113.31	110.80
25	YA	46	C	OP2-P-O3'	6.28	119.01	105.20
25	YA	621	A	C4-C5-N7	6.28	113.84	110.70
25	YA	650	C	C5-C6-N1	6.28	124.14	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1939	U	C5-C4-O4	6.28	129.66	125.90
25	YA	2566	A	P-O3'-C3'	6.28	127.23	119.70
25	YA	2715	C	N3-C4-C5	6.28	124.41	121.90
25	YA	676	A	C6-C5-N7	-6.27	127.91	132.30
25	YA	1329	U	O5'-P-OP2	-6.27	100.05	105.70
25	YA	1499	C	C5-C6-N1	-6.27	117.86	121.00
25	YA	1666	G	C6-C5-N7	-6.27	126.64	130.40
25	RA	1286	A	C2-N3-C4	6.27	113.74	110.60
25	RA	2688	U	N3-C4-O4	-6.27	115.01	119.40
25	YA	1403	C	N1-C2-N3	6.27	123.59	119.20
1	QA	328	C	P-O3'-C3'	6.27	127.22	119.70
1	QA	1432	G	C6-C5-N7	-6.27	126.64	130.40
25	RA	145	G	N3-C4-N9	-6.27	122.24	126.00
25	YA	1607	C	C2-N1-C1'	6.27	125.70	118.80
25	YA	2523	G	N1-C6-O6	6.27	123.66	119.90
25	RA	201	C	O5'-P-OP1	-6.27	100.06	105.70
25	RA	832	G	N1-C6-O6	6.27	123.66	119.90
25	RA	1601	G	C5-C6-O6	-6.27	124.84	128.60
25	YA	270(X)	G	C5-C6-N1	-6.27	108.37	111.50
25	YA	333	G	C5-C6-O6	-6.27	124.84	128.60
25	YA	2486	G	C8-N9-C4	6.27	108.91	106.40
25	RA	22	C	C5-C6-N1	-6.27	117.87	121.00
25	RA	2509	G	C4-N9-C1'	6.27	134.65	126.50
26	RB	5	C	C6-N1-C2	6.27	122.81	120.30
1	XA	416	G	C4-N9-C1'	6.27	134.65	126.50
25	RA	1786	A	N3-C4-C5	6.26	131.19	126.80
25	YA	592	G	C4-N9-C1'	6.26	134.64	126.50
25	YA	2767	C	C2-N1-C1'	6.26	125.69	118.80
25	YA	2419	U	OP1-P-O3'	6.26	118.98	105.20
25	YA	2430	A	C4-C5-C6	6.26	120.13	117.00
25	YA	354	G	N9-C4-C5	-6.26	102.90	105.40
25	YA	404	C	P-O3'-C3'	6.26	127.21	119.70
25	YA	972	G	N1-C2-N2	-6.26	110.56	116.20
25	YA	1950	G	N3-C4-N9	6.26	129.76	126.00
25	RA	1941	C	C2-N1-C1'	6.26	125.68	118.80
25	YA	342	G	N1-C6-O6	6.26	123.66	119.90
25	YA	1831	G	C4-N9-C1'	6.26	134.64	126.50
25	RA	680	G	C6-C5-N7	-6.26	126.64	130.40
25	RA	1949	G	C8-N9-C1'	-6.26	118.86	127.00
25	YA	483	A	N1-C2-N3	6.26	132.43	129.30
25	YA	1351	C	N1-C2-O2	-6.26	115.15	118.90
1	QA	853	G	N1-C6-O6	6.25	123.65	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	QD	28	SER	C-N-CD	6.25	141.53	128.40
25	RA	2205	C	C6-N1-C2	-6.25	117.80	120.30
25	YA	815	C	C5-C6-N1	-6.25	117.87	121.00
25	RA	1799	G	P-O3'-C3'	6.25	127.20	119.70
25	YA	258	G	N3-C4-C5	-6.25	125.47	128.60
25	YA	400	G	C2-N3-C4	-6.25	108.77	111.90
25	YA	1559	G	C2-N3-C4	-6.25	108.77	111.90
1	QA	1060	C	C6-N1-C2	-6.25	117.80	120.30
25	RA	1430	C	N3-C2-O2	-6.25	117.52	121.90
26	RB	89	G	C6-C5-N7	-6.25	126.65	130.40
25	YA	2779	U	N3-C2-O2	-6.25	117.82	122.20
1	QA	366	C	C6-N1-C2	6.25	122.80	120.30
1	QA	533	A	P-O3'-C3'	6.25	127.20	119.70
25	RA	297	C	C2-N1-C1'	6.25	125.67	118.80
1	XA	126	G	N3-C4-C5	-6.25	125.47	128.60
25	YA	2276	G	O5'-P-OP1	-6.25	100.08	105.70
25	RA	2586	C	C2-N1-C1'	6.25	125.67	118.80
1	XA	670	G	C5-C6-N1	6.25	114.62	111.50
25	YA	494	G	C4-C5-N7	6.25	113.30	110.80
25	YA	2532	G	C4-N9-C1'	6.25	134.62	126.50
25	YA	2592	G	O5'-P-OP2	-6.25	100.08	105.70
25	RA	1277	G	N1-C6-O6	-6.25	116.15	119.90
1	XA	1201	A	O4'-C4'-C3'	6.25	111.10	106.10
25	YA	450	G	N3-C2-N2	-6.25	115.53	119.90
1	QA	819	A	O4'-C1'-N9	-6.24	103.20	108.20
25	YA	296	C	N3-C2-O2	-6.24	117.53	121.90
1	QA	943	U	C2-N1-C1'	6.24	125.19	117.70
25	YA	2367	G	C4-C5-N7	6.24	113.30	110.80
26	YB	99	A	C2-N3-C4	-6.24	107.48	110.60
25	YA	318	C	N1-C2-O2	-6.24	115.16	118.90
25	YA	794	G	C4-N9-C1'	6.24	134.61	126.50
25	YA	1159	U	C5-C6-N1	-6.24	119.58	122.70
25	YA	1264	G	C4-C5-N7	-6.24	108.31	110.80
25	YA	1496	A	C8-N9-C4	-6.24	103.30	105.80
25	YA	2702	U	N1-C2-O2	6.24	127.17	122.80
1	QA	33	A	O5'-P-OP2	-6.24	100.09	105.70
1	QA	1203	C	N3-C4-C5	-6.24	119.41	121.90
1	XA	725	G	N3-C4-C5	-6.24	125.48	128.60
25	RA	527	C	C6-N1-C1'	-6.24	113.32	120.80
25	RA	1338	G	N3-C4-N9	6.24	129.74	126.00
25	RA	2399	G	N3-C4-N9	6.24	129.74	126.00
25	YA	734	A	C5-C6-N1	-6.24	114.58	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1256	G	N1-C2-N3	6.24	127.64	123.90
25	YA	1495	A	C8-N9-C4	-6.24	103.31	105.80
25	YA	1658	C	C6-N1-C2	-6.24	117.81	120.30
25	YA	2655	G	C4-C5-N7	-6.24	108.31	110.80
1	XA	914	A	O5'-P-OP1	-6.23	100.09	105.70
25	YA	385	C	N3-C4-C5	-6.23	119.41	121.90
25	RA	1028	A	N1-C6-N6	-6.23	114.86	118.60
25	RA	1654	A	N9-C4-C5	6.23	108.29	105.80
25	YA	1607	C	C5-C6-N1	6.23	124.12	121.00
25	YA	2584	U	N1-C2-N3	6.23	118.64	114.90
25	YA	2590	A	C6-C5-N7	-6.23	127.94	132.30
25	YA	2752	C	C6-N1-C1'	-6.23	113.32	120.80
1	XA	293	G	C4-C5-N7	6.23	113.29	110.80
25	YA	34	C	N1-C2-O2	6.23	122.64	118.90
25	YA	393	C	N3-C4-C5	6.23	124.39	121.90
25	YA	1326	U	C6-N1-C2	6.23	124.74	121.00
25	RA	1640	C	N1-C2-O2	6.23	122.64	118.90
25	YA	1728	G	C4-C5-N7	6.23	113.29	110.80
25	YA	380	U	N3-C4-O4	6.23	123.76	119.40
25	YA	1743	G	C8-N9-C4	-6.23	103.91	106.40
25	YA	2468	G	C8-N9-C4	-6.23	103.91	106.40
25	RA	2019	A	C8-N9-C4	6.23	108.29	105.80
25	YA	139	G	C8-N9-C4	-6.23	103.91	106.40
25	RA	2673	G	N1-C6-O6	6.22	123.63	119.90
1	XA	783	C	C6-N1-C2	6.22	122.79	120.30
25	YA	1163	G	C8-N9-C4	-6.22	103.91	106.40
25	YA	2249	U	C6-N1-C2	-6.22	117.27	121.00
1	QA	112	G	N1-C6-O6	6.22	123.63	119.90
1	QA	1187	G	C4-N9-C1'	6.22	134.59	126.50
25	RA	2008	C	C6-N1-C2	6.22	122.79	120.30
1	XA	573	A	N1-C6-N6	-6.22	114.87	118.60
25	YA	132	G	C4-C5-C6	6.22	122.53	118.80
25	YA	2871	C	C5-C4-N4	-6.22	115.84	120.20
25	RA	2515	C	N3-C4-C5	-6.22	119.41	121.90
1	XA	200	G	C8-N9-C4	6.22	108.89	106.40
1	XA	853	G	N1-C6-O6	6.22	123.63	119.90
25	YA	1204	A	N3-C4-C5	6.22	131.16	126.80
25	YA	2313	C	N3-C2-O2	-6.22	117.55	121.90
25	RA	67	U	N3-C4-O4	6.22	123.75	119.40
25	RA	1857	G	C4-N9-C1'	6.22	134.59	126.50
25	RA	2311	A	N1-C6-N6	6.22	122.33	118.60
25	RA	2549	G	C5-C6-N1	-6.22	108.39	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	26	A	N1-C6-N6	-6.22	114.87	118.60
1	QA	741	G	C8-N9-C4	-6.22	103.91	106.40
25	YA	2440	C	N1-C2-O2	-6.22	115.17	118.90
25	YA	2713	A	N7-C8-N9	6.22	116.91	113.80
25	RA	1791	A	N9-C4-C5	6.22	108.29	105.80
25	RA	2437	U	N1-C2-O2	-6.22	118.45	122.80
25	RA	2534	A	N7-C8-N9	6.22	116.91	113.80
1	XA	11	G	C8-N9-C4	-6.22	103.91	106.40
25	YA	580	C	N3-C2-O2	-6.22	117.55	121.90
25	YA	760	G	C5-C6-N1	-6.22	108.39	111.50
25	YA	1607	C	C2-N3-C4	6.22	123.01	119.90
25	RA	696	G	N3-C4-N9	6.21	129.73	126.00
25	RA	2483	C	C5-C6-N1	6.21	124.11	121.00
25	YA	286	C	C6-N1-C2	6.21	122.79	120.30
25	YA	1341	U	OP2-P-O3'	6.21	118.87	105.20
25	RA	1815	A	C4-C5-N7	-6.21	107.59	110.70
25	RA	2070	G	C8-N9-C4	-6.21	103.92	106.40
1	XA	353	A	O5'-P-OP1	-6.21	100.11	105.70
1	XA	659	U	N3-C2-O2	-6.21	117.85	122.20
25	YA	471	A	C8-N9-C4	-6.21	103.31	105.80
25	YA	697	C	C2-N1-C1'	6.21	125.63	118.80
25	YA	2607	G	N3-C4-N9	6.21	129.73	126.00
25	RA	760	G	N3-C4-C5	-6.21	125.50	128.60
25	RA	2583	G	C5-C6-O6	6.21	132.33	128.60
25	RA	760	G	C4-C5-C6	6.21	122.53	118.80
25	RA	1269	A	N3-C4-C5	6.21	131.15	126.80
25	YA	745	G	C5-C6-N1	-6.21	108.39	111.50
25	RA	776	G	O4'-C1'-N9	-6.21	103.24	108.20
25	YA	2689	U	P-O3'-C3'	6.21	127.15	119.70
25	YA	580	C	C6-N1-C2	-6.21	117.82	120.30
25	YA	1903	G	N3-C4-C5	6.21	131.70	128.60
25	YA	2557	G	C4-N9-C1'	6.21	134.57	126.50
1	QA	1096	C	N3-C2-O2	-6.20	117.56	121.90
25	RA	743	G	C5-C6-O6	-6.20	124.88	128.60
25	RA	1950	G	N7-C8-N9	6.20	116.20	113.10
25	YA	1969	A	OP1-P-O3'	6.20	118.85	105.20
25	YA	2362	G	C8-N9-C4	6.20	108.88	106.40
25	RA	1769	G	N1-C6-O6	6.20	123.62	119.90
1	XA	31	G	C6-C5-N7	-6.20	126.68	130.40
25	YA	820	A	N3-C4-N9	-6.20	122.44	127.40
25	YA	1933	G	N3-C4-C5	-6.20	125.50	128.60
25	YA	2235	G	C5-C6-N1	-6.20	108.40	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1441	G	C8-N9-C4	-6.20	103.92	106.40
25	YA	955	C	N1-C2-O2	-6.20	115.18	118.90
1	QA	1200	C	P-O3'-C3'	6.20	127.14	119.70
25	RA	696	G	N3-C4-C5	-6.20	125.50	128.60
26	RB	83	G	C5-C6-N1	-6.20	108.40	111.50
1	XA	1065	U	P-O3'-C3'	6.20	127.14	119.70
1	QA	1325	C	N3-C2-O2	-6.20	117.56	121.90
25	RA	493	G	N1-C6-O6	6.20	123.62	119.90
1	XA	553	A	O5'-P-OP2	-6.20	100.12	105.70
25	YA	1150	C	C6-N1-C2	-6.20	117.82	120.30
1	XA	1487	G	C5-C6-N1	6.19	114.60	111.50
25	YA	1022	G	C4-C5-N7	-6.19	108.32	110.80
25	RA	672	C	N3-C2-O2	-6.19	117.57	121.90
25	RA	1306	C	C5-C6-N1	6.19	124.10	121.00
1	XA	102	G	N3-C4-C5	-6.19	125.50	128.60
1	XA	799	G	N3-C4-N9	6.19	129.72	126.00
1	XA	1419	G	N1-C6-O6	6.19	123.61	119.90
25	YA	670	A	N9-C4-C5	6.19	108.28	105.80
1	QA	21	G	O5'-P-OP2	-6.19	100.13	105.70
1	XA	1204	A	C6-C5-N7	-6.19	127.97	132.30
25	YA	591	C	N3-C4-C5	6.19	124.38	121.90
25	YA	1392	A	N1-C6-N6	-6.19	114.89	118.60
25	YA	2325	G	O5'-P-OP1	-6.19	100.13	105.70
1	QA	1114	C	C6-N1-C2	-6.19	117.83	120.30
25	RA	508	G	N7-C8-N9	6.19	116.19	113.10
1	XA	953	G	C2-N3-C4	6.19	115.00	111.90
1	XA	1403	C	C6-N1-C2	-6.19	117.82	120.30
25	YA	528	A	N3-C4-C5	6.19	131.13	126.80
25	YA	1385	G	C4-N9-C1'	-6.19	118.45	126.50
25	RA	593	G	C2-N3-C4	-6.19	108.81	111.90
25	RA	1566	A	C8-N9-C4	6.19	108.28	105.80
25	YA	125	G	N1-C6-O6	-6.19	116.19	119.90
25	RA	126	A	C4-C5-C6	6.19	120.09	117.00
25	RA	198	C	C5-C4-N4	-6.18	115.87	120.20
25	YA	246	C	N1-C2-O2	-6.18	115.19	118.90
25	YA	1017	G	C5-C6-O6	-6.18	124.89	128.60
25	YA	1328	G	C5-C6-N1	6.18	114.59	111.50
25	YA	2218	G	C5-C6-N1	-6.18	108.41	111.50
1	QA	686	U	P-O3'-C3'	6.18	127.12	119.70
25	RA	684	G	N1-C6-O6	6.18	123.61	119.90
25	RA	1377	G	N3-C4-C5	-6.18	125.51	128.60
25	YA	948	G	N1-C6-O6	6.18	123.61	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2079	U	N3-C4-O4	6.18	123.73	119.40
25	YA	2228	G	N3-C4-N9	6.18	129.71	126.00
1	QA	313	A	N1-C6-N6	-6.18	114.89	118.60
1	QA	317	G	C6-C5-N7	-6.18	126.69	130.40
1	XA	1094	G	OP2-P-O3'	6.18	118.79	105.20
25	YA	1628	G	C8-N9-C1'	-6.18	118.97	127.00
25	RA	926	A	N1-C6-N6	6.18	122.31	118.60
25	RA	2450	A	N9-C4-C5	6.18	108.27	105.80
25	YA	28	A	C6-C5-N7	-6.18	127.97	132.30
26	YB	28	C	C6-N1-C2	-6.18	117.83	120.30
25	RA	55	G	N3-C4-N9	6.18	129.71	126.00
25	RA	512	G	O4'-C1'-N9	6.18	113.14	108.20
25	RA	2468	G	O5'-P-OP2	-6.18	100.14	105.70
25	YA	256	A	C4-C5-N7	6.18	113.79	110.70
25	YA	2880	C	C6-N1-C2	-6.18	117.83	120.30
1	QA	1347	G	C5-C6-O6	6.17	132.31	128.60
1	XA	244	U	N1-C2-N3	-6.17	111.19	114.90
25	YA	859	G	N3-C4-N9	-6.17	122.30	126.00
25	YA	1889	A	N1-C6-N6	-6.17	114.89	118.60
1	QA	299	G	N3-C4-N9	-6.17	122.30	126.00
1	QA	723	U	C5-C6-N1	6.17	125.79	122.70
25	RA	1774	C	C5-C6-N1	6.17	124.09	121.00
25	RA	140	A	C5-C6-N6	-6.17	118.76	123.70
26	RB	10	C	C6-N1-C2	-6.17	117.83	120.30
1	XA	653	A	C8-N9-C4	-6.17	103.33	105.80
25	YA	290	G	N7-C8-N9	-6.17	110.01	113.10
25	RA	439	G	C4-N9-C1'	6.17	134.52	126.50
25	RA	1204	A	C5-C6-N1	-6.17	114.61	117.70
25	RA	2712	U	C5-C4-O4	6.17	129.60	125.90
25	YA	1774	C	N3-C4-C5	6.17	124.37	121.90
25	YA	2230	G	N1-C6-O6	6.17	123.60	119.90
1	XA	674	G	C6-C5-N7	-6.17	126.70	130.40
25	YA	1027	A	OP1-P-OP2	-6.17	110.35	119.60
25	RA	193	U	OP2-P-O3'	6.17	118.77	105.20
25	RA	573	G	C6-C5-N7	-6.17	126.70	130.40
1	XA	522	C	C5-C6-N1	-6.17	117.92	121.00
1	XA	1268	A	N1-C6-N6	-6.17	114.90	118.60
25	YA	1981	A	N7-C8-N9	6.17	116.88	113.80
1	QA	865	A	C6-C5-N7	-6.17	127.98	132.30
25	RA	1952	A	C2-N3-C4	6.17	113.68	110.60
26	YB	81	G	C5-N7-C8	-6.17	101.22	104.30
25	YA	314	A	C5-C6-N1	6.16	120.78	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2639	A	C5-C6-N1	-6.16	114.62	117.70
25	YA	2686	G	OP2-P-O3'	6.16	118.76	105.20
26	YB	69	G	C8-N9-C4	-6.16	103.94	106.40
1	QA	789	U	N3-C4-C5	-6.16	110.90	114.60
25	YA	1259	G	C6-C5-N7	-6.16	126.70	130.40
25	YA	1670	C	C6-N1-C2	6.16	122.76	120.30
25	YA	952	G	N3-C4-C5	-6.16	125.52	128.60
25	YA	1934	C	C5-C4-N4	-6.16	115.89	120.20
25	YA	2581	G	C5-C6-O6	6.16	132.29	128.60
25	YA	2837	G	C5-N7-C8	-6.16	101.22	104.30
25	RA	1846	G	N3-C4-C5	-6.16	125.52	128.60
25	RA	2090	G	C2-N3-C4	-6.16	108.82	111.90
1	XA	247	G	C4-N9-C1'	6.16	134.50	126.50
25	RA	1226	G	C5-C6-O6	6.16	132.29	128.60
25	YA	193	U	N3-C4-O4	6.16	123.71	119.40
25	YA	784	A	C6-N1-C2	-6.16	114.91	118.60
25	YA	2299	G	C4-C5-N7	6.16	113.26	110.80
25	RA	1274	A	N9-C4-C5	6.15	108.26	105.80
25	YA	773	U	N1-C2-N3	6.15	118.59	114.90
25	YA	1955	U	N1-C2-N3	6.15	118.59	114.90
25	YA	622	G	C4-C5-C6	6.15	122.49	118.80
25	YA	663	G	N3-C4-C5	-6.15	125.52	128.60
25	YA	867	C	C2-N1-C1'	6.15	125.57	118.80
25	YA	1135	C	N1-C2-O2	6.15	122.59	118.90
25	YA	2309	A	C5-C6-N1	-6.15	114.62	117.70
25	YA	2620	C	N1-C2-O2	6.15	122.59	118.90
1	QA	108	G	C8-N9-C4	-6.15	103.94	106.40
1	QA	1112	C	C6-N1-C2	-6.15	117.84	120.30
1	QA	1435	G	N1-C6-O6	6.15	123.59	119.90
25	RA	74	A	C8-N9-C4	-6.15	103.34	105.80
25	RA	2542	A	N7-C8-N9	-6.15	110.72	113.80
25	RA	2562	U	C6-N1-C2	6.15	124.69	121.00
25	YA	2710	C	C5-C6-N1	-6.15	117.92	121.00
1	QA	589	C	N3-C2-O2	-6.15	117.60	121.90
25	YA	1563	G	C2-N3-C4	-6.15	108.83	111.90
1	QA	1354	C	C6-N1-C2	-6.15	117.84	120.30
25	RA	624	C	C5-C4-N4	-6.15	115.90	120.20
25	RA	1236	G	C2-N3-C4	-6.15	108.83	111.90
25	RA	1706	U	O4'-C1'-N1	6.15	113.12	108.20
25	YA	692	C	OP2-P-O3'	6.15	118.72	105.20
26	YB	50	G	N3-C4-N9	-6.15	122.31	126.00
25	YA	1206	G	N1-C6-O6	6.15	123.59	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	64	G	C4-N9-C1'	6.14	134.49	126.50
1	QA	566	G	N3-C4-N9	-6.14	122.31	126.00
1	QA	577	G	C5-C6-O6	-6.14	124.91	128.60
25	RA	330	A	C5-C6-N6	-6.14	118.78	123.70
25	RA	1826	G	C8-N9-C4	6.14	108.86	106.40
25	RA	2886	G	C4-N9-C1'	6.14	134.49	126.50
1	XA	791	G	C5-N7-C8	6.14	107.37	104.30
25	RA	1367	A	N1-C6-N6	6.14	122.28	118.60
25	RA	1992	G	P-O3'-C3'	6.14	127.07	119.70
25	RA	2710	C	C6-N1-C2	-6.14	117.84	120.30
25	RA	2884	U	C5-C4-O4	6.14	129.59	125.90
25	YA	221	A	C8-N9-C1'	-6.14	116.64	127.70
25	YA	1204	A	N1-C6-N6	6.14	122.29	118.60
25	YA	1325	G	C4-N9-C1'	-6.14	118.51	126.50
25	RA	2510	C	N3-C2-O2	-6.14	117.60	121.90
25	YA	1776	G	C4-C5-C6	6.14	122.48	118.80
25	YA	1406	U	N3-C2-O2	-6.14	117.90	122.20
25	YA	769	G	C6-C5-N7	-6.14	126.72	130.40
25	YA	2782	G	C6-C5-N7	-6.14	126.72	130.40
1	XA	785	G	C5-C6-O6	-6.14	124.92	128.60
25	YA	1890	A	C4-C5-N7	6.14	113.77	110.70
1	QA	316	G	C6-C5-N7	-6.13	126.72	130.40
25	RA	501	A	O5'-P-OP2	-6.13	100.18	105.70
25	RA	835	A	OP1-P-OP2	-6.13	110.40	119.60
25	RA	974(A)	C	N1-C2-O2	6.13	122.58	118.90
25	YA	2672	G	C4-C5-N7	6.13	113.25	110.80
25	RA	1773	A	C5-C6-N1	-6.13	114.63	117.70
1	XA	18	C	C6-N1-C2	-6.13	117.85	120.30
25	YA	204	A	C2-N3-C4	6.13	113.67	110.60
25	YA	1409	C	N3-C2-O2	6.13	126.19	121.90
25	YA	2251	G	C6-C5-N7	-6.13	126.72	130.40
25	YA	2481	G	P-O3'-C3'	6.13	127.06	119.70
25	RA	769	G	OP2-P-O3'	6.13	118.68	105.20
25	RA	1769	G	C5-C6-O6	-6.13	124.92	128.60
1	XA	190	G	C8-N9-C1'	-6.13	119.03	127.00
25	YA	529	A	N7-C8-N9	6.13	116.86	113.80
1	QA	885	G	O5'-P-OP1	-6.13	100.19	105.70
25	RA	1355	G	C6-C5-N7	-6.13	126.72	130.40
25	YA	445	C	OP2-P-O3'	6.13	118.68	105.20
25	YA	1610	A	C6-C5-N7	-6.13	128.01	132.30
25	RA	1437	C	N3-C2-O2	-6.12	117.61	121.90
1	QA	944	G	N3-C4-C5	-6.12	125.54	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	247	G	C5-C6-N1	6.12	114.56	111.50
25	RA	350	U	C6-N1-C2	-6.12	117.33	121.00
1	XA	811	C	C6-N1-C2	6.12	122.75	120.30
25	YA	62	C	C5-C6-N1	-6.12	117.94	121.00
25	YA	1673	U	C5-C6-N1	-6.12	119.64	122.70
25	RA	1769	G	C8-N9-C4	-6.12	103.95	106.40
1	XA	545	C	N1-C2-O2	6.12	122.57	118.90
25	YA	338	G	C8-N9-C1'	-6.12	119.04	127.00
25	YA	1610	A	N1-C6-N6	6.12	122.27	118.60
25	YA	2058	A	C4-C5-C6	6.12	120.06	117.00
25	YA	2254	C	N3-C2-O2	6.12	126.19	121.90
25	RA	639	U	C5-C4-O4	6.12	129.57	125.90
25	RA	2724	C	N1-C2-O2	-6.12	115.23	118.90
1	XA	1327	C	C6-N1-C2	6.12	122.75	120.30
25	YA	208	C	C5-C6-N1	-6.12	117.94	121.00
1	QA	372	C	C2-N3-C4	6.12	122.96	119.90
25	RA	1803	A	C4-C5-C6	-6.12	113.94	117.00
1	XA	858	G	N1-C6-O6	-6.12	116.23	119.90
1	QA	347	G	C4-C5-N7	6.12	113.25	110.80
1	QA	1204	A	N7-C8-N9	6.12	116.86	113.80
25	RA	2306	C	N1-C2-O2	6.12	122.57	118.90
25	RA	2413	G	N3-C4-C5	6.12	131.66	128.60
25	RA	2451	A	C2-N3-C4	-6.12	107.54	110.60
25	YA	301	G	N3-C4-N9	6.12	129.67	126.00
25	YA	1402	C	N3-C4-N4	6.12	122.28	118.00
1	QA	266	G	N1-C6-O6	6.11	123.57	119.90
25	RA	832	G	C5-C6-N1	-6.11	108.44	111.50
25	YA	688	U	N3-C4-O4	6.11	123.68	119.40
25	YA	776	G	N3-C4-N9	-6.11	122.33	126.00
25	YA	1343	G	C4-N9-C1'	6.11	134.45	126.50
25	YA	2005	A	C5-C6-N6	6.11	128.59	123.70
25	YA	2446	G	C4-C5-C6	6.11	122.47	118.80
25	RA	2751	G	C6-C5-N7	-6.11	126.73	130.40
1	XA	485	G	O4'-C1'-N9	6.11	113.09	108.20
25	YA	967	C	C5-C6-N1	-6.11	117.94	121.00
1	QA	823	G	C8-N9-C4	-6.11	103.96	106.40
25	RA	2447	G	C5-C6-O6	-6.11	124.93	128.60
25	YA	858	U	C5-C6-N1	-6.11	119.64	122.70
25	YA	2318	G	O4'-C1'-N9	6.11	113.09	108.20
25	RA	1805	U	C6-N1-C2	-6.11	117.33	121.00
1	XA	605	U	C5-C4-O4	6.11	129.56	125.90
25	RA	347	A	N1-C6-N6	-6.11	114.94	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1130	U	C5-C4-O4	6.11	129.56	125.90
25	RA	2052	G	C2-N3-C4	-6.11	108.85	111.90
25	RA	2291	U	C5-C4-O4	6.11	129.56	125.90
25	RA	2482	G	N3-C4-N9	6.11	129.66	126.00
1	XA	799	G	C4-N9-C1'	6.11	134.44	126.50
25	RA	725	G	C5-C6-N1	-6.11	108.45	111.50
1	XA	1235	U	C6-N1-C2	-6.11	117.34	121.00
1	QA	1201	A	P-O3'-C3'	6.10	127.03	119.70
25	YA	305	U	N3-C2-O2	-6.10	117.93	122.20
25	YA	2574	G	O5'-P-OP2	-6.10	100.21	105.70
25	RA	71	A	C4-C5-N7	6.10	113.75	110.70
25	RA	1343	G	N3-C4-C5	-6.10	125.55	128.60
25	RA	1426	G	C5-C6-O6	6.10	132.26	128.60
25	RA	2043	C	C6-N1-C2	-6.10	117.86	120.30
25	YA	81	G	N1-C6-O6	6.10	123.56	119.90
25	YA	414	C	C6-N1-C2	6.10	122.74	120.30
25	YA	1978	A	C2-N3-C4	-6.10	107.55	110.60
25	YA	2331	G	N1-C6-O6	6.10	123.56	119.90
25	RA	445	C	N1-C2-O2	-6.10	115.24	118.90
25	RA	829	A	C8-N9-C4	6.10	108.24	105.80
25	RA	1347	G	O5'-P-OP1	6.10	118.02	110.70
25	RA	2548	G	C6-C5-N7	-6.10	126.74	130.40
25	YA	697	C	N3-C2-O2	-6.10	117.63	121.90
25	YA	1785	A	C4-C5-C6	6.10	120.05	117.00
25	RA	26	G	N9-C4-C5	6.10	107.84	105.40
25	RA	773	U	N1-C2-N3	6.10	118.56	114.90
25	RA	1949	G	C4-N9-C1'	6.10	134.43	126.50
25	RA	2579	C	N3-C2-O2	6.10	126.17	121.90
25	YA	917	A	N1-C2-N3	6.10	132.35	129.30
1	QA	771	G	N3-C4-C5	6.10	131.65	128.60
25	RA	2239	G	N3-C4-N9	6.10	129.66	126.00
25	RA	2540	C	O5'-P-OP2	-6.10	100.21	105.70
25	YA	1477	A	C8-N9-C4	-6.10	103.36	105.80
25	YA	247	G	N3-C4-N9	6.10	129.66	126.00
25	RA	1427	A	P-O3'-C3'	6.09	127.01	119.70
25	YA	1187	G	C8-N9-C1'	-6.09	119.08	127.00
25	YA	1647	G	N3-C4-N9	6.09	129.66	126.00
25	RA	475	U	C6-N1-C2	-6.09	117.34	121.00
25	RA	2438	U	O5'-P-OP2	-6.09	100.22	105.70
25	YA	1238	G	O5'-P-OP2	-6.09	100.22	105.70
1	QA	1432	G	C5-N7-C8	-6.09	101.25	104.30
22	QV	17	C	C6-N1-C2	-6.09	117.86	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	974	G	C8-N9-C4	-6.09	103.96	106.40
25	RA	1365	A	N9-C4-C5	6.09	108.24	105.80
25	RA	2751	G	N7-C8-N9	6.09	116.14	113.10
25	YA	389	G	O5'-P-OP2	-6.09	100.22	105.70
25	YA	775	G	C6-C5-N7	-6.09	126.75	130.40
25	YA	2067	G	N1-C2-N3	6.09	127.55	123.90
25	RA	2052	G	C6-C5-N7	-6.09	126.75	130.40
25	RA	2531	A	C8-N9-C4	6.09	108.24	105.80
25	YA	376	C	C6-N1-C2	6.09	122.74	120.30
25	RA	972	G	N1-C6-O6	-6.09	116.25	119.90
25	YA	2312	U	C6-N1-C2	-6.09	117.35	121.00
25	YA	2509	G	N1-C6-O6	6.09	123.55	119.90
25	YA	1969	A	N9-C4-C5	6.09	108.23	105.80
25	RA	188	G	N3-C4-C5	6.08	131.64	128.60
25	RA	2597	G	C5-C6-O6	6.08	132.25	128.60
25	RA	572	A	N1-C2-N3	6.08	132.34	129.30
25	RA	1729	A	O4'-C1'-N9	6.08	113.07	108.20
25	YA	491	G	N1-C6-O6	-6.08	116.25	119.90
25	RA	827	U	O5'-P-OP1	6.08	118.00	110.70
25	RA	1653	G	C8-N9-C4	-6.08	103.97	106.40
1	XA	524	G	N1-C6-O6	6.08	123.55	119.90
25	YA	323	G	N1-C6-O6	6.08	123.55	119.90
25	YA	1780	A	N9-C4-C5	6.08	108.23	105.80
1	QA	703	G	OP1-P-O3'	6.08	118.58	105.20
25	RA	1184	G	C5-C6-N1	-6.08	108.46	111.50
1	XA	819	A	N1-C6-N6	6.08	122.25	118.60
1	XA	1446	A	P-O3'-C3'	6.08	127.00	119.70
25	YA	810	U	OP1-P-OP2	-6.08	110.48	119.60
25	YA	1271	G	C6-C5-N7	-6.08	126.75	130.40
25	YA	2020	A	N9-C4-C5	6.08	108.23	105.80
25	YA	1285	G	C8-N9-C4	-6.08	103.97	106.40
25	YA	1788	C	C5-C6-N1	-6.08	117.96	121.00
25	YA	1816	G	N3-C4-N9	-6.08	122.36	126.00
25	YA	1899	G	C4-N9-C1'	-6.08	118.60	126.50
25	YA	2407	G	C8-N9-C1'	-6.08	119.10	127.00
25	YA	2508	G	C6-C5-N7	-6.08	126.75	130.40
1	QA	717	C	C2-N1-C1'	6.07	125.48	118.80
1	XA	557	G	C8-N9-C1'	-6.07	119.10	127.00
1	XA	729	A	C4-C5-N7	6.07	113.74	110.70
1	XA	1064	G	N3-C4-N9	-6.07	122.36	126.00
25	YA	309	G	N3-C4-N9	6.07	129.64	126.00
25	YA	2502	G	C8-N9-C4	-6.07	103.97	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2635	C	N3-C2-O2	-6.07	117.65	121.90
25	YA	2751	G	C5-N7-C8	-6.07	101.26	104.30
25	RA	1931	U	C6-N1-C1'	6.07	129.70	121.20
25	YA	1264	G	N1-C6-O6	-6.07	116.26	119.90
25	RA	785	G	C2-N3-C4	6.07	114.94	111.90
25	RA	1896	G	N3-C4-N9	6.07	129.64	126.00
1	QA	923	A	C8-N9-C4	-6.07	103.37	105.80
25	RA	765	G	C8-N9-C4	-6.07	103.97	106.40
25	RA	964	C	N1-C2-O2	-6.07	115.26	118.90
25	YA	2697	G	N3-C4-N9	6.07	129.64	126.00
25	RA	862	G	N1-C6-O6	-6.07	116.26	119.90
25	RA	974	G	N3-C4-C5	-6.07	125.57	128.60
25	RA	1021	A	N1-C2-N3	6.07	132.33	129.30
25	RA	1657	C	C2-N1-C1'	6.07	125.47	118.80
1	XA	971	G	C5-C6-N1	-6.07	108.47	111.50
25	YA	38	A	C6-C5-N7	-6.07	128.05	132.30
1	QA	180	U	C6-N1-C2	-6.06	117.36	121.00
1	QA	859	A	C5-C6-N1	-6.06	114.67	117.70
25	RA	1286	A	C8-N9-C4	-6.06	103.38	105.80
25	YA	728	G	N1-C6-O6	6.06	123.54	119.90
25	YA	2228	G	OP2-P-O3'	6.06	118.54	105.20
26	YB	5	C	C6-N1-C2	6.06	122.72	120.30
25	RA	1790	C	O5'-P-OP1	-6.06	100.25	105.70
25	RA	2554	U	C5-C4-O4	6.06	129.54	125.90
25	YA	814	C	N1-C2-O2	-6.06	115.26	118.90
1	QA	26	A	O5'-P-OP2	-6.06	100.25	105.70
25	RA	382	G	C2-N3-C4	-6.06	108.87	111.90
25	RA	2515	C	C6-N1-C2	-6.06	117.88	120.30
25	YA	38	A	C5-C6-N6	-6.06	118.85	123.70
25	YA	1559	G	N1-C6-O6	6.06	123.53	119.90
25	RA	768	G	C4-C5-C6	6.06	122.44	118.80
25	RA	2886	G	N1-C2-N3	6.06	127.53	123.90
25	RA	2251	G	N1-C2-N3	6.06	127.53	123.90
25	YA	918	A	N1-C6-N6	6.06	122.23	118.60
25	YA	1889	A	O5'-P-OP1	-6.06	100.25	105.70
25	RA	238	C	C6-N1-C2	6.05	122.72	120.30
25	RA	1268	A	N1-C2-N3	6.05	132.33	129.30
25	RA	1968	G	N3-C4-C5	6.05	131.63	128.60
1	XA	21	G	N3-C4-C5	-6.05	125.57	128.60
1	XA	1358	U	O4'-C1'-N1	6.05	113.04	108.20
25	YA	582	G	C4-C5-N7	6.05	113.22	110.80
25	YA	1380	G	C6-C5-N7	-6.05	126.77	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1786	A	O4'-C1'-N9	6.05	113.04	108.20
25	YA	2318	G	C8-N9-C4	-6.05	103.98	106.40
25	RA	2393	A	N9-C4-C5	-6.05	103.38	105.80
25	YA	199	A	N1-C2-N3	-6.05	126.28	129.30
25	YA	528	A	N3-C4-N9	-6.05	122.56	127.40
25	RA	462	C	C2-N3-C4	-6.05	116.88	119.90
25	YA	2687	U	O5'-P-OP1	-6.05	100.25	105.70
25	YA	798	G	C6-C5-N7	-6.05	126.77	130.40
1	QA	717	C	C6-N1-C2	-6.05	117.88	120.30
25	RA	2508	G	C4-N9-C1'	6.05	134.36	126.50
25	YA	1332	G	O5'-P-OP2	-6.05	100.26	105.70
25	YA	1789	A	C8-N9-C4	6.05	108.22	105.80
25	RA	622	G	C8-N9-C4	6.04	108.82	106.40
25	RA	1011	G	N3-C4-C5	6.04	131.62	128.60
1	XA	108	G	O4'-C1'-N9	6.04	113.04	108.20
25	YA	1993	U	O5'-P-OP1	-6.04	100.26	105.70
25	RA	1816	G	N3-C4-N9	6.04	129.63	126.00
1	XA	1517	G	C8-N9-C1'	-6.04	119.14	127.00
25	YA	197	A	O5'-P-OP2	-6.04	100.26	105.70
25	YA	483	A	C4-C5-C6	6.04	120.02	117.00
25	YA	762	U	N1-C2-N3	-6.04	111.27	114.90
25	YA	956	G	C6-C5-N7	-6.04	126.77	130.40
25	YA	1289	C	C5-C6-N1	6.04	124.02	121.00
25	YA	1353	A	C5-C6-N1	6.04	120.72	117.70
25	YA	1679	U	N3-C2-O2	-6.04	117.97	122.20
1	QA	117	G	C5-N7-C8	-6.04	101.28	104.30
1	XA	265	G	C5-C6-N1	-6.04	108.48	111.50
1	XA	674	G	C5-C6-N1	-6.04	108.48	111.50
25	YA	188	G	C4-C5-C6	6.04	122.42	118.80
25	YA	865	C	C6-N1-C2	6.04	122.72	120.30
25	YA	1506	C	C2-N1-C1'	6.04	125.45	118.80
25	YA	1897	G	C2-N3-C4	-6.04	108.88	111.90
1	XA	854	G	C4-N9-C1'	6.04	134.35	126.50
1	XA	1206	G	N1-C2-N3	6.04	127.52	123.90
25	YA	967	C	N3-C4-C5	6.04	124.32	121.90
25	YA	1858	G	C4-N9-C1'	6.04	134.35	126.50
25	RA	707	G	C6-C5-N7	-6.04	126.78	130.40
25	RA	1426	G	N1-C6-O6	-6.04	116.28	119.90
25	RA	2468	G	C8-N9-C4	-6.04	103.98	106.40
25	RA	2731	G	C5-C6-O6	-6.04	124.98	128.60
25	RA	2829	C	N3-C4-C5	6.04	124.32	121.90
25	RA	2869	G	C5-C6-N1	-6.04	108.48	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	795	C	N1-C2-O2	-6.04	115.28	118.90
25	YA	141	A	N1-C6-N6	6.04	122.22	118.60
25	YA	1130	U	C6-N1-C2	-6.04	117.38	121.00
25	YA	1256	G	C6-C5-N7	-6.04	126.78	130.40
1	QA	1066	C	C2-N1-C1'	6.04	125.44	118.80
25	RA	987	G	C5-C6-N1	6.04	114.52	111.50
25	RA	1769	G	N3-C4-N9	6.04	129.62	126.00
25	YA	187	G	N9-C4-C5	-6.04	102.98	105.40
25	RA	71	A	N3-C4-C5	6.04	131.03	126.80
25	RA	1672	C	C6-N1-C2	6.04	122.71	120.30
25	RA	2520	C	C6-N1-C2	6.04	122.72	120.30
26	RB	99	A	C8-N9-C4	6.04	108.21	105.80
1	XA	568	G	C4-N9-C1'	6.04	134.35	126.50
25	YA	693	C	OP2-P-O3'	6.04	118.48	105.20
25	YA	942	G	C6-C5-N7	-6.04	126.78	130.40
25	YA	1015	G	C4-C5-N7	6.04	113.21	110.80
26	YB	81	G	C5-C6-O6	-6.04	124.98	128.60
25	RA	728	G	C8-N9-C4	6.03	108.81	106.40
25	RA	1399	C	C5-C4-N4	-6.03	115.98	120.20
25	RA	1762	A	N1-C6-N6	-6.03	114.98	118.60
25	RA	2576	G	C8-N9-C4	-6.03	103.99	106.40
25	RA	2712	U	O4'-C1'-N1	6.03	113.03	108.20
22	XV	17	C	C6-N1-C2	-6.03	117.89	120.30
25	YA	860	U	C2-N1-C1'	6.03	124.94	117.70
25	YA	944	G	C4-N9-C1'	6.03	134.34	126.50
25	YA	1377	G	C4-C5-C6	6.03	122.42	118.80
25	YA	1897	G	C5-C6-N1	-6.03	108.48	111.50
25	YA	2540	C	C6-N1-C2	6.03	122.71	120.30
25	RA	553	U	N3-C4-C5	-6.03	110.98	114.60
25	RA	248	G	C5-C6-O6	-6.03	124.98	128.60
25	RA	397	G	C2-N3-C4	-6.03	108.89	111.90
25	RA	1021	A	C5-N7-C8	-6.03	100.89	103.90
25	RA	2056	G	C8-N9-C4	-6.03	103.99	106.40
1	XA	250	A	N1-C6-N6	6.03	122.22	118.60
1	XA	416	G	C5-C6-N1	-6.03	108.48	111.50
25	YA	573	G	C4-N9-C1'	6.03	134.34	126.50
25	YA	917	A	C5-C6-N1	-6.03	114.69	117.70
25	YA	1327	C	N3-C4-C5	-6.03	119.49	121.90
25	YA	1383	C	N3-C4-N4	6.03	122.22	118.00
25	YA	2431	U	N1-C2-O2	-6.03	118.58	122.80
1	QA	545	C	C4-C5-C6	6.03	120.42	117.40
37	RR	9	LYS	N-CA-C	-6.03	94.72	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	577	G	C5-C6-O6	-6.03	124.98	128.60
25	YA	1313	U	C6-N1-C2	-6.03	117.38	121.00
25	YA	1329	U	N1-C2-N3	6.03	118.52	114.90
25	YA	1616	A	OP1-P-O3'	6.03	118.46	105.20
25	YA	1642	G	N1-C6-O6	6.03	123.52	119.90
25	YA	2067	G	C2-N3-C4	-6.03	108.89	111.90
26	YB	4	C	C6-N1-C2	6.03	122.71	120.30
25	RA	185	U	N3-C4-O4	-6.03	115.18	119.40
25	YA	2849	U	O4'-C1'-N1	6.03	113.02	108.20
25	RA	1374	G	N3-C4-N9	6.02	129.61	126.00
25	YA	682	G	C2-N3-C4	-6.02	108.89	111.90
25	RA	702	G	C6-C5-N7	-6.02	126.79	130.40
25	RA	1264	G	N9-C4-C5	6.02	107.81	105.40
25	YA	350	U	N3-C4-C5	-6.02	110.99	114.60
25	YA	577	G	N1-C6-O6	6.02	123.51	119.90
25	YA	597	U	N3-C4-C5	-6.02	110.99	114.60
25	YA	1301	A	N1-C2-N3	6.02	132.31	129.30
25	RA	1138	G	N1-C6-O6	6.02	123.51	119.90
1	QA	116	A	O5'-P-OP2	6.02	117.92	110.70
1	QA	246	A	C8-N9-C4	6.02	108.21	105.80
1	QA	778	G	C4-C5-C6	6.02	122.41	118.80
25	RA	532	A	C2-N3-C4	6.02	113.61	110.60
25	RA	811	U	N3-C2-O2	-6.02	117.99	122.20
25	RA	1795	C	N1-C2-N3	6.02	123.41	119.20
1	XA	435	C	C5-C6-N1	6.02	124.01	121.00
1	XA	481	G	N7-C8-N9	-6.02	110.09	113.10
1	XA	1373	G	C8-N9-C4	-6.02	103.99	106.40
25	YA	1336	A	C2-N3-C4	6.02	113.61	110.60
25	YA	1351	C	N3-C4-C5	-6.02	119.49	121.90
25	YA	2258	C	C2-N1-C1'	6.02	125.42	118.80
1	QA	232	G	C4-N9-C1'	6.02	134.32	126.50
1	QA	347	G	C5-N7-C8	-6.02	101.29	104.30
25	RA	1313	U	C2-N1-C1'	6.02	124.92	117.70
25	RA	1581	G	N3-C4-C5	-6.02	125.59	128.60
25	YA	1594	G	C6-C5-N7	-6.02	126.79	130.40
25	YA	2261	C	N3-C4-C5	6.02	124.31	121.90
25	YA	486	C	C4-C5-C6	-6.02	114.39	117.40
25	YA	503	A	N9-C4-C5	6.02	108.21	105.80
25	YA	1992	G	C5-C6-N1	6.02	114.51	111.50
25	YA	2271	G	N3-C4-C5	-6.02	125.59	128.60
25	RA	1141	U	C5-C6-N1	-6.01	119.69	122.70
25	RA	1796	U	N3-C4-C5	-6.01	110.99	114.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	415	A	N7-C8-N9	-6.01	110.79	113.80
25	YA	461	C	N3-C2-O2	6.01	126.11	121.90
26	YB	50	G	N3-C4-C5	6.01	131.61	128.60
1	QA	563	A	N1-C6-N6	6.01	122.21	118.60
1	XA	1316	G	C6-C5-N7	6.01	134.01	130.40
25	RA	957	A	C2-N3-C4	-6.01	107.59	110.60
25	RA	2004	G	N3-C4-C5	6.01	131.61	128.60
1	XA	904	C	N3-C4-N4	-6.01	113.79	118.00
25	YA	508	G	N9-C1'-C2'	6.01	121.81	114.00
25	YA	753	C	C5-C4-N4	-6.01	115.99	120.20
25	YA	1302	A	N1-C6-N6	-6.01	114.99	118.60
25	YA	2062	A	N9-C4-C5	-6.01	103.39	105.80
25	YA	2080	G	N7-C8-N9	6.01	116.11	113.10
25	RA	2867	G	C4-N9-C1'	-6.01	118.69	126.50
25	YA	265	A	N9-C4-C5	6.01	108.20	105.80
25	YA	528	A	C2-N3-C4	-6.01	107.60	110.60
25	RA	2817	G	C4-C5-N7	-6.01	108.40	110.80
37	YR	9	LYS	N-CA-C	-6.01	94.78	111.00
1	QA	64	G	C8-N9-C1'	-6.01	119.19	127.00
25	YA	305	U	C6-N1-C2	-6.01	117.40	121.00
25	YA	1786	A	C4-N9-C1'	6.01	137.11	126.30
25	YA	2392	A	N1-C6-N6	6.01	122.20	118.60
26	YB	95	U	C5-C4-O4	6.01	129.50	125.90
1	QA	416	G	C4-N9-C1'	6.00	134.31	126.50
1	QA	509	A	P-O3'-C3'	6.00	126.91	119.70
25	RA	2482	G	N3-C4-C5	-6.00	125.60	128.60
25	YA	1933	G	N3-C4-N9	6.00	129.60	126.00
27	YD	240	ALA	C-N-CD	6.00	141.01	128.40
25	RA	1690	A	O5'-P-OP1	-6.00	100.30	105.70
25	YA	391	G	C6-C5-N7	-6.00	126.80	130.40
25	YA	1791	A	C6-N1-C2	-6.00	115.00	118.60
25	YA	1930	G	N7-C8-N9	-6.00	110.10	113.10
26	YB	29	A	N7-C8-N9	6.00	116.80	113.80
25	RA	853	G	C6-C5-N7	-6.00	126.80	130.40
25	RA	1654	A	C5-C6-N6	6.00	128.50	123.70
1	XA	238	G	C8-N9-C4	6.00	108.80	106.40
25	RA	372	G	OP2-P-O3'	6.00	118.40	105.20
25	RA	2060	A	P-O3'-C3'	6.00	126.90	119.70
25	YA	2492	U	C5-C6-N1	6.00	125.70	122.70
1	QA	104	G	C4-C5-C6	6.00	122.40	118.80
1	QA	316	G	C4-C5-N7	6.00	113.20	110.80
1	QA	416	G	C4-C5-C6	6.00	122.40	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	28	A	N7-C8-N9	6.00	116.80	113.80
25	RA	1645	G	C6-C5-N7	-6.00	126.80	130.40
25	RA	2876	G	C8-N9-C4	6.00	108.80	106.40
25	RA	71	A	P-O3'-C3'	6.00	126.90	119.70
25	RA	1984	G	N9-C4-C5	-6.00	103.00	105.40
25	RA	2326	C	C6-N1-C2	-6.00	117.90	120.30
25	YA	580	C	N1-C2-N3	6.00	123.40	119.20
25	YA	1234	U	N3-C4-C5	-6.00	111.00	114.60
1	QA	104	G	N1-C6-O6	6.00	123.50	119.90
25	RA	1938	A	N1-C6-N6	-6.00	115.00	118.60
25	YA	1928	A	N1-C6-N6	6.00	122.20	118.60
25	RA	1238	G	C8-N9-C1'	5.99	134.79	127.00
25	RA	1896	G	N9-C4-C5	-5.99	103.00	105.40
1	XA	317	G	N3-C4-C5	-5.99	125.60	128.60
1	XA	345	C	P-O3'-C3'	5.99	126.89	119.70
1	XA	529	G	N9-C4-C5	-5.99	103.00	105.40
25	YA	1235	G	C4-C5-N7	-5.99	108.40	110.80
25	YA	2251	G	N3-C4-C5	-5.99	125.60	128.60
25	RA	212	G	C8-N9-C4	-5.99	104.00	106.40
25	YA	1594	G	C2-N3-C4	-5.99	108.90	111.90
25	YA	2080	G	C5-N7-C8	-5.99	101.30	104.30
25	YA	2281	C	N3-C4-C5	5.99	124.30	121.90
25	YA	2752	C	N1-C2-O2	5.99	122.50	118.90
25	YA	676	A	C4-C5-N7	5.99	113.69	110.70
1	QA	191	G	C4-N9-C1'	5.99	134.29	126.50
25	RA	953	A	C5-C6-N1	-5.99	114.71	117.70
25	RA	1371	G	C6-C5-N7	-5.99	126.81	130.40
25	YA	2765	A	O5'-P-OP1	-5.99	100.31	105.70
25	YA	2777	G	N1-C2-N3	5.99	127.49	123.90
25	RA	1819	A	C2-N3-C4	-5.99	107.61	110.60
25	RA	2441	C	N3-C4-N4	-5.99	113.81	118.00
25	YA	391	G	N3-C4-N9	5.99	129.59	126.00
25	YA	541	C	C2-N1-C1'	5.99	125.38	118.80
25	YA	270(S)	G	OP1-P-O3'	5.98	118.36	105.20
25	YA	1814	G	C2-N3-C4	-5.98	108.91	111.90
1	QA	169	C	C6-N1-C2	-5.98	117.91	120.30
25	RA	1430	C	C6-N1-C1'	-5.98	113.62	120.80
25	RA	1846	G	C6-C5-N7	-5.98	126.81	130.40
1	XA	960	U	N1-C2-O2	5.98	126.99	122.80
25	YA	234	C	OP1-P-OP2	-5.98	110.63	119.60
25	YA	1791	A	N3-C4-C5	-5.98	122.61	126.80
1	QA	265	G	C4-C5-N7	-5.98	108.41	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	895	G	C6-C5-N7	-5.98	126.81	130.40
1	QA	1242	C	C6-N1-C2	5.98	122.69	120.30
25	RA	681	G	C2-N3-C4	-5.98	108.91	111.90
25	RA	987	G	N1-C6-O6	-5.98	116.31	119.90
25	RA	1299	G	N3-C4-N9	-5.98	122.41	126.00
25	RA	1987	G	N1-C2-N2	-5.98	110.82	116.20
25	YA	662	G	N7-C8-N9	5.98	116.09	113.10
25	YA	1626	G	C6-C5-N7	-5.98	126.81	130.40
25	YA	2690	C	N3-C2-O2	5.98	126.08	121.90
25	RA	1388	G	C8-N9-C4	5.98	108.79	106.40
25	RA	2570	G	N3-C4-N9	5.98	129.59	126.00
25	YA	444	C	C6-N1-C2	-5.98	117.91	120.30
25	YA	2422	A	N9-C4-C5	-5.98	103.41	105.80
25	YA	2481	G	OP2-P-O3'	5.98	118.35	105.20
25	RA	533	G	C6-C5-N7	-5.98	126.81	130.40
25	RA	1814	G	C4-N9-C1'	5.98	134.27	126.50
25	RA	2822	G	C6-C5-N7	-5.98	126.81	130.40
1	XA	239	U	N3-C2-O2	-5.98	118.02	122.20
25	YA	2215	G	C4-C5-N7	5.98	113.19	110.80
1	QA	566	G	N9-C4-C5	5.97	107.79	105.40
1	QA	852	G	C8-N9-C4	-5.97	104.01	106.40
1	XA	481	G	C4-C5-N7	-5.97	108.41	110.80
1	XA	1305	G	C4-N9-C1'	-5.97	118.73	126.50
25	YA	444	C	OP2-P-O3'	5.97	118.34	105.20
25	YA	860	U	C4-C5-C6	5.97	123.28	119.70
25	YA	1633	G	C5-C6-N1	-5.97	108.51	111.50
25	YA	2698	U	N1-C2-O2	-5.97	118.62	122.80
25	RA	843	G	N1-C2-N3	5.97	127.48	123.90
25	YA	454	A	C2-N3-C4	-5.97	107.61	110.60
25	YA	2256	G	N3-C4-C5	-5.97	125.61	128.60
25	YA	2853	C	C5-C6-N1	-5.97	118.01	121.00
1	XA	1277	C	C2-N1-C1'	5.97	125.37	118.80
25	YA	776	G	C8-N9-C4	-5.97	104.01	106.40
25	YA	2830	G	C8-N9-C1'	-5.97	119.24	127.00
25	RA	944	G	C4-N9-C1'	5.97	134.26	126.50
25	YA	2012	G	N3-C4-N9	5.97	129.58	126.00
25	YA	2715	C	C5-C4-N4	-5.97	116.02	120.20
25	RA	236	C	C2-N1-C1'	-5.97	112.23	118.80
25	RA	752	A	P-O3'-C3'	5.97	126.86	119.70
25	YA	914	C	C6-N1-C2	-5.97	117.91	120.30
25	YA	988	A	C5-C6-N1	5.97	120.68	117.70
25	YA	1135	C	C2-N3-C4	5.97	122.88	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1916	A	C4-C5-C6	5.97	119.98	117.00
25	YA	1957	C	C5-C6-N1	-5.97	118.02	121.00
25	YA	2000	G	C4-N9-C1'	5.97	134.26	126.50
25	YA	2688	U	N1-C2-N3	5.97	118.48	114.90
1	XA	657	G	N1-C6-O6	5.96	123.48	119.90
1	XA	901	A	N3-C4-C5	5.96	130.97	126.80
1	XA	937	A	N1-C6-N6	-5.96	115.02	118.60
25	YA	1955	U	P-O3'-C3'	5.96	126.86	119.70
26	YB	100	G	N7-C8-N9	-5.96	110.12	113.10
25	RA	1759	A	C8-N9-C4	5.96	108.19	105.80
25	YA	876	C	N1-C2-O2	5.96	122.48	118.90
26	YB	47	C	C6-N1-C2	5.96	122.69	120.30
25	RA	756	C	N3-C4-N4	5.96	122.17	118.00
25	RA	1404	C	N1-C2-O2	5.96	122.48	118.90
25	RA	2294	C	N3-C2-O2	-5.96	117.73	121.90
26	RB	54	G	N3-C4-C5	-5.96	125.62	128.60
1	XA	789	U	N1-C2-N3	5.96	118.48	114.90
25	YA	945	A	C4-C5-N7	5.96	113.68	110.70
25	YA	1021	A	C5-C6-N1	-5.96	114.72	117.70
25	YA	1820	U	C4-C5-C6	5.96	123.28	119.70
25	RA	2292	C	C6-N1-C2	5.96	122.68	120.30
25	RA	2421	G	C5-C6-N1	5.96	114.48	111.50
25	YA	645	C	C5-C6-N1	5.96	123.98	121.00
25	YA	2547	U	C6-N1-C2	-5.96	117.42	121.00
25	RA	120	U	C5-C6-N1	-5.96	119.72	122.70
25	RA	1728	G	C2-N3-C4	5.96	114.88	111.90
1	XA	328	C	N1-C2-O2	5.96	122.47	118.90
1	XA	1189	C	N1-C2-N3	-5.96	115.03	119.20
25	YA	73	A	O5'-P-OP1	-5.96	100.34	105.70
25	YA	461	C	N3-C4-N4	5.96	122.17	118.00
25	YA	2017	U	N1-C2-O2	-5.96	118.63	122.80
1	QA	353	A	N3-C4-N9	-5.96	122.64	127.40
1	QA	777	A	O4'-C1'-N9	5.96	112.97	108.20
1	QA	1380	U	C5-C6-N1	-5.96	119.72	122.70
25	RA	1203	G	C5-N7-C8	5.96	107.28	104.30
25	YA	1994	C	C5-C6-N1	-5.96	118.02	121.00
25	YA	2061	G	C4-C5-C6	5.96	122.37	118.80
25	RA	2294	C	N1-C2-O2	5.96	122.47	118.90
1	XA	921	U	C6-N1-C2	-5.96	117.43	121.00
1	QA	1419	G	N3-C4-N9	5.95	129.57	126.00
25	RA	801	G	C8-N9-C4	-5.95	104.02	106.40
25	RA	990	A	C2-N3-C4	-5.95	107.62	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2701	C	N1-C2-O2	5.95	122.47	118.90
25	YA	264	C	C6-N1-C2	5.95	122.68	120.30
25	YA	715	G	C5-C6-N1	5.95	114.48	111.50
25	YA	1017	G	C5-N7-C8	-5.95	101.32	104.30
25	YA	2002	G	C8-N9-C1'	5.95	134.74	127.00
25	YA	2259	G	C5-N7-C8	-5.95	101.32	104.30
25	RA	2219	G	C8-N9-C4	-5.95	104.02	106.40
25	YA	2270	G	C5-C6-N1	-5.95	108.52	111.50
25	RA	29	U	O5'-P-OP2	-5.95	100.34	105.70
25	RA	729	G	C4-C5-N7	5.95	113.18	110.80
26	RB	100	G	N9-C4-C5	-5.95	103.02	105.40
25	YA	1595	G	C6-C5-N7	-5.95	126.83	130.40
25	YA	1728	G	C2-N3-C4	5.95	114.88	111.90
25	YA	1950	G	C2-N3-C4	5.95	114.88	111.90
25	YA	2702	U	O4'-C1'-N1	5.95	112.96	108.20
25	YA	29	U	C5-C6-N1	5.95	125.67	122.70
25	YA	242	G	C8-N9-C4	5.95	108.78	106.40
25	YA	760	G	C6-C5-N7	-5.95	126.83	130.40
25	YA	940	G	C8-N9-C4	-5.95	104.02	106.40
25	RA	15	G	N3-C2-N2	-5.95	115.74	119.90
25	RA	1699	G	N9-C4-C5	5.95	107.78	105.40
25	YA	592	G	C8-N9-C4	-5.95	104.02	106.40
25	YA	792	G	N3-C4-C5	-5.95	125.63	128.60
25	YA	140	A	N9-C4-C5	-5.95	103.42	105.80
25	YA	729	G	C5-C6-N1	5.95	114.47	111.50
25	RA	770	G	C2-N3-C4	5.94	114.87	111.90
25	RA	2509	G	C5-C6-N1	-5.94	108.53	111.50
25	RA	2714	G	C4-N9-C1'	5.94	134.23	126.50
25	YA	264	C	C4-C5-C6	-5.94	114.43	117.40
25	YA	1988	C	C6-N1-C1'	5.94	127.93	120.80
26	YB	81	G	N9-C4-C5	-5.94	103.02	105.40
1	QA	716	A	C8-N9-C4	-5.94	103.42	105.80
25	RA	1651	G	C6-C5-N7	-5.94	126.83	130.40
1	XA	792	A	N3-C4-C5	5.94	130.96	126.80
25	YA	2439	A	C8-N9-C4	-5.94	103.42	105.80
25	RA	211	A	N1-C2-N3	5.94	132.27	129.30
25	RA	707	G	C4-N9-C1'	5.94	134.22	126.50
25	RA	962	G	C8-N9-C4	-5.94	104.02	106.40
25	RA	2607	G	N9-C4-C5	-5.94	103.02	105.40
25	YA	210	C	C2-N3-C4	-5.94	116.93	119.90
25	YA	1115	G	C8-N9-C4	5.94	108.78	106.40
25	YA	2519	U	C5-C6-N1	-5.94	119.73	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	691	G	C5-C6-O6	-5.94	125.04	128.60
1	QA	290	C	N1-C2-O2	-5.94	115.34	118.90
1	QA	1499	A	N7-C8-N9	-5.94	110.83	113.80
25	RA	15	G	C4-N9-C1'	-5.94	118.78	126.50
25	RA	680	G	N3-C4-C5	-5.94	125.63	128.60
1	XA	1361	G	C8-N9-C4	-5.94	104.03	106.40
25	YA	554	U	N1-C2-N3	5.94	118.46	114.90
25	YA	2444	G	C5-C6-O6	-5.94	125.04	128.60
25	YA	226	G	C4-N9-C1'	-5.94	118.78	126.50
25	YA	962	G	C8-N9-C4	-5.94	104.03	106.40
25	YA	972	G	N3-C4-C5	-5.94	125.63	128.60
25	YA	24	G	C5-C6-O6	-5.93	125.04	128.60
25	YA	690	G	C5-C6-N1	-5.93	108.53	111.50
25	YA	1236	G	C5-C6-N1	-5.93	108.53	111.50
25	YA	1622	G	C6-C5-N7	-5.93	126.84	130.40
1	QA	541	G	C4-C5-N7	5.93	113.17	110.80
25	RA	1008	C	N1-C2-O2	5.93	122.46	118.90
25	RA	1619	G	C5-N7-C8	-5.93	101.33	104.30
25	YA	1774	C	O5'-P-OP2	-5.93	100.36	105.70
25	YA	1791	A	N9-C4-C5	5.93	108.17	105.80
25	YA	2237	G	C6-C5-N7	-5.93	126.84	130.40
25	RA	75	G	N3-C4-N9	5.93	129.56	126.00
25	RA	270(R)	G	C5-C6-N1	-5.93	108.53	111.50
25	RA	576	U	O5'-P-OP2	-5.93	100.36	105.70
1	XA	948	C	N1-C2-O2	-5.93	115.34	118.90
25	YA	264	C	C5-C4-N4	-5.93	116.05	120.20
1	QA	605	U	C6-N1-C2	-5.93	117.44	121.00
1	QA	1525	G	C8-N9-C4	5.93	108.77	106.40
25	RA	823	G	O5'-P-OP1	5.93	117.82	110.70
25	RA	2609	U	C2-N1-C1'	-5.93	110.58	117.70
1	XA	246	A	N1-C6-N6	5.93	122.16	118.60
1	XA	562	C	N1-C2-O2	5.93	122.46	118.90
1	XA	1301	U	C2-N1-C1'	5.93	124.81	117.70
25	YA	183	C	C6-N1-C2	-5.93	117.93	120.30
25	YA	663	G	N3-C4-N9	5.93	129.56	126.00
1	QA	882	C	C2-N3-C4	-5.93	116.94	119.90
25	RA	2770	G	C2-N3-C4	5.93	114.86	111.90
25	RA	2875	C	C5-C6-N1	5.93	123.96	121.00
27	RD	240	ALA	C-N-CD	5.93	140.85	128.40
25	YA	354	G	N1-C6-O6	5.93	123.46	119.90
25	YA	1400	G	N1-C6-O6	-5.93	116.34	119.90
1	QA	244	U	C5-C4-O4	-5.93	122.34	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	837	G	C8-N9-C4	5.93	108.77	106.40
25	RA	97	C	N3-C2-O2	-5.93	117.75	121.90
25	RA	401	A	N9-C4-C5	5.93	108.17	105.80
25	RA	765	G	C6-C5-N7	-5.93	126.84	130.40
25	RA	1846	G	N1-C2-N3	5.93	127.46	123.90
25	RA	2424	C	OP1-P-OP2	5.93	128.49	119.60
25	YA	1256	G	C4-C5-C6	5.93	122.36	118.80
25	YA	1329	U	N1-C2-O2	-5.93	118.65	122.80
25	YA	1381	G	C8-N9-C1'	-5.93	119.30	127.00
25	YA	1982	C	N3-C2-O2	5.93	126.05	121.90
25	YA	2303	G	C5-C6-N1	-5.93	108.54	111.50
25	RA	1027	A	O5'-P-OP1	5.92	117.81	110.70
25	RA	1756	G	C4-C5-C6	5.92	122.35	118.80
25	RA	1818	U	O5'-P-OP2	-5.92	100.37	105.70
25	RA	2884	U	C5-C6-N1	-5.92	119.74	122.70
25	YA	299	A	C8-N9-C4	-5.92	103.43	105.80
25	YA	2549	G	C4-N9-C1'	5.92	134.20	126.50
25	YA	2597	G	C2-N3-C4	-5.92	108.94	111.90
25	RA	1470	G	N7-C8-N9	5.92	116.06	113.10
25	RA	1604	C	C6-N1-C2	-5.92	117.93	120.30
25	YA	1382	G	N1-C6-O6	5.92	123.45	119.90
25	YA	2376	A	C6-N1-C2	5.92	122.15	118.60
25	YA	2710	C	C2-N3-C4	-5.92	116.94	119.90
25	RA	2088	G	C5-C6-N1	-5.92	108.54	111.50
25	YA	1402	C	C2-N1-C1'	5.92	125.31	118.80
25	YA	1997	G	N3-C4-N9	-5.92	122.45	126.00
25	RA	439	G	C4-C5-C6	5.92	122.35	118.80
25	RA	1342	A	N3-C4-C5	5.92	130.94	126.80
1	XA	1376	U	N3-C2-O2	-5.92	118.06	122.20
25	YA	1620	G	C5-C6-N1	-5.92	108.54	111.50
25	YA	2338	G	O5'-P-OP1	-5.92	100.37	105.70
1	QA	922	G	C8-N9-C4	-5.92	104.03	106.40
25	RA	621	A	N7-C8-N9	5.92	116.76	113.80
25	RA	804	A	C8-N9-C1'	5.92	138.35	127.70
25	YA	666	G	N3-C4-C5	5.92	131.56	128.60
25	RA	298	G	C5-N7-C8	-5.92	101.34	104.30
25	RA	1192	G	N1-C6-O6	5.92	123.45	119.90
25	RA	2702	U	C6-N1-C1'	-5.92	112.92	121.20
25	YA	602	G	C2-N3-C4	-5.92	108.94	111.90
1	QA	928	G	N1-C6-O6	5.92	123.45	119.90
25	RA	1210	A	N7-C8-N9	5.92	116.76	113.80
25	RA	1502	C	C5-C6-N1	5.92	123.96	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2339	G	C8-N9-C4	5.92	108.77	106.40
25	YA	465	G	N1-C2-N2	-5.92	110.88	116.20
25	YA	560	C	N3-C2-O2	5.92	126.04	121.90
1	QA	1206	G	C4-C5-C6	5.91	122.35	118.80
25	RA	1470	G	C6-C5-N7	-5.91	126.85	130.40
1	XA	108	G	C4-C5-N7	5.91	113.17	110.80
25	YA	2694	G	N9-C4-C5	-5.91	103.03	105.40
1	QA	1111	A	N7-C8-N9	5.91	116.76	113.80
25	RA	2862	G	C4-N9-C1'	5.91	134.19	126.50
25	YA	199	A	C4-C5-C6	-5.91	114.04	117.00
25	RA	252	G	C4-C5-N7	-5.91	108.44	110.80
25	RA	2081	C	C6-N1-C2	5.91	122.66	120.30
25	RA	2228	G	C4-C5-N7	5.91	113.16	110.80
25	RA	2722	G	C4-C5-C6	5.91	122.35	118.80
1	XA	578	C	C6-N1-C2	-5.91	117.94	120.30
1	XA	584	G	C4-N9-C1'	5.91	134.18	126.50
25	YA	1729	A	O4'-C1'-N9	5.91	112.93	108.20
25	YA	2436	G	C5-C6-O6	5.91	132.15	128.60
25	RA	773	U	C5-C6-N1	-5.91	119.75	122.70
25	RA	2056	G	N7-C8-N9	5.91	116.05	113.10
25	RA	2584	U	C4-C5-C6	5.91	123.25	119.70
1	XA	592	G	C4-C5-N7	5.91	113.16	110.80
1	XA	872	A	N7-C8-N9	5.91	116.75	113.80
25	YA	1501	C	C6-N1-C2	-5.91	117.94	120.30
25	RA	777	A	C5-C6-N6	-5.91	118.97	123.70
25	YA	398	G	N3-C4-C5	-5.91	125.65	128.60
25	YA	1683	C	C2-N3-C4	-5.91	116.95	119.90
25	YA	1780	A	N1-C6-N6	-5.91	115.06	118.60
1	QA	1432	G	C5-C6-N1	-5.91	108.55	111.50
25	RA	1959	G	N3-C4-N9	5.91	129.54	126.00
25	YA	379	G	C4-N9-C1'	5.91	134.18	126.50
25	YA	2447	G	N7-C8-N9	5.91	116.05	113.10
25	YA	2864	G	N3-C4-N9	5.91	129.54	126.00
1	QA	124	G	N3-C4-C5	-5.90	125.65	128.60
1	XA	1206	G	C4-C5-C6	5.90	122.34	118.80
1	XA	1498	U	P-O3'-C3'	5.90	126.78	119.70
25	RA	621	A	O4'-C1'-N9	5.90	112.92	108.20
25	RA	2714	G	N1-C6-O6	5.90	123.44	119.90
25	YA	523	C	C2-N1-C1'	5.90	125.29	118.80
25	RA	64	A	C2-N3-C4	5.90	113.55	110.60
25	RA	1138	G	C6-C5-N7	-5.90	126.86	130.40
25	RA	2357	U	N1-C2-O2	5.90	126.93	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2449	U	N3-C4-O4	5.90	123.53	119.40
25	YA	400	G	C5-C6-N1	-5.90	108.55	111.50
25	YA	1250	G	N3-C4-C5	5.90	131.55	128.60
25	YA	1773	A	C5-C6-N6	5.90	128.42	123.70
25	YA	2623	G	C8-N9-C4	-5.90	104.04	106.40
1	QA	1096	C	N1-C2-O2	5.90	122.44	118.90
25	RA	779	U	C2-N1-C1'	5.90	124.78	117.70
25	RA	869	G	C8-N9-C1'	-5.90	119.33	127.00
25	RA	2006	C	N1-C2-O2	5.90	122.44	118.90
25	RA	2509	G	C8-N9-C1'	-5.90	119.33	127.00
1	XA	362	G	C2-N3-C4	-5.90	108.95	111.90
25	YA	683	C	N1-C2-O2	-5.90	115.36	118.90
25	YA	2603	G	O5'-P-OP1	-5.90	100.39	105.70
31	YH	125	VAL	C-N-CD	-5.90	107.62	120.60
25	RA	1236	G	N3-C4-C5	5.90	131.55	128.60
25	YA	27	G	C5-C6-N1	-5.90	108.55	111.50
25	YA	2431	U	C5-C6-N1	5.90	125.65	122.70
25	RA	2287	A	N3-C4-C5	5.89	130.93	126.80
25	YA	116	C	C5-C6-N1	-5.89	118.05	121.00
25	YA	234	C	C5-C6-N1	5.89	123.95	121.00
25	YA	2534	A	N1-C6-N6	-5.89	115.06	118.60
1	QA	498	A	C8-N9-C4	5.89	108.16	105.80
25	RA	1645	G	C4-C5-N7	5.89	113.16	110.80
25	RA	2731	G	C4-C5-N7	5.89	113.16	110.80
1	XA	767	A	C8-N9-C4	5.89	108.16	105.80
1	XA	1279	A	N7-C8-N9	5.89	116.75	113.80
1	XA	1407	C	C5-C6-N1	5.89	123.95	121.00
25	YA	1704	G	O5'-P-OP1	5.89	117.77	110.70
25	YA	219	G	C6-C5-N7	-5.89	126.86	130.40
25	YA	966	G	C5-C6-N1	-5.89	108.55	111.50
25	YA	1368	G	N3-C4-N9	5.89	129.53	126.00
25	YA	1799	G	N1-C6-O6	-5.89	116.36	119.90
25	YA	2089	U	C5-C6-N1	5.89	125.64	122.70
25	YA	2371	G	C5-C6-N1	-5.89	108.55	111.50
25	RA	2644	G	C4-C5-C6	5.89	122.33	118.80
26	RB	54	G	C4-C5-C6	5.89	122.33	118.80
1	XA	376	G	C8-N9-C4	5.89	108.76	106.40
25	YA	473	G	C2-N3-C4	5.89	114.84	111.90
25	YA	487	C	C2-N1-C1'	5.89	125.28	118.80
25	YA	795	C	C2-N3-C4	-5.89	116.96	119.90
25	YA	2729	G	N3-C4-N9	-5.89	122.47	126.00
25	RA	1679	U	N3-C2-O2	-5.89	118.08	122.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2562	U	C5-C6-N1	-5.89	119.76	122.70
25	RA	2343	C	C6-N1-C2	-5.88	117.95	120.30
1	XA	667	G	C8-N9-C4	-5.88	104.05	106.40
25	YA	302	C	C6-N1-C2	-5.88	117.95	120.30
25	YA	2063	C	O4'-C1'-N1	-5.88	103.49	108.20
25	RA	2503	A	N7-C8-N9	5.88	116.74	113.80
25	YA	1982	C	C5-C4-N4	-5.88	116.08	120.20
25	YA	2598	A	O5'-P-OP2	-5.88	100.41	105.70
1	QA	557	G	N1-C6-O6	5.88	123.43	119.90
25	RA	1137	G	C5-C6-O6	-5.88	125.07	128.60
25	RA	1817	G	C5-C6-N1	-5.88	108.56	111.50
25	RA	1848	A	C2-N3-C4	5.88	113.54	110.60
26	RB	89	G	C8-N9-C4	-5.88	104.05	106.40
25	YA	191	A	N3-C4-C5	-5.88	122.68	126.80
25	YA	2679	A	C2-N3-C4	-5.88	107.66	110.60
25	YA	949	C	C2-N1-C1'	-5.88	112.33	118.80
1	XA	530	G	P-O3'-C3'	5.88	126.75	119.70
1	XA	1158	C	N3-C2-O2	-5.88	117.78	121.90
25	YA	2377	A	N7-C8-N9	-5.88	110.86	113.80
25	RA	2581	G	C5-C6-O6	5.88	132.12	128.60
1	XA	21	G	N3-C4-N9	5.88	129.53	126.00
1	XA	1406	U	O5'-P-OP2	-5.88	100.41	105.70
25	YA	1437	C	C5-C6-N1	5.88	123.94	121.00
25	YA	2505	G	N7-C8-N9	5.88	116.04	113.10
1	QA	115	G	P-O3'-C3'	5.88	126.75	119.70
25	YA	2731	G	C5-C6-O6	-5.88	125.08	128.60
25	RA	737	C	C6-N1-C2	5.87	122.65	120.30
25	RA	1142(A)	A	C5-N7-C8	-5.87	100.96	103.90
25	RA	1162	G	N9-C4-C5	-5.87	103.05	105.40
1	XA	1290	G	N7-C8-N9	5.87	116.04	113.10
1	XA	1362	C	C6-N1-C2	-5.87	117.95	120.30
25	YA	622	G	C8-N9-C1'	-5.87	119.36	127.00
25	YA	1426	G	C8-N9-C4	-5.87	104.05	106.40
1	QA	453	A	O5'-P-OP1	-5.87	100.42	105.70
25	RA	2074	U	N1-C2-N3	5.87	118.42	114.90
25	RA	2440	C	C6-N1-C2	5.87	122.65	120.30
25	YA	272	G	N3-C4-C5	5.87	131.54	128.60
25	YA	764	A	C2-N3-C4	-5.87	107.66	110.60
1	QA	918	A	N1-C2-N3	5.87	132.24	129.30
25	RA	1278	A	N7-C8-N9	-5.87	110.86	113.80
25	RA	1781	C	C6-N1-C1'	-5.87	113.76	120.80
25	RA	1189	A	C8-N9-C4	-5.87	103.45	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1021	A	C6-C5-N7	-5.87	128.19	132.30
25	YA	1845	G	C2-N3-C4	-5.87	108.97	111.90
25	YA	2320	A	N3-C4-C5	-5.87	122.69	126.80
25	YA	476	G	C6-C5-N7	-5.87	126.88	130.40
25	YA	2079	U	C5-C4-O4	-5.87	122.38	125.90
25	RA	211	A	C4-C5-C6	5.87	119.93	117.00
25	YA	1904	G	N3-C4-C5	-5.87	125.67	128.60
25	YA	2749	A	C8-N9-C4	5.87	108.15	105.80
25	RA	1792	G	C5-C6-O6	-5.86	125.08	128.60
25	RA	2516	G	C6-N1-C2	-5.86	121.58	125.10
25	YA	121	G	C5-C6-O6	-5.86	125.08	128.60
25	YA	687	C	N3-C4-N4	5.86	122.10	118.00
25	YA	1159	U	C6-N1-C2	5.86	124.52	121.00
25	YA	1728	G	N9-C4-C5	-5.86	103.06	105.40
25	YA	2294	C	C2-N1-C1'	5.86	125.25	118.80
25	RA	789	A	N3-C4-C5	5.86	130.90	126.80
25	RA	2424	C	C4-C5-C6	5.86	120.33	117.40
12	XL	119	LYS	N-CA-C	-5.86	95.17	111.00
25	YA	694	U	C5-C4-O4	5.86	129.42	125.90
25	YA	2226	C	C6-N1-C2	5.86	122.64	120.30
25	YA	2661	G	N3-C4-N9	5.86	129.52	126.00
1	QA	664	G	C5-C6-N1	-5.86	108.57	111.50
25	RA	1429	G	C4-N9-C1'	5.86	134.12	126.50
25	YA	2488	A	N1-C2-N3	5.86	132.23	129.30
25	YA	2685	G	N3-C2-N2	-5.86	115.80	119.90
25	RA	981	A	OP2-P-O3'	5.86	118.09	105.20
25	RA	1822	G	C4-C5-N7	5.86	113.14	110.80
25	RA	2227	A	C2-N3-C4	-5.86	107.67	110.60
25	RA	2682	U	C6-N1-C2	-5.86	117.49	121.00
31	RH	125	VAL	C-N-CD	-5.86	107.71	120.60
25	YA	247	G	C2-N3-C4	5.86	114.83	111.90
25	YA	804	A	N1-C6-N6	5.86	122.11	118.60
25	YA	2439	A	O4'-C1'-N9	-5.86	103.52	108.20
25	YA	2844	G	C4-N9-C1'	5.86	134.11	126.50
25	RA	1308	A	C4-C5-C6	5.86	119.93	117.00
25	RA	2385	C	C6-N1-C2	5.86	122.64	120.30
25	RA	2399	G	C4-N9-C1'	5.86	134.11	126.50
25	RA	2830	G	C6-C5-N7	-5.86	126.89	130.40
1	XA	658	G	N1-C6-O6	5.86	123.41	119.90
25	YA	1899	G	N3-C2-N2	-5.86	115.80	119.90
25	YA	1012	U	C5-C6-N1	-5.85	119.77	122.70
25	YA	1976	U	N1-C2-N3	5.85	118.41	114.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	701	C	P-O3'-C3'	5.85	126.72	119.70
25	YA	793	A	C5-C6-N1	-5.85	114.77	117.70
25	YA	1563	G	N1-C2-N3	5.85	127.41	123.90
25	YA	1967	C	N3-C4-C5	5.85	124.24	121.90
1	QA	356	A	N1-C6-N6	-5.85	115.09	118.60
25	YA	1628	G	N3-C4-N9	5.85	129.51	126.00
25	YA	2874	C	C6-N1-C2	5.85	122.64	120.30
25	RA	686	G	O5'-P-OP1	-5.85	100.44	105.70
25	RA	1704	G	C8-N9-C4	-5.85	104.06	106.40
25	RA	2502	G	O5'-P-OP1	-5.85	100.44	105.70
1	XA	504	C	C5-C6-N1	5.85	123.92	121.00
1	XA	860	A	O5'-P-OP1	-5.85	100.44	105.70
25	YA	272	G	C8-N9-C1'	5.85	134.60	127.00
25	YA	1761	C	C6-N1-C2	5.85	122.64	120.30
26	YB	8	U	C2-N3-C4	5.85	130.51	127.00
25	RA	662	G	N1-C6-O6	5.85	123.41	119.90
25	RA	1407	C	C5-C4-N4	-5.85	116.11	120.20
25	RA	2461	C	N3-C4-C5	5.85	124.24	121.90
1	XA	504	C	N3-C4-N4	5.85	122.09	118.00
1	XA	687	A	P-O3'-C3'	5.85	126.72	119.70
1	QA	108	G	C1'-O4'-C4'	-5.85	105.22	109.90
25	RA	67	U	C2-N3-C4	5.85	130.51	127.00
1	XA	722	A	C8-N9-C4	-5.85	103.46	105.80
25	RA	255	A	N1-C6-N6	-5.84	115.09	118.60
25	RA	1581	G	N7-C8-N9	5.84	116.02	113.10
25	RA	2063	C	O5'-P-OP2	-5.84	100.44	105.70
25	RA	2865	U	OP1-P-OP2	-5.84	110.83	119.60
1	XA	541	G	C5-C6-O6	-5.84	125.09	128.60
25	YA	1852	C	N1-C2-O2	5.84	122.41	118.90
25	YA	2028	U	C6-N1-C2	-5.84	117.49	121.00
25	RA	979	G	N1-C6-O6	5.84	123.41	119.90
25	RA	1193	G	O5'-P-OP2	-5.84	100.44	105.70
25	RA	2006	C	C4-C5-C6	-5.84	114.48	117.40
25	YA	622	G	C6-C5-N7	-5.84	126.89	130.40
25	YA	822	U	C2-N1-C1'	-5.84	110.69	117.70
12	QL	119	LYS	N-CA-C	-5.84	95.23	111.00
25	RA	742	G	C6-C5-N7	-5.84	126.90	130.40
25	RA	1158	C	N3-C2-O2	-5.84	117.81	121.90
25	RA	1468	C	C6-N1-C2	-5.84	117.96	120.30
25	YA	1425	G	C5-C6-N1	-5.84	108.58	111.50
25	YA	1840	G	N3-C4-C5	5.84	131.52	128.60
28	YE	58	ARG	N-CA-C	-5.84	95.23	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	748	C	C6-N1-C2	-5.84	117.96	120.30
1	QA	1528	U	OP2-P-O3'	5.84	118.05	105.20
25	RA	57	C	C5-C6-N1	5.84	123.92	121.00
25	RA	1363	C	N3-C4-C5	5.84	124.24	121.90
25	RA	1660	C	C5-C6-N1	-5.84	118.08	121.00
25	YA	210	C	N3-C4-C5	5.84	124.24	121.90
25	YA	1978	A	C4-C5-C6	5.84	119.92	117.00
25	YA	2782	G	C4-C5-C6	5.84	122.30	118.80
1	QA	1473	A	C8-N9-C4	5.84	108.14	105.80
25	RA	2583	G	N3-C4-C5	-5.84	125.68	128.60
25	YA	825	C	N3-C4-N4	5.84	122.09	118.00
1	QA	890	G	C4-C5-N7	-5.84	108.47	110.80
25	RA	1949	G	N3-C4-N9	5.84	129.50	126.00
1	XA	738	C	C5-C6-N1	5.84	123.92	121.00
25	RA	2506	U	C2-N1-C1'	5.83	124.70	117.70
1	QA	545	C	N1-C2-N3	5.83	123.28	119.20
25	RA	185	U	C5-C6-N1	-5.83	119.78	122.70
25	RA	727	A	C8-N9-C4	-5.83	103.47	105.80
25	RA	1202	C	C6-N1-C2	5.83	122.63	120.30
25	RA	1332	G	O4'-C1'-N9	-5.83	103.53	108.20
25	RA	2011	U	C2-N1-C1'	-5.83	110.70	117.70
1	XA	1420	C	N3-C4-C5	5.83	124.23	121.90
25	YA	964	C	C6-N1-C2	-5.83	117.97	120.30
25	YA	1230	C	C6-N1-C2	5.83	122.63	120.30
1	QA	347	G	C2-N3-C4	-5.83	108.98	111.90
25	RA	560	C	O5'-P-OP1	5.83	117.70	110.70
25	RA	1692	U	O5'-P-OP2	-5.83	100.45	105.70
1	XA	278	G	N3-C4-C5	-5.83	125.68	128.60
1	XA	928	G	C5-C6-N1	-5.83	108.58	111.50
25	YA	900	A	C8-N9-C4	-5.83	103.47	105.80
25	YA	1514	U	C6-N1-C2	-5.83	117.50	121.00
25	YA	2862	G	N1-C6-O6	5.83	123.40	119.90
25	RA	944	G	C4-C5-N7	-5.83	108.47	110.80
25	RA	1769	G	N3-C4-C5	-5.83	125.69	128.60
28	RE	58	ARG	N-CA-C	-5.83	95.26	111.00
25	YA	2021	C	N1-C2-O2	-5.83	115.40	118.90
25	YA	2410	G	C8-N9-C4	-5.83	104.07	106.40
1	QA	1228	C	C6-N1-C2	-5.83	117.97	120.30
25	RA	185	U	O5'-P-OP1	-5.83	100.45	105.70
25	RA	1985	G	C4-C5-C6	5.83	122.30	118.80
1	XA	354	G	C8-N9-C4	-5.83	104.07	106.40
1	XA	752	G	N9-C4-C5	-5.83	103.07	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	792	A	C8-N9-C4	5.83	108.13	105.80
25	YA	54	G	C4-C5-N7	5.83	113.13	110.80
25	YA	1961	C	C6-N1-C2	5.83	122.63	120.30
25	RA	2016	U	C6-N1-C2	-5.83	117.50	121.00
1	XA	1178	G	N7-C8-N9	5.83	116.01	113.10
25	YA	2517	C	O5'-P-OP1	-5.83	100.46	105.70
25	YA	2717	G	C6-C5-N7	-5.83	126.90	130.40
25	RA	124	G	C6-C5-N7	-5.83	126.91	130.40
25	RA	1792	G	C4-C5-N7	5.83	113.13	110.80
25	RA	1902	C	N1-C2-O2	-5.83	115.41	118.90
25	RA	2075	U	C5-C6-N1	-5.83	119.79	122.70
25	RA	2252	G	C2-N3-C4	-5.83	108.99	111.90
25	YA	51	G	N1-C6-O6	-5.83	116.40	119.90
1	QA	587	G	N3-C4-C5	-5.82	125.69	128.60
25	RA	327	G	N1-C6-O6	5.82	123.39	119.90
25	RA	1634	A	N1-C6-N6	-5.82	115.11	118.60
25	RA	2060	A	N9-C4-C5	5.82	108.13	105.80
25	YA	1378	A	C8-N9-C4	5.82	108.13	105.80
25	YA	2447	G	O5'-P-OP1	-5.82	100.46	105.70
25	RA	1954	G	C8-N9-C4	5.82	108.73	106.40
1	XA	819	A	C4-C5-C6	5.82	119.91	117.00
25	YA	192	C	N3-C4-C5	5.82	124.23	121.90
25	YA	797	C	N1-C2-O2	-5.82	115.41	118.90
25	YA	1983	C	C2-N1-C1'	-5.82	112.39	118.80
25	YA	2015	A	C8-N9-C4	-5.82	103.47	105.80
25	RA	2078	C	C6-N1-C2	-5.82	117.97	120.30
25	RA	2436	G	O5'-P-OP1	-5.82	100.46	105.70
25	RA	2820	A	C5-C6-N1	-5.82	114.79	117.70
25	YA	391	G	C5-C6-O6	-5.82	125.11	128.60
25	YA	671	C	C5-C4-N4	5.82	124.28	120.20
25	RA	2508	G	C4-C5-C6	5.82	122.29	118.80
25	YA	624	C	N1-C2-O2	5.82	122.39	118.90
25	YA	1962	C	C2-N1-C1'	5.82	125.20	118.80
35	YP	26	GLY	N-CA-C	-5.82	98.55	113.10
25	RA	118	A	O4'-C1'-N9	5.82	112.85	108.20
25	RA	869	G	C4-C5-C6	5.82	122.29	118.80
25	RA	1547	C	C4-C5-C6	5.82	120.31	117.40
25	RA	1648	C	N1-C2-O2	-5.82	115.41	118.90
25	RA	2059	A	C8-N9-C4	-5.82	103.47	105.80
1	XA	734	G	C8-N9-C4	-5.82	104.07	106.40
1	XA	789	U	N3-C4-C5	-5.82	111.11	114.60
25	YA	990	A	C2-N3-C4	-5.82	107.69	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2818	G	C5-C6-O6	-5.82	125.11	128.60
25	RA	745	G	N1-C2-N2	-5.82	110.97	116.20
25	RA	2474	C	C6-N1-C2	-5.82	117.97	120.30
25	YA	512	G	C6-C5-N7	5.82	133.89	130.40
25	YA	1786	A	OP1-P-OP2	-5.82	110.88	119.60
25	YA	1332	G	N7-C8-N9	5.81	116.01	113.10
25	YA	2728	U	N1-C2-N3	-5.81	111.41	114.90
25	YA	2811	G	C6-C5-N7	-5.81	126.91	130.40
25	YA	2827	C	C5-C4-N4	-5.81	116.13	120.20
25	RA	269	U	C2-N1-C1'	5.81	124.67	117.70
25	RA	1798	U	N1-C2-N3	5.81	118.39	114.90
1	QA	351	G	N1-C6-O6	-5.81	116.41	119.90
1	QA	668	G	N3-C4-C5	-5.81	125.69	128.60
25	RA	929	G	N1-C6-O6	5.81	123.39	119.90
25	YA	1762	A	C4-C5-N7	-5.81	107.79	110.70
25	YA	2014	A	C6-C5-N7	-5.81	128.23	132.30
25	YA	29	U	C2-N1-C1'	5.81	124.67	117.70
25	YA	1442	G	N3-C4-N9	5.81	129.49	126.00
26	YB	39	A	C8-N9-C4	-5.81	103.48	105.80
1	QA	129	U	N3-C4-C5	-5.81	111.11	114.60
1	QA	135	C	C5-C6-N1	5.81	123.90	121.00
1	QA	789	U	C4-C5-C6	5.81	123.18	119.70
25	RA	1785	A	O5'-P-OP1	-5.81	100.47	105.70
25	RA	2559	C	C6-N1-C2	-5.81	117.98	120.30
25	YA	121	G	N3-C4-N9	5.81	129.48	126.00
25	YA	298	G	C5-N7-C8	-5.81	101.40	104.30
25	YA	863	A	N7-C8-N9	-5.81	110.90	113.80
25	YA	1019	U	C5-C4-O4	5.81	129.38	125.90
25	YA	1822	G	C6-C5-N7	-5.81	126.92	130.40
25	YA	1903	G	C8-N9-C4	5.81	108.72	106.40
25	YA	1974	C	C2-N1-C1'	5.81	125.19	118.80
25	RA	1447	G	C6-C5-N7	-5.81	126.92	130.40
25	YA	74	A	C8-N9-C4	-5.81	103.48	105.80
25	YA	979	G	N3-C4-N9	-5.81	122.52	126.00
1	QA	812	C	N1-C2-O2	5.80	122.38	118.90
1	QA	1431	C	C6-N1-C2	-5.80	117.98	120.30
25	YA	132	G	C4-N9-C1'	5.80	134.05	126.50
25	YA	1814	G	C4-C5-N7	-5.80	108.48	110.80
25	YA	1939	U	N3-C2-O2	-5.80	118.14	122.20
25	YA	2016	U	N1-C2-N3	5.80	118.38	114.90
25	YA	2448	A	C5-C6-N6	-5.80	119.06	123.70
25	YA	1161	C	O5'-P-OP1	-5.80	100.48	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1236	G	C2-N3-C4	-5.80	109.00	111.90
25	YA	2064	C	N1-C2-O2	-5.80	115.42	118.90
25	YA	2574	G	N3-C4-C5	5.80	131.50	128.60
25	RA	1216	G	N3-C4-N9	5.80	129.48	126.00
25	YA	1367	A	C6-C5-N7	-5.80	128.24	132.30
25	YA	1762	A	N1-C6-N6	-5.80	115.12	118.60
1	QA	309	G	C5-C6-O6	-5.80	125.12	128.60
1	QA	324	G	N7-C8-N9	5.80	116.00	113.10
25	RA	1130	U	O4'-C1'-N1	-5.80	103.56	108.20
25	RA	1804	C	N1-C2-O2	-5.80	115.42	118.90
1	XA	734	G	C4-C5-N7	5.80	113.12	110.80
25	YA	1595	G	C4-C5-N7	5.80	113.12	110.80
25	RA	767	U	N3-C2-O2	5.80	126.26	122.20
25	RA	2457	U	C4-C5-C6	5.80	123.18	119.70
1	XA	118	U	N3-C2-O2	-5.80	118.14	122.20
25	YA	103	A	N1-C6-N6	5.80	122.08	118.60
25	YA	1130	U	N1-C2-N3	5.80	118.38	114.90
25	YA	1592	C	C6-N1-C2	5.80	122.62	120.30
25	RA	400	G	N3-C4-C5	5.80	131.50	128.60
25	RA	860	U	C5-C4-O4	5.80	129.38	125.90
25	RA	1277	G	C4-C5-N7	-5.80	108.48	110.80
35	RP	26	GLY	N-CA-C	-5.80	98.61	113.10
1	XA	555	C	C5-C6-N1	5.80	123.90	121.00
25	YA	839	U	N1-C2-N3	5.80	118.38	114.90
25	YA	944	G	O4'-C1'-N9	5.80	112.84	108.20
25	YA	955	C	C2-N1-C1'	-5.80	112.42	118.80
25	YA	1184	G	N3-C4-N9	5.80	129.48	126.00
25	YA	1237	A	N1-C6-N6	-5.80	115.12	118.60
25	YA	1253	A	N1-C2-N3	-5.80	126.40	129.30
25	YA	1319	G	C4-C5-N7	5.80	113.12	110.80
25	RA	742	G	N1-C6-O6	5.79	123.38	119.90
25	RA	1205	U	O5'-P-OP1	-5.79	100.48	105.70
25	RA	1892	C	C6-N1-C2	-5.79	117.98	120.30
25	YA	1767	C	C2-N3-C4	-5.79	117.00	119.90
25	YA	672	C	O5'-P-OP2	-5.79	100.49	105.70
25	YA	2383	G	N3-C4-C5	-5.79	125.70	128.60
1	QA	155	C	C6-N1-C2	-5.79	117.98	120.30
1	QA	690	G	O4'-C1'-N9	5.79	112.83	108.20
25	RA	979	G	C4-C5-N7	5.79	113.12	110.80
1	XA	953	G	N3-C4-C5	-5.79	125.70	128.60
1	XA	1472	U	N3-C2-O2	-5.79	118.15	122.20
25	YA	319	C	N3-C2-O2	5.79	125.95	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1613	G	O4'-C1'-N9	-5.79	103.57	108.20
1	XA	497	U	N3-C2-O2	-5.79	118.15	122.20
25	YA	842	G	C4-C5-N7	5.79	113.12	110.80
1	QA	230	G	C5-C6-N1	-5.79	108.61	111.50
25	RA	51	G	C8-N9-C1'	-5.79	119.47	127.00
25	RA	2052	G	C4-C5-N7	5.79	113.12	110.80
25	RA	2246	G	C4-C5-N7	5.79	113.12	110.80
1	XA	200	G	N9-C4-C5	-5.79	103.08	105.40
25	YA	751	A	C8-N9-C4	-5.79	103.48	105.80
25	YA	1830	C	N3-C2-O2	5.79	125.95	121.90
25	RA	110	G	C4-N9-C1'	-5.79	118.98	126.50
25	RA	1138	G	C8-N9-C4	-5.79	104.08	106.40
25	RA	1396	U	C6-N1-C1'	-5.79	113.10	121.20
25	RA	1487	G	C6-C5-N7	-5.79	126.93	130.40
25	RA	1821	A	C4-C5-N7	5.79	113.59	110.70
25	RA	2534	A	N1-C6-N6	5.79	122.07	118.60
25	YA	877	U	C5-C6-N1	5.79	125.59	122.70
25	YA	2227	A	N3-C4-N9	-5.79	122.77	127.40
26	YB	54	G	C6-C5-N7	-5.79	126.93	130.40
25	RA	593	G	N1-C2-N3	5.79	127.37	123.90
25	RA	2299	G	C8-N9-C1'	-5.79	119.48	127.00
25	RA	2409	G	C5-N7-C8	-5.79	101.41	104.30
1	XA	690	G	N3-C4-N9	-5.79	122.53	126.00
1	XA	755	G	C8-N9-C1'	-5.79	119.48	127.00
25	YA	2020	A	C4-C5-C6	5.79	119.89	117.00
1	QA	361	G	C8-N9-C4	5.78	108.71	106.40
25	RA	733	G	C6-C5-N7	-5.78	126.93	130.40
25	RA	991	C	N3-C4-C5	5.78	124.21	121.90
25	RA	1338	G	N9-C4-C5	-5.78	103.09	105.40
25	RA	2548	G	N1-C6-O6	5.78	123.37	119.90
1	XA	1338	G	C5-C6-N1	5.78	114.39	111.50
25	YA	839	U	C5-C4-O4	5.78	129.37	125.90
25	YA	2448	A	C8-N9-C4	5.78	108.11	105.80
25	RA	2504	U	N3-C4-O4	5.78	123.45	119.40
1	XA	319	G	N3-C4-N9	-5.78	122.53	126.00
1	XA	481	G	C4-N9-C1'	-5.78	118.98	126.50
1	XA	1305	G	C8-N9-C1'	5.78	134.52	127.00
25	YA	968	G	N9-C4-C5	5.78	107.71	105.40
25	YA	1142(A)	A	C4-C5-C6	5.78	119.89	117.00
25	RA	74	A	C5-N7-C8	-5.78	101.01	103.90
25	RA	232	G	N3-C4-N9	5.78	129.47	126.00
25	RA	476	G	O5'-P-OP2	-5.78	100.50	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1514	U	C5-C6-N1	5.78	125.59	122.70
25	YA	221	A	C4-N9-C1'	5.78	136.71	126.30
25	YA	414	C	N3-C4-N4	-5.78	113.95	118.00
25	YA	1380	G	C8-N9-C4	-5.78	104.09	106.40
25	YA	214	G	O4'-C1'-N9	5.78	112.82	108.20
1	QA	686	U	C6-N1-C2	-5.78	117.53	121.00
25	RA	2837	G	N7-C8-N9	5.78	115.99	113.10
1	XA	1099	G	C4-C5-N7	-5.78	108.49	110.80
1	QA	55	A	N1-C2-N3	5.78	132.19	129.30
25	RA	1634	A	N9-C4-C5	5.78	108.11	105.80
1	XA	819	A	C6-C5-N7	-5.78	128.26	132.30
25	YA	270(Y)	G	N3-C4-C5	-5.78	125.71	128.60
25	YA	433	C	C6-N1-C2	5.78	122.61	120.30
25	YA	1733	G	C4-N9-C1'	5.78	134.01	126.50
25	YA	2819	G	C8-N9-C4	5.78	108.71	106.40
25	RA	2070	G	N9-C4-C5	5.77	107.71	105.40
25	YA	621	A	C5-C6-N1	-5.77	114.81	117.70
25	YA	1425	G	C4-N9-C1'	5.77	134.01	126.50
25	YA	1769	G	C5-C6-N1	-5.77	108.61	111.50
25	RA	989	G	N3-C4-N9	5.77	129.46	126.00
25	RA	1940	U	N3-C4-C5	-5.77	111.14	114.60
25	RA	2460	U	C5-C4-O4	5.77	129.36	125.90
25	YA	80	G	C4-C5-C6	5.77	122.26	118.80
25	RA	594	U	C6-N1-C2	-5.77	117.54	121.00
25	RA	1419	A	C8-N9-C4	5.77	108.11	105.80
25	RA	258	G	N9-C4-C5	-5.77	103.09	105.40
25	RA	577	G	C5-C6-N1	-5.77	108.61	111.50
25	RA	1628	G	N3-C2-N2	-5.77	115.86	119.90
25	RA	1776	G	C8-N9-C1'	-5.77	119.50	127.00
25	RA	2439	A	C4-C5-N7	5.77	113.58	110.70
25	RA	2827	C	N3-C4-C5	5.77	124.21	121.90
1	XA	920	U	P-O3'-C3'	-5.77	112.78	119.70
25	YA	298	G	C4-N9-C1'	-5.77	119.00	126.50
25	YA	1311	G	C8-N9-C4	5.77	108.71	106.40
25	YA	1767	C	C6-N1-C2	5.77	122.61	120.30
25	YA	2190	G	N1-C6-O6	5.77	123.36	119.90
25	YA	2246	G	N3-C4-C5	-5.77	125.72	128.60
25	YA	2259	G	C5-C6-O6	-5.77	125.14	128.60
25	YA	2429	G	N1-C6-O6	5.77	123.36	119.90
25	YA	2439	A	C5-N7-C8	-5.77	101.02	103.90
25	YA	2532	G	C8-N9-C4	-5.77	104.09	106.40
25	YA	2557	G	C6-C5-N7	-5.77	126.94	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	YB	95	U	C4-C5-C6	5.77	123.16	119.70
25	RA	776	G	N7-C8-N9	5.77	115.98	113.10
25	RA	2251	G	C6-C5-N7	-5.77	126.94	130.40
25	RA	2346	A	C5-C6-N1	-5.77	114.82	117.70
25	YA	51	G	C5-C6-O6	5.77	132.06	128.60
25	YA	568	U	O4'-C1'-N1	5.77	112.81	108.20
26	YB	44	G	C2-N3-C4	5.77	114.78	111.90
1	QA	821	G	N3-C4-N9	5.77	129.46	126.00
25	YA	2869	G	C6-C5-N7	-5.77	126.94	130.40
25	RA	203	C	N1-C2-O2	-5.76	115.44	118.90
25	RA	2459	A	C4-C5-N7	5.76	113.58	110.70
25	YA	587	C	N1-C2-O2	5.76	122.36	118.90
25	YA	1017	G	C8-N9-C4	-5.76	104.09	106.40
25	YA	2000	G	C4-C5-N7	5.76	113.11	110.80
25	YA	2537	U	C5-C4-O4	5.76	129.36	125.90
25	RA	1930	G	N3-C4-N9	-5.76	122.54	126.00
25	YA	2726	U	O4'-C1'-N1	5.76	112.81	108.20
1	XA	930	C	C6-N1-C2	5.76	122.61	120.30
25	YA	400	G	N3-C4-C5	5.76	131.48	128.60
25	YA	1331	A	C8-N9-C4	5.76	108.11	105.80
25	YA	2281	C	C5-C4-N4	-5.76	116.17	120.20
25	RA	1581	G	C4-N9-C1'	5.76	133.99	126.50
25	RA	2206	C	N3-C2-O2	-5.76	117.87	121.90
25	YA	71	A	N1-C6-N6	5.76	122.06	118.60
25	YA	221	A	OP2-P-O3'	5.76	117.87	105.20
25	YA	444	C	N3-C4-C5	-5.76	119.60	121.90
25	YA	1833	U	C6-N1-C2	-5.76	117.55	121.00
25	RA	2848	G	C4-C5-N7	-5.76	108.50	110.80
1	XA	1517	G	C4-N9-C1'	5.76	133.99	126.50
25	YA	1800	C	C5-C6-N1	-5.76	118.12	121.00
25	RA	442	G	N1-C2-N3	5.76	127.35	123.90
1	XA	563	A	O4'-C1'-N9	5.76	112.81	108.20
25	YA	1890	A	N3-C4-C5	5.76	130.83	126.80
1	QA	300	A	N1-C2-N3	5.75	132.18	129.30
1	QA	1204	A	C6-C5-N7	-5.75	128.27	132.30
25	YA	352	G	C8-N9-C4	5.75	108.70	106.40
25	RA	1992	G	O4'-C1'-N9	-5.75	103.60	108.20
25	RA	2461	C	C6-N1-C2	5.75	122.60	120.30
25	YA	916	G	C4-C5-C6	5.75	122.25	118.80
25	YA	1826	G	N1-C6-O6	5.75	123.35	119.90
25	RA	2125	G	C8-N9-C4	-5.75	104.10	106.40
25	RA	2206	C	C4-C5-C6	5.75	120.28	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2238	G	N7-C8-N9	5.75	115.97	113.10
1	XA	1462	G	C8-N9-C4	5.75	108.70	106.40
25	RA	1165	U	N3-C2-O2	-5.75	118.18	122.20
25	YA	1756	G	C4-C5-N7	-5.75	108.50	110.80
25	YA	1926	U	N1-C2-N3	5.75	118.35	114.90
25	YA	2710	C	C4-C5-C6	5.75	120.27	117.40
25	RA	205	G	C6-N1-C2	-5.75	121.65	125.10
25	RA	1050	A	N7-C8-N9	5.75	116.67	113.80
25	RA	1772	G	N1-C6-O6	5.75	123.35	119.90
25	RA	2073	C	C6-N1-C2	-5.75	118.00	120.30
1	XA	1313	U	C6-N1-C2	-5.75	117.55	121.00
1	XA	1519	A	N1-C2-N3	5.75	132.17	129.30
25	YA	30	G	C8-N9-C4	-5.75	104.10	106.40
25	YA	140	A	C2-N3-C4	-5.75	107.73	110.60
25	YA	818	G	C5-C6-N1	-5.75	108.63	111.50
25	YA	1480	G	C5-C6-N1	-5.75	108.63	111.50
25	YA	1558	A	P-O3'-C3'	5.75	126.60	119.70
48	Y2	16	LEU	N-CA-C	-5.75	95.48	111.00
1	QA	1206	G	N3-C4-N9	5.75	129.45	126.00
25	RA	1610	A	N9-C4-C5	5.75	108.10	105.80
1	XA	1054	C	C2-N1-C1'	5.75	125.12	118.80
25	YA	2251	G	C2-N3-C4	-5.75	109.03	111.90
25	YA	2691	C	C2-N1-C1'	-5.75	112.48	118.80
1	QA	1513	A	C5-N7-C8	-5.74	101.03	103.90
25	RA	754	C	C5-C4-N4	-5.74	116.18	120.20
25	RA	859	G	N3-C4-N9	-5.74	122.55	126.00
25	RA	1759	A	N9-C4-C5	-5.74	103.50	105.80
48	R2	16	LEU	N-CA-C	-5.74	95.49	111.00
25	YA	270(R)	G	C4-C5-N7	-5.74	108.50	110.80
25	YA	972	G	C4-C5-N7	-5.74	108.50	110.80
25	YA	1658	C	N3-C2-O2	-5.74	117.88	121.90
25	YA	2432	A	C5-N7-C8	-5.74	101.03	103.90
25	YA	2468	G	O4'-C1'-N9	5.74	112.80	108.20
22	QV	17	C	C5-C6-N1	5.74	123.87	121.00
25	RA	1193	G	N3-C4-C5	5.74	131.47	128.60
25	RA	1202	C	C5-C6-N1	-5.74	118.13	121.00
25	RA	1681	G	C2-N3-C4	-5.74	109.03	111.90
25	RA	1855	G	N1-C6-O6	5.74	123.34	119.90
25	RA	1975	G	C4-C5-N7	5.74	113.10	110.80
1	XA	515	G	C6-C5-N7	-5.74	126.95	130.40
1	XA	1332	A	N7-C8-N9	5.74	116.67	113.80
25	YA	259	G	C4-C5-C6	5.74	122.25	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	52	G	C4-C5-N7	5.74	113.10	110.80
25	RA	1602	U	N1-C2-N3	5.74	118.34	114.90
1	XA	247	G	C8-N9-C4	-5.74	104.10	106.40
25	YA	508	G	O4'-C1'-N9	5.74	112.79	108.20
25	YA	1203	G	N9-C4-C5	5.74	107.70	105.40
25	YA	1317	A	O5'-P-OP1	5.74	117.59	110.70
25	YA	2634	G	N1-C6-O6	5.74	123.34	119.90
25	RA	330	A	N9-C4-C5	-5.74	103.50	105.80
25	RA	2637	U	C2-N1-C1'	5.74	124.59	117.70
1	XA	542	G	C8-N9-C4	-5.74	104.10	106.40
1	XA	791	G	C2-N3-C4	-5.74	109.03	111.90
25	YA	1825	A	C8-N9-C4	-5.74	103.50	105.80
26	YB	13	A	C5-C6-N6	5.74	128.29	123.70
1	XA	1374	A	O4'-C1'-N9	5.74	112.79	108.20
25	YA	585	G	C8-N9-C1'	-5.74	119.54	127.00
25	YA	2561	A	C8-N9-C4	5.74	108.09	105.80
25	RA	220	G	C8-N9-C4	-5.74	104.11	106.40
25	RA	762	U	N1-C2-O2	-5.74	118.79	122.80
1	XA	1478	C	N3-C2-O2	-5.74	117.89	121.90
25	YA	58	G	C5-C6-N1	-5.74	108.63	111.50
25	YA	2767	C	C6-N1-C2	-5.74	118.01	120.30
26	YB	26	A	C8-N9-C4	-5.74	103.50	105.80
25	RA	484	C	N3-C4-N4	5.73	122.01	118.00
25	YA	995	C	C6-N1-C2	-5.73	118.01	120.30
25	YA	1763	G	C5-C6-O6	5.73	132.04	128.60
25	YA	2318	G	C5'-C4'-O4'	5.73	115.98	109.10
1	QA	170	U	C6-N1-C2	-5.73	117.56	121.00
25	RA	1989	G	N9-C4-C5	5.73	107.69	105.40
25	RA	2608	G	C2-N3-C4	-5.73	109.03	111.90
25	YA	414	C	C2-N3-C4	-5.73	117.03	119.90
1	QA	1053	G	O4'-C1'-N9	5.73	112.78	108.20
1	QA	1076	C	C2-N1-C1'	-5.73	112.50	118.80
25	RA	2591	C	O5'-P-OP2	-5.73	100.54	105.70
25	YA	1189	A	O5'-P-OP1	-5.73	100.54	105.70
25	YA	1819	A	O5'-P-OP2	-5.73	100.54	105.70
25	RA	248	G	N3-C4-C5	5.73	131.47	128.60
25	RA	1235	G	N3-C4-C5	-5.73	125.73	128.60
25	RA	2299	G	C4-N9-C1'	5.73	133.95	126.50
25	RA	2270	G	C8-N9-C4	-5.73	104.11	106.40
25	YA	666	G	C8-N9-C4	5.73	108.69	106.40
25	YA	1787	A	C8-N9-C4	5.73	108.09	105.80
25	YA	1994	C	C2-N3-C4	-5.73	117.04	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	777	A	N3-C4-C5	-5.73	122.79	126.80
25	RA	1675	C	OP2-P-O3'	5.73	117.80	105.20
19	XS	6	LYS	N-CA-C	-5.73	95.54	111.00
25	RA	75	G	C4-N9-C1'	5.72	133.94	126.50
25	RA	768	G	N1-C2-N3	5.72	127.33	123.90
1	XA	186(A)	C	C5-C6-N1	5.72	123.86	121.00
25	YA	769	G	N1-C6-O6	5.72	123.33	119.90
25	YA	1577	C	O5'-P-OP1	-5.72	100.55	105.70
25	YA	1815	A	N1-C6-N6	-5.72	115.17	118.60
25	YA	2279	G	C5-C6-N1	5.72	114.36	111.50
25	YA	2318	G	C5-N7-C8	-5.72	101.44	104.30
25	YA	2399	G	N7-C8-N9	-5.72	110.24	113.10
1	QA	790	A	C5-N7-C8	-5.72	101.04	103.90
25	RA	382	G	C6-C5-N7	-5.72	126.97	130.40
25	RA	532	A	N3-C4-C5	-5.72	122.80	126.80
1	XA	518	C	N3-C2-O2	-5.72	117.89	121.90
25	YA	1862	G	N3-C4-C5	5.72	131.46	128.60
25	YA	2870	C	N3-C4-C5	-5.72	119.61	121.90
25	RA	1636	C	N3-C2-O2	-5.72	117.89	121.90
25	RA	1936	A	N9-C4-C5	-5.72	103.51	105.80
1	QA	501	C	N1-C2-O2	5.72	122.33	118.90
25	RA	1345	C	C6-N1-C2	-5.72	118.01	120.30
25	RA	1528	A	O4'-C1'-N9	5.72	112.78	108.20
25	YA	498	G	C2-N3-C4	5.72	114.76	111.90
25	YA	579	G	N1-C6-O6	5.72	123.33	119.90
25	YA	622	G	C4-N9-C1'	5.72	133.93	126.50
1	QA	150	C	N1-C2-O2	5.72	122.33	118.90
1	XA	790	A	C2-N3-C4	-5.72	107.74	110.60
25	YA	745	G	C8-N9-C4	-5.72	104.11	106.40
25	RA	488	G	N3-C4-N9	5.72	129.43	126.00
1	XA	29	G	C8-N9-C4	5.72	108.69	106.40
25	YA	2869	G	C8-N9-C4	-5.72	104.11	106.40
26	YB	82	G	C5-C6-O6	5.72	132.03	128.60
25	RA	1802	A	N1-C6-N6	-5.71	115.17	118.60
25	RA	1848	A	N1-C6-N6	-5.71	115.17	118.60
1	XA	568	G	C8-N9-C4	-5.71	104.11	106.40
25	YA	1814	G	N1-C2-N3	5.71	127.33	123.90
1	XA	1159	U	C2-N1-C1'	-5.71	110.84	117.70
25	YA	129	C	C5-C6-N1	-5.71	118.14	121.00
25	YA	916	G	N3-C4-N9	5.71	129.43	126.00
25	YA	1151	G	C6-C5-N7	-5.71	126.97	130.40
25	YA	1907	G	N1-C6-O6	5.71	123.33	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	723	U	N1-C2-O2	5.71	126.80	122.80
1	QA	1163	C	C6-N1-C2	-5.71	118.02	120.30
25	RA	559	G	C4-C5-N7	-5.71	108.52	110.80
26	RB	100	G	C5-C6-O6	-5.71	125.17	128.60
1	XA	581	G	C6-C5-N7	-5.71	126.97	130.40
1	XA	674	G	C4-C5-C6	5.71	122.23	118.80
1	XA	713	G	C2-N3-C4	5.71	114.76	111.90
1	XA	868	C	C5-C6-N1	5.71	123.86	121.00
25	YA	1224	G	N3-C4-N9	-5.71	122.57	126.00
25	YA	1611	C	N3-C4-C5	5.71	124.19	121.90
25	YA	1824	G	C6-C5-N7	-5.71	126.97	130.40
25	YA	2240	C	O5'-P-OP2	5.71	117.55	110.70
1	QA	723	U	C6-N1-C1'	-5.71	113.21	121.20
25	RA	1487	G	C4-N9-C1'	5.71	133.92	126.50
25	RA	1495	A	C8-N9-C4	-5.71	103.52	105.80
25	RA	2455	G	C4-C5-N7	5.71	113.08	110.80
1	XA	670	G	C2-N3-C4	5.71	114.75	111.90
12	XL	47	LYS	C-N-CD	5.71	140.39	128.40
25	YA	768	G	C4-C5-N7	5.71	113.08	110.80
25	YA	1818	U	C5-C4-O4	5.71	129.32	125.90
25	YA	2052	G	C5-C6-N1	5.71	114.35	111.50
1	QA	1347	G	OP2-P-O3'	5.71	117.75	105.20
25	YA	1304	C	C5-C6-N1	-5.71	118.15	121.00
25	YA	1568	G	C8-N9-C1'	5.71	134.42	127.00
25	YA	2395	C	C6-N1-C2	-5.71	118.02	120.30
25	RA	2730	C	C6-N1-C2	-5.71	118.02	120.30
25	YA	458	G	C5-N7-C8	5.71	107.15	104.30
25	YA	2000	G	N1-C6-O6	5.71	123.32	119.90
1	XA	186(A)	C	N3-C2-O2	-5.70	117.91	121.90
25	YA	2294	C	C5-C6-N1	5.70	123.85	121.00
25	YA	2616	C	N3-C4-C5	5.70	124.18	121.90
1	QA	243	A	N1-C6-N6	5.70	122.02	118.60
1	QA	937	A	N7-C8-N9	5.70	116.65	113.80
25	RA	2570	G	C8-N9-C1'	-5.70	119.59	127.00
1	XA	971	G	N3-C4-N9	-5.70	122.58	126.00
1	XA	1187	G	C4-N9-C1'	5.70	133.91	126.50
1	QA	320	C	C6-N1-C2	5.70	122.58	120.30
25	RA	1781	C	N1-C2-O2	5.70	122.32	118.90
25	RA	1931	U	N3-C2-O2	-5.70	118.21	122.20
25	YA	2538	C	C6-N1-C2	5.70	122.58	120.30
25	RA	1593	G	N3-C4-C5	-5.70	125.75	128.60
25	RA	1986	A	C4-C5-C6	-5.70	114.15	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2371	G	C4-C5-N7	-5.70	108.52	110.80
25	YA	84	A	C8-N9-C4	-5.70	103.52	105.80
25	YA	921	G	C6-C5-N7	-5.70	126.98	130.40
25	YA	1969	A	N1-C6-N6	-5.70	115.18	118.60
25	RA	503	A	N9-C4-C5	5.70	108.08	105.80
25	YA	602	G	N3-C4-C5	5.70	131.45	128.60
25	RA	725	G	C2-N3-C4	-5.70	109.05	111.90
25	RA	1022	G	OP2-P-O3'	5.70	117.73	105.20
25	RA	2665	A	N7-C8-N9	5.70	116.65	113.80
26	RB	27	C	C6-N1-C2	-5.70	118.02	120.30
25	YA	214	G	N3-C4-C5	-5.70	125.75	128.60
25	YA	391	G	C8-N9-C1'	-5.70	119.60	127.00
25	YA	861	A	O5'-P-OP2	5.70	117.53	110.70
25	YA	1307	A	C5-C6-N1	5.70	120.55	117.70
25	YA	1443	G	C5-C6-N1	-5.70	108.65	111.50
25	YA	1614	A	C5-C6-N6	-5.70	119.14	123.70
25	YA	2710	C	N3-C4-N4	-5.70	114.01	118.00
25	RA	2682	U	C2-N1-C1'	5.69	124.53	117.70
25	RA	2831	G	N1-C6-O6	5.69	123.32	119.90
25	YA	1516	U	N3-C2-O2	-5.69	118.21	122.20
25	YA	2293	C	P-O3'-C3'	-5.69	112.87	119.70
25	RA	258	G	C6-C5-N7	-5.69	126.98	130.40
25	RA	921	G	C4-C5-C6	5.69	122.22	118.80
1	XA	921	U	C5-C6-N1	5.69	125.55	122.70
1	XA	934	C	C2-N1-C1'	-5.69	112.54	118.80
25	YA	28	A	N7-C8-N9	5.69	116.65	113.80
25	YA	380	U	N3-C4-C5	-5.69	111.18	114.60
25	YA	704	G	N3-C4-C5	-5.69	125.75	128.60
25	YA	1489	U	O5'-P-OP1	-5.69	100.58	105.70
25	YA	2490	G	N7-C8-N9	5.69	115.95	113.10
25	YA	2719	G	N1-C6-O6	5.69	123.31	119.90
1	QA	1218	C	C6-N1-C2	-5.69	118.02	120.30
25	RA	647	G	N1-C6-O6	5.69	123.31	119.90
25	RA	1933	G	C6-C5-N7	-5.69	126.99	130.40
26	RB	18	G	N3-C4-N9	-5.69	122.58	126.00
25	YA	804	A	C5-N7-C8	-5.69	101.05	103.90
25	YA	1131	G	O5'-P-OP2	-5.69	100.58	105.70
25	YA	1344	G	N3-C4-N9	-5.69	122.58	126.00
25	YA	1421	G	N1-C6-O6	5.69	123.31	119.90
25	YA	1680	U	N3-C4-C5	-5.69	111.19	114.60
25	YA	1705	G	N3-C4-N9	5.69	129.41	126.00
25	YA	2623	G	C4-N9-C1'	5.69	133.90	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2647	U	C5-C4-O4	5.69	129.31	125.90
1	QA	161	A	N9-C4-C5	5.69	108.08	105.80
1	QA	496	A	C2-N3-C4	5.69	113.44	110.60
25	RA	1658	C	C6-N1-C2	-5.69	118.02	120.30
25	RA	2583	G	C4-C5-N7	-5.69	108.52	110.80
1	XA	904	C	N3-C4-C5	5.69	124.17	121.90
1	XA	1380	U	N3-C4-O4	-5.69	115.42	119.40
25	YA	228	A	C4-N9-C1'	5.69	136.54	126.30
1	QA	258	G	N1-C6-O6	5.69	123.31	119.90
1	QA	299	G	C5-C6-O6	5.69	132.01	128.60
25	RA	2639	A	C5-C6-N1	-5.69	114.86	117.70
1	XA	1452	C	C2-N1-C1'	5.69	125.06	118.80
25	YA	132	G	C8-N9-C1'	-5.69	119.61	127.00
25	YA	379	G	C5-C6-O6	-5.69	125.19	128.60
25	YA	523	C	C5-C6-N1	5.69	123.84	121.00
25	YA	952	G	C4-N9-C1'	5.69	133.90	126.50
1	XA	1313	U	C5-C6-N1	5.69	125.54	122.70
25	RA	688	U	N3-C4-C5	-5.68	111.19	114.60
25	RA	1299	G	C8-N9-C1'	5.68	134.39	127.00
25	RA	2556	C	C5-C4-N4	-5.68	116.22	120.20
25	YA	649	G	C5-C6-N1	-5.68	108.66	111.50
25	YA	906	G	N9-C4-C5	5.68	107.67	105.40
25	YA	1378	A	C2-N3-C4	-5.68	107.76	110.60
25	YA	1385	G	C6-C5-N7	5.68	133.81	130.40
1	QA	48	C	N3-C4-C5	5.68	124.17	121.90
1	QA	1336	C	C6-N1-C1'	-5.68	113.98	120.80
25	RA	300	A	C6-C5-N7	-5.68	128.32	132.30
25	RA	1241	A	C8-N9-C4	-5.68	103.53	105.80
1	XA	953	G	N1-C6-O6	-5.68	116.49	119.90
25	YA	184	C	C6-N1-C2	5.68	122.57	120.30
25	YA	1330	C	N3-C4-C5	5.68	124.17	121.90
25	YA	2003	G	C2-N3-C4	-5.68	109.06	111.90
25	YA	2080	G	C4-C5-C6	5.68	122.21	118.80
1	QA	1336	C	C5-C6-N1	5.68	123.84	121.00
25	RA	566	U	N3-C2-O2	5.68	126.18	122.20
25	RA	974(A)	C	C5-C4-N4	5.68	124.18	120.20
25	YA	379	G	N3-C2-N2	5.68	123.88	119.90
25	YA	2509	G	C4-C5-N7	5.68	113.07	110.80
1	QA	317	G	N3-C4-N9	5.68	129.41	126.00
25	YA	533	G	N9-C4-C5	5.68	107.67	105.40
25	YA	620	G	N3-C4-N9	-5.68	122.59	126.00
25	YA	1903	G	C2-N3-C4	-5.68	109.06	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2060	A	C2-N3-C4	-5.68	107.76	110.60
25	RA	904	C	C2-N1-C1'	5.68	125.05	118.80
25	RA	2573	C	C5-C6-N1	5.68	123.84	121.00
25	YA	756	C	C6-N1-C2	5.68	122.57	120.30
1	QA	1236	A	C8-N9-C4	-5.68	103.53	105.80
25	RA	729	G	C5-C6-O6	-5.68	125.19	128.60
25	RA	1924	C	C6-N1-C2	-5.68	118.03	120.30
25	RA	2814	C	C2-N1-C1'	-5.68	112.56	118.80
1	XA	971	G	O4'-C1'-N9	5.68	112.74	108.20
25	YA	452	G	C6-N1-C2	-5.68	121.69	125.10
25	YA	503	A	P-O3'-C3'	5.68	126.51	119.70
25	YA	1447	G	N1-C6-O6	5.68	123.31	119.90
25	YA	2677	G	C8-N9-C1'	-5.68	119.62	127.00
1	QA	1446	A	P-O3'-C3'	5.67	126.51	119.70
25	RA	1333	C	C5-C4-N4	-5.67	116.23	120.20
25	RA	2638	G	N1-C6-O6	5.67	123.31	119.90
25	YA	431	U	N3-C4-O4	5.67	123.37	119.40
25	YA	486	C	C5-C6-N1	5.67	123.84	121.00
25	YA	1907	G	N3-C4-N9	-5.67	122.60	126.00
1	XA	687	A	N1-C6-N6	-5.67	115.20	118.60
25	YA	1890	A	N1-C6-N6	5.67	122.00	118.60
25	YA	2609	U	C5-C6-N1	-5.67	119.86	122.70
1	QA	971	G	C4-N9-C1'	5.67	133.87	126.50
25	RA	856	C	C2-N3-C4	5.67	122.73	119.90
25	RA	2052	G	N3-C4-C5	5.67	131.44	128.60
1	XA	359	U	C5-C4-O4	5.67	129.30	125.90
1	XA	656	C	C6-N1-C2	-5.67	118.03	120.30
25	YA	523	C	N3-C2-O2	-5.67	117.93	121.90
25	YA	549	G	C4-C5-N7	5.67	113.07	110.80
25	RA	1180	C	C5-C6-N1	5.67	123.83	121.00
25	YA	319	C	N1-C2-O2	-5.67	115.50	118.90
1	QA	1227	A	C2-N3-C4	-5.67	107.77	110.60
25	RA	220	G	N3-C4-C5	-5.67	125.77	128.60
25	RA	1835	G	C2-N3-C4	5.67	114.73	111.90
25	RA	2478	A	C2-N3-C4	-5.67	107.77	110.60
25	RA	2765	A	C2-N3-C4	-5.67	107.77	110.60
25	YA	1311	G	N3-C4-N9	5.67	129.40	126.00
25	YA	1364	G	N1-C2-N3	5.67	127.30	123.90
25	YA	1971	A	C8-N9-C4	5.67	108.07	105.80
1	QA	884	U	C5-C6-N1	-5.67	119.87	122.70
1	QA	1111	A	C5-N7-C8	-5.67	101.07	103.90
25	RA	2333	A	C5-C6-N1	5.67	120.53	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	460	A	C8-N9-C4	5.67	108.07	105.80
25	RA	2083	G	C4-C5-N7	5.67	113.07	110.80
25	RA	2267	A	C5-C6-N1	5.67	120.53	117.70
25	YA	1424	G	N1-C2-N3	5.67	127.30	123.90
1	QA	523	A	C5-C6-N1	-5.66	114.87	117.70
1	QA	525	C	N3-C4-N4	5.66	121.97	118.00
1	QA	578	C	N3-C2-O2	-5.66	117.94	121.90
1	QA	993	G	C4-N9-C1'	5.66	133.86	126.50
25	RA	382	G	C6-N1-C2	5.66	128.50	125.10
25	RA	2862	G	N3-C4-C5	-5.66	125.77	128.60
1	XA	701	C	P-O3'-C3'	5.66	126.50	119.70
25	YA	1379	A	P-O3'-C3'	5.66	126.50	119.70
25	YA	1380	G	N1-C6-O6	5.66	123.30	119.90
25	YA	2422	A	N3-C4-C5	5.66	130.76	126.80
25	YA	203	C	C5-C6-N1	-5.66	118.17	121.00
25	YA	683	C	C4-C5-C6	5.66	120.23	117.40
25	YA	686	G	C2-N3-C4	-5.66	109.07	111.90
1	QA	867	G	N3-C4-C5	-5.66	125.77	128.60
25	RA	624	C	C4-C5-C6	-5.66	114.57	117.40
25	RA	1821	A	C6-C5-N7	-5.66	128.34	132.30
25	RA	2682	U	N3-C2-O2	-5.66	118.24	122.20
25	YA	196	A	C6-C5-N7	-5.66	128.34	132.30
25	YA	243	U	O5'-P-OP1	-5.66	100.61	105.70
25	YA	436	C	C4-C5-C6	5.66	120.23	117.40
25	YA	1602	U	C4-C5-C6	5.66	123.10	119.70
25	YA	2839	G	C4-N9-C1'	5.66	133.86	126.50
19	QS	6	LYS	N-CA-C	-5.66	95.72	111.00
25	RA	407	G	N3-C4-C5	-5.66	125.77	128.60
25	RA	1496	A	C4-N9-C1'	5.66	136.49	126.30
25	RA	1785	A	C8-N9-C4	-5.66	103.54	105.80
25	RA	1869	G	N7-C8-N9	5.66	115.93	113.10
25	RA	2227	A	N3-C4-N9	-5.66	122.87	127.40
25	RA	2250	G	O5'-P-OP1	-5.66	100.61	105.70
25	RA	2544	G	C4-C5-C6	5.66	122.19	118.80
1	XA	1014	A	N1-C6-N6	5.66	122.00	118.60
1	XA	1429	C	N3-C4-C5	5.66	124.16	121.90
25	YA	2440	C	O5'-P-OP1	-5.66	100.61	105.70
1	QA	557	G	N9-C4-C5	-5.66	103.14	105.40
25	RA	2325	G	N3-C2-N2	-5.66	115.94	119.90
25	YA	990	A	C4-C5-C6	5.66	119.83	117.00
25	YA	2619	C	N1-C2-O2	-5.66	115.51	118.90
1	QA	798	G	C5-C6-O6	-5.66	125.21	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	103	A	N1-C2-N3	5.66	132.13	129.30
25	YA	811	U	O5'-P-OP1	-5.66	100.61	105.70
25	YA	1280	G	C5-C6-N1	5.65	114.33	111.50
26	YB	89	G	N7-C8-N9	5.65	115.93	113.10
1	QA	913	A	OP2-P-O3'	5.65	117.63	105.20
25	RA	1809	A	N1-C2-N3	5.65	132.13	129.30
25	RA	2399	G	C8-N9-C1'	-5.65	119.65	127.00
25	RA	2458	G	N3-C4-C5	-5.65	125.77	128.60
25	RA	2713	A	C5-N7-C8	-5.65	101.07	103.90
25	YA	1517	G	N3-C4-N9	5.65	129.39	126.00
25	YA	2839	G	C8-N9-C1'	-5.65	119.65	127.00
1	QA	352	C	C2-N3-C4	5.65	122.72	119.90
25	RA	2053	G	C8-N9-C1'	5.65	134.34	127.00
25	RA	2383	G	C5-N7-C8	-5.65	101.47	104.30
1	XA	112	G	N1-C6-O6	5.65	123.29	119.90
1	XA	690	G	C2-N3-C4	-5.65	109.08	111.90
25	YA	112	U	C5-C4-O4	-5.65	122.51	125.90
25	YA	713	G	C4-C5-C6	5.65	122.19	118.80
25	YA	819	A	OP2-P-O3'	5.65	117.63	105.20
25	YA	1378	A	N3-C4-N9	-5.65	122.88	127.40
25	YA	2230	G	C5-C6-O6	-5.65	125.21	128.60
1	QA	34	C	C6-N1-C2	-5.65	118.04	120.30
1	QA	138	G	C5-C6-O6	-5.65	125.21	128.60
25	RA	2862	G	N3-C4-N9	5.65	129.39	126.00
1	XA	47	C	C4-C5-C6	5.65	120.22	117.40
25	YA	1206	G	N1-C2-N3	5.65	127.29	123.90
25	YA	1620	G	C2-N3-C4	-5.65	109.08	111.90
25	YA	1698	A	OP1-P-O3'	5.65	117.63	105.20
25	RA	2507	C	N3-C2-O2	5.65	125.85	121.90
25	YA	955	C	N3-C2-O2	5.65	125.85	121.90
25	YA	2371	G	C8-N9-C4	-5.65	104.14	106.40
1	QA	537	G	O5'-P-OP1	-5.64	100.62	105.70
1	QA	886	G	C8-N9-C4	5.64	108.66	106.40
25	RA	704	G	N3-C4-N9	5.64	129.39	126.00
25	RA	1377	G	C4-N9-C1'	5.64	133.84	126.50
25	RA	1426	G	C4-C5-N7	-5.64	108.54	110.80
25	RA	1564	C	C6-N1-C2	-5.64	118.04	120.30
26	RB	53	A	C2-N3-C4	5.64	113.42	110.60
1	XA	423	G	N3-C4-C5	-5.64	125.78	128.60
25	YA	141(A)	C	C6-N1-C2	5.64	122.56	120.30
25	YA	1392	A	N9-C4-C5	5.64	108.06	105.80
25	YA	1835	G	N3-C4-N9	5.64	129.39	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2049	G	C6-C5-N7	-5.64	127.01	130.40
1	QA	561	U	C6-N1-C2	5.64	124.39	121.00
1	QA	1487	G	N1-C2-N3	5.64	127.28	123.90
25	RA	503	A	P-O3'-C3'	5.64	126.47	119.70
25	RA	1470	G	C8-N9-C4	-5.64	104.14	106.40
26	RB	53	A	N7-C8-N9	5.64	116.62	113.80
1	XA	315	A	C4-C5-C6	-5.64	114.18	117.00
1	XA	1417	G	C4-C5-N7	-5.64	108.54	110.80
25	YA	1908	C	N3-C2-O2	-5.64	117.95	121.90
25	YA	1938	A	C8-N9-C4	5.64	108.06	105.80
25	YA	2513	G	C8-N9-C4	-5.64	104.14	106.40
25	RA	124	G	C4-C5-C6	5.64	122.18	118.80
25	YA	673	C	N3-C2-O2	-5.64	117.95	121.90
25	YA	798	G	C2-N3-C4	-5.64	109.08	111.90
25	YA	2053	G	N1-C6-O6	5.64	123.28	119.90
25	YA	2607	G	N3-C4-C5	-5.64	125.78	128.60
25	YA	270(Y)	G	N9-C4-C5	5.64	107.66	105.40
25	YA	2249	U	C4-C5-C6	5.64	123.08	119.70
25	YA	2710	C	N1-C2-N3	5.64	123.15	119.20
1	QA	633	G	C4-N9-C1'	5.64	133.83	126.50
1	QA	758	G	N3-C4-C5	5.64	131.42	128.60
1	QA	1340	A	N1-C6-N6	5.64	121.98	118.60
25	RA	145	G	C8-N9-C1'	5.64	134.33	127.00
25	RA	199	A	O5'-P-OP2	-5.64	100.63	105.70
25	RA	649	G	N3-C4-C5	-5.64	125.78	128.60
25	RA	1223	C	N3-C2-O2	5.64	125.84	121.90
25	RA	2640	G	C2-N3-C4	-5.64	109.08	111.90
1	XA	869	G	C5-C6-N1	-5.64	108.68	111.50
1	XA	1054	C	C4-C5-C6	-5.64	114.58	117.40
25	YA	382	G	C5-N7-C8	-5.64	101.48	104.30
25	YA	2520	C	N1-C2-O2	-5.64	115.52	118.90
1	QA	239	U	C6-N1-C2	-5.63	117.62	121.00
1	QA	1401	G	N1-C6-O6	5.63	123.28	119.90
25	RA	479	A	C8-N9-C4	-5.63	103.55	105.80
1	XA	1187	G	C6-C5-N7	-5.63	127.02	130.40
25	RA	1948	G	N1-C6-O6	5.63	123.28	119.90
1	XA	116	A	C5-C6-N1	5.63	120.52	117.70
25	YA	839	U	N3-C2-O2	-5.63	118.26	122.20
25	YA	2422	A	N1-C6-N6	5.63	121.98	118.60
25	RA	2325	G	C2-N3-C4	-5.63	109.08	111.90
1	XA	1127	G	N3-C4-C5	5.63	131.42	128.60
25	YA	195	A	N7-C8-N9	5.63	116.62	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	867	C	N3-C4-C5	-5.63	119.65	121.90
25	YA	1012	U	C2-N1-C1'	-5.63	110.94	117.70
25	YA	1189	A	O5'-P-OP2	5.63	117.46	110.70
25	RA	846	C	P-O3'-C3'	5.63	126.46	119.70
25	RA	2278	A	O4'-C1'-N9	5.63	112.70	108.20
25	YA	326	G	C5-C6-N1	-5.63	108.69	111.50
25	YA	393	C	N3-C2-O2	5.63	125.84	121.90
25	YA	1423	G	N7-C8-N9	-5.63	110.28	113.10
25	RA	828	U	N3-C2-O2	-5.63	118.26	122.20
25	RA	1153	C	C6-N1-C2	-5.63	118.05	120.30
25	YA	1844	C	OP1-P-O3'	5.63	117.58	105.20
25	YA	2002	G	C4-C5-N7	5.63	113.05	110.80
25	YA	2555	U	N1-C2-O2	-5.63	118.86	122.80
25	RA	914	C	O5'-P-OP2	-5.63	100.64	105.70
25	RA	2722	G	N3-C4-N9	5.63	129.38	126.00
1	XA	170	U	C6-N1-C2	-5.63	117.62	121.00
25	YA	1557	C	C5-C6-N1	-5.63	118.19	121.00
25	YA	2590	A	N9-C4-C5	-5.63	103.55	105.80
1	QA	566	G	C6-C5-N7	5.62	133.78	130.40
1	QA	664	G	C5-C6-O6	5.62	131.97	128.60
25	RA	2237	G	C4-N9-C1'	5.62	133.81	126.50
25	YA	218	A	C6-C5-N7	5.62	136.24	132.30
25	RA	1817	G	C8-N9-C4	-5.62	104.15	106.40
25	RA	2028	U	N3-C2-O2	5.62	126.14	122.20
25	RA	2393	A	N3-C4-C5	5.62	130.74	126.80
1	XA	724	G	N3-C4-C5	-5.62	125.79	128.60
1	XA	1292	U	C5-C6-N1	-5.62	119.89	122.70
25	YA	1180	C	C2-N1-C1'	5.62	124.99	118.80
1	QA	331	G	N7-C8-N9	5.62	115.91	113.10
1	QA	664	G	N3-C4-N9	-5.62	122.63	126.00
25	RA	2452	C	C6-N1-C2	-5.62	118.05	120.30
25	RA	2665	A	C4-N9-C1'	5.62	136.42	126.30
25	YA	539	G	N3-C4-N9	5.62	129.37	126.00
25	YA	1666	G	C8-N9-C4	5.62	108.65	106.40
25	YA	2053	G	C4-C5-N7	5.62	113.05	110.80
1	XA	960	U	N3-C4-C5	-5.62	111.23	114.60
25	YA	776	G	N1-C6-O6	-5.62	116.53	119.90
25	YA	1788	C	C2-N1-C1'	-5.62	112.62	118.80
25	YA	1992	G	O4'-C1'-N9	-5.62	103.70	108.20
25	YA	2429	G	C6-C5-N7	-5.62	127.03	130.40
25	YA	2620	C	O5'-P-OP2	5.62	117.44	110.70
25	YA	2707	G	C6-C5-N7	5.62	133.77	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	179	G	N1-C6-O6	5.62	123.27	119.90
25	YA	193	U	N1-C2-N3	5.62	118.27	114.90
25	YA	1728	G	C5-C6-O6	-5.62	125.23	128.60
1	QA	483	C	C6-N1-C2	5.62	122.55	120.30
25	RA	85	G	O5'-P-OP2	-5.62	100.64	105.70
25	RA	2261	C	O5'-P-OP2	-5.62	100.64	105.70
1	XA	858	G	N7-C8-N9	5.62	115.91	113.10
25	YA	979	G	N9-C4-C5	5.62	107.65	105.40
25	YA	1193	G	N3-C4-C5	5.62	131.41	128.60
25	YA	1240	U	N3-C4-C5	-5.62	111.23	114.60
1	QA	1430	C	C6-N1-C2	-5.62	118.05	120.30
25	RA	1763	G	N3-C4-N9	-5.62	122.63	126.00
25	RA	1834	U	N1-C2-N3	5.62	118.27	114.90
1	XA	240	C	C5-C6-N1	-5.62	118.19	121.00
25	YA	1442	G	N3-C4-C5	-5.62	125.79	128.60
1	QA	372	C	N1-C2-N3	-5.61	115.27	119.20
1	QA	690	G	C6-C5-N7	-5.61	127.03	130.40
1	QA	1158	C	C2-N3-C4	5.61	122.71	119.90
25	RA	1327	C	C6-N1-C2	-5.61	118.06	120.30
25	RA	2009	G	O5'-P-OP1	5.61	117.44	110.70
1	XA	34	C	N3-C4-C5	5.61	124.14	121.90
25	YA	111	A	N1-C6-N6	-5.61	115.23	118.60
25	YA	1979	C	C5-C6-N1	5.61	123.81	121.00
25	YA	2523	G	C5-N7-C8	-5.61	101.49	104.30
25	RA	309	G	C6-C5-N7	-5.61	127.03	130.40
25	RA	2246	G	C5-C6-O6	-5.61	125.23	128.60
25	YA	2814	C	N1-C2-N3	5.61	123.13	119.20
1	QA	790	A	N7-C8-N9	5.61	116.61	113.80
25	RA	184	C	N3-C4-C5	5.61	124.14	121.90
25	RA	1505	C	C2-N1-C1'	5.61	124.97	118.80
25	RA	1814	G	C5-C6-N1	-5.61	108.69	111.50
25	RA	2552	U	C5-C6-N1	-5.61	119.89	122.70
25	RA	2702	U	C4-C5-C6	-5.61	116.33	119.70
1	XA	176	C	C6-N1-C2	-5.61	118.06	120.30
25	YA	980	A	N9-C4-C5	-5.61	103.56	105.80
25	YA	2548	G	C4-C5-C6	5.61	122.17	118.80
25	YA	2707	G	C4-N9-C1'	-5.61	119.21	126.50
26	YB	24	G	P-O3'-C3'	5.61	126.43	119.70
25	RA	1667	G	C4-C5-N7	5.61	113.04	110.80
25	RA	2088	G	C4-C5-C6	5.61	122.17	118.80
26	RB	115	G	N3-C2-N2	-5.61	115.97	119.90
1	XA	1517	G	N9-C4-C5	-5.61	103.16	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	690	G	N1-C6-O6	5.61	123.27	119.90
1	QA	930	C	C6-N1-C2	-5.61	118.06	120.30
25	RA	593	G	C5-C6-N1	-5.61	108.70	111.50
25	YA	592	G	C2-N3-C4	5.61	114.70	111.90
25	YA	2228	G	N3-C4-C5	-5.61	125.80	128.60
25	YA	2520	C	C2-N3-C4	-5.61	117.10	119.90
25	YA	2788	C	N3-C2-O2	-5.61	117.97	121.90
25	RA	116	C	N3-C4-C5	-5.61	119.66	121.90
25	RA	1238	G	N3-C4-N9	-5.61	122.64	126.00
25	RA	1325	G	O4'-C1'-N9	5.61	112.68	108.20
25	RA	1682	G	C5-C6-O6	-5.61	125.24	128.60
25	RA	2720	U	C6-N1-C2	-5.61	117.64	121.00
25	YA	533	G	C8-N9-C4	-5.61	104.16	106.40
25	YA	1621	U	N1-C2-O2	-5.61	118.88	122.80
25	YA	2569	G	N3-C4-N9	5.61	129.36	126.00
25	YA	2672	G	C5-C6-O6	-5.61	125.24	128.60
1	QA	1529	G	C4-N9-C1'	5.60	133.78	126.50
25	RA	537	C	C5-C6-N1	5.60	123.80	121.00
1	XA	896	C	C6-N1-C2	5.60	122.54	120.30
25	YA	415	A	N9-C4-C5	-5.60	103.56	105.80
25	YA	693	C	C2-N3-C4	-5.60	117.10	119.90
25	YA	1416	G	P-O3'-C3'	5.60	126.42	119.70
25	YA	2881	C	C6-N1-C2	-5.60	118.06	120.30
1	QA	1158	C	C6-N1-C2	-5.60	118.06	120.30
25	YA	74	A	O4'-C1'-N9	-5.60	103.72	108.20
25	YA	441	U	N3-C2-O2	5.60	126.12	122.20
25	RA	270(R)	G	N1-C6-O6	5.60	123.26	119.90
25	RA	1404	C	C6-N1-C2	-5.60	118.06	120.30
25	RA	1667	G	OP1-P-OP2	-5.60	111.20	119.60
25	RA	1809	A	C6-C5-N7	-5.60	128.38	132.30
25	RA	2367	G	C6-C5-N7	-5.60	127.04	130.40
25	YA	1268	A	O5'-P-OP2	-5.60	100.66	105.70
25	YA	1273	U	C5-C6-N1	-5.60	119.90	122.70
25	YA	1517	G	N3-C4-C5	-5.60	125.80	128.60
25	YA	2227	A	C5-C6-N6	5.60	128.18	123.70
25	RA	1781	C	C5-C6-N1	5.60	123.80	121.00
25	RA	1951	U	N3-C4-C5	-5.60	111.24	114.60
25	RA	2048	G	N1-C2-N3	5.60	127.26	123.90
1	XA	186(B)	C	C6-N1-C2	-5.60	118.06	120.30
25	YA	1447	G	C8-N9-C4	-5.60	104.16	106.40
25	YA	329	G	O5'-P-OP1	-5.60	100.66	105.70
25	YA	410	G	O5'-P-OP2	5.60	117.42	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2822	G	C5-C6-N1	-5.60	108.70	111.50
1	QA	232	G	C8-N9-C1'	-5.59	119.73	127.00
1	QA	717	C	C5-C6-N1	5.59	123.80	121.00
25	RA	1328	G	C4-N9-C1'	5.59	133.77	126.50
25	RA	1469	A	O5'-P-OP1	-5.59	100.67	105.70
12	XL	45	PRO	CA-N-CD	-5.59	103.67	111.50
25	YA	425	G	N1-C6-O6	5.59	123.26	119.90
25	YA	928	G	N1-C2-N2	5.59	121.23	116.20
25	YA	1421	G	C6-C5-N7	-5.59	127.04	130.40
1	QA	394	G	N9-C4-C5	5.59	107.64	105.40
25	RA	2318	G	N7-C8-N9	5.59	115.90	113.10
1	XA	108	G	C8-N9-C1'	-5.59	119.73	127.00
1	XA	1523	G	C5-C6-N1	-5.59	108.70	111.50
25	YA	1368	G	C6-C5-N7	-5.59	127.04	130.40
25	RA	329	G	OP1-P-OP2	5.59	127.99	119.60
25	RA	745	G	C6-C5-N7	-5.59	127.05	130.40
25	RA	746	A	OP2-P-O3'	5.59	117.50	105.20
25	RA	1665	A	N3-C4-N9	5.59	131.87	127.40
25	RA	2398	U	C5-C6-N1	5.59	125.50	122.70
1	XA	903	G	C2-N3-C4	-5.59	109.11	111.90
1	XA	1108	G	C4-C5-N7	-5.59	108.56	110.80
25	YA	1182	A	C6-C5-N7	-5.59	128.39	132.30
1	QA	182	U	C5-C6-N1	5.59	125.50	122.70
1	QA	1205	U	C5-C6-N1	5.59	125.49	122.70
25	RA	932	G	C4-N9-C1'	-5.59	119.23	126.50
25	RA	2339	G	N3-C4-N9	5.59	129.35	126.00
25	RA	2820	A	C2-N3-C4	-5.59	107.81	110.60
1	XA	966	G	C8-N9-C4	5.59	108.64	106.40
1	XA	1480	G	C2-N3-C4	-5.59	109.11	111.90
25	YA	270(Y)	G	C4-C5-N7	-5.59	108.56	110.80
25	YA	995	C	C6-N1-C1'	-5.59	114.09	120.80
25	YA	1132	A	N1-C2-N3	-5.59	126.51	129.30
25	YA	2255	G	O5'-P-OP1	5.59	117.41	110.70
1	QA	243	A	C6-C5-N7	-5.59	128.39	132.30
25	RA	2000	G	O4'-C1'-N9	5.59	112.67	108.20
1	XA	659	U	C5-C6-N1	-5.59	119.91	122.70
1	XA	1187	G	N3-C4-N9	5.59	129.35	126.00
1	XA	1206	G	C6-C5-N7	-5.59	127.05	130.40
25	YA	71	A	C5-C6-N1	-5.59	114.91	117.70
25	YA	1559	G	O4'-C1'-N9	5.59	112.67	108.20
1	QA	396	G	N3-C4-C5	5.59	131.39	128.60
1	QA	1525	G	N7-C8-N9	-5.59	110.31	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1857	G	C8-N9-C1'	-5.59	119.74	127.00
1	XA	1259	C	C5-C6-N1	5.59	123.79	121.00
25	YA	667	U	N3-C4-O4	5.59	123.31	119.40
25	YA	680	G	C6-C5-N7	-5.59	127.05	130.40
25	YA	792	G	N3-C2-N2	5.59	123.81	119.90
25	YA	2269	A	C2-N3-C4	-5.59	107.81	110.60
1	QA	300	A	C8-N9-C4	-5.58	103.57	105.80
25	RA	225	A	N1-C6-N6	-5.58	115.25	118.60
25	YA	1768	U	C6-N1-C1'	5.58	129.02	121.20
25	YA	2690	C	N3-C4-C5	-5.58	119.67	121.90
25	RA	508	G	O4'-C1'-N9	5.58	112.67	108.20
25	RA	1666	G	N3-C4-C5	-5.58	125.81	128.60
1	XA	140	A	C8-N9-C4	-5.58	103.57	105.80
1	XA	529	G	C5-N7-C8	-5.58	101.51	104.30
1	XA	792	A	C5-N7-C8	-5.58	101.11	103.90
25	YA	593	G	C5-C6-N1	-5.58	108.71	111.50
25	YA	1252	G	N3-C4-N9	5.58	129.35	126.00
1	QA	200	G	N3-C4-C5	-5.58	125.81	128.60
1	QA	587	G	N3-C4-N9	5.58	129.35	126.00
25	RA	1269	A	C5-C6-N1	-5.58	114.91	117.70
25	RA	2496	C	N3-C4-C5	5.58	124.13	121.90
25	YA	841	A	N3-C4-C5	5.58	130.71	126.80
25	YA	1900	A	C6-N1-C2	-5.58	115.25	118.60
25	YA	2518	A	C5-C6-N6	-5.58	119.23	123.70
25	YA	2731	G	C4-C5-N7	5.58	113.03	110.80
25	YA	2869	G	C4-N9-C1'	5.58	133.76	126.50
26	YB	98	G	N7-C8-N9	-5.58	110.31	113.10
25	RA	530	G	O4'-C1'-N9	5.58	112.66	108.20
25	RA	783	A	N9-C1'-C2'	-5.58	105.86	112.00
25	RA	1370	C	C6-N1-C2	5.58	122.53	120.30
25	YA	2454	G	OP1-P-O3'	-5.58	92.92	105.20
1	QA	1200	C	N1-C2-O2	5.58	122.25	118.90
25	RA	1703	G	N9-C4-C5	-5.58	103.17	105.40
25	RA	2455	G	N9-C4-C5	-5.58	103.17	105.40
25	RA	2548	G	C5-C6-O6	-5.58	125.25	128.60
25	YA	945	A	C4-C5-C6	5.58	119.79	117.00
25	YA	2634	G	C5-C6-O6	-5.58	125.25	128.60
25	RA	774	A	N1-C6-N6	5.58	121.95	118.60
33	RN	114	ARG	N-CA-C	-5.58	95.94	111.00
25	YA	192	C	N1-C2-O2	5.58	122.25	118.90
25	YA	452	G	N3-C4-N9	5.58	129.35	126.00
25	YA	1528	A	C5-N7-C8	-5.58	101.11	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1542	G	N3-C4-N9	5.58	129.35	126.00
25	YA	2702	U	N3-C2-O2	-5.58	118.30	122.20
1	QA	115	G	C8-N9-C4	5.58	108.63	106.40
25	RA	922	U	O5'-P-OP1	-5.58	100.68	105.70
25	RA	1236	G	C5-N7-C8	-5.58	101.51	104.30
25	RA	1253	A	C5-N7-C8	-5.58	101.11	103.90
25	RA	1634	A	C6-N1-C2	-5.58	115.25	118.60
25	RA	2482	G	O5'-P-OP1	-5.58	100.68	105.70
1	XA	568	G	N3-C4-C5	-5.58	125.81	128.60
1	XA	1204	A	C5-C6-N6	-5.58	119.24	123.70
25	YA	1602	U	C5-C6-N1	5.58	125.49	122.70
25	YA	2108	C	C6-N1-C2	-5.58	118.07	120.30
1	QA	422	C	C6-N1-C2	-5.57	118.07	120.30
25	RA	450	G	N7-C8-N9	5.57	115.89	113.10
25	YA	2432	A	C4-C5-C6	5.57	119.79	117.00
25	YA	2439	A	P-O3'-C3'	5.57	126.39	119.70
25	RA	501	A	C5-C6-N6	5.57	128.16	123.70
25	RA	618	G	C4-N9-C1'	5.57	133.74	126.50
25	RA	2499	C	N3-C4-C5	-5.57	119.67	121.90
25	YA	813	U	C5-C6-N1	-5.57	119.91	122.70
25	YA	1142(A)	A	C6-C5-N7	-5.57	128.40	132.30
25	YA	2247	A	C6-C5-N7	-5.57	128.40	132.30
25	RA	404	C	OP1-P-OP2	-5.57	111.25	119.60
25	RA	2074	U	C6-N1-C2	-5.57	117.66	121.00
25	YA	1560	G	N9-C4-C5	-5.57	103.17	105.40
25	YA	1695	G	C8-N9-C4	-5.57	104.17	106.40
25	YA	1825	A	N1-C6-N6	-5.57	115.26	118.60
25	YA	1968	G	C8-N9-C4	-5.57	104.17	106.40
25	YA	2111	C	C6-N1-C2	-5.57	118.07	120.30
25	YA	2364	C	C2-N1-C1'	-5.57	112.67	118.80
25	YA	2830	G	N3-C4-N9	5.57	129.34	126.00
1	QA	232	G	C4-C5-C6	5.57	122.14	118.80
1	QA	558	G	C5-C6-N1	-5.57	108.72	111.50
1	QA	1432	G	N1-C6-O6	5.57	123.24	119.90
25	RA	420	C	C6-N1-C2	-5.57	118.07	120.30
25	RA	779	U	C5-C4-O4	-5.57	122.56	125.90
25	RA	2570	G	N9-C4-C5	-5.57	103.17	105.40
1	QA	800	G	N9-C4-C5	5.57	107.63	105.40
25	RA	981	A	C8-N9-C4	-5.57	103.57	105.80
25	RA	2287	A	C5-C6-N1	-5.57	114.92	117.70
25	RA	2500	U	N3-C4-C5	5.57	117.94	114.60
25	YA	1695	G	N7-C8-N9	5.57	115.88	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1849	G	C8-N9-C4	-5.57	104.17	106.40
25	RA	702	G	N3-C4-C5	-5.57	125.82	128.60
25	RA	1661	G	N7-C8-N9	-5.57	110.32	113.10
25	RA	1858	G	P-O3'-C3'	5.57	126.38	119.70
25	RA	2457	U	N3-C2-O2	-5.57	118.30	122.20
25	RA	2633	G	N3-C4-N9	5.57	129.34	126.00
25	RA	2837	G	C5-N7-C8	-5.57	101.52	104.30
26	RB	53	A	N3-C4-C5	-5.57	122.90	126.80
1	XA	1199	U	C5-C4-O4	5.57	129.24	125.90
25	YA	271(C)	U	N1-C2-O2	5.57	126.70	122.80
25	YA	625	G	N3-C4-C5	5.57	131.38	128.60
25	YA	928	G	C4-C5-N7	5.57	113.03	110.80
25	YA	2874	C	O5'-P-OP2	-5.57	100.69	105.70
25	RA	621	A	C5-N7-C8	-5.56	101.12	103.90
25	RA	2580	U	C5-C6-N1	5.56	125.48	122.70
25	RA	2706	G	C4-C5-N7	5.56	113.03	110.80
1	XA	1196	U	C4-C5-C6	5.56	123.04	119.70
1	XA	1519	A	C8-N9-C4	-5.56	103.57	105.80
25	YA	1385	G	C8-N9-C1'	5.56	134.23	127.00
25	YA	2557	G	C8-N9-C1'	-5.56	119.77	127.00
1	QA	1301	U	C6-N1-C1'	-5.56	113.41	121.20
25	RA	983	A	C4-C5-C6	5.56	119.78	117.00
25	RA	1264	G	C5-C6-O6	5.56	131.94	128.60
25	RA	1894	C	C5-C6-N1	-5.56	118.22	121.00
25	YA	1353	A	N3-C4-C5	-5.56	122.91	126.80
25	YA	1499	C	C2-N1-C1'	-5.56	112.68	118.80
1	QA	1506	U	N3-C4-O4	5.56	123.29	119.40
25	RA	2719	G	OP2-P-O3'	5.56	117.44	105.20
1	XA	555	C	C6-N1-C2	-5.56	118.08	120.30
25	YA	784	A	C5-C6-N1	5.56	120.48	117.70
1	QA	337	C	C5-C6-N1	5.56	123.78	121.00
25	RA	586	A	N9-C4-C5	5.56	108.02	105.80
1	XA	317	G	C4-N9-C1'	5.56	133.73	126.50
25	YA	333	G	C6-C5-N7	-5.56	127.06	130.40
25	YA	2463	C	C4-C5-C6	5.56	120.18	117.40
1	QA	425	G	N1-C6-O6	5.56	123.23	119.90
1	QA	1119	C	C6-N1-C2	-5.56	118.08	120.30
25	RA	602	G	N1-C6-O6	5.56	123.23	119.90
25	RA	1332	G	C4-N9-C1'	5.56	133.73	126.50
25	RA	1811	G	C6-C5-N7	-5.56	127.06	130.40
25	RA	2048	G	N3-C4-C5	-5.56	125.82	128.60
1	XA	280	C	C5-C6-N1	-5.56	118.22	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2584	U	N3-C2-O2	-5.56	118.31	122.20
25	RA	2238	G	N9-C4-C5	5.56	107.62	105.40
1	XA	886	G	C2-N3-C4	-5.56	109.12	111.90
25	YA	779	U	C5-C4-O4	-5.56	122.57	125.90
25	YA	2751	G	C6-C5-N7	-5.56	127.07	130.40
1	QA	728	A	C8-N9-C4	-5.55	103.58	105.80
25	RA	407	G	C4-N9-C1'	5.55	133.72	126.50
25	RA	1764	G	N9-C4-C5	5.55	107.62	105.40
25	RA	1939	U	C6-N1-C2	-5.55	117.67	121.00
1	XA	906	G	C6-C5-N7	-5.55	127.07	130.40
25	YA	948	G	C5-C6-N1	-5.55	108.72	111.50
25	YA	1122	G	N7-C8-N9	5.55	115.88	113.10
25	YA	1455	G	C5-C6-N1	5.55	114.28	111.50
25	YA	1595	G	C5-N7-C8	-5.55	101.52	104.30
25	YA	2224	G	C5-C6-N1	-5.55	108.72	111.50
25	YA	2278	A	C5-C6-N1	5.55	120.48	117.70
50	Y4	39	CYS	N-CA-C	-5.55	96.00	111.00
25	RA	212	G	N3-C4-C5	-5.55	125.82	128.60
25	RA	680	G	C4-N9-C1'	5.55	133.72	126.50
25	RA	2206	C	N1-C2-N3	5.55	123.09	119.20
25	RA	2437	U	C6-N1-C1'	5.55	128.97	121.20
25	YA	1160	G	N1-C6-O6	5.55	123.23	119.90
25	YA	1756	G	C4-C5-C6	5.55	122.13	118.80
25	YA	1826	G	C6-C5-N7	-5.55	127.07	130.40
25	YA	2820	A	C5-C6-N1	-5.55	114.92	117.70
1	QA	721	G	N1-C6-O6	5.55	123.23	119.90
25	RA	1185	C	C5-C6-N1	5.55	123.78	121.00
25	RA	1276	A	C4-C5-N7	5.55	113.48	110.70
25	RA	1613	G	OP1-P-O3'	5.55	117.41	105.20
25	RA	2270	G	N7-C8-N9	5.55	115.88	113.10
1	XA	130	A	N1-C2-N3	-5.55	126.52	129.30
25	YA	677	A	C5-C6-N1	5.55	120.48	117.70
25	YA	2035	G	N3-C4-N9	-5.55	122.67	126.00
25	YA	2463	C	C2-N1-C1'	-5.55	112.69	118.80
25	RA	520	G	C5-C6-O6	-5.55	125.27	128.60
25	RA	1610	A	N1-C6-N6	-5.55	115.27	118.60
25	YA	429	A	C4-C5-C6	5.55	119.78	117.00
25	YA	457	A	C4-C5-C6	5.55	119.78	117.00
25	YA	1358	G	N3-C4-N9	5.55	129.33	126.00
25	YA	1446	C	C5-C6-N1	5.55	123.77	121.00
25	YA	1805	U	N1-C2-O2	-5.55	118.92	122.80
25	YA	2346	A	C8-N9-C4	-5.55	103.58	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	103	A	C4-C5-C6	5.55	119.77	117.00
25	YA	1285	G	C5-C6-N1	-5.55	108.73	111.50
25	RA	81	G	C6-C5-N7	-5.55	127.07	130.40
25	RA	1294	U	N3-C2-O2	5.55	126.08	122.20
25	RA	1312	U	P-O3'-C3'	5.55	126.36	119.70
4	XD	14	ARG	C-N-CA	-5.55	107.83	121.70
25	YA	71	A	C2-N3-C4	-5.55	107.83	110.60
25	YA	494	G	C5-C6-O6	-5.55	125.27	128.60
25	YA	1614	A	O5'-P-OP2	-5.55	100.71	105.70
25	YA	2493	U	O5'-P-OP1	-5.55	100.71	105.70
25	RA	1187	G	C4-C5-C6	5.54	122.13	118.80
25	RA	1485	G	C6-C5-N7	-5.54	127.07	130.40
26	RB	80	U	N3-C2-O2	-5.54	118.32	122.20
1	XA	674	G	C8-N9-C1'	-5.54	119.79	127.00
25	YA	110	G	C5-C6-N1	5.54	114.27	111.50
25	RA	760	G	N3-C4-N9	5.54	129.33	126.00
1	XA	893	C	N3-C2-O2	-5.54	118.02	121.90
25	YA	1022	G	C4-N9-C1'	5.54	133.71	126.50
25	YA	1840	G	N1-C2-N3	5.54	127.23	123.90
25	YA	1896	G	N3-C4-C5	-5.54	125.83	128.60
25	YA	2037	G	N3-C4-N9	5.54	129.33	126.00
25	RA	1565	C	C2-N3-C4	-5.54	117.13	119.90
25	RA	1807	G	C6-C5-N7	-5.54	127.08	130.40
25	RA	2591	C	N3-C4-N4	5.54	121.88	118.00
26	RB	30	C	N3-C4-C5	-5.54	119.68	121.90
50	R4	39	CYS	N-CA-C	-5.54	96.04	111.00
1	XA	126	G	N3-C4-N9	5.54	129.32	126.00
1	XA	777	A	C8-N9-C4	5.54	108.02	105.80
1	XA	791	G	N1-C2-N3	5.54	127.22	123.90
1	XA	1420	C	C6-N1-C2	5.54	122.52	120.30
25	YA	1786	A	N1-C2-N3	5.54	132.07	129.30
25	RA	194	G	N1-C6-O6	5.54	123.22	119.90
25	RA	527	C	C2-N1-C1'	5.54	124.89	118.80
25	YA	739	G	O5'-P-OP2	-5.54	100.71	105.70
25	RA	1690	A	O5'-P-OP2	5.54	117.35	110.70
25	YA	1786	A	N1-C6-N6	5.54	121.92	118.60
25	YA	288	C	N3-C4-C5	5.54	124.11	121.90
25	YA	846	C	P-O3'-C3'	5.54	126.34	119.70
25	RA	216	A	C5-C6-N6	-5.54	119.27	123.70
25	RA	1833	U	N1-C2-N3	5.54	118.22	114.90
25	YA	945	A	C5-C6-N6	-5.54	119.27	123.70
1	QA	1481	U	C6-N1-C2	-5.53	117.68	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	379	G	C4-C5-N7	5.53	113.01	110.80
25	RA	827	U	O5'-P-OP2	-5.53	100.72	105.70
25	RA	2065	C	C2-N1-C1'	5.53	124.89	118.80
1	XA	108	G	C4-N9-C1'	5.53	133.69	126.50
25	YA	446	G	N1-C6-O6	5.53	123.22	119.90
25	YA	827	U	O5'-P-OP1	5.53	117.34	110.70
25	YA	916	G	C6-C5-N7	-5.53	127.08	130.40
25	YA	2048	G	C8-N9-C4	-5.53	104.19	106.40
25	RA	1123	C	C2-N1-C1'	-5.53	112.71	118.80
1	XA	686	U	N3-C4-O4	-5.53	115.53	119.40
25	RA	1496	A	N1-C6-N6	5.53	121.92	118.60
25	RA	2869	G	N1-C6-O6	5.53	123.22	119.90
25	YA	866	A	C5-C6-N1	-5.53	114.93	117.70
25	YA	1342	A	N9-C4-C5	5.53	108.01	105.80
25	YA	1925	C	C6-N1-C1'	5.53	127.44	120.80
25	YA	1962	C	C6-N1-C1'	-5.53	114.16	120.80
33	YN	114	ARG	N-CA-C	-5.53	96.07	111.00
25	RA	298	G	N7-C8-N9	5.53	115.86	113.10
25	RA	588	U	N3-C4-O4	5.53	123.27	119.40
25	RA	1733	G	C4-N9-C1'	5.53	133.69	126.50
26	RB	71	C	C5-C6-N1	5.53	123.77	121.00
25	YA	2847	U	C5-C6-N1	5.53	125.47	122.70
1	QA	318	G	N3-C4-C5	-5.53	125.84	128.60
1	QA	525	C	C2-N3-C4	5.53	122.66	119.90
1	QA	689	C	C5-C6-N1	5.53	123.76	121.00
25	RA	139	G	C5-C6-O6	5.53	131.92	128.60
25	RA	1981	A	C5-N7-C8	-5.53	101.14	103.90
25	RA	2421	G	N9-C4-C5	-5.53	103.19	105.40
26	RB	24	G	P-O3'-C3'	5.53	126.33	119.70
1	XA	759	A	C5-C6-N6	-5.53	119.28	123.70
25	YA	58	G	C8-N9-C1'	-5.53	119.81	127.00
25	YA	828	U	N3-C2-O2	-5.53	118.33	122.20
25	YA	1216	G	C4-C5-N7	5.53	113.01	110.80
25	YA	1620	G	N1-C6-O6	5.53	123.22	119.90
25	YA	2299	G	C5-N7-C8	-5.53	101.54	104.30
25	YA	2572	A	OP1-P-O3'	5.53	117.36	105.20
26	YB	95	U	C5-C6-N1	-5.53	119.94	122.70
1	QA	1417	G	C4-N9-C1'	5.53	133.68	126.50
25	RA	1455	G	N1-C6-O6	-5.53	116.58	119.90
25	RA	2720	U	OP1-P-O3'	5.53	117.36	105.20
1	XA	226	G	N3-C2-N2	5.53	123.77	119.90
25	YA	74	A	C2-N3-C4	-5.53	107.84	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	687	C	N3-C4-C5	-5.53	119.69	121.90
25	YA	836	G	C5-C6-N1	5.53	114.26	111.50
25	YA	1306	C	C4-C5-C6	-5.53	114.64	117.40
25	YA	2294	C	N1-C2-O2	5.53	122.22	118.90
25	YA	2532	G	N7-C8-N9	5.53	115.86	113.10
25	RA	829	A	N1-C6-N6	5.52	121.91	118.60
25	RA	2205	C	O5'-P-OP2	-5.52	100.73	105.70
25	YA	1563	G	C4-C5-N7	5.52	113.01	110.80
1	QA	356	A	C2-N3-C4	5.52	113.36	110.60
1	QA	1223	C	C2-N1-C1'	5.52	124.87	118.80
25	RA	1602	U	C4-C5-C6	5.52	123.01	119.70
25	RA	2197	U	C6-N1-C2	5.52	124.31	121.00
25	RA	2734	A	C8-N9-C4	-5.52	103.59	105.80
25	YA	88	G	C4-C5-C6	5.52	122.11	118.80
25	YA	686	G	C5-C6-N1	-5.52	108.74	111.50
25	YA	792	G	N1-C6-O6	-5.52	116.59	119.90
25	RA	471	A	C5-N7-C8	-5.52	101.14	103.90
1	XA	273	A	C4-C5-C6	5.52	119.76	117.00
1	XA	542	G	N3-C4-C5	-5.52	125.84	128.60
1	XA	1027	C	OP1-P-O3'	5.52	117.35	105.20
1	QA	108	G	N7-C8-N9	5.52	115.86	113.10
25	RA	1728	G	N3-C4-C5	-5.52	125.84	128.60
25	RA	2069	G	O5'-P-OP2	5.52	117.32	110.70
25	RA	2126	A	P-O3'-C3'	5.52	126.32	119.70
25	RA	2433	A	C6-C5-N7	-5.52	128.44	132.30
25	YA	2032	G	C8-N9-C1'	5.52	134.18	127.00
1	QA	685	G	N3-C2-N2	-5.52	116.04	119.90
1	QA	890	G	N1-C6-O6	-5.52	116.59	119.90
25	RA	798	G	N3-C2-N2	-5.52	116.04	119.90
25	RA	977	G	N3-C4-N9	5.52	129.31	126.00
25	RA	1909	C	N1-C2-O2	5.52	122.21	118.90
25	RA	2000	G	O5'-P-OP2	-5.52	100.73	105.70
1	XA	484	G	C8-N9-C4	-5.52	104.19	106.40
1	XA	719	C	O5'-P-OP2	-5.52	100.73	105.70
25	YA	1377	G	C4-N9-C1'	5.52	133.67	126.50
25	YA	1983	C	N1-C2-O2	-5.52	115.59	118.90
25	YA	2020	A	C4-C5-N7	-5.52	107.94	110.70
25	YA	2073	C	C6-N1-C1'	5.52	127.42	120.80
25	YA	2256	G	C5-C6-N1	5.52	114.26	111.50
1	QA	932	C	C2-N1-C1'	5.52	124.87	118.80
25	RA	187	G	C6-C5-N7	-5.52	127.09	130.40
1	XA	924	C	C5-C6-N1	5.52	123.76	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1409	C	C5-C6-N1	-5.52	118.24	121.00
25	YA	2358	G	N3-C4-N9	-5.52	122.69	126.00
1	QA	687	A	P-O3'-C3'	5.51	126.32	119.70
25	RA	997	G	O5'-P-OP1	-5.51	100.74	105.70
25	RA	2624	G	N9-C4-C5	-5.51	103.19	105.40
25	YA	1264	G	N3-C4-C5	-5.51	125.84	128.60
25	YA	1336	A	O5'-P-OP2	-5.51	100.74	105.70
1	QA	774	G	C5-C6-O6	-5.51	125.29	128.60
25	RA	1338	G	C4-C5-N7	5.51	113.00	110.80
25	RA	2283	C	N3-C4-C5	-5.51	119.69	121.90
25	YA	78	A	N1-C6-N6	5.51	121.91	118.60
1	QA	1114	C	C5-C6-N1	5.51	123.76	121.00
25	RA	1192	G	C8-N9-C4	5.51	108.60	106.40
25	RA	1653	G	C4-N9-C1'	5.51	133.66	126.50
25	RA	1819	A	N1-C2-N3	5.51	132.06	129.30
25	RA	2591	C	N1-C2-O2	-5.51	115.59	118.90
25	YA	599	G	N1-C6-O6	5.51	123.21	119.90
25	YA	828	U	C5-C4-O4	5.51	129.21	125.90
25	YA	1433	U	C5-C4-O4	-5.51	122.59	125.90
1	QA	299	G	N9-C4-C5	5.51	107.60	105.40
25	RA	783	A	N1-C2-N3	5.51	132.05	129.30
25	RA	2729	G	C2-N3-C4	5.51	114.66	111.90
25	RA	2772	C	N3-C2-O2	5.51	125.76	121.90
25	RA	2857	G	N1-C6-O6	5.51	123.21	119.90
26	RB	18	G	C4-N9-C1'	-5.51	119.34	126.50
1	XA	720	C	N3-C2-O2	-5.51	118.04	121.90
1	XA	777	A	N1-C2-N3	-5.51	126.55	129.30
25	YA	222	A	N3-C4-C5	-5.51	122.94	126.80
25	YA	531	C	O5'-P-OP1	-5.51	100.74	105.70
25	YA	1750	G	N3-C4-C5	-5.51	125.84	128.60
25	YA	1820	U	N1-C2-N3	5.51	118.21	114.90
25	RA	747	U	N3-C2-O2	5.51	126.06	122.20
25	RA	837	C	C6-N1-C2	-5.51	118.10	120.30
25	RA	2549	G	N1-C6-O6	5.51	123.20	119.90
25	YA	1390	U	C5-C4-O4	-5.51	122.60	125.90
25	YA	2061	G	OP2-P-O3'	5.51	117.31	105.20
25	RA	303	U	C2-N1-C1'	5.50	124.31	117.70
25	YA	621	A	N7-C8-N9	5.50	116.55	113.80
25	YA	914	C	N3-C4-C5	-5.50	119.70	121.90
25	YA	983	A	C4-C5-C6	5.50	119.75	117.00
25	YA	1933	G	C6-C5-N7	-5.50	127.10	130.40
1	QA	260	G	C4-C5-N7	-5.50	108.60	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	765	G	N7-C8-N9	5.50	115.85	113.10
25	RA	990	A	C5-C6-N1	-5.50	114.95	117.70
25	RA	1008	C	C6-N1-C1'	-5.50	114.20	120.80
25	RA	1329	U	N1-C2-O2	-5.50	118.95	122.80
25	RA	1931	U	O5'-P-OP2	5.50	117.30	110.70
1	XA	812	C	N1-C2-N3	-5.50	115.35	119.20
25	YA	862	G	C5-C6-O6	5.50	131.90	128.60
25	YA	1022	G	N1-C2-N3	5.50	127.20	123.90
25	YA	2088	G	N1-C6-O6	5.50	123.20	119.90
1	QA	545	C	C6-N1-C2	-5.50	118.10	120.30
25	RA	1634	A	N3-C4-C5	-5.50	122.95	126.80
25	RA	2434	A	C8-N9-C4	5.50	108.00	105.80
25	YA	187	G	N3-C4-N9	5.50	129.30	126.00
25	YA	1243	G	C5-C6-N1	-5.50	108.75	111.50
25	YA	1558	A	C2-N3-C4	-5.50	107.85	110.60
25	RA	443	A	C5-C6-N1	-5.50	114.95	117.70
25	YA	2218	G	N1-C6-O6	5.50	123.20	119.90
25	YA	2250	G	N9-C4-C5	5.50	107.60	105.40
25	YA	2393	A	N9-C4-C5	5.50	108.00	105.80
25	YA	2436	G	N1-C6-O6	-5.50	116.60	119.90
25	RA	793	A	N1-C6-N6	5.50	121.90	118.60
25	RA	802	A	N1-C2-N3	5.50	132.05	129.30
25	RA	804	A	C4-C5-C6	-5.50	114.25	117.00
25	RA	1688	U	N3-C4-C5	-5.50	111.30	114.60
25	RA	1769	G	C4-N9-C1'	5.50	133.65	126.50
25	RA	2077	A	C6-N1-C2	5.50	121.90	118.60
25	YA	464	U	N1-C2-N3	5.50	118.20	114.90
25	YA	529	A	N1-C6-N6	5.50	121.90	118.60
25	YA	636	G	C6-C5-N7	-5.50	127.10	130.40
25	YA	715	G	N3-C4-N9	5.50	129.30	126.00
25	YA	960	A	C8-N9-C4	5.50	108.00	105.80
25	YA	1329	U	N3-C4-C5	-5.50	111.30	114.60
25	YA	2503	A	C8-N9-C4	-5.50	103.60	105.80
1	QA	667	G	N1-C6-O6	5.50	123.20	119.90
1	QA	727	G	C5-C6-O6	5.50	131.90	128.60
25	RA	588	U	N3-C4-C5	-5.50	111.30	114.60
25	RA	662	G	C6-C5-N7	-5.50	127.10	130.40
25	RA	1299	G	C4-N9-C1'	-5.50	119.36	126.50
25	RA	1626	G	C6-C5-N7	-5.50	127.10	130.40
25	RA	2019	A	N9-C4-C5	-5.50	103.60	105.80
1	XA	312	C	C6-N1-C2	-5.50	118.10	120.30
1	XA	1413	A	C4-C5-C6	-5.50	114.25	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	97	C	N1-C2-O2	5.50	122.20	118.90
25	YA	1325	G	O4'-C1'-N9	5.50	112.60	108.20
25	YA	1816	G	N3-C4-C5	5.50	131.35	128.60
25	YA	2527	C	C6-N1-C2	-5.50	118.10	120.30
25	RA	1162	G	N3-C4-N9	5.50	129.30	126.00
25	RA	1935	G	C6-C5-N7	-5.50	127.10	130.40
1	XA	1113	C	N1-C2-O2	5.50	122.20	118.90
25	YA	527	C	C6-N1-C1'	-5.50	114.21	120.80
25	RA	476	G	C5-C6-N1	-5.49	108.75	111.50
25	RA	1561	G	C4-C5-C6	-5.49	115.50	118.80
25	RA	1628	G	C4-N9-C1'	5.49	133.64	126.50
25	RA	2315	G	C4-C5-N7	5.49	113.00	110.80
1	XA	1225	A	C8-N9-C4	5.49	108.00	105.80
25	YA	570	G	C8-N9-C4	-5.49	104.20	106.40
25	YA	1016	G	C8-N9-C4	-5.49	104.20	106.40
25	YA	1383	C	C5-C4-N4	-5.49	116.36	120.20
25	YA	1938	A	N3-C4-C5	5.49	130.65	126.80
25	YA	2036	C	O5'-P-OP2	-5.49	100.76	105.70
25	RA	1785	A	OP1-P-OP2	5.49	127.84	119.60
1	XA	35	G	C4-C5-N7	-5.49	108.60	110.80
25	YA	1024	G	OP1-P-OP2	5.49	127.84	119.60
25	YA	1409	C	C2-N1-C1'	-5.49	112.76	118.80
25	YA	1938	A	C2-N3-C4	-5.49	107.85	110.60
1	QA	671	G	N3-C4-N9	-5.49	122.71	126.00
25	YA	191	A	C6-N1-C2	-5.49	115.31	118.60
25	YA	1897	G	N1-C6-O6	5.49	123.19	119.90
25	YA	2349	G	C8-N9-C4	-5.49	104.20	106.40
1	QA	1241	G	C8-N9-C4	5.49	108.60	106.40
25	RA	944	G	C4-C5-C6	5.49	122.09	118.80
25	RA	2452	C	C6-N1-C1'	-5.49	114.21	120.80
1	XA	583	A	C2-N3-C4	-5.49	107.86	110.60
1	XA	615	C	N3-C2-O2	-5.49	118.06	121.90
22	XV	17	C	C5-C6-N1	5.49	123.74	121.00
25	YA	88	G	N1-C6-O6	5.49	123.19	119.90
25	YA	760	G	N1-C6-O6	5.49	123.19	119.90
25	YA	1206	G	C4-C5-C6	5.49	122.09	118.80
25	YA	1477	A	N7-C8-N9	5.49	116.54	113.80
25	YA	2014	A	C6-N1-C2	-5.49	115.31	118.60
25	RA	128	C	C6-N1-C2	5.49	122.50	120.30
25	RA	2252	G	N3-C4-C5	5.49	131.34	128.60
25	RA	765	G	C4-C5-N7	5.49	113.00	110.80
26	RB	59	A	N1-C2-N3	-5.49	126.56	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1495	U	C6-N1-C2	-5.49	117.71	121.00
25	RA	342	G	N1-C6-O6	5.48	123.19	119.90
25	RA	762	U	C6-N1-C2	5.48	124.29	121.00
1	QA	539	A	O5'-P-OP2	-5.48	100.77	105.70
25	RA	1581	G	N3-C4-N9	5.48	129.29	126.00
25	RA	1800	C	O5'-P-OP2	5.48	117.28	110.70
25	RA	2822	G	C4-C5-N7	5.48	112.99	110.80
1	XA	31	G	N9-C4-C5	-5.48	103.21	105.40
1	XA	791	G	C8-N9-C1'	-5.48	119.87	127.00
25	YA	837	C	C6-N1-C2	-5.48	118.11	120.30
25	YA	1328	G	C2-N3-C4	5.48	114.64	111.90
25	YA	1484	G	N1-C6-O6	5.48	123.19	119.90
25	YA	2832	U	P-O3'-C3'	5.48	126.28	119.70
25	RA	200	U	N1-C2-O2	-5.48	118.96	122.80
25	RA	639	U	N3-C4-O4	-5.48	115.56	119.40
25	RA	920	G	C8-N9-C4	-5.48	104.21	106.40
1	XA	392	G	C8-N9-C4	5.48	108.59	106.40
1	XA	1297	C	P-O3'-C3'	5.48	126.28	119.70
25	YA	71	A	N3-C4-C5	5.48	130.64	126.80
25	YA	506	G	C5-C6-N1	5.48	114.24	111.50
25	YA	1681	G	C5-C6-N1	-5.48	108.76	111.50
1	QA	812	C	C2-N1-C1'	5.48	124.83	118.80
25	RA	2065	C	C6-N1-C2	-5.48	118.11	120.30
1	XA	529	G	C6-C5-N7	-5.48	127.11	130.40
25	YA	388	G	C5-C6-N1	-5.48	108.76	111.50
1	QA	646	U	N1-C2-N3	5.48	118.19	114.90
25	RA	370	G	N1-C2-N2	-5.48	111.27	116.20
25	RA	1374	G	C4-C5-N7	5.48	112.99	110.80
25	RA	1612	C	C6-N1-C2	5.48	122.49	120.30
25	RA	2031	A	C8-N9-C4	-5.48	103.61	105.80
25	RA	2453	A	N1-C6-N6	-5.48	115.31	118.60
25	YA	242	G	O4'-C1'-N9	-5.48	103.82	108.20
25	YA	431	U	N1-C2-O2	-5.48	118.97	122.80
25	YA	2256	G	N1-C6-O6	-5.48	116.61	119.90
1	QA	1518	A	C2-N3-C4	-5.47	107.86	110.60
25	RA	2061	G	OP1-P-O3'	5.47	117.24	105.20
25	RA	2508	G	N9-C4-C5	-5.47	103.21	105.40
1	XA	670	G	N1-C6-O6	-5.47	116.61	119.90
1	XA	1108	G	C2-N3-C4	-5.47	109.16	111.90
1	XA	1408	A	N1-C6-N6	5.47	121.88	118.60
25	YA	841	A	C5-C6-N1	-5.47	114.96	117.70
25	YA	1226	G	C4-C5-C6	5.47	122.08	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2099	U	C6-N1-C2	-5.47	117.72	121.00
25	YA	2396	G	C2-N3-C4	-5.47	109.16	111.90
25	YA	2453	A	C4-C5-C6	-5.47	114.26	117.00
26	YB	98	G	N3-C4-C5	5.47	131.34	128.60
25	RA	999	U	OP1-P-O3'	5.47	117.24	105.20
1	XA	19	C	N3-C4-C5	5.47	124.09	121.90
25	YA	474	G	C6-C5-N7	-5.47	127.12	130.40
25	YA	1947	C	N3-C2-O2	-5.47	118.07	121.90
25	YA	2829	C	N3-C4-C5	5.47	124.09	121.90
1	QA	715	A	C2-N3-C4	-5.47	107.86	110.60
25	RA	619	G	N3-C4-C5	-5.47	125.86	128.60
25	RA	1141	U	P-O3'-C3'	5.47	126.27	119.70
25	YA	2639	A	C2-N3-C4	-5.47	107.86	110.60
1	QA	364	A	C8-N9-C4	5.47	107.99	105.80
1	QA	1048	G	C8-N9-C4	-5.47	104.21	106.40
1	XA	853	G	C6-C5-N7	-5.47	127.12	130.40
1	XA	1096	C	C6-N1-C2	-5.47	118.11	120.30
25	YA	754	C	C6-N1-C2	5.47	122.49	120.30
25	YA	1382	G	C5-C6-N1	-5.47	108.77	111.50
25	YA	1421	G	C4-N9-C1'	5.47	133.61	126.50
25	YA	1495	A	N1-C6-N6	-5.47	115.32	118.60
25	YA	2542	A	N3-C4-C5	5.47	130.63	126.80
25	YA	2641	G	OP2-P-O3'	5.47	117.23	105.20
1	XA	977	A	C8-N9-C4	-5.47	103.61	105.80
25	YA	1257	C	N1-C2-N3	5.47	123.03	119.20
31	YH	127	GLU	N-CA-C	-5.47	96.24	111.00
1	QA	374	A	N9-C4-C5	-5.47	103.61	105.80
25	RA	1629	U	N3-C4-C5	-5.47	111.32	114.60
25	RA	1821	A	N3-C4-N9	5.47	131.77	127.40
31	RH	127	GLU	N-CA-C	-5.47	96.24	111.00
25	YA	195	A	C4-C5-N7	5.47	113.43	110.70
25	YA	429	A	C2-N3-C4	-5.47	107.87	110.60
25	YA	2723	C	C6-N1-C2	-5.47	118.11	120.30
1	QA	182	U	O5'-P-OP1	-5.46	100.78	105.70
1	QA	1498	U	P-O3'-C3'	5.46	126.26	119.70
25	RA	835	A	O5'-P-OP1	5.46	117.26	110.70
25	RA	1446	C	C6-N1-C2	-5.46	118.11	120.30
25	RA	2559	C	C5-C6-N1	5.46	123.73	121.00
25	YA	497	A	N1-C6-N6	5.46	121.88	118.60
25	YA	529	A	C8-N9-C4	-5.46	103.61	105.80
25	YA	967	C	C2-N1-C1'	-5.46	112.79	118.80
25	YA	1271	G	N1-C6-O6	5.46	123.18	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1628	G	C4-N9-C1'	5.46	133.60	126.50
25	RA	600	G	N7-C8-N9	-5.46	110.37	113.10
25	RA	944	G	C8-N9-C1'	-5.46	119.90	127.00
25	RA	1328	G	C8-N9-C1'	-5.46	119.90	127.00
25	RA	1337	G	C6-C5-N7	-5.46	127.12	130.40
25	RA	2548	G	N3-C4-N9	5.46	129.28	126.00
1	XA	1103	C	N3-C2-O2	-5.46	118.08	121.90
25	YA	636	G	C5-N7-C8	-5.46	101.57	104.30
25	YA	763	G	N1-C6-O6	5.46	123.18	119.90
1	QA	357	G	C6-C5-N7	-5.46	127.12	130.40
25	RA	1470	G	C5-N7-C8	-5.46	101.57	104.30
26	RB	70	C	C5-C6-N1	5.46	123.73	121.00
1	XA	101	A	N7-C8-N9	5.46	116.53	113.80
1	XA	895	G	N3-C2-N2	-5.46	116.08	119.90
25	YA	868	U	C5-C6-N1	5.46	125.43	122.70
25	YA	1190	G	N3-C4-N9	-5.46	122.72	126.00
25	RA	1336	A	C2-N3-C4	5.46	113.33	110.60
25	YA	748	G	C2-N3-C4	-5.46	109.17	111.90
25	YA	1620	G	C4-C5-C6	5.46	122.08	118.80
1	QA	485	G	O4'-C1'-N9	5.46	112.57	108.20
1	QA	861	G	C8-N9-C4	-5.46	104.22	106.40
25	RA	501	A	C5-C6-N1	-5.46	114.97	117.70
25	RA	1302	A	C8-N9-C4	5.46	107.98	105.80
27	RD	251	GLY	N-CA-C	5.46	126.75	113.10
25	YA	772	C	N3-C4-N4	5.46	121.82	118.00
25	YA	1253	A	C5-N7-C8	-5.46	101.17	103.90
25	YA	1329	U	C6-N1-C2	-5.46	117.72	121.00
25	YA	1653	G	C8-N9-C1'	-5.46	119.90	127.00
25	YA	2821	A	C5-C6-N6	-5.46	119.33	123.70
25	RA	1950	G	C6-N1-C2	-5.46	121.83	125.10
25	RA	2612	C	N3-C2-O2	5.46	125.72	121.90
25	RA	2842	G	N1-C6-O6	5.46	123.17	119.90
25	YA	2215	G	N1-C6-O6	5.46	123.17	119.90
25	YA	2689	U	C5-C6-N1	-5.46	119.97	122.70
25	RA	1309	G	C2-N3-C4	-5.46	109.17	111.90
25	RA	1667	G	C5-N7-C8	-5.46	101.57	104.30
25	RA	2228	G	C6-C5-N7	-5.46	127.13	130.40
25	RA	2713	A	P-O3'-C3'	-5.46	113.15	119.70
1	XA	798	G	O5'-P-OP2	5.46	117.25	110.70
25	YA	301	G	C4-N9-C1'	5.46	133.59	126.50
25	YA	2093	G	N1-C6-O6	5.46	123.17	119.90
1	QA	704	A	C2-N3-C4	5.45	113.33	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1338	G	C4-C5-N7	-5.45	108.62	110.80
25	RA	1645	G	N1-C6-O6	5.45	123.17	119.90
25	RA	1846	G	C4-N9-C1'	5.45	133.59	126.50
1	XA	1189	C	N1-C2-O2	5.45	122.17	118.90
25	YA	333	G	C8-N9-C4	-5.45	104.22	106.40
25	YA	2549	G	C8-N9-C1'	-5.45	119.91	127.00
25	RA	2224	G	N1-C6-O6	5.45	123.17	119.90
1	XA	789	U	C4-C5-C6	5.45	122.97	119.70
25	YA	132	G	C6-C5-N7	-5.45	127.13	130.40
25	YA	354	G	C5-C6-O6	-5.45	125.33	128.60
25	YA	974	G	O5'-P-OP1	-5.45	100.79	105.70
25	YA	1304	C	N1-C2-O2	-5.45	115.63	118.90
25	YA	1307	A	N1-C6-N6	-5.45	115.33	118.60
25	YA	1647	G	C5-N7-C8	-5.45	101.57	104.30
25	YA	1790	C	O5'-P-OP1	-5.45	100.79	105.70
25	YA	1869	G	C8-N9-C1'	-5.45	119.91	127.00
25	RA	1784	A	C8-N9-C4	-5.45	103.62	105.80
25	YA	1332	G	N1-C2-N2	-5.45	111.29	116.20
25	YA	2235	G	N1-C2-N3	5.45	127.17	123.90
25	YA	2590	A	C4-C5-N7	5.45	113.42	110.70
25	YA	2822	G	N3-C4-N9	-5.45	122.73	126.00
25	YA	2868	A	O5'-P-OP1	-5.45	100.80	105.70
27	YD	251	GLY	N-CA-C	5.45	126.72	113.10
25	RA	247	G	N3-C4-N9	5.45	129.27	126.00
1	XA	1353	G	C8-N9-C1'	-5.45	119.92	127.00
25	YA	1162	G	N3-C4-N9	5.45	129.27	126.00
25	YA	1626	G	N7-C8-N9	5.45	115.82	113.10
25	YA	1985	G	O5'-P-OP1	-5.45	100.80	105.70
26	YB	89	G	N1-C6-O6	5.45	123.17	119.90
25	YA	254	G	C8-N9-C4	-5.45	104.22	106.40
25	YA	961	C	C5-C4-N4	-5.45	116.39	120.20
25	YA	1969	A	C4-C5-N7	-5.45	107.98	110.70
1	QA	596	C	C6-N1-C2	5.45	122.48	120.30
1	QA	1076	C	C5-C6-N1	-5.45	118.28	121.00
1	QA	1158	C	C6-N1-C1'	-5.45	114.26	120.80
25	RA	1153	C	N3-C4-C5	-5.45	119.72	121.90
1	XA	535	A	C2-N3-C4	-5.45	107.88	110.60
25	YA	339	U	C6-N1-C2	5.45	124.27	121.00
25	YA	801	G	O5'-P-OP2	5.45	117.23	110.70
25	YA	830	G	N3-C4-C5	-5.45	125.88	128.60
25	YA	1390	U	N3-C4-C5	5.45	117.87	114.60
25	YA	1403	C	N1-C2-O2	5.45	122.17	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2665	A	C5-C6-N1	-5.45	114.98	117.70
1	QA	129	U	O4'-C1'-N1	5.44	112.56	108.20
1	QA	573	A	C5-C6-N6	5.44	128.06	123.70
25	RA	2006	C	N1-C2-N3	-5.44	115.39	119.20
25	YA	2447	G	C8-N9-C4	-5.44	104.22	106.40
25	YA	2593	U	C4-C5-C6	5.44	122.97	119.70
1	QA	1231	G	N3-C4-C5	5.44	131.32	128.60
25	RA	327	G	C5-C6-O6	-5.44	125.33	128.60
25	YA	463	G	N1-C6-O6	-5.44	116.63	119.90
1	QA	299	G	C2-N3-C4	-5.44	109.18	111.90
25	RA	1235	G	C5-N7-C8	5.44	107.02	104.30
25	RA	1367	A	C5-C6-N6	-5.44	119.35	123.70
25	YA	396	G	N9-C4-C5	-5.44	103.22	105.40
25	RA	1543	A	O4'-C1'-N9	5.44	112.55	108.20
35	RP	25	SER	N-CA-C	-5.44	96.31	111.00
25	YA	2271	G	C8-N9-C1'	-5.44	119.93	127.00
1	QA	44	G	C8-N9-C1'	-5.44	119.93	127.00
1	QA	317	G	N3-C4-C5	-5.44	125.88	128.60
1	QA	353	A	OP2-P-O3'	5.44	117.16	105.20
25	RA	791	C	N3-C4-N4	-5.44	114.19	118.00
1	XA	557	G	C5-C6-O6	-5.44	125.34	128.60
25	YA	986	C	N3-C4-N4	5.44	121.81	118.00
25	YA	1048	A	C4-N9-C1'	5.44	136.09	126.30
25	YA	1358	G	C4-C5-C6	5.44	122.06	118.80
25	YA	1633	G	N1-C6-O6	5.44	123.16	119.90
25	YA	1690	A	N1-C6-N6	-5.44	115.34	118.60
25	YA	1773	A	OP1-P-O3'	5.44	117.16	105.20
25	YA	1894	C	C5-C6-N1	5.44	123.72	121.00
1	QA	496	A	C5-C6-N1	5.44	120.42	117.70
25	RA	827	U	N1-C2-N3	-5.43	111.64	114.90
25	RA	2418	A	C2-N3-C4	-5.43	107.88	110.60
1	XA	558	G	C6-C5-N7	-5.43	127.14	130.40
25	YA	859	G	C4-N9-C1'	-5.43	119.44	126.50
25	YA	2000	G	C5-C6-O6	-5.43	125.34	128.60
25	YA	2032	G	N3-C2-N2	-5.43	116.10	119.90
25	RA	105	C	C5-C6-N1	5.43	123.72	121.00
25	RA	226	G	O4'-C1'-N9	5.43	112.55	108.20
25	RA	651	G	N3-C4-N9	5.43	129.26	126.00
25	RA	1490	A	N9-C4-C5	-5.43	103.63	105.80
1	XA	564	C	O5'-P-OP2	-5.43	100.81	105.70
25	YA	2688	U	N3-C4-O4	-5.43	115.60	119.40
1	QA	958	A	N1-C6-N6	5.43	121.86	118.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	271(B)	G	P-O3'-C3'	5.43	126.22	119.70
25	RA	1840	G	C6-C5-N7	-5.43	127.14	130.40
25	RA	2395	C	N1-C2-O2	5.43	122.16	118.90
25	RA	2508	G	C5-C6-N1	-5.43	108.78	111.50
25	RA	2817	G	N1-C6-O6	-5.43	116.64	119.90
1	XA	870	U	C5-C6-N1	-5.43	119.98	122.70
25	YA	228	A	N3-C4-C5	-5.43	123.00	126.80
25	YA	1267	U	OP2-P-O3'	5.43	117.15	105.20
25	YA	1287	A	C6-C5-N7	-5.43	128.50	132.30
25	YA	1835	G	C8-N9-C1'	-5.43	119.94	127.00
25	YA	1984	G	C4-C5-C6	5.43	122.06	118.80
1	QA	33	A	N1-C6-N6	-5.43	115.34	118.60
1	QA	1260	C	C5-C6-N1	5.43	123.72	121.00
25	RA	1760	A	C8-N9-C4	-5.43	103.63	105.80
25	RA	2004	G	C4-C5-N7	5.43	112.97	110.80
25	RA	2237	G	N3-C4-N9	5.43	129.26	126.00
1	XA	1519	A	C5-C6-N1	-5.43	114.98	117.70
25	YA	380	U	N1-C2-O2	-5.43	119.00	122.80
25	YA	1496	A	C6-C5-N7	-5.43	128.50	132.30
25	YA	1568	G	N9-C4-C5	5.43	107.57	105.40
25	YA	2032	G	N7-C8-N9	5.43	115.81	113.10
25	YA	2219	G	C6-C5-N7	-5.43	127.14	130.40
25	RA	364	C	C2-N3-C4	5.43	122.61	119.90
25	RA	817	C	OP2-P-O3'	5.43	117.14	105.20
1	XA	924	C	OP1-P-O3'	5.43	117.14	105.20
25	YA	458	G	N9-C4-C5	5.43	107.57	105.40
25	YA	1267	U	P-O3'-C3'	5.43	126.21	119.70
25	RA	573	G	C5-N7-C8	-5.43	101.59	104.30
25	RA	783	A	C8-N9-C1'	-5.43	117.93	127.70
25	RA	847	U	C2-N1-C1'	-5.43	111.19	117.70
25	RA	1561	G	N3-C4-C5	5.43	131.31	128.60
25	RA	1667	G	N9-C1'-C2'	5.43	121.05	114.00
25	RA	1836	C	C5-C4-N4	-5.43	116.40	120.20
25	RA	1950	G	O4'-C1'-N9	5.43	112.54	108.20
25	RA	2467	C	N3-C4-C5	-5.43	119.73	121.90
25	RA	2763	G	N3-C4-N9	5.43	129.26	126.00
1	XA	262	A	N1-C6-N6	-5.43	115.34	118.60
25	YA	615	G	O4'-C1'-N9	5.43	112.54	108.20
1	QA	771	G	C2-N3-C4	-5.42	109.19	111.90
25	RA	775	G	N3-C4-N9	5.42	129.25	126.00
25	RA	866	A	N9-C4-C5	-5.42	103.63	105.80
25	RA	1698	A	P-O3'-C3'	5.42	126.21	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1699	G	N1-C2-N3	5.42	127.15	123.90
25	RA	1802	A	N9-C4-C5	5.42	107.97	105.80
25	RA	2689	U	N3-C4-O4	-5.42	115.60	119.40
1	XA	19	C	N1-C2-O2	5.42	122.15	118.90
25	YA	270(B)	A	C8-N9-C4	5.42	107.97	105.80
25	YA	333	G	N7-C8-N9	5.42	115.81	113.10
25	YA	1243	G	C2-N3-C4	-5.42	109.19	111.90
25	YA	2515	C	C2-N1-C1'	-5.42	112.83	118.80
25	YA	2594	C	N3-C4-C5	5.42	124.07	121.90
25	YA	2603	G	O5'-P-OP2	5.42	117.21	110.70
1	QA	1314	C	C5-C6-N1	5.42	123.71	121.00
1	XA	690	G	N3-C4-C5	5.42	131.31	128.60
25	YA	1319	G	N1-C6-O6	5.42	123.15	119.90
25	YA	1800	C	C2-N3-C4	-5.42	117.19	119.90
25	YA	2380	C	N3-C4-N4	-5.42	114.20	118.00
25	RA	459	U	N3-C2-O2	-5.42	118.40	122.20
25	RA	1799	G	N9-C4-C5	5.42	107.57	105.40
25	RA	2817	G	N3-C4-N9	5.42	129.25	126.00
1	XA	1094	G	P-O3'-C3'	5.42	126.20	119.70
25	YA	366	C	C4-C5-C6	5.42	120.11	117.40
25	YA	842	G	C5-N7-C8	-5.42	101.59	104.30
25	YA	1163	G	O4'-C1'-N9	5.42	112.54	108.20
25	YA	1402	C	C6-N1-C2	-5.42	118.13	120.30
25	YA	1535	U	N1-C2-O2	5.42	126.59	122.80
25	YA	2572	A	C4-C5-C6	5.42	119.71	117.00
25	RA	226	G	C8-N9-C1'	5.42	134.05	127.00
25	RA	1968	G	OP2-P-O3'	5.42	117.12	105.20
25	YA	582	G	C6-C5-N7	-5.42	127.15	130.40
1	QA	1107	C	C5-C6-N1	5.42	123.71	121.00
25	RA	530	G	N3-C4-C5	-5.42	125.89	128.60
25	RA	1601	G	C6-C5-N7	-5.42	127.15	130.40
25	RA	1614	A	C6-C5-N7	-5.42	128.51	132.30
25	RA	1928	A	C2-N3-C4	-5.42	107.89	110.60
25	RA	2056	G	N1-C6-O6	-5.42	116.65	119.90
25	RA	2360	A	C5-C6-N6	5.42	128.03	123.70
1	XA	557	G	C4-N9-C1'	5.42	133.54	126.50
25	YA	1602	U	N3-C4-O4	5.42	123.19	119.40
25	RA	673	C	OP2-P-O3'	5.42	117.12	105.20
25	RA	743	G	N9-C4-C5	-5.42	103.23	105.40
25	RA	1359	A	C4-C5-N7	5.42	113.41	110.70
26	RB	36	C	C2-N1-C1'	-5.42	112.84	118.80
1	XA	190	G	N3-C4-N9	5.42	129.25	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	315	A	C4-N9-C1'	-5.42	116.55	126.30
25	YA	429	A	C5-C6-N1	-5.42	114.99	117.70
25	YA	1048	A	N7-C8-N9	5.42	116.51	113.80
35	YP	25	SER	N-CA-C	-5.42	96.38	111.00
1	QA	1316	G	C6-C5-N7	5.42	133.65	130.40
25	RA	217	G	N3-C4-C5	-5.42	125.89	128.60
25	RA	247	G	C5-C6-O6	5.42	131.85	128.60
25	RA	822	U	C5-C6-N1	-5.42	119.99	122.70
25	RA	2731	G	N7-C8-N9	5.42	115.81	113.10
1	QA	1434	A	C5-C6-N1	-5.41	114.99	117.70
25	RA	714	U	C5-C4-O4	5.41	129.15	125.90
25	RA	819	A	N7-C8-N9	5.41	116.51	113.80
25	RA	2540	C	C5-C6-N1	-5.41	118.29	121.00
1	XA	589	C	C4-C5-C6	5.41	120.11	117.40
25	YA	2637	U	O5'-P-OP2	5.41	117.20	110.70
25	YA	2719	G	C6-C5-N7	-5.41	127.15	130.40
25	RA	926	A	C5-C6-N6	-5.41	119.37	123.70
25	RA	1393	A	O4'-C1'-N9	5.41	112.53	108.20
25	RA	1518	C	C6-N1-C2	5.41	122.47	120.30
25	RA	122	G	C8-N9-C4	5.41	108.56	106.40
25	RA	342	G	C5-C6-O6	-5.41	125.35	128.60
25	RA	1342	A	C8-N9-C4	5.41	107.96	105.80
25	RA	1624	G	C5-C6-O6	-5.41	125.35	128.60
25	RA	2315	G	C5-C6-N1	5.41	114.20	111.50
25	RA	2479	G	N3-C4-C5	5.41	131.31	128.60
25	RA	2612	C	O5'-P-OP1	5.41	117.19	110.70
1	XA	1113	C	C5-C6-N1	5.41	123.71	121.00
25	YA	2326	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	932	C	C6-N1-C2	-5.41	118.14	120.30
25	YA	55	G	C8-N9-C1'	-5.41	119.97	127.00
25	YA	188	G	N3-C4-N9	5.41	129.25	126.00
25	YA	832	G	C4-C5-C6	5.41	122.05	118.80
1	QA	1215	G	C8-N9-C4	-5.41	104.24	106.40
25	RA	38	A	O5'-P-OP2	-5.41	100.83	105.70
1	XA	1266	G	N3-C4-N9	-5.41	122.76	126.00
25	YA	1816	G	C5-C6-N1	-5.41	108.80	111.50
1	QA	1158	C	C5-C6-N1	5.41	123.70	121.00
25	RA	1795	C	C2-N1-C1'	5.41	124.75	118.80
25	RA	2073	C	C6-N1-C1'	5.41	127.29	120.80
25	RA	2429	G	O5'-P-OP2	-5.41	100.83	105.70
25	RA	2449	U	C5-C6-N1	5.41	125.40	122.70
25	YA	872	A	C4-C5-C6	5.41	119.70	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1309	G	C6-C5-N7	-5.41	127.16	130.40
25	YA	2470	G	C6-C5-N7	5.41	133.64	130.40
25	YA	2737	G	N3-C4-C5	5.41	131.30	128.60
25	RA	715	G	C2-N3-C4	5.40	114.60	111.90
25	RA	1430	C	C2-N1-C1'	5.40	124.75	118.80
25	RA	1899	G	C5-N7-C8	-5.40	101.60	104.30
25	YA	875	G	O5'-P-OP2	-5.40	100.84	105.70
25	YA	1016	G	C5-C6-O6	-5.40	125.36	128.60
25	YA	2685	G	N1-C2-N3	5.40	127.14	123.90
1	QA	55	A	C2-N3-C4	-5.40	107.90	110.60
1	QA	754	C	C2-N1-C1'	5.40	124.74	118.80
25	RA	482	A	C4-C5-C6	-5.40	114.30	117.00
25	RA	553	U	N1-C2-N3	5.40	118.14	114.90
25	RA	1342	A	C4-C5-C6	-5.40	114.30	117.00
25	RA	1347	G	N1-C6-O6	5.40	123.14	119.90
1	XA	1514	C	N3-C4-C5	5.40	124.06	121.90
25	YA	573	G	C6-C5-N7	-5.40	127.16	130.40
25	YA	898	C	C6-N1-C2	-5.40	118.14	120.30
25	YA	903	C	N3-C4-C5	5.40	124.06	121.90
25	YA	1206	G	C4-N9-C1'	5.40	133.52	126.50
25	YA	1344	G	N3-C4-C5	5.40	131.30	128.60
25	YA	1902	C	C5-C6-N1	-5.40	118.30	121.00
25	YA	2029	G	C5-C6-O6	5.40	131.84	128.60
25	YA	2256	G	C2-N3-C4	5.40	114.60	111.90
25	RA	1379	A	C1'-O4'-C4'	-5.40	105.58	109.90
1	XA	244	U	P-O3'-C3'	5.40	126.18	119.70
1	XA	871	U	N1-C2-O2	5.40	126.58	122.80
25	YA	734	A	C2-N3-C4	-5.40	107.90	110.60
25	YA	2413	G	N3-C4-N9	-5.40	122.76	126.00
1	QA	394	G	C8-N9-C4	-5.40	104.24	106.40
25	YA	142	G	C8-N9-C4	5.40	108.56	106.40
25	YA	2026	C	N3-C4-C5	5.40	124.06	121.90
25	YA	2235	G	N1-C6-O6	5.40	123.14	119.90
25	YA	2587	A	OP2-P-O3'	5.40	117.08	105.20
1	QA	5	U	C6-N1-C2	-5.40	117.76	121.00
1	QA	778	G	C8-N9-C1'	-5.40	119.98	127.00
25	RA	1366	A	N1-C6-N6	5.40	121.84	118.60
25	RA	2399	G	N1-C2-N3	5.40	127.14	123.90
25	RA	2851	A	N1-C6-N6	-5.40	115.36	118.60
1	XA	319	G	C6-C5-N7	5.40	133.64	130.40
1	XA	1505	G	C4-C5-N7	-5.40	108.64	110.80
25	YA	204	A	C5-C6-N1	5.40	120.40	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	270(Z)	U	O5'-P-OP1	-5.40	100.84	105.70
25	YA	900	A	N7-C8-N9	5.40	116.50	113.80
25	YA	2417	C	N3-C4-C5	-5.40	119.74	121.90
1	QA	1057	G	N3-C4-N9	-5.40	122.76	126.00
25	RA	117	G	N1-C6-O6	-5.40	116.66	119.90
25	YA	1270	C	N3-C2-O2	5.40	125.68	121.90
1	QA	1336	C	N3-C2-O2	-5.39	118.12	121.90
1	QA	1361	G	N1-C6-O6	5.39	123.14	119.90
25	RA	559	G	N7-C8-N9	-5.39	110.40	113.10
25	RA	804	A	C4-N9-C1'	-5.39	116.59	126.30
25	RA	1007	C	N3-C4-C5	5.39	124.06	121.90
25	RA	1844	C	C6-N1-C2	5.39	122.46	120.30
25	RA	2449	U	C5-C4-O4	-5.39	122.66	125.90
1	XA	263	A	N1-C6-N6	5.39	121.84	118.60
25	YA	944	G	C4-C5-C6	5.39	122.04	118.80
25	YA	1391	U	C6-N1-C2	-5.39	117.76	121.00
25	YA	1906	G	N1-C2-N3	5.39	127.14	123.90
1	QA	299	G	C6-N1-C2	5.39	128.34	125.10
25	RA	2727	G	C8-N9-C4	5.39	108.56	106.40
25	YA	239	U	C6-N1-C2	-5.39	117.76	121.00
25	YA	1015	G	C5-C6-O6	-5.39	125.36	128.60
25	YA	1695	G	C4-C5-C6	5.39	122.03	118.80
25	YA	1812	A	N1-C6-N6	-5.39	115.36	118.60
25	YA	2015	A	C2-N3-C4	5.39	113.30	110.60
25	YA	2586	C	C5-C4-N4	-5.39	116.42	120.20
1	QA	667	G	C4-C5-N7	5.39	112.96	110.80
1	QA	1054	C	C2-N1-C1'	5.39	124.73	118.80
25	RA	1334	G	C4-C5-C6	5.39	122.03	118.80
25	RA	2052	G	C5-C6-N1	-5.39	108.80	111.50
1	XA	1309	G	N3-C4-N9	5.39	129.24	126.00
25	YA	259	G	N1-C2-N3	5.39	127.13	123.90
25	YA	509	C	C2-N3-C4	-5.39	117.20	119.90
25	YA	1395	A	C2-N3-C4	-5.39	107.90	110.60
25	YA	2651	C	C6-N1-C2	5.39	122.46	120.30
25	RA	118	A	C4-C5-C6	-5.39	114.31	117.00
25	RA	439	G	C5-C6-N1	-5.39	108.81	111.50
25	RA	512	G	O5'-P-OP1	-5.39	100.85	105.70
25	RA	2074	U	N1-C2-O2	-5.39	119.03	122.80
25	YA	445	C	C6-N1-C2	-5.39	118.14	120.30
25	YA	627	A	N3-C4-N9	-5.39	123.09	127.40
25	YA	815	C	C2-N3-C4	-5.39	117.20	119.90
25	YA	1214	A	N9-C4-C5	5.39	107.96	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1966	A	N3-C4-N9	-5.39	123.09	127.40
25	RA	2824	C	O5'-P-OP2	-5.39	100.85	105.70
25	YA	2756	U	OP1-P-O3'	5.39	117.05	105.20
1	QA	992	U	P-O3'-C3'	5.39	126.16	119.70
25	RA	71	A	C2-N3-C4	-5.39	107.91	110.60
25	RA	242	G	C8-N9-C4	-5.39	104.25	106.40
25	RA	470	A	C5-C6-N1	5.39	120.39	117.70
25	RA	1655	A	N1-C6-N6	5.39	121.83	118.60
25	RA	2251	G	C4-C5-C6	5.39	122.03	118.80
25	RA	2484	G	C4-C5-N7	5.39	112.95	110.80
26	RB	66	A	P-O3'-C3'	5.39	126.16	119.70
1	XA	423	G	C4-C5-C6	5.39	122.03	118.80
1	XA	1323	G	N7-C8-N9	5.39	115.79	113.10
1	XA	1503	A	N1-C2-N3	-5.39	126.61	129.30
25	YA	470	A	O5'-P-OP1	-5.39	100.85	105.70
25	YA	473	G	C6-N1-C2	-5.39	121.87	125.10
25	YA	599	G	N9-C4-C5	-5.39	103.25	105.40
25	YA	1342	A	C6-N1-C2	-5.39	115.37	118.60
1	QA	686	U	C2-N1-C1'	5.38	124.16	117.70
25	RA	281	G	N1-C6-O6	5.38	123.13	119.90
25	RA	363(C)	G	N3-C4-N9	-5.38	122.77	126.00
25	RA	1356	G	N3-C4-C5	-5.38	125.91	128.60
25	RA	1473	G	N3-C4-C5	5.38	131.29	128.60
25	RA	1695	G	C8-N9-C1'	-5.38	120.00	127.00
25	RA	2032	G	N7-C8-N9	5.38	115.79	113.10
25	RA	2643	G	N3-C4-C5	-5.38	125.91	128.60
1	XA	112	G	C6-C5-N7	-5.38	127.17	130.40
1	XA	1408	A	C2-N3-C4	-5.38	107.91	110.60
25	YA	192	C	C6-N1-C1'	-5.38	114.34	120.80
25	YA	866	A	C4-C5-C6	5.38	119.69	117.00
25	YA	1361	G	N3-C4-C5	5.38	131.29	128.60
25	YA	2726	U	C4-C5-C6	5.38	122.93	119.70
25	RA	2347	C	C6-N1-C2	-5.38	118.15	120.30
25	YA	330	A	C4-C5-C6	5.38	119.69	117.00
25	RA	1396	U	N1-C2-O2	5.38	126.57	122.80
1	XA	869	G	N7-C8-N9	5.38	115.79	113.10
1	XA	880	C	N3-C2-O2	5.38	125.67	121.90
1	XA	947	G	C4-C5-N7	-5.38	108.65	110.80
25	YA	433	C	C2-N3-C4	-5.38	117.21	119.90
25	YA	1104	C	C4-C5-C6	5.38	120.09	117.40
25	RA	731	C	N3-C4-C5	5.38	124.05	121.90
1	QA	978	A	N7-C8-N9	5.38	116.49	113.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	584	C	C6-N1-C2	5.38	122.45	120.30
25	RA	2634	G	OP2-P-O3'	5.38	117.03	105.20
25	YA	804	A	C4-C5-N7	5.38	113.39	110.70
25	YA	1869	G	C6-N1-C2	-5.38	121.87	125.10
25	YA	2502	G	C4-C5-C6	5.38	122.03	118.80
25	RA	512	G	P-O3'-C3'	5.38	126.15	119.70
25	RA	2065	C	N3-C4-N4	5.38	121.76	118.00
1	XA	31	G	P-O3'-C3'	5.38	126.15	119.70
1	XA	1094	G	C4-C5-N7	-5.38	108.65	110.80
25	YA	1021	A	C4-C5-N7	5.38	113.39	110.70
25	YA	1455	G	C2-N3-C4	5.38	114.59	111.90
25	YA	1968	G	C5-C6-N1	-5.38	108.81	111.50
25	YA	2238	G	O5'-P-OP1	-5.38	100.86	105.70
25	YA	2434	A	C4-C5-N7	5.38	113.39	110.70
25	YA	2539	C	C6-N1-C2	5.38	122.45	120.30
25	YA	2569	G	N3-C4-C5	-5.38	125.91	128.60
27	YD	111	LEU	CA-CB-CG	5.38	127.67	115.30
25	YA	473	G	N7-C8-N9	-5.38	110.41	113.10
1	QA	928	G	C5-C6-N1	-5.37	108.81	111.50
1	QA	1223	C	C5-C4-N4	-5.37	116.44	120.20
25	RA	982	C	N3-C4-C5	-5.37	119.75	121.90
25	RA	2042	A	N1-C6-N6	5.37	121.82	118.60
25	RA	2510	C	O5'-P-OP2	-5.37	100.86	105.70
25	RA	2674	G	C4-N9-C1'	-5.37	119.51	126.50
1	XA	34	C	C6-N1-C2	5.37	122.45	120.30
1	XA	812	C	C2-N3-C4	5.37	122.59	119.90
25	YA	406	G	N1-C6-O6	5.37	123.12	119.90
25	YA	793	A	C4-C5-C6	5.37	119.69	117.00
25	YA	1247	A	C2-N3-C4	-5.37	107.91	110.60
25	YA	1396	U	N3-C2-O2	-5.37	118.44	122.20
25	YA	2088	G	C4-C5-C6	5.37	122.02	118.80
25	YA	2782	G	C8-N9-C1'	-5.37	120.02	127.00
25	RA	775	G	C6-N1-C2	-5.37	121.88	125.10
25	RA	1377	G	C8-N9-C1'	-5.37	120.02	127.00
1	XA	254	G	O5'-P-OP1	-5.37	100.87	105.70
1	XA	572	A	O4'-C1'-N9	5.37	112.50	108.20
1	XA	1228	C	O5'-P-OP2	-5.37	100.87	105.70
25	YA	379	G	C8-N9-C4	5.37	108.55	106.40
25	YA	761	A	C2-N3-C4	-5.37	107.91	110.60
25	YA	961	C	O4'-C1'-N1	5.37	112.50	108.20
25	YA	2782	G	N7-C8-N9	5.37	115.78	113.10
25	YA	187	G	O4'-C1'-N9	-5.37	103.90	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1076	C	N1-C2-O2	-5.37	115.68	118.90
25	RA	618	G	N3-C4-N9	5.37	129.22	126.00
25	RA	635	C	C6-N1-C2	-5.37	118.15	120.30
25	RA	1263	U	C4-C5-C6	5.37	122.92	119.70
25	YA	1931	U	C6-N1-C1'	5.37	128.72	121.20
25	YA	2093	G	C2-N3-C4	-5.37	109.22	111.90
25	YA	2337	G	C4-C5-N7	5.37	112.95	110.80
25	YA	2447	G	P-O3'-C3'	5.37	126.14	119.70
31	YH	100	GLY	N-CA-C	-5.37	99.68	113.10
25	YA	859	G	P-O3'-C3'	5.37	126.14	119.70
25	YA	1477	A	C6-C5-N7	-5.37	128.54	132.30
1	QA	451	A	N3-C4-C5	-5.37	123.05	126.80
1	QA	800	G	C8-N9-C4	-5.37	104.25	106.40
25	RA	2457	U	C6-N1-C2	-5.37	117.78	121.00
25	RA	2844	G	C5-C6-O6	-5.37	125.38	128.60
26	RB	9	G	C8-N9-C4	-5.37	104.25	106.40
25	YA	668	G	C6-C5-N7	-5.37	127.18	130.40
25	YA	1247	A	N1-C2-N3	5.37	131.98	129.30
25	YA	2718	G	C8-N9-C4	-5.37	104.25	106.40
26	YB	89	G	C6-C5-N7	-5.37	127.18	130.40
25	RA	987	G	O5'-P-OP1	-5.36	100.87	105.70
25	RA	1504	C	N3-C4-C5	5.36	124.05	121.90
25	RA	2543	G	C4-C5-N7	5.36	112.94	110.80
1	XA	960	U	C6-N1-C2	-5.36	117.78	121.00
1	XA	1452	C	C6-N1-C2	-5.36	118.16	120.30
25	YA	342	G	C5-C6-N1	-5.36	108.82	111.50
25	YA	486	C	O5'-P-OP2	5.36	117.14	110.70
25	YA	729	G	C4-C5-N7	5.36	112.95	110.80
25	YA	1342	A	N7-C8-N9	5.36	116.48	113.80
25	YA	1433	U	C5-C6-N1	5.36	125.38	122.70
25	YA	1477	A	C5-N7-C8	-5.36	101.22	103.90
25	YA	1519	G	C4-N9-C1'	5.36	133.47	126.50
1	QA	690	G	N3-C4-C5	5.36	131.28	128.60
25	RA	1627	G	C2-N3-C4	-5.36	109.22	111.90
25	RA	2083	G	C6-C5-N7	-5.36	127.18	130.40
1	XA	500	G	C5-C6-O6	-5.36	125.38	128.60
25	YA	2299	G	N7-C8-N9	5.36	115.78	113.10
1	QA	413	G	C8-N9-C4	5.36	108.54	106.40
25	RA	391	G	C4-C5-N7	5.36	112.94	110.80
25	RA	2125	G	N3-C4-C5	-5.36	125.92	128.60
25	RA	2707	G	C8-N9-C4	5.36	108.54	106.40
25	YA	11	G	C8-N9-C4	5.36	108.54	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	701	G	C8-N9-C1'	-5.36	120.03	127.00
25	YA	1160	G	C5-C6-O6	-5.36	125.38	128.60
25	YA	1368	G	C8-N9-C4	-5.36	104.26	106.40
25	YA	1591	G	C4-N9-C1'	5.36	133.47	126.50
25	YA	2267	A	C6-N1-C2	-5.36	115.38	118.60
25	YA	2849	U	C6-N1-C1'	5.36	128.71	121.20
25	RA	777	A	N3-C4-N9	5.36	131.69	127.40
25	RA	1017	G	N1-C6-O6	5.36	123.11	119.90
25	RA	1790	C	C2-N1-C1'	-5.36	112.91	118.80
25	RA	2055	C	N1-C2-O2	-5.36	115.69	118.90
25	YA	195	A	C6-C5-N7	-5.36	128.55	132.30
25	YA	309	G	C4-N9-C1'	5.36	133.47	126.50
25	YA	2014	A	N1-C6-N6	5.36	121.81	118.60
25	YA	2337	G	C6-C5-N7	-5.36	127.19	130.40
25	YA	2673	G	C8-N9-C4	-5.36	104.26	106.40
1	QA	705	U	N3-C2-O2	-5.36	118.45	122.20
1	QA	769	G	C4-N9-C1'	5.36	133.47	126.50
25	RA	311	A	N1-C6-N6	5.36	121.81	118.60
25	RA	350	U	C5-C6-N1	5.36	125.38	122.70
25	RA	563	G	N1-C6-O6	-5.36	116.69	119.90
25	RA	2487	G	N3-C4-N9	-5.36	122.78	126.00
25	RA	2487	G	O5'-P-OP1	-5.36	100.88	105.70
25	YA	309	G	C4-C5-C6	5.36	122.01	118.80
25	YA	1417	C	N1-C2-O2	-5.36	115.69	118.90
25	YA	1595	G	C2-N3-C4	-5.36	109.22	111.90
25	YA	1606	G	OP1-P-O3'	5.36	116.99	105.20
25	YA	1669	A	N7-C8-N9	5.36	116.48	113.80
25	YA	1830	C	C5-C6-N1	5.36	123.68	121.00
25	YA	2749	A	OP1-P-O3'	5.36	116.99	105.20
25	RA	2237	G	C4-C5-C6	5.36	122.01	118.80
25	RA	2451	A	C5-N7-C8	-5.36	101.22	103.90
25	RA	2453	A	C4-C5-C6	-5.36	114.32	117.00
25	RA	2513	G	C8-N9-C4	-5.36	104.26	106.40
1	XA	902	G	C4-C5-N7	5.36	112.94	110.80
1	XA	1087	G	C8-N9-C4	-5.36	104.26	106.40
25	YA	54	G	C5-N7-C8	-5.36	101.62	104.30
25	YA	240	G	C4-N9-C1'	5.36	133.46	126.50
25	YA	529	A	C6-C5-N7	-5.36	128.55	132.30
25	YA	576	U	N3-C4-O4	5.36	123.15	119.40
25	YA	1197	G	N1-C6-O6	-5.36	116.69	119.90
25	YA	1901	A	N1-C6-N6	-5.36	115.39	118.60
25	YA	2271	G	C2-N3-C4	5.36	114.58	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2780	G	C8-N9-C4	-5.36	104.26	106.40
25	RA	248	G	C4-C5-N7	5.35	112.94	110.80
25	RA	303	U	C5-C4-O4	-5.35	122.69	125.90
25	RA	1610	A	C2-N3-C4	5.35	113.28	110.60
1	XA	280	C	P-O3'-C3'	5.35	126.12	119.70
25	YA	618(A)	C	C2-N3-C4	5.35	122.58	119.90
25	YA	1668	A	N9-C4-C5	5.35	107.94	105.80
25	YA	2218	G	C4-C5-C6	5.35	122.01	118.80
1	QA	410	G	OP1-P-O3'	5.35	116.97	105.20
25	RA	217	G	C8-N9-C4	-5.35	104.26	106.40
25	RA	396	G	N9-C4-C5	5.35	107.54	105.40
25	RA	462	C	C6-N1-C2	5.35	122.44	120.30
25	RA	1814	G	N3-C4-C5	-5.35	125.92	128.60
1	XA	552	U	N3-C2-O2	-5.35	118.45	122.20
1	XA	572	A	N1-C6-N6	-5.35	115.39	118.60
1	XA	1220	G	N1-C6-O6	-5.35	116.69	119.90
25	YA	581	C	C2-N3-C4	-5.35	117.22	119.90
25	YA	663	G	C4-C5-C6	5.35	122.01	118.80
25	YA	852	G	C5-C6-N1	5.35	114.18	111.50
25	YA	1811	G	N1-C2-N3	5.35	127.11	123.90
25	YA	2015	A	N3-C4-C5	-5.35	123.05	126.80
1	QA	612	C	N3-C4-N4	-5.35	114.25	118.00
1	QA	1228	C	N3-C2-O2	-5.35	118.16	121.90
25	RA	2010	G	C4-C5-C6	5.35	122.01	118.80
25	RA	2031	A	O5'-P-OP1	-5.35	100.89	105.70
25	RA	2246	G	N9-C4-C5	-5.35	103.26	105.40
1	XA	541	G	C5-N7-C8	-5.35	101.62	104.30
1	XA	818	G	O4'-C1'-N9	5.35	112.48	108.20
1	XA	1053	G	N1-C6-O6	5.35	123.11	119.90
25	YA	222	A	C2-N3-C4	5.35	113.28	110.60
25	YA	1271	G	C8-N9-C1'	-5.35	120.05	127.00
25	YA	1676	A	O5'-P-OP1	-5.35	100.89	105.70
25	YA	2555	U	N1-C2-N3	5.35	118.11	114.90
25	YA	2871	C	N3-C4-N4	5.35	121.75	118.00
1	QA	134	A	C2-N3-C4	-5.35	107.93	110.60
1	QA	192	U	N1-C2-N3	-5.35	111.69	114.90
1	QA	581	G	N1-C6-O6	5.35	123.11	119.90
25	RA	845	G	C2-N3-C4	-5.35	109.23	111.90
25	RA	2002	G	C5-C6-O6	-5.35	125.39	128.60
25	RA	2392	A	N1-C6-N6	5.35	121.81	118.60
25	RA	2506	U	C6-N1-C2	-5.35	117.79	121.00
1	XA	558	G	N1-C6-O6	5.35	123.11	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	768	A	C8-N9-C4	5.35	107.94	105.80
1	XA	858	G	C8-N9-C4	-5.35	104.26	106.40
25	YA	772	C	C5-C6-N1	5.35	123.67	121.00
25	YA	2020	A	N3-C4-C5	-5.35	123.06	126.80
25	YA	2309	A	C2-N3-C4	-5.35	107.93	110.60
1	QA	515	G	C5-C6-N1	-5.35	108.83	111.50
25	RA	949	C	C6-N1-C2	5.35	122.44	120.30
26	YB	60	C	C5-C6-N1	5.35	123.67	121.00
25	RA	727	A	N3-C4-C5	-5.34	123.06	126.80
25	RA	1287	A	C4-C5-C6	5.34	119.67	117.00
25	RA	1370	C	C5-C6-N1	-5.34	118.33	121.00
25	RA	2673	G	C6-C5-N7	-5.34	127.19	130.40
27	RD	111	LEU	CA-CB-CG	5.34	127.59	115.30
25	YA	593	G	N1-C2-N3	5.34	127.11	123.90
25	YA	782	A	N3-C4-C5	-5.34	123.06	126.80
25	YA	1203	G	C4-N9-C1'	5.34	133.45	126.50
25	YA	1236	G	N1-C2-N3	5.34	127.11	123.90
25	YA	1573	G	N7-C8-N9	-5.34	110.43	113.10
25	YA	1577	C	N3-C4-N4	5.34	121.74	118.00
25	YA	2821	A	OP1-P-OP2	5.34	127.62	119.60
25	RA	2886	G	O5'-P-OP2	5.34	117.11	110.70
25	YA	1206	G	C2-N3-C4	-5.34	109.23	111.90
25	YA	2438	U	OP2-P-O3'	5.34	116.95	105.20
25	RA	305	U	OP2-P-O3'	5.34	116.95	105.20
25	RA	439	G	C8-N9-C1'	-5.34	120.06	127.00
25	RA	727	A	N9-C4-C5	5.34	107.94	105.80
25	RA	832	G	C2-N3-C4	-5.34	109.23	111.90
25	RA	1334	G	C6-C5-N7	-5.34	127.19	130.40
25	RA	2637	U	C6-N1-C2	-5.34	117.80	121.00
25	RA	2776	A	C2-N3-C4	5.34	113.27	110.60
1	XA	948	C	C2-N1-C1'	-5.34	112.92	118.80
25	YA	1005	C	N1-C2-O2	5.34	122.11	118.90
25	YA	1184	G	C6-C5-N7	-5.34	127.19	130.40
25	YA	1204	A	O4'-C1'-N9	5.34	112.47	108.20
25	YA	2004	G	N1-C6-O6	5.34	123.10	119.90
25	YA	2468	G	C4-N9-C1'	5.34	133.44	126.50
26	YB	82	G	N1-C2-N3	5.34	127.11	123.90
25	RA	51	G	C4-N9-C1'	5.34	133.44	126.50
25	RA	990	A	C5-C6-N6	5.34	127.97	123.70
25	RA	1657	C	C6-N1-C2	-5.34	118.16	120.30
1	XA	584	G	N3-C4-N9	5.34	129.20	126.00
1	XA	1461	G	C6-C5-N7	-5.34	127.20	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1505	G	N9-C4-C5	5.34	107.54	105.40
25	YA	70	G	N3-C4-N9	5.34	129.20	126.00
25	YA	1400	G	N3-C4-C5	-5.34	125.93	128.60
25	YA	1883	G	N1-C6-O6	-5.34	116.70	119.90
25	RA	221	A	N7-C8-N9	5.34	116.47	113.80
25	RA	1933	G	N1-C6-O6	5.34	123.10	119.90
25	RA	2355	C	N1-C2-O2	5.34	122.10	118.90
25	RA	2857	G	C4-C5-C6	5.34	122.00	118.80
25	YA	1658	C	OP2-P-O3'	5.34	116.94	105.20
26	YB	13	A	N9-C4-C5	5.34	107.94	105.80
1	QA	754	C	C6-N1-C1'	-5.34	114.39	120.80
25	RA	229	A	P-O3'-C3'	5.34	126.10	119.70
25	RA	651	G	C4-N9-C1'	5.34	133.44	126.50
25	RA	2340	G	C8-N9-C4	5.34	108.53	106.40
1	XA	26	A	C4-C5-N7	-5.34	108.03	110.70
1	XA	190	G	N3-C4-C5	-5.34	125.93	128.60
1	XA	899	C	O5'-P-OP1	-5.34	100.90	105.70
25	YA	773	U	O5'-P-OP2	-5.34	100.90	105.70
25	YA	1264	G	C5-C6-O6	5.34	131.80	128.60
25	YA	2337	G	N7-C8-N9	5.34	115.77	113.10
25	YA	2360	A	N7-C8-N9	-5.34	111.13	113.80
1	QA	895	G	C5-C6-N1	-5.33	108.83	111.50
1	QA	1356	G	N7-C8-N9	5.33	115.77	113.10
25	RA	2549	G	N3-C4-C5	-5.33	125.93	128.60
25	RA	2592	G	O5'-P-OP1	5.33	117.10	110.70
25	RA	2688	U	N3-C2-O2	-5.33	118.47	122.20
1	XA	566	G	O5'-P-OP2	-5.33	100.90	105.70
1	QA	685	G	N3-C4-C5	5.33	131.27	128.60
1	QA	869	G	C5-N7-C8	-5.33	101.63	104.30
1	QA	963	G	C8-N9-C4	-5.33	104.27	106.40
25	RA	954	G	C4-N9-C1'	5.33	133.43	126.50
25	RA	1643	G	C6-C5-N7	-5.33	127.20	130.40
25	RA	1949	G	N1-C6-O6	5.33	123.10	119.90
25	RA	2000	G	N9-C4-C5	5.33	107.53	105.40
1	XA	8	A	C8-N9-C4	5.33	107.93	105.80
25	YA	494	G	N1-C6-O6	5.33	123.10	119.90
25	YA	539	G	C4-N9-C1'	5.33	133.43	126.50
25	YA	858	U	N3-C2-O2	-5.33	118.47	122.20
25	YA	968	G	N3-C4-N9	-5.33	122.80	126.00
25	YA	1433	U	N3-C4-O4	5.33	123.13	119.40
25	YA	1548	C	N1-C2-O2	5.33	122.10	118.90
25	YA	2070	G	C2-N3-C4	-5.33	109.23	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2331	G	C2-N3-C4	-5.33	109.23	111.90
25	RA	227	A	N1-C6-N6	-5.33	115.40	118.60
25	RA	563	G	C5-C6-N1	5.33	114.17	111.50
25	RA	1263	U	N1-C2-N3	5.33	118.10	114.90
25	RA	2073	C	OP1-P-OP2	-5.33	111.60	119.60
25	RA	2508	G	N3-C4-N9	5.33	129.20	126.00
31	RH	100	GLY	N-CA-C	-5.33	99.77	113.10
1	XA	22	G	C6-C5-N7	-5.33	127.20	130.40
25	YA	671	C	O5'-P-OP1	-5.33	100.90	105.70
25	YA	1815	A	C5-N7-C8	5.33	106.57	103.90
25	YA	1934	C	C2-N1-C1'	5.33	124.67	118.80
25	YA	2000	G	N1-C2-N3	5.33	127.10	123.90
25	YA	2278	A	O4'-C1'-N9	5.33	112.47	108.20
25	RA	2056	G	N3-C4-N9	-5.33	122.80	126.00
1	XA	1490	C	C6-N1-C2	5.33	122.43	120.30
25	YA	1839	G	N3-C4-N9	5.33	129.20	126.00
25	RA	374	A	C8-N9-C4	5.33	107.93	105.80
25	RA	1421	G	C5-C6-N1	-5.33	108.84	111.50
25	RA	1765	C	C6-N1-C2	-5.33	118.17	120.30
25	RA	1987	G	C2-N3-C4	-5.33	109.24	111.90
25	RA	2239	G	N3-C4-C5	-5.33	125.94	128.60
25	RA	2250	G	C5-C6-O6	-5.33	125.40	128.60
25	RA	2544	G	C2-N3-C4	-5.33	109.23	111.90
1	XA	11	G	N9-C4-C5	5.33	107.53	105.40
1	XA	481	G	C8-N9-C4	5.33	108.53	106.40
25	YA	54	G	C2-N3-C4	-5.33	109.24	111.90
25	YA	284	U	N3-C4-O4	5.33	123.13	119.40
25	YA	942	G	N1-C6-O6	5.33	123.10	119.90
25	YA	2049	G	N1-C6-O6	5.33	123.10	119.90
25	YA	2444	G	C5-C6-N1	5.33	114.16	111.50
25	YA	2451	A	C5-N7-C8	-5.33	101.24	103.90
25	RA	1854	A	N1-C6-N6	-5.33	115.40	118.60
1	XA	538	G	N3-C4-C5	-5.33	125.94	128.60
1	QA	664	G	C2-N3-C4	-5.33	109.24	111.90
25	YA	101	G	C4-N9-C1'	-5.33	119.58	126.50
25	YA	108	U	N1-C2-O2	5.33	126.53	122.80
25	YA	1185	C	C6-N1-C2	-5.33	118.17	120.30
25	YA	1594	G	N1-C6-O6	5.33	123.09	119.90
25	YA	2709	G	C5-C6-N1	-5.33	108.84	111.50
25	YA	2774	C	O5'-P-OP2	-5.33	100.91	105.70
1	QA	313	A	C2-N3-C4	5.32	113.26	110.60
25	RA	1791	A	OP2-P-O3'	5.32	116.91	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	865	A	C4-C5-N7	5.32	113.36	110.70
25	YA	783	A	C4-N9-C1'	5.32	135.88	126.30
25	YA	1552	G	N1-C6-O6	5.32	123.09	119.90
25	YA	1665	A	C5-C6-N6	-5.32	119.44	123.70
25	RA	2450	A	C4-C5-C6	5.32	119.66	117.00
1	XA	555	C	C5-C4-N4	-5.32	116.47	120.20
25	RA	2430	A	N1-C2-N3	5.32	131.96	129.30
1	XA	817	C	C6-N1-C2	5.32	122.43	120.30
25	YA	442	G	N1-C2-N3	5.32	127.09	123.90
25	YA	1568	G	N3-C4-N9	-5.32	122.81	126.00
1	QA	1359	C	C6-N1-C2	-5.32	118.17	120.30
1	QA	1239	A	C8-N9-C4	5.32	107.93	105.80
25	RA	1432	C	C6-N1-C2	5.32	122.43	120.30
25	RA	1680	U	N3-C4-C5	-5.32	111.41	114.60
25	RA	2072	G	C8-N9-C4	5.32	108.53	106.40
25	YA	701	G	C8-N9-C4	-5.32	104.27	106.40
25	YA	946	G	C2-N3-C4	-5.32	109.24	111.90
25	YA	2347	C	C6-N1-C2	-5.32	118.17	120.30
25	YA	2401	U	C6-N1-C2	-5.32	117.81	121.00
25	YA	2504	U	N3-C4-O4	5.32	123.12	119.40
25	YA	2672	G	C6-C5-N7	-5.32	127.21	130.40
25	RA	595	C	C5-C4-N4	-5.32	116.48	120.20
25	RA	1388	G	N7-C8-N9	-5.32	110.44	113.10
25	RA	2506	U	C5-C4-O4	5.32	129.09	125.90
25	YA	961	C	N3-C2-O2	-5.32	118.18	121.90
25	YA	1291	C	N3-C4-C5	5.32	124.03	121.90
25	YA	1789	A	O5'-P-OP2	-5.32	100.92	105.70
25	YA	1916	A	N1-C6-N6	5.32	121.79	118.60
1	QA	200	G	C4-N9-C1'	5.31	133.41	126.50
1	QA	792	A	C5-N7-C8	-5.31	101.24	103.90
1	QA	1018	C	C6-N1-C2	-5.31	118.17	120.30
25	RA	1367	A	C4-C5-N7	5.31	113.36	110.70
25	RA	1688	U	C2-N1-C1'	5.31	124.08	117.70
25	RA	2022	U	C2-N1-C1'	-5.31	111.32	117.70
1	XA	813	U	C6-N1-C2	5.31	124.19	121.00
1	QA	1334	G	C4-N9-C1'	5.31	133.41	126.50
1	QA	1516	G	C8-N9-C4	5.31	108.53	106.40
25	RA	1682	G	N9-C4-C5	-5.31	103.28	105.40
1	XA	515	G	C2-N3-C4	-5.31	109.24	111.90
25	YA	650	C	O5'-P-OP1	5.31	117.07	110.70
25	YA	2468	G	N7-C8-N9	5.31	115.76	113.10
25	RA	2394	C	C6-N1-C2	5.31	122.42	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1535	U	C2-N1-C1'	5.31	124.07	117.70
25	RA	391	G	N9-C4-C5	-5.31	103.28	105.40
25	RA	742	G	C4-C5-N7	5.31	112.92	110.80
25	RA	783	A	N9-C4-C5	-5.31	103.68	105.80
25	YA	1323	U	N3-C4-O4	5.31	123.12	119.40
25	YA	1351	C	N1-C2-N3	5.31	122.92	119.20
25	YA	1778	U	N1-C2-N3	-5.31	111.71	114.90
25	YA	1837	C	N3-C4-C5	-5.31	119.78	121.90
25	YA	2362	G	C2-N3-C4	-5.31	109.25	111.90
25	RA	270(W)	G	N3-C4-N9	5.31	129.18	126.00
25	RA	1389	G	N1-C6-O6	-5.31	116.72	119.90
25	RA	2587	A	OP2-P-O3'	5.31	116.88	105.20
25	RA	2817	G	C5-N7-C8	5.31	106.95	104.30
25	YA	2004	G	C2-N3-C4	-5.31	109.25	111.90
1	QA	898	G	C8-N9-C4	5.31	108.52	106.40
25	RA	684	G	N3-C2-N2	-5.31	116.19	119.90
25	RA	1988	C	N3-C2-O2	5.31	125.61	121.90
25	RA	2345	G	N3-C4-C5	5.31	131.25	128.60
1	QA	581	G	C6-C5-N7	-5.30	127.22	130.40
1	QA	971	G	O4'-C1'-N9	5.30	112.44	108.20
25	RA	445	C	OP2-P-O3'	5.30	116.87	105.20
25	RA	805	G	N3-C4-N9	5.30	129.18	126.00
25	RA	1948	G	C5-C6-O6	-5.30	125.42	128.60
25	RA	2215	G	N1-C6-O6	5.30	123.08	119.90
25	RA	2255	G	N3-C4-N9	5.30	129.18	126.00
1	XA	893	C	C6-N1-C1'	-5.30	114.43	120.80
1	XA	1221	G	C5-C6-O6	-5.30	125.42	128.60
25	YA	450	G	N7-C8-N9	5.30	115.75	113.10
25	YA	539	G	C4-C5-C6	5.30	121.98	118.80
25	YA	733	G	O5'-P-OP2	-5.30	100.93	105.70
25	YA	2582	G	N1-C2-N3	5.30	127.08	123.90
26	YB	81	G	C4-N9-C1'	5.30	133.40	126.50
25	RA	1643	G	N1-C6-O6	5.30	123.08	119.90
25	RA	2570	G	C5-C6-O6	-5.30	125.42	128.60
25	RA	2776	A	N7-C8-N9	5.30	116.45	113.80
25	YA	458	G	C5-C6-N1	-5.30	108.85	111.50
25	YA	1595	G	N7-C8-N9	5.30	115.75	113.10
1	QA	885	G	N1-C2-N3	5.30	127.08	123.90
1	QA	1435	G	N3-C4-N9	-5.30	122.82	126.00
25	RA	704	G	C8-N9-C4	5.30	108.52	106.40
25	RA	847	U	C5-C6-N1	-5.30	120.05	122.70
25	RA	1187	G	N7-C8-N9	5.30	115.75	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2240	C	C6-N1-C2	-5.30	118.18	120.30
25	RA	2722	G	N3-C4-C5	-5.30	125.95	128.60
25	RA	2848	G	C2'-C3'-O3'	5.30	122.18	113.70
1	XA	1385	G	N1-C6-O6	5.30	123.08	119.90
25	YA	26	G	C4-C5-C6	5.30	121.98	118.80
25	YA	836	G	O5'-P-OP2	5.30	117.06	110.70
25	YA	1296	G	N3-C4-N9	-5.30	122.82	126.00
25	YA	1319	G	C5-C6-O6	-5.30	125.42	128.60
25	YA	1414	G	C4-C5-N7	5.30	112.92	110.80
25	YA	1834	U	O5'-P-OP1	-5.30	100.93	105.70
25	YA	2607	G	C5-C6-N1	-5.30	108.85	111.50
1	QA	305	G	C5-C6-O6	5.30	131.78	128.60
25	RA	1190	G	N9-C4-C5	5.30	107.52	105.40
1	XA	1158	C	C2-N1-C1'	5.30	124.63	118.80
25	YA	110	G	C8-N9-C4	5.30	108.52	106.40
25	YA	247	G	OP2-P-O3'	5.30	116.86	105.20
25	YA	956	G	N3-C2-N2	5.30	123.61	119.90
25	YA	1468	C	N3-C2-O2	-5.30	118.19	121.90
25	YA	2320	A	N9-C4-C5	5.30	107.92	105.80
25	YA	2591	C	OP1-P-OP2	-5.30	111.65	119.60
1	QA	1049	U	C5-C6-N1	5.30	125.35	122.70
25	RA	1443	G	N1-C6-O6	5.30	123.08	119.90
25	YA	1675	C	N1-C2-O2	-5.30	115.72	118.90
1	QA	250	A	C8-N9-C4	5.30	107.92	105.80
25	RA	784	A	P-O3'-C3'	5.30	126.06	119.70
1	XA	725	G	OP1-P-O3'	5.30	116.85	105.20
1	XA	923	A	O5'-P-OP1	-5.30	100.93	105.70
1	XA	1373	G	C4-C5-C6	5.30	121.98	118.80
1	XA	1397	C	C5-C4-N4	5.30	123.91	120.20
25	YA	1514	U	C5-C6-N1	5.30	125.35	122.70
25	RA	74	A	N1-C2-N3	5.29	131.95	129.30
25	RA	2325	G	C4-C5-C6	5.29	121.98	118.80
1	XA	595	G	P-O3'-C3'	5.29	126.05	119.70
25	YA	2031	A	O5'-P-OP1	-5.29	100.93	105.70
25	YA	2264	C	O5'-P-OP2	5.29	117.05	110.70
25	YA	2275	C	OP1-P-O3'	5.29	116.85	105.20
1	QA	324	G	C8-N9-C4	-5.29	104.28	106.40
1	QA	1419	G	N1-C6-O6	5.29	123.08	119.90
25	RA	1221	C	C6-N1-C2	5.29	122.42	120.30
25	RA	1353	A	N3-C4-C5	-5.29	123.09	126.80
25	RA	1487	G	C5-C6-O6	-5.29	125.42	128.60
25	RA	2638	G	OP2-P-O3'	5.29	116.84	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	RB	47	C	C6-N1-C1'	-5.29	114.45	120.80
25	YA	37	C	C5-C6-N1	-5.29	118.35	121.00
25	YA	132	G	N1-C6-O6	5.29	123.08	119.90
25	YA	1403	C	C4-C5-C6	5.29	120.05	117.40
25	RA	832	G	N3-C2-N2	-5.29	116.20	119.90
25	RA	958	U	C6-N1-C2	-5.29	117.83	121.00
25	RA	2481	G	C8-N9-C4	5.29	108.52	106.40
25	RA	2511	U	N3-C2-O2	-5.29	118.50	122.20
1	XA	1054	C	N1-C2-O2	5.29	122.08	118.90
1	XA	1279	A	C8-N9-C4	-5.29	103.68	105.80
25	YA	1190	G	C2-N3-C4	-5.29	109.25	111.90
25	YA	2239	G	C8-N9-C1'	-5.29	120.12	127.00
25	RA	544	C	C2-N1-C1'	5.29	124.62	118.80
25	RA	2070	G	OP1-P-OP2	-5.29	111.67	119.60
25	RA	2365	G	N3-C2-N2	5.29	123.60	119.90
1	QA	348	G	N3-C4-C5	5.29	131.25	128.60
25	RA	971	C	C5-C4-N4	-5.29	116.50	120.20
25	RA	1334	G	C4-N9-C1'	5.29	133.38	126.50
25	RA	1455	G	C5-C6-N1	5.29	114.14	111.50
25	YA	20	C	C6-N1-C2	5.29	122.42	120.30
25	YA	664	C	C4-C5-C6	5.29	120.04	117.40
25	YA	979	G	C5-C6-N1	-5.29	108.86	111.50
54	Y8	36	LYS	N-CA-C	-5.29	96.72	111.00
1	QA	15	G	C6-C5-N7	-5.29	127.23	130.40
1	QA	558	G	OP1-P-OP2	-5.29	111.67	119.60
1	QA	835	U	C5-C4-O4	5.29	129.07	125.90
25	RA	1664	A	C4-N9-C1'	5.29	135.82	126.30
25	RA	1687	G	N3-C4-C5	-5.29	125.96	128.60
1	XA	138	G	C8-N9-C4	-5.29	104.28	106.40
1	XA	1113	C	N3-C2-O2	-5.29	118.20	121.90
25	YA	1705	G	N1-C6-O6	5.29	123.07	119.90
25	YA	2750	A	C8-N9-C4	-5.29	103.69	105.80
1	QA	1285	A	P-O3'-C3'	5.29	126.04	119.70
1	QA	1382	C	N1-C2-O2	5.29	122.07	118.90
25	RA	530	G	C5-C6-N1	5.29	114.14	111.50
25	RA	2342	C	C5-C6-N1	5.29	123.64	121.00
1	XA	752	G	C8-N9-C1'	-5.29	120.13	127.00
25	YA	84	A	C5-N7-C8	-5.29	101.26	103.90
25	YA	753	C	C6-N1-C1'	-5.29	114.46	120.80
25	YA	1184	G	N3-C4-C5	-5.29	125.96	128.60
25	YA	1478	G	C4-N9-C1'	-5.29	119.63	126.50
25	YA	1521	G	N1-C2-N3	5.29	127.07	123.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1956	U	N1-C2-N3	5.29	118.07	114.90
1	QA	12	U	N3-C2-O2	-5.28	118.50	122.20
1	QA	742	G	C5-C6-N1	-5.28	108.86	111.50
25	RA	2679	A	N7-C8-N9	-5.28	111.16	113.80
25	RA	2838	G	N3-C2-N2	-5.28	116.20	119.90
25	RA	2851	A	C5-N7-C8	-5.28	101.26	103.90
1	XA	21	G	C4-N9-C1'	5.28	133.37	126.50
1	XA	318	G	O5'-P-OP2	-5.28	100.94	105.70
1	XA	806	C	N3-C2-O2	-5.28	118.20	121.90
25	YA	202	U	N3-C4-C5	-5.28	111.43	114.60
25	YA	1592	C	N3-C4-C5	5.28	124.01	121.90
25	YA	1698	A	N7-C8-N9	5.28	116.44	113.80
1	QA	501	C	N3-C2-O2	-5.28	118.20	121.90
25	YA	383	U	N3-C2-O2	-5.28	118.50	122.20
25	YA	452	G	N1-C2-N2	-5.28	111.45	116.20
25	YA	2422	A	N7-C8-N9	-5.28	111.16	113.80
25	YA	2713	A	C8-N9-C4	-5.28	103.69	105.80
25	RA	756	C	C5-C4-N4	-5.28	116.50	120.20
25	RA	808	G	N1-C6-O6	-5.28	116.73	119.90
25	RA	945	A	N1-C6-N6	5.28	121.77	118.60
25	RA	1353	A	N1-C2-N3	5.28	131.94	129.30
25	RA	1998	G	N7-C8-N9	-5.28	110.46	113.10
25	RA	2419	U	C6-N1-C2	-5.28	117.83	121.00
25	RA	2682	U	C5-C6-N1	5.28	125.34	122.70
1	XA	485	G	OP2-P-O3'	5.28	116.82	105.20
1	XA	557	G	C4-C5-N7	5.28	112.91	110.80
1	XA	907	A	C4-C5-N7	5.28	113.34	110.70
1	XA	1339	A	C5-C6-N1	5.28	120.34	117.70
25	YA	1403	C	OP1-P-O3'	5.28	116.82	105.20
25	YA	1773	A	C4-C5-N7	-5.28	108.06	110.70
25	YA	2721	A	N1-C6-N6	5.28	121.77	118.60
25	RA	37	C	N3-C4-C5	5.28	124.01	121.90
25	RA	345	A	P-O3'-C3'	5.28	126.03	119.70
25	RA	583	G	C6-C5-N7	-5.28	127.23	130.40
25	RA	2624	G	C4-C5-N7	5.28	112.91	110.80
1	XA	1316	G	C8-N9-C1'	5.28	133.86	127.00
25	YA	203	C	C2-N3-C4	-5.28	117.26	119.90
25	YA	2665	A	C2-N3-C4	-5.28	107.96	110.60
25	RA	789	A	C6-C5-N7	5.28	135.99	132.30
25	RA	1304	C	C4-C5-C6	-5.28	114.76	117.40
1	XA	21	G	C4-C5-C6	5.28	121.97	118.80
1	XA	1362	C	N1-C2-O2	5.28	122.07	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	121	G	C5-C6-N1	5.28	114.14	111.50
25	YA	1441	G	N1-C6-O6	5.28	123.07	119.90
25	YA	1904	G	C2-N3-C4	5.28	114.54	111.90
25	YA	2052	G	OP2-P-O3'	5.28	116.81	105.20
1	QA	35	G	N3-C4-C5	-5.28	125.96	128.60
1	QA	106	C	C4-C5-C6	5.28	120.04	117.40
1	QA	481	G	P-O3'-C3'	5.28	126.03	119.70
25	RA	454	A	N7-C8-N9	-5.28	111.16	113.80
25	RA	661	C	C6-N1-C2	-5.28	118.19	120.30
25	RA	924	C	C6-N1-C2	-5.28	118.19	120.30
1	XA	637	G	N3-C4-N9	5.28	129.16	126.00
25	YA	187	G	C8-N9-C4	5.28	108.51	106.40
25	YA	1306	C	C5-C4-N4	-5.28	116.51	120.20
25	YA	1984	G	C8-N9-C4	5.28	108.51	106.40
25	RA	34	C	O5'-P-OP1	5.27	117.03	110.70
1	XA	1112	C	C2-N1-C1'	5.27	124.60	118.80
25	YA	832	G	C5-C6-N1	-5.27	108.86	111.50
25	YA	1258	C	C5-C6-N1	-5.27	118.36	121.00
1	QA	226	G	N7-C8-N9	-5.27	110.46	113.10
1	QA	1206	G	N7-C8-N9	5.27	115.74	113.10
25	RA	401	A	C5-C6-N6	5.27	127.92	123.70
25	RA	2779	U	O4'-C1'-N1	5.27	112.42	108.20
54	R8	36	LYS	N-CA-C	-5.27	96.77	111.00
1	XA	126	G	C4-C5-C6	5.27	121.96	118.80
1	XA	186(A)	C	N1-C2-O2	5.27	122.06	118.90
25	YA	482	A	C5-C6-N6	-5.27	119.48	123.70
25	YA	1454	U	C6-N1-C2	5.27	124.16	121.00
25	YA	1904	G	C5-C6-O6	-5.27	125.44	128.60
25	RA	276	A	C8-N9-C4	5.27	107.91	105.80
25	RA	2051	A	N1-C6-N6	5.27	121.76	118.60
25	RA	2371	G	N3-C4-N9	-5.27	122.84	126.00
25	RA	2686	G	C8-N9-C4	5.27	108.51	106.40
1	XA	530	G	C4-N9-C1'	5.27	133.35	126.50
1	XA	800	G	C8-N9-C4	-5.27	104.29	106.40
25	YA	2262	U	N3-C2-O2	-5.27	118.51	122.20
25	RA	1784	A	O4'-C1'-N9	-5.27	103.98	108.20
1	XA	945	G	N1-C6-O6	5.27	123.06	119.90
25	YA	1258	C	N3-C2-O2	5.27	125.59	121.90
25	YA	1560	G	C4-C5-N7	5.27	112.91	110.80
25	YA	2004	G	C4-C5-N7	5.27	112.91	110.80
25	YA	2020	A	N1-C6-N6	-5.27	115.44	118.60
25	YA	2509	G	C6-C5-N7	-5.27	127.24	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	YB	82	G	N9-C4-C5	5.27	107.51	105.40
1	QA	573	A	O5'-P-OP2	-5.27	100.96	105.70
1	QA	612	C	N1-C2-O2	5.27	122.06	118.90
25	RA	126	A	C8-N9-C4	-5.27	103.69	105.80
25	RA	184	C	N3-C4-N4	-5.27	114.31	118.00
25	RA	187	G	N1-C6-O6	5.27	123.06	119.90
25	RA	1193	G	C5-C6-O6	-5.27	125.44	128.60
25	RA	2415	G	C8-N9-C1'	-5.27	120.15	127.00
25	RA	2612	C	O5'-P-OP2	-5.27	100.96	105.70
1	XA	342	C	C6-N1-C2	5.27	122.41	120.30
1	XA	903	G	N1-C2-N3	5.27	127.06	123.90
25	YA	521	G	C5-C6-N1	-5.27	108.87	111.50
25	YA	1151	G	C4-N9-C1'	5.27	133.35	126.50
25	YA	1361	G	C8-N9-C4	5.27	108.51	106.40
25	YA	2028	U	OP1-P-OP2	-5.27	111.70	119.60
25	YA	2277	G	C4-N9-C1'	5.27	133.35	126.50
1	QA	104	G	C6-C5-N7	-5.27	127.24	130.40
1	QA	298	A	C2-N3-C4	-5.27	107.97	110.60
1	QA	1513	A	C4-C5-N7	5.27	113.33	110.70
25	RA	127	A	C4-C5-C6	-5.27	114.37	117.00
25	RA	860	U	O5'-P-OP1	-5.27	100.96	105.70
25	YA	2432	A	C5-C6-N6	-5.27	119.49	123.70
1	QA	754	C	N3-C2-O2	-5.26	118.21	121.90
1	QA	1469	G	C8-N9-C4	-5.26	104.30	106.40
25	RA	2869	G	C6-C5-N7	-5.26	127.24	130.40
25	YA	568	U	C6-N1-C1'	5.26	128.57	121.20
25	YA	928	G	C5-C6-O6	-5.26	125.44	128.60
25	YA	1021	A	N1-C6-N6	5.26	121.76	118.60
25	YA	1273	U	N3-C2-O2	-5.26	118.52	122.20
26	YB	81	G	N3-C4-N9	5.26	129.16	126.00
25	YA	1367	A	C4-C5-C6	5.26	119.63	117.00
1	QA	294	U	O5'-P-OP1	-5.26	100.97	105.70
1	QA	919	A	N9-C4-C5	5.26	107.91	105.80
25	RA	58	G	N7-C8-N9	5.26	115.73	113.10
25	RA	1413	G	C4-C5-N7	5.26	112.91	110.80
25	RA	1502	C	C2-N1-C1'	5.26	124.59	118.80
25	RA	1967	C	C6-N1-C2	5.26	122.40	120.30
25	RA	2145	C	C6-N1-C2	-5.26	118.19	120.30
25	RA	2838	G	N1-C6-O6	5.26	123.06	119.90
25	YA	94	G	N3-C4-C5	-5.26	125.97	128.60
25	YA	267	C	C6-N1-C2	5.26	122.41	120.30
25	YA	672	C	C4-C5-C6	5.26	120.03	117.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	677	A	C5-N7-C8	-5.26	101.27	103.90
25	YA	754	C	N3-C4-N4	-5.26	114.32	118.00
25	YA	793	A	O4'-C1'-N9	-5.26	103.99	108.20
25	YA	2326	C	C5-C6-N1	5.26	123.63	121.00
25	YA	2518	A	C4-C5-N7	5.26	113.33	110.70
25	YA	2599	G	C5-C6-N1	5.26	114.13	111.50
25	YA	2765	A	OP1-P-OP2	5.26	127.49	119.60
26	YB	54	G	C4-C5-C6	5.26	121.96	118.80
1	QA	387	U	O5'-P-OP1	5.26	117.01	110.70
25	RA	1517	G	C6-C5-N7	5.26	133.56	130.40
25	RA	2088	G	C6-C5-N7	-5.26	127.24	130.40
1	XA	314	C	N3-C2-O2	-5.26	118.22	121.90
1	XA	358	U	N3-C2-O2	-5.26	118.52	122.20
1	XA	1416	G	C4-N9-C1'	5.26	133.34	126.50
25	YA	562	U	OP2-P-O3'	5.26	116.77	105.20
25	YA	1142(A)	A	N7-C8-N9	5.26	116.43	113.80
25	RA	1137	G	N9-C4-C5	-5.26	103.30	105.40
1	XA	5	U	C6-N1-C1'	5.26	128.56	121.20
1	XA	784	C	N1-C2-O2	-5.26	115.75	118.90
25	YA	1974	C	N1-C2-O2	5.26	122.06	118.90
25	RA	475	U	N1-C2-N3	5.26	118.05	114.90
25	RA	962	G	N1-C2-N2	5.26	120.93	116.20
25	RA	2262	U	N1-C2-O2	5.26	126.48	122.80
25	YA	209	C	C5-C4-N4	-5.26	116.52	120.20
25	YA	324	A	C8-N9-C4	-5.26	103.70	105.80
25	YA	2481	G	N3-C4-C5	-5.26	125.97	128.60
25	YA	2490	G	N3-C4-C5	5.26	131.23	128.60
25	YA	2721	A	C2-N3-C4	-5.26	107.97	110.60
26	YB	39	A	N7-C8-N9	5.26	116.43	113.80
1	QA	575	G	N1-C6-O6	5.25	123.05	119.90
25	RA	27	G	C2-N3-C4	-5.25	109.27	111.90
25	RA	1601	G	N1-C6-O6	5.25	123.05	119.90
25	RA	2259	G	N1-C6-O6	5.25	123.05	119.90
1	XA	788	U	C5-C4-O4	-5.25	122.75	125.90
25	YA	117	G	C6-C5-N7	-5.25	127.25	130.40
1	QA	495	A	N1-C6-N6	-5.25	115.45	118.60
1	QA	1111	A	C8-N9-C4	-5.25	103.70	105.80
25	RA	676	A	C4-N9-C1'	5.25	135.75	126.30
1	XA	312	C	C2-N1-C1'	5.25	124.58	118.80
1	XA	401	C	O5'-P-OP2	-5.25	100.97	105.70
1	XA	683	G	N3-C4-C5	-5.25	125.97	128.60
1	XA	1323	G	C5-N7-C8	-5.25	101.67	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1889	A	N7-C8-N9	-5.25	111.17	113.80
25	YA	1935	G	C4-N9-C1'	-5.25	119.67	126.50
1	QA	31	G	P-O3'-C3'	5.25	126.00	119.70
1	QA	893	C	N1-C2-O2	5.25	122.05	118.90
25	RA	258	G	C2-N3-C4	-5.25	109.27	111.90
25	RA	793	A	C2-N3-C4	-5.25	107.97	110.60
25	RA	1891	G	N1-C2-N3	5.25	127.05	123.90
25	RA	1992	G	N3-C4-C5	-5.25	125.97	128.60
25	RA	2350	C	C2-N1-C1'	5.25	124.58	118.80
1	XA	494	U	N3-C4-O4	5.25	123.08	119.40
1	XA	759	A	N1-C6-N6	5.25	121.75	118.60
1	XA	1285	A	P-O3'-C3'	5.25	126.00	119.70
1	XA	1341	U	N1-C2-O2	-5.25	119.12	122.80
25	YA	327	G	N9-C4-C5	-5.25	103.30	105.40
25	YA	2004	G	N1-C2-N3	5.25	127.05	123.90
25	YA	2782	G	N3-C4-N9	5.25	129.15	126.00
25	RA	2037	G	N1-C6-O6	-5.25	116.75	119.90
1	XA	774	G	N1-C6-O6	5.25	123.05	119.90
1	XA	944	G	C4-N9-C1'	5.25	133.32	126.50
1	XA	1010	G	N3-C4-C5	5.25	131.22	128.60
25	YA	2532	G	N3-C4-C5	-5.25	125.97	128.60
25	RA	252	G	N3-C2-N2	-5.25	116.23	119.90
25	RA	398	G	N7-C8-N9	-5.25	110.48	113.10
25	RA	1299	G	C5-N7-C8	-5.25	101.68	104.30
25	RA	1496	A	O4'-C1'-N9	5.25	112.40	108.20
25	RA	1678	G	N3-C4-C5	5.25	131.22	128.60
25	RA	2710	C	N1-C2-O2	-5.25	115.75	118.90
1	XA	1415	G	N1-C6-O6	5.25	123.05	119.90
25	YA	176	G	O5'-P-OP1	-5.25	100.98	105.70
25	YA	870	A	N7-C8-N9	-5.25	111.18	113.80
25	YA	1799	G	C5-C6-O6	5.25	131.75	128.60
25	YA	2230	G	C4-C5-N7	5.25	112.90	110.80
25	YA	2247	A	C4-C5-C6	5.25	119.62	117.00
25	YA	2291	U	C6-N1-C2	-5.25	117.85	121.00
26	YB	95	U	C2-N1-C1'	-5.25	111.40	117.70
25	RA	739	G	OP2-P-O3'	5.25	116.74	105.20
25	RA	1144	G	C6-C5-N7	5.25	133.55	130.40
25	RA	2451	A	C8-N9-C4	-5.25	103.70	105.80
25	RA	2589	A	N7-C8-N9	-5.25	111.18	113.80
1	XA	1054	C	C5-C4-N4	-5.25	116.53	120.20
25	YA	270(G)	C	N3-C4-C5	-5.25	119.80	121.90
25	YA	329	G	N1-C6-O6	5.25	123.05	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	529	A	C5-N7-C8	-5.25	101.28	103.90
25	YA	614	U	C6-N1-C2	-5.25	117.85	121.00
25	YA	965	C	N1-C2-O2	-5.25	115.75	118.90
25	YA	977	G	C5-C6-N1	5.25	114.12	111.50
25	YA	1705	G	C5-C6-N1	-5.25	108.88	111.50
25	YA	1818	U	N1-C2-O2	-5.25	119.13	122.80
25	YA	1994	C	C4-C5-C6	5.25	120.02	117.40
25	YA	2093	G	C4-C5-N7	5.25	112.90	110.80
25	YA	2346	A	C4-C5-C6	5.25	119.62	117.00
25	YA	2435	A	N1-C2-N3	5.25	131.92	129.30
25	YA	2714	G	C4-C5-N7	5.25	112.90	110.80
1	XA	799	G	C8-N9-C1'	-5.25	120.18	127.00
1	XA	941	G	C2-N3-C4	5.25	114.52	111.90
25	YA	693	C	N1-C2-N3	5.25	122.87	119.20
25	YA	1238	G	N1-C6-O6	5.25	123.05	119.90
25	YA	1435	G	C5-C6-N1	5.25	114.12	111.50
25	YA	1900	A	C5-C6-N1	5.25	120.32	117.70
25	YA	1933	G	C4-N9-C1'	5.25	133.32	126.50
25	YA	2067	G	N3-C4-N9	-5.25	122.85	126.00
25	YA	2573	C	N3-C4-C5	5.25	124.00	121.90
1	QA	380	G	N1-C6-O6	5.24	123.05	119.90
25	YA	1210	A	C5-N7-C8	-5.24	101.28	103.90
25	YA	2458	G	C8-N9-C4	-5.24	104.30	106.40
25	YA	2710	C	C5-C4-N4	5.24	123.87	120.20
25	RA	2570	G	C4-N9-C1'	5.24	133.31	126.50
25	RA	2744	G	C8-N9-C4	-5.24	104.30	106.40
22	XV	17	C	N3-C2-O2	-5.24	118.23	121.90
25	YA	396	G	C8-N9-C1'	-5.24	120.19	127.00
25	YA	834	C	C6-N1-C2	5.24	122.40	120.30
25	YA	1416	G	N7-C8-N9	-5.24	110.48	113.10
25	YA	1478	G	C4-C5-N7	-5.24	108.70	110.80
25	YA	2246	G	C8-N9-C4	-5.24	104.30	106.40
25	YA	2394	C	C5-C4-N4	-5.24	116.53	120.20
1	QA	1158	C	N3-C2-O2	-5.24	118.23	121.90
25	RA	700	G	C5-C6-O6	-5.24	125.46	128.60
25	RA	793	A	C8-N9-C4	5.24	107.90	105.80
25	RA	1337	G	OP1-P-O3'	5.24	116.73	105.20
25	RA	1421	G	N1-C6-O6	5.24	123.05	119.90
1	XA	116	A	C6-N1-C2	-5.24	115.46	118.60
25	YA	214	G	N1-C6-O6	-5.24	116.75	119.90
25	YA	218	A	C4-C5-C6	-5.24	114.38	117.00
25	YA	1900	A	C2-N3-C4	5.24	113.22	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1382	C	N3-C2-O2	-5.24	118.23	121.90
1	QA	1419	G	C4-C5-N7	5.24	112.89	110.80
25	RA	116	C	C5-C6-N1	5.24	123.62	121.00
1	XA	484	G	C4-N9-C1'	5.24	133.31	126.50
1	XA	1054	C	C5-C6-N1	5.24	123.62	121.00
1	QA	337	C	C2-N1-C1'	5.24	124.56	118.80
25	RA	1201	C	C6-N1-C2	5.24	122.39	120.30
25	RA	1333	C	N3-C4-N4	5.24	121.67	118.00
25	YA	2407	G	C4-C5-C6	5.24	121.94	118.80
25	RA	765	G	C5-N7-C8	-5.24	101.68	104.30
25	RA	1487	G	C4-C5-N7	5.24	112.89	110.80
25	RA	2751	G	N3-C4-C5	-5.24	125.98	128.60
25	YA	73	A	N9-C4-C5	5.24	107.89	105.80
25	YA	1381	G	C8-N9-C4	-5.24	104.31	106.40
25	YA	1568	G	C4-N9-C1'	-5.24	119.69	126.50
1	QA	778	G	C8-N9-C4	-5.23	104.31	106.40
1	XA	1027	C	P-O3'-C3'	5.23	125.98	119.70
1	XA	1506	U	C5-C4-O4	-5.23	122.76	125.90
25	YA	1606	G	C5-N7-C8	5.23	106.92	104.30
1	QA	752	G	N9-C4-C5	-5.23	103.31	105.40
25	RA	1733	G	C6-C5-N7	-5.23	127.26	130.40
25	RA	2606	C	N1-C2-O2	-5.23	115.76	118.90
1	XA	299	G	C6-N1-C2	5.23	128.24	125.10
25	YA	448	U	N3-C2-O2	-5.23	118.54	122.20
25	YA	774	A	C6-C5-N7	-5.23	128.64	132.30
25	YA	783	A	N1-C2-N3	5.23	131.92	129.30
25	YA	793	A	C6-C5-N7	-5.23	128.64	132.30
25	YA	1202	C	OP2-P-O3'	5.23	116.71	105.20
25	YA	1959	G	C5-C6-N1	5.23	114.12	111.50
25	YA	2525	G	C8-N9-C4	5.23	108.49	106.40
25	YA	2583	G	C6-C5-N7	-5.23	127.26	130.40
25	RA	629	G	C4-C5-C6	5.23	121.94	118.80
25	RA	1734	C	C5-C6-N1	5.23	123.61	121.00
26	RB	9	G	C2-N3-C4	5.23	114.52	111.90
1	XA	1480	G	C4-N9-C1'	-5.23	119.70	126.50
25	YA	295	G	C5-C6-N1	-5.23	108.89	111.50
25	YA	1818	U	C6-N1-C1'	5.23	128.52	121.20
25	RA	568	U	C5-C4-O4	5.23	129.04	125.90
25	RA	687	C	C5-C6-N1	5.23	123.61	121.00
25	YA	893	C	N1-C2-O2	5.23	122.04	118.90
25	YA	1160	G	C4-C5-N7	5.23	112.89	110.80
1	QA	1211	U	C5-C6-N1	-5.23	120.09	122.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1372	U	C6-N1-C2	-5.23	117.86	121.00
25	RA	861	A	N1-C2-N3	5.23	131.91	129.30
25	RA	1553	A	C4-C5-C6	5.23	119.61	117.00
25	RA	1835	G	C4-N9-C1'	5.23	133.30	126.50
25	RA	2581	G	N9-C4-C5	5.23	107.49	105.40
1	XA	1488	G	N1-C6-O6	5.23	123.04	119.90
25	YA	570	G	C5-N7-C8	5.23	106.91	104.30
25	YA	1888	G	N3-C4-C5	-5.23	125.99	128.60
1	QA	1401	G	C6-C5-N7	-5.23	127.27	130.40
1	QA	1469	G	C4-C5-C6	5.23	121.94	118.80
25	RA	2710	C	N3-C4-C5	-5.23	119.81	121.90
25	YA	264	C	N1-C2-N3	-5.23	115.54	119.20
25	YA	1316	U	O5'-P-OP2	-5.23	101.00	105.70
25	YA	2244	U	OP1-P-OP2	-5.23	111.76	119.60
36	YQ	5	ARG	N-CA-C	-5.23	96.89	111.00
25	RA	71	A	N9-C4-C5	-5.22	103.71	105.80
25	RA	448	U	C6-N1-C2	5.22	124.14	121.00
25	RA	1115	G	N3-C4-C5	5.22	131.21	128.60
25	RA	1809	A	C4-N9-C1'	5.22	135.70	126.30
25	RA	2345	G	C4-C5-N7	-5.22	108.71	110.80
25	RA	2582	G	N1-C2-N3	5.22	127.03	123.90
1	XA	1103	C	N1-C2-O2	5.22	122.03	118.90
1	XA	1376	U	N1-C2-N3	5.22	118.03	114.90
25	YA	869	G	C5-C6-N1	-5.22	108.89	111.50
25	YA	2249	U	N3-C4-O4	5.22	123.06	119.40
25	YA	2367	G	N1-C6-O6	5.22	123.03	119.90
25	YA	2766	G	C5-C6-O6	-5.22	125.47	128.60
25	RA	1266	G	N7-C8-N9	-5.22	110.49	113.10
25	RA	1696	G	C5-C6-N1	5.22	114.11	111.50
25	RA	2367	G	C4-N9-C1'	5.22	133.29	126.50
25	RA	2372	G	N3-C2-N2	-5.22	116.24	119.90
26	RB	86	G	N9-C4-C5	-5.22	103.31	105.40
1	XA	59	A	C2-N3-C4	5.22	113.21	110.60
1	XA	944	G	C8-N9-C4	-5.22	104.31	106.40
25	YA	961	C	C6-N1-C1'	-5.22	114.53	120.80
25	YA	1315	C	C2-N3-C4	-5.22	117.29	119.90
25	YA	1528	A	C4-C5-C6	5.22	119.61	117.00
25	YA	2383	G	N3-C4-N9	5.22	129.13	126.00
25	YA	2717	G	C5-C6-O6	-5.22	125.47	128.60
25	YA	2751	G	N7-C8-N9	5.22	115.71	113.10
25	RA	1610	A	N7-C8-N9	5.22	116.41	113.80
1	XA	1478	C	C2-N3-C4	-5.22	117.29	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	86	C	OP2-P-O3'	5.22	116.69	105.20
25	YA	844	C	C6-N1-C2	5.22	122.39	120.30
25	YA	953	A	O5'-P-OP1	-5.22	101.00	105.70
25	RA	103	A	C5-C6-N1	-5.22	115.09	117.70
25	RA	756	C	C2-N1-C1'	5.22	124.54	118.80
25	RA	2035	G	O4'-C1'-N9	5.22	112.38	108.20
1	XA	1332	A	C4-C5-C6	5.22	119.61	117.00
1	XA	1487	G	N1-C6-O6	-5.22	116.77	119.90
25	YA	667	U	N3-C2-O2	5.22	125.85	122.20
25	YA	777	A	N1-C2-N3	5.22	131.91	129.30
25	YA	1301	A	C4-C5-C6	5.22	119.61	117.00
26	YB	82	G	C2-N3-C4	-5.22	109.29	111.90
25	RA	1795	C	N3-C4-C5	-5.22	119.81	121.90
1	XA	247	G	C4-C5-C6	5.22	121.93	118.80
1	XA	484	G	C4-C5-N7	-5.22	108.71	110.80
25	YA	768	G	C2-N3-C4	-5.22	109.29	111.90
25	YA	2690	C	C2-N1-C1'	-5.22	113.06	118.80
1	QA	565	U	C2-N1-C1'	5.22	123.96	117.70
1	QA	1513	A	N7-C8-N9	5.22	116.41	113.80
25	RA	55	G	C6-N1-C2	-5.22	121.97	125.10
25	RA	1299	G	C4-C5-N7	5.22	112.89	110.80
25	RA	1979	C	N3-C2-O2	-5.22	118.25	121.90
25	RA	2345	G	C5-C6-O6	5.22	131.73	128.60
25	RA	2579	C	N1-C2-O2	-5.22	115.77	118.90
1	XA	48	C	N1-C2-O2	5.22	122.03	118.90
1	XA	112	G	N7-C8-N9	5.22	115.71	113.10
25	YA	86	C	N3-C4-C5	5.22	123.99	121.90
25	YA	693	C	C5-C6-N1	-5.22	118.39	121.00
25	YA	715	G	C4-C5-N7	5.22	112.89	110.80
25	YA	731	C	C6-N1-C2	5.22	122.39	120.30
25	YA	794	G	N1-C6-O6	5.22	123.03	119.90
25	YA	1125	G	OP1-P-OP2	-5.22	111.78	119.60
25	YA	1136	G	O5'-P-OP2	-5.22	101.00	105.70
1	QA	353	A	C4-C5-C6	-5.21	114.39	117.00
25	RA	921	G	C8-N9-C4	-5.21	104.31	106.40
25	RA	2292	C	C4-C5-C6	-5.21	114.79	117.40
25	RA	2540	C	C2-N3-C4	-5.21	117.29	119.90
1	XA	521	G	C5-C6-N1	5.21	114.11	111.50
25	YA	511	U	O5'-P-OP1	-5.21	101.01	105.70
1	QA	727	G	N1-C6-O6	-5.21	116.77	119.90
25	RA	1984	G	C6-C5-N7	-5.21	127.27	130.40
25	RA	2199	A	C8-N9-C4	-5.21	103.72	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2318	G	C4-N9-C1'	5.21	133.28	126.50
1	XA	854	G	C8-N9-C1'	-5.21	120.22	127.00
1	XA	885	G	N3-C4-N9	-5.21	122.87	126.00
1	XA	1480	G	N3-C4-N9	-5.21	122.87	126.00
25	YA	188	G	N1-C2-N2	-5.21	111.51	116.20
25	YA	191	A	C8-N9-C4	-5.21	103.72	105.80
25	YA	531	C	C4-C5-C6	5.21	120.01	117.40
25	YA	806	C	C6-N1-C2	-5.21	118.22	120.30
25	YA	1560	G	O5'-P-OP2	-5.21	101.01	105.70
25	YA	1572	A	C8-N9-C4	5.21	107.89	105.80
25	YA	2588	G	C5-C6-N1	5.21	114.11	111.50
25	YA	2662	A	C8-N9-C4	-5.21	103.72	105.80
26	YB	31	C	C6-N1-C2	-5.21	118.22	120.30
25	RA	130	C	C2-N3-C4	-5.21	117.29	119.90
25	RA	141	A	C4-C5-N7	5.21	113.31	110.70
25	RA	151	C	N3-C4-C5	5.21	123.98	121.90
25	RA	1612	C	C2-N3-C4	-5.21	117.29	119.90
25	RA	1756	G	C6-C5-N7	-5.21	127.27	130.40
25	RA	1949	G	N3-C4-C5	-5.21	125.99	128.60
1	XA	564	C	N3-C4-C5	-5.21	119.81	121.90
1	XA	865	A	C5-C6-N6	-5.21	119.53	123.70
1	XA	1504	G	N1-C2-N3	5.21	127.03	123.90
25	YA	219	G	C8-N9-C4	-5.21	104.31	106.40
25	YA	250	G	O5'-P-OP1	-5.21	101.01	105.70
25	YA	1487	G	C4-C5-N7	5.21	112.89	110.80
25	YA	2067	G	N3-C2-N2	-5.21	116.25	119.90
25	YA	2069	G	OP2-P-O3'	5.21	116.67	105.20
25	RA	2077	A	C5-C6-N1	-5.21	115.09	117.70
25	YA	521	G	N1-C6-O6	5.21	123.03	119.90
25	YA	570	G	C2-N3-C4	-5.21	109.30	111.90
25	YA	1260	G	N3-C4-C5	-5.21	126.00	128.60
1	QA	716	A	O5'-P-OP1	-5.21	101.01	105.70
25	RA	401	A	C4-C5-N7	-5.21	108.09	110.70
25	RA	856	C	C4-C5-C6	-5.21	114.80	117.40
25	RA	1433	U	C4-C5-C6	-5.21	116.57	119.70
36	RQ	5	ARG	N-CA-C	-5.21	96.94	111.00
1	XA	944	G	C6-C5-N7	-5.21	127.28	130.40
25	YA	486	C	O5'-P-OP1	-5.21	101.01	105.70
25	YA	576	U	C5-C4-O4	-5.21	122.78	125.90
25	YA	2856	C	C6-N1-C2	-5.21	118.22	120.30
1	QA	106	C	OP2-P-O3'	5.21	116.66	105.20
25	RA	577	G	C6-C5-N7	-5.21	127.28	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	817	C	N3-C4-C5	5.21	123.98	121.90
1	XA	732	C	N3-C2-O2	-5.21	118.26	121.90
1	XA	776	G	C8-N9-C4	-5.21	104.32	106.40
25	YA	175	G	C5-C6-N1	-5.21	108.90	111.50
25	YA	681	G	N1-C6-O6	5.21	123.02	119.90
25	YA	1816	G	N1-C6-O6	5.21	123.02	119.90
25	YA	2360	A	N1-C2-N3	5.21	131.90	129.30
25	RA	956	G	N1-C6-O6	5.21	123.02	119.90
1	XA	690	G	O4'-C1'-N9	5.21	112.36	108.20
1	XA	1124	G	C8-N9-C4	-5.21	104.32	106.40
25	YA	1312	U	OP1-P-O3'	5.21	116.65	105.20
1	QA	129	U	C4-C5-C6	5.20	122.82	119.70
25	RA	399	G	C8-N9-C4	5.20	108.48	106.40
25	RA	508	G	P-O3'-C3'	5.20	125.94	119.70
25	YA	391	G	C4-C5-N7	5.20	112.88	110.80
25	YA	474	G	C5-C6-N1	-5.20	108.90	111.50
25	RA	822	U	O4'-C1'-N1	5.20	112.36	108.20
19	XS	79	THR	N-CA-C	-5.20	96.95	111.00
25	YA	381	G	C8-N9-C4	5.20	108.48	106.40
25	YA	759	G	C4-C5-N7	5.20	112.88	110.80
25	YA	859	G	OP2-P-O3'	5.20	116.64	105.20
25	YA	2736	G	C5-C6-N1	-5.20	108.90	111.50
1	QA	284	G	N9-C4-C5	-5.20	103.32	105.40
25	RA	389	G	N1-C6-O6	5.20	123.02	119.90
25	RA	559	G	C5-N7-C8	5.20	106.90	104.30
25	RA	583	G	C8-N9-C4	-5.20	104.32	106.40
25	RA	1521	G	N3-C4-N9	5.20	129.12	126.00
25	RA	2429	G	N3-C4-C5	-5.20	126.00	128.60
25	RA	2429	G	N3-C4-N9	5.20	129.12	126.00
1	XA	121	C	C5-C6-N1	5.20	123.60	121.00
1	XA	1382	C	N1-C2-O2	5.20	122.02	118.90
25	RA	2549	G	C8-N9-C1'	-5.20	120.24	127.00
38	RS	110	LEU	CA-CB-CG	5.20	127.25	115.30
1	XA	509	A	N1-C6-N6	-5.20	115.48	118.60
1	XA	1504	G	C8-N9-C4	-5.20	104.32	106.40
25	YA	333	G	C5-N7-C8	-5.20	101.70	104.30
25	YA	1666	G	C5-C6-O6	-5.20	125.48	128.60
1	QA	921	U	C6-N1-C2	-5.20	117.88	121.00
1	QA	922	G	C4-N9-C1'	5.20	133.26	126.50
25	RA	1276	A	N7-C8-N9	5.20	116.40	113.80
25	YA	852	G	N3-C4-C5	-5.20	126.00	128.60
25	YA	1457	A	C4-C5-C6	5.20	119.60	117.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	244	U	C6-N1-C1'	-5.20	113.93	121.20
1	XA	837	G	N3-C4-C5	-5.20	126.00	128.60
25	YA	508	G	P-O3'-C3'	5.20	125.94	119.70
25	YA	705	A	C2-N3-C4	-5.20	108.00	110.60
25	YA	906	G	C8-N9-C4	-5.20	104.32	106.40
25	YA	916	G	N7-C8-N9	5.20	115.70	113.10
25	YA	952	G	N3-C4-N9	5.20	129.12	126.00
25	YA	1251	C	O5'-P-OP2	-5.20	101.02	105.70
25	YA	1989	G	C2-N3-C4	-5.20	109.30	111.90
38	YS	110	LEU	CA-CB-CG	5.20	127.25	115.30
1	QA	259	G	C2-N3-C4	-5.19	109.30	111.90
1	QA	703	G	C2-N3-C4	5.19	114.50	111.90
1	QA	1392	G	N3-C4-C5	5.19	131.20	128.60
25	RA	116	C	O4'-C1'-N1	5.19	112.36	108.20
25	RA	209	C	C2-N1-C1'	-5.19	113.09	118.80
25	RA	1376	C	N1-C2-O2	5.19	122.02	118.90
26	RB	75	G	C8-N9-C1'	-5.19	120.25	127.00
25	YA	1890	A	C5-N7-C8	-5.19	101.30	103.90
1	QA	247	G	C5-C6-N1	-5.19	108.90	111.50
25	RA	271(C)	U	C6-N1-C2	-5.19	117.89	121.00
25	RA	726	G	N1-C6-O6	-5.19	116.78	119.90
25	RA	1458	C	N3-C4-C5	5.19	123.98	121.90
25	RA	1628	G	N1-C6-O6	5.19	123.02	119.90
25	RA	2342	C	N1-C2-O2	5.19	122.02	118.90
26	RB	28	C	O5'-P-OP2	-5.19	101.03	105.70
1	XA	703	G	C5-C6-O6	5.19	131.72	128.60
1	XA	792	A	C6-N1-C2	5.19	121.72	118.60
25	YA	1500	G	N3-C4-C5	-5.19	126.00	128.60
25	YA	2296	U	C6-N1-C2	-5.19	117.89	121.00
25	YA	2454	G	OP2-P-O3'	5.19	116.62	105.20
25	YA	2553	G	OP1-P-O3'	5.19	116.62	105.20
25	RA	71	A	O5'-P-OP2	-5.19	101.03	105.70
25	RA	949	C	C5-C6-N1	-5.19	118.41	121.00
25	RA	1990	C	N3-C4-C5	-5.19	119.82	121.90
25	RA	2042	A	C5-C6-N1	-5.19	115.10	117.70
26	RB	84	C	C6-N1-C2	5.19	122.38	120.30
32	RI	72	LEU	CA-CB-CG	5.19	127.24	115.30
1	XA	190	G	C2-N3-C4	5.19	114.50	111.90
1	XA	1412	C	N3-C4-C5	5.19	123.98	121.90
25	YA	179	G	C6-C5-N7	-5.19	127.29	130.40
25	YA	494	G	C5-N7-C8	-5.19	101.70	104.30
25	YA	2029	G	C4-C5-N7	-5.19	108.72	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2256	G	N3-C2-N2	5.19	123.53	119.90
25	YA	2501	C	OP2-P-O3'	5.19	116.62	105.20
1	QA	374	A	C4-C5-N7	5.19	113.29	110.70
1	QA	1473	A	N7-C8-N9	-5.19	111.21	113.80
1	XA	1159	U	O4'-C1'-N1	5.19	112.35	108.20
25	YA	16	G	N1-C6-O6	5.19	123.01	119.90
25	YA	117	G	C4-N9-C1'	5.19	133.25	126.50
25	YA	2495	G	N1-C6-O6	5.19	123.01	119.90
25	YA	2506	U	N3-C4-O4	-5.19	115.77	119.40
1	QA	724	G	N9-C4-C5	-5.19	103.33	105.40
25	RA	203	C	N3-C2-O2	5.19	125.53	121.90
25	RA	503	A	C6-N1-C2	-5.19	115.49	118.60
25	RA	702	G	C5-C6-N1	-5.19	108.91	111.50
25	RA	1462	C	C6-N1-C2	-5.19	118.22	120.30
25	RA	1776	G	N7-C8-N9	5.19	115.69	113.10
25	RA	2576	G	N7-C8-N9	5.19	115.69	113.10
25	RA	2617	C	C5-C6-N1	-5.19	118.41	121.00
1	XA	432	A	N1-C2-N3	-5.19	126.71	129.30
25	YA	1183	G	C4-C5-N7	5.19	112.88	110.80
25	YA	1368	G	C4-N9-C1'	5.19	133.24	126.50
25	YA	1762	A	C5-C6-N6	5.19	127.85	123.70
25	YA	1770	G	N1-C6-O6	5.19	123.01	119.90
25	RA	1268	A	N9-C4-C5	5.19	107.87	105.80
25	RA	1299	G	C4-C5-C6	-5.19	115.69	118.80
25	RA	1817	G	C6-C5-N7	-5.19	127.29	130.40
25	RA	2716	U	N3-C4-O4	5.19	123.03	119.40
1	XA	992	U	P-O3'-C3'	5.19	125.92	119.70
25	YA	2307	G	C8-N9-C4	-5.19	104.33	106.40
25	YA	2312	U	N3-C4-O4	5.19	123.03	119.40
25	YA	2428	G	N1-C6-O6	5.19	123.01	119.90
1	QA	53	A	N7-C8-N9	5.18	116.39	113.80
25	RA	145	G	C8-N9-C4	5.18	108.47	106.40
25	RA	855	G	C6-C5-N7	-5.18	127.29	130.40
25	RA	2335	A	O4'-C1'-N9	5.18	112.35	108.20
25	RA	2544	G	C4-C5-N7	5.18	112.87	110.80
25	RA	2822	G	N1-C6-O6	5.18	123.01	119.90
25	YA	827	U	N3-C4-O4	-5.18	115.77	119.40
25	YA	1222	C	C6-N1-C2	5.18	122.37	120.30
25	YA	1408	C	C6-N1-C2	-5.18	118.23	120.30
25	YA	1642	G	C4-C5-C6	5.18	121.91	118.80
25	YA	2318	G	C6-C5-N7	-5.18	127.29	130.40
25	YA	2572	A	C8-N9-C4	-5.18	103.73	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2681	C	C5-C6-N1	5.18	123.59	121.00
25	YA	2691	C	N3-C2-O2	5.18	125.53	121.90
25	RA	363(C)	G	N3-C4-C5	5.18	131.19	128.60
25	RA	1142(A)	A	N3-C4-C5	5.18	130.43	126.80
25	RA	1441	G	C8-N9-C4	5.18	108.47	106.40
25	RA	1528	A	N7-C8-N9	5.18	116.39	113.80
25	RA	2826	A	C2-N3-C4	-5.18	108.01	110.60
1	XA	801	U	C2-N3-C4	-5.18	123.89	127.00
25	YA	376	C	C5-C6-N1	-5.18	118.41	121.00
25	YA	761	A	C8-N9-C4	-5.18	103.73	105.80
25	YA	792	G	OP1-P-OP2	5.18	127.38	119.60
25	YA	1156	A	N1-C6-N6	5.18	121.71	118.60
25	YA	1444	G	N3-C4-C5	-5.18	126.01	128.60
25	YA	2015	A	O5'-P-OP2	5.18	116.92	110.70
25	YA	2385	C	N3-C4-C5	5.18	123.97	121.90
25	YA	2677	G	C4-C5-C6	5.18	121.91	118.80
25	RA	1342	A	C4-N9-C1'	-5.18	116.97	126.30
25	RA	2831	G	C4-C5-C6	5.18	121.91	118.80
25	YA	856	C	N3-C4-N4	5.18	121.63	118.00
25	YA	1264	G	C5-N7-C8	5.18	106.89	104.30
25	YA	2053	G	C5-N7-C8	-5.18	101.71	104.30
25	YA	2573	C	C2-N1-C1'	5.18	124.50	118.80
1	QA	11	G	C8-N9-C4	-5.18	104.33	106.40
1	QA	332	G	C5-C6-N1	5.18	114.09	111.50
1	QA	496	A	N9-C4-C5	5.18	107.87	105.80
25	RA	1264	G	OP2-P-O3'	5.18	116.59	105.20
25	RA	1522	G	O4'-C1'-N9	5.18	112.34	108.20
1	XA	1204	A	N9-C4-C5	-5.18	103.73	105.80
1	XA	1352	C	C6-N1-C2	-5.18	118.23	120.30
1	XA	1455	G	C4-N9-C1'	-5.18	119.77	126.50
25	RA	1334	G	N3-C4-C5	-5.18	126.01	128.60
25	RA	2449	U	C2-N1-C1'	5.18	123.91	117.70
25	YA	534	U	N1-C2-N3	5.18	118.01	114.90
25	YA	1984	G	C6-C5-N7	-5.18	127.29	130.40
25	YA	2329	G	N7-C8-N9	-5.18	110.51	113.10
1	QA	716	A	C6-C5-N7	-5.18	128.68	132.30
25	RA	1776	G	N9-C4-C5	-5.18	103.33	105.40
25	RA	2048	G	C4-C5-C6	5.18	121.91	118.80
25	RA	2418	A	C8-N9-C4	5.18	107.87	105.80
25	RA	2844	G	C4-C5-N7	5.18	112.87	110.80
25	YA	1029	A	OP1-P-OP2	-5.18	111.83	119.60
25	YA	2466	C	C2-N3-C4	-5.18	117.31	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	26	A	C6-C5-N7	5.17	135.92	132.30
1	QA	1340	A	C6-C5-N7	-5.17	128.68	132.30
25	RA	74	A	O4'-C1'-N9	-5.17	104.06	108.20
25	RA	258	G	C5-C6-N1	-5.17	108.91	111.50
1	XA	320	C	C2-N1-C1'	-5.17	113.11	118.80
25	YA	228	A	C6-C5-N7	-5.17	128.68	132.30
25	YA	382	G	C4-C5-N7	5.17	112.87	110.80
25	YA	1401	G	C4-C5-C6	5.17	121.90	118.80
25	YA	2213	U	O4'-C1'-N1	5.17	112.34	108.20
25	YA	2225	A	C5-C6-N1	5.17	120.29	117.70
25	RA	974	G	C2-N3-C4	5.17	114.49	111.90
25	YA	2430	A	N1-C6-N6	5.17	121.70	118.60
1	QA	1417	G	C8-N9-C1'	-5.17	120.28	127.00
25	RA	270(X)	G	C2-N3-C4	-5.17	109.31	111.90
25	RA	595	C	C5-C6-N1	5.17	123.59	121.00
25	RA	941	A	N1-C6-N6	-5.17	115.50	118.60
25	RA	1195	G	N7-C8-N9	5.17	115.69	113.10
25	RA	2237	G	C8-N9-C1'	-5.17	120.28	127.00
25	RA	2447	G	P-O3'-C3'	5.17	125.91	119.70
1	XA	522	C	C6-N1-C2	5.17	122.37	120.30
1	XA	782	A	C2-N3-C4	-5.17	108.02	110.60
1	XA	853	G	N9-C4-C5	-5.17	103.33	105.40
25	YA	354	G	C4-C5-N7	5.17	112.87	110.80
25	YA	874	G	N9-C1'-C2'	-5.17	106.31	112.00
25	YA	974	G	C5-N7-C8	-5.17	101.71	104.30
25	YA	1250	G	C4-N9-C1'	-5.17	119.78	126.50
25	YA	1484	G	C5-C6-N1	-5.17	108.92	111.50
25	YA	1500	G	N3-C4-N9	5.17	129.10	126.00
25	YA	2655	G	OP2-P-O3'	5.17	116.58	105.20
26	YB	108	C	C5-C6-N1	-5.17	118.41	121.00
25	RA	933	A	N1-C6-N6	5.17	121.70	118.60
25	RA	1239	G	C4-C5-N7	5.17	112.87	110.80
25	RA	1313	U	OP1-P-O3'	5.17	116.58	105.20
1	XA	1061	G	C6-C5-N7	-5.17	127.30	130.40
25	YA	715	G	N3-C2-N2	5.17	123.52	119.90
25	YA	836	G	N3-C4-N9	5.17	129.10	126.00
25	YA	2351	G	N3-C4-C5	-5.17	126.02	128.60
1	QA	502	G	N1-C6-O6	5.17	123.00	119.90
25	RA	607	U	N3-C4-O4	-5.17	115.78	119.40
25	RA	1137	G	C4-C5-N7	5.17	112.87	110.80
25	RA	1651	G	N3-C4-N9	5.17	129.10	126.00
25	RA	1894	C	C2-N3-C4	-5.17	117.32	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2290	G	C5-C6-N1	-5.17	108.92	111.50
25	RA	2523	G	C8-N9-C1'	-5.17	120.28	127.00
25	YA	1325	G	C4-C5-N7	-5.17	108.73	110.80
25	YA	1473	G	C5-C6-N1	-5.17	108.92	111.50
25	RA	840	C	OP1-P-OP2	5.17	127.35	119.60
25	RA	2194	G	N3-C4-C5	-5.17	126.02	128.60
1	XA	317	G	C6-C5-N7	-5.17	127.30	130.40
25	YA	1891	G	C4-C5-N7	5.17	112.87	110.80
25	YA	2006	C	C6-N1-C2	5.17	122.37	120.30
25	YA	2685	G	C4-C5-N7	-5.17	108.73	110.80
25	RA	393	C	N1-C2-N3	5.17	122.81	119.20
25	RA	1050	A	C8-N9-C4	-5.17	103.73	105.80
25	YA	240	G	C6-C5-N7	-5.17	127.30	130.40
25	YA	2005	A	N9-C4-C5	5.17	107.87	105.80
1	QA	1183	A	N7-C8-N9	-5.16	111.22	113.80
25	RA	686	G	N3-C4-C5	-5.16	126.02	128.60
25	RA	1696	G	C2-N3-C4	5.16	114.48	111.90
25	YA	406	G	C6-C5-N7	-5.16	127.30	130.40
25	YA	1027	A	N1-C6-N6	5.16	121.70	118.60
25	YA	1549	C	P-O3'-C3'	-5.16	113.50	119.70
1	QA	1235	U	C6-N1-C2	-5.16	117.90	121.00
25	RA	1624	G	C4-C5-N7	5.16	112.86	110.80
25	YA	788	A	N1-C2-N3	-5.16	126.72	129.30
25	YA	1135	C	N1-C2-N3	-5.16	115.59	119.20
25	YA	2470	G	N3-C4-N9	-5.16	122.90	126.00
25	YA	2616	C	N1-C2-O2	-5.16	115.80	118.90
1	QA	107	G	N3-C4-C5	5.16	131.18	128.60
1	QA	716	A	N7-C8-N9	5.16	116.38	113.80
25	RA	1678	G	C2-N3-C4	-5.16	109.32	111.90
25	YA	63	U	C4-C5-C6	5.16	122.80	119.70
25	YA	244	A	N1-C2-N3	-5.16	126.72	129.30
25	YA	704	G	N1-C2-N3	5.16	127.00	123.90
25	YA	941	A	C8-N9-C4	-5.16	103.74	105.80
25	YA	1698	A	P-O3'-C3'	5.16	125.89	119.70
25	YA	2080	G	N1-C2-N3	5.16	127.00	123.90
25	YA	2542	A	P-O3'-C3'	-5.16	113.51	119.70
1	QA	785	G	C5-C6-N1	-5.16	108.92	111.50
1	QA	1081	G	O5'-P-OP2	5.16	116.89	110.70
25	RA	926	A	C4-C5-N7	5.16	113.28	110.70
25	RA	1792	G	N9-C4-C5	-5.16	103.34	105.40
25	YA	752	A	O5'-P-OP1	-5.16	101.06	105.70
25	YA	1899	G	C5-N7-C8	-5.16	101.72	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	YB	112	G	N1-C6-O6	5.16	123.00	119.90
25	RA	2067	G	N1-C6-O6	-5.16	116.81	119.90
1	XA	101	A	C8-N9-C4	-5.16	103.74	105.80
1	QA	5	U	P-O3'-C3'	5.16	125.89	119.70
19	QS	79	THR	N-CA-C	-5.16	97.08	111.00
25	RA	249	C	C2-N1-C1'	-5.16	113.13	118.80
25	RA	532	A	O4'-C1'-N9	5.16	112.33	108.20
25	RA	1458	C	C6-N1-C2	5.16	122.36	120.30
25	RA	1951	U	C4-C5-C6	5.16	122.79	119.70
25	RA	2504	U	N1-C2-N3	-5.16	111.81	114.90
25	RA	2820	A	P-O3'-C3'	5.16	125.89	119.70
1	XA	1084	G	C4-C5-N7	-5.16	108.74	110.80
25	YA	960	A	N3-C4-C5	5.16	130.41	126.80
25	YA	1010	A	OP2-P-O3'	5.16	116.54	105.20
25	YA	1377	G	C8-N9-C1'	-5.16	120.30	127.00
25	YA	1551	C	N1-C2-O2	-5.16	115.81	118.90
25	YA	2450	A	C6-N1-C2	-5.16	115.51	118.60
25	YA	2470	G	C4-N9-C1'	-5.16	119.80	126.50
1	QA	11	G	O5'-P-OP1	-5.15	101.06	105.70
1	XA	698	G	C5-C6-O6	-5.15	125.51	128.60
1	XA	1145	C	P-O3'-C3'	5.15	125.88	119.70
25	YA	382	G	C8-N9-C1'	5.15	133.70	127.00
25	YA	793	A	N1-C6-N6	5.15	121.69	118.60
25	YA	1383	C	C5-C6-N1	5.15	123.58	121.00
25	YA	2859	G	C5-C6-O6	5.15	131.69	128.60
25	RA	459	U	N1-C2-N3	5.15	117.99	114.90
25	RA	1274	A	N3-C4-N9	-5.15	123.28	127.40
25	RA	1496	A	C4-C5-C6	5.15	119.58	117.00
1	XA	29	G	N9-C4-C5	-5.15	103.34	105.40
1	XA	138	G	C6-C5-N7	-5.15	127.31	130.40
25	YA	410	G	O5'-P-OP1	-5.15	101.06	105.70
25	YA	1597	A	N7-C8-N9	-5.15	111.22	113.80
25	YA	2497	A	N1-C6-N6	5.15	121.69	118.60
25	YA	2622	C	N3-C4-N4	-5.15	114.39	118.00
25	YA	2646	C	C5-C6-N1	5.15	123.58	121.00
1	QA	108	G	C8-N9-C1'	-5.15	120.31	127.00
1	QA	772	U	O5'-P-OP1	5.15	116.88	110.70
1	QA	864	A	C2-N3-C4	5.15	113.17	110.60
25	RA	637	A	P-O3'-C3'	5.15	125.88	119.70
25	RA	2598	A	N1-C6-N6	-5.15	115.51	118.60
25	YA	228	A	N7-C8-N9	5.15	116.38	113.80
25	YA	270(Z)	U	C2-N1-C1'	-5.15	111.52	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	728	G	N3-C4-C5	-5.15	126.03	128.60
25	YA	1132	A	C2-N3-C4	5.15	113.17	110.60
25	YA	1182	A	N1-C6-N6	5.15	121.69	118.60
25	YA	1286	A	C5-C6-N1	5.15	120.28	117.70
25	YA	2271	G	C4-N9-C1'	5.15	133.20	126.50
25	YA	2316	C	C6-N1-C2	-5.15	118.24	120.30
25	RA	1826	G	N1-C6-O6	5.15	122.99	119.90
25	RA	2046	G	C5-C6-N1	5.15	114.07	111.50
25	RA	2686	G	O5'-P-OP2	-5.15	101.07	105.70
25	RA	2830	G	N1-C6-O6	5.15	122.99	119.90
25	YA	792	G	N3-C4-N9	5.15	129.09	126.00
25	YA	2446	G	C8-N9-C4	-5.15	104.34	106.40
25	YA	2545	G	O5'-P-OP2	-5.15	101.07	105.70
1	QA	758	G	N3-C4-N9	-5.15	122.91	126.00
1	QA	1490	C	C5-C6-N1	-5.15	118.43	121.00
25	RA	1773	A	C6-C5-N7	-5.15	128.70	132.30
25	RA	1846	G	C4-C5-C6	5.15	121.89	118.80
25	RA	2441	C	N1-C2-O2	-5.15	115.81	118.90
25	RA	2448	A	C8-N9-C4	-5.15	103.74	105.80
25	RA	2577	A	O5'-P-OP2	-5.15	101.07	105.70
1	XA	763	G	C8-N9-C4	-5.15	104.34	106.40
25	YA	240	G	C8-N9-C1'	-5.15	120.31	127.00
25	YA	355	G	C5-C6-N1	-5.15	108.93	111.50
25	YA	1141	U	C6-N1-C2	-5.15	117.91	121.00
25	YA	1325	G	N9-C4-C5	5.15	107.46	105.40
25	YA	1817	G	C8-N9-C4	-5.15	104.34	106.40
25	YA	1878	G	N1-C6-O6	5.15	122.99	119.90
25	YA	1971	A	N1-C6-N6	5.15	121.69	118.60
25	YA	2060	A	C4-C5-C6	5.15	119.57	117.00
1	QA	397	A	N3-C4-C5	-5.15	123.20	126.80
25	RA	1275	A	C8-N9-C4	5.15	107.86	105.80
25	RA	1624	G	C4-C5-C6	5.15	121.89	118.80
25	RA	2433	A	C8-N9-C4	-5.15	103.74	105.80
1	XA	812	C	N3-C2-O2	-5.15	118.30	121.90
25	YA	1968	G	C6-C5-N7	-5.15	127.31	130.40
25	RA	28	A	N9-C4-C5	5.14	107.86	105.80
25	RA	465	G	N1-C6-O6	5.14	122.99	119.90
25	RA	862	G	C8-N9-C4	-5.14	104.34	106.40
25	RA	1772	G	C5-C6-O6	-5.14	125.51	128.60
25	RA	2311	A	C5-C6-N1	-5.14	115.13	117.70
1	XA	584	G	C8-N9-C1'	-5.14	120.31	127.00
1	XA	1419	G	N3-C4-C5	5.14	131.17	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	953	A	C2-N3-C4	-5.14	108.03	110.60
25	YA	1020	A	N1-C6-N6	5.14	121.69	118.60
25	YA	1048	A	C8-N9-C4	-5.14	103.74	105.80
25	YA	1196	C	N3-C4-N4	5.14	121.60	118.00
25	YA	2376	A	C8-N9-C4	5.14	107.86	105.80
25	YA	2694	G	C4-C5-N7	5.14	112.86	110.80
1	QA	869	G	N3-C4-C5	5.14	131.17	128.60
25	RA	557	U	N3-C2-O2	-5.14	118.60	122.20
25	RA	2095	C	C5-C6-N1	5.14	123.57	121.00
25	RA	2333	A	N1-C6-N6	-5.14	115.51	118.60
1	XA	1064	G	N3-C4-C5	5.14	131.17	128.60
25	YA	1297	C	N1-C2-O2	-5.14	115.81	118.90
25	YA	1542	G	C4-N9-C1'	5.14	133.19	126.50
1	QA	263	A	C8-N9-C4	5.14	107.86	105.80
25	YA	2734	A	C8-N9-C4	-5.14	103.74	105.80
25	RA	1286	A	C5-C6-N1	5.14	120.27	117.70
25	RA	1543	A	C2-N3-C4	-5.14	108.03	110.60
1	XA	35	G	N9-C4-C5	5.14	107.46	105.40
1	XA	553	A	N1-C6-N6	-5.14	115.52	118.60
1	XA	1189	C	C2-N3-C4	5.14	122.47	119.90
25	YA	1052	C	C6-N1-C2	-5.14	118.24	120.30
25	YA	1271	G	C4-N9-C1'	5.14	133.18	126.50
25	YA	1622	G	N1-C6-O6	5.14	122.98	119.90
25	YA	2430	A	N1-C2-N3	5.14	131.87	129.30
25	RA	2755	C	C6-N1-C2	-5.14	118.25	120.30
1	QA	1354	C	C5-C6-N1	5.14	123.57	121.00
25	YA	1026	U	OP1-P-O3'	5.14	116.50	105.20
25	YA	1142(A)	A	C5-C6-N1	-5.14	115.13	117.70
26	YB	102	G	OP2-P-O3'	5.14	116.50	105.20
1	QA	1401	G	C4-N9-C1'	5.13	133.17	126.50
25	RA	1903	G	OP2-P-O3'	5.13	116.50	105.20
25	RA	2492	U	C5-C6-N1	5.13	125.27	122.70
1	XA	776	G	N1-C6-O6	5.13	122.98	119.90
25	YA	80	G	C5-C6-N1	-5.13	108.93	111.50
25	YA	1698	A	N1-C2-N3	5.13	131.87	129.30
1	QA	793	U	C5-C4-O4	5.13	128.98	125.90
25	RA	1437	C	C2-N1-C1'	5.13	124.45	118.80
25	RA	2235	G	C6-C5-N7	-5.13	127.32	130.40
25	YA	1674	G	N3-C4-C5	-5.13	126.03	128.60
25	YA	1699	G	C6-C5-N7	5.13	133.48	130.40
25	YA	1985	G	N3-C4-C5	-5.13	126.03	128.60
25	YA	2056	G	OP2-P-O3'	5.13	116.49	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	26	G	C4-C5-N7	-5.13	108.75	110.80
1	XA	690	G	C5-C6-N1	-5.13	108.93	111.50
1	XA	1099	G	N9-C4-C5	5.13	107.45	105.40
25	YA	94	G	C8-N9-C4	-5.13	104.35	106.40
25	YA	1978	A	C5-C6-N1	-5.13	115.13	117.70
25	YA	2822	G	C2-N3-C4	-5.13	109.33	111.90
1	XA	919	A	N9-C4-C5	5.13	107.85	105.80
1	XA	1370	G	C8-N9-C4	-5.13	104.35	106.40
1	XA	1422	G	C8-N9-C1'	-5.13	120.33	127.00
1	XA	1514	C	C2-N3-C4	-5.13	117.34	119.90
25	YA	191	A	C4-C5-C6	5.13	119.56	117.00
25	YA	295	G	C4-C5-N7	5.13	112.85	110.80
25	YA	494	G	C4-N9-C1'	5.13	133.17	126.50
25	YA	733	G	N7-C8-N9	5.13	115.66	113.10
25	YA	1164	G	C8-N9-C4	5.13	108.45	106.40
25	YA	1788	C	N3-C2-O2	5.13	125.49	121.90
25	YA	1907	G	N3-C4-C5	5.13	131.16	128.60
25	YA	2011	U	OP1-P-OP2	5.13	127.29	119.60
25	YA	2434	A	N1-C2-N3	-5.13	126.74	129.30
1	QA	731	G	N1-C6-O6	5.13	122.98	119.90
1	QA	1268	A	C4-C5-N7	-5.13	108.14	110.70
25	RA	110	G	C8-N9-C1'	5.13	133.66	127.00
25	RA	1300	U	N1-C2-N3	5.13	117.98	114.90
25	RA	2709	G	C6-C5-N7	-5.13	127.33	130.40
1	XA	138	G	N1-C6-O6	5.13	122.98	119.90
1	XA	799	G	N3-C4-C5	-5.13	126.04	128.60
1	XA	1491	G	O5'-P-OP2	-5.13	101.08	105.70
25	YA	208	C	C2-N3-C4	-5.13	117.34	119.90
25	YA	352	G	N3-C4-C5	5.13	131.16	128.60
25	YA	465	G	C8-N9-C1'	-5.13	120.34	127.00
25	YA	718	A	C4-C5-C6	5.13	119.56	117.00
25	YA	1908	C	N1-C2-N3	5.13	122.79	119.20
1	QA	34	C	N1-C2-O2	5.12	121.97	118.90
1	QA	54	C	N1-C2-O2	-5.12	115.83	118.90
1	QA	366	C	C5-C6-N1	-5.12	118.44	121.00
1	QA	1079	G	C4-C5-N7	-5.12	108.75	110.80
25	YA	1141	U	C5-C4-O4	5.12	128.97	125.90
1	QA	519	C	C6-N1-C2	5.12	122.35	120.30
25	RA	628	G	C5-C6-N1	5.12	114.06	111.50
25	RA	1017	G	C5-C6-O6	-5.12	125.53	128.60
25	RA	1389	G	N3-C4-C5	-5.12	126.04	128.60
25	RA	1669	A	C5-C6-N1	5.12	120.26	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1803	A	N7-C8-N9	-5.12	111.24	113.80
25	RA	2453	A	N1-C2-N3	-5.12	126.74	129.30
25	RA	2869	G	C4-C5-C6	5.12	121.87	118.80
25	YA	196	A	N9-C4-C5	-5.12	103.75	105.80
25	YA	443	A	C4-C5-C6	5.12	119.56	117.00
25	YA	1271	G	C2-N3-C4	-5.12	109.34	111.90
25	YA	1768	U	N3-C4-C5	-5.12	111.53	114.60
1	QA	195	A	C8-N9-C4	-5.12	103.75	105.80
1	QA	773	G	N1-C6-O6	5.12	122.97	119.90
25	RA	608	A	N7-C8-N9	5.12	116.36	113.80
25	YA	832	G	N7-C8-N9	5.12	115.66	113.10
25	YA	1734	C	C5-C4-N4	5.12	123.78	120.20
25	YA	1810	A	C8-N9-C4	-5.12	103.75	105.80
25	YA	2698	U	C5-C4-O4	5.12	128.97	125.90
22	QV	17	C	N3-C2-O2	-5.12	118.32	121.90
25	RA	2573	C	N3-C4-N4	5.12	121.58	118.00
25	RA	2635	C	C4-C5-C6	5.12	119.96	117.40
1	QA	119	A	N7-C8-N9	-5.12	111.24	113.80
25	RA	328	U	C5-C6-N1	-5.12	120.14	122.70
25	RA	1992	G	C2-N3-C4	5.12	114.46	111.90
25	RA	2267	A	N1-C6-N6	-5.12	115.53	118.60
25	RA	2385	C	N1-C2-O2	-5.12	115.83	118.90
1	XA	273	A	N7-C8-N9	5.12	116.36	113.80
1	XA	740	U	C5-C4-O4	5.12	128.97	125.90
25	YA	325	G	N3-C4-N9	5.12	129.07	126.00
25	YA	1470	G	N1-C6-O6	5.12	122.97	119.90
25	YA	1758	G	C5-C6-O6	5.12	131.67	128.60
25	YA	1778	U	C6-N1-C2	5.12	124.07	121.00
25	YA	2766	G	C8-N9-C1'	-5.12	120.35	127.00
25	YA	2788	C	N1-C2-O2	5.12	121.97	118.90
25	RA	639	U	C2-N1-C1'	-5.12	111.56	117.70
25	RA	1283	G	C4-C5-N7	-5.12	108.75	110.80
1	XA	288	A	N9-C1'-C2'	-5.12	106.37	112.00
1	XA	698	G	C8-N9-C1'	-5.12	120.35	127.00
25	YA	1758	G	C4-C5-N7	-5.12	108.75	110.80
1	QA	1064	G	N1-C2-N3	5.12	126.97	123.90
25	RA	1142(A)	A	N1-C2-N3	5.12	131.86	129.30
25	RA	1193	G	N1-C6-O6	5.12	122.97	119.90
25	RA	1328	G	N1-C6-O6	5.12	122.97	119.90
25	RA	2518	A	N1-C6-N6	5.12	121.67	118.60
1	XA	751	U	C5-C6-N1	5.12	125.26	122.70
1	XA	853	G	C4-C5-N7	5.12	112.85	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	109	G	P-O3'-C3'	-5.12	113.56	119.70
25	YA	2319	G	N3-C4-N9	5.12	129.07	126.00
25	YA	2719	G	C8-N9-C1'	-5.12	120.35	127.00
25	RA	39	C	C5-C6-N1	5.11	123.56	121.00
25	RA	1325	G	C8-N9-C1'	5.11	133.65	127.00
1	XA	1375	A	C8-N9-C4	-5.11	103.75	105.80
25	YA	860	U	N3-C2-O2	-5.11	118.62	122.20
25	YA	1471	A	C8-N9-C4	-5.11	103.75	105.80
25	YA	1495	A	OP1-P-O3'	5.11	116.45	105.20
25	YA	1562	A	C8-N9-C4	-5.11	103.75	105.80
25	YA	2033	A	O5'-P-OP2	-5.11	101.10	105.70
25	RA	140	A	N9-C4-C5	-5.11	103.75	105.80
25	RA	300	A	C2-N3-C4	-5.11	108.04	110.60
25	RA	444	C	C2-N1-C1'	-5.11	113.18	118.80
26	RB	47	C	C2-N1-C1'	5.11	124.42	118.80
1	XA	555	C	N3-C4-N4	5.11	121.58	118.00
25	YA	701	G	C5-C6-O6	-5.11	125.53	128.60
25	YA	850	C	N3-C4-C5	5.11	123.94	121.90
25	YA	2246	G	OP1-P-O3'	5.11	116.45	105.20
25	RA	553	U	C4-C5-C6	5.11	122.77	119.70
25	RA	1957	C	O5'-P-OP1	5.11	116.83	110.70
25	RA	2610	C	P-O3'-C3'	5.11	125.83	119.70
25	YA	294	A	C8-N9-C4	5.11	107.84	105.80
25	YA	2269	A	C5-C6-N1	-5.11	115.14	117.70
25	YA	2537	U	C4-C5-C6	5.11	122.77	119.70
25	YA	2549	G	C6-C5-N7	-5.11	127.33	130.40
25	RA	467	G	C5-C6-O6	-5.11	125.53	128.60
26	RB	45	A	N1-C6-N6	5.11	121.67	118.60
25	YA	2665	A	C4-C5-C6	5.11	119.56	117.00
25	YA	2758	A	O5'-P-OP1	-5.11	101.10	105.70
1	QA	1334	G	N1-C2-N3	5.11	126.96	123.90
25	RA	1463	C	C6-N1-C2	-5.11	118.26	120.30
25	RA	2043	C	C2-N1-C1'	5.11	124.42	118.80
25	RA	2259	G	C5-C6-O6	-5.11	125.53	128.60
25	RA	2540	C	C4-C5-C6	5.11	119.95	117.40
25	RA	2755	C	C5-C6-N1	5.11	123.55	121.00
1	XA	64	G	P-O3'-C3'	5.11	125.83	119.70
25	YA	272	G	C4-N9-C1'	-5.11	119.86	126.50
25	YA	333	G	C4-N9-C1'	5.11	133.14	126.50
25	YA	835	A	N9-C4-C5	5.11	107.84	105.80
25	YA	2829	C	C5-C6-N1	-5.11	118.45	121.00
25	RA	18	C	O5'-P-OP1	-5.11	101.11	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	738	G	N3-C4-C5	-5.11	126.05	128.60
25	RA	804	A	N3-C4-N9	-5.11	123.31	127.40
25	RA	1827	C	C6-N1-C2	-5.11	118.26	120.30
25	RA	2500	U	N1-C2-O2	5.11	126.37	122.80
25	RA	2696	U	C6-N1-C2	-5.11	117.94	121.00
1	XA	623	C	C5-C6-N1	5.11	123.55	121.00
25	YA	452	G	C4-N9-C1'	5.11	133.14	126.50
25	YA	693	C	N1-C2-O2	-5.11	115.84	118.90
25	YA	827	U	O4'-C1'-N1	5.11	112.28	108.20
25	YA	1270	C	N1-C2-O2	-5.11	115.84	118.90
25	YA	2012	G	C6-C5-N7	-5.11	127.34	130.40
25	RA	1215	G	C4-C5-C6	5.10	121.86	118.80
25	RA	2438	U	OP2-P-O3'	5.10	116.43	105.20
25	RA	2452	C	C5-C4-N4	-5.10	116.63	120.20
25	YA	450	G	N1-C2-N3	5.10	126.96	123.90
25	YA	2608	G	C5-N7-C8	-5.10	101.75	104.30
1	QA	1113	C	C5-C6-N1	5.10	123.55	121.00
1	QA	1120	G	N3-C4-C5	5.10	131.15	128.60
25	RA	1021	A	C5-C6-N1	-5.10	115.15	117.70
25	RA	1355	G	N1-C6-O6	5.10	122.96	119.90
25	RA	2621	A	C2-N3-C4	-5.10	108.05	110.60
25	YA	245	G	C2-N3-C4	-5.10	109.35	111.90
25	YA	2302	G	N3-C4-C5	-5.10	126.05	128.60
25	YA	2571	C	N3-C2-O2	-5.10	118.33	121.90
25	RA	269	U	N1-C2-O2	5.10	126.37	122.80
25	RA	671	C	N3-C2-O2	-5.10	118.33	121.90
25	RA	1327	C	N1-C2-O2	-5.10	115.84	118.90
1	XA	1124	G	N7-C8-N9	5.10	115.65	113.10
1	XA	1151	A	O4'-C1'-N9	5.10	112.28	108.20
1	XA	1235	U	N3-C4-O4	5.10	122.97	119.40
25	YA	628	G	C4-C5-N7	-5.10	108.76	110.80
26	YB	109	G	C8-N9-C4	-5.10	104.36	106.40
26	YB	111	U	O4'-C1'-N1	5.10	112.28	108.20
25	RA	498	G	N3-C4-C5	-5.10	126.05	128.60
25	RA	1786	A	C6-N1-C2	5.10	121.66	118.60
25	RA	2251	G	N3-C4-C5	-5.10	126.05	128.60
25	YA	122	G	O4'-C1'-N9	-5.10	104.12	108.20
25	YA	1260	G	N3-C4-N9	5.10	129.06	126.00
25	YA	1647	G	C4-C5-C6	5.10	121.86	118.80
25	YA	1661	G	N1-C2-N3	5.10	126.96	123.90
25	YA	1800	C	O5'-P-OP2	5.10	116.82	110.70
25	YA	2416	C	C5-C6-N1	5.10	123.55	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	396	G	C2-N3-C4	-5.10	109.35	111.90
25	RA	283	A	N1-C6-N6	5.10	121.66	118.60
25	RA	745	G	N3-C2-N2	5.10	123.47	119.90
25	RA	859	G	N3-C4-C5	5.10	131.15	128.60
25	RA	1313	U	C6-N1-C2	-5.10	117.94	121.00
25	RA	2237	G	C6-C5-N7	-5.10	127.34	130.40
25	RA	2239	G	C5-C6-N1	5.10	114.05	111.50
25	RA	2396	G	N1-C6-O6	5.10	122.96	119.90
1	XA	813	U	C5-C6-N1	-5.10	120.15	122.70
25	YA	117	G	N1-C2-N2	-5.10	111.61	116.20
25	YA	145	G	N1-C2-N3	5.10	126.96	123.90
25	YA	1215	G	OP1-P-O3'	5.10	116.42	105.20
25	YA	2495	G	N7-C8-N9	-5.10	110.55	113.10
26	YB	53	A	N1-C6-N6	5.10	121.66	118.60
26	YB	101	A	N1-C6-N6	-5.10	115.54	118.60
25	RA	1785	A	N1-C6-N6	5.10	121.66	118.60
25	YA	1333	C	N3-C4-C5	5.10	123.94	121.90
25	YA	2445	G	N3-C2-N2	-5.10	116.33	119.90
1	QA	226	G	N1-C6-O6	5.09	122.96	119.90
1	QA	529	G	N1-C6-O6	5.09	122.96	119.90
1	QA	1479	C	N3-C4-C5	-5.09	119.86	121.90
25	RA	624	C	N3-C4-N4	5.09	121.57	118.00
25	RA	1293	C	N3-C2-O2	5.09	125.47	121.90
25	RA	2451	A	N9-C4-C5	5.09	107.84	105.80
26	RB	100	G	N3-C4-N9	5.09	129.06	126.00
1	XA	1159	U	N1-C2-O2	-5.09	119.23	122.80
1	XA	1270	C	C5-C6-N1	5.09	123.55	121.00
25	YA	52	A	OP2-P-O3'	5.09	116.41	105.20
25	YA	414	C	N3-C4-C5	5.09	123.94	121.90
25	YA	512	G	C8-N9-C4	-5.09	104.36	106.40
25	YA	768	G	C5-C6-O6	-5.09	125.54	128.60
25	YA	1813	G	C6-C5-N7	-5.09	127.34	130.40
25	YA	2066	C	N3-C2-O2	-5.09	118.33	121.90
25	YA	2295	C	C2-N1-C1'	5.09	124.40	118.80
25	YA	2389	G	C5-N7-C8	-5.09	101.75	104.30
25	RA	301	G	N7-C8-N9	-5.09	110.55	113.10
25	RA	1308	A	C6-C5-N7	-5.09	128.74	132.30
25	YA	379	G	C4-C5-N7	5.09	112.84	110.80
25	YA	1369	G	C6-C5-N7	-5.09	127.34	130.40
25	YA	1424	G	N3-C4-N9	5.09	129.06	126.00
25	YA	1533	C	C5-C6-N1	5.09	123.55	121.00
25	YA	2037	G	N1-C6-O6	5.09	122.96	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2278	A	C6-N1-C2	-5.09	115.54	118.60
1	QA	686	U	N1-C2-N3	5.09	117.95	114.90
1	QA	818	G	C5-C6-N1	-5.09	108.95	111.50
25	RA	482	A	N1-C2-N3	-5.09	126.75	129.30
25	RA	855	G	C5-C6-N1	-5.09	108.95	111.50
25	RA	2041	U	C5-C4-O4	-5.09	122.84	125.90
25	RA	2457	U	N3-C4-C5	-5.09	111.55	114.60
1	XA	557	G	N3-C4-C5	-5.09	126.05	128.60
25	YA	898	C	N3-C2-O2	-5.09	118.34	121.90
25	YA	906	G	C4-C5-N7	-5.09	108.76	110.80
25	YA	1048	A	C4-C5-C6	5.09	119.55	117.00
25	YA	1929	G	N9-C4-C5	-5.09	103.36	105.40
25	YA	2287	A	N9-C4-C5	-5.09	103.76	105.80
25	YA	2461	C	C4-C5-C6	5.09	119.94	117.40
25	YA	2697	G	C4-N9-C1'	5.09	133.12	126.50
39	YT	123	GLN	N-CA-C	-5.09	97.25	111.00
1	QA	716	A	O5'-P-OP2	5.09	116.81	110.70
25	RA	683	C	C6-N1-C2	-5.09	118.26	120.30
25	RA	1903	G	OP1-P-OP2	5.09	127.23	119.60
25	RA	1979	C	C6-N1-C2	-5.09	118.26	120.30
25	RA	2433	A	N1-C2-N3	5.09	131.84	129.30
1	XA	1305	G	N3-C4-N9	-5.09	122.95	126.00
25	YA	22	C	O5'-P-OP1	-5.09	101.12	105.70
25	YA	246	C	N3-C2-O2	5.09	125.46	121.90
25	YA	624	C	C6-N1-C1'	-5.09	114.69	120.80
25	YA	783	A	N9-C1'-C2'	-5.09	106.40	112.00
25	YA	1206	G	C4-C5-N7	5.09	112.84	110.80
1	QA	484	G	P-O3'-C3'	5.09	125.81	119.70
1	QA	503	C	C2-N1-C1'	5.09	124.40	118.80
25	RA	828	U	C5-C4-O4	5.09	128.95	125.90
25	RA	1213	A	C2-N3-C4	-5.09	108.06	110.60
1	XA	500	G	N1-C6-O6	5.09	122.95	119.90
1	XA	627	G	N3-C4-C5	-5.09	126.06	128.60
25	YA	489	G	O5'-P-OP2	-5.09	101.12	105.70
25	YA	573	G	C8-N9-C1'	-5.09	120.39	127.00
25	YA	1614	A	C8-N9-C4	-5.09	103.77	105.80
25	YA	1983	C	C6-N1-C2	5.09	122.33	120.30
25	YA	2229	C	N3-C4-C5	-5.09	119.86	121.90
1	QA	749	C	N3-C2-O2	-5.09	118.34	121.90
1	QA	1204	A	C8-N9-C4	-5.09	103.77	105.80
25	RA	621	A	C8-N9-C4	-5.09	103.77	105.80
25	RA	1465	G	N3-C4-C5	-5.09	126.06	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1487	G	C8-N9-C1'	-5.09	120.39	127.00
25	RA	1616	A	C8-N9-C4	-5.09	103.77	105.80
25	RA	2355	C	C2-N1-C1'	5.09	124.39	118.80
25	YA	219	G	OP2-P-O3'	5.09	116.39	105.20
25	YA	270(Z)	U	O4'-C1'-N1	5.09	112.27	108.20
25	YA	592	G	C4-C5-C6	5.09	121.85	118.80
25	YA	794	G	N1-C2-N3	5.09	126.95	123.90
25	YA	1561	G	C8-N9-C4	-5.09	104.36	106.40
26	YB	31	C	C2-N1-C1'	5.09	124.39	118.80
1	QA	316	G	N9-C4-C5	-5.08	103.37	105.40
1	QA	685	G	C8-N9-C1'	5.08	133.61	127.00
25	RA	636	G	C6-C5-N7	-5.08	127.35	130.40
1	XA	658	G	C5-C6-N1	-5.08	108.96	111.50
25	YA	416	C	N3-C2-O2	-5.08	118.34	121.90
25	YA	822	U	N3-C4-O4	-5.08	115.84	119.40
25	YA	2814	C	N3-C2-O2	-5.08	118.34	121.90
1	QA	425	G	C6-C5-N7	-5.08	127.35	130.40
1	QA	841	U	N3-C2-O2	-5.08	118.64	122.20
25	RA	716	A	C6-C5-N7	-5.08	128.74	132.30
25	RA	745	G	N9-C4-C5	-5.08	103.37	105.40
25	RA	1846	G	C6-N1-C2	-5.08	122.05	125.10
1	XA	54	C	C5-C4-N4	-5.08	116.64	120.20
25	YA	458	G	N3-C4-N9	-5.08	122.95	126.00
39	YT	59	THR	N-CA-C	-5.08	97.28	111.00
25	RA	1598	C	OP1-P-OP2	-5.08	111.98	119.60
1	XA	547	A	OP1-P-O3'	5.08	116.38	105.20
1	XA	1187	G	C8-N9-C1'	-5.08	120.39	127.00
25	YA	570	G	N3-C2-N2	-5.08	116.34	119.90
25	YA	798	G	N1-C2-N3	5.08	126.95	123.90
25	YA	1411	C	C5-C6-N1	5.08	123.54	121.00
25	RA	1195	G	N1-C6-O6	5.08	122.95	119.90
25	RA	2007	C	C5-C4-N4	-5.08	116.64	120.20
25	RA	2321	G	N3-C4-C5	-5.08	126.06	128.60
25	YA	2574	G	C8-N9-C4	5.08	108.43	106.40
25	YA	2612	C	N1-C2-O2	5.08	121.95	118.90
25	YA	2729	G	C4-N9-C1'	-5.08	119.90	126.50
1	QA	541	G	C6-C5-N7	-5.08	127.35	130.40
1	QA	793	U	N1-C2-N3	5.08	117.95	114.90
25	RA	1198	U	C2-N1-C1'	5.08	123.79	117.70
25	RA	1430	C	C2-N3-C4	-5.08	117.36	119.90
25	RA	1848	A	C4-C5-C6	-5.08	114.46	117.00
26	RB	71	C	C6-N1-C2	-5.08	118.27	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1315	C	N3-C4-C5	5.08	123.93	121.90
25	YA	1933	G	C4-C5-C6	5.08	121.85	118.80
25	YA	2215	G	C5-C6-O6	-5.08	125.55	128.60
25	YA	2307	G	N7-C8-N9	5.08	115.64	113.10
25	YA	2474	C	N3-C4-C5	-5.08	119.87	121.90
25	YA	2830	G	C6-C5-N7	-5.08	127.35	130.40
25	RA	365	C	C2-N3-C4	5.08	122.44	119.90
25	YA	977	G	N1-C6-O6	-5.08	116.85	119.90
25	YA	1616	A	C5-N7-C8	-5.08	101.36	103.90
25	YA	2250	G	N7-C8-N9	5.08	115.64	113.10
1	QA	1259	C	C5-C6-N1	5.08	123.54	121.00
25	RA	246	C	O5'-P-OP1	-5.08	101.13	105.70
25	RA	365	C	N1-C2-O2	5.08	121.94	118.90
1	XA	1052	U	C5-C6-N1	5.08	125.24	122.70
25	YA	317	G	N1-C6-O6	-5.08	116.86	119.90
25	YA	814	C	N3-C2-O2	5.08	125.45	121.90
25	YA	944	G	C2-N3-C4	-5.08	109.36	111.90
25	YA	2445	G	N3-C4-N9	-5.08	122.95	126.00
25	YA	2677	G	OP1-P-O3'	5.08	116.36	105.20
1	QA	631	G	C2-N3-C4	5.07	114.44	111.90
25	RA	457	A	C8-N9-C4	-5.07	103.77	105.80
25	RA	690	G	N1-C2-N3	5.07	126.94	123.90
25	RA	715	G	C5-C6-N1	5.07	114.04	111.50
25	RA	1141	U	OP2-P-O3'	5.07	116.36	105.20
25	RA	1195	G	C5-N7-C8	-5.07	101.76	104.30
25	YA	415	A	C5-C6-N6	-5.07	119.64	123.70
25	YA	1330	C	N1-C2-O2	5.07	121.94	118.90
25	YA	1622	G	C5-C6-O6	-5.07	125.56	128.60
25	YA	1669	A	C4-C5-N7	5.07	113.24	110.70
25	YA	1964	G	C6-C5-N7	-5.07	127.36	130.40
25	YA	2337	G	N1-C6-O6	5.07	122.94	119.90
25	YA	2428	G	C6-C5-N7	-5.07	127.36	130.40
25	YA	2534	A	C5-C6-N1	5.07	120.24	117.70
25	YA	2586	C	N3-C4-N4	5.07	121.55	118.00
1	QA	752	G	N1-C6-O6	5.07	122.94	119.90
25	RA	2479	G	N3-C4-N9	-5.07	122.96	126.00
1	XA	941	G	C5-C6-N1	5.07	114.04	111.50
25	YA	51	G	C6-N1-C2	-5.07	122.06	125.10
25	YA	2766	G	C6-C5-N7	-5.07	127.36	130.40
25	RA	705	A	C2-N3-C4	-5.07	108.06	110.60
25	RA	789	A	C4-N9-C1'	-5.07	117.17	126.30
25	RA	855	G	C8-N9-C4	-5.07	104.37	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	1430	C	N1-C2-O2	5.07	121.94	118.90
25	RA	1446	C	N3-C2-O2	-5.07	118.35	121.90
25	RA	1773	A	N1-C6-N6	5.07	121.64	118.60
25	RA	2228	G	N3-C4-N9	5.07	129.04	126.00
1	XA	869	G	C8-N9-C4	-5.07	104.37	106.40
1	XA	1094	G	N9-C4-C5	5.07	107.43	105.40
1	XA	1366	C	C5-C6-N1	5.07	123.53	121.00
25	YA	341	G	N3-C4-N9	5.07	129.04	126.00
25	YA	852	G	C2-N3-C4	5.07	114.44	111.90
25	YA	1602	U	N3-C2-O2	-5.07	118.65	122.20
25	YA	1831	G	N9-C4-C5	-5.07	103.37	105.40
25	YA	2409	G	N3-C4-N9	5.07	129.04	126.00
1	QA	1425	U	C6-N1-C2	-5.07	117.96	121.00
25	RA	715	G	N3-C4-N9	5.07	129.04	126.00
1	XA	751	U	C6-N1-C2	-5.07	117.96	121.00
25	YA	528	A	C4-N9-C1'	-5.07	117.18	126.30
25	YA	2216	G	C4-C5-C6	5.07	121.84	118.80
1	QA	249	U	C6-N1-C2	5.07	124.04	121.00
1	QA	646	U	C6-N1-C2	-5.07	117.96	121.00
1	QA	1507	A	C2-N3-C4	-5.07	108.07	110.60
25	RA	370	G	C4-N9-C1'	5.07	133.09	126.50
25	RA	696	G	C4-N9-C1'	5.07	133.09	126.50
25	RA	1146	C	C6-N1-C2	-5.07	118.27	120.30
25	RA	1252	G	C2-N3-C4	5.07	114.43	111.90
25	RA	2004	G	C5-N7-C8	-5.07	101.77	104.30
25	RA	2573	C	C5-C4-N4	-5.07	116.65	120.20
25	YA	330	A	C6-C5-N7	-5.07	128.75	132.30
25	YA	794	G	C8-N9-C1'	-5.07	120.41	127.00
25	YA	842	G	N3-C4-C5	5.07	131.13	128.60
25	YA	1439	A	C8-N9-C4	5.07	107.83	105.80
25	YA	1499	C	C6-N1-C2	5.07	122.33	120.30
25	YA	2228	G	C8-N9-C1'	-5.07	120.41	127.00
25	YA	2366	A	N7-C8-N9	5.07	116.33	113.80
1	QA	1147	C	C2-N3-C4	-5.07	117.37	119.90
25	RA	752	A	C3'-C2'-C1'	5.07	105.55	101.50
25	RA	1141	U	N3-C4-O4	-5.07	115.85	119.40
25	RA	1254	A	C8-N9-C4	-5.07	103.77	105.80
25	RA	1361	G	P-O3'-C3'	-5.07	113.62	119.70
25	RA	1776	G	C5-N7-C8	-5.07	101.77	104.30
25	RA	2307	G	C8-N9-C4	-5.07	104.37	106.40
25	RA	2369	A	N3-C4-C5	-5.07	123.25	126.80
25	RA	2519	U	N1-C2-O2	5.07	126.35	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
26	RB	7	G	C2-N3-C4	-5.07	109.37	111.90
1	XA	112	G	N3-C4-N9	5.07	129.04	126.00
1	XA	1227	A	C2-N3-C4	-5.07	108.07	110.60
25	YA	779	U	N1-C1'-C2'	-5.07	106.43	112.00
25	YA	908	C	C6-N1-C2	5.07	122.33	120.30
25	YA	1413	G	N1-C6-O6	5.07	122.94	119.90
25	YA	1890	A	N9-C4-C5	-5.07	103.77	105.80
25	YA	1905	C	N3-C2-O2	-5.07	118.35	121.90
25	YA	2229	C	N3-C4-N4	5.07	121.55	118.00
25	YA	2319	G	C8-N9-C1'	-5.07	120.42	127.00
25	YA	2356	C	OP1-P-OP2	-5.07	112.00	119.60
25	RA	15	G	N1-C2-N2	5.06	120.76	116.20
25	RA	37	C	C5-C6-N1	-5.06	118.47	121.00
1	XA	321	A	N3-C4-C5	-5.06	123.25	126.80
25	YA	193	U	C4-C5-C6	5.06	122.74	119.70
25	YA	701	G	C4-C5-N7	5.06	112.83	110.80
25	YA	1327	C	C6-N1-C1'	5.06	126.88	120.80
25	YA	1414	G	C6-C5-N7	-5.06	127.36	130.40
25	RA	759	G	N9-C4-C5	-5.06	103.38	105.40
25	RA	1263	U	N3-C4-C5	-5.06	111.56	114.60
25	RA	1315	C	C2-N3-C4	-5.06	117.37	119.90
25	RA	1983	C	C6-N1-C2	-5.06	118.28	120.30
1	XA	674	G	C4-N9-C1'	5.06	133.08	126.50
25	YA	240	G	N1-C6-O6	5.06	122.94	119.90
25	YA	546	C	C6-N1-C2	-5.06	118.28	120.30
25	YA	921	G	C5-C6-N1	-5.06	108.97	111.50
25	YA	989	G	N1-C6-O6	5.06	122.94	119.90
25	RA	105	C	N3-C2-O2	5.06	125.44	121.90
25	RA	1786	A	N9-C1'-C2'	5.06	120.58	114.00
1	XA	530	G	C3'-C2'-C1'	5.06	105.55	101.50
25	YA	389	G	N3-C2-N2	-5.06	116.36	119.90
46	Y0	25	ARG	NE-CZ-NH1	5.06	122.83	120.30
1	QA	890	G	OP2-P-O3'	5.06	116.33	105.20
1	QA	991	U	C2-N1-C1'	5.06	123.77	117.70
25	RA	15	G	N1-C6-O6	5.06	122.94	119.90
25	RA	1627	G	C6-C5-N7	-5.06	127.36	130.40
25	RA	1639	U	C5-C4-O4	5.06	128.94	125.90
25	RA	2091	U	N3-C4-C5	-5.06	111.56	114.60
25	RA	2859	G	N1-C6-O6	-5.06	116.86	119.90
1	XA	904	C	C6-N1-C2	5.06	122.32	120.30
25	YA	746	A	O5'-P-OP2	-5.06	101.15	105.70
25	YA	1368	G	C6-N1-C2	-5.06	122.06	125.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1594	G	N1-C2-N3	5.06	126.94	123.90
25	YA	2443	C	N1-C2-N3	5.06	122.74	119.20
1	QA	116	A	N1-C6-N6	5.06	121.64	118.60
1	QA	1441	G	N3-C4-N9	-5.06	122.97	126.00
25	RA	2007	C	N3-C4-N4	5.06	121.54	118.00
26	RB	59	A	C2-N3-C4	5.06	113.13	110.60
39	RT	59	THR	N-CA-C	-5.06	97.35	111.00
1	XA	323	U	C5-C6-N1	5.06	125.23	122.70
25	YA	860	U	C6-N1-C1'	-5.06	114.12	121.20
25	YA	1921	G	C4-C5-N7	5.06	112.82	110.80
25	YA	2655	G	N9-C4-C5	5.06	107.42	105.40
25	YA	2691	C	N1-C2-O2	-5.06	115.87	118.90
25	YA	195	A	C5-C6-N1	-5.06	115.17	117.70
25	YA	712	G	O5'-P-OP1	-5.06	101.15	105.70
25	YA	754	C	O5'-P-OP1	5.06	116.77	110.70
25	YA	2712(A)	A	C5-N7-C8	-5.06	101.37	103.90
25	YA	2757	A	C8-N9-C4	-5.06	103.78	105.80
25	YA	2830	G	C8-N9-C4	-5.06	104.38	106.40
1	QA	1469	G	N3-C4-C5	-5.05	126.07	128.60
25	RA	941	A	C8-N9-C4	-5.05	103.78	105.80
25	RA	1419	A	N7-C8-N9	-5.05	111.27	113.80
25	RA	1647	G	N3-C4-N9	-5.05	122.97	126.00
1	XA	383	A	N1-C6-N6	-5.05	115.57	118.60
1	XA	1432	G	N1-C6-O6	5.05	122.93	119.90
25	YA	450	G	C2-N3-C4	-5.05	109.37	111.90
25	YA	1672	C	C2-N1-C1'	5.05	124.36	118.80
1	QA	455	C	C6-N1-C1'	-5.05	114.74	120.80
25	RA	855	G	N1-C6-O6	5.05	122.93	119.90
25	YA	1445	C	C6-N1-C2	-5.05	118.28	120.30
25	YA	1464	C	N1-C2-O2	-5.05	115.87	118.90
25	YA	1616	A	N7-C8-N9	5.05	116.33	113.80
1	QA	145	G	N7-C8-N9	5.05	115.63	113.10
1	QA	1187	G	N3-C4-C5	-5.05	126.07	128.60
1	QA	1498	U	C2-N1-C1'	5.05	123.76	117.70
1	QA	1518	A	N1-C2-N3	5.05	131.83	129.30
25	RA	866	A	C8-N9-C4	5.05	107.82	105.80
25	RA	869	G	OP1-P-O3'	5.05	116.31	105.20
25	RA	1431	U	N3-C4-C5	5.05	117.63	114.60
39	RT	123	GLN	N-CA-C	-5.05	97.36	111.00
25	YA	616	A	C5-C6-N6	5.05	127.74	123.70
25	YA	804	A	C2-N3-C4	-5.05	108.07	110.60
25	YA	1212	G	C5-C6-N1	-5.05	108.97	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2028	U	N3-C4-C5	-5.05	111.57	114.60
1	XA	585	G	C4-C5-N7	-5.05	108.78	110.80
25	YA	23	G	C5-C6-O6	-5.05	125.57	128.60
25	YA	841	A	N1-C6-N6	5.05	121.63	118.60
25	YA	1497	U	N3-C2-O2	-5.05	118.67	122.20
1	QA	64	G	C4-C5-C6	5.05	121.83	118.80
1	QA	347	G	N3-C4-N9	-5.05	122.97	126.00
25	RA	853	G	N3-C4-N9	5.05	129.03	126.00
25	RA	1162	G	C4-C5-N7	5.05	112.82	110.80
25	RA	2049	G	N1-C2-N3	5.05	126.93	123.90
25	YA	1231	G	N1-C6-O6	5.05	122.93	119.90
25	YA	2732	G	N3-C4-C5	5.05	131.12	128.60
25	RA	678	C	O5'-P-OP2	-5.05	101.16	105.70
1	XA	1336	C	P-O3'-C3'	5.05	125.76	119.70
1	XA	1412	C	C2-N3-C4	-5.05	117.38	119.90
25	YA	251	A	N1-C6-N6	-5.05	115.57	118.60
25	YA	1978	A	N9-C4-C5	5.05	107.82	105.80
25	YA	2252	G	C4-C5-N7	5.05	112.82	110.80
25	YA	2481	G	N3-C4-N9	5.05	129.03	126.00
26	YB	60	C	C6-N1-C2	-5.05	118.28	120.30
1	QA	114	U	N3-C4-O4	-5.04	115.87	119.40
1	QA	1238	A	O5'-P-OP2	5.04	116.75	110.70
25	RA	127	A	C4-N9-C1'	-5.04	117.22	126.30
25	YA	1186	G	C8-N9-C4	-5.04	104.38	106.40
25	YA	1992	G	C2'-C3'-O3'	5.04	121.77	113.70
25	RA	1849	G	N7-C8-N9	5.04	115.62	113.10
25	RA	1965	C	C2-N1-C1'	-5.04	113.25	118.80
1	XA	645	C	C6-N1-C2	-5.04	118.28	120.30
1	XA	944	G	N7-C8-N9	5.04	115.62	113.10
25	YA	680	G	C4-C5-C6	5.04	121.83	118.80
25	YA	1937	A	C8-N9-C4	5.04	107.82	105.80
25	YA	2168	G	C8-N9-C4	-5.04	104.38	106.40
25	YA	2254	C	C2-N1-C1'	-5.04	113.25	118.80
25	YA	2277	G	C4-C5-C6	5.04	121.83	118.80
25	RA	77	C	C5-C4-N4	-5.04	116.67	120.20
25	RA	1333	C	OP1-P-O3'	5.04	116.29	105.20
25	RA	1448	G	N1-C6-O6	5.04	122.92	119.90
25	RA	1811	G	C5-C6-O6	-5.04	125.58	128.60
25	RA	2391	G	C4-C5-N7	-5.04	108.78	110.80
1	XA	964	A	O5'-P-OP2	-5.04	101.16	105.70
1	XA	1416	G	C6-C5-N7	-5.04	127.38	130.40
25	YA	625	G	N9-C4-C5	5.04	107.42	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	845	G	C5-C6-O6	-5.04	125.58	128.60
25	YA	2020	A	C5-N7-C8	5.04	106.42	103.90
25	YA	2867	G	N1-C6-O6	5.04	122.92	119.90
1	XA	819	A	C2-N3-C4	-5.04	108.08	110.60
25	YA	1276	A	N9-C4-C5	-5.04	103.78	105.80
1	QA	189	U	C4'-C3'-C2'	5.04	107.64	102.60
1	QA	1303	C	C6-N1-C2	-5.04	118.28	120.30
25	RA	741	G	C5-C6-N1	5.04	114.02	111.50
25	RA	1123	C	C6-N1-C2	5.04	122.31	120.30
25	RA	1617	C	C2-N1-C1'	-5.04	113.26	118.80
25	RA	1812	A	OP1-P-OP2	5.04	127.16	119.60
1	XA	443	C	N1-C2-O2	5.04	121.92	118.90
1	XA	563	A	C6-N1-C2	5.04	121.62	118.60
1	XA	724	G	OP1-P-O3'	5.04	116.28	105.20
25	YA	517	C	N3-C4-N4	5.04	121.53	118.00
25	YA	1256	G	N7-C8-N9	5.04	115.62	113.10
25	YA	1682	G	C4-C5-N7	5.04	112.81	110.80
25	YA	2052	G	C8-N9-C1'	5.04	133.55	127.00
25	YA	2287	A	O4'-C1'-N9	-5.04	104.17	108.20
25	YA	2556	C	N3-C4-C5	5.04	123.92	121.90
25	YA	2782	G	C5-C6-N1	-5.04	108.98	111.50
1	QA	492	G	C8-N9-C4	-5.04	104.39	106.40
1	QA	557	G	C4-C5-C6	5.04	121.82	118.80
1	QA	1027	C	P-O3'-C3'	5.04	125.74	119.70
25	RA	752	A	OP2-P-O3'	5.04	116.28	105.20
1	XA	1385	G	C6-C5-N7	-5.04	127.38	130.40
25	YA	2409	G	C6-C5-N7	-5.04	127.38	130.40
25	YA	2820	A	N9-C4-C5	-5.04	103.78	105.80
1	QA	191	G	C2-N3-C4	5.04	114.42	111.90
25	RA	595	C	N3-C2-O2	5.04	125.42	121.90
25	RA	862	G	C5-C6-O6	5.04	131.62	128.60
25	RA	1133	U	N3-C4-O4	5.04	122.92	119.40
25	RA	1784	A	C4-N9-C1'	5.04	135.37	126.30
25	YA	684	G	N3-C4-C5	-5.04	126.08	128.60
25	YA	704	G	N3-C4-N9	5.04	129.02	126.00
25	YA	1286	A	N7-C8-N9	-5.04	111.28	113.80
25	YA	1974	C	N3-C2-O2	-5.04	118.38	121.90
25	YA	2611	U	OP2-P-O3'	5.04	116.28	105.20
1	QA	455	C	C2-N1-C1'	5.03	124.34	118.80
1	QA	741	G	N7-C8-N9	5.03	115.62	113.10
25	RA	1471	A	N1-C6-N6	5.03	121.62	118.60
25	RA	1569	A	OP1-P-O3'	5.03	116.27	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	2867	G	N7-C8-N9	-5.03	110.58	113.10
25	YA	482	A	C4-C5-N7	5.03	113.22	110.70
25	YA	745	G	OP2-P-O3'	5.03	116.27	105.20
25	YA	1388	G	C8-N9-C4	5.03	108.41	106.40
25	YA	1442	G	C4-N9-C1'	5.03	133.04	126.50
25	YA	2550	G	C4-C5-N7	5.03	112.81	110.80
31	YH	127	GLU	C-N-CD	-5.03	109.53	120.60
25	YA	1332	G	C8-N9-C4	-5.03	104.39	106.40
1	QA	198	G	C4-N9-C1'	5.03	133.04	126.50
1	QA	865	A	C5-C6-N1	-5.03	115.18	117.70
25	RA	243	U	O5'-P-OP1	-5.03	101.17	105.70
25	RA	1485	G	N7-C8-N9	5.03	115.62	113.10
25	RA	1695	G	N1-C2-N2	-5.03	111.67	116.20
26	RB	116	G	N3-C4-C5	5.03	131.12	128.60
1	XA	1144	G	N3-C4-C5	5.03	131.12	128.60
25	YA	1184	G	C4-N9-C1'	5.03	133.04	126.50
25	RA	518	G	C5-C6-N1	5.03	114.02	111.50
25	RA	1198	U	N3-C2-O2	-5.03	118.68	122.20
25	YA	2417	C	C4-C5-C6	5.03	119.92	117.40
25	YA	2606	C	C5-C4-N4	-5.03	116.68	120.20
25	YA	2712(A)	A	C5-C6-N1	-5.03	115.19	117.70
1	QA	1361	G	C6-C5-N7	-5.03	127.38	130.40
25	RA	121	G	C5-C6-O6	-5.03	125.58	128.60
25	RA	2090	G	N1-C2-N3	5.03	126.92	123.90
25	RA	2420	C	O5'-P-OP2	5.03	116.73	110.70
25	YA	176	G	C2-N3-C4	-5.03	109.39	111.90
25	YA	802	A	C8-N9-C4	5.03	107.81	105.80
25	YA	917	A	O4'-C1'-N9	5.03	112.22	108.20
25	YA	1395	A	C5-C6-N6	5.03	127.72	123.70
25	YA	1913	A	C2-N3-C4	-5.03	108.09	110.60
1	QA	332	G	C2-N3-C4	5.03	114.41	111.90
25	RA	320	A	N7-C8-N9	-5.03	111.29	113.80
25	RA	910	A	N1-C6-N6	5.03	121.62	118.60
25	RA	2335	A	P-O3'-C3'	5.03	125.73	119.70
1	XA	779	C	N1-C2-O2	-5.03	115.89	118.90
1	XA	797	C	C4-C5-C6	-5.03	114.89	117.40
25	YA	38	A	C4-C5-C6	5.03	119.51	117.00
25	YA	1152	C	N1-C2-O2	-5.03	115.89	118.90
25	YA	1243	G	N9-C4-C5	-5.03	103.39	105.40
25	YA	1350	C	C6-N1-C2	5.03	122.31	120.30
25	YA	1920	C	O4'-C1'-N1	-5.03	104.18	108.20
25	RA	2205	C	N3-C2-O2	-5.02	118.38	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	539	G	N1-C6-O6	5.02	122.91	119.90
25	YA	2878	U	N3-C4-C5	-5.02	111.58	114.60
1	QA	281	G	C1'-O4'-C4'	5.02	113.92	109.90
1	QA	562	C	N1-C2-O2	5.02	121.91	118.90
1	QA	821	G	C5-N7-C8	5.02	106.81	104.30
1	QA	865	A	N1-C6-N6	5.02	121.61	118.60
1	QA	1200	C	N3-C2-O2	-5.02	118.39	121.90
25	RA	28	A	C6-N1-C2	-5.02	115.59	118.60
25	RA	442	G	C2-N3-C4	-5.02	109.39	111.90
25	RA	741	G	O5'-P-OP2	-5.02	101.18	105.70
25	RA	853	G	C4-N9-C1'	5.02	133.03	126.50
25	RA	1300	U	N1-C2-O2	-5.02	119.28	122.80
25	RA	1966	A	O5'-P-OP1	-5.02	101.18	105.70
25	RA	2673	G	C2-N3-C4	-5.02	109.39	111.90
25	RA	2882	A	C8-N9-C4	5.02	107.81	105.80
1	XA	880	C	C6-N1-C2	5.02	122.31	120.30
1	XA	902	G	C5-N7-C8	-5.02	101.79	104.30
25	YA	74	A	C8-N9-C1'	-5.02	118.66	127.70
25	YA	1559	G	N3-C4-N9	-5.02	122.99	126.00
25	YA	2072	G	C4-C5-N7	5.02	112.81	110.80
25	YA	2321	G	C4-N9-C1'	5.02	133.03	126.50
25	YA	2378	A	C2-N3-C4	-5.02	108.09	110.60
25	YA	2648	C	C5-C4-N4	-5.02	116.68	120.20
25	YA	2732	G	C5-N7-C8	-5.02	101.79	104.30
1	QA	195	A	C2-N3-C4	5.02	113.11	110.60
1	QA	1371	G	C8-N9-C4	-5.02	104.39	106.40
1	XA	1197	G	C5-C6-O6	-5.02	125.59	128.60
25	YA	517	C	C2-N1-C1'	5.02	124.32	118.80
25	YA	2271	G	N9-C4-C5	-5.02	103.39	105.40
25	YA	2621	A	C5-N7-C8	-5.02	101.39	103.90
1	QA	106	C	N1-C2-N3	5.02	122.71	119.20
1	QA	276	G	C8-N9-C4	5.02	108.41	106.40
1	QA	1147	C	N3-C4-N4	-5.02	114.49	118.00
25	RA	268	C	C2-N3-C4	5.02	122.41	119.90
25	RA	735	A	N7-C8-N9	-5.02	111.29	113.80
25	RA	759	G	N1-C6-O6	5.02	122.91	119.90
25	RA	2224	G	C5-C6-N1	-5.02	108.99	111.50
25	RA	2453	A	C2-N3-C4	5.02	113.11	110.60
1	XA	60	A	P-O3'-C3'	5.02	125.72	119.70
1	XA	296	U	N3-C2-O2	-5.02	118.69	122.20
25	YA	856	C	C4-C5-C6	-5.02	114.89	117.40
25	YA	1015	G	C5-N7-C8	-5.02	101.79	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	1274	A	N1-C6-N6	-5.02	115.59	118.60
25	YA	1976	U	C4-C5-C6	5.02	122.71	119.70
25	YA	2239	G	O4'-C1'-N9	-5.02	104.18	108.20
26	YB	89	G	C8-N9-C4	-5.02	104.39	106.40
1	QA	383	A	C8-N9-C4	5.02	107.81	105.80
1	QA	1336	C	C6-N1-C2	-5.02	118.29	120.30
25	RA	776	G	N3-C4-N9	-5.02	122.99	126.00
25	RA	1151	G	N1-C6-O6	5.02	122.91	119.90
25	RA	1652	A	C2-N3-C4	-5.02	108.09	110.60
25	RA	1891	G	C6-C5-N7	-5.02	127.39	130.40
25	RA	2347	C	N3-C2-O2	-5.02	118.39	121.90
25	RA	2644	G	N1-C6-O6	5.02	122.91	119.90
1	XA	821	G	C4-C5-C6	5.02	121.81	118.80
1	XA	869	G	N1-C6-O6	5.02	122.91	119.90
25	YA	18	C	N3-C2-O2	-5.02	118.39	121.90
25	YA	648	G	N1-C2-N3	5.02	126.91	123.90
25	YA	1195	G	N1-C2-N2	-5.02	111.68	116.20
25	YA	1528	A	N1-C6-N6	5.02	121.61	118.60
25	YA	2358	G	N9-C4-C5	5.02	107.41	105.40
25	YA	2555	U	C2-N1-C1'	-5.02	111.68	117.70
25	YA	2779	U	C6-N1-C1'	-5.02	114.17	121.20
1	QA	280	C	N1-C2-O2	5.02	121.91	118.90
25	RA	1614	A	C4-C5-C6	5.02	119.51	117.00
25	RA	1924	C	N3-C4-C5	-5.02	119.89	121.90
1	XA	1303	C	C2-N1-C1'	5.02	124.32	118.80
25	YA	2237	G	C4-C5-C6	5.02	121.81	118.80
25	RA	1444(A)	A	O4'-C1'-N9	5.01	112.21	108.20
25	RA	1763	G	N3-C4-C5	5.01	131.11	128.60
25	RA	1773	A	N1-C2-N3	5.01	131.81	129.30
25	RA	2544	G	C5-C6-N1	-5.01	108.99	111.50
1	XA	861	G	C4-N9-C1'	5.01	133.02	126.50
25	YA	1665	A	C6-C5-N7	-5.01	128.79	132.30
25	YA	1899	G	N1-C2-N3	5.01	126.91	123.90
25	YA	1987	G	C6-C5-N7	-5.01	127.39	130.40
25	RA	362	U	N1-C2-O2	5.01	126.31	122.80
25	RA	587	C	C6-N1-C2	-5.01	118.30	120.30
25	RA	865	C	N3-C4-C5	5.01	123.91	121.90
25	RA	1822	G	C5-N7-C8	-5.01	101.79	104.30
25	YA	956	G	C8-N9-C1'	-5.01	120.48	127.00
1	QA	515	G	N1-C6-O6	5.01	122.91	119.90
1	QA	811	C	N3-C2-O2	5.01	125.41	121.90
25	RA	444	C	OP1-P-O3'	-5.01	94.17	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	553	U	C6-N1-C2	-5.01	117.99	121.00
25	RA	607	U	C5-C4-O4	5.01	128.91	125.90
25	RA	1434	A	N1-C6-N6	-5.01	115.59	118.60
25	RA	1465	G	N3-C4-N9	5.01	129.01	126.00
25	RA	2250	G	C4-C5-N7	5.01	112.80	110.80
1	XA	1372	U	C6-N1-C2	-5.01	117.99	121.00
25	YA	140	A	C8-N9-C4	-5.01	103.80	105.80
25	YA	1822	G	C8-N9-C1'	-5.01	120.49	127.00
25	YA	2017	U	C5-C6-N1	-5.01	120.19	122.70
25	YA	2278	A	OP2-P-O3'	5.01	116.22	105.20
25	YA	2643	G	C2-N3-C4	-5.01	109.39	111.90
25	RA	680	G	C8-N9-C1'	-5.01	120.49	127.00
25	RA	685	A	C5-C6-N1	5.01	120.20	117.70
25	RA	729	G	N3-C4-N9	5.01	129.01	126.00
25	RA	1223	C	N3-C4-C5	-5.01	119.90	121.90
25	RA	2714	G	N3-C4-N9	5.01	129.00	126.00
1	XA	244	U	C5-C4-O4	-5.01	122.89	125.90
25	YA	945	A	OP2-P-O3'	5.01	116.22	105.20
25	YA	989	G	N3-C4-N9	5.01	129.00	126.00
25	YA	2058	A	C6-N1-C2	-5.01	115.59	118.60
25	YA	2321	G	C5-N7-C8	-5.01	101.80	104.30
25	YA	2584	U	C6-N1-C2	-5.01	117.99	121.00
1	QA	142	G	N3-C4-C5	-5.01	126.10	128.60
25	RA	270(W)	G	N3-C4-C5	-5.01	126.10	128.60
25	RA	1267	U	OP2-P-O3'	5.01	116.22	105.20
25	RA	2303	G	OP1-P-O3'	5.01	116.22	105.20
1	XA	14	U	C6-N1-C1'	5.01	128.21	121.20
1	XA	328	C	P-O3'-C3'	5.01	125.71	119.70
25	YA	1393	A	C5-N7-C8	5.01	106.40	103.90
25	YA	1626	G	N1-C6-O6	5.01	122.91	119.90
25	YA	1857	G	C8-N9-C1'	-5.01	120.49	127.00
1	QA	1469	G	N7-C8-N9	5.01	115.60	113.10
25	RA	211	A	C6-C5-N7	-5.01	128.79	132.30
25	RA	1197	G	C4-N9-C1'	5.01	133.01	126.50
25	RA	1235	G	C4-C5-N7	-5.01	108.80	110.80
25	RA	1416	G	C8-N9-C4	5.01	108.40	106.40
25	RA	1541	U	C6-N1-C2	-5.01	118.00	121.00
25	RA	2006	C	C6-N1-C1'	-5.01	114.79	120.80
25	RA	2276	G	C8-N9-C4	5.01	108.40	106.40
25	RA	2769	C	C4-C5-C6	5.01	119.90	117.40
25	YA	526	A	N7-C8-N9	5.01	116.30	113.80
25	YA	776	G	N9-C4-C5	5.01	107.40	105.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2431	U	N3-C2-O2	5.01	125.70	122.20
1	QA	294	U	N3-C2-O2	-5.00	118.70	122.20
25	RA	1277	G	C6-C5-N7	5.00	133.40	130.40
25	YA	692	C	C6-N1-C2	5.00	122.30	120.30
25	YA	820	A	N1-C6-N6	-5.00	115.60	118.60
1	QA	265	G	C5-C6-O6	5.00	131.60	128.60
1	QA	567	G	N1-C6-O6	5.00	122.90	119.90
1	QA	869	G	C8-N9-C4	-5.00	104.40	106.40
25	RA	680	G	N1-C2-N2	-5.00	111.70	116.20
25	RA	1277	G	C5-C6-O6	5.00	131.60	128.60
25	RA	1825	A	OP1-P-OP2	-5.00	112.09	119.60
25	RA	1903	G	N3-C4-N9	5.00	129.00	126.00
25	RA	2622	C	C2-N3-C4	-5.00	117.40	119.90
1	XA	751	U	C2-N1-C1'	5.00	123.70	117.70
1	XA	1301	U	P-O3'-C3'	5.00	125.70	119.70
25	YA	648	G	C2-N3-C4	-5.00	109.40	111.90
25	YA	1131	G	N3-C4-C5	-5.00	126.10	128.60
25	YA	1182	A	C4-C5-C6	5.00	119.50	117.00
25	YA	2264	C	N1-C2-O2	5.00	121.90	118.90
1	QA	68	G	N1-C6-O6	-5.00	116.90	119.90
1	QA	943	U	C5-C6-N1	5.00	125.20	122.70
1	QA	1527	C	C2-N3-C4	-5.00	117.40	119.90
25	RA	642	G	C5-C6-N1	-5.00	109.00	111.50
25	RA	924	C	N3-C2-O2	-5.00	118.40	121.90
25	RA	1626	G	N1-C6-O6	5.00	122.90	119.90
25	RA	2261	C	N3-C2-O2	-5.00	118.40	121.90
25	RA	2589	A	C8-N9-C4	5.00	107.80	105.80
1	XA	826	C	C6-N1-C2	-5.00	118.30	120.30
25	YA	815	C	C6-N1-C2	5.00	122.30	120.30
25	YA	1698	A	C8-N9-C4	-5.00	103.80	105.80
25	YA	1839	G	C8-N9-C1'	-5.00	120.50	127.00
25	YA	2400	G	N3-C2-N2	-5.00	116.40	119.90
25	YA	2407	G	O4'-C1'-N9	-5.00	104.20	108.20
26	YB	42	C	N3-C4-C5	-5.00	119.90	121.90

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
45	YZ	181	GLU	Peptide

5.2 Too-close contacts [i](#)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16278	1130	0
1	XA	32249	0	16279	1064	1
2	QB	1924	0	1975	289	0
2	XB	1924	0	1975	290	0
3	QC	1605	0	1668	205	0
3	XC	1605	0	1668	211	0
4	QD	1703	0	1764	253	0
4	XD	1703	0	1765	214	0
5	QE	1155	0	1213	182	0
5	XE	1155	0	1213	147	0
6	QF	843	0	857	94	0
6	XF	843	0	857	99	0
7	QG	1257	0	1296	151	0
7	XG	1257	0	1294	142	0
8	QH	1116	0	1175	167	0
8	XH	1116	0	1177	150	0
9	QI	1010	0	1037	144	0
9	XI	1010	0	1037	152	0
10	QJ	801	0	849	150	0
10	XJ	801	0	849	132	0
11	QK	885	0	904	103	0
11	XK	885	0	904	107	0
12	QL	975	0	1062	100	0
12	XL	975	0	1062	111	0
13	QM	964	0	1034	169	0
13	XM	964	0	1034	163	0
14	QN	492	0	530	102	0
14	XN	492	0	530	99	0
15	QO	734	0	771	76	0
15	XO	734	0	771	78	0
16	QP	705	0	725	120	0
16	XP	705	0	725	113	0
17	QQ	834	0	904	84	0
17	XQ	834	0	904	81	0
18	QR	574	0	644	66	0
18	XR	574	0	644	66	0
19	QS	674	0	699	109	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	XS	674	0	699	132	0
20	QT	763	0	860	108	0
20	XT	763	0	861	108	0
21	QU	217	0	234	30	0
21	XU	217	0	234	26	0
22	QV	1644	0	836	44	0
22	XV	1644	0	836	29	0
23	QX	167	0	87	13	0
23	XX	145	0	75	9	0
24	QY	303	0	154	11	0
24	XY	303	0	154	11	0
25	RA	62071	0	31285	1926	0
25	YA	62091	0	31293	1989	0
26	RB	2573	0	1306	121	0
26	YB	2573	0	1306	103	0
27	RD	2115	0	2195	324	0
27	YD	2115	0	2195	332	0
28	RE	1568	0	1634	270	0
28	YE	1568	0	1634	263	0
29	RF	1585	0	1632	178	0
29	YF	1585	0	1632	178	0
30	RG	1474	0	1535	201	0
30	YG	1474	0	1535	194	0
31	RH	1307	0	1382	226	0
31	YH	1307	0	1382	228	0
32	RI	1136	0	1223	79	1
32	YI	1136	0	1223	72	0
33	RN	1104	0	1180	200	0
33	YN	1104	0	1180	189	0
34	RO	933	0	996	126	0
34	YO	933	0	996	125	0
35	RP	1145	0	1228	256	0
35	YP	1145	0	1228	244	0
36	RQ	1122	0	1179	157	0
36	YQ	1122	0	1178	165	0
37	RR	968	0	1033	115	0
37	YR	968	0	1033	117	0
38	RS	882	0	943	166	0
38	YS	882	0	943	159	0
39	RT	1141	0	1202	151	0
39	YT	1141	0	1202	155	0
40	RU	964	0	1022	130	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	YU	964	0	1022	142	0
41	RV	779	0	852	130	0
41	YV	779	0	852	131	0
42	RW	900	0	964	100	0
42	YW	900	0	964	108	0
43	RX	725	0	778	70	0
43	YX	725	0	778	74	0
44	RY	785	0	878	167	0
44	YY	785	0	878	160	0
45	RZ	1461	0	1493	81	0
45	YZ	1461	0	1493	86	0
46	R0	648	0	671	55	0
46	Y0	648	0	672	51	0
47	R1	763	0	848	142	0
47	Y1	763	0	848	142	0
48	R2	581	0	629	83	0
48	Y2	581	0	629	78	0
49	R3	469	0	518	41	0
49	Y3	469	0	518	46	0
50	R4	581	0	574	159	0
50	Y4	581	0	574	167	0
51	R5	459	0	480	73	0
51	Y5	459	0	480	76	0
52	R6	424	0	450	90	0
52	Y6	424	0	450	97	0
53	R7	430	0	480	42	0
53	Y7	430	0	480	40	0
54	R8	517	0	582	104	0
54	Y8	517	0	582	105	0
55	R9	307	0	335	23	0
55	Y9	307	0	336	24	0
56	Z6	74	0	51	10	0
56	Z8	74	0	51	10	0
57	QA	64	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	1	0	0	0	0
57	QX	1	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	R8	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	RA	239	0	0	0	0
57	RB	2	0	0	0	0
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	1	0	0	0	0
57	RR	2	0	0	0	0
57	XA	72	0	0	1	0
57	XB	1	0	0	0	0
57	XM	1	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	269	0	0	1	0
57	YB	3	0	0	0	0
57	YE	1	0	0	0	0
57	YP	1	0	0	0	0
57	YQ	1	0	0	0	0
58	QD	1	0	0	0	0
58	QN	1	0	0	0	0
58	R9	1	0	0	0	0
58	XD	1	0	0	0	0
58	XN	1	0	0	0	0
58	Y9	1	0	0	0	0
59	XX	22	0	12	1	0
All	All	291868	0	198240	17856	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 37.

All (17856) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:32:SER:CB	14:YN:41:ARG:HB3	1.23	1.54
14:YN:32:SER:HB3	14:YN:41:ARG:CB	1.28	1.54
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.36	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.36
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.43	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.42	1.34
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.24	1.32
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.62	1.29
4:XD:22:LYS:HG3	4:XD:26:CYS:SG	1.64	1.27
47:R1:81:LYS:HE2	47:R1:81:LYS:N	1.50	1.26
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
13:QM:121:LYS:NZ	24:QY:40:G:OP1	1.71	1.24
14:XN:40:CYS:SG	14:XN:43:CYS:N	2.11	1.23
36:RQ:59:ARG:O	36:RQ:60:ARG:HD2	1.38	1.22
14:XN:32:SER:CB	14:XN:41:ARG:CB	1.97	1.21
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.70	1.21
31:YH:127:GLU:CB	31:YH:128:PRO:HD3	1.69	1.20
31:RH:127:GLU:HG2	31:RH:128:PRO:CD	1.70	1.20
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.56	1.20
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.07	1.18
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.18
44:RY:95:LYS:HB3	44:RY:100:ALA:HA	1.20	1.17
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.63	1.16
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.16
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.16
44:YY:76:CYS:HB3	44:YY:96:ILE:HD13	1.17	1.16
31:RH:132:ARG:HB2	31:RH:132:ARG:HH11	1.10	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	1.15
1:QA:339:C:OP2	34:RO:97:ARG:NH1	1.80	1.15
14:XN:42:ILE:O	14:XN:43:CYS:O	1.65	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
35:RP:50:ARG:HH21	35:RP:50:ARG:HB3	1.13	1.14
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	1.83	1.13
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.13
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.13
47:R1:82:LEU:C	47:R1:82:LEU:HD12	1.66	1.13
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.29	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
22:QV:1:C:O4'	46:R0:5:LYS:NZ	1.80	1.12
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.84	1.12
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.12
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	1.12
35:YP:50:ARG:HH21	35:YP:50:ARG:HB3	1.13	1.12
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.02	1.11
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.31	1.11
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.31	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.51	1.11
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.85	1.11
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	1.99	1.10
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	1.66	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.09
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.09
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	1.09
35:RP:19:VAL:HG22	35:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.08
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.19	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.05	1.08
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.34	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.08
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.34	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.16	1.07
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.06
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.14	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
35:YP:59:LEU:HA	35:YP:61:ARG:NH2	1.69	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.07	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	1.69	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.05
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
26:RB:45:A:O4'	30:RG:95:ARG:NH1	1.89	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	1.73	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.33	1.05
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.05
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.37	1.04
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.12	1.04
36:RQ:59:ARG:O	36:RQ:60:ARG:CD	2.05	1.04
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.33	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
10:QJ:49:VAL:CG1	14:QN:41:ARG:HB2	1.88	1.03
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.03
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.56	1.03
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	1.87	1.03
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
14:YN:22:THR:O	14:YN:23:ARG:HB2	1.56	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.59	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.72	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
34:RO:53:LYS:HD2	34:RO:53:LYS:H	1.23	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.25	1.02
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
29:YF:46:ARG:HH11	29:YF:46:ARG:HG2	1.20	1.01
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.41	1.01
2:QB:178:ARG:NE	8:QH:71:GLY:O	1.93	1.01
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.01
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.43	1.00
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.59	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.39	1.00
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00
25:YA:27:G:HO2'	25:YA:28:A:H8	1.06	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.26	1.00
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	1.00
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.19	0.99
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.39	0.99
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.77	0.99
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
25:RA:1019:U:HO2'	25:RA:1021:A:H2	1.02	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
23:XX:5:C:H2'	23:XX:6:C:H6	1.27	0.99
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	1.93	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.31	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.98
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.98
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.42	0.98
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
35:RP:50:ARG:HH21	35:RP:50:ARG:CB	1.76	0.98
25:RA:1542:G:O6	25:RA:1543:A:N6	1.95	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.61	0.98
47:R1:81:LYS:HZ3	47:R1:81:LYS:CA	1.77	0.98
25:RA:2638:G:OP2	28:RE:82:ARG:NH2	1.96	0.98
36:RQ:79:LEU:O	36:RQ:79:LEU:HD22	1.64	0.98
1:XA:1054:C:OP2	1:XA:1197:G:OP2	1.82	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.45	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.97
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.65	0.97
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.30	0.97
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.45	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.77	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
36:RQ:79:LEU:O	36:RQ:79:LEU:HD13	1.63	0.97
25:YA:27:G:N2	25:YA:512:G:O2'	1.97	0.97
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.97
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.28	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
36:YQ:79:LEU:O	36:YQ:79:LEU:HD22	1.64	0.97
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.96
1:XA:1139:G:N2	1:XA:1143:G:O6	1.98	0.96
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.45	0.96
23:XX:5:C:H2'	23:XX:6:C:C6	2.00	0.96
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.48	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1434:A:H61	25:RA:1558:A:H62	1.11	0.96
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.46	0.96
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	1.98	0.96
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.44	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.45	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.96
25:RA:1428:C:N4	25:RA:1570:A:OP2	1.99	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.96
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.96
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.44	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.95
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.65	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.15	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
12:XL:46:LYS:HG2	12:XL:47:LYS:N	1.78	0.95
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.31	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
35:YP:62:LEU:N	35:YP:62:LEU:HD22	1.82	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.55	0.95
4:XD:94:LEU:H	4:XD:94:LEU:HD12	1.28	0.95
1:QA:954:G:H21	1:QA:1227:A:H62	1.15	0.95
1:XA:1238:A:H62	1:XA:1301:U:H3	0.96	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.95
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.95
22:QV:1:C:H1'	46:R0:5:LYS:HE3	1.49	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.95
22:XV:2:G:H4'	46:Y0:7:LEU:O	1.67	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.48	0.95
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.97	0.94
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.94
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.94
25:RA:265:A:N6	25:RA:427:U:O2'	2.00	0.94
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.94
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.03	0.94
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
35:RP:62:LEU:N	35:RP:62:LEU:HD22	1.82	0.94
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.32	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.29	0.94
25:YA:1899:G:H22	25:YA:1902:C:H41	1.11	0.94
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.49	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.30	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
47:R1:81:LYS:N	47:R1:81:LYS:CE	2.30	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.46	0.94
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.14	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:77:LYS:HB3	31:YH:77:LYS:NZ	1.82	0.94
2:XB:8:LYS:HD3	2:XB:8:LYS:H	1.30	0.93
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.93
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.93
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.30	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.93
39:YT:11:GLU:CD	39:YT:11:GLU:H	1.71	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.51	0.93
36:RQ:59:ARG:O	36:RQ:60:ARG:CG	2.17	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ3	1.31	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
14:YN:43:CYS:O	14:YN:45:ARG:N	2.01	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.93
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
41:RV:99:ILE:HD13	41:RV:99:ILE:H	1.31	0.92
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.05	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.34	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.85	0.92
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.48	0.92
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.52	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.49	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
25:RA:1270:C:H5''	25:RA:1271:G:H5'	1.50	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:81:LYS:NZ	47:R1:81:LYS:CA	2.31	0.92
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.52	0.92
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	0.92
1:QA:191:G:C4	20:QT:105:SER:HB3	2.05	0.92
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.92
14:YN:32:SER:CB	14:YN:41:ARG:HB2	2.00	0.92
25:YA:1496:A:H8	25:YA:1577:C:HO2'	0.92	0.92
1:QA:992:U:H3	1:QA:1044:A:H62	1.18	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
14:YN:32:SER:OG	14:YN:41:ARG:HB2	1.70	0.92
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.92
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.70	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
25:RA:1019:U:H3	25:RA:1142(A):A:H62	1.10	0.92
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.22	0.91
1:XA:961:U:O2	1:XA:1201:A:N6	2.03	0.91
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.00	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91
47:R1:81:LYS:HA	47:R1:81:LYS:CE	2.01	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
31:RH:77:LYS:HB3	31:RH:77:LYS:NZ	1.82	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.33	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.49	0.91
38:RS:67:ARG:NH1	38:RS:67:ARG:HB2	1.85	0.91
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.90
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.90
1:XA:1078:U:O2'	5:XE:130:ASN:OD1	1.89	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.49	0.90
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.90
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.05	0.90
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.51	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.90
1:XA:411:A:H62	1:XA:413:G:H21	1.16	0.90
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	0.90
25:YA:297:C:H5''	44:YY:85:VAL:HG21	1.52	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.86	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
1:XA:1128:C:N3	1:XA:1144:G:N2	2.19	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
25:YA:607:U:H3	25:YA:621:A:H2	1.20	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
36:RQ:59:ARG:O	36:RQ:60:ARG:HG3	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:22:THR:O	14:YN:23:ARG:CB	2.16	0.90
27:YD:44:ASN:HD22	27:YD:44:ASN:H	1.19	0.90
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.90
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.54	0.90
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.89
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	1.52	0.89
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.89
25:RA:49:A:H4'	25:RA:50:U:H5''	1.54	0.89
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.52	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.36	0.89
51:R5:3:LYS:HA	51:R5:3:LYS:HE3	1.54	0.89
1:XA:891:U:OP2	1:XA:906:G:N2	2.05	0.89
25:YA:67:U:H3	25:YA:74:A:H2	1.21	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.87	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.36	0.89
54:Y8:59:LYS:HB2	54:Y8:59:LYS:NZ	1.88	0.89
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.52	0.89
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.55	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
25:YA:518:G:H4'	42:YW:18:ARG:NH1	1.87	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
40:RU:92:ARG:HG2	40:RU:92:ARG:O	1.69	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.89
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:121:LYS:NZ	24:XY:40:G:OP1	2.05	0.89
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	0.88
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
25:YA:620:G:H4'	25:YA:621:A:H5''	1.51	0.88
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.06	0.88
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.06	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.07	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.88	0.88
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.54	0.88
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
25:RA:1068:G:N2	25:RA:1095:A:O2'	2.07	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	1.74	0.88
25:YA:2600:A:C2'	25:YA:2601:C:H5'	2.03	0.88
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.88
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.38	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.37	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.55	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88
54:R8:59:LYS:HB2	54:R8:59:LYS:NZ	1.88	0.88
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.88
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.88
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.39	0.88
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.88
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.88
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.04	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
23:XX:2:U:O2'	23:XX:3:G:H5'	1.74	0.87
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.88	0.87
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.87
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	1.89	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
25:YA:2600:A:H2'	25:YA:2601:C:H5'	1.56	0.87
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.87
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.57	0.87
1:QA:1139:G:N2	1:QA:1143:G:O6	2.08	0.87
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.53	0.87
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.87
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.37	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
25:YA:2068:U:H3	25:YA:2430:A:H2	1.22	0.86
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.11	0.86
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.86
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.86
22:QV:1:C:C1'	46:R0:5:LYS:HE3	2.03	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:526:A:OP1	25:RA:527:C:OP1	1.93	0.86
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.07	0.86
38:RS:106:ARG:HB2	38:RS:106:ARG:HH11	1.39	0.86
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.56	0.86
26:YB:8:U:H3	26:YB:112:G:H1	1.19	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.86
25:RA:1022:G:O2'	25:RA:1023:U:OP2	1.93	0.86
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.57	0.86
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.86
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.57	0.86
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.40	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
1:QA:923:A:N6	1:QA:1392:G:O6	2.07	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
25:RA:1678:G:H22	25:RA:1989:G:H22	1.22	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
23:QX:6:C:O2'	23:QX:7:U:OP1	1.93	0.86
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.08	0.86
29:RF:82:ILE:O	29:RF:82:ILE:HG13	1.73	0.86
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.39	0.86
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.76	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.40	0.86
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
45:YZ:151:HIS:HB3	45:YZ:170:THR:HA	1.55	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86
25:YA:1795:C:O2	27:YD:255:LYS:HE2	1.75	0.86
25:RA:1582:C:HO2'	25:RA:1586:A:H8	1.21	0.86
25:RA:768:G:O2'	25:RA:1379:A:N6	2.09	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.86
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.86
1:XA:674:G:H2'	1:XA:675:A:H8	1.41	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
23:QX:2:U:O2'	23:QX:3:G:H5'	1.74	0.86
25:RA:2122:U:H2'	25:RA:2123:G:H8	1.40	0.86
25:RA:2302:G:N2	25:RA:2314:C:O2	2.07	0.86
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.56	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.85
10:XJ:53:PRO:O	14:YN:41:ARG:NH2	2.09	0.85
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.09	0.85
1:QA:1081:G:OP1	5:QE:16:THR:OG1	1.94	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
1:XA:895:G:H1	1:XA:904:C:H42	1.22	0.85
25:YA:2245:U:H5'	25:YA:2246:G:H5'	1.56	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.39	0.85
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.85
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.85
25:RA:279:C:H42	25:RA:361:G:H1	1.22	0.85
1:XA:689:C:HO2'	1:XA:705:U:HO2'	1.20	0.85
25:YA:443:A:N7	29:YF:45:ARG:HD2	1.91	0.85
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.75	0.85
24:XY:29:U:H2'	24:XY:30:C:C6	2.11	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.76	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
25:YA:1055:G:H1	25:YA:1104:C:H42	1.25	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
36:RQ:83:MET:HB2	46:R0:7:LEU:HD12	1.59	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.92	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
25:RA:2210:G:H3'	25:RA:2211:G:C8	2.11	0.85
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.92	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.85
40:RU:64:ARG:HG2	40:RU:64:ARG:HH21	1.42	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.85
1:XA:247:G:N2	1:XA:277:C:O2	2.08	0.85
26:YB:82:G:H2'	26:YB:83:G:H8	1.41	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.58	0.85
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.85
1:XA:1238:A:N6	1:XA:1301:U:H3	1.75	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
25:YA:2303:G:H1	25:YA:2313:C:H42	1.25	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
29:YF:82:ILE:O	29:YF:82:ILE:HG13	1.73	0.85
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.40	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.59	0.84
24:QY:29:U:H2'	24:QY:30:C:C6	2.11	0.84
25:RA:270(S):G:H1'	47:R1:78:LYS:HD2	1.59	0.84
25:RA:1689:A:H62	25:RA:1698:A:H2	1.22	0.84
12:XL:10:LEU:HD13	17:XQ:32:TYR:HE2	1.42	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
1:QA:1070:U:O5'	5:QE:25:ARG:NH1	2.10	0.84
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.11	0.84
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.59	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
25:YA:265:A:N6	25:YA:427:U:O2'	2.10	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.75	0.84
28:YE:95:ILE:HD12	28:YE:95:ILE:H	1.42	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
1:QA:606:G:H22	1:QA:631:G:H5'	1.41	0.84
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.13	0.84
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.84
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.42	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:949:A:H1'	1:QA:1364:U:H3	1.42	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
25:YA:2634:G:O6	25:YA:2784:C:N4	2.09	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	1.76	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.10	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.06	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
1:XA:1002:G:H1	1:XA:1038:C:H42	1.22	0.84
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.10	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.59	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
14:XN:32:SER:OG	14:XN:41:ARG:CB	2.24	0.84
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.23	0.84
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.57	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83
1:XA:372:C:H42	1:XA:389:A:H62	1.25	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	0.83
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.43	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
12:XL:46:LYS:CG	12:XL:47:LYS:H	1.85	0.83
25:YA:2846:G:H2'	25:YA:2847:U:H6	1.40	0.83
26:YB:31:C:O2	26:YB:53:A:N6	2.12	0.83
31:YH:13:LYS:HE2	31:YH:13:LYS:HA	1.61	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.60	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
31:RH:105:LEU:HD13	31:RH:105:LEU:H	1.43	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
25:YA:592:G:H1	25:YA:665:C:H42	1.24	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.61	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.93	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
44:RY:57:GLN:NE2	44:RY:58:GLY:H	1.76	0.83
14:YN:8:GLU:OE2	14:YN:11:LYS:HD2	1.78	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
25:RA:1833:U:H2'	25:RA:1834:U:H6	1.43	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
25:YA:242:G:H5''	54:Y8:3:LYS:HE3	1.60	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.58	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
1:XA:359:U:H2'	1:XA:360:A:H8	1.44	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.58	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
1:XA:1163:C:N4	1:XA:1173:G:O6	2.12	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:12:ARG:C	14:YN:14:PRO:HD2	1.98	0.83
26:YB:38:C:H42	26:YB:44:G:H1	1.25	0.83
36:YQ:83:MET:H	46:Y0:7:LEU:HD22	1.44	0.83
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.83
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD2	1.59	0.83
1:XA:973:G:O3'	14:YN:41:ARG:NH1	2.12	0.83
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.83
25:YA:1863:G:H2'	25:YA:1864:U:C6	2.14	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83
1:QA:1124:G:H3'	1:QA:1145:C:N4	1.93	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.83
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.83
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.10	0.83
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.08	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
1:QA:411:A:H62	1:QA:413:G:H21	1.26	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
22:QV:1:C:C4'	46:R0:5:LYS:HZ1	1.91	0.82
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.82
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.82
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HD23	1.60	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.61	0.82
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.11	0.82
26:RB:6:C:HO2'	38:RS:29:PHE:HE1	1.27	0.82
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
25:RA:884:C:O2	25:RA:892:G:N1	2.12	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.12	0.82
14:YN:44:LEU:HD12	14:YN:53:LEU:CD1	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.60	0.82
25:YA:2592:G:O6	25:YA:2601:C:N4	2.12	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.42	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	0.82
25:RA:1476:C:N4	25:RA:1517:G:O6	2.13	0.82
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
31:YH:105:LEU:HD13	31:YH:105:LEU:H	1.42	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
1:XA:1346:A:H5''	9:XI:120:ARG:HH12	1.44	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
1:XA:1281:U:OP2	1:XA:1282:C:N4	2.11	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
25:YA:571:A:H5'	25:YA:2030:A:H62	1.45	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HG2	1.60	0.82
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.43	0.82
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.43	0.82
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.42	0.82
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.62	0.82
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.41	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.08	0.82
25:YA:819:A:OP2	25:YA:1187:G:N2	2.11	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
25:RA:1359:A:OP2	25:RA:1371:G:N2	2.13	0.82
25:RA:2637:U:H5''	28:RE:82:ARG:HH21	1.44	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.15	0.82
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:642:A:N3	8:QH:113:SER:OG	2.12	0.82
25:RA:2112:G:O6	25:RA:2169:A:N6	2.12	0.82
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
26:YB:7:G:H1	26:YB:113:C:H42	1.26	0.82
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.82
50:Y4:71:ARG:HG3	50:Y4:71:ARG:NH1	1.90	0.82
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.82
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.26	0.82
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.61	0.82
25:YA:1103:A:H5'	25:YA:1104:C:H5	1.44	0.82
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.80	0.82
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.44	0.81
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.81
26:YB:70:C:H2'	26:YB:71:C:H6	1.44	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
34:RO:53:LYS:HD2	34:RO:53:LYS:N	1.96	0.81
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.81
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.15	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
31:RH:132:ARG:HB2	31:RH:132:ARG:NH1	1.94	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81
48:R2:16:LEU:O	48:R2:16:LEU:HG	1.78	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.60	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
10:XJ:6:ILE:O	10:XJ:6:ILE:HD12	1.81	0.81
25:YA:1363:C:O2	25:YA:1368:G:N2	2.11	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.08	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
23:QX:4:C:C2'	23:QX:5:C:H5'	2.11	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
1:XA:642:A:N3	8:XH:113:SER:OG	2.13	0.81
25:YA:1341:U:OP2	25:YA:1394:U:O2'	1.98	0.81
25:YA:1359:A:N6	25:YA:1372:U:O4	2.13	0.81
25:RA:1447:G:N2	25:RA:1464:C:O2	2.12	0.81
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.14	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
10:XJ:63:PHE:HD1	14:YN:58:LYS:HA	1.43	0.81
25:YA:1667:G:N2	25:YA:1993:U:O4	2.13	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.81
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.79	0.81
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.81
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.61	0.81
1:QA:973:G:H3'	1:QA:974:A:H5''	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.80	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.11	0.81
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.81
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.46	0.81
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.81
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.80
26:RB:65:C:H41	26:RB:108:C:H2'	1.46	0.80
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.80
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
25:YA:86:C:HO2'	25:YA:104:U:HO2'	1.15	0.80
25:YA:1077:A:H5'	25:YA:1078:U:H5''	1.62	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.80
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.29	0.80
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.46	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.11	0.80
31:RH:13:LYS:HE2	31:RH:13:LYS:HA	1.61	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.14	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	1.81	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
25:YA:83:G:O2'	25:YA:84:A:H8	1.65	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
1:QA:474:G:H2'	1:QA:475:G:H8	1.47	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.44	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
25:RA:195:A:H61	25:RA:198:C:H3'	1.46	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.64	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
14:XN:40:CYS:SG	14:XN:43:CYS:HB2	2.21	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
25:YA:1049:C:H2'	25:YA:1050:A:H5''	1.64	0.80
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
32:RI:78:THR:H	32:RI:104:GLN:HE22	1.29	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.03	0.80
25:YA:2637:U:H5''	28:YE:82:ARG:HH21	1.46	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.62	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
1:QA:1055:A:N7	1:QA:1200:C:N4	2.30	0.80
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
25:YA:2696:U:O4	25:YA:2711:A:N6	2.11	0.80
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	0.84	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.12	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.17	0.80
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.80
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.80
25:YA:1530:G:O6	25:YA:1542:G:N2	2.15	0.80
25:YA:2327:A:H2'	25:YA:2328:A:H8	1.44	0.80
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.79
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.79
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.79
25:YA:1689:A:H62	25:YA:1698:A:H2	1.31	0.79
26:YB:30:C:O2	26:YB:54:G:N2	2.13	0.79
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.79
1:QA:745:C:OP1	1:QA:851:G:O2'	2.01	0.79
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.02	0.79
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.79
27:RD:34:VAL:O	27:RD:34:VAL:HG13	1.80	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
27:YD:34:VAL:O	27:YD:34:VAL:HG13	1.81	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.79
25:YA:83:G:O2'	25:YA:84:A:O5'	2.01	0.79
1:QA:1080:A:H4'	5:QE:16:THR:HB	1.65	0.79
25:RA:2808:U:O2	25:RA:2892:A:N6	2.15	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	0.79
26:YB:40:U:H3	26:YB:43:C:H5''	1.45	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.03	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
25:RA:384:U:H2'	25:RA:385:C:H6	1.48	0.79
25:RA:404:C:O2'	25:RA:405:U:OP2	1.98	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.96	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.17	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.15	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
28:YE:24:THR:HG21	28:YE:188:VAL:CG1	2.13	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.65	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
25:RA:900:A:H3'	25:RA:901:A:H8	1.48	0.79
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
1:XA:448:A:OP2	1:XA:485:G:N2	2.16	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
25:YA:83:G:HO2'	25:YA:84:A:H8	0.84	0.79
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	2.01	0.79
1:QA:673:G:H2'	1:QA:674:G:C8	2.17	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
25:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.18	0.79
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.15	0.79
25:YA:583:G:H5''	40:YU:10:ARG:HH12	1.48	0.79
27:YD:17:THR:CG2	27:YD:205:VAL:H	1.96	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
1:QA:1312:G:H5''	50:R4:67:TYR:OH	1.82	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
25:RA:1021:A:H62	25:RA:1141:U:H3	1.29	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	0.79
1:XA:686:U:O4	1:XA:703:G:O2'	2.00	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
13:XM:121:LYS:NZ	24:XY:39:C:O2'	2.16	0.79
25:YA:2636:U:OP1	28:YE:79:ARG:HA	1.82	0.79
47:Y1:11:ARG:HB3	47:Y1:11:ARG:NH1	1.98	0.79
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.47	0.79
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.79
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.79
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.79
1:XA:703:G:O2'	1:XA:704:A:OP2	2.01	0.79
1:XA:1497:G:H2'	1:XA:1498:U:H5'	1.64	0.79
25:YA:1210:A:H5'	25:YA:1210:A:H8	1.48	0.79
25:YA:2368:C:H2'	25:YA:2369:A:H8	1.46	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.48	0.78
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.16	0.78
25:RA:873:G:H1	25:RA:904:C:H42	1.30	0.78
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
1:XA:987:G:H1	1:XA:1218:C:H42	1.31	0.78
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.12	0.78
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.78
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.78
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.78
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.18	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.65	0.78
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.78
1:XA:601:C:O2	1:XA:637:G:N2	2.14	0.78
1:XA:837:G:H1	1:XA:849:C:H42	1.31	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
25:YA:1019:U:HO2'	25:YA:1021:A:H2	1.31	0.78
43:YX:70:LEU:HD23	43:YX:70:LEU:N	1.98	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
1:XA:970:C:N4	9:XI:128:ARG:OXT	2.16	0.78
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.66	0.78
25:RA:1278:A:H61	25:RA:1292:U:H3	1.30	0.78
27:RD:54:ARG:HG3	27:RD:54:ARG:HH11	1.49	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
25:YA:102:G:OP2	48:Y2:7:ARG:NH2	2.16	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
36:YQ:59:ARG:HD3	36:YQ:59:ARG:H	1.48	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.66	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.16	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.48	0.78
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.16	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.30	0.78
1:QA:1338:G:H21	22:QV:41:C:H1'	1.47	0.78
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
25:RA:1187:G:H5''	41:RV:81:TYR:CE2	2.19	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
1:XA:546:G:HO2'	1:XA:548:G:HO2'	1.27	0.78
1:XA:1008:C:H42	1:XA:1021:G:H1	1.32	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
26:RB:8:U:H3	26:RB:112:G:H1	1.32	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
30:YG:128:ARG:HH21	30:YG:128:ARG:HG3	1.49	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.17	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.49	0.78
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
1:QA:953:G:O6	1:QA:1228:C:N4	2.13	0.78
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.66	0.78
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.53	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
25:RA:380:U:H2'	25:RA:381:G:H8	1.48	0.78
25:RA:855:G:H1	25:RA:922:U:H3	1.28	0.78
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.48	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
32:RI:4:ILE:HD11	32:RI:44:LEU:HD12	1.65	0.78
35:RP:75:ILE:HD13	35:RP:75:ILE:N	1.99	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.19	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
25:YA:102:G:HO2'	25:YA:103:A:P	2.06	0.78
25:YA:1013:C:H42	25:YA:1149:G:H1	1.32	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.67	0.78
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.17	0.77
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
35:RP:62:LEU:N	35:RP:62:LEU:CD2	2.46	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
54:R8:59:LYS:HB2	54:R8:59:LYS:HZ2	1.48	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.65	0.77
29:YF:145:GLU:O	29:YF:145:GLU:HG3	1.81	0.77
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
30:RG:128:ARG:HH21	30:RG:128:ARG:HG3	1.48	0.77
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1026:U:H4'	25:YA:1027:A:OP1	1.85	0.77
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.85	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.66	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
25:YA:138:G:N2	43:YX:44:GLU:OE2	2.15	0.77
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
1:QA:1105:A:H2'	1:QA:1106:G:H8	1.48	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
25:RA:222:A:O2'	25:RA:223:A:O5'	2.01	0.77
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.67	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
1:XA:359:U:H2'	1:XA:360:A:C8	2.18	0.77
25:YA:2347:C:H5	25:YA:2382:G:H1'	1.49	0.77
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.18	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.95	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
1:QA:951:G:OP2	13:QM:102:ARG:NH2	2.18	0.77
1:QA:999:U:H2'	1:QA:1000:A:H8	1.49	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
25:YA:189:G:H2'	25:YA:205:G:H22	1.50	0.77
25:YA:1045:A:N3	25:YA:1047:G:N2	2.33	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.66	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
1:XA:377:G:OP1	16:XP:5:ARG:NH1	2.17	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.17	0.77
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.04	0.77
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.66	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
25:RA:1833:U:O2'	25:RA:1969:A:N1	2.17	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.20	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
1:QA:1206:G:O2'	3:QC:192:THR:O	2.01	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.95	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.02	0.77
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.77
27:YD:44:ASN:HD22	27:YD:44:ASN:N	1.79	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.15	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
1:QA:346:G:H1'	1:QA:347:G:H5'	1.67	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:514:C:N4	1:QA:537:G:O6	2.18	0.77
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.77
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.00	0.77
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	2.00	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.84	0.77
14:XN:25:VAL:HG22	14:XN:38:GLY:O	1.84	0.77
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.77
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.19	0.77
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.84	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.76
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.76
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.76
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.76
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.76
1:QA:108:G:H5''	1:QA:109:A:H5''	1.68	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.30	0.76
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.02	0.76
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.76
25:YA:2364:C:OP1	46:Y0:55:ARG:NH1	2.18	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
36:YQ:59:ARG:H	36:YQ:59:ARG:CD	1.99	0.76
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.76
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.21	0.76
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
25:RA:693:C:O2	25:RA:769:G:N2	2.15	0.76
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.51	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
25:YA:465:G:H21	25:YA:684:G:H1'	1.50	0.76
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	2.00	0.76
48:Y2:47:ASN:H	48:Y2:47:ASN:HD22	1.33	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:59:LYS:HB2	54:Y8:59:LYS:HZ2	1.48	0.76
1:QA:255:G:H2'	1:QA:256:U:C6	2.21	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.01	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.00	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.67	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.48	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
1:QA:625:G:H2'	1:QA:626:U:H6	1.50	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:242:G:H5''	54:R8:3:LYS:HE3	1.67	0.76
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.17	0.76
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.50	0.76
25:RA:2119:A:N6	25:RA:2170:A:N7	2.34	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.01	0.76
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.18	0.76
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.51	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.50	0.76
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.39	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.48	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
55:R9:1:MET:HB3	55:R9:4:ARG:NH1	2.01	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.76
47:R1:56:GLN:NE2	47:R1:56:GLN:N	2.34	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.98	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.51	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	1.99	0.76
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.39	0.76
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.86	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
35:YP:62:LEU:N	35:YP:62:LEU:CD2	2.46	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
1:QA:1081:G:P	5:QE:16:THR:OG1	2.44	0.76
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.16	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.51	0.76
26:RB:24:G:N3	26:RB:27:C:N4	2.32	0.76
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.76
34:RO:104:ARG:HH11	34:RO:104:ARG:HG2	1.50	0.76
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.76
1:XA:1109:C:OP2	3:XC:176:HIS:ND1	2.19	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
25:YA:566:U:OP1	35:YP:29:LYS:HE2	1.87	0.76
25:YA:1416:G:O2'	25:YA:1417:C:O5'	2.04	0.76
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.76
28:YE:63:LEU:CD1	28:YE:65:GLY:H	1.99	0.76
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.68	0.76
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.49	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:1:C:O4'	46:R0:5:LYS:CE	2.34	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.75
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.21	0.75
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.75
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.75
52:Y6:34:LEU:H	52:Y6:34:LEU:HD13	1.50	0.75
1:QA:18:C:H5''	5:QE:127:ASN:HD21	1.49	0.75
1:QA:961:U:O2	1:QA:1201:A:N6	2.15	0.75
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.18	0.75
5:QE:53:LEU:H	5:QE:53:LEU:CD1	1.99	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
25:RA:2529:G:O6	55:R9:31:LYS:NZ	2.17	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.14	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.86	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.66	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.69	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.51	0.75
54:Y8:59:LYS:CB	54:Y8:59:LYS:HZ3	1.98	0.75
1:QA:407:G:O6	1:QA:435:C:N4	2.18	0.75
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.86	0.75
54:R8:59:LYS:CB	54:R8:59:LYS:HZ3	1.98	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
25:YA:155:C:N4	25:YA:171:G:O6	2.18	0.75
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.19	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
1:QA:475:G:H2'	1:QA:476:G:H8	1.50	0.75
25:RA:1167:U:O2	25:RA:1183:G:N2	2.19	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
40:RU:52:ARG:HH11	40:RU:52:ARG:HG2	1.50	0.75
1:XA:669:U:O4	1:XA:737:A:N6	2.19	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
25:YA:2310:A:H62	30:YG:77:ILE:HG21	1.51	0.75
25:YA:2399:G:O6	25:YA:2417:C:N4	2.13	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.52	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.86	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
25:YA:484:C:H2'	25:YA:485:C:H6	1.51	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.67	0.75
1:QA:15:G:H2'	1:QA:16:A:C8	2.22	0.75
1:QA:745:C:H2'	1:QA:746:A:H8	1.52	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.86	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.69	0.75
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.75
25:YA:918:A:N3	26:YB:80:U:O2'	2.19	0.75
35:YP:75:ILE:HD13	35:YP:75:ILE:N	2.00	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
55:Y9:1:MET:HB3	55:Y9:4:ARG:NH1	2.02	0.75
1:QA:1200:C:H1'	1:QA:1204:A:H61	1.50	0.75
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.69	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
25:RA:247:G:O6	54:R8:12:LYS:NZ	2.15	0.75
25:RA:305:U:H2'	25:RA:306:U:C6	2.22	0.75
25:RA:481:G:O6	25:RA:509:C:N4	2.14	0.75
25:RA:2593:U:H2'	25:RA:2594:C:H6	1.51	0.75
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
1:XA:606:G:N2	1:XA:631:G:H8	1.85	0.75
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.75
25:YA:1812:A:H2'	25:YA:1813:G:H8	1.51	0.75
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.01	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.14	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
7:XG:148:ASN:HD22	7:XG:148:ASN:N	1.82	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
47:Y1:56:GLN:NE2	47:Y1:56:GLN:N	2.34	0.75
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.69	0.75
1:XA:64:G:N2	1:XA:68:G:O6	2.17	0.75
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.01	0.75
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.51	0.75
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.75
25:YA:265:A:O2'	25:YA:266:G:H4'	1.87	0.75
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.04	0.75
47:Y1:81:LYS:NZ	47:Y1:81:LYS:CA	2.30	0.75
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.75
1:QA:1154:G:H2'	1:QA:1155:G:H8	1.51	0.74
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.74
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.74
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.20	0.74
25:RA:746:A:O2'	25:RA:747:U:OP2	2.04	0.74
25:RA:2068:U:H3	25:RA:2430:A:H2	1.32	0.74
25:RA:2636:U:OP2	28:RE:79:ARG:NH1	2.20	0.74
25:RA:2745:C:O2	31:RH:139:GLN:NE2	2.20	0.74
28:RE:63:LEU:CD1	28:RE:65:GLY:H	1.99	0.74
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
25:YA:1532:C:N4	25:YA:1539:G:O6	2.18	0.74
25:YA:2439:A:C8	25:YA:2439:A:H5'	2.22	0.74
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74
1:QA:1316:G:OP1	14:QN:17:LYS:NZ	2.17	0.74
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.74
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.20	0.74
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.74
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.19	0.74
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.00	0.74
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.74
25:YA:577:G:O2'	25:YA:1254:A:OP1	2.05	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
1:QA:1081:G:P	5:QE:16:THR:HG1	2.09	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.21	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.87	0.74
1:XA:243:A:N6	1:XA:281:G:O2'	2.20	0.74
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.53	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.87	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.02	0.74
1:QA:359:U:H2'	1:QA:360:A:C8	2.23	0.74
1:QA:569:C:N4	1:QA:881:G:O6	2.19	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
32:RI:12:LEU:HG	32:RI:19:VAL:HG11	1.69	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
50:R4:71:ARG:HG3	50:R4:71:ARG:NH1	1.90	0.74
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.20	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.21	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.69	0.74
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	2.03	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.52	0.74
25:YA:2846:G:H2'	25:YA:2847:U:C6	2.22	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
36:YQ:79:LEU:O	36:YQ:79:LEU:CD2	2.36	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
25:RA:859:G:O2'	25:RA:860:U:O2	2.06	0.74
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.22	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
23:XX:2:U:C2'	23:XX:3:G:H5'	2.17	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.53	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
1:XA:191:G:C4	20:XT:105:SER:HB3	2.23	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
25:YA:271(B):G:H5''	25:YA:271(B):G:H8	1.52	0.74
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.70	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
1:QA:156:G:H1	1:QA:165:C:H42	1.35	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.74
23:QX:2:U:C2'	23:QX:3:G:H5'	2.17	0.74
25:RA:1792:G:N2	25:RA:1827:C:O2	2.20	0.74
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.70	0.74
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.74
1:XA:971:G:H5''	1:XA:972:C:H5''	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.88	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.87	0.74
25:YA:2443:C:H2'	25:YA:2444:G:C8	2.23	0.74
25:YA:2723:C:OP1	37:YR:3:HIS:ND1	2.20	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.87	0.74
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.74
25:RA:270(D):C:O2	25:RA:270(V):G:N2	2.19	0.74
25:RA:1468:C:O2	25:RA:1524:G:N2	2.19	0.74
25:RA:1791:A:N6	25:RA:1828:G:O2'	2.19	0.74
25:RA:2818:G:O6	25:RA:2828:C:N4	2.19	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.74
35:RP:50:ARG:HB3	35:RP:50:ARG:NH2	1.98	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.88	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
25:YA:1187:G:H5''	41:YV:81:TYR:CE2	2.23	0.74
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.74
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.49	0.74
39:YT:54:ARG:HG2	39:YT:54:ARG:HH11	1.52	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
1:QA:750:G:N2	15:QO:23:GLY:O	2.18	0.74
25:RA:2006:C:O2'	25:RA:2823:A:N3	2.18	0.74
36:RQ:79:LEU:O	36:RQ:79:LEU:CD1	2.35	0.74
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.74
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.74
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.74
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.74
49:R3:29:ARG:HH11	49:R3:29:ARG:HB2	1.52	0.74
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.74
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.20	0.74
25:YA:851:U:H1'	49:Y3:46:ASN:HD21	1.53	0.74
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
49:Y3:29:ARG:HB2	49:Y3:29:ARG:HH11	1.53	0.74
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.74
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.53	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.50	0.73
25:RA:305:U:H2'	25:RA:306:U:H6	1.52	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.20	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
25:RA:1050:A:H8	25:RA:2751:G:HO2'	1.35	0.73
25:RA:1795:C:O2	27:RD:255:LYS:HE2	1.88	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.73
47:R1:76:ARG:HH11	47:R1:76:ARG:HG2	1.53	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.73
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.73
25:YA:751:A:OP1	57:YA:3027:MG:MG	1.31	0.73
26:YB:15:A:H5'	26:YB:16:G:C8	2.22	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.18	0.73
25:RA:2582:G:H21	25:RA:2583:G:H1'	1.51	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.73
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.52	0.73
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.52	0.73
2:XB:8:LYS:HD3	2:XB:8:LYS:N	2.03	0.73
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.73
25:YA:2655:G:O2'	25:YA:2656:U:OP2	2.05	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.19	0.73
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.03	0.73
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.06	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.73
40:RU:64:ARG:HH21	40:RU:64:ARG:CG	2.00	0.73
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.19	0.73
14:XN:32:SER:O	14:XN:41:ARG:N	2.22	0.73
14:XN:44:LEU:CD1	14:XN:53:LEU:CD1	2.66	0.73
25:YA:1454:U:H5'	37:YR:63:ARG:NE	1.99	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.69	0.73
45:YZ:10:ARG:NH2	45:YZ:26:GLY:O	2.20	0.73
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.21	0.73
25:RA:270(L):U:H2'	32:RI:50:ARG:HD2	1.71	0.73
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.36	0.73
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.54	0.73
25:RA:1728:G:H3'	25:RA:1729:A:H5''	1.69	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
32:RI:64:GLU:O	32:RI:67:ARG:NH2	2.21	0.73
25:YA:2071:A:H2'	25:YA:2072:G:H8	1.53	0.73
25:YA:2777:G:OP2	25:YA:2781:A:O2'	2.06	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
36:YQ:79:LEU:O	36:YQ:79:LEU:CD1	2.35	0.73
1:QA:474:G:H2'	1:QA:475:G:C8	2.24	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.17	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.89	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
1:XA:295:C:O2	1:XA:302:G:N2	2.20	0.73
1:XA:891:U:H2'	1:XA:892:A:H8	1.54	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.87	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
25:YA:2864:G:OP1	39:YT:119:LYS:HD2	1.88	0.73
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.19	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
2:QB:195:ASP:O	8:QH:74:PRO:HG3	1.88	0.73
25:RA:2439:A:C8	25:RA:2439:A:H5'	2.23	0.73
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.70	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.68	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1078:U:O2'	5:QE:130:ASN:OD1	2.05	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.73
25:RA:709:U:H3	25:RA:722:A:H61	1.36	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
25:YA:704:G:H2'	25:YA:726:G:N2	2.04	0.73
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.53	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
25:RA:259:G:O2'	25:RA:621:A:O2'	2.07	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
40:RU:34:LYS:HE2	40:RU:34:LYS:HA	1.70	0.73
1:XA:1239:A:H62	1:XA:1299:A:N6	1.87	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
25:YA:71:A:H4'	25:YA:72:U:H5''	1.70	0.73
28:YE:203:LYS:O	28:YE:203:LYS:HD2	1.88	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.73
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.70	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.05	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
1:XA:1296:C:HO2'	1:XA:1302:U:H5	1.35	0.72
13:XM:65:LYS:NZ	50:Y4:52:THR:HG21	2.04	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.72
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.30	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.72
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	1.90	0.72
26:RB:4:C:N3	26:RB:117:G:N2	2.36	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.72
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.72
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.72
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.22	0.72
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.69	0.72
25:YA:2848:G:O2'	25:YA:2867:G:N2	2.23	0.72
26:YB:40:U:H1'	26:YB:45:A:H61	1.54	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.04	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
25:RA:2893:G:H5''	25:RA:2894:G:H5'	1.71	0.72
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.88	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
25:YA:890:A:HO2'	25:YA:892:G:H8	1.34	0.72
25:YA:1019:U:H3	25:YA:1142(A):A:N6	1.86	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
25:YA:330:A:HO2'	25:YA:331:A:H8	1.35	0.72
25:YA:1485:G:O6	25:YA:1504:C:N4	2.17	0.72
25:YA:2026:C:O2	25:YA:2037:G:N2	2.12	0.72
26:YB:42:C:O4'	30:YG:69:ALA:HB2	1.88	0.72
31:YH:132:ARG:HH11	31:YH:132:ARG:CB	1.97	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
1:QA:1213:A:N6	1:QA:1215:G:N3	2.38	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
25:RA:593:G:H2'	25:RA:594:U:H6	1.53	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
1:XA:474:G:H2'	1:XA:475:G:H8	1.55	0.72
1:XA:1353:G:N2	1:XA:1369:C:O2	2.17	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
25:YA:299:A:H5'	25:YA:300:A:OP2	1.88	0.72
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	1.89	0.72
25:YA:2443:C:H2'	25:YA:2444:G:H8	1.53	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
38:YS:26:LEU:O	38:YS:26:LEU:HD23	1.90	0.72
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.19	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
1:XA:1094:G:O2'	1:XA:1095:U:OP2	2.05	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
1:QA:872:A:O2'	1:QA:873:A:H5''	1.90	0.72
1:QA:1311:G:N2	1:QA:1326:C:O2	2.19	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG22	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.90	0.72
1:XA:1439:C:H42	1:XA:1462:G:H1	1.37	0.72
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
25:YA:102:G:O2'	25:YA:103:A:OP2	2.06	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.71	0.72
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.23	0.72
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.25	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
25:RA:2289:G:N2	25:RA:2344:U:O2	2.22	0.72
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.05	0.72
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:54:ARG:HH11	39:RT:54:ARG:HG2	1.52	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
1:XA:210:U:O2'	1:XA:216:G:N7	2.23	0.72
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.72
25:YA:2516:G:N2	25:YA:2568:C:O2	2.17	0.72
29:YF:32:LEU:O	29:YF:32:LEU:HD12	1.90	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.72
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.72
25:RA:674:G:O6	25:RA:806:C:N4	2.18	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.72
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.72
1:XA:107:G:C2	1:XA:108:G:H1'	2.25	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
25:YA:1788:C:H2'	25:YA:1789:A:H8	1.54	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.72
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.72
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.70	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.10	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
25:RA:2210:G:H3'	25:RA:2211:G:H8	1.52	0.72
26:RB:40:U:H1'	26:RB:45:A:H61	1.53	0.72
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.19	0.72
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.72
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.72
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.72
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.72
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.55	0.72
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.90	0.71
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.55	0.71
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.22	0.71
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.20	0.71
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	1.90	0.71
29:RF:32:LEU:HD12	29:RF:32:LEU:C	2.10	0.71
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.71
38:RS:26:LEU:O	38:RS:26:LEU:HD23	1.89	0.71
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.55	0.71
1:XA:372:C:N4	1:XA:389:A:H62	1.88	0.71
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.71
25:YA:878:A:N6	25:YA:899:A:O2'	2.22	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.36	0.71
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.71
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.54	0.71
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.71
25:RA:779:U:O2	25:RA:785:G:N1	2.19	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
25:YA:363:G:H2'	25:YA:363(A):A:H8	1.54	0.71
25:YA:518:G:C4'	42:YW:18:ARG:HH12	1.96	0.71
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.72	0.71
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.71
48:Y2:41:ILE:C	48:Y2:41:ILE:HD12	2.10	0.71
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.24	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.71	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.71
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.71
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.71
1:XA:701:C:O2'	1:XA:702:A:OP2	2.08	0.71
1:XA:791:G:N2	1:XA:1497:G:O3'	2.23	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.54	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.91	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.89	0.71
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
1:QA:41:G:H2'	1:QA:42:G:H8	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
25:YA:1535:U:H5''	25:YA:1537:C:C4	2.26	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
36:YQ:79:LEU:HD22	36:YQ:79:LEU:C	2.06	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71
1:QA:983:A:N1	1:QA:1222:G:N2	2.38	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
23:QX:4:C:H2'	23:QX:5:C:H5'	1.72	0.71
25:RA:1397:U:OP2	25:RA:1398:C:N4	2.22	0.71
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.70	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.90	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.71
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.03	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.71
25:YA:270(T):G:H5''	47:Y1:97:LEU:HD22	1.71	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
1:QA:41:G:H2'	1:QA:42:G:C8	2.26	0.71
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.04	0.71
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:135:G:H1	25:RA:144:C:H42	1.36	0.71
25:RA:323:G:O2'	25:RA:1205:U:N3	2.23	0.71
25:RA:2443:C:H2'	25:RA:2444:G:H8	1.54	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
33:RN:1:MET:CE	40:RU:95:LEU:HD21	2.21	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
37:YR:1:MET:HG3	37:YR:3:HIS:CE1	2.26	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.24	0.71
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.39	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.71
25:RA:252:G:OP2	35:RP:50:ARG:NH1	2.24	0.71
25:RA:2114:A:N6	25:RA:2119:A:N7	2.39	0.71
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.25	0.71
27:RD:263:ARG:HB2	27:RD:263:ARG:NH1	2.05	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
45:RZ:108:PRO:HA	45:RZ:142:SER:HA	1.70	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.71
1:XA:116:A:H61	1:XA:313:A:H1'	1.56	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.91	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71
1:QA:191(F):U:O2	20:QT:105:SER:HB2	1.91	0.71
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.72	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.73	0.71
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.24	0.71
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.71
1:XA:328:C:H4'	1:XA:329:A:H5'	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.71
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.71
25:YA:188:G:N2	25:YA:208:C:N3	2.35	0.71
25:YA:704:G:H2'	25:YA:726:G:H22	1.56	0.71
25:YA:1021:A:H3'	25:YA:1021:A:C8	2.26	0.71
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.71	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.71	0.71
48:Y2:7:ARG:HG3	48:Y2:7:ARG:HH11	1.55	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
1:QA:533:A:O2'	1:QA:534:U:H5''	1.91	0.71
1:QA:1446:A:C2	39:RT:118:ARG:HD2	2.26	0.71
1:QA:1502:A:H5'	1:QA:1504:G:N7	2.06	0.71
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.71
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.71
25:RA:270(T):G:O5'	47:R1:97:LEU:HD22	1.90	0.71
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.06	0.71
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.73	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.20	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
47:Y1:81:LYS:HE2	47:Y1:81:LYS:CA	2.13	0.71
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.70
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.26	0.70
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.59	0.70
25:RA:2553:G:N2	56:Z6:76:PPU:H2	2.06	0.70
31:RH:132:ARG:HH11	31:RH:132:ARG:CB	1.97	0.70
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
1:XA:1507:A:N6	1:XA:1528:U:O4	2.14	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.70
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.70
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.70
13:XM:65:LYS:HZ3	50:Y4:52:THR:HG21	1.56	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.70
25:YA:1291:C:H2'	25:YA:1292:U:C6	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.91	0.70
1:QA:6:G:N2	5:QE:98:THR:OG1	2.24	0.70
1:QA:999:U:H2'	1:QA:1000:A:C8	2.26	0.70
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.57	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.40	0.70
26:RB:82:G:H2'	26:RB:83:G:H8	1.55	0.70
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.89	0.70
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.91	0.70
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
1:XA:1128:C:H42	1:XA:1144:G:H1	1.37	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.04	0.70
25:YA:18:C:N4	25:YA:522:G:O6	2.16	0.70
25:YA:2114:A:N6	25:YA:2119:A:N7	2.39	0.70
31:YH:59:ARG:HH11	31:YH:59:ARG:HG3	1.56	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
25:RA:2667:C:H1'	31:RH:109:PHE:CD2	2.24	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.91	0.70
1:XA:782:A:OP1	57:XA:1610:MG:MG	1.34	0.70
1:XA:1252:A:H2'	1:XA:1253:G:O4'	1.91	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
25:YA:24:G:O2'	42:YW:78:GLU:O	2.09	0.70
25:YA:592:G:H1	25:YA:665:C:N4	1.90	0.70
25:YA:1006:C:H5'	33:YN:28:THR:HG23	1.72	0.70
25:YA:1372:U:H2'	25:YA:1373:A:H5'	1.73	0.70
25:YA:2422:A:N7	25:YA:2424:C:N4	2.38	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.06	0.70
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:81:G:N2	1:QA:88:C:O2	2.19	0.70
1:QA:1076:C:O2	1:QA:1082:G:N2	2.25	0.70
25:RA:507:A:H5''	25:RA:508:G:H5'	1.72	0.70
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
1:XA:842:C:O2'	1:XA:848:C:N4	2.24	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	0.70
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.39	0.70
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.08	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.92	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.05	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.39	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
25:YA:330:A:O2'	25:YA:331:A:H8	1.73	0.70
25:YA:863:A:H2'	25:YA:864:G:H8	1.54	0.70
25:YA:2123:G:H1	25:YA:2175:C:H42	1.39	0.70
26:YB:8:U:O2	26:YB:112:G:N2	2.24	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
25:RA:958:U:O2	26:RB:89(A):A:H4'	1.92	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
1:XA:1071:C:H5''	5:XE:49:PRO:HG2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.21	0.70
1:QA:618:C:N3	1:QA:622:A:N6	2.40	0.70
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.56	0.70
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.06	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
25:RA:438:G:H2'	25:RA:439:G:C8	2.26	0.70
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.21	0.70
25:RA:2582:G:N2	25:RA:2583:G:H1'	2.06	0.70
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.27	0.70
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.21	0.70
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.05	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.10	0.70
25:YA:2422:A:OP2	52:Y6:6:ARG:NH1	2.25	0.70
25:YA:2712:U:O2'	25:YA:2712(A):A:O5'	2.10	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.72	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.27	0.70
1:QA:1471:G:H2'	1:QA:1472:U:H6	1.56	0.70
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
25:RA:372:G:H5''	47:R1:66:HIS:CD2	2.26	0.70
25:RA:2053:G:O6	25:RA:2616:C:N4	2.20	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.74	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
25:YA:530:G:O2'	25:YA:532:A:N7	2.24	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.73	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.72	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.13	0.70
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
27:RD:65:ILE:HD13	27:RD:65:ILE:O	1.91	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.40	0.70
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.70
36:RQ:80:GLU:OE1	46:R0:7:LEU:HB3	1.92	0.70
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.27	0.70
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.70
25:YA:301:G:H1	25:YA:316:C:H42	1.40	0.70
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.09	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.72	0.70
1:QA:559:A:H4'	1:QA:560:U:H3'	1.72	0.70
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
26:RB:7:G:H3'	26:RB:8:U:H5''	1.73	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.70
1:XA:407:G:H1	1:XA:435:C:H42	1.40	0.70
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.17	0.70
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.56	0.70
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.70
1:QA:409:G:H1	1:QA:433:C:H42	1.38	0.69
1:QA:1095:U:P	1:QA:1108:G:H1	2.15	0.69
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
9:QI:113:LYS:HD2	9:QI:113:LYS:N	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:628:G:H2'	25:RA:629:G:H8	1.56	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.69
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
19:XS:5:LEU:HD21	50:Y4:66:SER:HB2	1.74	0.69
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.72	0.69
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.69
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.69
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.69
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.21	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.07	0.69
25:RA:32:C:N4	25:RA:447:A:OP2	2.25	0.69
25:RA:1341:U:H2'	25:RA:1397:U:O2	1.92	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.74	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.27	0.69
26:YB:38:C:O2	26:YB:48:A:H1'	1.92	0.69
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.69
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.12	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.91	0.69
25:RA:2245:U:H5'	25:RA:2246:G:H5'	1.72	0.69
25:RA:2531:A:N3	25:RA:2658:C:O2'	2.21	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.73	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.69
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:6:LEU:O	14:YN:6:LEU:HD23	1.92	0.69
25:YA:1429:G:H2'	25:YA:1430:C:H6	1.57	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.98	0.69
1:QA:299:G:H2'	1:QA:300:A:C8	2.27	0.69
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.73	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.75	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.58	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
34:YO:8:LEU:HD22	34:YO:8:LEU:N	2.07	0.69
35:YP:62:LEU:HD22	35:YP:62:LEU:H	1.53	0.69
35:YP:64:LYS:C	35:YP:66:GLY:H	1.95	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.27	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
25:RA:1059:G:O6	25:RA:1079:C:N4	2.26	0.69
25:RA:1590:U:H2'	25:RA:1591:G:H8	1.57	0.69
26:RB:33:G:O5'	30:RG:2:PRO:HG3	1.92	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
1:XA:266:G:O2'	1:XA:267:C:OP2	2.11	0.69
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.60	0.69
25:YA:304:G:H2'	25:YA:305:U:H6	1.56	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.73	0.69
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
8:QH:6:ILE:HD12	8:QH:6:ILE:N	2.08	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:71:A:H4'	25:RA:72:U:H5''	1.75	0.69
25:RA:83:G:N2	25:RA:103:A:OP2	2.25	0.69
25:RA:1061:U:H5'	25:RA:1070:A:H1'	1.75	0.69
25:RA:1153:C:OP1	40:RU:76:TYR:OH	2.11	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.75	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
47:R1:74:VAL:HG12	47:R1:74:VAL:O	1.93	0.69
47:R1:81:LYS:HE2	47:R1:81:LYS:CA	2.13	0.69
1:XA:1059:C:O2	10:XJ:53:PRO:HG3	1.92	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
25:YA:1270:C:H5''	25:YA:1271:G:H5'	1.74	0.69
25:YA:2498:C:O2'	25:YA:2499:C:H5'	1.92	0.69
25:YA:2757:A:OP1	55:Y9:19:ARG:HA	1.93	0.69
26:YB:70:C:H2'	26:YB:71:C:C6	2.27	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
35:YP:61:ARG:H	35:YP:61:ARG:HD2	1.58	0.69
1:QA:1069:C:C2'	5:QE:25:ARG:HH12	2.06	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
25:RA:595:C:H42	25:RA:662:G:H1	1.40	0.69
25:RA:1799:G:H5'	25:RA:1819:A:H61	1.58	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
41:RV:41:GLY:HA3	41:RV:46:VAL:HG11	1.74	0.69
14:XN:23:ARG:CZ	14:XN:30:ALA:HB2	2.22	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
25:YA:822:U:H2'	25:YA:823:G:H8	1.58	0.69
25:YA:2469:A:H2	25:YA:2481:G:H21	1.40	0.69
26:YB:82:G:H2'	26:YB:83:G:C8	2.27	0.69
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
1:QA:636:U:H2'	1:QA:637:G:C8	2.28	0.69
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.10	0.69
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	2.07	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
25:RA:249:C:O2	54:R8:12:LYS:HE3	1.91	0.69
25:RA:813:U:H2'	25:RA:814:C:C6	2.28	0.69
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.18	0.69
25:RA:1041:C:H2'	25:RA:1042:G:H8	1.58	0.69
25:RA:1296:G:OP1	25:RA:2709:G:O2'	2.10	0.69
25:RA:1614:A:H62	42:RW:93:ALA:HB2	1.57	0.69
25:RA:2626:C:H42	25:RA:2777:G:H1	1.40	0.69
25:RA:2630:G:N3	25:RA:2894:G:N2	2.41	0.69
26:RB:13:A:H2'	26:RB:70:C:O2'	1.92	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.56	0.69
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
14:YN:44:LEU:CD1	14:YN:53:LEU:HD13	2.23	0.69
25:YA:1021:A:H3'	25:YA:1021:A:H8	1.57	0.69
25:YA:1899:G:O2'	25:YA:1900:A:OP2	2.08	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.06	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.93	0.69
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
25:RA:49:A:N7	25:RA:120:U:H5	1.91	0.69
25:RA:1043:C:N3	25:RA:1112:G:N2	2.41	0.69
25:RA:1930:G:O2'	25:RA:1931:U:O5'	2.09	0.69
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.75	0.69
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.75	0.69
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.28	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.93	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.75	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.58	0.69
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.74	0.69
1:QA:1287:A:H2'	1:QA:1288:A:C8	2.28	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.91	0.69
25:RA:141:A:H8	25:RA:1595:G:H21	1.41	0.69
25:RA:1140:C:H5''	33:RN:66:LYS:HZ1	1.58	0.69
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.06	0.69
35:RP:61:ARG:HD2	35:RP:61:ARG:H	1.58	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.06	0.69
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.69
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.69
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.69
1:XA:376:G:OP1	16:XP:5:ARG:HB2	1.93	0.69
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.74	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	0.69
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.69
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.26	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.69
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.07	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
25:RA:769:G:H5'	25:RA:1379:A:N6	2.08	0.68
25:RA:1754:C:H2'	25:RA:1755:A:C8	2.29	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
36:RQ:80:GLU:HG3	36:RQ:81:VAL:H	1.58	0.68
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	0.68
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.68
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.68
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.68
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.22	0.68
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.11	0.68
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
25:RA:74:A:H4'	25:RA:75:G:O5'	1.94	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.26	0.68
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	0.68
25:YA:1022:G:O2'	25:YA:1023:U:OP2	2.09	0.68
25:YA:2025:C:H2'	25:YA:2026:C:H6	1.59	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.68
1:XA:1095:U:P	1:XA:1108:G:H1	2.17	0.68
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.23	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.06	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
25:RA:279:C:N4	25:RA:361:G:H1	1.89	0.68
25:RA:817:C:O2'	25:RA:839:U:H5''	1.93	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.75	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
1:XA:561:U:O2'	1:XA:562:C:OP2	2.09	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
12:XL:45:PRO:HB3	12:XL:93:LEU:HD23	1.73	0.68
25:YA:1291:C:H2'	25:YA:1292:U:H6	1.58	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
38:YS:57:LYS:HD3	38:YS:57:LYS:H	1.59	0.68
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.75	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.27	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.94	0.68
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	0.68
17:XQ:59:ILE:HD13	17:XQ:59:ILE:N	2.08	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
1:QA:15:G:H2'	1:QA:16:A:H8	1.57	0.68
1:QA:920:U:H2'	1:QA:921:U:C6	2.28	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.15	0.68
25:RA:2198:A:C2	32:RI:29:TYR:HB2	2.29	0.68
25:RA:2287:A:N6	25:RA:2344:U:H3	1.92	0.68
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.08	0.68
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.74	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.23	0.68
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
50:R4:15:ILE:N	50:R4:15:ILE:HD13	2.09	0.68
1:XA:1496:C:O2	1:XA:1517:G:N2	2.25	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
25:YA:1863:G:H2'	25:YA:1864:U:H6	1.59	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.09	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.08	0.68
1:QA:658:G:N2	1:QA:747:C:O2	2.19	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.26	0.68
25:RA:2393:A:H4'	35:RP:61:ARG:O	1.93	0.68
25:RA:2831:G:H1'	25:RA:2883:A:H2'	1.75	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
25:YA:1778:U:H2'	25:YA:1784:A:N6	2.09	0.68
28:YE:16:ARG:O	28:YE:16:ARG:HG3	1.93	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.93	0.68
36:YQ:80:GLU:HG3	36:YQ:81:VAL:H	1.58	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	0.68
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.58	0.68
17:QQ:59:ILE:HD13	17:QQ:59:ILE:N	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.68
25:RA:372:G:HO2'	25:RA:373:U:P	2.16	0.68
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.59	0.68
25:RA:1931:U:H6	25:RA:1932:A:C8	2.11	0.68
25:RA:2470:G:H5'	36:RQ:56:ARG:HH22	1.58	0.68
31:RH:88:LEU:H	31:RH:88:LEU:HD22	1.58	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.68
1:XA:411:A:H62	1:XA:413:G:N2	1.90	0.68
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.76	0.68
25:YA:994:C:O2'	25:YA:996:A:OP1	2.12	0.68
25:YA:2303:G:N2	25:YA:2313:C:N3	2.38	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
1:QA:1497:G:H2'	1:QA:1498:U:H5'	1.75	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.08	0.68
4:QD:166:LYS:CG	27:YD:135:PHE:CZ	2.77	0.68
25:RA:380:U:H2'	25:RA:381:G:C8	2.28	0.68
25:RA:1043:C:HO2'	25:RA:1048:A:HO2'	1.36	0.68
25:RA:1378:A:HO2'	25:RA:1379:A:P	2.17	0.68
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.29	0.68
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.68
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.58	0.68
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.09	0.68
25:YA:1418:G:OP1	25:YA:1588:C:O2'	2.12	0.68
25:YA:2211:G:O2'	25:YA:2212:A:OP2	2.11	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.59	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.68
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.68
14:QN:6:LEU:O	14:QN:6:LEU:HD23	1.93	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.68
25:RA:2555:U:C2	56:Z6:74:C:C5	2.82	0.68
25:RA:2663:G:H3'	25:RA:2664:G:H8	1.59	0.68
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
1:XA:577:G:H1'	1:XA:816:A:C4	2.29	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
25:YA:136:G:H1	25:YA:143:C:H42	1.40	0.68
25:YA:188:G:H1	25:YA:208:C:H42	1.42	0.68
25:YA:1606:G:H5''	25:YA:1607:C:OP1	1.94	0.68
25:YA:2893:G:H5''	25:YA:2894:G:H5'	1.76	0.68
27:YD:241:PRO:O	27:YD:243:GLY:N	2.27	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
1:QA:411:A:N6	1:QA:413:G:H21	1.92	0.67
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.67
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.93	0.67
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.67
1:XA:309:G:H2'	1:XA:310:G:H8	1.59	0.67
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.67
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.26	0.67
25:YA:1667:G:O2'	25:YA:1991:U:O4	2.11	0.67
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.23	0.67
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.94	0.67
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.57	0.67
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.94	0.67
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.67
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.67
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.67
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.77	0.67
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.67
1:QA:221:C:H2'	1:QA:222:U:H6	1.58	0.67
1:QA:1070:U:P	5:QE:25:ARG:NH1	2.67	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
10:QJ:96:ILE:HD13	10:QJ:96:ILE:N	2.09	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:848:G:H2'	25:RA:849:A:C8	2.30	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	0.67
1:XA:1422:G:N2	1:XA:1478:C:O2	2.26	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.10	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
35:YP:65:ARG:HH11	35:YP:65:ARG:CG	2.06	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67
1:QA:828:A:H5''	1:QA:859:A:C2	2.29	0.67
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
7:QG:8:GLU:CD	7:QG:8:GLU:H	1.97	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
25:RA:674:G:H2'	25:RA:804:A:H61	1.57	0.67
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.76	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.29	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
25:YA:484:C:H2'	25:YA:485:C:C6	2.28	0.67
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.10	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
25:RA:593:G:O3'	54:R8:61:LEU:HD22	1.95	0.67
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.10	0.67
25:RA:2758:A:C2	25:RA:2759:G:H1'	2.29	0.67
28:RE:13:ARG:HH11	28:RE:13:ARG:CB	2.07	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.76	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.76	0.67
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.58	0.67
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
25:RA:873:G:H1	25:RA:904:C:N4	1.93	0.67
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.76	0.67
25:RA:2041:U:H2'	25:RA:2042:A:C8	2.30	0.67
27:RD:135:PHE:CD2	27:RD:135:PHE:N	2.62	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.59	0.67
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.76	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.28	0.67
1:XA:34:C:H2'	1:XA:35:G:C8	2.29	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.74	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
25:YA:270(J):G:N2	25:YA:270(Q):C:O2	2.28	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.42	0.67
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.67
38:YS:67:ARG:HB2	38:YS:67:ARG:CZ	2.24	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.23	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
1:QA:375:U:H2'	1:QA:376:G:H8	1.60	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.60	0.67
25:RA:948:G:N2	25:RA:970:C:O2	2.28	0.67
25:RA:1674:G:N2	25:RA:1677:A:N1	2.42	0.67
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.30	0.67
26:RB:11:C:H3'	26:RB:12:C:H6	1.57	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
31:RH:89:ILE:HG12	31:RH:89:ILE:O	1.93	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.14	0.67
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
1:XA:902:G:H2'	1:XA:903:G:H8	1.59	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.25	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
25:YA:530:G:N1	25:YA:2022:U:OP1	2.27	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.60	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.10	0.67
1:QA:1158:C:H4'	2:QB:133:LYS:HZ3	1.56	0.67
1:QA:1267:C:H5	1:QA:1268:A:C5	2.13	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
25:RA:483:A:H3'	25:RA:484:C:H6	1.60	0.67
25:RA:1433:U:H6	25:RA:1433:U:H5''	1.58	0.67
28:RE:16:ARG:O	28:RE:16:ARG:HG3	1.93	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.08	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
25:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.29	0.67
25:YA:2781:A:H5''	25:YA:2782:G:H5'	1.76	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:47:ASN:H	48:R2:47:ASN:ND2	1.92	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
1:QA:54:C:N4	1:QA:353:A:OP2	2.27	0.67
1:QA:503:C:OP2	12:QL:116:SER:HB3	1.95	0.67
1:QA:1274:G:N2	1:QA:1275:A:N7	2.42	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
25:RA:29:U:H2'	25:RA:30:G:C8	2.30	0.67
25:RA:1412:A:H2'	25:RA:1413:G:O4'	1.95	0.67
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.75	0.67
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.67
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
1:XA:958:A:C8	19:XS:55:LYS:HD2	2.30	0.67
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	1.95	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.76	0.67
25:YA:639:U:H2'	25:YA:640:C:C6	2.29	0.67
25:YA:993:G:H2'	25:YA:994:C:H6	1.60	0.67
25:YA:2450:A:C2	25:YA:2451:A:C4	2.83	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.59	0.67
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.28	0.67
49:Y3:29:ARG:HB2	49:Y3:29:ARG:NH1	2.10	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
1:QA:265:G:H2'	1:QA:266:G:H5''	1.78	0.67
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.11	0.67
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.67
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.06	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.77	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
25:RA:1473:G:H1	25:RA:1520:U:H3	1.42	0.67
25:RA:2405:G:OP1	35:RP:77:ARG:NH2	2.28	0.67
26:RB:15:A:H5'	26:RB:16:G:C8	2.30	0.67
28:RE:36:ARG:HH11	28:RE:36:ARG:HB3	1.60	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.58	0.67
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
25:YA:688:U:H2'	25:YA:689:A:H8	1.59	0.67
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.67
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.27	0.66
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	0.66
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.66
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:1339:G:N2	25:RA:1603:A:H1'	2.10	0.66
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.25	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.25	0.66
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
49:R3:29:ARG:HB2	49:R3:29:ARG:NH1	2.10	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.66
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.76	0.66
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	1.68	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.66
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.66
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.27	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
25:RA:1543:A:H1'	25:RA:1545:A:H5''	1.77	0.66
26:RB:97:G:H2'	26:RB:98:G:O4'	1.95	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.26	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.66
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.44	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.66
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.66
36:YQ:83:MET:HB2	46:Y0:7:LEU:HD22	1.77	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
1:QA:828:A:H2'	1:QA:829:G:O4'	1.96	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
1:XA:108:G:H5''	1:XA:109:A:H5''	1.76	0.66
1:XA:451:A:N7	1:XA:481:G:C2	2.63	0.66
4:XD:14:ARG:O	4:XD:14:ARG:HD3	1.95	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.78	0.66
25:YA:270(A):A:N3	25:YA:365:C:O2'	2.27	0.66
25:YA:1403:C:H5''	25:YA:1471:A:C1'	2.25	0.66
25:YA:2470:G:H5'	36:YQ:56:ARG:NH2	2.10	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.66
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.66
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.66
1:QA:804:U:H5''	1:QA:805:C:OP2	1.95	0.66
1:QA:1277:C:O2'	1:QA:1279:A:H8	1.78	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
25:RA:25:U:H5''	42:RW:80:PRO:HD3	1.75	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.96	0.66
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.24	0.66
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.66
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.28	0.66
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.30	0.66
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.76	0.66
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	2.24	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.27	0.66
25:YA:2654:A:H62	25:YA:2667:C:N4	1.94	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.61	0.66
41:YV:53:GLU:HG2	41:YV:53:GLU:O	1.94	0.66
1:QA:865:A:H5'	1:QA:1078:U:C5	2.29	0.66
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.78	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.94	0.66
25:RA:997:G:OP1	40:RU:93:LYS:HD3	1.94	0.66
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.12	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.31	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
32:RI:57:ARG:O	32:RI:61:ARG:HG2	1.96	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.95	0.66
34:RO:86:ILE:H	34:RO:86:ILE:HD12	1.61	0.66
39:RT:11:GLU:CD	39:RT:11:GLU:N	2.47	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
7:XG:69:VAL:HG12	7:XG:69:VAL:O	1.95	0.66
7:XG:141:VAL:HG12	7:XG:141:VAL:O	1.95	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	0.66
25:YA:578:A:OP1	25:YA:1255:U:O2'	2.13	0.66
25:YA:1533:C:H2'	25:YA:1534:G:N7	2.11	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
1:QA:946:A:O2'	1:QA:1333:A:N3	2.27	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.96	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
25:RA:227:A:OP1	35:RP:76:LYS:HE3	1.95	0.66
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.95	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.75	0.66
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.95	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:88:ILE:HD13	40:RU:88:ILE:N	2.10	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
13:XM:65:LYS:HE2	50:Y4:50:VAL:HG11	1.76	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
40:YU:88:ILE:HD13	40:YU:88:ILE:N	2.10	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
1:QA:624:C:H2'	1:QA:625:G:H8	1.60	0.66
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.28	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.27	0.66
5:QE:78:HIS:HD2	8:QH:104:ARG:HG2	1.54	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
25:RA:27:G:H1'	25:RA:513:A:H62	1.60	0.66
25:RA:398:G:H2'	25:RA:399:G:C8	2.30	0.66
25:RA:583:G:H5''	40:RU:10:ARG:HH12	1.61	0.66
25:RA:675:A:N3	25:RA:2443:C:O2'	2.29	0.66
25:RA:813:U:H2'	25:RA:814:C:H6	1.60	0.66
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
1:XA:44:G:C2	1:XA:45:U:H1'	2.31	0.66
1:XA:718:G:H5''	1:XA:719:C:OP2	1.96	0.66
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.11	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
25:YA:125:G:H5''	53:Y7:19:ARG:HD3	1.77	0.66
25:YA:744:G:N2	25:YA:753:C:O2	2.21	0.66
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.61	0.66
25:YA:2477:C:H2'	55:Y9:1:MET:HG3	1.78	0.66
28:YE:37:ARG:NE	28:YE:37:ARG:HA	2.11	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.66
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.25	0.66
47:Y1:11:ARG:HB3	47:Y1:11:ARG:HH11	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1084:G:H5'	1:QA:1102:A:OP2	1.95	0.66
1:QA:1333:A:C2	1:QA:1334:G:H1'	2.31	0.66
25:RA:577:G:O2'	25:RA:1254:A:OP1	2.14	0.66
25:RA:866:A:N3	25:RA:866:A:H2'	2.09	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.26	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.76	0.66
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.31	0.66
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.30	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
25:YA:2632:A:HO2'	25:YA:2811:G:HO2'	1.37	0.66
27:YD:135:PHE:CD2	27:YD:135:PHE:N	2.61	0.66
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	0.66
32:YI:29:TYR:O	32:YI:33:ARG:HB2	1.95	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.77	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.66
45:YZ:52:SER:O	45:YZ:52:SER:OG	2.05	0.66
1:QA:255:G:H2'	1:QA:256:U:H6	1.58	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.66
25:RA:1065:U:O2	25:RA:1074:G:N1	2.29	0.66
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.78	0.66
25:RA:1349:A:N6	25:RA:1598:C:H42	1.94	0.66
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.60	0.66
27:RD:237:GLU:N	27:RD:237:GLU:OE1	2.29	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.09	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.26	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.66
1:XA:674:G:H2'	1:XA:675:A:C8	2.27	0.66
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.61	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.66
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.59	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
14:YN:40:CYS:SG	14:YN:43:CYS:CB	2.83	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1210:A:H5'	25:YA:1210:A:C8	2.31	0.66
25:YA:2389:G:H5''	25:YA:2390:U:H5'	1.78	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
48:Y2:47:ASN:H	48:Y2:47:ASN:ND2	1.92	0.66
1:QA:607:A:H2'	1:QA:608:A:O4'	1.96	0.66
1:QA:677:U:H3	1:QA:713:G:H22	1.43	0.66
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.66
25:RA:67:U:H2'	25:RA:68:G:H8	1.60	0.66
25:RA:774:A:O2'	25:RA:775:G:O5'	2.14	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.30	0.66
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.66
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.66
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.66
1:XA:1016:A:H2'	1:XA:1017:G:O4'	1.95	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	1.96	0.66
25:YA:2712:U:H1'	25:YA:2712(A):A:N7	2.11	0.66
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.66
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.66
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.66
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.66
50:Y4:71:ARG:HH11	50:Y4:71:ARG:CG	1.98	0.66
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.26	0.65
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.65
5:QE:78:HIS:CD2	8:QH:104:ARG:NE	2.64	0.65
5:QE:78:HIS:HB3	8:QH:104:ARG:O	1.96	0.65
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
25:RA:76:C:O2'	48:R2:62:THR:HG21	1.96	0.65
25:RA:288:C:H2'	25:RA:289:A:H8	1.61	0.65
25:RA:994:C:O2'	25:RA:996:A:OP1	2.11	0.65
26:RB:22:U:H3	26:RB:61:G:H1	1.43	0.65
39:RT:22:PHE:CD2	39:RT:22:PHE:N	2.63	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:25:ARG:NH1	42:RW:25:ARG:HB2	2.11	0.65
43:RX:65:ARG:HD3	43:RX:65:ARG:N	2.11	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.95	0.65
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.65
14:YN:23:ARG:NH1	14:YN:30:ALA:HB2	2.11	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
25:YA:1761:C:H42	25:YA:1762:A:H62	1.44	0.65
25:YA:2839:G:H1	25:YA:2878:U:H3	1.41	0.65
26:YB:12:C:O2'	46:Y0:74:ARG:HG3	1.95	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.26	0.65
1:QA:1004:A:P	1:QA:1025:U:H3	2.19	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.60	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
25:RA:846:C:H42	25:RA:931:G:H1	1.43	0.65
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.32	0.65
25:RA:2749:A:H4'	31:RH:62:LYS:HB3	1.78	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
25:YA:1805:U:O2	27:YD:50:THR:HB	1.96	0.65
25:YA:2376:A:N1	38:YS:87:PHE:CD2	2.64	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
34:YO:86:ILE:H	34:YO:86:ILE:HD12	1.61	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.10	0.65
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.26	0.65
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.65
1:QA:1266:G:N2	1:QA:1270:C:N3	2.44	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
25:RA:769:G:H2'	25:RA:770:G:H8	1.60	0.65
25:RA:910:A:N3	25:RA:2264:C:O2'	2.25	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.32	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.65
1:XA:1243:C:H42	1:XA:1294:G:H1	1.43	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
25:YA:1190:G:OP1	35:YP:30:THR:OG1	2.13	0.65
25:YA:1790:C:H5''	25:YA:1791:A:OP1	1.96	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.96	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.59	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.65
45:YZ:74:VAL:HG22	45:YZ:86:VAL:HG13	1.78	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	1.96	0.65
27:RD:176:ARG:HH11	27:RD:176:ARG:HG2	1.60	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65
32:RI:85:GLU:OE1	32:RI:86:THR:OG1	2.14	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
45:RZ:111:VAL:HG22	45:RZ:112:ARG:H	1.62	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
25:YA:1407:C:H42	25:YA:1595:G:H1	1.43	0.65
25:YA:1899:G:H22	25:YA:1902:C:N4	1.92	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.09	0.65
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.77	0.65
1:QA:565:U:H5''	1:QA:566:G:H2'	1.78	0.65
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.12	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.97	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
41:RV:53:GLU:HG2	41:RV:53:GLU:O	1.94	0.65
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.65
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.79	0.65
1:XA:1219:U:OP1	14:YN:19:ARG:NH2	2.18	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.26	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.77	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.62	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.31	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
9:QI:118:LYS:CB	9:QI:118:LYS:HZ3	2.09	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
25:RA:2456:C:H42	25:RA:2495:G:H1	1.43	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65
36:RQ:59:ARG:C	36:RQ:60:ARG:HG3	2.17	0.65
41:RV:43:GLU:OE2	41:RV:43:GLU:HA	1.95	0.65
1:XA:429:U:H1'	1:XA:430:A:H5''	1.78	0.65
1:XA:1316:G:N2	1:XA:1319:A:OP2	2.29	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.65	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.27	0.65
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.31	0.65
25:YA:2093:G:H2'	25:YA:2094:G:H8	1.60	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
1:QA:1071:C:H5''	5:QE:49:PRO:HG2	1.79	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
25:RA:597:U:H2'	25:RA:598:G:H8	1.62	0.65
25:RA:896:A:C2	45:RZ:146:ILE:HD11	2.32	0.65
25:RA:1156:A:C8	40:RU:51:LYS:HD2	2.32	0.65
26:RB:55:U:H4'	30:RG:28:VAL:HG21	1.79	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
1:XA:797:C:OP1	11:XK:124:LYS:HE2	1.96	0.65
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.62	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.61	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.78	0.65
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.12	0.65
25:YA:2071:A:H2	25:YA:2441:C:N3	1.94	0.65
25:YA:2468:G:H5''	36:YQ:120:ILE:HD12	1.79	0.65
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
1:QA:991:U:O4	1:QA:1212:U:O2'	2.09	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	1.96	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.65
25:YA:702:G:N2	25:YA:730:C:N3	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2073:C:H2'	25:YA:2074:U:H6	1.61	0.65
25:YA:2466:C:OP1	55:Y9:4:ARG:HB2	1.97	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
39:YT:11:GLU:N	39:YT:11:GLU:OE1	2.27	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
1:QA:1124:G:H3'	1:QA:1145:C:H41	1.62	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.31	0.65
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
47:R1:11:ARG:HB3	47:R1:11:ARG:HH11	1.61	0.65
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.31	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.65
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
19:XS:68:GLY:HA3	50:Y4:68:ARG:CB	2.27	0.65
26:YB:42:C:O2	30:YG:93:THR:N	2.28	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.78	0.65
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.30	0.65
1:QA:486:U:H2'	1:QA:487:A:H8	1.62	0.65
1:QA:540:G:H2'	1:QA:541:G:C8	2.32	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.12	0.65
25:RA:879:G:C2	25:RA:880:G:H1'	2.32	0.65
25:RA:2770:G:H5''	25:RA:2771:C:OP2	1.96	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.65
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.15	0.65
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.12	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.65
25:YA:2807:G:N1	25:YA:2893:G:O6	2.30	0.65
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.97	0.65
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.65
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.79	0.65
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
1:QA:954:G:H21	1:QA:1227:A:N6	1.91	0.64
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
25:RA:363(B):G:H2'	25:RA:363(C):G:C8	2.32	0.64
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.62	0.64
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.79	0.64
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.64
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.78	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.64
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.45	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.97	0.64
25:YA:278:A:O2'	25:YA:279:C:O4'	2.08	0.64
27:YD:176:ARG:HH11	27:YD:176:ARG:HG2	1.61	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
45:YZ:10:ARG:HH21	45:YZ:26:GLY:H	1.45	0.64
1:QA:546:G:P	4:QD:72:GLU:HB3	2.37	0.64
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.64
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.64
22:QV:6:G:H1	22:QV:67:C:H42	1.45	0.64
24:QY:29:U:H2'	24:QY:30:C:H6	1.61	0.64
25:RA:2313:C:H2'	25:RA:2314:C:H6	1.62	0.64
26:RB:78:A:H2'	26:RB:79:C:O4'	1.97	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
31:RH:51:ARG:HH11	31:RH:51:ARG:HG3	1.62	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
39:RT:11:GLU:N	39:RT:11:GLU:OE1	2.27	0.64
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.64
54:R8:52:LYS:O	54:R8:52:LYS:HG3	1.97	0.64
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.32	0.64
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
25:YA:526:A:N3	25:YA:2044:C:H1'	2.11	0.64
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.12	0.64
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.64	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.01	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
1:QA:73:G:H1	1:QA:97:U:H3	1.45	0.64
1:QA:1024:G:H4'	1:QA:1024:G:OP1	1.96	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
25:RA:2517:C:N3	25:RA:2542:A:N6	2.45	0.64
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.79	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.11	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.31	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
25:YA:530:G:C2	25:YA:2022:U:OP1	2.50	0.64
25:YA:2314:C:H2'	25:YA:2315:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:38:C:N4	26:YB:44:G:H1	1.95	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.61	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.98	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
1:QA:191:G:N9	20:QT:105:SER:HB3	2.11	0.64
1:QA:198:G:H1	1:QA:219:C:H42	1.44	0.64
1:QA:971:G:N2	1:QA:1363:A:OP2	2.30	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
25:RA:816:C:H2'	25:RA:817:C:H6	1.62	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.96	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
24:XY:29:U:H2'	24:XY:30:C:H6	1.60	0.64
25:YA:1166:C:H42	25:YA:1183:G:H1	1.45	0.64
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.33	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
50:Y4:36:CYS:O	50:Y4:37:SER:O	2.14	0.64
1:QA:880:C:OP1	12:QL:8:ASN:ND2	2.30	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.98	0.64
4:QD:79:PHE:C	4:QD:79:PHE:HD2	2.00	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
25:RA:1141:U:O2'	25:RA:1142:U:OP2	2.16	0.64
25:RA:2227:A:H5''	27:RD:263:ARG:NH1	2.12	0.64
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.79	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
32:RI:116:LEU:O	32:RI:118:LYS:N	2.31	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:636:U:H2'	1:XA:637:G:C8	2.32	0.64
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.14	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.79	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.78	0.64
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.33	0.64
25:YA:1396:U:H2'	25:YA:1396:U:O2	1.97	0.64
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.27	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.97	0.64
41:YV:43:GLU:HA	41:YV:43:GLU:OE2	1.95	0.64
1:QA:1223:C:H5''	1:QA:1224:G:H5''	1.79	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
25:RA:1678:G:N2	25:RA:1989:G:H22	1.94	0.64
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
1:XA:618:C:N3	1:XA:622:A:N6	2.45	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.27	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
25:YA:707:G:H1	25:YA:724:U:H3	1.45	0.64
25:YA:984:A:H5''	25:YA:985:C:H5	1.62	0.64
25:YA:2747:G:N2	25:YA:2748:A:N7	2.45	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
50:Y4:37:SER:C	50:Y4:39:CYS:H	1.99	0.64
1:QA:719:C:O2'	18:QR:49:LYS:HB3	1.98	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
54:R8:56:GLU:N	54:R8:56:GLU:OE1	2.30	0.64
1:XA:923:A:OP1	5:XE:21:ALA:HB2	1.97	0.64
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.98	0.64
2:XB:8:LYS:H	2:XB:8:LYS:CD	2.09	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
25:YA:795:C:H2'	25:YA:796:C:C6	2.32	0.64
25:YA:846:C:O2'	25:YA:847:U:OP2	2.15	0.64
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	1.97	0.64
25:YA:1776:G:C2	25:YA:1777:U:C6	2.85	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.95	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.64
25:RA:882:G:H1	25:RA:894:C:H42	1.46	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.64
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.62	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.97	0.64
25:YA:795:C:H2'	25:YA:796:C:H6	1.63	0.64
25:YA:1676:A:H8	25:YA:1676:A:O5'	1.80	0.64
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.80	0.64
26:YB:14:U:OP2	26:YB:70:C:O2'	2.15	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
1:QA:1237:C:O2'	1:QA:1300:G:N2	2.24	0.64
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64
25:RA:1328:G:H2'	25:RA:1330:C:C4	2.33	0.64
25:RA:2688:U:H1'	25:RA:2721:A:N6	2.13	0.64
25:RA:2774:C:H2'	25:RA:2775:A:C8	2.33	0.64
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.98	0.64
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.63	0.64
1:XA:452:A:H62	1:XA:480:U:H3	1.46	0.64
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.64
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.61	0.64
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.33	0.64
25:YA:2677:G:N2	25:YA:2730:C:O2	2.25	0.64
26:YB:50:G:OP1	38:YS:63:THR:HG23	1.98	0.64
27:YD:135:PHE:N	27:YD:135:PHE:HD2	1.96	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
1:QA:15:G:C4'	5:QE:24:ARG:HH12	2.11	0.64
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.80	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
11:QK:103:LEU:H	11:QK:103:LEU:HD22	1.62	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.64
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.80	0.64
25:RA:2250:G:C6	36:RQ:82:ARG:HD2	2.33	0.64
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.21	0.64
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.64
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.63	0.64
1:XA:939:G:H5''	7:XG:102:ARG:NH2	2.12	0.64
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.64
4:XD:165:MET:HA	4:XD:165:MET:HE3	1.79	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
23:XX:3:G:C2'	23:XX:4:C:OP2	2.45	0.64
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.98	0.64
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.64
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.64
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.79	0.64
1:QA:709:G:H2'	1:QA:710:G:H8	1.63	0.63
1:QA:1080:A:H5''	5:QE:16:THR:CG2	2.28	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
9:QI:47:LEU:N	9:QI:47:LEU:HD22	2.14	0.63
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	0.63
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.63
12:QL:46:LYS:HG2	12:QL:47:LYS:N	2.12	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
25:RA:155:C:H42	25:RA:171:G:H1	1.43	0.63
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.31	0.63
34:RO:86:ILE:HD12	34:RO:86:ILE:N	2.13	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
2:XB:158:LEU:O	2:XB:158:LEU:HD12	1.97	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
25:YA:1792:G:N2	25:YA:1827:C:O2	2.23	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
29:YF:46:ARG:HG2	29:YF:46:ARG:NH1	2.00	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.63
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.63
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.14	0.63
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.63
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.63
1:QA:458:C:H2'	1:QA:464:G:H8	1.64	0.63
1:QA:949:A:H1'	1:QA:1364:U:N3	2.13	0.63
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
25:RA:573:G:N1	25:RA:2031:A:OP2	2.26	0.63
25:RA:2122:U:H2'	25:RA:2123:G:C8	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:135:PHE:N	27:RD:135:PHE:HD2	1.96	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ3	1.61	0.63
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.07	0.63
19:XS:5:LEU:HD21	50:Y4:66:SER:CB	2.28	0.63
25:YA:654(A):G:H22	25:YA:654(U):A:H1'	1.62	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.13	0.63
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.62	0.63
1:QA:1397:C:H1'	23:QX:8:A:N6	2.14	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	0.63
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.62	0.63
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
25:RA:844:C:H41	25:RA:845:G:N2	1.95	0.63
25:RA:923:C:H2'	25:RA:924:C:C6	2.33	0.63
25:RA:1543:A:O2'	25:RA:1544:C:H3'	1.97	0.63
25:RA:2015:A:N3	51:R5:2:ALA:N	2.47	0.63
25:RA:2466:C:OP1	55:R9:4:ARG:HB2	1.99	0.63
25:RA:2477:C:H2'	55:R9:1:MET:CG	2.28	0.63
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.81	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.63
1:XA:192:U:H2'	1:XA:193:C:C6	2.34	0.63
1:XA:232:G:O2'	1:XA:262:A:N6	2.26	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.64	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.80	0.63
1:QA:15:G:H8	1:QA:1396:A:HO2'	1.46	0.63
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.32	0.63
1:QA:707:C:H2'	1:QA:708:C:H6	1.64	0.63
1:QA:1070:U:H5'	5:QE:18:ARG:HH22	1.63	0.63
5:QE:78:HIS:CD2	8:QH:104:ARG:HE	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.81	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.64	0.63
26:RB:5:C:OP1	26:RB:61:G:O2'	2.12	0.63
30:RG:83:ARG:HG3	30:RG:86:MET:HE1	1.79	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.98	0.63
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.63
1:XA:376:G:H2'	1:XA:377:G:C8	2.33	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.47	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.63	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
36:YQ:60:ARG:HH12	45:YZ:112:ARG:HG2	1.61	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
45:YZ:102:LEU:HG	45:YZ:123:ASP:HA	1.79	0.63
1:QA:1105:A:H2'	1:QA:1106:G:C8	2.33	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.34	0.63
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.33	0.63
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.19	0.63
26:RB:83:G:H1	26:RB:93:C:H42	1.46	0.63
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
1:XA:529:G:O6	12:XL:49:ASN:HB3	1.99	0.63
1:XA:718:G:H1'	11:XK:116:HIS:HA	1.81	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
25:YA:26:G:H1'	25:YA:515:A:H61	1.63	0.63
25:YA:842:G:N2	25:YA:936:C:O2	2.29	0.63
25:YA:2126:A:H4'	25:YA:2127:G:O5'	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2306:C:C2	25:YA:2307:G:N2	2.67	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
1:QA:390:C:H2'	1:QA:391:G:C8	2.34	0.63
1:QA:959:A:O2'	1:QA:984:C:O2'	2.17	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.11	0.63
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
25:RA:825:C:H2'	25:RA:826:U:O4'	1.97	0.63
25:RA:2056:G:N2	51:R5:4:HIS:O	2.29	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.64	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.28	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.98	0.63
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.63	0.63
1:XA:536:C:H2'	1:XA:537:G:H8	1.63	0.63
1:XA:601:C:H2'	1:XA:602:A:C8	2.34	0.63
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
25:YA:10:G:N2	25:YA:2802:G:OP1	2.31	0.63
25:YA:372:G:H5''	47:Y1:66:HIS:CD2	2.33	0.63
25:YA:2285:C:H5	52:Y6:27:LYS:HZ1	1.44	0.63
25:YA:2388:A:N7	25:YA:2389:G:C6	2.66	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.81	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.63
1:QA:986:A:N3	19:QS:52:TYR:OH	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1095:U:OP1	1:QA:1108:G:N1	2.31	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
25:RA:882:G:H1	25:RA:894:C:N4	1.97	0.63
25:RA:2812:G:N2	25:RA:2889:C:O2	2.32	0.63
25:RA:2821:A:H2'	25:RA:2822:G:H8	1.64	0.63
27:RD:44:ASN:N	27:RD:44:ASN:ND2	2.42	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.63
1:XA:1326:C:OP1	21:XU:17:THR:OG1	2.13	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
25:YA:380:U:H2'	25:YA:381:G:H8	1.64	0.63
25:YA:928:G:H2'	25:YA:928:G:N3	2.14	0.63
25:YA:1286:A:N6	25:YA:1329:U:O2'	2.30	0.63
25:YA:1434:A:H61	25:YA:1558:A:N6	1.97	0.63
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.14	0.63
25:YA:2840:C:H2'	25:YA:2841:C:C6	2.33	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
39:YT:49:VAL:HG13	39:YT:49:VAL:O	1.99	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.63
45:YZ:13:GLU:HB3	45:YZ:18:LEU:HD11	1.79	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.63
25:RA:187:G:H1	25:RA:209:C:H42	1.45	0.63
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.13	0.63
25:RA:1527:G:H2'	25:RA:1543:A:N1	2.13	0.63
25:RA:1870:C:H2'	25:RA:1871:A:O4'	1.99	0.63
25:RA:2115:G:N2	25:RA:2165:G:N7	2.46	0.63
25:RA:2443:C:H2'	25:RA:2444:G:C8	2.32	0.63
26:RB:6:C:C2	26:RB:115:G:N2	2.66	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.81	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.81	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.19	0.63
14:YN:18:VAL:HG23	14:YN:19:ARG:N	2.14	0.63
25:YA:2642:G:H4'	33:YN:78:TYR:CD2	2.34	0.63
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.16	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.63
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.63
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.63
22:QV:1:C:C4'	46:R0:5:LYS:NZ	2.55	0.63
25:RA:443:A:H1'	25:RA:1201:C:O4'	1.98	0.63
25:RA:1019:U:H3	25:RA:1142(A):A:N6	1.91	0.63
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.14	0.63
25:RA:2331:G:O2'	46:R0:43:THR:HG22	1.99	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.63
35:RP:108:LYS:HD2	35:RP:108:LYS:H	1.64	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.99	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.63	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.11	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.46	0.63
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.81	0.63
25:YA:2711:A:H5''	25:YA:2712:U:H5'	1.80	0.63
32:YI:75:LEU:HB3	32:YI:105:HIS:NE2	2.14	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.29	0.63
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.63
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.63
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.64	0.62
1:QA:1280:A:O2'	1:QA:1281:U:OP1	2.17	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.62
29:RF:107:LYS:O	29:RF:108:LYS:C	2.36	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.62
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.62
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.62
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.62
1:XA:258:G:H1	1:XA:268:C:H42	1.48	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
19:XS:42:PRO:HD3	50:Y4:63:TYR:HE2	1.64	0.62
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.46	0.62
25:YA:1479:G:N7	25:YA:1510:A:N6	2.43	0.62
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.34	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.62
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.62
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.62
33:YN:87:LEU:O	33:YN:87:LEU:HD23	1.99	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.98	0.62
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.62
48:Y2:46:GLN:OE1	48:Y2:46:GLN:HA	1.98	0.62
1:QA:561:U:O2'	1:QA:562:C:OP2	2.16	0.62
1:QA:645:C:H2'	1:QA:646:U:O4'	1.99	0.62
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.35	0.62
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.97	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.14	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
25:RA:372:G:O2'	25:RA:373:U:P	2.57	0.62
25:RA:624:C:H5''	25:RA:624:C:H6	1.63	0.62
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.14	0.62
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.32	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.80	0.62
1:XA:224:C:H2'	1:XA:225:C:C6	2.34	0.62
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	1.99	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.81	0.62
8:XH:112:LEU:O	8:XH:112:LEU:HD12	1.98	0.62
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.62
19:XS:2:PRO:HB2	50:Y4:68:ARG:HH22	1.64	0.62
25:YA:724:U:H2'	25:YA:725:G:O4'	1.98	0.62
25:YA:2011:U:H2'	25:YA:2012:G:H5'	1.82	0.62
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.33	0.62
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
33:YN:61:ARG:HA	33:YN:61:ARG:HE	1.63	0.62
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.34	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.62	0.62
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.33	0.62
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.81	0.62
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.32	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.11	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.62
25:RA:2593:U:C2	25:RA:2594:C:C5	2.87	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.34	0.62
35:RP:65:ARG:HH11	35:RP:65:ARG:CG	2.06	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
1:XA:188:U:H2'	1:XA:189:U:H5''	1.79	0.62
4:XD:96:LEU:H	4:XD:96:LEU:CD2	2.11	0.62
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.79	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
22:XV:6:G:H1	22:XV:67:C:H42	1.45	0.62
25:YA:630:G:N2	25:YA:633:A:OP2	2.23	0.62
25:YA:957:A:N6	25:YA:959:A:C2	2.67	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2303:G:H1	25:YA:2313:C:N4	1.95	0.62
25:YA:2600:A:N7	27:YD:237:GLU:OE2	2.32	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.36	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
30:YG:94:LEU:H	30:YG:94:LEU:HD23	1.64	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
39:YT:22:PHE:N	39:YT:22:PHE:HD2	1.97	0.62
40:YU:34:LYS:HA	40:YU:34:LYS:CE	2.29	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.81	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
25:RA:301:G:H1	25:RA:316:C:H42	1.47	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	0.62
10:XJ:29:ARG:HG2	10:XJ:29:ARG:O	2.00	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.99	0.62
25:YA:483:A:H4'	44:YY:49:VAL:HG13	1.81	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.64	0.62
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
25:RA:1224:G:OP2	41:RV:66:ARG:NH2	2.32	0.62
25:RA:1411:C:H42	25:RA:1591:G:H1	1.48	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62
30:RG:94:LEU:HD23	30:RG:94:LEU:N	2.14	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:48:LEU:N	38:RS:48:LEU:HD12	2.14	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
1:XA:194:C:C2'	1:XA:195:A:H5''	2.29	0.62
1:XA:250:A:H4'	1:XA:251:G:O5'	1.99	0.62
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.15	0.62
1:XA:695:A:H2'	1:XA:696:A:C8	2.34	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
14:YN:53:LEU:HB3	14:YN:56:VAL:HG21	1.80	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
25:YA:681:G:H2'	25:YA:682:G:O4'	2.00	0.62
25:YA:1270:C:O2'	25:YA:1325:G:H2'	1.99	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.25	0.62
38:YS:48:LEU:HD12	38:YS:48:LEU:N	2.14	0.62
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.29	0.62
39:YT:96:ARG:HB2	39:YT:96:ARG:NH1	2.14	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
1:QA:962:C:H2'	1:QA:963:G:O4'	1.99	0.62
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.32	0.62
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.32	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.32	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
25:RA:512:G:OP1	25:RA:1234:U:O2'	2.17	0.62
25:RA:858:U:H1'	25:RA:2268:A:H2'	1.82	0.62
25:RA:1871:A:H2'	25:RA:1872:A:C8	2.34	0.62
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.32	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	1.99	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	2.00	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.51	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.62	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	2.32	0.62
25:YA:745:G:H5''	25:YA:746:A:OP2	1.99	0.62
25:YA:2072:G:C2	25:YA:2073:C:C2	2.88	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
47:Y1:91:LYS:HA	47:Y1:91:LYS:HE3	1.81	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
1:QA:728:A:H2'	1:QA:729:A:C8	2.34	0.62
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.32	0.62
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.63	0.62
25:RA:270(I):G:H1	25:RA:270(Q):C:H42	1.47	0.62
25:RA:674:G:H2'	25:RA:804:A:N6	2.14	0.62
25:RA:1332:G:H21	25:RA:1610:A:H8	1.45	0.62
25:RA:1582:C:O2'	25:RA:1586:A:H8	1.81	0.62
25:RA:2883:A:H5'	25:RA:2884:U:H5'	1.81	0.62
26:RB:33:G:H8	26:RB:33:G:H5''	1.65	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62
52:R6:18:ARG:O	52:R6:18:ARG:HD2	2.00	0.62
1:XA:816:A:OP1	1:XA:1526:G:O2'	2.17	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
25:YA:2332:U:O2'	25:YA:2333:A:H5'	1.99	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.62	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.81	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	2.00	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
1:QA:827:U:H6	1:QA:859:A:H61	1.48	0.62
1:QA:868:C:H2'	1:QA:869:G:O4'	1.98	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.62
25:RA:302:C:H2'	25:RA:303:U:C6	2.35	0.62
25:RA:1341:U:OP2	25:RA:1394:U:O2'	2.14	0.62
25:RA:1826:G:H4'	27:RD:242:ARG:NH2	2.14	0.62
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.35	0.62
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.17	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.14	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.80	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.31	0.62
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.82	0.62
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	0.62
13:XM:77:ASN:HA	50:Y4:71:ARG:CZ	2.30	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.11	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.18	0.62
25:YA:1696:G:C2	25:YA:1697:G:H1'	2.35	0.62
25:YA:2467:C:H4'	36:YQ:123:HIS:CD2	2.34	0.62
26:YB:71:C:C2	26:YB:72:G:C8	2.88	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
1:QA:741:G:H2'	1:QA:742:G:C8	2.35	0.62
1:QA:793:U:H3'	1:QA:794:A:H5''	1.82	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.28	0.62
25:RA:2395:C:O2'	47:R1:30:VAL:HG12	1.99	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.62
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.62
1:XA:1070:U:O5'	5:XE:25:ARG:NH1	2.33	0.62
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.33	0.62
25:YA:225:A:O2'	25:YA:257:A:H4'	2.00	0.62
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.62
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.62
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
45:YZ:117:LEU:HA	45:YZ:174:VAL:HG22	1.81	0.62
1:QA:280:C:H3'	1:QA:281:G:H5'	1.82	0.62
25:RA:530:G:H1'	25:RA:2021:C:O2'	1.98	0.62
25:RA:1298:C:H2'	25:RA:1299:G:O4'	2.00	0.62
25:RA:1434:A:H61	25:RA:1558:A:N6	1.91	0.62
25:RA:2041:U:H2'	25:RA:2042:A:H8	1.63	0.62
25:RA:2415:G:H4'	35:RP:67:MET:N	2.15	0.62
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.34	0.62
25:RA:2723:C:H5''	37:RR:1:MET:HG2	1.82	0.62
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.62
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.62
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.62
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	2.00	0.62
30:RG:170:ARG:O	30:RG:174:GLU:HB2	1.99	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.30	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.82	0.62
48:R2:69:ARG:HB2	48:R2:69:ARG:CZ	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
1:XA:1314:C:H5	19:XS:4:SER:HB2	1.63	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.62
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.30	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
25:YA:777:A:C2	25:YA:778:G:C4	2.87	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.15	0.62
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.62
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:HB3	1.63	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.61
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.64	0.61
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.61
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.61
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.61
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.61
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.61
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.61
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.18	0.61
25:RA:2847:U:H3	25:RA:2869:G:H1	1.48	0.61
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
1:XA:142:G:H2'	1:XA:143:A:H8	1.64	0.61
1:XA:414:A:H2'	1:XA:415:A:C8	2.35	0.61
1:XA:821:G:H2'	1:XA:822:C:H6	1.63	0.61
1:XA:829:G:O6	1:XA:857:C:N4	2.20	0.61
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
25:YA:602:G:O2'	25:YA:655:A:N6	2.33	0.61
25:YA:1384:A:O2'	25:YA:1404:C:O2	2.18	0.61
25:YA:2119:A:N6	25:YA:2170:A:H62	1.97	0.61
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
25:RA:2439:A:H4'	25:RA:2440:C:O5'	2.01	0.61
25:RA:2529:G:H5''	25:RA:2530:A:H5''	1.81	0.61
25:RA:2688:U:H1'	25:RA:2721:A:H62	1.64	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.61
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.61
32:RI:62:LYS:HE3	32:RI:134:PRO:HG2	1.82	0.61
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
45:RZ:53:ILE:HG22	45:RZ:71:VAL:O	2.01	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.61	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.61
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
25:YA:822:U:H2'	25:YA:823:G:C8	2.35	0.61
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD21	1.82	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
46:Y0:23:VAL:HB	46:Y0:26:TYR:HE2	1.65	0.61
46:Y0:53:MET:HB2	46:Y0:59:LEU:HD23	1.82	0.61
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.35	0.61
25:RA:301:G:N2	25:RA:316:C:N3	2.40	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.82	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
1:XA:295:C:H2'	1:XA:296:U:H6	1.65	0.61
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.61
14:XN:32:SER:O	14:XN:40:CYS:C	2.37	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
25:YA:751:A:H5'	42:YW:90:ARG:HA	1.81	0.61
25:YA:1459:G:H2'	25:YA:1460:A:H5'	1.83	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
35:YP:108:LYS:HD2	35:YP:108:LYS:H	1.64	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
1:QA:156:G:H1	1:QA:165:C:N4	1.97	0.61
1:QA:745:C:H2'	1:QA:746:A:C8	2.34	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.01	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
9:QI:118:LYS:HZ3	9:QI:118:LYS:HB2	1.65	0.61
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.19	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
25:RA:738:G:H2'	25:RA:739:G:O4'	2.00	0.61
25:RA:829:A:C8	25:RA:2248:C:H5'	2.35	0.61
25:RA:1667:G:H2'	25:RA:1991:U:O4	2.00	0.61
25:RA:2114:A:N6	25:RA:2119:A:H62	1.98	0.61
25:RA:2849:U:H5	39:RT:93:ARG:HH12	1.49	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.82	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.30	0.61
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
49:R3:29:ARG:HH11	49:R3:29:ARG:CB	2.13	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.00	0.61
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.17	0.61
25:YA:1991:U:H2'	25:YA:1992:G:H5''	1.83	0.61
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.35	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	2.00	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
35:YP:50:ARG:CB	35:YP:50:ARG:NH2	2.58	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
43:YX:15:GLU:N	43:YX:15:GLU:OE1	2.34	0.61
45:YZ:169:GLU:HG2	45:YZ:170:THR:N	2.15	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:404:U:H2'	1:QA:405:U:H6	1.64	0.61
1:QA:450:G:N7	1:QA:481:G:C6	2.69	0.61
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.16	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.29	0.61
10:QJ:98:ILE:HD12	10:QJ:98:ILE:N	2.15	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
23:QX:8:A:H8	23:QX:8:A:O5'	1.83	0.61
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.82	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.61
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	1.82	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.64	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
1:XA:826:C:H2'	1:XA:827:U:O2	1.99	0.61
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.36	0.61
1:XA:1149:C:H2'	1:XA:1150:U:H6	1.65	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
9:XI:128:ARG:NH2	22:XV:35:A:OP1	2.26	0.61
25:YA:2368:C:H2'	25:YA:2369:A:C8	2.33	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
38:YS:43:GLU:HG2	46:Y0:49:LYS:HE2	1.82	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	2.00	0.61
41:YV:46:VAL:O	41:YV:46:VAL:HG13	2.01	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.83	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.33	0.61
1:QA:701:C:H4'	1:QA:702:A:H5''	1.83	0.61
1:QA:735:C:H2'	1:QA:736:C:H6	1.66	0.61
1:QA:865:A:H5'	1:QA:1078:U:H5	1.65	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.00	0.61
25:RA:2072:G:N2	25:RA:2073:C:O2	2.33	0.61
25:RA:2152:G:H2'	25:RA:2153:G:H8	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.81	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61
1:XA:118:U:H3'	1:XA:288:A:H61	1.65	0.61
1:XA:581:G:N2	1:XA:760:G:N7	2.49	0.61
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.15	0.61
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.36	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.61
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.61
5:XE:79:GLU:OE2	8:XH:104:ARG:CA	2.48	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:77:ARG:HB2	6:XF:77:ARG:NH1	2.15	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
13:XM:77:ASN:CA	50:Y4:71:ARG:NH2	2.55	0.61
25:YA:287:C:H42	25:YA:354:G:H1	1.49	0.61
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.34	0.61
25:YA:1586:A:H3'	25:YA:1587:A:H8	1.64	0.61
25:YA:1818:U:H2'	27:YD:157:ARG:HG3	1.82	0.61
25:YA:2532:G:O2'	25:YA:2657:A:N1	2.30	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.10	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.83	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
1:QA:36:C:O2'	1:QA:501:C:OP1	2.17	0.61
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
25:RA:49:A:N7	25:RA:120:U:C5	2.69	0.61
25:RA:2102:U:H3	25:RA:2187:G:H1	1.49	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
41:RV:46:VAL:O	41:RV:46:VAL:HG13	2.01	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.01	0.61
1:XA:376:G:H5'	16:XP:5:ARG:HD2	1.82	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.01	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.29	0.61
25:YA:688:U:H2'	25:YA:689:A:C8	2.36	0.61
26:YB:38:C:N3	26:YB:44:G:N2	2.44	0.61
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61
28:YE:95:ILE:HD12	28:YE:95:ILE:N	2.15	0.61
34:YO:91:LEU:N	34:YO:91:LEU:HD22	2.16	0.61
40:YU:88:ILE:H	40:YU:88:ILE:CD1	2.05	0.61
44:YY:19:LYS:O	44:YY:19:LYS:HG3	2.01	0.61
45:YZ:182:LYS:HB2	45:YZ:183:LEU:HA	1.81	0.61
1:QA:108:G:P	1:QA:326:G:H22	2.23	0.61
1:QA:489:C:H2'	1:QA:490:G:H8	1.66	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
4:QD:166:LYS:HG3	27:YD:135:PHE:CZ	2.36	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
25:RA:547:A:H3'	25:RA:548:A:C8	2.36	0.61
25:RA:816:C:H2'	25:RA:817:C:C6	2.36	0.61
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.83	0.61
25:RA:2870:C:H2'	25:RA:2871:C:O4'	2.00	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
45:RZ:16:SER:O	45:RZ:20:ARG:HB2	2.00	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
54:R8:48:PHE:N	54:R8:48:PHE:CD1	2.66	0.61
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.10	0.61
1:XA:465:A:N7	1:XA:467:G:C6	2.69	0.61
1:XA:821:G:H2'	1:XA:822:C:C6	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.15	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
25:YA:860:U:H5	25:YA:917:A:C2	2.19	0.61
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.82	0.61
25:YA:1728:G:H8	25:YA:1732:A:H62	1.48	0.61
25:YA:2439:A:H5'	25:YA:2439:A:H8	1.65	0.61
25:YA:2887:U:H2'	25:YA:2888:C:H6	1.66	0.61
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.14	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.83	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
12:QL:44:THR:O	12:QL:45:PRO:O	2.17	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.34	0.61
25:RA:1678:G:H22	25:RA:1989:G:N2	1.97	0.61
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.66	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
4:XD:196:LEU:HD12	4:XD:196:LEU:N	2.15	0.61
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.61
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.29	0.61
25:YA:863:A:H2'	25:YA:864:G:C8	2.35	0.61
25:YA:882:G:N2	25:YA:895:U:O2	2.33	0.61
25:YA:1327:C:N4	25:YA:1328:G:C6	2.69	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
29:YF:164:ARG:HH11	29:YF:164:ARG:HG2	1.66	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.30	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
1:QA:227:G:H2'	1:QA:228:A:C8	2.35	0.61
1:QA:590:C:H2'	1:QA:591:U:H6	1.66	0.61
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.83	0.61
1:QA:1330:U:OP1	13:QM:25:ILE:O	2.18	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.99	0.61
16:QP:8:ARG:HH11	16:QP:8:ARG:HG2	1.64	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.61
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.16	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.61
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.83	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.61
1:XA:110:C:H2'	1:XA:111:G:O4'	2.01	0.61
1:XA:192:U:H4'	20:XT:102:GLY:O	2.00	0.61
1:XA:895:G:H2'	1:XA:896:C:C6	2.36	0.61
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.83	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	2.00	0.61
25:YA:795:C:O2'	25:YA:796:C:H5'	2.00	0.61
25:YA:934:G:H2'	25:YA:935:C:C6	2.35	0.61
25:YA:1113:U:OP1	31:YH:2:SER:N	2.34	0.61
25:YA:2816:C:O2'	25:YA:2817:G:H5'	1.99	0.61
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.31	0.61
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.61
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.61
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
46:Y0:11:ARG:O	46:Y0:14:ARG:NH2	2.34	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.83	0.60
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.36	0.60
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.36	0.60
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.34	0.60
25:RA:903:C:H2'	25:RA:904:C:H6	1.66	0.60
26:RB:28:C:H2'	26:RB:29:A:C8	2.36	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
32:RI:68:LEU:HA	32:RI:71:ILE:HG22	1.82	0.60
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60
41:RV:35:LEU:O	41:RV:35:LEU:HD23	2.01	0.60
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.60
1:XA:1081:G:P	5:XE:16:THR:HG1	2.23	0.60
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.35	0.60
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.60
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.60
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.60
25:YA:877:U:H3	25:YA:899:A:H2	1.49	0.60
25:YA:1359:A:H61	25:YA:1372:U:H3	1.48	0.60
25:YA:2635:C:OP1	28:YE:78:LEU:HD12	2.01	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.60
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.01	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.01	0.60
35:YP:27:HIS:ND1	35:YP:27:HIS:N	2.49	0.60
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.60
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.60
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.21	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.28	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:108:U:H2'	25:RA:109:G:H8	1.65	0.60
25:RA:558:G:P	33:RN:111:PRO:HD2	2.41	0.60
25:RA:923:C:H2'	25:RA:924:C:H6	1.65	0.60
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.36	0.60
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.35	0.60
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.01	0.60
27:RD:263:ARG:HH11	27:RD:263:ARG:CB	2.14	0.60
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.80	0.60
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.60
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.60
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.65	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.22	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	0.60
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.18	0.60
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.60
32:YI:48:GLU:HA	32:YI:51:ILE:HD12	1.82	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
1:QA:298:A:H5''	1:QA:299:G:OP2	2.01	0.60
1:QA:955:U:H2'	1:QA:956:U:H6	1.66	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.60
22:QV:1:C:C1'	46:R0:5:LYS:CE	2.78	0.60
25:RA:1977:A:H8	25:RA:1977:A:O5'	1.85	0.60
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.34	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.64	0.60
34:RO:91:LEU:HD22	34:RO:91:LEU:N	2.16	0.60
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
45:RZ:166:SER:H	45:RZ:167:PRO:HA	1.66	0.60
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:567:G:H2'	1:XA:568:G:O4'	2.02	0.60
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.36	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.60
25:YA:570:G:H2'	25:YA:2030:A:C5	2.36	0.60
25:YA:582:G:H1	25:YA:1258:C:H42	1.46	0.60
25:YA:676:A:H2	25:YA:802:A:H61	1.48	0.60
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.82	0.60
25:YA:2284:C:C5	52:Y6:27:LYS:HE2	2.36	0.60
27:YD:263:ARG:HH11	27:YD:263:ARG:CB	2.15	0.60
31:YH:44:VAL:HG22	31:YH:44:VAL:O	2.01	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
50:Y4:71:ARG:NH1	50:Y4:71:ARG:CG	2.61	0.60
1:QA:684:A:O2'	11:QK:38:ASN:HB3	2.02	0.60
1:QA:1066:C:H5'	1:QA:1067:A:OP2	2.01	0.60
1:QA:1255:G:HO2'	1:QA:1258:G:HO2'	1.46	0.60
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:146:ILE:HD12	4:QD:146:ILE:H	1.66	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.82	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.17	0.60
25:RA:270:A:H2'	25:RA:270(A):A:C8	2.35	0.60
25:RA:870:A:H2'	25:RA:871:U:C6	2.37	0.60
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.19	0.60
25:RA:2336:A:H61	46:R0:43:THR:HG21	1.64	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
47:R1:81:LYS:HA	47:R1:81:LYS:HZ3	0.80	0.60
1:XA:309:G:H2'	1:XA:310:G:C8	2.36	0.60
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.33	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1412:C:H42	1:XA:1488:G:H1	1.50	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
4:XD:146:ILE:HD12	4:XD:146:ILE:H	1.66	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
25:YA:466:A:N3	25:YA:683:C:H1'	2.15	0.60
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.00	0.60
25:YA:580:C:H2'	25:YA:581:C:H6	1.66	0.60
25:YA:1443:G:N2	25:YA:1548:C:N3	2.47	0.60
26:YB:18:G:H1	26:YB:65:C:H42	1.49	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
28:YE:37:ARG:NE	28:YE:37:ARG:CA	2.64	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.37	0.60
32:YI:113:ARG:HB3	32:YI:131:LYS:HD3	1.84	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.65	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.00	0.60
45:YZ:28:MET:N	45:YZ:35:ARG:O	2.32	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.02	0.60
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.37	0.60
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.37	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.31	0.60
1:XA:272:C:H2'	1:XA:273:A:H8	1.67	0.60
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.01	0.60
1:XA:1189:C:H5''	1:XA:1190:G:OP2	2.02	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
9:XI:85:LEU:HD12	9:XI:85:LEU:O	2.02	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
13:XM:3:ARG:HG2	50:Y4:34:GLU:OE1	2.02	0.60
14:YN:44:LEU:HD12	14:YN:48:ALA:HB2	1.83	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
25:YA:1005:C:H5''	25:YA:1006:C:OP2	2.01	0.60
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.35	0.60
25:YA:1825:A:H2'	25:YA:1826:G:H8	1.67	0.60
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.02	0.60
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.01	0.60
25:YA:2723:C:H5''	37:YR:1:MET:HG2	1.83	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
27:YD:166:GLN:HE21	27:YD:166:GLN:CA	2.14	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.83	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
1:QA:196:A:OP1	20:QT:68:LYS:NZ	2.28	0.60
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.01	0.60
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.82	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.99	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
25:RA:38:A:N3	29:RF:48:THR:OG1	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:67:U:H3	25:RA:74:A:H2	1.49	0.60
25:RA:2544:G:H2'	25:RA:2545:G:H8	1.66	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
33:RN:133:GLN:O	33:RN:134:ARG:HB3	1.99	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
9:X1:9:ARG:CB	9:X1:14:VAL:HG22	2.31	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
25:YA:492:A:C2'	25:YA:493:G:H5'	2.31	0.60
25:YA:688:U:H5'	25:YA:1780:A:C2	2.36	0.60
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.36	0.60
25:YA:2347:C:C5	25:YA:2382:G:H1'	2.35	0.60
26:YB:24:G:H1'	26:YB:26:A:H62	1.66	0.60
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
45:YZ:1:MET:HG2	45:YZ:2:GLU:H	1.65	0.60
45:YZ:23:LYS:O	45:YZ:25:PRO:HD3	2.02	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.65	0.60
25:RA:2068:U:N3	25:RA:2430:A:H2	1.98	0.60
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.01	0.60
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.26	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ2	1.66	0.60
31:RH:44:VAL:HG22	31:RH:44:VAL:O	2.01	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
44:RY:19:LYS:O	44:RY:19:LYS:HG3	2.01	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.82	0.60
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.67	0.60
1:XA:1292:U:H2'	1:XA:1293:G:C8	2.36	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
25:YA:26:G:N1	25:YA:27:G:N2	2.50	0.60
25:YA:428:A:N6	25:YA:429:A:N1	2.49	0.60
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.29	0.60
25:YA:492:A:H2'	25:YA:493:G:H5'	1.82	0.60
25:YA:675:A:C8	25:YA:804:A:C6	2.90	0.60
25:YA:818:G:H3'	25:YA:1187:G:H22	1.65	0.60
25:YA:993:G:H2'	25:YA:994:C:C6	2.36	0.60
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.82	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
41:YV:35:LEU:HD23	41:YV:35:LEU:O	2.01	0.60
41:YV:99:ILE:N	41:YV:99:ILE:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
1:QA:528:C:HO2'	1:QA:535:A:HO2'	1.44	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.12	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.32	0.60
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
25:RA:654:A:O2'	25:RA:654(A):G:N7	2.34	0.60
25:RA:863:A:H2'	25:RA:864:G:C8	2.36	0.60
25:RA:892:G:N2	25:RA:893:C:O2	2.35	0.60
25:RA:955:C:N4	25:RA:962:G:O6	2.17	0.60
25:RA:2318:G:H22	38:RS:2:ALA:N	2.00	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.83	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
28:RE:37:ARG:NE	28:RE:37:ARG:CA	2.64	0.60
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.60
29:RF:46:ARG:HH11	29:RF:46:ARG:CG	2.04	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.02	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.84	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
1:XA:701:C:H1'	1:XA:703:G:C4	2.37	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
25:YA:264:C:C2'	25:YA:265:A:H5''	2.31	0.60
25:YA:1846:G:H5'	25:YA:1847:A:OP2	2.02	0.60
25:YA:2324:C:H5''	25:YA:2325:G:H5'	1.84	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.01	0.60
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.67	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.60
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.35	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
1:QA:192:U:H4'	20:QT:102:GLY:O	2.01	0.60
1:QA:1440:C:O2'	1:QA:1442:G:N2	2.35	0.60
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.66	0.60
25:RA:1101:U:H2'	25:RA:1102:C:C6	2.36	0.60
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.37	0.60
29:RF:164:ARG:HH11	29:RF:164:ARG:HG2	1.66	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.84	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.84	0.60
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:828:A:H2'	1:XA:829:G:O4'	2.02	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.02	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
14:YN:19:ARG:O	14:YN:20:ALA:C	2.40	0.60
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.02	0.60
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.34	0.60
25:YA:2840:C:H2'	25:YA:2841:C:H6	1.65	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.49	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
1:QA:145:G:H1	1:QA:177:C:H42	1.50	0.60
1:QA:811:C:H4'	1:QA:900:A:N6	2.17	0.60
1:QA:1347:G:H22	1:QA:1374:A:P	2.24	0.60
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.82	0.60
25:RA:1805:U:O2	27:RD:50:THR:HB	2.01	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.60
1:XA:148:G:H2'	1:XA:149:A:H8	1.66	0.60
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.67	0.60
1:XA:1288:A:N1	1:XA:1371:G:H1'	2.17	0.60
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.20	0.60
1:XA:1399:C:H4'	1:XA:1400:C:H5''	1.84	0.60
1:XA:1502:A:H2	1:XA:1505:G:H1	1.50	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.01	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.37	0.60
25:YA:2071:A:H2'	25:YA:2072:G:C8	2.37	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.60
47:Y1:81:LYS:HA	47:Y1:81:LYS:HZ3	0.70	0.60
1:QA:355:C:O4'	1:QA:388:G:O2'	2.20	0.59
1:QA:559:A:H4'	1:QA:560:U:H5''	1.83	0.59
1:QA:959:A:HO2'	1:QA:984:C:HO2'	1.50	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
25:RA:303:U:H2'	25:RA:304:G:H8	1.65	0.59
25:RA:530:G:C2	25:RA:2022:U:OP1	2.55	0.59
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.35	0.59
25:RA:649:G:H2'	25:RA:650:C:O4'	2.02	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.83	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
37:RR:75:LEU:HD13	37:RR:75:LEU:C	2.22	0.59
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.35	0.59
45:RZ:163:LEU:H	45:RZ:163:LEU:HD12	1.66	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.17	0.59
25:YA:1055:G:H1	25:YA:1104:C:N4	1.97	0.59
25:YA:1204:A:H2	25:YA:1241:A:N1	1.99	0.59
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.02	0.59
25:YA:1652:A:H2'	25:YA:1653:G:H5'	1.84	0.59
25:YA:2355:C:O2	46:Y0:39:ARG:NH2	2.35	0.59
27:YD:174:ILE:HD12	27:YD:174:ILE:N	2.16	0.59
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.67	0.59
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.02	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.59
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.13	0.59
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.59
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.59
1:QA:1073:U:OP2	5:QE:57:LYS:NZ	2.35	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.84	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.51	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
25:RA:589:C:H2'	25:RA:590:A:H8	1.68	0.59
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.18	0.59
33:RN:41:ASP:O	33:RN:48:MET:HE3	2.01	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	0.59
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.59
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.59
1:XA:272:C:H2'	1:XA:273:A:C8	2.37	0.59
1:XA:401:C:H2'	1:XA:402:G:C8	2.37	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.83	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.59
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
25:YA:1344:G:H4'	25:YA:1384:A:N7	2.17	0.59
26:YB:33:G:N2	26:YB:35:U:O4	2.34	0.59
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.83	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
1:QA:1411:C:H2'	1:QA:1412:C:H6	1.67	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
25:RA:1027:A:N6	25:RA:1126:A:C4	2.70	0.59
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.37	0.59
25:RA:1729:A:H2'	25:RA:1730:U:H5''	1.84	0.59
25:RA:2637:U:H5''	28:RE:82:ARG:NH2	2.14	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59
27:RD:166:GLN:CA	27:RD:166:GLN:HE21	2.14	0.59
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.40	0.59
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.84	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.85	0.59
1:XA:646:U:H2'	1:XA:647:C:H6	1.67	0.59
1:XA:1461:G:H2'	1:XA:1462:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
25:YA:740:U:H2'	25:YA:741:G:C8	2.38	0.59
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.16	0.59
25:YA:1424:G:N2	25:YA:1574:C:O2	2.27	0.59
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.35	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.85	0.59
45:YZ:152:ALA:O	45:YZ:154:ASP:N	2.34	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
1:QA:355:C:H2'	1:QA:356:A:O4'	2.03	0.59
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.67	0.59
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.65	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.35	0.59
25:RA:712:G:N2	25:RA:719:C:O2	2.35	0.59
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.28	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
1:XA:1069:C:O2'	5:XE:25:ARG:NH1	2.28	0.59
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.38	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:685:A:C2	25:YA:689:A:C6	2.90	0.59
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.84	0.59
25:YA:1257:C:H5''	29:YF:75:HIS:CE1	2.37	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.18	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.84	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.59
1:QA:986:A:H1'	19:QS:54:GLY:O	2.01	0.59
1:QA:1004:A:H1'	1:QA:1036:G:N2	2.16	0.59
1:QA:1399:C:C2	1:QA:1502:A:N6	2.70	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
25:RA:83:G:N2	25:RA:102:G:H1'	2.17	0.59
25:RA:221:A:H4'	25:RA:222:A:O5'	2.02	0.59
25:RA:1047:G:H2'	25:RA:1110:G:H1	1.66	0.59
25:RA:1530:G:H1	25:RA:1541:U:H3	1.50	0.59
25:RA:1576:U:H2'	25:RA:1577:C:H6	1.68	0.59
25:RA:2456:C:C5	25:RA:2457:U:C5	2.91	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.33	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
45:RZ:102:LEU:HB3	45:RZ:104:PHE:CE1	2.36	0.59
45:RZ:117:LEU:HA	45:RZ:174:VAL:HA	1.82	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
1:XA:91:C:H2'	1:XA:92:G:O4'	2.02	0.59
1:XA:1081:G:OP1	5:XE:16:THR:OG1	2.19	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.03	0.59
25:YA:1359:A:H2'	25:YA:1360:A:H5'	1.84	0.59
25:YA:1935:G:N2	25:YA:1964:G:O4'	2.36	0.59
25:YA:2494:G:H2'	25:YA:2495:G:H8	1.67	0.59
25:YA:2516:G:N1	25:YA:2568:C:N3	2.38	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
45:YZ:26:GLY:HA2	45:YZ:85:HIS:CD2	2.37	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
1:QA:411:A:C5	1:QA:413:G:H1'	2.37	0.59
1:QA:717:C:H6	1:QA:717:C:H5''	1.67	0.59
1:QA:1295:G:O2'	13:QM:14:ARG:NH2	2.35	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.84	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
25:RA:2470:G:H5'	36:RQ:56:ARG:NH2	2.18	0.59
25:RA:2843:G:H1	25:RA:2874:C:H42	1.50	0.59
26:RB:113:C:H2'	26:RB:114:G:H8	1.67	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
1:XA:982:U:H5''	14:XN:6:LEU:CD1	2.33	0.59
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.37	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.18	0.59
2:QB:178:ARG:NE	8:QH:71:GLY:C	2.56	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.84	0.59
22:QV:53:G:H4'	22:QV:54:U:OP1	2.02	0.59
25:RA:108:U:H2'	25:RA:109:G:C8	2.38	0.59
25:RA:150:C:H2'	25:RA:151:C:C6	2.37	0.59
25:RA:859:G:H2'	25:RA:916:G:O6	2.03	0.59
25:RA:2470:G:O6	25:RA:2481:G:N2	2.36	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.33	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
40:RU:52:ARG:HG2	40:RU:52:ARG:NH1	2.17	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
1:XA:145:G:H1	1:XA:177:C:H42	1.49	0.59
1:XA:1178:G:N2	1:XA:1181:G:N7	2.50	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
14:XN:15:LYS:HD2	14:XN:16:PHE:CZ	2.37	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.34	0.59
25:YA:664:C:OP1	35:YP:18:ARG:NH2	2.34	0.59
25:YA:859:G:H5'	25:YA:2268:A:O2'	2.02	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.02	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.49	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
45:YZ:182:LYS:CB	45:YZ:183:LEU:HA	2.32	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
1:QA:6:G:O2'	1:QA:7:G:O5'	2.19	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
5:QE:78:HIS:HB2	8:QH:104:ARG:O	2.02	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.17	0.59
25:RA:623:G:H2'	25:RA:624:C:C6	2.37	0.59
25:RA:878:A:N6	25:RA:899:A:O2'	2.35	0.59
25:RA:1478:G:O2'	25:RA:1558:A:N1	2.36	0.59
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.03	0.59
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
37:RR:79:LEU:HD23	37:RR:79:LEU:C	2.23	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.59
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.02	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59
25:YA:227:A:OP1	35:YP:76:LYS:HE3	2.03	0.59
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.37	0.59
25:YA:2314:C:H2'	25:YA:2315:G:H8	1.66	0.59
26:YB:95:U:H2'	26:YB:96:G:C8	2.38	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.23	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.64	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.36	0.59
1:QA:1221:G:OP1	1:QA:1320:C:N4	2.32	0.59
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.31	0.59
1:QA:1505:G:H4'	1:QA:1506:U:H5''	1.85	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
25:RA:116:C:H2'	25:RA:117:G:O4'	2.02	0.59
25:RA:1564:C:O2'	25:RA:1565:C:H5'	2.02	0.59
25:RA:2255:G:H1	25:RA:2275:C:H42	1.51	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.59
25:YA:140:A:H8	25:YA:1408:C:O2'	1.86	0.59
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	2.03	0.59
25:YA:2537:U:H2'	25:YA:2538:C:C6	2.38	0.59
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.49	0.59
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.59
32:YI:93:THR:OG1	32:YI:94:ALA:N	2.31	0.59
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.67	0.59
37:YR:63:ARG:HH11	37:YR:63:ARG:HG3	1.68	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
1:QA:501:C:H2'	1:QA:502:G:H8	1.68	0.59
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.17	0.59
1:QA:1363:A:H4'	1:QA:1364:U:H5''	1.84	0.59
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.85	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.59
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.59
25:RA:2298:A:H2'	25:RA:2299:G:O4'	2.03	0.59
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.59
32:RI:104:GLN:O	32:RI:105:HIS:ND1	2.33	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.02	0.59
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.59
41:RV:1:MET:CE	41:RV:43:GLU:HG2	2.32	0.59
1:XA:33:A:H2'	1:XA:34:C:C6	2.37	0.59
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.59
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
25:YA:389:G:H1	35:YP:70:GLN:HB3	1.66	0.59
25:YA:716:A:C2	25:YA:717:G:H1'	2.38	0.59
25:YA:1688:U:O2	25:YA:1700:A:H5''	2.02	0.59
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.18	0.59
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.59
1:QA:833:U:H2'	1:QA:834:C:H6	1.68	0.58
1:QA:1349:A:OP2	9:QI:118:LYS:NZ	2.31	0.58
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.58
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
25:RA:263:C:H2'	25:RA:264:C:O4'	2.03	0.58
25:RA:483:A:H3'	25:RA:484:C:C6	2.38	0.58
25:RA:628:G:H2'	25:RA:629:G:C8	2.38	0.58
25:RA:2342:C:O2	25:RA:2374:C:H4'	2.03	0.58
26:RB:104:A:H2'	26:RB:105:G:O4'	2.03	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.58
6:XF:97:PHE:C	6:XF:97:PHE:CD2	2.76	0.58
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.16	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
25:YA:336:C:HO2'	44:YY:35:TYR:HH	1.50	0.58
25:YA:1062:G:H8	25:YA:1062:G:O5'	1.85	0.58
25:YA:2030:A:H5''	25:YA:2031:A:OP1	2.03	0.58
25:YA:2344:U:C4	52:Y6:37:ARG:NH1	2.71	0.58
25:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.50	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	0.58
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.58
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.58
1:QA:501:C:H2'	1:QA:502:G:C8	2.38	0.58
1:QA:575:G:C6	1:QA:821:G:N7	2.71	0.58
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.03	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.58
12:QL:46:LYS:CG	12:QL:47:LYS:H	2.15	0.58
17:QQ:92:ARG:HG3	17:QQ:92:ARG:HH11	1.68	0.58
24:QY:39:C:O2'	24:QY:40:G:OP1	2.21	0.58
25:RA:224:G:O6	25:RA:419:C:O2'	2.21	0.58
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.35	0.58
27:RD:34:VAL:O	27:RD:34:VAL:CG1	2.50	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.38	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.58
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.03	0.58
1:XA:1336:C:H1'	1:XA:1337:G:N2	2.18	0.58
1:XA:1443:G:H22	25:YA:2864:G:P	2.26	0.58
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.03	0.58
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
25:YA:1278:A:OP1	37:YR:36:THR:HG22	2.04	0.58
25:YA:1532:C:H2'	25:YA:1533:C:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2014:A:H2'	25:YA:2015:A:C8	2.38	0.58
25:YA:2376:A:N1	38:YS:87:PHE:HD2	2.01	0.58
25:YA:2677:G:H2'	25:YA:2678:C:H6	1.68	0.58
25:YA:2757:A:P	55:Y9:20:HIS:H	2.26	0.58
25:YA:2832:U:H4'	25:YA:2833:G:H5''	1.84	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.58
1:QA:818:G:H3'	1:QA:819:A:H5''	1.84	0.58
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.58
25:RA:620:G:H4'	25:RA:621:A:H5''	1.85	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.21	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
45:RZ:141:VAL:HG23	45:RZ:144:LEU:HD23	1.84	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.72	0.58
1:XA:445:G:H1	1:XA:489:C:H42	1.48	0.58
1:XA:1229:A:OP1	13:XM:116:THR:HG23	2.03	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.58
25:YA:888:C:H3'	25:YA:889:C:H4'	1.85	0.58
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.37	0.58
25:YA:1435:G:H21	25:YA:1478:G:H5'	1.68	0.58
25:YA:1793:C:H42	25:YA:1826:G:H1	1.49	0.58
25:YA:2326:C:O2	25:YA:2326:C:H2'	2.02	0.58
25:YA:2637:U:H5''	28:YE:82:ARG:NH2	2.15	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.33	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.03	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.02	0.58
1:QA:1202:G:H2'	1:QA:1203:C:O4'	2.03	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
9:QI:128:ARG:HD3	22:QV:32:C:OP2	2.03	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.11	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.19	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.67	0.58
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.32	0.58
48:R2:16:LEU:O	48:R2:16:LEU:CG	2.49	0.58
48:R2:69:ARG:NH1	48:R2:69:ARG:CB	2.67	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
1:XA:429:U:H4'	1:XA:430:A:OP1	2.03	0.58
1:XA:565:U:H5''	1:XA:566:G:H2'	1.83	0.58
1:XA:908:A:H2'	1:XA:909:A:C8	2.38	0.58
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.51	0.58
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.38	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
25:YA:654(A):G:N2	25:YA:654(U):A:H1'	2.17	0.58
25:YA:1424:G:H2'	25:YA:1425:G:O4'	2.02	0.58
25:YA:1532:C:N3	25:YA:1539:G:N1	2.51	0.58
25:YA:1795:C:O2'	25:YA:1901:A:OP1	2.20	0.58
25:YA:1885:A:H5'	25:YA:1886:C:OP2	2.04	0.58
25:YA:2050:C:H42	25:YA:2618:G:H1	1.52	0.58
25:YA:2415:G:H4'	35:YP:67:MET:N	2.19	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.38	0.58
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.58
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
1:QA:429:U:H4'	1:QA:430:A:H5''	1.85	0.58
1:QA:658:G:H2'	1:QA:659:U:H6	1.68	0.58
1:QA:933:G:H1	1:QA:1384:C:H42	1.50	0.58
1:QA:1036:G:C8	1:QA:1037:C:C4	2.92	0.58
1:QA:1142:G:H3'	1:QA:1143:G:C8	2.37	0.58
1:QA:1432:G:H1'	1:QA:1469:G:H22	1.66	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.58
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.83	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.69	0.58
25:RA:609(A):G:H2'	25:RA:610:C:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1359:A:N6	25:RA:1372:U:C4	2.71	0.58
25:RA:2250:G:C8	25:RA:2496:C:H5''	2.39	0.58
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.33	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
51:R5:60:VAL:HG13	51:R5:60:VAL:OXT	2.03	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.85	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.38	0.58
25:YA:2287:A:N6	25:YA:2344:U:H3	2.00	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.84	0.58
36:YQ:60:ARG:HA	45:YZ:178:GLU:O	2.03	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
1:QA:19:C:P	5:QE:127:ASN:HD22	2.27	0.58
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.03	0.58
1:QA:1263:C:H42	1:QA:1272:G:H1	1.51	0.58
1:QA:1312:G:H3'	50:R4:67:TYR:OH	2.04	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.33	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.39	0.58
25:RA:812:C:H5'	35:RP:22:GLY:HA3	1.85	0.58
25:RA:1270:C:O2'	25:RA:1648:C:OP2	2.22	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
42:RW:95:ILE:HD12	42:RW:95:ILE:O	2.04	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.85	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
13:XM:57:ARG:HH11	13:XM:57:ARG:CB	2.13	0.58
14:XN:42:ILE:C	14:XN:43:CYS:O	2.41	0.58
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.18	0.58
25:YA:1696:G:C6	25:YA:1697:G:C4	2.91	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
1:QA:992:U:H3	1:QA:1044:A:N6	1.96	0.58
1:QA:1221:G:OP1	19:QS:36:ARG:HD3	2.04	0.58
1:QA:1528:U:O2'	1:QA:1529:G:OP2	2.21	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.22	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
18:QR:36:ASN:O	18:QR:36:ASN:ND2	2.32	0.58
25:RA:839:U:H1'	25:RA:1191:G:H1'	1.85	0.58
25:RA:903:C:H2'	25:RA:904:C:C6	2.38	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.84	0.58
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
46:R0:37:LEU:N	46:R0:59:LEU:O	2.34	0.58
1:XA:781:A:C5	1:XA:802:A:C2	2.92	0.58
1:XA:1213:A:C6	1:XA:1215:G:H1'	2.39	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
12:XL:45:PRO:HB3	12:XL:93:LEU:CD2	2.33	0.58
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.52	0.58
25:YA:738:G:C6	25:YA:739:G:C2	2.91	0.58
25:YA:1055:G:N2	25:YA:1104:C:N3	2.48	0.58
25:YA:1636:C:H2'	25:YA:1637:A:H8	1.69	0.58
25:YA:2273:A:O2'	25:YA:2274:A:H5'	2.03	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:31:LEU:HD21	32:YI:38:LEU:HG	1.86	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.34	0.58
48:Y2:69:ARG:NH1	48:Y2:69:ARG:CB	2.67	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.33	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
1:QA:900:A:H2'	1:QA:901:A:C8	2.39	0.58
1:QA:1203:C:H2'	1:QA:1204:A:H8	1.68	0.58
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.86	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
4:QD:170:VAL:O	6:XF:21:LEU:CD2	2.48	0.58
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.03	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.85	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
25:RA:900:A:H5'	25:RA:901:A:OP2	2.04	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
38:RS:67:ARG:HB2	38:RS:67:ARG:HH11	1.66	0.58
45:RZ:54:HIS:O	45:RZ:55:HIS:ND1	2.37	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.18	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.58
1:XA:486:U:H2'	1:XA:487:A:H8	1.69	0.58
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.19	0.58
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.32	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.58
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.38	0.58
5:XE:152:ARG:O	8:XH:64:LYS:NZ	2.36	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
25:YA:323:G:HO2'	25:YA:1205:U:H3	1.52	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:863:A:HO2'	26:YB:100:G:HO2'	1.50	0.58
25:YA:1222:C:H2'	25:YA:1223:C:H6	1.69	0.58
25:YA:1342:A:O2'	25:YA:1344:G:OP2	2.21	0.58
25:YA:1872:A:H5'	25:YA:1878:G:OP2	2.03	0.58
25:YA:2691:C:H5'	25:YA:2872:G:H5''	1.85	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.03	0.58
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.58
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.07	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.58
1:QA:1378:C:N4	1:QA:1379:G:N3	2.51	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
25:RA:669:G:H2'	25:RA:669:G:N3	2.19	0.58
25:RA:1454:U:O2'	25:RA:1455:G:N7	2.33	0.58
25:RA:2246:G:H2'	25:RA:2247:A:H8	1.68	0.58
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.38	0.58
26:RB:65:C:N4	26:RB:108:C:H2'	2.15	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.39	0.58
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.72	0.58
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.69	0.58
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.38	0.58
25:YA:74:A:H4'	25:YA:75:G:O5'	2.04	0.58
25:YA:1357:U:H2'	25:YA:1358:G:C8	2.38	0.58
25:YA:1614:A:H62	42:YW:93:ALA:HB2	1.68	0.58
25:YA:2495:G:H2'	25:YA:2496:C:C6	2.39	0.58
31:YH:4:ILE:HD13	31:YH:4:ILE:H	1.68	0.58
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.58
45:YZ:24:LEU:HB2	45:YZ:41:LEU:HG	1.85	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
51:Y5:60:VAL:HG13	51:Y5:60:VAL:OXT	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:309:G:O2'	1:QA:607:A:N1	2.36	0.58
1:QA:727:G:N2	1:QA:730:G:OP2	2.36	0.58
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.58
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.51	0.58
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
25:RA:1485:G:H5''	25:RA:1485:G:H8	1.69	0.58
25:RA:2753:A:O2'	55:R9:15:LYS:NZ	2.36	0.58
31:RH:153:LYS:HA	31:RH:153:LYS:HZ3	1.68	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.58
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.04	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.39	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.58
12:XL:54:LYS:N	12:XL:54:LYS:HD2	2.18	0.58
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.58
25:YA:219:G:N3	25:YA:234:C:O2'	2.32	0.58
25:YA:534:U:H5'	40:YU:42:ALA:HB1	1.86	0.58
25:YA:573:G:O2'	25:YA:574:C:H3'	2.04	0.58
25:YA:715:G:H2'	25:YA:716:A:C8	2.39	0.58
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.58
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.86	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.19	0.57
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.39	0.57
1:QA:1399:C:N3	1:QA:1502:A:N6	2.51	0.57
25:RA:637:A:H8	35:RP:117:GLU:OE2	1.86	0.57
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.39	0.57
25:RA:1230:C:H2'	25:RA:1231:G:H8	1.68	0.57
25:RA:1448:G:H1'	25:RA:1528:A:H62	1.68	0.57
25:RA:2061:G:OP2	25:RA:2502:G:H5'	2.03	0.57
25:RA:2420:C:H41	54:R8:30:ARG:HD2	1.68	0.57
25:RA:2814:C:H42	25:RA:2886:G:H1	1.49	0.57
26:RB:40:U:H3	26:RB:43:C:H5''	1.69	0.57
26:RB:42:C:O4'	30:RG:69:ALA:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.85	0.57
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.57
32:RI:77:LEU:HD11	32:RI:140:LEU:HD12	1.86	0.57
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
45:RZ:52:SER:OG	45:RZ:52:SER:O	2.15	0.57
46:R0:50:ASN:ND2	46:R0:81:VAL:O	2.36	0.57
47:R1:81:LYS:HE2	47:R1:81:LYS:H	1.62	0.57
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.57
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.57
1:XA:595:G:H1'	1:XA:596:C:H5	1.68	0.57
1:XA:960:U:O2	1:XA:960:U:H2'	2.03	0.57
2:XB:111:ARG:HA	2:XB:111:ARG:NE	2.19	0.57
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.57
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.57
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.19	0.57
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.57
16:XP:76:GLN:O	16:XP:76:GLN:HG2	2.04	0.57
25:YA:330:A:H2	25:YA:1210:A:H2'	1.67	0.57
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.36	0.57
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.57
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.57
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
32:YI:71:ILE:HG12	32:YI:71:ILE:O	2.04	0.57
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.57
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.57
39:YT:82:LEU:HD12	39:YT:82:LEU:N	2.19	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.57
25:RA:1403:C:H5''	25:RA:1471:A:C1'	2.34	0.57
25:RA:2130:U:O2'	25:RA:2133:G:O2'	2.17	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.04	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
37:RR:63:ARG:HH11	37:RR:63:ARG:HG3	1.68	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.03	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
50:R4:38:LYS:C	50:R4:40:HIS:N	2.53	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.57
1:XA:374:A:C6	1:XA:375:U:C4	2.92	0.57
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.38	0.57
1:XA:728:A:H2'	1:XA:729:A:C8	2.38	0.57
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.57
11:XK:21:ILE:HD12	11:XK:21:ILE:N	2.19	0.57
25:YA:1316:U:C2'	25:YA:1317:A:H5'	2.34	0.57
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.34	0.57
25:YA:2881:C:H5'	37:YR:117:VAL:HG21	1.85	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.86	0.57
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	1.85	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.03	0.57
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.57
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.69	0.57
1:QA:411:A:C4	1:QA:413:G:H1'	2.39	0.57
1:QA:429:U:H4'	1:QA:430:A:OP1	2.02	0.57
1:QA:545:C:OP1	4:QD:61:LYS:NZ	2.35	0.57
1:QA:748:C:H1'	1:QA:749:C:H5	1.69	0.57
1:QA:838:G:C6	1:QA:842:C:H1'	2.40	0.57
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.38	0.57
1:QA:1239:A:H4'	1:QA:1240:U:H5''	1.86	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
25:RA:303:U:H2'	25:RA:304:G:C8	2.39	0.57
25:RA:323:G:HO2'	25:RA:1205:U:H3	1.48	0.57
25:RA:439:G:H8	25:RA:439:G:O5'	1.87	0.57
25:RA:1188:U:C2'	25:RA:1189:A:H5'	2.34	0.57
25:RA:1405:U:O2'	25:RA:1406:U:O4'	2.13	0.57
25:RA:1468:C:H2'	25:RA:1469:A:C8	2.40	0.57
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2056:G:H2'	25:RA:2056:G:N3	2.19	0.57
26:RB:6:C:O2'	38:RS:29:PHE:HE1	1.86	0.57
26:RB:116:G:O2'	38:RS:54:LEU:HD11	2.04	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.86	0.57
30:RG:53:LEU:C	30:RG:53:LEU:HD23	2.25	0.57
31:RH:4:ILE:HD13	31:RH:4:ILE:H	1.68	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.04	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.20	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.18	0.57
45:RZ:166:SER:OG	45:RZ:168:GLU:N	2.36	0.57
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
1:XA:216:G:H2'	1:XA:217:C:C6	2.39	0.57
1:XA:811:C:H4'	1:XA:900:A:N6	2.19	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
22:XV:53:G:H4'	22:XV:54:U:OP1	2.02	0.57
25:YA:286:C:O2'	25:YA:287:C:H5'	2.04	0.57
25:YA:600:G:H2'	25:YA:601:C:C6	2.39	0.57
25:YA:1344:G:H4'	25:YA:1384:A:C5	2.39	0.57
25:YA:2887:U:H2'	25:YA:2888:C:C6	2.39	0.57
26:YB:43:C:O2	30:YG:95:ARG:NH2	2.37	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
30:YG:53:LEU:C	30:YG:53:LEU:HD23	2.24	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
45:YZ:57:ILE:O	45:YZ:69:THR:N	2.24	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
1:QA:186:C:H4'	20:QT:82:SER:HB3	1.86	0.57
1:QA:243:A:H4'	1:QA:244:U:O5'	2.03	0.57
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.38	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:586:A:N1	25:RA:809:G:O2'	2.31	0.57
25:RA:960:A:H4'	25:RA:2457:U:H5'	1.87	0.57
25:RA:1568:G:H5''	27:RD:61:LEU:HD22	1.86	0.57
25:RA:2072:G:C2	25:RA:2073:C:C2	2.91	0.57
25:RA:2137:C:H42	25:RA:2154:G:H1	1.51	0.57
25:RA:2861:G:H2'	25:RA:2862:G:H8	1.69	0.57
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.03	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.57
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.86	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.35	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
42:RW:1:MET:HA	42:RW:1:MET:HE3	1.86	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.36	0.57
1:XA:1008:C:N4	1:XA:1021:G:H1	2.01	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.05	0.57
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.57
25:YA:638:G:H2'	25:YA:639:U:O4'	2.04	0.57
25:YA:862:G:H2'	25:YA:863:A:O4'	2.04	0.57
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.69	0.57
25:YA:2405:G:O2'	25:YA:2406:U:OP2	2.22	0.57
26:YB:86:G:H2'	26:YB:87:G:C8	2.40	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
32:YI:83:ALA:O	32:YI:85:GLU:N	2.38	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.19	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.70	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.51	0.57
1:QA:627:G:H2'	1:QA:628:G:H8	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.39	0.57
1:QA:1305:G:HO2'	1:QA:1306:A:P	2.28	0.57
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.04	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
25:RA:443:A:OP1	29:RF:46:ARG:HB2	2.04	0.57
25:RA:451:C:H4'	29:RF:52:LYS:NZ	2.20	0.57
25:RA:554:U:HO2'	25:RA:556:G:H8	1.51	0.57
25:RA:888:C:O2'	25:RA:889:C:H4'	2.03	0.57
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.37	0.57
25:RA:2009:G:OP1	42:RW:41:LYS:HE2	2.04	0.57
25:RA:2061:G:H5''	25:RA:2503:A:C2	2.39	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.69	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
1:XA:67:C:H2'	1:XA:68:G:C8	2.39	0.57
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.19	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.05	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
24:XY:39:C:O2'	24:XY:40:G:OP1	2.21	0.57
25:YA:177:G:H5''	25:YA:177:G:N3	2.20	0.57
25:YA:370:G:H5''	25:YA:423:A:N6	2.20	0.57
25:YA:612:G:C2	25:YA:613:U:O2	2.56	0.57
25:YA:669:G:H2'	25:YA:669:G:N3	2.19	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
34:YO:71:ARG:HG3	34:YO:71:ARG:HH11	1.69	0.57
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.05	0.57
1:QA:947:G:O3'	13:QM:109:THR:OG1	2.23	0.57
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.38	0.57
26:RB:56:G:P	30:RG:27:ASN:HD21	2.26	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.87	0.57
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.57
45:RZ:153:SER:HB2	45:RZ:167:PRO:HB3	1.86	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.86	0.57
1:XA:434:U:H2'	1:XA:435:C:C6	2.40	0.57
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	2.10	0.57
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:CB	2.17	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:HB2	1.69	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.33	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.18	0.57
25:YA:239:U:H2'	25:YA:240:G:O4'	2.04	0.57
25:YA:465:G:N2	25:YA:684:G:H1'	2.19	0.57
25:YA:1885:A:H3'	25:YA:1886:C:C6	2.39	0.57
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.05	0.57
25:YA:2481:G:O2'	25:YA:2482:G:OP2	2.21	0.57
27:YD:34:VAL:O	27:YD:34:VAL:CG1	2.51	0.57
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.57
28:YE:41:LYS:HE2	28:YE:41:LYS:HA	1.87	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.70	0.57
1:QA:57:G:H2'	1:QA:58:C:C6	2.40	0.57
1:QA:113:G:O2'	1:QA:354:G:H5'	2.05	0.57
1:QA:1037:C:H2'	1:QA:1038:C:C6	2.39	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.04	0.57
25:RA:121:G:C2	25:RA:131:G:C4	2.92	0.57
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.05	0.57
27:RD:239:ARG:O	27:RD:240:ALA:HB2	2.05	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.04	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.52	0.57
25:YA:259:G:H21	25:YA:621:A:H8	1.52	0.57
25:YA:2073:C:O2'	25:YA:2074:U:H5'	2.05	0.57
25:YA:2292:C:H42	25:YA:2340:G:H1	1.52	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
32:YI:9:LEU:HD21	32:YI:12:LEU:HB2	1.86	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
40:YU:52:ARG:HG2	40:YU:52:ARG:NH1	2.18	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.04	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
1:QA:1079:G:H2'	1:QA:1080:A:C8	2.40	0.57
1:QA:1244:C:H42	1:QA:1293:G:H1	1.50	0.57
1:QA:1297:C:H4'	1:QA:1298:C:H5'	1.86	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
5:QE:78:HIS:CB	8:QH:104:ARG:HG2	2.34	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
25:RA:270(T):G:P	47:R1:97:LEU:HD13	2.44	0.57
25:RA:589:C:H2'	25:RA:590:A:C8	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:664:C:OP1	35:RP:18:ARG:NH2	2.31	0.57
25:RA:770:G:N3	25:RA:1354:A:H2	2.03	0.57
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.38	0.57
25:RA:1449:A:H5'	25:RA:1449(A):G:OP2	2.05	0.57
25:RA:2087:G:H2'	25:RA:2088:G:H8	1.69	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.68	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.04	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
1:XA:232:G:H1'	1:XA:262:A:N1	2.19	0.57
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.38	0.57
1:XA:299:G:H2'	1:XA:300:A:C8	2.39	0.57
1:XA:633:G:H5'	1:XA:634:C:OP2	2.03	0.57
1:XA:1135:U:H4'	1:XA:1136:U:H5	1.69	0.57
1:XA:1417:G:N2	1:XA:1482:G:H2'	2.20	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
25:YA:121:G:H2'	25:YA:122:G:H8	1.69	0.57
25:YA:304:G:H2'	25:YA:305:U:C6	2.39	0.57
25:YA:1728:G:H3'	25:YA:1729:A:H5''	1.85	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57
35:YP:64:LYS:C	35:YP:66:GLY:N	2.57	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
1:QA:954:G:N2	1:QA:1227:A:H62	1.94	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.57
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.57
25:RA:177:G:H3'	25:RA:178:G:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1230:C:H2'	25:RA:1231:G:C8	2.40	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.87	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.85	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.35	0.57
1:XA:1120:G:H1	1:XA:1153:C:H42	1.52	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.34	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.40	0.57
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.57
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.29	0.57
25:YA:702:G:H1	25:YA:730:C:H42	1.52	0.57
25:YA:2848:G:N2	25:YA:2867:G:C4	2.73	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.85	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.57
44:YY:97:ARG:HG2	44:YY:97:ARG:O	2.05	0.57
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.57
1:QA:67:C:H2'	1:QA:68:G:C8	2.40	0.57
1:QA:230:G:N2	1:QA:231:G:N3	2.53	0.57
1:QA:1080:A:C4'	5:QE:16:THR:HB	2.34	0.57
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.39	0.57
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.04	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.57
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.57
25:RA:1480:G:O6	25:RA:1513:C:N4	2.32	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2367:G:H8	25:RA:2367:G:O5'	1.87	0.57
25:RA:2517:C:C2	25:RA:2542:A:N6	2.73	0.57
26:RB:42:C:N4	30:RG:91:ARG:HH21	2.02	0.57
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.57
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.57
40:RU:79:PHE:CD2	40:RU:79:PHE:C	2.78	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.70	0.57
1:XA:536:C:H2'	1:XA:537:G:C8	2.38	0.57
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.04	0.57
1:XA:1352:C:H42	1:XA:1370:G:H1	1.52	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
25:YA:297:C:H5''	44:YY:85:VAL:CG2	2.32	0.57
25:YA:1955:U:O2'	25:YA:1956:U:H5'	2.04	0.57
25:YA:2418:A:H2'	25:YA:2419:U:C6	2.40	0.57
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.57
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.57
45:YZ:179:ASP:OD1	45:YZ:180:VAL:HG22	2.05	0.57
46:Y0:10:THR:HG23	46:Y0:12:ASN:H	1.69	0.57
1:QA:399:G:H2'	1:QA:400:C:C6	2.40	0.56
1:QA:703:G:O2'	1:QA:704:A:OP2	2.22	0.56
1:QA:977:A:O2'	1:QA:979:C:OP2	2.17	0.56
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.40	0.56
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.56
5:QE:78:HIS:HB2	8:QH:104:ARG:HG2	1.86	0.56
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.56
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.56
25:RA:991:C:H5'	25:RA:991:C:H6	1.69	0.56
25:RA:2273:A:H2'	25:RA:2274:A:C8	2.40	0.56
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.37	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
1:XA:347:G:O2'	1:XA:348:G:H5''	2.05	0.56
1:XA:975:A:O2'	14:YN:32:SER:OG	2.13	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.04	0.56
14:YN:13:THR:N	14:YN:14:PRO:CD	2.68	0.56
14:YN:29:ARG:HH11	14:YN:29:ARG:HG3	1.70	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
25:YA:900:A:H5'	25:YA:901:A:OP2	2.04	0.56
25:YA:1093:G:H4'	31:YH:170:ARG:NH2	2.19	0.56
25:YA:2115:G:N2	25:YA:2165:G:N7	2.52	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.34	0.56
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.18	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.04	0.56
40:YU:104:GLN:OE1	40:YU:104:GLN:N	2.35	0.56
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.56
1:QA:980:C:H5'	1:QA:981:U:OP2	2.05	0.56
1:QA:1305:G:O2'	1:QA:1306:A:O5'	2.22	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
25:RA:612:G:H2'	25:RA:613:U:O2	2.04	0.56
25:RA:1308:A:H2'	25:RA:1309:G:O4'	2.05	0.56
25:RA:2456:C:N4	25:RA:2495:G:H1	2.03	0.56
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.40	0.56
29:RF:46:ARG:HG2	29:RF:46:ARG:NH1	2.00	0.56
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.05	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
52:R6:42:TRP:N	52:R6:42:TRP:CD1	2.73	0.56
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.56
1:XA:58:C:O2'	1:XA:388:G:N7	2.34	0.56
1:XA:976:G:N2	1:XA:1362(A):C:OP2	2.34	0.56
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
25:YA:195:A:H4'	25:YA:251:A:O2'	2.04	0.56
25:YA:1453:A:O2'	25:YA:1454:U:H2'	2.05	0.56
25:YA:1558:A:H1'	25:YA:1559:G:H5''	1.86	0.56
25:YA:1778:U:C5	25:YA:1784:A:C4	2.93	0.56
25:YA:2250:G:C8	25:YA:2496:C:H5''	2.40	0.56
26:YB:34:U:P	30:YG:2:PRO:HG2	2.44	0.56
32:YI:56:LYS:HE3	32:YI:57:ARG:HG2	1.86	0.56
32:YI:78:THR:HG22	32:YI:141:LYS:HD2	1.87	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.52	0.56
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
45:YZ:31:ARG:NH2	45:YZ:93:ASP:OD1	2.38	0.56
46:Y0:23:VAL:HA	46:Y0:38:VAL:HG22	1.85	0.56
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.04	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.86	0.56
1:QA:210:U:O2'	1:QA:216:G:N7	2.37	0.56
1:QA:448:A:OP2	1:QA:485:G:N2	2.37	0.56
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.21	0.56
1:QA:1028:C:H42	1:QA:1033:G:H1	1.53	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.56
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.20	0.56
13:QM:119:GLY:HA3	22:QV:29:G:OP1	2.06	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
25:RA:270(K):C:H42	25:RA:270(M):U:H5	1.50	0.56
25:RA:1083:U:O2'	25:RA:1085:A:H5''	2.05	0.56
25:RA:1310:G:O6	25:RA:1604:C:N4	2.38	0.56
25:RA:1769:G:O2'	25:RA:1958:C:OP1	2.17	0.56
25:RA:2287:A:H62	25:RA:2344:U:H3	1.51	0.56
25:RA:2293:C:H2'	25:RA:2294:C:O4'	2.05	0.56
25:RA:2370:G:N3	52:R6:45:LYS:NZ	2.51	0.56
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.21	0.56
25:RA:2416:C:H5''	35:RP:64:LYS:HE3	1.86	0.56
25:RA:2864:G:OP1	39:RT:119:LYS:HD2	2.05	0.56
26:RB:40:U:N3	26:RB:43:C:H5''	2.21	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.23	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.54	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.56
28:RE:183:LEU:HD12	28:RE:183:LEU:N	2.20	0.56
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.35	0.56
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
45:RZ:77:ASP:OD2	45:RZ:80:ARG:HD3	2.05	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.20	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
50:R4:64:GLY:C	50:R4:66:SER:H	2.07	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.04	0.56
1:XA:236:G:H2'	1:XA:237:C:H6	1.70	0.56
1:XA:392:G:H2'	1:XA:393:A:C8	2.40	0.56
1:XA:737:A:H2'	1:XA:738:C:C6	2.40	0.56
1:XA:983:A:H5''	1:XA:984:C:OP2	2.05	0.56
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.87	0.56
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.20	0.56
1:XA:1128:C:N4	1:XA:1144:G:H1	2.03	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1222:G:H5'	19:XS:78:ARG:NH1	2.20	0.56
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.19	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
6:XF:92:LYS:HB2	6:XF:92:LYS:HZ2	1.70	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.53	0.56
25:YA:503:A:H4'	25:YA:504:U:C5'	2.35	0.56
25:YA:612:G:N2	25:YA:617:G:C5	2.74	0.56
25:YA:851:U:O2'	49:Y3:45:GLY:HA3	2.05	0.56
25:YA:1024:G:OP2	25:YA:1025:G:H3'	2.05	0.56
25:YA:1221:C:H2'	25:YA:1222:C:C6	2.41	0.56
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.20	0.56
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.40	0.56
25:YA:2115:G:N2	25:YA:2165:G:O6	2.38	0.56
25:YA:2506:U:H2'	25:YA:2506:U:O2	2.03	0.56
25:YA:2507:C:H2'	25:YA:2508:G:H8	1.70	0.56
25:YA:2845:G:C2'	25:YA:2846:G:H5'	2.35	0.56
28:YE:69:LYS:C	28:YE:71:GLY:H	2.09	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
36:YQ:79:LEU:O	36:YQ:79:LEU:CG	2.52	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.04	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.56
55:Y9:2:LYS:HD2	55:Y9:33:LYS:O	2.05	0.56
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.05	0.56
1:QA:833:U:H2'	1:QA:834:C:C6	2.41	0.56
1:QA:933:G:N2	1:QA:935:A:O4'	2.39	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
25:RA:139:G:N2	25:RA:1596:A:H4'	2.20	0.56
25:RA:851:U:O2'	49:R3:45:GLY:HA3	2.05	0.56
25:RA:1581:G:H5''	25:RA:1581:G:H8	1.69	0.56
25:RA:2308:G:H22	25:RA:2311:A:H2	1.54	0.56
32:RI:57:ARG:HB2	32:RI:57:ARG:HH11	1.70	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.35	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.21	0.56
1:XA:236:G:H2'	1:XA:237:C:C6	2.40	0.56
1:XA:292:G:N7	1:XA:293:G:H1'	2.21	0.56
1:XA:615:C:O2	1:XA:625:G:N2	2.35	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
25:YA:103:A:H8	25:YA:103:A:O5'	1.89	0.56
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.85	0.56
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.41	0.56
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.36	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
47:Y1:76:ARG:HG2	47:Y1:76:ARG:NH1	2.20	0.56
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.07	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.38	0.56
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.38	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.71	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.41	0.56
25:RA:66:C:C4	25:RA:67:U:C4	2.94	0.56
25:RA:1351:C:H2'	25:RA:1352:U:C6	2.40	0.56
25:RA:1534:G:N3	25:RA:1534:G:H2'	2.20	0.56
25:RA:2747:G:H2'	25:RA:2748:A:C8	2.41	0.56
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
28:RE:117:MET:O	28:RE:117:MET:HG3	2.06	0.56
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.67	0.56
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.56
34:RO:1:MET:HE3	34:RO:67:LYS:HE2	1.87	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
36:RQ:59:ARG:C	36:RQ:60:ARG:CG	2.74	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.87	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.70	0.56
50:R4:48:ARG:O	50:R4:50:VAL:N	2.38	0.56
1:XA:465:A:N7	1:XA:467:G:C5	2.74	0.56
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.06	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
25:YA:1433:U:H6	25:YA:1433:U:H5''	1.70	0.56
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.06	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.87	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
1:QA:358:U:H2'	1:QA:359:U:H6	1.70	0.56
1:QA:376:G:H2'	1:QA:377:G:H8	1.70	0.56
1:QA:1213:A:C6	1:QA:1215:G:H1'	2.41	0.56
1:QA:1255:G:N2	1:QA:1259:C:O2	2.39	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
25:RA:1210:A:H5''	25:RA:1210:A:C8	2.40	0.56
25:RA:2645:G:C3'	25:RA:2646:C:H5'	2.35	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.88	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
42:RW:20:VAL:C	42:RW:22:ASP:N	2.59	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.54	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.41	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
25:YA:1288:U:O2'	25:YA:1647:G:N2	2.39	0.56
25:YA:2028:U:H2'	25:YA:2029:G:O4'	2.06	0.56
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.36	0.56
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.39	0.56
27:YD:239:ARG:O	27:YD:240:ALA:HB2	2.05	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
1:QA:313:A:H2'	1:QA:314:C:C6	2.40	0.56
1:QA:864:A:H5'	5:QE:86:ALA:CB	2.22	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ3	1.71	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.63	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
25:RA:195:A:N6	25:RA:198:C:H3'	2.18	0.56
25:RA:398:G:H2'	25:RA:399:G:H8	1.71	0.56
25:RA:1434:A:H2'	25:RA:1435:G:C8	2.40	0.56
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.29	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2821:A:H2'	25:RA:2822:G:C8	2.41	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56
44:RY:97:ARG:O	44:RY:97:ARG:HG2	2.06	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.70	0.56
1:XA:7:G:H5'	1:XA:298:A:O4'	2.05	0.56
1:XA:246:A:N3	1:XA:247:G:H1'	2.21	0.56
1:XA:328:C:HO2'	1:XA:329:A:P	2.28	0.56
1:XA:923:A:H2'	1:XA:924:C:C6	2.41	0.56
1:XA:1151:A:O2'	1:XA:1152:A:O5'	2.21	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.06	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.56
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
25:YA:189:G:H2'	25:YA:205:G:N2	2.17	0.56
25:YA:503:A:H4'	25:YA:504:U:H5'	1.87	0.56
25:YA:1303:G:H1'	25:YA:1641:A:N1	2.20	0.56
25:YA:2782:G:O5'	25:YA:2782:G:H8	1.89	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.87	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.54	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
32:YI:144:VAL:O	32:YI:145:VAL:HG22	2.06	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.23	0.56
35:YP:59:LEU:O	35:YP:59:LEU:HD23	2.06	0.56
44:YY:95:LYS:HE3	44:YY:95:LYS:O	2.06	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
1:QA:909:A:H2'	1:QA:910:C:O4'	2.04	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.59	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.73	0.56
25:RA:68:G:N2	25:RA:69:C:H1'	2.21	0.56
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.20	0.56
25:RA:2271:G:H2'	25:RA:2272:U:O4'	2.06	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.69	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.69	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
45:RZ:150:LEU:O	45:RZ:171:ILE:HG12	2.05	0.56
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.60	0.56
1:XA:685:G:N2	1:XA:686:U:C4	2.74	0.56
1:XA:791:G:H22	1:XA:1498:U:P	2.28	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:47:LYS:O	12:XL:49:ASN:N	2.39	0.56
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.06	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
25:YA:277:C:H3'	25:YA:278:A:C5'	2.36	0.56
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.39	0.56
25:YA:1059:G:H3'	25:YA:1060:U:H5''	1.86	0.56
25:YA:2395:C:O2'	47:Y1:30:VAL:HG12	2.05	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
1:QA:266:G:O2'	1:QA:267:C:OP2	2.17	0.56
1:QA:458:C:H2'	1:QA:464:G:C8	2.40	0.56
1:QA:724:G:H2'	1:QA:725:G:H8	1.70	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.56
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
25:RA:597:U:H2'	25:RA:598:G:C8	2.41	0.56
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	2.05	0.56
25:RA:2576:G:N2	25:RA:2576:G:OP2	2.38	0.56
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.56
32:RI:121:LYS:HG2	32:RI:122:GLU:H	1.70	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.56
39:RT:105:LEU:C	39:RT:107:ASP:H	2.08	0.56
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.56
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.39	0.56
1:XA:1376:U:OP1	7:XG:98:SER:HB3	2.06	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
59:XX:101:AMP:O2P	59:XX:101:AMP:H8	1.89	0.56
25:YA:596:G:C2	25:YA:662:G:C2	2.94	0.56
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.41	0.56
25:YA:2031:A:C5	25:YA:2498:C:H1'	2.41	0.56
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	2.06	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.56
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.31	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
1:QA:921:U:O2	5:QE:19:MET:HB2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.56
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.56
13:QM:77:ASN:CA	50:R4:71:ARG:HH22	2.09	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
25:RA:607:U:H3	25:RA:621:A:H2	1.50	0.56
25:RA:1289:C:H2'	25:RA:1290:C:H6	1.69	0.56
25:RA:2364:C:OP1	46:R0:55:ARG:NH1	2.38	0.56
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.88	0.56
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.86	0.56
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.19	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.86	0.56
1:XA:32:A:H2'	1:XA:33:A:C8	2.41	0.56
1:XA:713:G:H2'	1:XA:714:G:C8	2.41	0.56
1:XA:986:A:N3	19:XS:52:TYR:OH	2.39	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.88	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.56
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.56
25:YA:433:C:H2'	25:YA:434:U:C6	2.40	0.56
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.41	0.56
25:YA:1543:A:C2	25:YA:1545:A:C4	2.94	0.56
25:YA:2422:A:C8	25:YA:2424:C:C5	2.94	0.56
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.41	0.56
26:YB:55:U:O3'	30:YG:27:ASN:ND2	2.38	0.56
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.56
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.56
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.56
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
1:QA:347:G:O2'	1:QA:348:G:OP2	2.22	0.55
1:QA:575:G:O4'	1:QA:881:G:N2	2.39	0.55
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1255:G:OP1	10:QJ:45:ARG:NH2	2.38	0.55
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.55
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.05	0.55
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.53	0.55
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
25:RA:654(S):G:H2'	25:RA:654(T):C:C6	2.40	0.55
25:RA:1005:C:C2	25:RA:1143:A:C5	2.94	0.55
25:RA:2419:U:OP1	52:R6:23:THR:HG21	2.06	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.72	0.55
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.55
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.55
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.16	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.55
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.55
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.55
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.88	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:10:LEU:CD1	17:XQ:32:TYR:CE2	2.85	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
15:XO:24:SER:O	15:XO:28:GLN:HG3	2.06	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
25:YA:152:G:H2'	25:YA:153:C:C6	2.41	0.55
25:YA:244:A:H2'	25:YA:245:G:O4'	2.06	0.55
25:YA:287:C:N4	25:YA:354:G:H1	2.04	0.55
25:YA:464:U:C2	25:YA:788:A:C6	2.94	0.55
25:YA:528:A:C2	25:YA:2043:C:H4'	2.41	0.55
25:YA:685:A:N3	25:YA:689:A:N6	2.54	0.55
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.21	0.55
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.71	0.55
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.34	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.21	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.71	0.55
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.02	0.55
1:QA:375:U:H2'	1:QA:376:G:C8	2.41	0.55
1:QA:762:C:H2'	1:QA:763:G:C8	2.41	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.05	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.88	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.06	0.55
20:QT:74:LYS:C	20:QT:76:ALA:H	2.10	0.55
25:RA:51:G:N3	25:RA:119:A:C2	2.74	0.55
25:RA:117:G:OP2	25:RA:119:A:O2'	2.21	0.55
25:RA:1101:U:H2'	25:RA:1102:C:H6	1.69	0.55
25:RA:1607:C:H5''	25:RA:1608:A:H5'	1.88	0.55
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.33	0.55
26:RB:27:C:H5''	38:RS:33:LYS:HZ1	1.71	0.55
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.55
32:RI:41:GLU:HA	32:RI:44:LEU:HB2	1.89	0.55
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.55
1:XA:321:A:N6	1:XA:329:A:OP2	2.39	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.40	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
25:YA:205:G:O2'	25:YA:206:U:OP2	2.22	0.55
25:YA:224:G:O6	25:YA:419:C:O2'	2.24	0.55
25:YA:819:A:C4	25:YA:1189:A:C2	2.94	0.55
25:YA:1271:G:N2	25:YA:1617:C:O4'	2.39	0.55
25:YA:1798:U:H5''	27:YD:259:THR:HG22	1.87	0.55
25:YA:2419:U:OP1	52:Y6:23:THR:HG21	2.06	0.55
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.55
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.99	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
42:YW:1:MET:C	42:YW:64:MET:HE1	2.27	0.55
42:YW:20:VAL:C	42:YW:22:ASP:N	2.60	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
1:QA:144:G:H1	1:QA:178:C:H42	1.54	0.55
1:QA:859:A:H2'	1:QA:860:A:O4'	2.05	0.55
1:QA:1222:G:H2'	1:QA:1223:C:C6	2.40	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.06	0.55
25:RA:1278:A:O3'	37:RR:34:ILE:HG23	2.07	0.55
25:RA:2636:U:OP1	28:RE:79:ARG:HA	2.05	0.55
25:RA:2779:U:O2'	25:RA:2781:A:N7	2.39	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
44:RY:95:LYS:HB2	44:RY:95:LYS:NZ	2.21	0.55
1:XA:677:U:H3	1:XA:713:G:H22	1.55	0.55
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.04	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.07	0.55
25:YA:1022:G:H4'	25:YA:1023:U:H5'	1.87	0.55
33:YN:101:HIS:CD2	33:YN:101:HIS:C	2.79	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
1:QA:68:G:N2	1:QA:69:G:H1'	2.21	0.55
1:QA:826:C:H2'	1:QA:827:U:O2	2.07	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.07	0.55
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.55
15:QO:65:ARG:HB2	15:QO:65:ARG:NH1	2.20	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:918:A:C5	25:RA:919:G:H1'	2.41	0.55
25:RA:1854:A:H3'	25:RA:1855:G:H8	1.71	0.55
25:RA:2483:C:H5''	25:RA:2484:G:OP2	2.06	0.55
25:RA:2760:C:H2'	25:RA:2761:G:O4'	2.05	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.05	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
1:XA:731:G:OP1	1:XA:766:A:H1'	2.07	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.21	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.21	0.55
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.71	0.55
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	2.33	0.55
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.41	0.55
25:YA:1930:G:H2'	25:YA:1968:G:O6	2.06	0.55
25:YA:2364:C:H4'	46:Y0:56:ASP:OD2	2.06	0.55
25:YA:2517:C:C5	25:YA:2542:A:C5	2.95	0.55
25:YA:2758:A:C5	25:YA:2759:G:C8	2.94	0.55
25:YA:2776:A:OP1	25:YA:2776:A:H3'	2.06	0.55
25:YA:2836:U:C4	25:YA:2883:A:N6	2.75	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.48	0.55
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.88	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.11	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
1:QA:690:G:H2'	1:QA:691:G:O4'	2.07	0.55
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.42	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
5:QE:78:HIS:HD2	8:QH:104:ARG:CG	2.14	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
25:RA:289:A:H2'	25:RA:290:G:O4'	2.06	0.55
25:RA:412:A:N7	25:RA:2411:A:H2	2.05	0.55
25:RA:746:A:HO2'	25:RA:747:U:P	2.28	0.55
25:RA:896:A:N3	45:RZ:146:ILE:HD11	2.21	0.55
25:RA:1062:G:N3	25:RA:1077:A:N6	2.55	0.55
25:RA:1917:U:H2'	25:RA:1918:A:C8	2.41	0.55
25:RA:2078:C:H1'	25:RA:2434:A:N3	2.21	0.55
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.72	0.55
25:RA:2355:C:H1'	46:R0:39:ARG:HH21	1.70	0.55
25:RA:2506:U:O2	25:RA:2506:U:H2'	2.05	0.55
25:RA:2809:A:OP2	25:RA:2891:G:N1	2.33	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
32:RI:4:ILE:HG23	32:RI:18:VAL:HG22	1.88	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.26	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
1:XA:194:C:H2'	1:XA:195:A:H5''	1.87	0.55
1:XA:1157:A:H1'	1:XA:1158:C:C2	2.42	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
25:YA:849:A:N6	25:YA:929:G:H1'	2.21	0.55
25:YA:1093:G:H1'	25:YA:1099:G:O6	2.06	0.55
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.42	0.55
25:YA:1885:A:H3'	25:YA:1886:C:H6	1.71	0.55
25:YA:2870:C:H5''	37:YR:65:LEU:HD21	1.87	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.88	0.55
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.71	0.55
1:QA:1095:U:OP1	1:QA:1108:G:N2	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.39	0.55
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.55
3:QC:188:LEU:N	3:QC:188:LEU:HD22	2.21	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.70	0.55
25:RA:1202:C:H42	25:RA:1243:G:H1	1.54	0.55
25:RA:1265:A:H61	25:RA:2013:A:H5''	1.71	0.55
25:RA:2193:G:H2'	25:RA:2194:G:H8	1.72	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
28:RE:26:ILE:HD13	28:RE:26:ILE:C	2.26	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
32:RI:3:VAL:O	32:RI:18:VAL:HA	2.06	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
40:RU:104:GLN:OE1	40:RU:104:GLN:N	2.35	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ2	1.69	0.55
1:XA:59:A:N6	1:XA:331:G:H1'	2.22	0.55
1:XA:401:C:H2'	1:XA:402:G:H8	1.71	0.55
1:XA:690:G:H2'	1:XA:691:G:O4'	2.07	0.55
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.06	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.71	0.55
25:YA:155:C:H5'	25:YA:161:U:OP2	2.07	0.55
25:YA:1299:G:H5''	25:YA:1300:U:OP1	2.06	0.55
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.42	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.06	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
45:YZ:48:PHE:CE2	45:YZ:52:SER:HA	2.42	0.55
1:QA:404:U:H2'	1:QA:405:U:C6	2.42	0.55
1:QA:440:A:H5'	1:QA:442:C:OP2	2.07	0.55
1:QA:686:U:H2'	1:QA:687:A:C8	2.41	0.55
1:QA:1181:G:C5	1:QA:1182:G:N2	2.75	0.55
1:QA:1338:G:N3	22:QV:41:C:O2'	2.35	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.06	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55
25:RA:482:A:H4'	44:RY:47:LYS:HD2	1.88	0.55
25:RA:2467:C:C2'	25:RA:2468:G:H5'	2.37	0.55
26:RB:44:G:C2	26:RB:48:A:C2	2.94	0.55
33:RN:109:LYS:N	33:RN:109:LYS:HD2	2.22	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.22	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
45:RZ:110:GLY:HA2	45:RZ:111:VAL:C	2.27	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
1:XA:518:C:H2'	1:XA:530:G:C4	2.42	0.55
1:XA:735:C:H2'	1:XA:736:C:H6	1.71	0.55
1:XA:1068:G:N7	1:XA:1094:G:C8	2.74	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.21	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.59	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
25:YA:23:G:N2	25:YA:517:C:O2	2.40	0.55
25:YA:287:C:O2'	25:YA:288:C:O5'	2.24	0.55
25:YA:780:G:H21	25:YA:783:A:H62	1.53	0.55
25:YA:1000:A:H2'	25:YA:1001:A:C8	2.42	0.55
25:YA:2285:C:H5	52:Y6:27:LYS:NZ	2.04	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2653:U:H3'	25:YA:2654:A:H8	1.72	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
34:YO:19:ILE:O	34:YO:19:ILE:HD13	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
52:Y6:42:TRP:N	52:Y6:42:TRP:CD1	2.73	0.55
1:QA:707:C:H2'	1:QA:708:C:C6	2.42	0.55
1:QA:1157:A:H1'	1:QA:1158:C:C4	2.42	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.05	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.88	0.55
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:566:U:H5''	35:RP:29:LYS:NZ	2.22	0.55
25:RA:1204:A:H2	25:RA:1241:A:C2	2.24	0.55
25:RA:2131:G:N2	25:RA:2158:A:N7	2.54	0.55
25:RA:2197:U:H1'	25:RA:2198:A:H8	1.70	0.55
25:RA:2405:G:P	35:RP:77:ARG:NH2	2.80	0.55
26:RB:75:G:H1	26:RB:102:G:N2	2.05	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
30:RG:135:LEU:HD12	30:RG:135:LEU:N	2.21	0.55
33:RN:101:HIS:CD2	33:RN:101:HIS:C	2.79	0.55
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
1:XA:353:A:H5'	1:XA:353:A:H8	1.71	0.55
1:XA:965:A:C2	1:XA:969:A:C2	2.95	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
10:XJ:16:LEU:HD13	10:XJ:16:LEU:O	2.07	0.55
15:XO:65:ARG:HB2	15:XO:65:ARG:NH1	2.20	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.06	0.55
25:YA:888:C:H3'	25:YA:889:C:C4'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:902:C:H2'	25:YA:903:C:H6	1.72	0.55
25:YA:2015:A:C1'	51:Y5:2:ALA:HA	2.30	0.55
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.42	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.27	0.55
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.71	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.20	0.55
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.55
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.18	0.55
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
39:YT:29:ARG:HH11	39:YT:29:ARG:HB2	1.72	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
50:Y4:48:ARG:HH12	50:Y4:52:THR:HG22	1.71	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.42	0.55
1:QA:370:C:H2'	1:QA:371:G:C8	2.41	0.55
1:QA:1213:A:N1	1:QA:1215:G:H1'	2.22	0.55
2:QB:41:ILE:HD12	2:QB:41:ILE:N	2.21	0.55
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
10:QJ:16:LEU:HD13	10:QJ:16:LEU:O	2.07	0.55
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.40	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
25:RA:975:G:H1'	25:RA:990:A:C2	2.41	0.55
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.72	0.55
25:RA:1465:G:C2	25:RA:1466:G:C8	2.95	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
32:RI:13:GLY:HA3	32:RI:17:GLN:CD	2.27	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.55
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.06	0.55
41:RV:99:ILE:N	41:RV:99:ILE:CD1	2.65	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.72	0.55
1:XA:297:G:N2	1:XA:299:G:H3'	2.22	0.55
1:XA:977:A:H8	1:XA:1223:C:C2	2.25	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
4:XD:94:LEU:H	4:XD:94:LEU:CD1	2.08	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.55	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.55
25:YA:25:U:H5''	42:YW:80:PRO:HD3	1.89	0.55
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.22	0.55
25:YA:859:G:H21	25:YA:860:U:H3	1.55	0.55
25:YA:1001:A:H2'	25:YA:1002:G:O4'	2.07	0.55
25:YA:1138:G:N2	33:YN:106:MET:HE3	2.13	0.55
25:YA:1317:A:H2'	25:YA:1318:C:H6	1.72	0.55
26:YB:112:G:H8	26:YB:112:G:O5'	1.90	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
29:YF:28:ILE:HD12	29:YF:28:ILE:O	2.06	0.55
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.63	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ2	1.72	0.55
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.55
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.07	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.55
50:Y4:51:ASP:OD1	50:Y4:51:ASP:O	2.25	0.55
1:QA:20:U:H2'	1:QA:21:G:O4'	2.06	0.55
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.88	0.55
1:QA:552:U:O4	1:QA:553:A:N6	2.40	0.55
1:QA:565:U:H5''	1:QA:566:G:C2'	2.37	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
25:RA:1543:A:H2	25:RA:1545:A:C5	2.25	0.55
25:RA:1869:G:N2	25:RA:1878:G:C5	2.75	0.55
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.20	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:52:ARG:HA	32:RI:56:LYS:H	1.72	0.55
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.38	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.55
9:XI:114:TYR:O	9:XI:114:TYR:CD2	2.59	0.55
25:YA:86:C:O2'	25:YA:104:U:O2'	1.96	0.55
25:YA:573:G:N1	25:YA:2031:A:OP2	2.32	0.55
25:YA:1636:C:H2'	25:YA:1637:A:C8	2.42	0.55
25:YA:2600:A:O2'	25:YA:2601:C:H5'	2.06	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.70	0.55
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.55
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.56	0.55
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.55
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.55
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.55	0.55
1:QA:581:G:N2	1:QA:760:G:N7	2.54	0.54
1:QA:960:U:O2	1:QA:960:U:H2'	2.07	0.54
1:QA:1312:G:OP2	50:R4:67:TYR:HE1	1.89	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.54
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.08	0.54
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.54
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.54
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
25:RA:198:C:O2'	25:RA:199:A:H5'	2.08	0.54
25:RA:1022:G:C6	25:RA:1140:C:C4	2.95	0.54
25:RA:1278:A:N6	25:RA:1292:U:H3	2.04	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.51	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	1.89	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
1:XA:423:G:H2'	1:XA:424:G:O4'	2.06	0.54
1:XA:474:G:H2'	1:XA:475:G:C8	2.39	0.54
1:XA:721:G:H4'	1:XA:722:A:O4'	2.08	0.54
1:XA:1124:G:H8	1:XA:1124:G:OP2	1.90	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.05	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
25:YA:738:G:C2	25:YA:759:G:C5	2.95	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.54
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.54
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.54
40:YU:95:LEU:HD12	41:YV:11:GLN:HE21	1.72	0.54
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.89	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
44:YY:95:LYS:HB2	44:YY:95:LYS:NZ	2.21	0.54
1:QA:176:C:H2'	1:QA:177:C:C6	2.42	0.54
1:QA:258:G:H2'	1:QA:259:G:C8	2.42	0.54
1:QA:567:G:H5''	1:QA:568:G:OP2	2.07	0.54
1:QA:865:A:H8	1:QA:865:A:O5'	1.90	0.54
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.30	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.54
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
25:RA:507:A:C5'	25:RA:508:G:H5'	2.37	0.54
25:RA:2151:G:H2'	25:RA:2152:G:C8	2.43	0.54
25:RA:2881:C:H2'	25:RA:2882:A:H8	1.71	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.54
35:RP:59:LEU:O	35:RP:59:LEU:HD23	2.06	0.54
38:RS:13:ARG:O	38:RS:13:ARG:HD2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.40	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.55	0.54
47:R1:91:LYS:HA	47:R1:91:LYS:CE	2.38	0.54
53:R7:18:PHE:C	53:R7:18:PHE:CD2	2.81	0.54
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.54
1:XA:22:G:C6	1:XA:23:C:C4	2.95	0.54
1:XA:837:G:H1	1:XA:849:C:N4	2.03	0.54
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.54
4:XD:19:LEU:N	4:XD:19:LEU:HD23	2.22	0.54
22:XV:68:C:H2'	22:XV:69:C:C6	2.42	0.54
25:YA:49:A:C2	25:YA:118:A:C6	2.94	0.54
25:YA:271(B):G:H5''	25:YA:271(B):G:C8	2.39	0.54
25:YA:484:C:OP1	44:YY:51:VAL:HG11	2.07	0.54
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.42	0.54
25:YA:2163:C:H2'	25:YA:2164:C:H6	1.71	0.54
25:YA:2212:A:N3	25:YA:2215:G:N1	2.55	0.54
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.42	0.54
25:YA:2861:G:H2'	25:YA:2862:G:H8	1.72	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
44:YY:2:ARG:HG2	44:YY:2:ARG:NH1	2.22	0.54
1:QA:1127:G:H21	1:QA:1147:C:H41	1.55	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
25:RA:856:C:C6	25:RA:856:C:H3'	2.42	0.54
25:RA:987:G:O2'	25:RA:1000:A:N3	2.34	0.54
25:RA:1006:C:H1'	33:RN:106:MET:HE3	1.90	0.54
25:RA:2261:C:C6	46:R0:16:SER:HB3	2.43	0.54
25:RA:2505:G:C6	25:RA:2576:G:C8	2.95	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.54
29:RF:62:ARG:HB3	29:RF:62:ARG:NH1	2.22	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
42:RW:70:TYR:CD2	42:RW:70:TYR:N	2.75	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.07	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.37	0.54
1:XA:1127:G:H21	1:XA:1147:C:N4	2.05	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
25:YA:336:C:O2'	44:YY:35:TYR:OH	2.23	0.54
25:YA:543:C:H2'	25:YA:544:C:C6	2.42	0.54
25:YA:1761:C:N4	25:YA:1762:A:H62	2.05	0.54
25:YA:2596:U:H2'	25:YA:2597:G:O4'	2.07	0.54
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
34:YO:1:MET:HE3	34:YO:67:LYS:HE2	1.88	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.45	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
45:YZ:158:PRO:O	45:YZ:160:GLY:N	2.40	0.54
1:QA:475:G:H2'	1:QA:476:G:C8	2.35	0.54
1:QA:1329:A:H5'	13:QM:29:ARG:HG3	1.90	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.54
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.54
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.54
25:RA:204:A:O3'	25:RA:205:G:H4'	2.07	0.54
25:RA:312:G:H4'	25:RA:331:A:N3	2.23	0.54
25:RA:483:A:C5'	44:RY:49:VAL:HG13	2.37	0.54
25:RA:527:C:H4'	25:RA:528:A:O5'	2.07	0.54
25:RA:678:C:H2'	25:RA:679:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.89	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.43	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
44:RY:95:LYS:HD3	44:RY:95:LYS:N	2.23	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
1:XA:297:G:H4'	1:XA:557:G:H4'	1.89	0.54
1:XA:982:U:H5''	14:YN:6:LEU:HD11	1.89	0.54
1:XA:1081:G:P	5:XE:16:THR:OG1	2.65	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
25:YA:1788:C:H2'	25:YA:1789:A:C8	2.39	0.54
27:YD:25:THR:O	27:YD:25:THR:HG23	2.07	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.07	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
1:QA:625:G:H2'	1:QA:626:U:C6	2.35	0.54
1:QA:701:C:H4'	1:QA:702:A:C5'	2.37	0.54
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.91	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.38	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
23:QX:6:C:HO2'	23:QX:7:U:P	2.29	0.54
25:RA:1509:C:N3	25:RA:1511:A:N6	2.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1600:C:H2'	25:RA:1601:G:H8	1.72	0.54
25:RA:1727:U:H2'	25:RA:1728:G:O4'	2.07	0.54
25:RA:1835:G:C4	25:RA:1931:U:N3	2.75	0.54
25:RA:1837:C:N3	25:RA:1903:G:N2	2.42	0.54
25:RA:2287:A:O2'	25:RA:2288:A:H5''	2.08	0.54
25:RA:2331:G:H4'	46:R0:43:THR:H	1.72	0.54
25:RA:2578:G:N2	25:RA:2579:C:C2	2.76	0.54
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.22	0.54
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.72	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.90	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.06	0.54
1:XA:181:G:O2'	1:XA:182:U:H6	1.90	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.06	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
25:YA:699:A:H2'	25:YA:700:G:O4'	2.08	0.54
25:YA:777:A:H2	25:YA:778:G:C4	2.26	0.54
25:YA:2230:G:C6	25:YA:2231:C:C4	2.95	0.54
25:YA:2275:C:O2	36:YQ:83:MET:HG3	2.08	0.54
25:YA:2336:A:H61	46:Y0:43:THR:HG21	1.72	0.54
25:YA:2712:U:H1'	25:YA:2712(A):A:C8	2.42	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
32:YI:14:ASP:O	32:YI:16:GLY:N	2.39	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
9:QI:66:ARG:HG2	9:QI:66:ARG:NH1	2.22	0.54
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.23	0.54
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.89	0.54
25:RA:995:C:H42	33:RN:2:LYS:HG3	1.72	0.54
25:RA:1006:C:H1'	33:RN:106:MET:CE	2.38	0.54
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.11	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.71	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
1:XA:688:G:H2'	1:XA:689:C:H6	1.73	0.54
1:XA:966:G:O2'	9:XI:127:LYS:O	2.24	0.54
1:XA:1007:C:H2'	1:XA:1008:C:H5''	1.90	0.54
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.72	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.70	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
25:YA:389:G:H22	35:YP:72:PRO:CG	2.20	0.54
25:YA:755:C:H2'	25:YA:756:C:H6	1.72	0.54
25:YA:812:C:H5'	35:YP:22:GLY:HA3	1.89	0.54
25:YA:860:U:C5	25:YA:917:A:C2	2.95	0.54
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.41	0.54
25:YA:2667:C:H1'	31:YH:109:PHE:HD2	1.73	0.54
26:YB:9:G:N2	26:YB:111:U:O2	2.36	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.23	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
1:QA:627:G:H2'	1:QA:628:G:C8	2.43	0.54
1:QA:966:G:O2'	9:QI:127:LYS:O	2.26	0.54
1:QA:1161:C:O2'	1:QA:1162:C:H5'	2.07	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
25:RA:744:G:H2'	25:RA:745:G:O4'	2.08	0.54
25:RA:1059:G:C6	25:RA:1060:U:H1'	2.43	0.54
25:RA:1199:U:H1'	40:RU:4:ALA:HB2	1.89	0.54
25:RA:2351:G:H8	25:RA:2351:G:O5'	1.89	0.54
25:RA:2425:A:H4'	25:RA:2426:A:H5''	1.88	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
28:RE:54:GLN:NE2	28:RE:54:GLN:N	2.55	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
41:RV:45:THR:HG22	41:RV:45:THR:O	2.08	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
1:XA:377:G:P	16:XP:5:ARG:NH1	2.81	0.54
1:XA:1312:G:N7	19:XS:2:PRO:HD2	2.23	0.54
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.23	0.54
1:XA:1453:G:H2'	20:XT:39:LYS:HZ1	1.72	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.54
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
25:YA:39:C:H2'	25:YA:40:C:C6	2.43	0.54
25:YA:1803:A:H2	25:YA:1822:G:N3	2.06	0.54
25:YA:1825:A:H2'	25:YA:1826:G:C8	2.42	0.54
25:YA:1931:U:H6	25:YA:1932:A:C8	2.25	0.54
25:YA:2230:G:C5	25:YA:2231:C:C5	2.95	0.54
25:YA:2287:A:N6	25:YA:2344:U:N3	2.55	0.54
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.68	0.54
28:YE:134:ILE:C	28:YE:134:ILE:HD12	2.28	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.72	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.90	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
1:QA:741:G:H2'	1:QA:742:G:H8	1.73	0.54
1:QA:965:A:C2	1:QA:969:A:N1	2.76	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.21	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
25:RA:242:G:C5'	54:R8:3:LYS:HE3	2.35	0.54
25:RA:310:A:OP1	44:RY:18:GLY:N	2.25	0.54
25:RA:571:A:C6	25:RA:575:A:C8	2.95	0.54
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.48	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
36:RQ:60:ARG:HH12	36:RQ:113:GLN:HE22	1.55	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
1:XA:1446:A:C2	39:YT:118:ARG:HD2	2.43	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
25:YA:482:A:H4'	44:YY:47:LYS:CD	2.26	0.54
25:YA:529:A:H2	25:YA:2041:U:H3	1.51	0.54
25:YA:739:G:H22	25:YA:758:C:H42	1.56	0.54
25:YA:852:G:H2'	25:YA:853:G:C8	2.43	0.54
25:YA:977:G:H4'	25:YA:1155:A:H5'	1.89	0.54
25:YA:1443:G:N2	25:YA:1549:C:N3	2.56	0.54
25:YA:2084:C:H2'	25:YA:2085:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.23	0.54
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	0.54
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.54
38:YS:13:ARG:O	38:YS:13:ARG:HD2	2.07	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.55	0.54
46:Y0:22:GLY:N	46:Y0:39:ARG:O	2.29	0.54
55:Y9:1:MET:HB3	55:Y9:4:ARG:CZ	2.37	0.54
1:QA:487:A:H2'	1:QA:488:C:O4'	2.07	0.54
1:QA:691:G:N2	1:QA:696:A:OP2	2.41	0.54
1:QA:807:A:H2'	1:QA:808:C:C6	2.43	0.54
1:QA:922:G:N2	1:QA:923:A:N3	2.55	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
25:RA:265:A:O2'	25:RA:266:G:H4'	2.07	0.54
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.91	0.54
26:RB:27:C:H5''	38:RS:33:LYS:NZ	2.23	0.54
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.89	0.54
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.64	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.37	0.54
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.38	0.54
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.54
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.54
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
44:RY:87:LYS:NZ	44:RY:87:LYS:HB2	2.23	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:303:A:H2'	1:XA:304:U:O4'	2.08	0.54
1:XA:375:U:H5''	16:XP:69:THR:HG21	1.90	0.54
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.08	0.54
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.47	0.54
1:XA:1230:C:H2'	1:XA:1231:G:H8	1.73	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.38	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.22	0.54
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.54
25:YA:445:C:O2'	25:YA:446:G:H5'	2.07	0.54
25:YA:646:A:H2'	25:YA:647:G:O4'	2.08	0.54
25:YA:1412:A:H2'	25:YA:1413:G:C8	2.43	0.54
25:YA:2061:G:OP2	25:YA:2502:G:OP2	2.25	0.54
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.89	0.54
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
44:YY:87:LYS:HB2	44:YY:87:LYS:NZ	2.23	0.54
47:Y1:91:LYS:HA	47:Y1:91:LYS:CE	2.37	0.54
48:Y2:47:ASN:ND2	48:Y2:47:ASN:N	2.54	0.54
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
1:QA:277:C:H5'	17:QQ:68:ARG:NH2	2.23	0.54
1:QA:337:C:H2'	1:QA:338:A:C8	2.43	0.54
1:QA:354:G:C2'	1:QA:355:C:H5'	2.38	0.54
1:QA:582:U:C2	1:QA:760:G:C6	2.96	0.54
1:QA:585:G:O3'	17:QQ:34:LYS:NZ	2.40	0.54
4:QD:33:MET:HE1	4:QD:37:PRO:HA	1.89	0.54
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.54
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.54
13:QM:121:LYS:NZ	24:QY:39:C:O2'	2.41	0.54
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.54
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.43	0.54
25:RA:2635:C:H5''	28:RE:78:LEU:HA	1.89	0.54
25:RA:2740:A:H2'	25:RA:2741:A:C8	2.43	0.54
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.28	0.54
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
1:XA:142:G:H2'	1:XA:143:A:C8	2.41	0.54
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.89	0.54
1:XA:186(C):G:H2'	1:XA:186(D):C:C6	2.43	0.54
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.24	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.54
10:XJ:61:GLU:HG3	14:YN:58:LYS:HE2	1.90	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.90	0.54
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.75	0.54
25:YA:2289:G:N2	25:YA:2344:U:C2	2.76	0.54
25:YA:2370:G:H21	52:Y6:45:LYS:NZ	2.06	0.54
26:YB:100:G:H2'	26:YB:101:A:C8	2.43	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.54
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.08	0.54
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.54
34:YO:49:ARG:HB3	34:YO:49:ARG:NH1	2.23	0.54
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.54
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.54
41:YV:45:THR:HG22	41:YV:45:THR:O	2.08	0.54
45:YZ:152:ALA:HB2	45:YZ:168:GLU:HA	1.90	0.54
1:QA:493:G:H8	1:QA:493:G:O5'	1.90	0.53
1:QA:836:G:C6	1:QA:851:G:C6	2.96	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.53
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.53
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.53
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.89	0.53
14:QN:23:ARG:O	14:QN:24:CYS:C	2.46	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.08	0.53
22:QV:68:C:H2'	22:QV:69:C:C6	2.42	0.53
25:RA:422:A:C6	25:RA:423:A:C6	2.95	0.53
25:RA:602:G:HO2'	25:RA:604:G:HO2'	1.46	0.53
25:RA:845:G:HO2'	25:RA:846:C:H5	1.56	0.53
25:RA:897:C:H3'	25:RA:897:C:OP2	2.08	0.53
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.53
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.53
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.53
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.53
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.53
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
51:R5:60:VAL:OXT	51:R5:60:VAL:CG1	2.56	0.53
1:XA:582:U:C2	1:XA:760:G:C6	2.97	0.53
1:XA:600:C:H42	1:XA:638:G:H1	1.57	0.53
1:XA:1157:A:H1'	1:XA:1158:C:N3	2.23	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
25:YA:372:G:O2'	25:YA:373:U:P	2.65	0.53
25:YA:580:C:H2'	25:YA:581:C:C6	2.43	0.53
25:YA:784:A:O2'	25:YA:785:G:H5''	2.07	0.53
25:YA:860:U:OP2	25:YA:916:G:N1	2.38	0.53
25:YA:890:A:O2'	25:YA:892:G:H8	1.92	0.53
25:YA:1050:A:O2'	25:YA:2752:C:H1'	2.08	0.53
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.07	0.53
25:YA:2738:A:H2	25:YA:2766:G:H22	1.56	0.53
25:YA:2756:U:OP2	55:Y9:19:ARG:NE	2.41	0.53
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.53
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.53
28:YE:186:GLY:O	28:YE:188:VAL:N	2.41	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.06	0.53
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.53
37:YR:91:GLN:HG2	37:YR:91:GLN:O	2.08	0.53
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.53
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:45:U:H2'	1:QA:46:G:C8	2.43	0.53
1:QA:122:G:C2	1:QA:123:C:C2	2.96	0.53
1:QA:327:A:O2'	1:QA:328:C:O4'	2.22	0.53
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.56	0.53
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.90	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
25:RA:1359:A:H61	25:RA:1372:U:H3	1.55	0.53
25:RA:1600:C:H2'	25:RA:1601:G:C8	2.42	0.53
25:RA:2046:G:H2'	25:RA:2047:U:C6	2.44	0.53
25:RA:2723:C:OP1	37:RR:3:HIS:HD2	1.91	0.53
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.91	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.53
29:RF:53:THR:C	29:RF:55:GLY:H	2.11	0.53
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.74	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
36:RQ:119:ARG:HG2	36:RQ:119:ARG:NH1	2.20	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
40:RU:47:TYR:C	40:RU:47:TYR:CD2	2.81	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53
1:XA:34:C:H2'	1:XA:35:G:H8	1.72	0.53
1:XA:337:C:H2'	1:XA:338:A:C8	2.43	0.53
1:XA:403:C:H42	1:XA:547:A:H5'	1.73	0.53
1:XA:486:U:H2'	1:XA:487:A:C8	2.42	0.53
1:XA:881:G:P	12:XL:12:ARG:HH22	2.31	0.53
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.09	0.53
1:XA:1239:A:H4'	1:XA:1240:U:H5''	1.90	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
9:XI:128:ARG:HH21	22:XV:35:A:P	2.31	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
25:YA:1509:C:H2'	25:YA:1511:A:C8	2.43	0.53
25:YA:1670:C:C4	25:YA:1671:U:C2	2.96	0.53
25:YA:2134:A:O2'	25:YA:2159:G:N2	2.36	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.73	0.53
25:YA:2863:C:H2'	25:YA:2864:G:H8	1.73	0.53
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
31:YH:59:ARG:HH11	31:YH:59:ARG:CG	2.20	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
39:YT:88:ILE:C	39:YT:88:ILE:HD12	2.29	0.53
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.91	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
45:YZ:10:ARG:HD2	45:YZ:36:LYS:HB3	1.90	0.53
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.53
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.53
1:QA:792:A:H2'	1:QA:792:A:N3	2.23	0.53
1:QA:1178:G:C8	1:QA:1180:A:OP2	2.61	0.53
1:QA:1471:G:H2'	1:QA:1472:U:C6	2.41	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
8:QH:10:LEU:H	8:QH:10:LEU:CD2	2.15	0.53
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.43	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
18:QR:58:LEU:HD12	18:QR:58:LEU:H	1.72	0.53
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.08	0.53
25:RA:1020:A:N1	25:RA:1141:U:O2'	2.26	0.53
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.07	0.53
25:RA:1992:G:O2'	25:RA:1993:U:OP2	2.22	0.53
25:RA:2359:C:H2'	25:RA:2360:A:O4'	2.09	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.07	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
1:XA:562:C:H1'	12:XL:15:ARG:HD2	1.89	0.53
1:XA:606:G:N2	1:XA:631:G:C8	2.72	0.53
1:XA:1343:G:H2'	1:XA:1344:C:H6	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.72	0.53
25:YA:273(A):G:C2	25:YA:364:C:N3	2.76	0.53
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.41	0.53
25:YA:1221:C:H2'	25:YA:1222:C:H6	1.72	0.53
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.41	0.53
25:YA:1386:C:H2'	25:YA:1387:C:H6	1.73	0.53
25:YA:1691:C:H2'	25:YA:1692:U:O4'	2.09	0.53
25:YA:1788:C:O2'	25:YA:1789:A:H5'	2.08	0.53
25:YA:1957:C:H2'	25:YA:1958:C:H6	1.74	0.53
25:YA:2168:G:H8	25:YA:2168:G:OP2	1.91	0.53
25:YA:2252:G:H2'	25:YA:2253:G:O4'	2.07	0.53
25:YA:2356:C:OP1	46:Y0:24:LYS:NZ	2.39	0.53
25:YA:2543:G:N2	25:YA:2765:A:C8	2.76	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.53
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.53
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.27	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.39	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.71	0.53
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.09	0.53
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.43	0.53
2:QB:75:LYS:HD3	2:QB:75:LYS:C	2.29	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.57	0.53
25:RA:843:G:N2	25:RA:936:C:C2	2.77	0.53
25:RA:856:C:H1'	46:R0:27:GLU:HB3	1.89	0.53
25:RA:1107:G:H2'	25:RA:1108:U:H6	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1754:C:H2'	25:RA:1755:A:H8	1.71	0.53
25:RA:2676:C:O2	25:RA:2732:G:N2	2.31	0.53
25:RA:2712:U:H1'	25:RA:2712(A):A:C8	2.44	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.22	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53
30:RG:81:LYS:O	30:RG:82:LEU:CB	2.56	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.53
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.27	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.40	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
1:XA:442:C:H2'	1:XA:443:C:H6	1.73	0.53
1:XA:1399:C:C2	1:XA:1502:A:N6	2.77	0.53
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.53
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	2.05	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:247:G:O6	54:Y8:12:LYS:NZ	2.28	0.53
25:YA:1793:C:O2	25:YA:1900:A:H2	1.91	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
32:YI:29:TYR:HA	32:YI:33:ARG:HD3	1.89	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
1:QA:474:G:C5'	16:QP:81:ARG:HG3	2.38	0.53
1:QA:980:C:H3'	1:QA:981:U:C6	2.43	0.53
1:QA:1178:G:H5''	9:QI:93:ARG:NH2	2.23	0.53
1:QA:1259:C:C4	1:QA:1260:C:H1'	2.43	0.53
3:QC:173:VAL:HG12	3:QC:173:VAL:O	2.08	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
25:RA:153:C:P	47:R1:88:LYS:HE2	2.48	0.53
25:RA:729:G:H2'	25:RA:1775:U:H1'	1.90	0.53
25:RA:1590:U:H2'	25:RA:1591:G:C8	2.40	0.53
25:RA:2216:G:H2'	25:RA:2217:G:H8	1.72	0.53
27:RD:25:THR:O	27:RD:25:THR:HG23	2.07	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
38:RS:25:ARG:HH11	38:RS:25:ARG:CB	2.22	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.65	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.90	0.53
1:XA:447:G:H2'	1:XA:485:G:N2	2.22	0.53
1:XA:604:G:H2'	1:XA:605:U:O4'	2.08	0.53
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.28	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.90	0.53
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.73	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
25:YA:270(U):C:H2'	25:YA:270(V):G:H8	1.74	0.53
25:YA:317:G:C2	25:YA:318:C:C2	2.97	0.53
25:YA:793:A:O2'	25:YA:794:G:OP2	2.26	0.53
25:YA:901:A:H5'	25:YA:902:C:OP2	2.07	0.53
25:YA:1405:U:H2'	25:YA:1406:U:H6	1.74	0.53
25:YA:1444(A):A:O2'	25:YA:1460:A:N3	2.42	0.53
25:YA:2735:G:H2'	25:YA:2736:G:C8	2.44	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.91	0.53
48:Y2:16:LEU:O	48:Y2:16:LEU:CG	2.49	0.53
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
1:QA:176:C:H2'	1:QA:177:C:H6	1.74	0.53
1:QA:315:A:H5''	1:QA:317:G:OP2	2.08	0.53
1:QA:619:U:N3	4:QD:134:ASP:OD2	2.42	0.53
1:QA:1004:A:H1'	1:QA:1036:G:C2	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
19:QS:5:LEU:CD2	50:R4:66:SER:HB2	2.36	0.53
23:QX:6:C:O2'	23:QX:7:U:P	2.66	0.53
25:RA:135:G:H1	25:RA:144:C:N4	2.05	0.53
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.38	0.53
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.55	0.53
25:RA:288:C:H2'	25:RA:289:A:C8	2.42	0.53
25:RA:1140:C:H5''	33:RN:66:LYS:NZ	2.24	0.53
25:RA:1380:G:O2'	25:RA:1569:A:N6	2.42	0.53
25:RA:1592:C:H2'	25:RA:1593:G:C8	2.43	0.53
25:RA:1852:C:H41	25:RA:1888:G:N2	2.06	0.53
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.91	0.53
25:RA:2061:G:C2	25:RA:2063:C:C4	2.97	0.53
26:RB:31:C:H42	26:RB:51:G:H1	1.55	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
28:RE:134:ILE:C	28:RE:134:ILE:HD12	2.28	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
45:RZ:157:LEU:HD23	45:RZ:161:VAL:HG12	1.90	0.53
1:XA:73:G:H2'	1:XA:74:C:C6	2.43	0.53
1:XA:266:G:H5''	1:XA:267:C:C5	2.44	0.53
1:XA:1226:C:O2'	13:XM:103:THR:O	2.17	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
12:XL:11:VAL:HG13	17:XQ:29:HIS:HD2	1.72	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
14:XN:40:CYS:SG	14:XN:42:ILE:N	2.81	0.53
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
25:YA:106:C:H2'	25:YA:107:C:H6	1.73	0.53
25:YA:270(W):G:H2'	25:YA:270(X):G:O4'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:303:U:H2'	25:YA:304:G:C8	2.43	0.53
25:YA:704:G:HO2'	25:YA:705:A:P	2.32	0.53
25:YA:768:G:C4	25:YA:769:G:C8	2.97	0.53
25:YA:1359:A:N6	25:YA:1372:U:C4	2.76	0.53
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.43	0.53
25:YA:2424:C:O2	25:YA:2429:G:O2'	2.20	0.53
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.35	0.53
25:YA:2729:G:O2'	28:YE:187:ALA:HB2	2.09	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
29:YF:179:GLU:CD	29:YF:179:GLU:H	2.11	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
32:YI:99:GLU:O	32:YI:102:SER:HB2	2.08	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.23	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.31	0.53
50:Y4:49:PHE:N	50:Y4:49:PHE:CD1	2.76	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.29	0.53
1:QA:216:G:O2'	1:QA:217:C:O4'	2.25	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
25:RA:345:A:N3	25:RA:347:A:N6	2.57	0.53
25:RA:871:U:H5'	25:RA:872:A:OP1	2.09	0.53
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.44	0.53
25:RA:1949:G:H1	25:RA:1957:C:N4	2.06	0.53
25:RA:2032:G:H21	28:RE:146:THR:CG2	2.22	0.53
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.44	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.39	0.53
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.53
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.90	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.90	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
1:XA:191:G:N9	20:XT:105:SER:HB3	2.23	0.53
1:XA:665:A:C8	1:XA:733:A:C2	2.97	0.53
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.09	0.53
1:XA:1127:G:H21	1:XA:1147:C:H41	1.56	0.53
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.24	0.53
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.89	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
25:YA:2262:U:H4'	25:YA:2328:A:C2	2.44	0.53
25:YA:2751:G:H8	25:YA:2751:G:O5'	1.92	0.53
25:YA:2816:C:O2	25:YA:2883:A:O2'	2.26	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
51:Y5:60:VAL:OXT	51:Y5:60:VAL:CG1	2.56	0.53
1:QA:560:U:H5'	1:QA:566:G:H22	1.73	0.53
1:QA:560:U:N3	1:QA:566:G:O4'	2.41	0.53
1:QA:920:U:H2'	1:QA:921:U:H6	1.74	0.53
1:QA:1222:G:OP1	19:QS:77:THR:HG21	2.09	0.53
1:QA:1487:G:H8	1:QA:1487:G:O5'	1.91	0.53
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.09	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.53
25:RA:111:A:O3'	48:R2:69:ARG:NH2	2.41	0.53
25:RA:323:G:H2'	29:RF:169:ASN:OD1	2.08	0.53
25:RA:1989:G:C5	25:RA:1990:C:C5	2.97	0.53
25:RA:2781:A:H5''	25:RA:2782:G:H5'	1.90	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.29	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
1:XA:323:U:H5'	20:XT:23:ARG:HB2	1.91	0.53
1:XA:411:A:N7	1:XA:413:G:N3	2.57	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.90	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	2.44	0.53
25:YA:270(R):G:H1'	47:Y1:78:LYS:NZ	2.23	0.53
25:YA:459:U:OP2	25:YA:469:G:N1	2.34	0.53
25:YA:1425:G:H2'	25:YA:1426:G:C8	2.42	0.53
25:YA:2069:G:N2	25:YA:2442:C:O2	2.42	0.53
25:YA:2820:A:C2	37:YR:4:LEU:HD21	2.44	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.72	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.09	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.08	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.48	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
47:Y1:20:ARG:HG2	47:Y1:20:ARG:NH1	2.24	0.53
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.27	0.53
1:QA:316:G:OP2	1:QA:351:G:O2'	2.26	0.53
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.72	0.53
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.43	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
2:QB:178:ARG:CD	8:QH:71:GLY:CA	2.77	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
25:RA:389:G:H22	35:RP:72:PRO:CD	2.21	0.53
25:RA:593:G:H2'	25:RA:594:U:C6	2.40	0.53
25:RA:709:U:H3	25:RA:722:A:N6	2.04	0.53
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.42	0.53
25:RA:2345:G:N2	25:RA:2382:G:OP2	2.39	0.53
25:RA:2663:G:H3'	25:RA:2664:G:C8	2.42	0.53
26:RB:16:G:H1	26:RB:68:C:H42	1.56	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.53
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
1:XA:502:G:H2'	1:XA:503:C:O4'	2.09	0.53
1:XA:673:G:H2'	1:XA:674:G:C8	2.43	0.53
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.44	0.53
1:XA:1030:C:H2'	1:XA:1031:G:O4'	2.09	0.53
1:XA:1315:U:H2'	1:XA:1316:G:O4'	2.09	0.53
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.90	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
23:XX:7:U:H2'	23:XX:7:U:O2	2.07	0.53
25:YA:572:A:H5''	25:YA:573:G:OP2	2.09	0.53
25:YA:974:G:OP1	41:YV:76:LYS:HE2	2.09	0.53
25:YA:1105:U:H2'	25:YA:1106:G:C8	2.36	0.53
25:YA:1206:G:C6	25:YA:1207:C:C4	2.97	0.53
25:YA:2636:U:O2	25:YA:2783:G:N1	2.42	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.71	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
45:YZ:70:LEU:HB2	45:YZ:91:LEU:HD21	1.90	0.53
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.91	0.53
1:QA:662:G:O2'	1:QA:836:G:OP1	2.26	0.53
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.08	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
25:RA:384:U:H2'	25:RA:385:C:C6	2.37	0.53
25:RA:922:U:H2'	25:RA:923:C:C6	2.43	0.53
25:RA:1021:A:H3'	25:RA:1021:A:C8	2.44	0.53
25:RA:1131:G:HO2'	25:RA:1132:A:H8	1.57	0.53
25:RA:2338:G:C2	25:RA:2339:G:C8	2.97	0.53
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.42	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.08	0.53
32:RI:97:ILE:HD12	32:RI:140:LEU:HD11	1.90	0.53
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.53
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.53
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.53
46:R0:56:ASP:CG	46:R0:58:THR:HG1	2.12	0.53
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
1:XA:764:C:H5''	1:XA:765:G:OP2	2.08	0.53
1:XA:956:U:H2'	1:XA:957:U:O4'	2.08	0.53
1:XA:1004:A:C5	1:XA:1025:U:H1'	2.44	0.53
1:XA:1268:A:H2'	1:XA:1269:A:C8	2.44	0.53
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.36	0.53
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.44	0.53
2:XB:9:GLU:OE2	2:XB:9:GLU:N	2.42	0.53
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.28	0.53
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.39	0.53
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.53
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.53
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
11:XK:125:PHE:HD1	11:XK:125:PHE:N	2.06	0.53
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	1.91	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
25:YA:1101:U:H2'	25:YA:1102:C:H6	1.73	0.53
25:YA:1434:A:H61	25:YA:1558:A:H62	1.56	0.53
25:YA:2330:G:H2'	25:YA:2331:G:O4'	2.08	0.53
25:YA:2614:A:H4'	25:YA:2615:U:OP1	2.09	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:44:VAL:O	31:YH:44:VAL:CG2	2.57	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.53
42:YW:8:ARG:HG3	42:YW:8:ARG:HH11	1.73	0.53
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
45:YZ:128:VAL:HB	45:YZ:161:VAL:HG13	1.91	0.53
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.91	0.53
1:QA:736:C:H2'	1:QA:737:A:C8	2.44	0.52
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.52
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.52
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	0.52
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
22:QV:4:G:HO2'	22:QV:5:G:H8	1.56	0.52
25:RA:638:G:H5''	25:RA:638:G:H8	1.75	0.52
25:RA:1195:G:H5''	25:RA:1195:G:H8	1.75	0.52
26:RB:7:G:H8	26:RB:7:G:H5''	1.74	0.52
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.52
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.52
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.52
38:RS:89:ARG:HH11	38:RS:89:ARG:HG2	1.74	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
50:R4:49:PHE:N	50:R4:49:PHE:CD1	2.76	0.52
1:XA:717:C:H6	1:XA:717:C:H5''	1.74	0.52
1:XA:1348:U:N3	1:XA:1374:A:H2	2.07	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
3:XC:173:VAL:HG12	3:XC:173:VAL:O	2.08	0.52
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.24	0.52
14:YN:7:ILE:CG1	14:YN:8:GLU:N	2.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:75:ARG:C	16:XP:77:ALA:H	2.11	0.52
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.10	0.52
25:YA:530:G:O2'	25:YA:2021:C:O2'	2.25	0.52
25:YA:1799:G:O2'	25:YA:1800:C:OP2	2.25	0.52
25:YA:1847:A:H5'	25:YA:1848:A:OP2	2.09	0.52
25:YA:2355:C:H4'	46:Y0:36:ILE:HD11	1.90	0.52
25:YA:2838:G:H2'	25:YA:2839:G:H8	1.73	0.52
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.52
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.52
31:YH:89:ILE:O	31:YH:89:ILE:CG1	2.57	0.52
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.52
33:YN:109:LYS:HD2	33:YN:109:LYS:H	1.73	0.52
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.52
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.52
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.74	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.91	0.52
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.52
1:QA:141:A:H1'	1:QA:182:U:C2	2.44	0.52
1:QA:508:C:OP1	1:QA:508:C:H6	1.92	0.52
1:QA:1322:C:O2'	1:QA:1323:G:H5'	2.09	0.52
1:QA:1349:A:H2'	1:QA:1350:A:O4'	2.09	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.52
22:QV:15:G:H22	22:QV:48:C:H42	1.57	0.52
25:RA:312:G:H5'	25:RA:331:A:O2'	2.10	0.52
25:RA:333:G:H5''	25:RA:334:C:OP2	2.09	0.52
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.43	0.52
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.08	0.52
25:RA:2336:A:H61	46:R0:43:THR:CG2	2.21	0.52
25:RA:2469:A:C5	25:RA:2482:G:C8	2.97	0.52
25:RA:2523:G:O2'	25:RA:2764:A:O3'	2.26	0.52
25:RA:2525:G:N2	25:RA:2538:C:O2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.74	0.52
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.52
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.90	0.52
1:XA:542:G:H5''	4:XD:10:ARG:HH22	1.73	0.52
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.10	0.52
1:XA:1216:G:H5''	14:XN:5:ALA:CB	2.39	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.52
25:YA:224:G:C2	25:YA:225:A:C4	2.98	0.52
25:YA:252:G:N2	25:YA:253:C:H1'	2.24	0.52
25:YA:373:U:H1'	25:YA:423:A:C2	2.44	0.52
25:YA:1441:G:H2'	25:YA:1442:G:C8	2.45	0.52
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.09	0.52
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.91	0.52
25:YA:2424:C:H5'	25:YA:2424:C:H6	1.74	0.52
25:YA:2538:C:O2'	25:YA:2539:C:H5'	2.09	0.52
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.09	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.52
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.20	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.09	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
1:QA:734:G:H2'	1:QA:735:C:H6	1.74	0.52
1:QA:752:G:H1'	1:QA:754:C:H41	1.74	0.52
1:QA:985:C:H2'	1:QA:986:A:H8	1.74	0.52
1:QA:1049:U:H5'	1:QA:1201:A:OP1	2.10	0.52
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.73	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
4:QD:13:ARG:HB3	4:QD:33:MET:HE2	1.92	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	2.10	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.10	0.52
19:QS:65:ASN:ND2	19:QS:65:ASN:H	2.08	0.52
25:RA:27:G:H1'	25:RA:513:A:N6	2.24	0.52
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.45	0.52
25:RA:1401:G:H2'	25:RA:1402:C:O4'	2.08	0.52
25:RA:2011:U:OP2	42:RW:16:LYS:NZ	2.42	0.52
25:RA:2508:G:HO2'	25:RA:2554:U:HO2'	1.57	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.38	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
45:RZ:20:ARG:O	45:RZ:20:ARG:HD3	2.09	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
1:XA:606:G:H1	1:XA:631:G:H5''	1.74	0.52
1:XA:1359:C:H3'	14:XN:35:ARG:HH12	1.75	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
25:YA:271(B):G:O2'	25:YA:271(C):U:OP2	2.24	0.52
25:YA:295:G:H1	25:YA:343:C:H42	1.57	0.52
25:YA:846:C:H42	25:YA:931:G:H1	1.56	0.52
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.91	0.52
25:YA:1654:A:OP2	37:YR:2:ARG:HD2	2.09	0.52
25:YA:2033:A:O2'	25:YA:2035:G:OP2	2.26	0.52
25:YA:2267:A:H5''	25:YA:2268:A:H5'	1.90	0.52
25:YA:2420:C:H6	25:YA:2420:C:O5'	1.93	0.52
25:YA:2748:A:H2'	25:YA:2749:A:C8	2.44	0.52
26:YB:89:G:C6	26:YB:89(A):A:C6	2.98	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
42:YW:25:ARG:HB2	42:YW:25:ARG:HH11	1.74	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
46:Y0:25:ARG:HH11	46:Y0:25:ARG:HG2	1.73	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
1:QA:376:G:H2'	1:QA:377:G:C8	2.45	0.52
1:QA:568:G:N3	1:QA:574:A:H2	2.08	0.52
1:QA:600:C:H5'	8:QH:129:VAL:HA	1.91	0.52
1:QA:624:C:H2'	1:QA:625:G:C8	2.43	0.52
1:QA:779:C:H4'	11:QK:121:PRO:O	2.10	0.52
1:QA:1087:G:H22	1:QA:1099:G:H1'	1.73	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
25:RA:171:G:N2	25:RA:172:C:O2	2.42	0.52
25:RA:235:U:H2'	25:RA:236:C:C6	2.44	0.52
25:RA:517:C:O2'	42:RW:18:ARG:NH2	2.42	0.52
25:RA:832:G:OP1	35:RP:38:GLN:HB3	2.09	0.52
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.57	0.52
25:RA:2393:A:C2'	25:RA:2394:C:H5'	2.39	0.52
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.91	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
32:RI:14:ASP:O	32:RI:16:GLY:N	2.42	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
40:RU:88:ILE:H	40:RU:88:ILE:CD1	2.05	0.52
45:RZ:5:LEU:HD12	45:RZ:7:ALA:HB2	1.90	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.24	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
1:XA:443:C:H42	1:XA:491:G:H1	1.58	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.57	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:XX:3:G:O2'	23:XX:4:C:OP2	2.27	0.52
25:YA:26:G:C6	25:YA:27:G:C2	2.97	0.52
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.72	0.52
25:YA:859:G:H5'	25:YA:2268:A:HO2'	1.75	0.52
25:YA:1029:A:H5''	36:YQ:128:LYS:HE2	1.92	0.52
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.91	0.52
25:YA:2808:U:H5'	25:YA:2891:G:O6	2.09	0.52
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.10	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
45:YZ:149:SER:HB2	45:YZ:172:ALA:O	2.10	0.52
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.25	0.52
1:QA:258:G:H2'	1:QA:259:G:H8	1.75	0.52
1:QA:791:G:C6	1:QA:792:A:N1	2.77	0.52
1:QA:1192:C:C5	1:QA:1193:G:C8	2.98	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	0.52
25:RA:155:C:N4	25:RA:171:G:H1	2.06	0.52
25:RA:900:A:H3'	25:RA:901:A:C8	2.36	0.52
25:RA:952:G:C6	25:RA:966:G:C6	2.98	0.52
25:RA:1342:A:C5	25:RA:1397:U:C6	2.98	0.52
25:RA:1352:U:O2'	25:RA:1353:A:H5'	2.08	0.52
25:RA:1359:A:N6	25:RA:1373:A:C4	2.78	0.52
25:RA:1448:G:H1'	25:RA:1528:A:N6	2.24	0.52
25:RA:1728:G:H5''	25:RA:1728:G:N3	2.24	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52
32:RI:21:VAL:HG13	32:RI:22:LYS:O	2.10	0.52
32:RI:68:LEU:HA	32:RI:71:ILE:CG2	2.40	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.09	0.52
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.19	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.52
1:XA:1085:U:H3'	1:XA:1086:U:C5	2.45	0.52
1:XA:1347:G:OP2	9:XI:107:ARG:HG2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
11:XK:77:MET:HE3	11:XK:80:VAL:HG12	1.90	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.52
25:YA:24:G:H2'	25:YA:25:U:O4'	2.09	0.52
25:YA:272:G:H2'	25:YA:273:G:H8	1.74	0.52
25:YA:503:A:C5	25:YA:506:G:C5	2.98	0.52
25:YA:869:G:O2'	25:YA:870:A:H5'	2.10	0.52
25:YA:1063:G:H22	25:YA:1076:C:H1'	1.74	0.52
25:YA:2790:A:C2	25:YA:2791:C:H2'	2.45	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
48:Y2:7:ARG:HG3	48:Y2:7:ARG:NH1	2.25	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
1:QA:892:A:H2'	1:QA:893:C:C6	2.44	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
25:RA:515:A:H1'	25:RA:581:C:H1'	1.91	0.52
25:RA:571:A:C5	25:RA:575:A:C8	2.98	0.52
25:RA:582:G:H2'	25:RA:583:G:C8	2.44	0.52
25:RA:704:G:H1'	25:RA:727:A:N6	2.25	0.52
25:RA:1001:A:H2'	25:RA:1002:G:O4'	2.09	0.52
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.74	0.52
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:179:GLU:HA	28:RE:179:GLU:OE1	2.10	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
33:RN:112:LEU:C	33:RN:112:LEU:HD23	2.30	0.52
35:RP:13:ASN:O	35:RP:14:LYS:C	2.48	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.62	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.10	0.52
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.52
1:XA:328:C:H4'	1:XA:329:A:C5'	2.40	0.52
1:XA:1004:A:H1'	1:XA:1036:G:H22	1.74	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.07	0.52
25:YA:121:G:H2'	25:YA:122:G:C8	2.44	0.52
25:YA:1071:G:O2'	25:YA:1089:G:OP2	2.20	0.52
25:YA:1093:G:OP1	31:YH:170:ARG:HD2	2.09	0.52
25:YA:1156:A:C8	40:YU:51:LYS:HD2	2.45	0.52
25:YA:1590:U:H2'	25:YA:1591:G:C8	2.44	0.52
25:YA:2378:A:H4'	38:YS:23:ARG:NE	2.25	0.52
25:YA:2689:U:P	25:YA:2719:G:H22	2.33	0.52
26:YB:16:G:C6	26:YB:69:G:C2	2.97	0.52
27:YD:174:ILE:N	27:YD:174:ILE:CD1	2.73	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
31:YH:24:VAL:HG23	31:YH:24:VAL:O	2.09	0.52
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.10	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
50:Y4:15:ILE:HD13	50:Y4:15:ILE:H	1.73	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
1:QA:164:U:H2'	1:QA:165:C:H6	1.75	0.52
1:QA:955:U:OP1	13:QM:121:LYS:HD2	2.09	0.52
1:QA:988:G:H2'	1:QA:989:C:O4'	2.10	0.52
1:QA:1147:C:O2	9:QI:16:ARG:NH1	2.43	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
25:RA:151:C:O5'	25:RA:151:C:H6	1.93	0.52
25:RA:1050:A:H2'	25:RA:1051:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1478:G:HO2'	25:RA:1558:A:H2	1.55	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.92	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.43	0.52
46:R0:21:LEU:HD11	46:R0:41:ARG:HG2	1.92	0.52
47:R1:76:ARG:HG2	47:R1:76:ARG:NH1	2.19	0.52
1:XA:335:C:O2'	1:XA:1433:A:N3	2.33	0.52
1:XA:815:A:H5''	1:XA:817:C:N4	2.25	0.52
1:XA:1167:A:C6	1:XA:1169:A:C6	2.98	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
25:YA:317:G:N2	25:YA:318:C:O2	2.43	0.52
25:YA:347:A:H2'	25:YA:348:G:C8	2.45	0.52
25:YA:1021:A:C8	25:YA:1021:A:C3'	2.91	0.52
25:YA:2522:U:O2'	25:YA:2647:U:OP1	2.19	0.52
25:YA:2747:G:O6	25:YA:2755:C:H5''	2.10	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.91	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
33:YN:112:LEU:HD23	33:YN:112:LEU:C	2.30	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
39:YT:42:ILE:HD12	39:YT:42:ILE:N	2.25	0.52
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.52
52:Y6:30:THR:O	52:Y6:30:THR:HG23	2.09	0.52
1:QA:224:C:H2'	1:QA:225:C:C6	2.45	0.52
1:QA:1069:C:C3'	5:QE:25:ARG:HH12	2.23	0.52
1:QA:1432:G:H1'	1:QA:1469:G:N2	2.25	0.52
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.09	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
25:RA:222:A:HO2'	25:RA:223:A:P	2.31	0.52
25:RA:746:A:O2'	25:RA:747:U:P	2.67	0.52
25:RA:2697:G:C2	25:RA:2711:A:C2	2.97	0.52
25:RA:2861:G:H2'	25:RA:2862:G:C8	2.45	0.52
26:RB:30:C:H4'	26:RB:58:A:H2	1.73	0.52
26:RB:75:G:H1	26:RB:102:G:H22	1.54	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.52
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.92	0.52
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.52
55:R9:27:CYS:SG	55:R9:28:GLU:N	2.83	0.52
1:XA:160:A:H1'	1:XA:344:A:C5	2.45	0.52
1:XA:185:A:H61	1:XA:192:U:H3	1.57	0.52
1:XA:646:U:H2'	1:XA:647:C:C6	2.43	0.52
1:XA:1070:U:H5'	5:XE:18:ARG:HH22	1.75	0.52
1:XA:1120:G:H1	1:XA:1153:C:N4	2.08	0.52
3:XC:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
25:YA:79:G:O2'	25:YA:346:A:N3	2.30	0.52
25:YA:275:G:OP2	25:YA:363:G:N1	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:704:G:O2'	25:YA:705:A:P	2.68	0.52
25:YA:863:A:O2'	26:YB:100:G:O2'	2.25	0.52
25:YA:2102:U:H3	25:YA:2187:G:H1	1.56	0.52
25:YA:2478:A:OP1	55:Y9:31:LYS:HD3	2.09	0.52
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.52
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.52
44:YY:9:LYS:HG2	44:YY:9:LYS:O	2.10	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
1:QA:909:A:H2	1:QA:1413:A:N3	2.08	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.55	0.52
7:QG:89:MET:HE3	7:QG:156:TRP:H	1.74	0.52
12:QL:46:LYS:CG	12:QL:47:LYS:N	2.73	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
25:RA:155:C:H5'	25:RA:161:U:OP2	2.10	0.52
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.32	0.52
25:RA:1140:C:H1'	25:RA:1143:A:C2	2.45	0.52
25:RA:2814:C:N4	25:RA:2886:G:H1	2.07	0.52
25:RA:2867:G:O2'	25:RA:2868:A:P	2.67	0.52
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.52
28:RE:54:GLN:NE2	28:RE:54:GLN:H	2.08	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.52
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.92	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	0.52
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
1:XA:790:A:N6	1:XA:791:G:N1	2.58	0.52
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
25:YA:962:G:H2'	25:YA:963:U:H6	1.75	0.52
25:YA:1203:G:N2	25:YA:1243:G:O6	2.42	0.52
25:YA:1657:C:O2'	25:YA:1658:C:H5'	2.10	0.52
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.10	0.52
25:YA:2700:C:C2'	25:YA:2701:C:H5'	2.39	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
32:YI:9:LEU:O	32:YI:10:GLU:HG3	2.10	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.21	0.52
1:QA:948:C:H2'	1:QA:949:A:H8	1.75	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.92	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.10	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.73	0.52
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.52
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.92	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
25:RA:220:G:H21	25:RA:429:A:H62	1.58	0.52
25:RA:769:G:H2'	25:RA:770:G:C8	2.43	0.52
25:RA:806:C:OP2	35:RP:41:ARG:NE	2.41	0.52
25:RA:1666:G:H2'	25:RA:1667:G:H1'	1.92	0.52
25:RA:1844:C:H2'	25:RA:1845:G:C8	2.45	0.52
26:RB:2:C:H2'	26:RB:3:C:C6	2.45	0.52
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
32:RI:60:GLU:HG3	32:RI:61:ARG:NH1	2.25	0.52
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.52
45:RZ:17:ALA:O	45:RZ:21:ALA:N	2.41	0.52
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:247:G:N1	1:XA:277:C:N3	2.39	0.52
1:XA:977:A:H8	1:XA:1223:C:N3	2.07	0.52
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.24	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.39	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.52
25:YA:864:G:O2'	25:YA:866:A:N6	2.43	0.52
25:YA:922:U:H2'	25:YA:923:C:C6	2.45	0.52
25:YA:1035:U:H2'	25:YA:1036:G:C8	2.45	0.52
25:YA:1337:G:H2'	25:YA:1338:G:O4'	2.10	0.52
25:YA:2210:G:H2'	25:YA:2210:G:N3	2.25	0.52
25:YA:2500:U:O2'	25:YA:2504:U:OP1	2.24	0.52
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.68	0.52
26:YB:7:G:H1	26:YB:113:C:N4	2.00	0.52
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.52
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.52
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.52
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.52
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	2.10	0.52
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.52
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.92	0.52
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.52
1:QA:97:U:O2'	1:QA:99:C:H5'	2.10	0.51
1:QA:449:C:H2'	1:QA:450:G:O4'	2.09	0.51
1:QA:596:C:N3	1:QA:644:G:N2	2.53	0.51
1:QA:682:G:C6	1:QA:683:G:N7	2.78	0.51
1:QA:1129:C:O2	1:QA:1132:C:N4	2.43	0.51
5:QE:78:HIS:HB2	8:QH:104:ARG:C	2.31	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.51
19:QS:15:LEU:HD23	19:QS:15:LEU:H	1.74	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:375:C:O5'	25:RA:375:C:H6	1.92	0.51
25:RA:530:G:C5	25:RA:2022:U:H5''	2.45	0.51
25:RA:704:G:H2'	25:RA:726:G:H22	1.75	0.51
25:RA:1012:U:H3	33:RN:25:ARG:NH1	2.02	0.51
25:RA:1405:U:O2'	25:RA:1406:U:O5'	2.28	0.51
25:RA:1466:G:H2'	25:RA:1466:G:N3	2.24	0.51
25:RA:2028:U:H2'	25:RA:2029:G:C8	2.46	0.51
25:RA:2469:A:H2	25:RA:2481:G:H21	1.58	0.51
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.74	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.25	0.51
34:RO:2:ILE:HD12	34:RO:2:ILE:N	2.24	0.51
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.40	0.51
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.91	0.51
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.23	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.10	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	0.51
45:RZ:3:TYR:O	45:RZ:57:ILE:HG23	2.10	0.51
45:RZ:129:SER:C	45:RZ:131:ARG:H	2.12	0.51
45:RZ:129:SER:O	45:RZ:131:ARG:N	2.39	0.51
49:R3:49:LYS:O	49:R3:49:LYS:HG2	2.10	0.51
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.51
1:XA:132:C:H42	1:XA:230:G:H1	1.57	0.51
1:XA:292:G:C5	1:XA:293:G:H1'	2.45	0.51
1:XA:360:A:H2'	1:XA:361:G:C8	2.45	0.51
1:XA:377:G:P	16:XP:5:ARG:HH11	2.34	0.51
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.10	0.51
1:XA:926:G:H8	1:XA:926:G:O5'	1.92	0.51
1:XA:1085:U:H3'	1:XA:1086:U:H5	1.75	0.51
1:XA:1285:A:H4'	1:XA:1286:A:H5'	1.92	0.51
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.51
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.51
25:YA:839:U:H2'	25:YA:840:C:C6	2.44	0.51
25:YA:1069:A:H4'	25:YA:1070:A:H5''	1.93	0.51
25:YA:1252:G:C2	25:YA:1253:A:C2	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2735:G:H2'	25:YA:2736:G:H8	1.75	0.51
26:YB:50:G:OP1	38:YS:62:LYS:HB2	2.10	0.51
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.51
32:YI:21:VAL:HG21	32:YI:25:TYR:HD1	1.76	0.51
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.51
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.51
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
1:QA:278:G:N2	17:QQ:95:TYR:HB3	2.25	0.51
1:QA:519:C:OP2	12:QL:50:SER:OG	2.28	0.51
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.08	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
25:RA:109:G:C2	25:RA:110:G:C8	2.99	0.51
25:RA:1356:G:N2	25:RA:1376:C:C2	2.78	0.51
25:RA:1410:G:H5''	25:RA:1410:G:H8	1.74	0.51
25:RA:1681:G:H8	25:RA:1681:G:O5'	1.93	0.51
25:RA:2881:C:H5''	37:RR:117:VAL:HG21	1.92	0.51
26:RB:12:C:H2'	46:R0:73:GLY:HA3	1.92	0.51
26:RB:50:G:OP1	38:RS:63:THR:HG23	2.10	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.92	0.51
29:RF:127:GLU:OE1	29:RF:127:GLU:HA	2.07	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.25	0.51
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.26	0.51
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.25	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
39:RT:42:ILE:HD12	39:RT:42:ILE:N	2.25	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.11	0.51
41:RV:75:PHE:C	41:RV:75:PHE:CD1	2.83	0.51
43:RX:47:PHE:N	43:RX:47:PHE:CD1	2.78	0.51
46:R0:10:THR:HG22	46:R0:12:ASN:H	1.75	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
1:XA:191:G:O2'	20:XT:101:GLY:O	2.28	0.51
1:XA:193:C:OP1	20:XT:57:ARG:HD2	2.10	0.51
1:XA:1052:U:H5''	1:XA:1053:G:OP2	2.10	0.51
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.90	0.51
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
13:XM:77:ASN:ND2	50:Y4:71:ARG:NH1	2.58	0.51
25:YA:534:U:O2	40:YU:49:HIS:HE1	1.93	0.51
25:YA:685:A:N3	25:YA:689:A:C6	2.79	0.51
25:YA:1641:A:H3'	25:YA:1642:G:H8	1.75	0.51
25:YA:1741:C:H5'	25:YA:1742:C:OP2	2.09	0.51
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	2.10	0.51
25:YA:2578:G:OP2	25:YA:2578:G:H4'	2.10	0.51
26:YB:105:G:C2	26:YB:106:G:C8	2.97	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.75	0.51
38:YS:67:ARG:HB2	38:YS:67:ARG:HH11	1.66	0.51
41:YV:75:PHE:C	41:YV:75:PHE:CD1	2.83	0.51
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.51
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.66	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
1:QA:6:G:H4'	1:QA:298:A:H4'	1.92	0.51
1:QA:216:G:H2'	1:QA:217:C:C6	2.46	0.51
1:QA:328:C:O2	1:QA:328:C:H2'	2.10	0.51
1:QA:1004:A:H2	1:QA:1024:G:C8	2.28	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.11	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.10	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
22:QV:74:C:H42	25:RA:2252:G:H1	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:120:U:H4'	25:RA:121:G:H5''	1.91	0.51
25:RA:190:A:N6	25:RA:207:A:H1'	2.25	0.51
25:RA:2627:G:N3	25:RA:2781:A:H2	2.09	0.51
26:RB:37:C:N4	26:RB:38:C:N3	2.59	0.51
26:RB:46:A:C5	26:RB:47:C:C5	2.98	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.28	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.93	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
25:YA:27:G:H1'	25:YA:513:A:N6	2.25	0.51
25:YA:392:C:H5''	25:YA:409:C:H5''	1.91	0.51
25:YA:656:G:H2'	25:YA:657:U:O4'	2.11	0.51
25:YA:1343:G:H1	25:YA:1404:C:H42	1.58	0.51
25:YA:1422:G:C5	25:YA:1423:G:N7	2.78	0.51
25:YA:1638:C:H4'	25:YA:2710:C:O2	2.11	0.51
25:YA:1652:A:C2'	25:YA:1653:G:H5'	2.41	0.51
25:YA:2318:G:H22	38:YS:2:ALA:N	2.09	0.51
25:YA:2459:A:C6	25:YA:2460:U:C2	2.99	0.51
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.10	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.91	0.51
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.31	0.51
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ1	1.75	0.51
45:YZ:19:ARG:HD3	45:YZ:25:PRO:HD2	1.91	0.51
1:QA:634:C:C2'	1:QA:635:G:H5'	2.40	0.51
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.11	0.51
1:QA:924:C:N4	1:QA:925:G:O6	2.44	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
6:QF:63:TYR:HD2	6:QF:63:TYR:N	2.09	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
25:RA:246:C:N4	54:R8:8:LYS:HG3	2.25	0.51
25:RA:336:C:HO2'	44:RY:35:TYR:HH	1.59	0.51
25:RA:626:U:H5''	25:RA:627:A:H5'	1.93	0.51
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.10	0.51
25:RA:1378:A:O2'	25:RA:1379:A:O5'	2.18	0.51
26:RB:66:A:C2	26:RB:108:C:C4	2.98	0.51
28:RE:77:ILE:O	28:RE:78:LEU:C	2.47	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
32:RI:120:ILE:HG12	32:RI:126:TYR:CE1	2.46	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
1:XA:60:A:H4'	1:XA:61:G:O5'	2.10	0.51
1:XA:277:C:C4	1:XA:278:G:N7	2.78	0.51
1:XA:582:U:H2'	1:XA:583:A:C8	2.45	0.51
1:XA:738:C:H2'	1:XA:739:C:C6	2.45	0.51
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.10	0.51
1:XA:1324:A:H4'	1:XA:1362:C:H4'	1.93	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
25:YA:49:A:N6	25:YA:177:G:C4	2.78	0.51
25:YA:195:A:H5'	35:YP:46:LYS:NZ	2.25	0.51
25:YA:934:G:H2'	25:YA:935:C:H6	1.74	0.51
25:YA:1492:G:H3'	25:YA:1493:C:H5'	1.92	0.51
25:YA:2205:C:O5'	25:YA:2205:C:H6	1.92	0.51
25:YA:2408:U:H2'	25:YA:2409:G:C8	2.45	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.09	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.91	0.51
1:QA:129(A):G:N2	1:QA:188:U:HO2'	2.07	0.51
1:QA:573:A:N3	1:QA:883:C:O2'	2.42	0.51
1:QA:696:A:H8	1:QA:696:A:O5'	1.94	0.51
1:QA:1127:G:N2	1:QA:1145:C:O2	2.44	0.51
1:QA:1329:A:N7	21:QU:7:ARG:NH2	2.59	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.25	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
25:RA:247:G:H4'	25:RA:386:G:C5	2.46	0.51
25:RA:828:U:H4'	25:RA:831:G:N1	2.26	0.51
25:RA:829:A:N7	25:RA:2247:A:O2'	2.37	0.51
25:RA:2516:G:C5	25:RA:2517:C:C4	2.98	0.51
25:RA:2600:A:C6	25:RA:2601:C:N4	2.79	0.51
25:RA:2745:C:C4	25:RA:2746:U:C4	2.98	0.51
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.20	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
1:XA:267:C:H2'	1:XA:268:C:H6	1.76	0.51
1:XA:475:G:H2'	1:XA:476:G:H8	1.76	0.51
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.11	0.51
1:XA:1054:C:N4	24:XY:34:C:C6	2.78	0.51
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.10	0.51
3:XC:29:TYR:OH	14:YN:54:PRO:HD2	2.09	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
25:YA:17:G:H2'	25:YA:18:C:H6	1.75	0.51
25:YA:628:G:H2'	25:YA:629:G:H8	1.75	0.51
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.43	0.51
25:YA:1338:G:O2'	25:YA:1393:A:N1	2.37	0.51
25:YA:1449:A:H5'	25:YA:1449(A):G:OP2	2.10	0.51
25:YA:1506:C:H3'	25:YA:1507:A:H5''	1.91	0.51
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.10	0.51
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.46	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.09	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
1:QA:389:A:H2'	1:QA:390:C:H5'	1.93	0.51
1:QA:409:G:H1	1:QA:433:C:N4	2.06	0.51
1:QA:940:C:H2'	1:QA:941:G:C8	2.46	0.51
1:QA:1015:A:H1'	1:QA:1219:U:H5'	1.93	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.75	0.51
25:RA:130:C:H4'	25:RA:1349:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:848:G:C2	25:RA:933:A:H1'	2.45	0.51
25:RA:1188:U:O2'	25:RA:1189:A:H5'	2.10	0.51
25:RA:1705:G:C6	25:RA:1706:U:C4	2.98	0.51
25:RA:1899:G:H21	25:RA:1902:C:H42	1.58	0.51
25:RA:2625:G:H2'	25:RA:2626:C:C6	2.46	0.51
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.10	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.79	0.51
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.93	0.51
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.75	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.10	0.51
1:XA:129(A):G:N2	1:XA:191(A):G:C5	2.79	0.51
1:XA:421:U:H5''	1:XA:422:C:OP2	2.11	0.51
1:XA:505:G:H2'	1:XA:505:G:N3	2.26	0.51
1:XA:889:A:H4'	1:XA:890:G:OP1	2.09	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
12:XL:24:VAL:O	12:XL:24:VAL:CG1	2.58	0.51
13:XM:80:ARG:NH2	50:Y4:70:GLY:HA3	2.26	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
14:XN:44:LEU:O	14:XN:48:ALA:N	2.41	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
25:YA:216:A:C8	25:YA:432:A:C6	2.99	0.51
25:YA:836:G:H5''	25:YA:837:C:OP2	2.10	0.51
25:YA:1962:C:O2'	25:YA:1964:G:OP2	2.28	0.51
25:YA:2336:A:H8	25:YA:2336:A:O5'	1.92	0.51
25:YA:2745:C:H1'	31:YH:143:GLN:HG2	1.91	0.51
26:YB:5:C:H2'	26:YB:6:C:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:63:G:C2	26:YB:64:C:C2	2.99	0.51
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.58	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
39:YT:14:TYR:N	39:YT:14:TYR:CD1	2.78	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
1:QA:102:G:C6	1:QA:103:C:C4	2.99	0.51
1:QA:359:U:H2'	1:QA:360:A:H8	1.72	0.51
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.10	0.51
1:QA:502:G:H2'	1:QA:503:C:O4'	2.11	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.11	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
25:RA:554:U:O2'	25:RA:556:G:H8	1.93	0.51
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.11	0.51
25:RA:860:U:C5	25:RA:917:A:C2	2.98	0.51
25:RA:2414:G:H21	35:RP:67:MET:CE	2.23	0.51
25:RA:2459:A:C2	25:RA:2460:U:H1'	2.46	0.51
25:RA:2475:C:H42	25:RA:2529:G:H22	1.57	0.51
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.92	0.51
30:RG:51:ARG:HH11	30:RG:51:ARG:HB3	1.76	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.11	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
1:XA:339:C:OP2	34:YO:97:ARG:NH1	2.43	0.51
1:XA:411:A:C4	1:XA:413:G:H1'	2.46	0.51
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.10	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.75	0.51
22:XV:4:G:HO2'	22:XV:5:G:H8	1.58	0.51
22:XV:15:G:H22	22:XV:48:C:H42	1.57	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.16	0.51
22:XV:68:C:H2'	22:XV:69:C:H6	1.76	0.51
25:YA:270(B):A:O2'	25:YA:364:C:H2'	2.10	0.51
25:YA:394:A:H5'	25:YA:395:U:OP2	2.11	0.51
25:YA:470:A:H2'	25:YA:471:A:O4'	2.10	0.51
25:YA:1291:C:C2	25:YA:1292:U:C5	2.99	0.51
25:YA:1529:A:C8	25:YA:1530:G:C8	2.99	0.51
25:YA:1888:G:N3	25:YA:1888:G:H5''	2.25	0.51
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.43	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.48	0.51
30:YG:51:ARG:HH11	30:YG:51:ARG:HB3	1.76	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.11	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.40	0.51
37:YR:118:GLU:OXT	37:YR:118:GLU:HG3	2.11	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
43:YX:18:TYR:C	43:YX:20:GLY:N	2.64	0.51
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.51
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.78	0.51
1:QA:359:U:OP1	32:YI:87:LYS:HD3	2.10	0.51
2:QB:187:LEU:HD13	2:QB:187:LEU:O	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.46	0.51
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.51
25:RA:185:U:H4'	25:RA:218:A:H4'	1.93	0.51
25:RA:531:C:OP1	25:RA:561:G:N1	2.44	0.51
25:RA:930:U:H4'	25:RA:931:G:O5'	2.11	0.51
25:RA:947:G:H2'	25:RA:948:G:C8	2.46	0.51
25:RA:1392:A:H62	25:RA:1393:A:N6	2.09	0.51
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.45	0.51
25:RA:1832:C:N4	25:RA:1833:U:C4	2.79	0.51
25:RA:2818:G:H2'	25:RA:2819:G:C8	2.46	0.51
26:RB:89(A):A:C5	26:RB:90:C:H1'	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.40	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.51
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.92	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.92	0.51
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.51
14:XN:40:CYS:SG	14:XN:43:CYS:CA	2.98	0.51
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.51
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
25:YA:1155:A:O2'	25:YA:1156:A:H2'	2.10	0.51
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.11	0.51
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.11	0.51
25:YA:1842:G:N2	25:YA:1901:A:C4	2.79	0.51
26:YB:13:A:C2	26:YB:70:C:O4'	2.64	0.51
27:YD:94:LEU:HD13	27:YD:94:LEU:C	2.31	0.51
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.92	0.51
34:YO:24:VAL:O	34:YO:24:VAL:HG13	2.11	0.51
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
36:YQ:58:PHE:HD1	36:YQ:58:PHE:O	1.94	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
43:YX:47:PHE:CD1	43:YX:47:PHE:N	2.78	0.51
43:YX:65:ARG:H	43:YX:65:ARG:CD	2.24	0.51
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.57	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
1:QA:190:G:O2'	1:QA:191(A):G:OP2	2.29	0.51
1:QA:224:C:H2'	1:QA:225:C:H6	1.75	0.51
1:QA:555:C:H2'	1:QA:556:C:C6	2.46	0.51
1:QA:923:A:O2'	1:QA:1399:C:OP2	2.19	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
25:RA:363(B):G:H2'	25:RA:363(C):G:H8	1.73	0.51
25:RA:879:G:H2'	25:RA:880:G:O4'	2.10	0.51
25:RA:1043:C:O2'	25:RA:1048:A:O2'	2.14	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.51
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
44:RY:2:ARG:HG2	44:RY:2:ARG:NH1	2.22	0.51
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
1:XA:1057:G:H2'	1:XA:1058:G:O4'	2.10	0.51
1:XA:1240:U:OP2	7:XG:116:ALA:N	2.44	0.51
1:XA:1301:U:C4	1:XA:1303:C:C6	2.99	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.51
5:XE:126:ARG:HH11	5:XE:126:ARG:CG	2.21	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
25:YA:60:G:C2	25:YA:74:A:C5	2.98	0.51
25:YA:628:G:H2'	25:YA:629:G:C8	2.45	0.51
25:YA:655:A:H8	25:YA:656:G:O4'	1.94	0.51
25:YA:898:C:H2'	25:YA:899:A:H5'	1.92	0.51
25:YA:1899:G:N2	25:YA:1902:C:H5	2.08	0.51
25:YA:2401:U:H2'	25:YA:2402:C:H5''	1.93	0.51
25:YA:2416:C:C2	25:YA:2417:C:C5	2.99	0.51
25:YA:2723:C:O3'	37:YR:1:MET:HE2	2.10	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.08	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:77:LEU:HD11	32:YI:140:LEU:HD12	1.92	0.51
33:YN:78:TYR:N	33:YN:78:TYR:HD1	2.07	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
45:YZ:146:ILE:HG22	45:YZ:176:PRO:HD3	1.92	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.62	0.51
1:QA:181:G:O2'	1:QA:182:U:O5'	2.27	0.51
1:QA:539:A:N6	1:QA:540:G:O6	2.44	0.51
1:QA:959:A:H3'	1:QA:960:U:H5''	1.92	0.51
1:QA:1368:G:OP1	9:QI:111:ARG:NH2	2.44	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.11	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.76	0.51
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.51
25:RA:201:C:O2'	25:RA:386:G:N1	2.41	0.51
25:RA:856:C:H6	25:RA:856:C:H5''	1.75	0.51
25:RA:2406:U:C2	35:RP:72:PRO:HB2	2.46	0.51
25:RA:2612:C:C4	25:RA:2613:U:H5	2.29	0.51
27:RD:94:LEU:HD13	27:RD:94:LEU:C	2.31	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
38:RS:89:ARG:HD2	38:RS:89:ARG:O	2.11	0.51
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.93	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
1:XA:438:G:H2'	1:XA:494:U:O4	2.11	0.51
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.11	0.51
1:XA:1064:G:OP1	1:XA:1386:G:H4'	2.11	0.51
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.51
25:YA:1048:A:H5'	25:YA:1049:C:OP2	2.11	0.51
25:YA:1798:U:C2	25:YA:1822:G:N2	2.79	0.51
25:YA:2466:C:H5'	55:Y9:5:ALA:HB3	1.92	0.51
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.25	0.51
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.51
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.51
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.51
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.51
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.51
53:Y7:36:GLN:HG2	53:Y7:36:GLN:O	2.09	0.51
1:QA:15:G:C4'	5:QE:24:ARG:NH1	2.74	0.50
1:QA:17:U:H2'	1:QA:18:C:C6	2.46	0.50
1:QA:922:G:C2	1:QA:923:A:C4	2.98	0.50
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.45	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
25:RA:257:A:H2'	25:RA:258:G:O4'	2.11	0.50
25:RA:404:C:HO2'	25:RA:405:U:P	2.32	0.50
25:RA:826:U:C6	25:RA:828:U:H6	2.29	0.50
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.10	0.50
25:RA:1711:C:H2'	25:RA:1712:C:C6	2.47	0.50
25:RA:1930:G:O2'	25:RA:1931:U:P	2.68	0.50
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.40	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.25	0.50
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.08	0.50
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.50
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
37:RR:1:MET:O	37:RR:2:ARG:CB	2.60	0.50
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
1:XA:148:G:H2'	1:XA:149:A:C8	2.46	0.50
1:XA:451:A:N6	1:XA:481:G:O4'	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.50
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.50
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.50
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.50
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.75	0.50
25:YA:1258:C:O4'	29:YF:84:VAL:HG11	2.11	0.50
25:YA:1357:U:H2'	25:YA:1358:G:H8	1.75	0.50
25:YA:1401:G:H8	25:YA:1401:G:O5'	1.94	0.50
25:YA:1864:U:H3	25:YA:1878:G:H1	1.59	0.50
26:YB:43:C:H1'	30:YG:93:THR:O	2.11	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.50
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.50
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.50
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.50
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.50
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.11	0.50
1:QA:570:G:H2'	1:QA:571:U:H6	1.74	0.50
1:QA:658:G:H2'	1:QA:659:U:C6	2.47	0.50
1:QA:878:G:H5'	8:QH:89:PRO:HG2	1.93	0.50
1:QA:912:C:O2'	1:QA:913:A:H5'	2.12	0.50
1:QA:942:G:H2'	1:QA:943:U:H6	1.76	0.50
1:QA:1221:G:P	19:QS:36:ARG:HD3	2.51	0.50
1:QA:1223:C:P	19:QS:78:ARG:HH12	2.34	0.50
1:QA:1224:G:N1	1:QA:1322:C:H1'	2.26	0.50
1:QA:1478:C:H2'	1:QA:1479:C:C6	2.46	0.50
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.50
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
25:RA:49:A:H5''	25:RA:51:G:C5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:654(U):A:H8	25:RA:654(U):A:O5'	1.95	0.50
25:RA:2032:G:H1'	28:RE:145:LYS:HD3	1.93	0.50
25:RA:2666:C:H3'	25:RA:2667:C:H6	1.76	0.50
25:RA:2726:U:O2'	25:RA:2727:G:H5'	2.11	0.50
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.50
30:RG:92:VAL:O	30:RG:92:VAL:HG13	2.12	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	0.50
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.41	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.40	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.76	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.25	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CG	2.46	0.50
1:XA:15:G:H2'	1:XA:16:A:C8	2.46	0.50
1:XA:19:C:O2'	1:XA:572:A:N1	2.35	0.50
1:XA:1399:C:H4'	1:XA:1400:C:C5'	2.41	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.41	0.50
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.50
25:YA:264:C:O2'	25:YA:265:A:H5''	2.11	0.50
25:YA:592:G:N2	25:YA:593:G:H1'	2.27	0.50
25:YA:823:G:H2'	25:YA:824:A:C8	2.46	0.50
25:YA:1370:C:O2'	25:YA:1811:G:O2'	2.29	0.50
25:YA:1593:G:H2'	25:YA:1594:G:C8	2.46	0.50
25:YA:2244:U:H2'	25:YA:2245:U:O4'	2.10	0.50
25:YA:2308:G:H2'	25:YA:2308:G:N3	2.26	0.50
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.75	0.50
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
32:YI:87:LYS:HA	32:YI:122:GLU:HG2	1.93	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
34:YO:23:ARG:HH11	34:YO:23:ARG:HG2	1.76	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.92	0.50
1:QA:236:G:H8	1:QA:236:G:O5'	1.93	0.50
1:QA:248:C:H2'	1:QA:249:U:H6	1.76	0.50
1:QA:625:G:C4	1:QA:626:U:C5	3.00	0.50
1:QA:674:G:O2'	1:QA:675:A:H5'	2.11	0.50
1:QA:857:C:H2'	1:QA:858:G:O4'	2.10	0.50
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.45	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.50
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.50
4:QD:163:GLU:OE1	27:YD:134:ARG:NH2	2.44	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
14:QN:8:GLU:C	14:QN:10:ALA:H	2.14	0.50
25:RA:315:G:H2'	25:RA:316:C:C6	2.45	0.50
25:RA:676:A:H2	25:RA:802:A:H61	1.60	0.50
25:RA:1413:G:N2	25:RA:1414:G:H1'	2.26	0.50
25:RA:1530:G:H2'	25:RA:1531:C:C6	2.47	0.50
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.75	0.50
25:RA:1568:G:OP2	27:RD:63:ARG:NH2	2.39	0.50
25:RA:1860:G:H1	25:RA:1882:C:H42	1.57	0.50
25:RA:2069:G:C2'	25:RA:2070:G:H5'	2.42	0.50
25:RA:2151:G:H2'	25:RA:2152:G:H8	1.74	0.50
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.46	0.50
25:RA:2548:G:N2	25:RA:2560:C:O2	2.37	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
32:RI:29:TYR:O	32:RI:33:ARG:HD3	2.11	0.50
47:R1:91:LYS:HE3	47:R1:91:LYS:CA	2.40	0.50
51:R5:37:LYS:O	51:R5:37:LYS:HD2	2.12	0.50
1:XA:407:G:H1	1:XA:435:C:N4	2.05	0.50
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.26	0.50
1:XA:474:G:H5'	16:XP:81:ARG:HG3	1.92	0.50
1:XA:505:G:H5''	1:XA:506:G:OP2	2.10	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
25:YA:185:U:H4'	25:YA:218:A:H4'	1.93	0.50
25:YA:270(J):G:N2	25:YA:270(Q):C:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:298:G:P	44:YY:85:VAL:HG22	2.51	0.50
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.36	0.50
25:YA:558:G:P	33:YN:111:PRO:HD2	2.51	0.50
25:YA:841:A:C2	25:YA:938:G:C2	2.99	0.50
25:YA:1204:A:H1'	25:YA:1206:G:N9	2.27	0.50
25:YA:1687:G:H1'	25:YA:1702:G:N2	2.26	0.50
25:YA:1871:A:H2'	25:YA:1872:A:C8	2.46	0.50
25:YA:2532:G:H1'	25:YA:2663:G:N2	2.27	0.50
25:YA:2869:G:H2'	25:YA:2870:C:H6	1.76	0.50
26:YB:24:G:O6	26:YB:56:G:O2'	2.26	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.76	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
1:QA:1051:C:H2'	1:QA:1052:U:C6	2.46	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.24	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
25:RA:508:G:O2'	25:RA:509:C:P	2.69	0.50
25:RA:869:G:C2	25:RA:870:A:C8	2.99	0.50
25:RA:1359:A:N6	25:RA:1372:U:N3	2.59	0.50
25:RA:1534:G:OP1	25:RA:1534:G:H8	1.95	0.50
25:RA:1770:G:C6	25:RA:1771:C:C4	2.99	0.50
25:RA:2106:G:N2	25:RA:2107:C:O2	2.43	0.50
25:RA:2477:C:H41	55:R9:10:ILE:HG23	1.75	0.50
28:RE:37:ARG:HE	28:RE:37:ARG:H	1.59	0.50
29:RF:45:ARG:CG	29:RF:45:ARG:NH1	2.71	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
32:RI:102:SER:O	32:RI:106:GLY:N	2.40	0.50
33:RN:87:LEU:HD23	33:RN:87:LEU:C	2.32	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.23	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:8:TYR:HB2	45:RZ:38:TYR:CE2	2.47	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
1:XA:411:A:C6	1:XA:429:U:C5	3.00	0.50
1:XA:994:A:H61	1:XA:1047:G:H4'	1.77	0.50
1:XA:1035:A:C6	1:XA:1036:G:H1'	2.46	0.50
1:XA:1064:G:N2	1:XA:1190:G:H2'	2.27	0.50
1:XA:1238:A:C6	1:XA:1303:C:O4'	2.65	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
25:YA:637:A:H4'	25:YA:638:G:O5'	2.12	0.50
25:YA:1022:G:N2	25:YA:1142(A):A:H2	2.08	0.50
25:YA:1026:U:H1'	25:YA:1027:A:H5''	1.92	0.50
25:YA:1171:G:O6	25:YA:1174:A:N6	2.43	0.50
25:YA:1331:A:C6	25:YA:1333:C:C2	2.99	0.50
25:YA:1530:G:C2	25:YA:1531:C:C2	2.99	0.50
25:YA:2013:A:C2'	25:YA:2014:A:H5'	2.41	0.50
25:YA:2286:A:H2'	52:Y6:31:PRO:HG2	1.94	0.50
26:YB:15:A:H1'	26:YB:109:G:N9	2.27	0.50
27:YD:10:THR:CG2	27:YD:13:ARG:HB3	2.35	0.50
27:YD:233:HIS:CD2	27:YD:233:HIS:H	2.29	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
1:QA:564:C:H5'	17:QQ:32:TYR:CE2	2.46	0.50
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.27	0.50
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.77	0.50
1:QA:1158:C:N3	1:QA:1160:G:C8	2.79	0.50
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.12	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
4:QD:13:ARG:CB	4:QD:33:MET:CE	2.89	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
22:QV:68:C:H2'	22:QV:69:C:H6	1.76	0.50
25:RA:27:G:N2	25:RA:512:G:O2'	2.44	0.50
25:RA:747:U:N3	51:R5:2:ALA:N	2.58	0.50
25:RA:1091:G:N2	25:RA:1101:U:H1'	2.26	0.50
28:RE:176:ILE:HG22	28:RE:176:ILE:O	2.10	0.50
29:RF:108:LYS:HA	29:RF:108:LYS:NZ	2.27	0.50
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.94	0.50
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.94	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
44:RY:88:LYS:NZ	44:RY:88:LYS:HA	2.27	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
1:XA:753:A:H4'	1:XA:754:C:O5'	2.11	0.50
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.12	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
25:YA:1503:U:H2'	25:YA:1504:C:H6	1.77	0.50
25:YA:2322:A:H2'	25:YA:2323:G:O4'	2.11	0.50
25:YA:2472:G:N2	25:YA:2477:C:H5'	2.27	0.50
25:YA:2849:U:O2	25:YA:2867:G:H1'	2.12	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
31:YH:143:GLN:C	31:YH:143:GLN:HE21	2.15	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
37:YR:117:VAL:CG2	37:YR:118:GLU:N	2.74	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50
51:Y5:56:LYS:HD2	51:Y5:56:LYS:N	2.13	0.50
1:QA:374:A:C6	1:QA:375:U:C4	3.00	0.50
1:QA:941:G:O6	1:QA:1342:C:N4	2.37	0.50
1:QA:1230:C:H6	1:QA:1230:C:O5'	1.95	0.50
1:QA:1237:C:H5''	1:QA:1238:A:O4'	2.10	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.14	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
25:RA:278:A:H61	25:RA:362:U:H3	1.57	0.50
25:RA:652:C:H5'	25:RA:653:A:OP2	2.11	0.50
25:RA:2828:C:O2'	25:RA:2829:C:H5'	2.11	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.46	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
44:RY:90:LEU:HD22	44:RY:90:LEU:H	1.73	0.50
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.76	0.50
45:RZ:103:ARG:O	45:RZ:138:GLU:HA	2.11	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.93	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.93	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
14:YN:8:GLU:C	14:YN:10:ALA:H	2.13	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
25:YA:303:U:H2'	25:YA:304:G:H8	1.77	0.50
25:YA:546:C:OP1	25:YA:547:A:N6	2.45	0.50
25:YA:729:G:C5	27:YD:208:LYS:HB2	2.47	0.50
25:YA:747:U:C4	51:Y5:2:ALA:N	2.80	0.50
25:YA:796:C:H2'	25:YA:797:C:C6	2.47	0.50
25:YA:962:G:H2'	25:YA:963:U:O4'	2.12	0.50
25:YA:1511:A:O2'	25:YA:1512:G:H5'	2.12	0.50
25:YA:2577:A:H5''	25:YA:2578:G:H5'	1.93	0.50
25:YA:2620:C:H2'	25:YA:2621:A:O4'	2.12	0.50
29:YF:45:ARG:CG	29:YF:45:ARG:NH1	2.71	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.32	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
38:YS:89:ARG:HD2	38:YS:89:ARG:O	2.11	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
1:QA:67:C:H2'	1:QA:68:G:H8	1.76	0.50
1:QA:246:A:N6	1:QA:281:G:H1'	2.26	0.50
1:QA:371:G:O3'	1:QA:372:C:H4'	2.12	0.50
1:QA:934:C:H5	1:QA:1344:C:H2'	1.77	0.50
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.75	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.77	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.15	0.50
19:QS:2:PRO:CB	50:R4:68:ARG:HH22	2.24	0.50
25:RA:107:C:H2'	25:RA:108:U:H6	1.76	0.50
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.12	0.50
25:RA:483:A:C4'	44:RY:49:VAL:HA	2.34	0.50
25:RA:696:G:C2	25:RA:697:C:C6	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:703:U:H2'	25:RA:704:G:O4'	2.12	0.50
25:RA:727:A:C2'	25:RA:728:G:H5'	2.42	0.50
25:RA:999:U:C5	25:RA:1154:G:C5	2.99	0.50
25:RA:1022:G:C2	25:RA:1140:C:N3	2.80	0.50
25:RA:1028:A:H2'	25:RA:1029:A:C8	2.47	0.50
25:RA:1061:U:H2'	25:RA:1063:G:P	2.52	0.50
25:RA:1278:A:OP1	37:RR:36:THR:HG22	2.11	0.50
25:RA:1764:G:C6	25:RA:1989:G:C2	3.00	0.50
25:RA:1854:A:H5''	25:RA:1855:G:OP2	2.11	0.50
25:RA:2524:G:C2	25:RA:2525:G:H1'	2.47	0.50
25:RA:2555:U:H2'	25:RA:2556:C:H5'	1.94	0.50
25:RA:2625:G:C6	25:RA:2626:C:C4	3.00	0.50
25:RA:2679:A:H1'	25:RA:2729:G:H22	1.77	0.50
26:RB:42:C:O2'	30:RG:67:LYS:O	2.20	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
31:RH:143:GLN:HE21	31:RH:143:GLN:C	2.15	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.10	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
1:XA:250:A:H1'	1:XA:251:G:OP2	2.11	0.50
1:XA:264:U:H2'	1:XA:265:G:O4'	2.12	0.50
1:XA:632:A:C8	1:XA:633:G:C8	3.00	0.50
1:XA:734:G:C2	1:XA:735:C:C2	3.00	0.50
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.46	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.50
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.74	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
25:YA:981:A:OP2	25:YA:982:C:N4	2.38	0.50
25:YA:1028:A:H61	25:YA:1125:G:H2'	1.77	0.50
25:YA:1140:C:OP1	33:YN:24:GLY:N	2.43	0.50
25:YA:1586:A:H3'	25:YA:1587:A:C8	2.46	0.50
25:YA:1773:A:H2'	25:YA:1774:C:O4'	2.12	0.50
25:YA:2514:U:H2'	25:YA:2515:C:O4'	2.12	0.50
26:YB:105:G:OP1	45:YZ:31:ARG:HB2	2.12	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.32	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.41	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
50:Y4:22:ILE:H	50:Y4:22:ILE:HD12	1.77	0.50
51:Y5:37:LYS:O	51:Y5:37:LYS:HD2	2.12	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.12	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
1:QA:109:A:C4	1:QA:327:A:C2	3.00	0.50
1:QA:828:A:N6	1:QA:859:A:H5''	2.27	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.50
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	0.50
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.50
22:QV:75:C:H2'	22:QV:76:A:O4'	2.12	0.50
25:RA:314:A:O2'	25:RA:315:G:H5'	2.12	0.50
25:RA:531:C:C5	25:RA:2035:G:C2	3.00	0.50
25:RA:565:C:H4'	25:RA:1253:A:C6	2.47	0.50
25:RA:604:G:O6	25:RA:624:C:N4	2.44	0.50
25:RA:833:U:O4	25:RA:834:C:N4	2.45	0.50
25:RA:860:U:O2'	25:RA:2267:A:H4'	2.11	0.50
25:RA:999:U:H5	25:RA:1154:G:C5	2.29	0.50
25:RA:1869:G:C2	25:RA:1878:G:C6	3.00	0.50
25:RA:2123:G:H22	25:RA:2176:A:H1'	1.77	0.50
26:RB:32:C:C2	26:RB:51:G:N2	2.80	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.90	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
32:RI:57:ARG:HA	32:RI:60:GLU:HB3	1.93	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
36:RQ:2:LEU:HD23	36:RQ:2:LEU:N	2.27	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
1:XA:389:A:C6	1:XA:390:C:H1'	2.46	0.50
1:XA:544:G:H2'	1:XA:545:C:H6	1.76	0.50
1:XA:1053:G:H2'	1:XA:1199:U:H5	1.77	0.50
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.12	0.50
1:XA:1206:G:C6	1:XA:1207:G:C5	3.00	0.50
1:XA:1244:C:N3	1:XA:1294:G:N2	2.60	0.50
1:XA:1400:C:H4'	1:XA:1401:G:OP2	2.11	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.50
14:YN:41:ARG:HE	14:YN:42:ILE:HG13	1.76	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
25:YA:162:U:H6	25:YA:162:U:OP1	1.95	0.50
25:YA:534:U:O2'	40:YU:45:TYR:HB3	2.12	0.50
25:YA:952:G:C6	25:YA:953:A:N7	2.80	0.50
25:YA:1053:C:H42	25:YA:1106:G:H1	1.60	0.50
25:YA:1169:G:H1	25:YA:1180:C:H42	1.58	0.50
25:YA:1266:G:N7	42:YW:15:ARG:NH1	2.58	0.50
25:YA:2093:G:H2'	25:YA:2094:G:C8	2.44	0.50
25:YA:2468:G:O2'	25:YA:2481:G:N2	2.45	0.50
25:YA:2646:C:OP2	25:YA:2732:G:O2'	2.25	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.92	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.50
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
32:YI:97:ILE:HD12	32:YI:140:LEU:HD11	1.93	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.26	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
45:YZ:5:LEU:O	45:YZ:6:LYS:HB2	2.12	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.50
1:QA:282:A:C6	1:QA:283:C:C2	3.00	0.50
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.93	0.50
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.43	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
25:RA:222:A:O2'	25:RA:223:A:P	2.70	0.50
25:RA:595:C:N4	25:RA:662:G:H1	2.08	0.50
25:RA:611:C:C2	25:RA:618:G:N2	2.80	0.50
25:RA:870:A:C2	25:RA:908:C:C2	3.00	0.50
25:RA:1190:G:C5'	35:RP:32:THR:HA	2.41	0.50
25:RA:1336:A:H2'	25:RA:1337:G:C8	2.47	0.50
25:RA:1534:G:H1	25:RA:1538:G:N2	2.10	0.50
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.47	0.50
25:RA:2131:G:O3'	25:RA:2132:U:H4'	2.12	0.50
25:RA:2154:G:H2'	25:RA:2155:G:C8	2.47	0.50
25:RA:2495:G:H5''	36:RQ:81:VAL:CG1	2.41	0.50
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.93	0.50
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.50
32:RI:52:ARG:HB2	32:RI:56:LYS:HG2	1.94	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.58	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:6:LEU:N	35:RP:6:LEU:CD2	2.75	0.50
36:RQ:80:GLU:HG3	36:RQ:81:VAL:N	2.27	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.50
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
55:R9:7:VAL:HG12	55:R9:25:VAL:HG21	1.94	0.50
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.46	0.50
1:XA:356:A:N3	1:XA:368:U:O2'	2.39	0.50
1:XA:664:G:N2	1:XA:742:G:C2	2.80	0.50
1:XA:762:C:H2'	1:XA:763:G:C8	2.46	0.50
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.12	0.50
1:XA:1298:C:H1'	1:XA:1299:A:C2	2.46	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.25	0.50
5:XE:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
25:YA:39:C:H2'	25:YA:40:C:H6	1.76	0.50
25:YA:282:A:H2'	25:YA:282:A:N3	2.27	0.50
25:YA:1792:G:O2'	25:YA:1830:C:OP1	2.29	0.50
25:YA:1813:G:H1'	27:YD:50:THR:OG1	2.12	0.50
25:YA:2277:G:C5'	36:YQ:85:LYS:HG3	2.42	0.50
25:YA:2756:U:H3	25:YA:2758:A:H62	1.60	0.50
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.47	0.50
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.50
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.50
53:Y7:12:ARG:NH1	53:Y7:12:ARG:HG3	2.27	0.50
1:QA:616:G:C2	1:QA:617:G:C8	3.00	0.49
1:QA:1052:U:H5''	1:QA:1053:G:OP2	2.11	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.49
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.49
25:RA:530:G:N1	25:RA:2022:U:OP1	2.45	0.49
25:RA:622:G:O2'	25:RA:623:G:H5'	2.12	0.49
25:RA:738:G:C6	25:RA:739:G:C2	2.99	0.49
25:RA:774:A:H2	25:RA:787:U:HO2'	1.58	0.49
25:RA:2818:G:H2'	25:RA:2819:G:H8	1.77	0.49
26:RB:15:A:H1'	26:RB:109:G:C4	2.47	0.49
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.49
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.49
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.49
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.49
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.49
32:RI:9:LEU:O	32:RI:10:GLU:HG3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:63:ALA:HA	32:RI:66:GLU:HG2	1.94	0.49
32:RI:130:TYR:O	32:RI:131:LYS:HD2	2.11	0.49
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.49
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
53:R7:12:ARG:NH1	53:R7:12:ARG:HG3	2.27	0.49
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.77	0.49
1:XA:1070:U:P	5:XE:25:ARG:NH1	2.84	0.49
1:XA:1502:A:H2	1:XA:1505:G:H22	1.55	0.49
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49
2:XB:23:ARG:HG2	2:XB:23:ARG:HH11	1.76	0.49
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.49
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.49
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.49
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.49
25:YA:423:A:H5''	25:YA:424:G:C5'	2.42	0.49
25:YA:481:G:H1'	25:YA:507:A:N1	2.28	0.49
25:YA:918:A:C5	25:YA:919:G:H1'	2.47	0.49
25:YA:1212:G:O2'	25:YA:1236:G:N2	2.32	0.49
25:YA:1344:G:H5'	25:YA:1384:A:C6	2.47	0.49
25:YA:2272:U:H5''	25:YA:2273:A:OP1	2.12	0.49
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.35	0.49
25:YA:2352:A:N6	25:YA:2365:G:O2'	2.45	0.49
25:YA:2773:C:H2'	25:YA:2774:C:H6	1.76	0.49
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.49
32:YI:37:VAL:HG12	32:YI:38:LEU:HD12	1.92	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.49
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.49
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.49
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.25	0.49
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.49
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.49
1:QA:190:G:N3	1:QA:190:G:H2'	2.26	0.49
1:QA:292:G:C5	1:QA:293:G:H1'	2.47	0.49
1:QA:552:U:O2'	12:QL:86:ARG:O	2.28	0.49
1:QA:821:G:C2	1:QA:822:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:985:C:H2'	1:QA:986:A:C8	2.47	0.49
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.27	0.49
1:QA:1397:C:H1'	23:QX:8:A:H62	1.76	0.49
1:QA:1486:G:H2'	1:QA:1487:G:O4'	2.12	0.49
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.94	0.49
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.49
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
25:RA:570:G:H2'	25:RA:2030:A:C6	2.47	0.49
25:RA:1517:G:H2'	25:RA:1518:C:C6	2.47	0.49
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.12	0.49
25:RA:2720:U:H2'	25:RA:2721:A:O4'	2.11	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.50	0.49
46:R0:41:ARG:O	46:R0:57:PHE:HD1	1.95	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
1:XA:73:G:H2'	1:XA:74:C:H6	1.77	0.49
1:XA:1054:C:C4	1:XA:1196:U:H5	2.30	0.49
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.49
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.49
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.49
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.94	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
8:XH:91:ARG:HG2	8:XH:91:ARG:NH1	2.25	0.49
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.13	0.49
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.60	0.49
25:YA:747:U:N3	51:Y5:2:ALA:N	2.59	0.49
25:YA:1496:A:H5'	25:YA:1497:U:OP1	2.12	0.49
25:YA:2654:A:N6	25:YA:2667:C:N4	2.58	0.49
25:YA:2675:A:H8	25:YA:2675:A:OP2	1.94	0.49
25:YA:2756:U:H5''	55:Y9:19:ARG:CB	2.42	0.49
25:YA:2842:G:O2'	25:YA:2843:G:H5'	2.13	0.49
26:YB:42:C:O2'	30:YG:67:LYS:O	2.27	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
28:YE:37:ARG:HE	28:YE:37:ARG:H	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.77	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.11	0.49
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
1:QA:718:G:H1'	11:QK:116:HIS:HA	1.93	0.49
1:QA:762:C:H2'	1:QA:763:G:H8	1.76	0.49
1:QA:790:A:C6	1:QA:791:G:C6	3.00	0.49
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.11	0.49
1:QA:1502:A:H3'	1:QA:1503:A:H3'	1.95	0.49
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.43	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
25:RA:137:C:N4	25:RA:137(A):G:O6	2.44	0.49
25:RA:602:G:H8	25:RA:602:G:OP2	1.96	0.49
25:RA:607:U:OP1	29:RF:102:PRO:HA	2.13	0.49
25:RA:1949:G:H1	25:RA:1957:C:H42	1.60	0.49
25:RA:2309:A:C6	25:RA:2310:A:C6	3.01	0.49
25:RA:2495:G:H2'	25:RA:2496:C:C6	2.47	0.49
25:RA:2872:G:C2	25:RA:2873:A:N6	2.80	0.49
26:RB:2:C:H2'	26:RB:3:C:H6	1.78	0.49
26:RB:5:C:O2	26:RB:116:G:N2	2.45	0.49
26:RB:15:A:H1'	26:RB:109:G:N9	2.27	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.47	0.49
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:20:ARG:HG2	47:R1:20:ARG:NH1	2.24	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.16	0.49
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.47	0.49
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.45	0.49
1:XA:891:U:H2'	1:XA:892:A:C8	2.42	0.49
1:XA:1070:U:H2'	1:XA:1071:C:C6	2.47	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.27	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
25:YA:840:C:OP2	25:YA:932:G:N2	2.44	0.49
25:YA:856:C:H1'	46:Y0:27:GLU:HB3	1.93	0.49
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.43	0.49
25:YA:1048:A:P	25:YA:1110:G:H22	2.34	0.49
25:YA:1293:C:H2'	25:YA:1294:U:H6	1.77	0.49
25:YA:1864:U:C3'	25:YA:1869:G:H5''	2.42	0.49
25:YA:1917:U:H2'	25:YA:1918:A:O4'	2.11	0.49
25:YA:2286:A:C2'	52:Y6:31:PRO:HG2	2.42	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.26	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
44:YY:88:LYS:NZ	44:YY:88:LYS:HA	2.27	0.49
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.49
1:QA:911:U:H2'	1:QA:912:C:C6	2.47	0.49
1:QA:1162:C:C2	1:QA:1175:G:C2	3.00	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
25:RA:67:U:N3	25:RA:74:A:H2	2.10	0.49
25:RA:352:G:H3'	25:RA:353:G:C8	2.47	0.49
25:RA:638:G:C5	25:RA:639:U:C4	3.00	0.49
25:RA:751:A:C6	25:RA:789:A:C5	3.01	0.49
25:RA:842:G:N2	25:RA:937:U:C2	2.80	0.49
25:RA:1021:A:H3'	25:RA:1021:A:H8	1.77	0.49
25:RA:1312:U:C4	25:RA:1603:A:C6	3.00	0.49
25:RA:1341:U:O4	43:RX:16:LYS:HE2	2.11	0.49
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.48	0.49
25:RA:2464:C:H2'	25:RA:2465:C:O4'	2.12	0.49
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.51	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.49
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
1:XA:93:U:H2'	1:XA:95:G:O4'	2.13	0.49
1:XA:657:G:C2	1:XA:658:G:C8	3.00	0.49
1:XA:720:C:H5''	18:XR:52:PRO:HA	1.94	0.49
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.28	0.49
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.27	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
10:XJ:63:PHE:CD1	14:XN:58:LYS:HA	2.35	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:XX:3:G:H2'	23:XX:4:C:OP2	2.11	0.49
25:YA:80:G:H1'	25:YA:346:A:C6	2.47	0.49
25:YA:732:C:H2'	25:YA:733:G:O4'	2.12	0.49
25:YA:851:U:H1'	49:Y3:46:ASN:ND2	2.23	0.49
25:YA:993:G:OP1	40:YU:50:ARG:NH1	2.45	0.49
25:YA:2012:G:H4'	42:YW:96:ILE:HD11	1.93	0.49
25:YA:2104:G:N2	25:YA:2186:G:C4	2.81	0.49
25:YA:2419:U:O4	54:Y8:30:ARG:CZ	2.61	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.47	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
1:QA:192:U:H2'	1:QA:193:C:C6	2.47	0.49
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.77	0.49
1:QA:1208:C:H2'	1:QA:1209:C:C6	2.47	0.49
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.12	0.49
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.13	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
5:QE:93:PRO:HG3	8:QH:105:ARG:CG	2.36	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	2.12	0.49
25:RA:94:G:N3	48:R2:47:ASN:OD1	2.46	0.49
25:RA:222:A:N6	25:RA:224:G:C2	2.81	0.49
25:RA:270(T):G:C5'	47:R1:97:LEU:HD22	2.42	0.49
25:RA:752:A:O2'	25:RA:753:C:OP2	2.23	0.49
25:RA:1293:C:O5'	25:RA:1293:C:H6	1.95	0.49
25:RA:1668:A:C5	25:RA:1674:G:C5	3.00	0.49
25:RA:2404:C:H2'	25:RA:2405:G:O4'	2.12	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.44	0.49
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.49
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.27	0.49
37:RR:71:GLN:HA	37:RR:71:GLN:HE21	1.77	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
41:RV:91:TYR:C	41:RV:91:TYR:HD1	2.16	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
46:R0:27:GLU:HB2	46:R0:69:PHE:HD1	1.76	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
1:XA:418:C:H2'	1:XA:419:C:C6	2.47	0.49
1:XA:1296:C:O2'	1:XA:1302:U:H5	1.94	0.49
1:XA:1346:A:N1	1:XA:1374:A:H5''	2.27	0.49
1:XA:1418:A:C2	1:XA:1483:A:C2	3.00	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	0.49
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.77	0.49
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.32	0.49
25:YA:607:U:N3	25:YA:621:A:H2	2.00	0.49
25:YA:970:C:O2'	25:YA:984:A:O2'	2.29	0.49
25:YA:1769:G:C2	25:YA:1984:G:C4	3.01	0.49
25:YA:1782:C:C4	25:YA:2587:A:N1	2.81	0.49
25:YA:2070:G:N1	25:YA:2071:A:C2	2.80	0.49
25:YA:2387:U:O2'	46:Y0:19:LYS:NZ	2.41	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.75	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.29	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
37:YR:18:LEU:HD13	37:YR:18:LEU:C	2.33	0.49
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.48	0.49
41:YV:91:TYR:C	41:YV:91:TYR:HD1	2.16	0.49
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HA	1.95	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.49
1:QA:6:G:N2	5:QE:98:THR:HG1	2.11	0.49
1:QA:126:G:H1	1:QA:235:C:H42	1.60	0.49
1:QA:1152:A:H2'	1:QA:1153:C:H6	1.72	0.49
1:QA:1267:C:C5	1:QA:1268:A:C5	2.99	0.49
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.48	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.13	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	0.49
11:QK:91:ARG:NH2	18:QR:88:LYS:HZ1	2.10	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.13	0.49
25:RA:273(A):G:C2	25:RA:364:C:N3	2.81	0.49
25:RA:307:G:N2	25:RA:310:A:O5'	2.42	0.49
25:RA:449:A:C2'	25:RA:450:G:H5'	2.43	0.49
25:RA:751:A:H5''	25:RA:752:A:OP1	2.13	0.49
25:RA:818:G:H5'	25:RA:819:A:OP2	2.12	0.49
25:RA:858:U:O2	25:RA:2268:A:H2'	2.12	0.49
25:RA:868:U:C4	25:RA:869:G:N7	2.81	0.49
25:RA:877:U:OP2	25:RA:877:U:H6	1.94	0.49
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.13	0.49
25:RA:1107:G:H2'	25:RA:1108:U:C6	2.48	0.49
25:RA:1191:G:N2	25:RA:1192:G:H1'	2.27	0.49
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.46	0.49
25:RA:1844:C:H2'	25:RA:1845:G:H8	1.77	0.49
25:RA:2481:G:O2'	25:RA:2482:G:P	2.70	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
37:RR:18:LEU:HD13	37:RR:18:LEU:C	2.33	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.93	0.49
1:XA:320:C:H2'	1:XA:321:A:C8	2.47	0.49
1:XA:347:G:O2'	1:XA:348:G:OP2	2.26	0.49
1:XA:945:G:C6	1:XA:1337:G:C5	3.01	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.66	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
14:YN:8:GLU:O	14:YN:10:ALA:N	2.45	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
25:YA:528:A:N1	25:YA:2042:A:H2'	2.27	0.49
25:YA:566:U:H5''	35:YP:29:LYS:NZ	2.27	0.49
25:YA:1047:G:N2	25:YA:1110:G:H2'	2.28	0.49
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.45	0.49
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.95	0.49
25:YA:1265:A:C8	25:YA:1267:U:C2	3.01	0.49
25:YA:1341:U:OP1	25:YA:1397:U:N3	2.38	0.49
25:YA:1414:G:N2	25:YA:1589:C:C2	2.81	0.49
25:YA:1829:A:H2'	25:YA:1830:C:O4'	2.13	0.49
25:YA:2647:U:H2'	25:YA:2648:C:C6	2.46	0.49
25:YA:2737:G:H2'	25:YA:2738:A:C8	2.48	0.49
25:YA:2792:G:C6	25:YA:2805:G:C2	3.01	0.49
26:YB:7:G:C2	26:YB:114:G:C2	3.01	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49
41:YV:79:VAL:HG22	41:YV:79:VAL:O	2.12	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.28	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.75	0.49
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.46	0.49
50:Y4:1:MET:HG3	50:Y4:1:MET:O	2.12	0.49
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:Y9:7:VAL:HG12	55:Y9:25:VAL:HG21	1.94	0.49
1:QA:942:G:C2	1:QA:1342:C:C2	3.01	0.49
1:QA:1239:A:H4'	1:QA:1240:U:C5'	2.43	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.27	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.12	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
25:RA:863:A:H2'	25:RA:864:G:H8	1.76	0.49
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.12	0.49
25:RA:2277:G:P	36:RQ:85:LYS:HB2	2.53	0.49
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.12	0.49
25:RA:2576:G:O2'	25:RA:2579:C:OP2	2.22	0.49
26:RB:81:G:C2	26:RB:82:G:N7	2.80	0.49
30:RG:35:GLU:CD	30:RG:35:GLU:C	2.71	0.49
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.94	0.49
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49
31:RH:103:LEU:HD23	31:RH:103:LEU:H	1.77	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.28	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
46:R0:14:ARG:O	46:R0:15:ASP:HB2	2.11	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.60	0.49
1:XA:544:G:H2'	1:XA:545:C:C6	2.48	0.49
1:XA:662:G:O2'	1:XA:836:G:H5'	2.13	0.49
1:XA:1004:A:H1'	1:XA:1036:G:N2	2.27	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
25:YA:52:A:H8	25:YA:52:A:O5'	1.96	0.49
25:YA:525:U:H5''	25:YA:556:G:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.11	0.49
25:YA:844:C:C5	25:YA:845:G:C5	3.01	0.49
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.35	0.49
25:YA:2807:G:H3'	25:YA:2808:U:H5''	1.95	0.49
26:YB:39:A:C4	26:YB:44:G:N2	2.81	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.90	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.27	0.49
32:YI:75:LEU:HB3	32:YI:105:HIS:CD2	2.47	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.61	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
1:QA:144:G:H1	1:QA:178:C:N4	2.11	0.49
1:QA:304:U:H2'	1:QA:305:G:C8	2.47	0.49
1:QA:622:A:C8	1:QA:623:C:C6	3.01	0.49
1:QA:971:G:H5''	1:QA:972:C:H5''	1.94	0.49
1:QA:1198:G:H2'	1:QA:1199:U:O4'	2.13	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.42	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
25:RA:31:C:O3'	25:RA:1238:G:H5''	2.12	0.49
25:RA:270(S):G:C1'	47:R1:78:LYS:HD2	2.38	0.49
25:RA:704:G:H2'	25:RA:726:G:N2	2.28	0.49
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.48	0.49
25:RA:977:G:C6	25:RA:987:G:C5	3.01	0.49
25:RA:1265:A:C8	25:RA:1267:U:C2	3.00	0.49
25:RA:1797:C:O2'	27:RD:259:THR:HB	2.13	0.49
25:RA:1820:U:O4	27:RD:199:ALA:HB1	2.13	0.49
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2838:G:C6	25:RA:2839:G:C5	3.00	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.42	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.25	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.43	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
44:RY:95:LYS:N	44:RY:95:LYS:CD	2.76	0.49
46:R0:18:ALA:HB3	46:R0:20:ARG:NH1	2.28	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
1:XA:97:U:H2'	1:XA:99:C:C6	2.47	0.49
1:XA:439:A:OP2	1:XA:493:G:N1	2.42	0.49
1:XA:736:C:H2'	1:XA:737:A:C8	2.47	0.49
1:XA:1079:G:O3'	5:XE:14:ARG:NH2	2.46	0.49
1:XA:1230:C:H2'	1:XA:1231:G:C8	2.47	0.49
1:XA:1464:G:H2'	1:XA:1465:C:C6	2.48	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.45	0.49
3:XC:188:LEU:N	3:XC:188:LEU:CD2	2.76	0.49
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
9:XI:110:GLU:O	9:XI:110:GLU:HG3	2.12	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.13	0.49
25:YA:301:G:H1	25:YA:316:C:N4	2.06	0.49
25:YA:993:G:C4	25:YA:994:C:C5	3.01	0.49
25:YA:1157:G:C6	25:YA:1158:C:C4	3.01	0.49
25:YA:1443:G:N2	25:YA:1549:C:C2	2.81	0.49
25:YA:1676:A:H2'	25:YA:1677:A:O4'	2.12	0.49
25:YA:1882:C:H5'	25:YA:1883:G:OP2	2.12	0.49
25:YA:2292:C:N4	25:YA:2340:G:H1	2.11	0.49
25:YA:2625:G:H2'	25:YA:2626:C:O4'	2.12	0.49
25:YA:2849:U:H4'	25:YA:2868:A:C2	2.47	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
1:QA:221:C:H2'	1:QA:222:U:C6	2.45	0.49
1:QA:345:C:H5'	1:QA:346:G:C5	2.47	0.49
1:QA:397:A:H5'	1:QA:398:C:OP1	2.13	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
5:QE:78:HIS:CD2	8:QH:104:ARG:CD	2.96	0.49
9:QI:110:GLU:O	9:QI:110:GLU:HG3	2.12	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.49
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.42	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.21	0.49
25:RA:1059:G:H2'	25:RA:1060:U:H4'	1.95	0.49
25:RA:1247:A:O2'	25:RA:1248:G:H5''	2.13	0.49
25:RA:2851:A:H2'	25:RA:2852:G:O4'	2.13	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.18	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.27	0.49
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.49
36:RQ:132:VAL:HG11	45:RZ:81:ARG:NH2	2.28	0.49
38:RS:48:LEU:N	38:RS:48:LEU:CD1	2.76	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.49
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.49
47:R1:19:GLN:HA	47:R1:19:GLN:OE1	2.12	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.49
1:XA:109:A:C6	1:XA:326:G:C6	3.01	0.49
1:XA:369:C:OP2	1:XA:388:G:N2	2.39	0.49
1:XA:415:A:H2'	1:XA:416:G:C8	2.48	0.49
1:XA:1171:G:H2'	1:XA:1172:C:H6	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1492:A:OP1	12:XL:47:LYS:CG	2.61	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
9:XI:79:LEU:O	9:XI:79:LEU:HD13	2.12	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
25:YA:190:A:C6	25:YA:191:A:C6	3.01	0.49
25:YA:222:A:O2'	25:YA:223:A:O5'	2.30	0.49
25:YA:777:A:C2	25:YA:778:G:C5	3.01	0.49
25:YA:1145:C:H2'	25:YA:1146:C:C6	2.48	0.49
25:YA:1264:G:C3'	25:YA:1265:A:H5''	2.39	0.49
25:YA:1296:G:OP1	25:YA:2709:G:O2'	2.22	0.49
25:YA:1916:A:H2'	25:YA:1917:U:O4'	2.12	0.49
25:YA:2001:A:C2	25:YA:2002:G:C4	3.00	0.49
25:YA:2127:G:H2'	25:YA:2128:C:O4'	2.13	0.49
25:YA:2287:A:H8	25:YA:2287:A:H5''	1.78	0.49
25:YA:2832:U:H1'	25:YA:2834:G:C4	2.47	0.49
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
32:YI:63:ALA:HA	32:YI:66:GLU:HG2	1.95	0.49
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.65	0.49
37:YR:71:GLN:HE21	37:YR:71:GLN:HA	1.77	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.13	0.49
1:QA:222:U:H2'	1:QA:223:U:C6	2.48	0.49
1:QA:737:A:H2'	1:QA:738:C:C6	2.48	0.49
1:QA:962:C:C2	1:QA:963:G:C8	3.01	0.49
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.48	0.49
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.49
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.59	0.49
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.49
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.49
25:RA:182:A:N3	25:RA:433:C:O2'	2.41	0.49
25:RA:1201:C:N4	25:RA:1244:G:H1	2.11	0.49
25:RA:1773:A:H2'	25:RA:1774:C:O4'	2.12	0.49
25:RA:1872:A:H5'	25:RA:1878:G:OP2	2.12	0.49
25:RA:2404:C:O2	25:RA:2414:G:C2	2.66	0.49
25:RA:2422:A:C8	25:RA:2424:C:C5	3.01	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49
29:RF:45:ARG:NH1	29:RF:45:ARG:HG2	2.28	0.49
34:RO:55:GLY:O	34:RO:56:ASP:C	2.50	0.49
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.42	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.96	0.49
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.49
40:RU:81:HIS:CE1	40:RU:117:GLN:HG3	2.48	0.49
47:R1:25:LYS:C	47:R1:27:GLU:H	2.16	0.49
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:27:LYS:NZ	52:R6:27:LYS:CB	2.73	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.49
1:XA:96:G:H2'	1:XA:97:U:O4'	2.12	0.49
1:XA:179:A:H2'	1:XA:180:U:C6	2.47	0.49
1:XA:601:C:H2'	1:XA:602:A:H8	1.75	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.95	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
13:XM:65:LYS:HZ2	13:XM:69:GLU:HG2	1.77	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
25:YA:106:C:H2'	25:YA:107:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1045:A:H4'	25:YA:1046:A:C5'	2.43	0.49
25:YA:1650:G:N2	25:YA:2007:C:O2	2.44	0.49
25:YA:2782:G:O5'	25:YA:2782:G:C8	2.65	0.49
26:YB:3:C:H2'	26:YB:4:C:C6	2.48	0.49
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.49
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.49
30:YG:115:ARG:HH11	30:YG:115:ARG:HG2	1.77	0.49
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.49
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
38:YS:48:LEU:N	38:YS:48:LEU:CD1	2.76	0.49
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.13	0.49
40:YU:64:ARG:CG	40:YU:64:ARG:NH2	2.70	0.49
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.48	0.49
41:YV:91:TYR:C	41:YV:91:TYR:CD1	2.87	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
52:Y6:37:ARG:HE	52:Y6:37:ARG:HA	1.77	0.49
1:QA:468:A:C8	1:QA:474:G:C8	3.01	0.48
1:QA:1326:C:OP1	21:QU:12:LYS:HE3	2.13	0.48
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.48
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.48
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.48
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.42	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	0.48
25:RA:372:G:H8	47:R1:65:SER:O	1.96	0.48
25:RA:676:A:C8	25:RA:2069:G:N2	2.80	0.48
25:RA:862:G:H2'	25:RA:863:A:O4'	2.13	0.48
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	2.12	0.48
25:RA:1349:A:H3'	25:RA:1349:A:N3	2.27	0.48
25:RA:1427:A:C4	25:RA:1428:C:N4	2.81	0.48
25:RA:1462:C:H4'	25:RA:2703:C:H5'	1.94	0.48
25:RA:2199:A:H5''	25:RA:2205:C:OP2	2.12	0.48
25:RA:2747:G:H5''	31:RH:70:THR:HG21	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.48
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.48
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.12	0.48
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.43	0.48
32:RI:86:THR:H	32:RI:123:LEU:HD12	1.78	0.48
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.48
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.48
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.43	0.48
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.48
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.48
45:RZ:4:ARG:NH1	45:RZ:58:VAL:HG21	2.28	0.48
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.48
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.46	0.48
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.48
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.48
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.48
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.48
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	0.48
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
22:XV:75:C:H2'	22:XV:76:A:O4'	2.12	0.48
25:YA:38:A:O5'	25:YA:38:A:H8	1.95	0.48
25:YA:643:A:N1	25:YA:2369:A:O2'	2.29	0.48
25:YA:664:C:H4'	25:YA:941:A:OP1	2.13	0.48
25:YA:1784:A:H4'	25:YA:1785:A:O5'	2.13	0.48
25:YA:2677:G:C4	25:YA:2731:G:N2	2.81	0.48
25:YA:2744:G:O2'	25:YA:2745:C:H5'	2.13	0.48
25:YA:2824:C:C5	25:YA:2825:C:C4	3.01	0.48
26:YB:54:G:O2'	26:YB:55:U:H5'	2.13	0.48
27:YD:48:ARG:HG3	27:YD:48:ARG:HH11	1.78	0.48
30:YG:115:ARG:NH1	30:YG:115:ARG:HG2	2.26	0.48
34:YO:107:ARG:HA	34:YO:112:MET:HE1	1.94	0.48
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.43	0.48
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.48
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.48
1:QA:407:G:N1	1:QA:435:C:N3	2.56	0.48
1:QA:830:G:N2	1:QA:857:C:C2	2.81	0.48
1:QA:1122:U:N3	1:QA:1123:A:N7	2.61	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.48
25:RA:130:C:O3'	25:RA:1349:A:H1'	2.13	0.48
25:RA:1059:G:C5	25:RA:1060:U:H1'	2.48	0.48
25:RA:1469:A:H2'	25:RA:1470:G:O4'	2.13	0.48
25:RA:1718:G:C2	25:RA:1725:G:C8	3.01	0.48
25:RA:1839:G:C8	25:RA:1927:A:H1'	2.48	0.48
25:RA:1995:U:N3	25:RA:1996:C:C4	2.81	0.48
26:RB:4:C:C2	26:RB:117:G:N2	2.80	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
30:RG:115:ARG:HG2	30:RG:115:ARG:HH11	1.77	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.74	0.48
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.48
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.48
41:RV:91:TYR:C	41:RV:91:TYR:CD1	2.87	0.48
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.12	0.48
1:XA:1161:C:C2'	1:XA:1162:C:H5'	2.43	0.48
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.13	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.27	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.13	0.48
5:XE:78:HIS:CD2	8:XH:104:ARG:CG	2.91	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.42	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.95	0.48
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
25:YA:53:A:C8	25:YA:54:G:C8	3.01	0.48
25:YA:211:A:H2'	25:YA:212:G:O4'	2.13	0.48
25:YA:319:C:H2'	25:YA:320:A:O4'	2.13	0.48
25:YA:374:A:H3'	25:YA:375:C:H6	1.78	0.48
25:YA:456:C:C5	43:YX:69:TYR:CZ	3.02	0.48
25:YA:1048:A:C5	25:YA:1111:A:H2	2.31	0.48
25:YA:1056:G:H5'	25:YA:1085:A:H2	1.78	0.48
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.48	0.48
25:YA:2074:U:HO2'	25:YA:2597:G:HO2'	1.56	0.48
25:YA:2298:A:H5''	25:YA:2299:G:OP2	2.12	0.48
25:YA:2532:G:H4'	25:YA:2657:A:H2	1.78	0.48
26:YB:44:G:OP1	50:Y4:1:MET:N	2.35	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.48
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.12	0.48
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:63:LYS:HB2	45:YZ:116:VAL:HG21	1.96	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
1:QA:411:A:H62	1:QA:413:G:N2	2.04	0.48
1:QA:565:U:OP2	1:QA:566:G:O2'	2.14	0.48
1:QA:838:G:N2	1:QA:849:C:C2	2.81	0.48
1:QA:1442:G:C5	1:QA:1446:A:C6	3.02	0.48
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.13	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.95	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
25:RA:67:U:H2'	25:RA:68:G:C8	2.44	0.48
25:RA:270(I):G:H1	25:RA:270(Q):C:N4	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:693:C:O4'	25:RA:1354:A:H1'	2.13	0.48
25:RA:1047:G:O2'	25:RA:1110:G:N2	2.47	0.48
25:RA:1399:C:O5'	25:RA:1399:C:H6	1.96	0.48
25:RA:1661:G:C6	25:RA:2000:G:C6	3.01	0.48
25:RA:1783:A:H5'	25:RA:2608:G:H4'	1.95	0.48
25:RA:2747:G:H2'	25:RA:2748:A:H8	1.78	0.48
26:RB:9:G:H5'	38:RS:19:LYS:NZ	2.28	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.13	0.48
46:R0:56:ASP:OD2	46:R0:58:THR:N	2.43	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.78	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
1:XA:1226:C:N4	13:XM:104:ARG:HD2	2.27	0.48
1:XA:1321:C:C5'	1:XA:1322:C:H5''	2.43	0.48
1:XA:1348:U:C5	1:XA:1349:A:N7	2.81	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.95	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
25:YA:301:G:H1'	25:YA:302:C:C6	2.47	0.48
25:YA:696:G:C2	25:YA:697:C:C5	3.02	0.48
25:YA:1322:A:H2'	25:YA:1323:U:H6	1.79	0.48
25:YA:1972:A:H2'	25:YA:1973:G:H8	1.78	0.48
25:YA:2063:C:H5'	25:YA:2063:C:H6	1.77	0.48
25:YA:2263:C:H2'	25:YA:2264:C:H6	1.77	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.49	0.48
25:YA:2864:G:C2	25:YA:2865:U:C2	3.01	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.40	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
32:YI:133:HIS:HB2	32:YI:134:PRO:CD	2.44	0.48
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
1:QA:12:U:H2'	1:QA:13:U:H5''	1.94	0.48
1:QA:563:A:N7	1:QA:567:G:H1'	2.28	0.48
1:QA:597:G:N2	8:QH:94:TYR:OH	2.47	0.48
1:QA:627:G:O2'	1:QA:628:G:H5'	2.13	0.48
1:QA:735:C:H2'	1:QA:736:C:C6	2.46	0.48
1:QA:1171:G:H2'	1:QA:1172:C:C6	2.48	0.48
1:QA:1220:G:O3'	19:QS:36:ARG:HD3	2.14	0.48
1:QA:1411:C:H2'	1:QA:1412:C:C6	2.48	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.95	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
22:QV:4:G:O2'	22:QV:5:G:H8	1.96	0.48
25:RA:96:G:H4'	48:R2:48:HIS:CD2	2.48	0.48
25:RA:301:G:H1'	25:RA:302:C:C6	2.48	0.48
25:RA:476:G:H4'	25:RA:502:A:N1	2.29	0.48
25:RA:724:U:H2'	25:RA:725:G:O4'	2.14	0.48
25:RA:2607:G:H2'	25:RA:2608:G:O4'	2.14	0.48
26:RB:16:G:H2'	26:RB:17:C:C6	2.49	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.14	0.48
43:RX:53:LYS:HZ2	43:RX:55:ASN:HD21	1.62	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.13	0.48
1:XA:28:G:N2	1:XA:555:C:O2	2.46	0.48
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.45	0.48
1:XA:1206:G:C4	1:XA:1207:G:C8	3.01	0.48
1:XA:1213:A:N6	1:XA:1215:G:N3	2.60	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:114:ARG:HH11	4:XD:114:ARG:CG	2.16	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
9:XI:118:LYS:NZ	9:XI:118:LYS:CB	2.75	0.48
9:XI:128:ARG:NH2	22:XV:35:A:P	2.86	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
22:XV:4:G:O2'	22:XV:5:G:H8	1.96	0.48
24:XY:40:G:O2'	24:XY:41:A:H5'	2.13	0.48
25:YA:242:G:N2	25:YA:255:A:OP2	2.37	0.48
25:YA:333:G:H5''	25:YA:334:C:OP2	2.13	0.48
25:YA:612:G:C2	25:YA:617:G:C6	3.01	0.48
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.49	0.48
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.13	0.48
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.48	0.48
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.33	0.48
25:YA:2504:U:O5'	25:YA:2504:U:H6	1.96	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
32:YI:79:ILE:HG22	32:YI:81:VAL:HG22	1.94	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
39:YT:58:ASN:HD22	39:YT:58:ASN:N	2.10	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48
1:QA:707:C:H5''	11:QK:85:ARG:NH1	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1258:G:C6	1:QA:1259:C:N4	2.81	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
5:QE:78:HIS:NE2	8:QH:104:ARG:NE	2.62	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
25:RA:1163:G:C2	25:RA:1164:G:C8	3.02	0.48
25:RA:1954:G:H21	25:RA:1956:U:H3	1.62	0.48
25:RA:2320:A:C8	25:RA:2333:A:N6	2.81	0.48
25:RA:2524:G:H2'	25:RA:2525:G:O4'	2.13	0.48
26:RB:42:C:O2	30:RG:93:THR:N	2.30	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48
27:RD:65:ILE:HD13	27:RD:65:ILE:C	2.32	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
32:RI:29:TYR:O	32:RI:32:PRO:HD2	2.12	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.77	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.96	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
45:RZ:150:LEU:HD23	45:RZ:171:ILE:CG1	2.43	0.48
1:XA:321:A:N7	1:XA:328:C:O2	2.46	0.48
1:XA:613:C:O2	1:XA:627:G:N2	2.34	0.48
1:XA:1517:G:H1'	25:YA:1919:A:O3'	2.14	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.77	0.48
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.48	0.48
25:YA:301:G:C4	25:YA:302:C:C5	3.01	0.48
25:YA:653:A:O2'	25:YA:654:A:OP1	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:836:G:C6	25:YA:837:C:C4	3.01	0.48
25:YA:1024:G:C6	25:YA:1025:G:C6	3.01	0.48
25:YA:1419:A:N7	25:YA:1421:G:C6	2.81	0.48
25:YA:1658:C:H2'	25:YA:1659:U:H6	1.79	0.48
25:YA:1682:G:C6	25:YA:1683:C:C4	3.02	0.48
25:YA:2733:A:C2	25:YA:2734:A:H1'	2.49	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.31	0.48
32:YI:57:ARG:HA	32:YI:60:GLU:HB3	1.96	0.48
32:YI:99:GLU:HG2	32:YI:103:ARG:HH21	1.79	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
46:Y0:14:ARG:HE	46:Y0:14:ARG:HB2	1.45	0.48
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.61	0.48
1:QA:18:C:C5'	5:QE:127:ASN:HD21	2.21	0.48
1:QA:281:G:H8	1:QA:281:G:OP2	1.96	0.48
1:QA:528:C:O2'	1:QA:535:A:O2'	2.17	0.48
1:QA:559:A:C5'	1:QA:560:U:H3'	2.44	0.48
1:QA:729:A:N1	1:QA:764:C:O2'	2.44	0.48
1:QA:814:A:N7	1:QA:816:A:C4	2.82	0.48
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.79	0.48
1:QA:940:C:H2'	1:QA:941:G:H8	1.77	0.48
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.49	0.48
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.49	0.48
1:QA:1511:G:C6	1:QA:1512:U:N3	2.82	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
25:RA:71:A:H5'	25:RA:72:U:H2'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:103:A:OP2	25:RA:103:A:H8	1.96	0.48
25:RA:327:G:N2	44:RY:70:SER:OG	2.46	0.48
25:RA:449:A:O2'	25:RA:450:G:H5'	2.14	0.48
25:RA:624:C:O2	25:RA:657:U:H4'	2.14	0.48
25:RA:628:G:H4'	25:RA:651:G:O2'	2.14	0.48
25:RA:1322:A:C5	25:RA:1323:U:C5	3.01	0.48
25:RA:1433:U:H5''	25:RA:1433:U:C6	2.44	0.48
25:RA:1534:G:N1	25:RA:1538:G:N2	2.61	0.48
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.13	0.48
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.77	0.48
25:RA:2143:C:H2'	25:RA:2144:U:O4'	2.14	0.48
25:RA:2417:C:H2'	25:RA:2418:A:H8	1.78	0.48
25:RA:2877:G:O2'	25:RA:2878:U:H5'	2.14	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.47	0.48
47:R1:56:GLN:NE2	47:R1:56:GLN:H	2.10	0.48
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.40	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
1:XA:17:U:H1'	1:XA:1080:A:H1'	1.95	0.48
1:XA:574:A:N3	1:XA:883:C:H1'	2.28	0.48
1:XA:827:U:C5	1:XA:870:U:C4	3.01	0.48
1:XA:939:G:H2'	1:XA:940:C:C6	2.48	0.48
1:XA:1333:A:H2'	1:XA:1334:G:O4'	2.13	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.96	0.48
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.76	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
25:YA:27:G:N2	25:YA:512:G:HO2'	2.08	0.48
25:YA:198:C:O2'	25:YA:199:A:H5'	2.13	0.48
25:YA:210:C:H2'	25:YA:211:A:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:288:C:H2'	25:YA:289:A:H8	1.79	0.48
25:YA:301:G:C6	25:YA:317:G:C6	3.02	0.48
25:YA:921:G:H4'	25:YA:2269:A:C5	2.49	0.48
25:YA:960:A:C8	25:YA:962:G:C8	3.01	0.48
25:YA:1055:G:O2'	25:YA:1085:A:C6	2.62	0.48
25:YA:1607:C:N4	25:YA:1621:U:H2'	2.28	0.48
25:YA:2259:G:C2	25:YA:2282:G:N1	2.81	0.48
25:YA:2432:A:H5''	25:YA:2433:A:OP2	2.14	0.48
25:YA:2477:C:H2'	55:Y9:1:MET:CG	2.42	0.48
25:YA:2494:G:O2'	25:YA:2495:G:H5'	2.14	0.48
25:YA:2505:G:O2'	25:YA:2506:U:H5'	2.14	0.48
25:YA:2756:U:H4'	25:YA:2757:A:OP1	2.12	0.48
26:YB:9:G:C6	26:YB:10:C:C4	3.01	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
36:YQ:79:LEU:HD12	46:Y0:5:LYS:HD3	1.95	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.31	0.48
47:Y1:56:GLN:NE2	47:Y1:56:GLN:H	2.10	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
1:QA:192:U:H2'	1:QA:193:C:H6	1.79	0.48
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.35	0.48
1:QA:1234:C:H4'	1:QA:1364:U:H1'	1.96	0.48
1:QA:1498:U:O5'	1:QA:1498:U:H6	1.96	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.48
4:QD:165:MET:HE3	4:QD:168:ARG:HD2	1.96	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.79	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.48
25:RA:57:C:H2'	25:RA:58:G:O4'	2.14	0.48
25:RA:418:G:O2'	25:RA:419:C:H5'	2.13	0.48
25:RA:1077:A:H3'	25:RA:1077:A:N3	2.28	0.48
25:RA:1373:A:N6	25:RA:1374:G:C2	2.82	0.48
25:RA:1478:G:C2	25:RA:1479:G:C8	3.01	0.48
25:RA:1654:A:OP2	37:RR:2:ARG:HD2	2.14	0.48
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2867:G:HO2'	25:RA:2868:A:H8	1.60	0.48
26:RB:5:C:H2'	26:RB:6:C:H6	1.78	0.48
26:RB:113:C:H2'	26:RB:114:G:C8	2.47	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
32:RI:52:ARG:NH1	32:RI:52:ARG:HB3	2.29	0.48
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
1:XA:14:U:H2'	1:XA:16:A:OP2	2.13	0.48
1:XA:585:G:O2'	1:XA:879:C:H5''	2.14	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.45	0.48
25:YA:823:G:H2'	25:YA:824:A:H8	1.79	0.48
25:YA:839:U:H2'	25:YA:840:C:H6	1.79	0.48
25:YA:1004:C:O5'	25:YA:1004:C:H6	1.97	0.48
25:YA:1204:A:C2	25:YA:1241:A:N1	2.79	0.48
25:YA:1728:G:H3'	25:YA:1729:A:C5'	2.43	0.48
25:YA:1815:A:OP2	27:YD:54:ARG:NH2	2.47	0.48
25:YA:1826:G:O2'	27:YD:242:ARG:NH2	2.46	0.48
25:YA:2100:G:C4	25:YA:2190:G:C2	3.02	0.48
25:YA:2208:U:O2'	25:YA:2209:C:H5'	2.12	0.48
25:YA:2266:A:H4'	25:YA:2267:A:N3	2.28	0.48
25:YA:2758:A:C4	31:YH:67:LEU:HD21	2.48	0.48
25:YA:2790:A:H2'	25:YA:2791:C:H5''	1.95	0.48
26:YB:30:C:H2'	26:YB:31:C:O4'	2.14	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
29:YF:45:ARG:NH1	29:YF:45:ARG:HG2	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
39:YT:96:ARG:NH1	39:YT:96:ARG:CB	2.77	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.78	0.48
1:QA:335:C:H2'	1:QA:336:C:C6	2.49	0.48
1:QA:1112:C:O2	3:QC:179:ARG:HG2	2.13	0.48
1:QA:1298:C:C6	7:QG:114:ARG:NH1	2.82	0.48
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.44	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.28	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.79	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
25:RA:719:C:O2'	25:RA:720:C:H5'	2.14	0.48
25:RA:807:U:C2	25:RA:808:G:C8	3.01	0.48
25:RA:2115:G:N1	25:RA:2164:C:OP2	2.47	0.48
25:RA:2553:G:N2	56:Z6:76:PPU:C2	2.76	0.48
26:RB:11:C:H5''	26:RB:12:C:OP2	2.14	0.48
26:RB:56:G:P	30:RG:27:ASN:ND2	2.87	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
27:RD:198:ASN:C	27:RD:198:ASN:HD22	2.17	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.52	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48
45:RZ:9:TYR:HE2	45:RZ:61:LEU:HD13	1.79	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
1:XA:456:C:H2'	1:XA:457:C:C6	2.47	0.48
1:XA:767:A:H2'	1:XA:768:A:O4'	2.12	0.48
1:XA:975:A:N6	1:XA:1367:C:O4'	2.46	0.48
1:XA:1031:G:H8	1:XA:1031:G:OP2	1.97	0.48
1:XA:1521:G:H2'	1:XA:1522:U:C6	2.49	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.48
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.48
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
25:YA:281:G:O2'	25:YA:282:A:O4'	2.25	0.48
25:YA:761:A:H8	25:YA:761:A:O5'	1.97	0.48
25:YA:888:C:C3'	25:YA:889:C:H4'	2.44	0.48
25:YA:1301:A:C2	25:YA:1303:G:C6	3.02	0.48
25:YA:2040:C:H2'	25:YA:2041:U:O4'	2.14	0.48
25:YA:2063:C:C4	25:YA:2064:C:C4	3.01	0.48
25:YA:2363:C:O2'	46:Y0:39:ARG:NH1	2.42	0.48
25:YA:2583:G:C6	25:YA:2584:U:C5	3.01	0.48
25:YA:2795:G:H3'	25:YA:2797:U:H5'	1.96	0.48
25:YA:2838:G:C4	25:YA:2839:G:C8	3.02	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
38:YS:56:LEU:C	38:YS:56:LEU:HD23	2.34	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.13	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.48
1:QA:74:C:H42	1:QA:96:G:H1	1.60	0.48
1:QA:103:C:P	20:QT:17:ARG:HH21	2.36	0.48
1:QA:115:G:C2	1:QA:289:G:N7	2.82	0.48
1:QA:190:G:O2'	1:QA:191(A):G:P	2.72	0.48
1:QA:615:C:C2	1:QA:616:G:C8	3.02	0.48
1:QA:953:G:H2'	1:QA:954:G:O4'	2.14	0.48
1:QA:953:G:C5'	1:QA:965:A:H61	2.26	0.48
1:QA:1190:G:OP1	3:QC:5:ILE:HG23	2.14	0.48
1:QA:1199:U:H5''	1:QA:1200:C:OP2	2.14	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.48
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.48
24:QY:40:G:O2'	24:QY:41:A:H5'	2.13	0.48
25:RA:135:G:C2	25:RA:136:G:C8	3.02	0.48
25:RA:804:A:H2'	25:RA:806:C:C4	2.49	0.48
25:RA:836:G:H2'	25:RA:837:C:C6	2.48	0.48
25:RA:845:G:O2'	25:RA:846:C:H5	1.97	0.48
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.95	0.48
25:RA:934:G:H2'	25:RA:935:C:C6	2.49	0.48
25:RA:1259:G:H2'	25:RA:1260:G:C8	2.49	0.48
25:RA:1946:U:H2'	25:RA:1947:C:H6	1.79	0.48
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.14	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.96	0.48
32:RI:3:VAL:HG12	32:RI:38:LEU:HA	1.95	0.48
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.44	0.48
35:RP:75:ILE:H	35:RP:75:ILE:CD1	2.14	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CD1	2.49	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
1:XA:131:C:H2'	1:XA:132:C:C6	2.48	0.48
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.31	0.48
1:XA:683:G:C6	1:XA:684:A:C5	3.01	0.48
1:XA:889:A:C8	1:XA:891:U:C2	3.02	0.48
1:XA:936:C:H2'	1:XA:937:A:O4'	2.13	0.48
1:XA:1044:A:C6	1:XA:1045:C:H1'	2.49	0.48
1:XA:1234:C:H1'	1:XA:1364:U:O2	2.13	0.48
1:XA:1357:A:C6	1:XA:1358:U:C4	3.02	0.48
1:XA:1387:G:C6	1:XA:1388:C:N4	2.82	0.48
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.48	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.48
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.48
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.14	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
25:YA:1899:G:H21	25:YA:1902:C:H5	1.61	0.48
25:YA:2088:G:C6	25:YA:2089:U:C4	3.01	0.48
25:YA:2420:C:OP1	54:Y8:34:TRP:HB2	2.14	0.48
26:YB:94:C:H2'	26:YB:95:U:H6	1.79	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.68	0.48
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.48
31:YH:45:VAL:O	31:YH:45:VAL:HG13	2.14	0.48
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:134:PRO:HB3	45:YZ:137:ILE:HD11	1.96	0.48
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.48
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.48
1:QA:49:U:C2	1:QA:361:G:N2	2.82	0.48
1:QA:245:C:C2	1:QA:284:G:C2	3.02	0.48
1:QA:678:U:H2'	1:QA:679:C:C6	2.48	0.48
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.14	0.48
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.48
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.33	0.48
14:QN:43:CYS:O	14:QN:46:GLU:N	2.43	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.48
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.44	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
25:RA:39:C:H2'	25:RA:40:C:H6	1.79	0.48
25:RA:71:A:H4'	25:RA:72:U:C5'	2.42	0.48
25:RA:226:G:O2'	25:RA:228:A:N6	2.47	0.48
25:RA:646:A:H5'	25:RA:646:A:N3	2.29	0.48
25:RA:1007:C:H5''	33:RN:35:ARG:NH1	2.29	0.48
25:RA:1359:A:N6	25:RA:1372:U:H3	2.11	0.48
25:RA:1576:U:O2'	25:RA:1577:C:H5'	2.14	0.48
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.71	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
28:RE:64:LYS:C	28:RE:66:HIS:N	2.68	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.48
1:XA:267:C:H2'	1:XA:268:C:C6	2.48	0.48
1:XA:988:G:N2	1:XA:989:C:H1'	2.28	0.48
1:XA:1304:G:N2	1:XA:1332:A:N7	2.61	0.48
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.09	0.48
7:XG:51:GLN:OE1	7:XG:51:GLN:HA	2.14	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.14	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.48
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.35	0.48
13:XM:50:GLU:OE1	50:Y4:32:TYR:CE2	2.67	0.48
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.48
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.48
25:YA:478:A:C6	25:YA:480:A:C6	3.01	0.48
25:YA:572:A:C8	25:YA:573:G:C8	3.02	0.48
25:YA:1416:G:N2	25:YA:1417:C:N3	2.62	0.48
25:YA:2009:G:H2'	25:YA:2010:G:H5'	1.96	0.48
25:YA:2396:G:C2	25:YA:2421:G:C2	3.01	0.48
25:YA:2418:A:OP2	54:Y8:29:LYS:HE2	2.13	0.48
25:YA:2494:G:C4	25:YA:2495:G:C8	3.02	0.48
25:YA:2756:U:N3	25:YA:2759:G:O6	2.47	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.49	0.48
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.48
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
36:YQ:60:ARG:NH2	36:YQ:60:ARG:HB2	2.28	0.48
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.48
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.27	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.48
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.48
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.47	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.13	0.48
1:QA:96:G:C6	1:QA:97:U:C4	3.02	0.47
1:QA:189:U:O2'	17:QQ:63:ARG:NH2	2.47	0.47
1:QA:243:A:N6	1:QA:281:G:O2'	2.45	0.47
1:QA:563:A:C8	1:QA:567:G:H1'	2.49	0.47
1:QA:570:G:C4	1:QA:571:U:C5	3.02	0.47
1:QA:615:C:H2'	1:QA:616:G:O4'	2.14	0.47
1:QA:978:A:H5'	1:QA:1224:G:O6	2.13	0.47
1:QA:1014:A:C2	1:QA:1219:U:H1'	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.44	0.47
22:QV:19:G:H4'	22:QV:20:U:OP2	2.14	0.47
23:QX:4:C:C3'	23:QX:5:C:H5'	2.41	0.47
25:RA:335:C:H4'	44:RY:73:ARG:CZ	2.44	0.47
25:RA:469:G:O6	53:R7:37:LYS:HE2	2.12	0.47
25:RA:492:A:H2'	25:RA:493:G:O4'	2.13	0.47
25:RA:966:G:H1'	25:RA:2267:A:H62	1.79	0.47
25:RA:1005:C:O2'	33:RN:28:THR:HG21	2.13	0.47
25:RA:1181:C:H2'	25:RA:1182:A:C8	2.49	0.47
25:RA:1628:G:H2'	25:RA:1629:U:H6	1.78	0.47
25:RA:2384:G:H5''	25:RA:2386:C:OP1	2.14	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.67	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.77	0.47
36:RQ:42:ILE:HD12	36:RQ:42:ILE:N	2.29	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.47
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.47
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.47
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.13	0.47
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.47
1:XA:18:C:H5''	5:XE:127:ASN:ND2	2.29	0.47
1:XA:455:C:O5'	1:XA:455:C:H6	1.97	0.47
1:XA:1274:G:H2'	1:XA:1275:A:H8	1.79	0.47
1:XA:1324:A:C4'	1:XA:1362:C:H4'	2.43	0.47
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.47
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.44	0.47
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.47
14:YN:6:LEU:HD22	14:YN:23:ARG:NH2	2.29	0.47
14:YN:15:LYS:HD2	14:YN:16:PHE:CE2	2.49	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.28	0.47
25:YA:30:G:O2'	25:YA:31:C:H5'	2.14	0.47
25:YA:836:G:C5	25:YA:837:C:C4	3.02	0.47
25:YA:1169:G:N2	25:YA:1181:C:C2	2.82	0.47
25:YA:1389:G:C2	25:YA:1399:C:O2	2.67	0.47
25:YA:1815:A:C5	25:YA:1817:G:C6	3.02	0.47
25:YA:2280:G:H2'	25:YA:2281:C:H5'	1.95	0.47
25:YA:2408:U:O2'	25:YA:2409:G:H5'	2.14	0.47
25:YA:2421:G:H5''	25:YA:2422:A:OP2	2.14	0.47
25:YA:2431:U:H2'	25:YA:2433:A:OP2	2.13	0.47
25:YA:2647:U:H2'	25:YA:2648:C:H6	1.78	0.47
25:YA:2700:C:O2'	25:YA:2701:C:H5'	2.14	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.96	0.47
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.47
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.78	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.13	0.47
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.43	0.47
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.47
42:YW:32:ALA:O	42:YW:33:ARG:C	2.51	0.47
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.47
45:YZ:48:PHE:CZ	45:YZ:52:SER:HA	2.48	0.47
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.17	0.47
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.47
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.47
1:QA:32:A:H3'	1:QA:33:A:H8	1.78	0.47
1:QA:734:G:H2'	1:QA:735:C:C6	2.49	0.47
1:QA:1066:C:H3'	1:QA:1067:A:C8	2.49	0.47
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.29	0.47
1:QA:1502:A:H2	1:QA:1505:G:N2	2.12	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
7:QG:51:GLN:HA	7:QG:51:GLN:OE1	2.14	0.47
7:QG:63:LYS:O	7:QG:63:LYS:HD2	2.13	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.49	0.47
25:RA:301:G:H1	25:RA:316:C:N4	2.12	0.47
25:RA:582:G:H2'	25:RA:583:G:H8	1.78	0.47
25:RA:1356:G:C6	25:RA:1357:U:C4	3.02	0.47
25:RA:2544:G:H2'	25:RA:2545:G:C8	2.46	0.47
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.14	0.47
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.15	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.47
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.47
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.28	0.47
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.47
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.47
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.15	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
1:XA:35:G:O2'	12:XL:118:SER:O	2.18	0.47
1:XA:714:G:H2'	1:XA:715:A:C8	2.49	0.47
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.49	0.47
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.49	0.47
1:XA:1366:C:H2'	1:XA:1367:C:C6	2.41	0.47
1:XA:1505:G:H4'	1:XA:1506:U:H5''	1.97	0.47
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
14:YN:26:ARG:NH1	14:YN:43:CYS:SG	2.86	0.47
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.47
18:XR:30:ASP:C	18:XR:32:ARG:H	2.15	0.47
19:XS:36:ARG:HB3	19:XS:36:ARG:NH1	2.28	0.47
22:XV:19:G:H4'	22:XV:20:U:OP2	2.14	0.47
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:152:G:H2'	25:YA:153:C:H6	1.77	0.47
25:YA:809:G:H2'	25:YA:810:U:C6	2.48	0.47
25:YA:1771:C:HO2'	25:YA:1786:A:H8	1.60	0.47
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.28	0.47
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.48	0.47
25:YA:2263:C:H2'	25:YA:2264:C:C6	2.50	0.47
25:YA:2388:A:C8	25:YA:2389:G:C5	3.02	0.47
25:YA:2529:G:H5''	25:YA:2530:A:H5''	1.95	0.47
25:YA:2648:C:H1'	25:YA:2673:G:N2	2.29	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.07	0.47
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.14	0.47
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.62	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.47
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.45	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
1:QA:186:C:O2	20:QT:85:MET:HE1	2.13	0.47
1:QA:957:U:O2	1:QA:959:A:C8	2.67	0.47
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.47
7:QG:8:GLU:CD	7:QG:8:GLU:N	2.67	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.97	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
25:RA:388:G:H5'	25:RA:389:G:OP2	2.13	0.47
25:RA:1009:A:OP1	33:RN:37:LYS:NZ	2.47	0.47
25:RA:1058:G:N2	25:RA:1080:C:O2	2.25	0.47
25:RA:1165:U:H3	25:RA:1184:G:H1	1.60	0.47
25:RA:1932:A:N6	25:RA:1933:G:C2	2.82	0.47
25:RA:2025:C:H2'	25:RA:2026:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.14	0.47
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.49	0.47
25:RA:2469:A:N7	25:RA:2482:G:C8	2.82	0.47
26:RB:57:A:C4	30:RG:29:TRP:HB2	2.49	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.96	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.47
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.47
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.53	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.82	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.62	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
45:RZ:102:LEU:HB3	45:RZ:104:PHE:HE1	1.78	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
50:R4:50:VAL:O	50:R4:50:VAL:CG1	2.63	0.47
1:XA:61:G:H2'	1:XA:62:U:O4'	2.14	0.47
1:XA:403:C:N4	1:XA:547:A:H5'	2.29	0.47
1:XA:1269:A:H2	1:XA:1312:G:N3	2.12	0.47
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.49	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	2.00	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
2:XB:181:PHE:HE1	8:XH:70:GLN:O	1.97	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
25:YA:431:U:O5'	25:YA:431:U:H6	1.97	0.47
25:YA:1045:A:H1'	25:YA:1047:G:C2	2.49	0.47
25:YA:1109:C:HO2'	25:YA:1110:G:P	2.36	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1407:C:N4	25:YA:1595:G:H1	2.10	0.47
25:YA:1657:C:H4'	28:YE:133:LYS:HB3	1.96	0.47
25:YA:1831:G:N2	25:YA:1974:C:O2	2.46	0.47
25:YA:1835:G:C4	25:YA:1931:U:N3	2.82	0.47
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.15	0.47
25:YA:2294:C:H5	38:YS:13:ARG:NH1	2.12	0.47
25:YA:2298:A:H62	25:YA:2318:G:H8	1.61	0.47
25:YA:2522:U:H3	25:YA:2543:G:H1	1.63	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.49	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.29	0.47
32:YI:129:THR:HG22	32:YI:137:PRO:HB3	1.96	0.47
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.47
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
55:Y9:27:CYS:SG	55:Y9:28:GLU:N	2.87	0.47
1:QA:321:A:H62	1:QA:328:C:H1'	1.80	0.47
1:QA:881:G:OP1	12:QL:12:ARG:NH2	2.46	0.47
1:QA:1095:U:H5''	1:QA:1109:C:O2	2.14	0.47
1:QA:1133:G:N2	1:QA:1141:C:O2	2.38	0.47
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.49	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
5:QE:79:GLU:OE2	8:QH:104:ARG:C	2.51	0.47
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
25:RA:1328:G:H8	25:RA:1328:G:O5'	1.98	0.47
25:RA:1711:C:H2'	25:RA:1712:C:H6	1.80	0.47
25:RA:2404:C:C1'	35:RP:67:MET:HE1	2.43	0.47
25:RA:2439:A:C8	25:RA:2439:A:C5'	2.96	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.95	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
32:RI:19:VAL:HG22	32:RI:20:ASP:H	1.78	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
38:RS:43:GLU:HG2	46:R0:49:LYS:HE2	1.96	0.47
39:RT:96:ARG:NH1	39:RT:96:ARG:CB	2.77	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.95	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.30	0.47
44:RY:97:ARG:HG2	44:RY:97:ARG:NH1	2.28	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.28	0.47
1:XA:1202:G:H1'	14:YN:29:ARG:HD2	1.96	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.47	0.47
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.47
25:YA:186:G:C2	25:YA:211:A:C2	3.02	0.47
25:YA:399:G:H2'	25:YA:400:G:O4'	2.15	0.47
25:YA:456:C:C4	43:YX:69:TYR:CE1	3.02	0.47
25:YA:604:G:H5''	25:YA:604:G:H8	1.79	0.47
25:YA:814:C:O2'	25:YA:815:C:H5'	2.14	0.47
25:YA:954:G:OP1	36:YQ:15:GLY:N	2.39	0.47
25:YA:1144:G:C6	25:YA:1145:C:C4	3.02	0.47
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.29	0.47
25:YA:1804:C:H42	25:YA:1813:G:H1	1.62	0.47
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.50	0.47
25:YA:2400:G:C5	25:YA:2401:U:C5	3.02	0.47
25:YA:2408:U:H2'	25:YA:2409:G:H8	1.78	0.47
25:YA:2616:C:O2	25:YA:2616:C:C2'	2.60	0.47
26:YB:114:G:O5'	26:YB:114:G:H8	1.97	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.44	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
36:YQ:59:ARG:CD	36:YQ:59:ARG:N	2.73	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.62	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
45:YZ:72:ARG:HH22	45:YZ:97:GLU:HB2	1.78	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
1:QA:507:C:C4	1:QA:508:C:C4	3.02	0.47
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.15	0.47
1:QA:1287:A:H2'	1:QA:1288:A:H8	1.75	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.47
15:QO:8:LYS:HB2	15:QO:8:LYS:HZ3	1.79	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.47
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
25:RA:34:C:OP1	25:RA:34:C:O4'	2.33	0.47
25:RA:83:G:C2	25:RA:102:G:H1'	2.49	0.47
25:RA:540:G:H5'	25:RA:541:C:OP2	2.14	0.47
25:RA:595:C:H6	25:RA:595:C:H5''	1.79	0.47
25:RA:2349:G:OP2	54:R8:42:ARG:HD3	2.14	0.47
25:RA:2710:C:OP1	37:RR:15:SER:HB2	2.14	0.47
25:RA:2854:G:C6	25:RA:2855:C:C4	3.02	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.27	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.14	0.47
32:RI:78:THR:H	32:RI:104:GLN:NE2	2.05	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.26	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.15	0.47
1:XA:187:C:H1'	1:XA:191(A):G:N2	2.30	0.47
1:XA:655:A:N1	1:XA:754:C:N4	2.63	0.47
1:XA:1158:C:N3	1:XA:1160:G:N7	2.63	0.47
1:XA:1292:U:H2'	1:XA:1293:G:H8	1.80	0.47
1:XA:1333:A:C8	1:XA:1334:G:C8	3.02	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
4:XD:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
10:XJ:49:VAL:HG23	14:YN:34:TYR:OH	2.13	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
20:XT:26:ASN:N	20:XT:26:ASN:ND2	2.62	0.47
25:YA:325:G:N2	25:YA:326:G:C4	2.82	0.47
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.14	0.47
25:YA:984:A:H5''	25:YA:985:C:C5	2.47	0.47
25:YA:1364:G:N7	47:Y1:2:SER:N	2.62	0.47
25:YA:1764:G:C6	25:YA:1989:G:C2	3.02	0.47
25:YA:2163:C:H2'	25:YA:2164:C:C6	2.50	0.47
26:YB:44:G:H1'	26:YB:47:C:N4	2.29	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.43	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.43	0.47
1:QA:164:U:H2'	1:QA:165:C:C6	2.49	0.47
1:QA:559:A:H5''	1:QA:560:U:H3'	1.96	0.47
1:QA:728:A:C6	1:QA:729:A:C6	3.03	0.47
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.45	0.47
1:QA:1342:C:O2'	9:QI:124:GLN:HA	2.14	0.47
1:QA:1386:G:C2	1:QA:1387:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.13	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
25:RA:26:G:H1'	25:RA:514:A:H61	1.79	0.47
25:RA:103:A:OP2	25:RA:103:A:C8	2.67	0.47
25:RA:516:C:O2'	25:RA:517:C:H5'	2.14	0.47
25:RA:1054:A:N6	25:RA:1055:G:C6	2.82	0.47
25:RA:1328:G:H2'	25:RA:1330:C:C5	2.50	0.47
25:RA:1468:C:H2'	25:RA:1469:A:H8	1.78	0.47
25:RA:1889:A:O2'	25:RA:2087:G:H5'	2.15	0.47
25:RA:2531:A:H4'	31:RH:157:TYR:CD2	2.50	0.47
32:RI:133:HIS:HB2	32:RI:134:PRO:CD	2.45	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
41:RV:2:PHE:CD1	41:RV:2:PHE:C	2.88	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.47
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.78	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
55:R9:1:MET:SD	55:R9:31:LYS:O	2.72	0.47
1:XA:722:A:H2'	1:XA:724:G:C8	2.50	0.47
1:XA:857:C:H2'	1:XA:858:G:O4'	2.14	0.47
1:XA:1220:G:H21	19:XS:54:GLY:CA	2.28	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.63	0.47
2:XB:224:GLN:HA	2:XB:229:VAL:HG23	1.97	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
25:YA:463:G:C6	25:YA:467:G:C6	3.03	0.47
25:YA:679:C:H2'	25:YA:680:G:C8	2.49	0.47
25:YA:1034:G:C6	25:YA:1035:U:C4	3.02	0.47
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.15	0.47
25:YA:2092:U:H4'	25:YA:2093:G:O5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2243:U:O2'	25:YA:2244:U:H5'	2.15	0.47
25:YA:2601:C:H2'	25:YA:2602:A:OP2	2.14	0.47
25:YA:2675:A:OP1	34:YO:31:LYS:HB2	2.14	0.47
25:YA:2770:G:H5''	25:YA:2771:C:OP2	2.15	0.47
25:YA:2871:C:H5''	25:YA:2872:G:OP1	2.14	0.47
26:YB:82:G:C4	26:YB:83:G:C8	3.03	0.47
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
35:YP:147:LEU:N	35:YP:147:LEU:HD22	2.29	0.47
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.14	0.47
1:QA:78:G:C2	1:QA:79:G:H1'	2.50	0.47
1:QA:116:A:H8	1:QA:116:A:O5'	1.98	0.47
1:QA:181:G:HO2'	1:QA:182:U:C5'	2.27	0.47
1:QA:502:G:C2	1:QA:503:C:C2	3.03	0.47
1:QA:600:C:H2'	1:QA:601:C:H6	1.79	0.47
1:QA:685:G:N2	1:QA:686:U:C4	2.83	0.47
1:QA:757:U:O2'	1:QA:879:C:H1'	2.14	0.47
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.14	0.47
1:QA:763:G:H2'	1:QA:764:C:H6	1.80	0.47
1:QA:1068:G:N7	1:QA:1094:G:C8	2.83	0.47
1:QA:1158:C:C2	1:QA:1160:G:C8	3.03	0.47
1:QA:1237:C:OP1	1:QA:1238:A:H1'	2.15	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.30	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.47
14:QN:36:PHE:C	14:QN:36:PHE:CD1	2.88	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
25:RA:120:U:H4'	25:RA:121:G:C5'	2.45	0.47
25:RA:244:A:H2'	25:RA:245:G:O4'	2.15	0.47
25:RA:300:A:OP1	44:RY:84:ARG:NH2	2.47	0.47
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.28	0.47
25:RA:459:U:H5''	53:R7:40:TRP:CD2	2.50	0.47
25:RA:483:A:O5'	25:RA:484:C:H5	1.98	0.47
25:RA:656:G:H2'	25:RA:657:U:O4'	2.14	0.47
25:RA:796:C:H2'	25:RA:797:C:C6	2.50	0.47
25:RA:852:G:H2'	25:RA:853:G:C8	2.49	0.47
25:RA:863:A:O2'	25:RA:864:G:H5'	2.14	0.47
25:RA:968:G:C2	25:RA:969:U:C2	3.03	0.47
25:RA:1045:A:H4'	25:RA:1046:A:C5'	2.45	0.47
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.14	0.47
25:RA:1222:C:C2	25:RA:1229(A):G:C2	3.03	0.47
25:RA:1335:U:OP2	43:RX:65:ARG:NH2	2.47	0.47
25:RA:1346:G:C6	25:RA:1347:G:N7	2.83	0.47
25:RA:1630:G:N2	25:RA:1636:C:O2	2.40	0.47
25:RA:1652:A:N7	25:RA:1653:G:C6	2.83	0.47
25:RA:2284:C:C5	52:R6:27:LYS:HE2	2.49	0.47
25:RA:2380:C:C4	25:RA:2381:C:C4	3.03	0.47
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.49	0.47
25:RA:2734:A:N6	25:RA:2770:G:O2'	2.32	0.47
25:RA:2832:U:O2'	25:RA:2833:G:P	2.73	0.47
25:RA:2845:G:O2'	25:RA:2846:G:H5'	2.14	0.47
26:RB:21:G:H2'	26:RB:22:U:O4'	2.15	0.47
26:RB:47:C:H5'	26:RB:48:A:OP2	2.15	0.47
26:RB:49:C:H2'	26:RB:50:G:C8	2.49	0.47
26:RB:59:A:H2'	26:RB:60:C:O4'	2.14	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.80	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.14	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
36:RQ:83:MET:H	46:R0:7:LEU:HD12	1.78	0.47
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.29	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.77	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
1:XA:509:A:C2	1:XA:510:A:C2	3.02	0.47
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.61	0.47
1:XA:936:C:O2	1:XA:1382:C:N4	2.47	0.47
1:XA:1020:U:H2'	1:XA:1021:G:H8	1.80	0.47
1:XA:1128:C:C2	1:XA:1144:G:N2	2.83	0.47
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.29	0.47
1:XA:1441:G:H5''	1:XA:1442:G:H5'	1.97	0.47
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
3:XC:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.96	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.47
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.47
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.27	0.47
25:YA:271(B):G:HO2'	25:YA:271(C):U:P	2.37	0.47
25:YA:284:U:H2'	25:YA:285:C:C6	2.49	0.47
25:YA:576:U:OP1	25:YA:2503:A:OP1	2.32	0.47
25:YA:612:G:N3	25:YA:613:U:O2	2.47	0.47
25:YA:755:C:H2'	25:YA:756:C:C6	2.49	0.47
25:YA:823:G:C6	25:YA:835:A:N1	2.83	0.47
25:YA:1048:A:C5	25:YA:1111:A:C2	3.03	0.47
25:YA:1270:C:H5''	25:YA:1271:G:C5'	2.45	0.47
25:YA:1292:U:H2'	25:YA:1293:C:H6	1.77	0.47
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.15	0.47
25:YA:1460:A:H4'	25:YA:1461:G:OP2	2.14	0.47
25:YA:1483:G:N2	25:YA:1507:A:H1'	2.30	0.47
25:YA:1817:G:OP1	27:YD:88:ARG:NH2	2.46	0.47
25:YA:1900:A:N1	25:YA:1970:A:C6	2.83	0.47
25:YA:2210:G:H5'	25:YA:2211:G:C4	2.49	0.47
25:YA:2352:A:H2'	25:YA:2353:G:O4'	2.14	0.47
25:YA:2533:A:H2'	25:YA:2534:A:O4'	2.14	0.47
26:YB:11:C:OP1	46:Y0:72:ARG:HD2	2.15	0.47
26:YB:78:A:C2	26:YB:99:A:C4	3.03	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.77	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
32:YI:11:ASN:O	32:YI:12:LEU:HB2	2.15	0.47
33:YN:63:THR:HG22	33:YN:66:LYS:HZ1	1.79	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.47
40:YU:104:GLN:H	40:YU:104:GLN:CD	2.16	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.14	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:CG1	2.63	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.35	0.47
1:QA:619:U:O2	4:QD:135:LEU:HD23	2.15	0.47
1:QA:955:U:H2'	1:QA:956:U:C6	2.48	0.47
1:QA:1076:C:C2	1:QA:1082:G:N2	2.82	0.47
1:QA:1228:C:OP1	13:QM:114:ARG:HA	2.15	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
25:RA:826:U:H2'	25:RA:828:U:O4'	2.15	0.47
25:RA:1042:G:H2'	25:RA:1043:C:C6	2.50	0.47
25:RA:1139:G:O2'	25:RA:1143:A:N1	2.29	0.47
25:RA:1204:A:C2	25:RA:1241:A:C2	3.02	0.47
25:RA:1285:G:N2	25:RA:1328:G:H5''	2.29	0.47
25:RA:1286:A:HO2'	25:RA:1288:U:P	2.31	0.47
25:RA:1301:A:H2'	25:RA:1301:A:N3	2.30	0.47
25:RA:1342:A:C6	25:RA:1345:C:N3	2.82	0.47
25:RA:1910:G:H1	25:RA:1920:C:H42	1.63	0.47
25:RA:2555:U:O2	56:Z6:74:C:C6	2.68	0.47
25:RA:2558:C:H2'	25:RA:2559:C:O4'	2.15	0.47
26:RB:24:G:H4'	26:RB:25:A:O5'	2.15	0.47
26:RB:44:G:N2	26:RB:48:A:N3	2.63	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.47
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.45	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.28	0.47
1:XA:313:A:H2'	1:XA:314:C:H6	1.80	0.47
1:XA:902:G:H2'	1:XA:903:G:C8	2.46	0.47
1:XA:1296:C:H1'	1:XA:1302:U:C5	2.50	0.47
1:XA:1305:G:N2	1:XA:1331:G:C4	2.83	0.47
1:XA:1352:C:N3	1:XA:1370:G:N2	2.52	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.36	0.47
5:XE:13:ILE:HG22	5:XE:13:ILE:O	2.14	0.47
14:YN:41:ARG:NE	14:YN:42:ILE:HG13	2.29	0.47
19:XS:9:VAL:HG12	50:Y4:66:SER:O	2.14	0.47
25:YA:557:U:H2'	25:YA:558:G:H8	1.80	0.47
25:YA:680:G:H1	25:YA:797:C:H42	1.61	0.47
25:YA:1534:G:H2'	25:YA:1534:G:N3	2.30	0.47
25:YA:1899:G:N2	25:YA:1902:C:C5	2.83	0.47
25:YA:2056:G:N2	25:YA:2057:A:C4	2.83	0.47
25:YA:2335:A:C8	25:YA:2337:G:C5	3.03	0.47
25:YA:2756:U:H5''	55:Y9:19:ARG:HB3	1.97	0.47
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.48	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.15	0.47
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.97	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
1:QA:973:G:N3	10:QJ:55:LYS:HE2	2.30	0.47
1:QA:976:G:H5''	1:QA:1358:U:O2'	2.15	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.24	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.47
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.33	0.47
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
14:QN:41:ARG:CG	14:QN:41:ARG:HH11	2.28	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.47
22:QV:76:A:C2	25:RA:2450:A:H2'	2.50	0.47
25:RA:47:C:O2	25:RA:178:G:N2	2.30	0.47
25:RA:217:G:H2'	25:RA:218:A:O4'	2.14	0.47
25:RA:413:C:H6	25:RA:413:C:O5'	1.98	0.47
25:RA:467:G:H8	25:RA:467:G:O5'	1.98	0.47
25:RA:520:G:H2'	25:RA:521:G:C8	2.50	0.47
25:RA:804:A:H2'	25:RA:806:C:N4	2.29	0.47
25:RA:1009:A:OP2	25:RA:1010:A:OP2	2.32	0.47
25:RA:1210:A:O5'	25:RA:1212:G:H5'	2.15	0.47
25:RA:1281:G:C5	25:RA:1282:U:C5	3.03	0.47
25:RA:1543:A:C2	25:RA:1545:A:C8	3.03	0.47
25:RA:2549:G:N2	25:RA:2560:C:C2	2.82	0.47
25:RA:2626:C:N4	25:RA:2777:G:H1	2.10	0.47
25:RA:2842:G:N2	25:RA:2876:G:H1'	2.30	0.47
25:RA:2881:C:H2'	25:RA:2882:A:C8	2.50	0.47
25:RA:2887:U:O2'	25:RA:2888:C:H5'	2.14	0.47
26:RB:45:A:C2'	26:RB:46:A:H5'	2.45	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
28:RE:17:ASP:N	28:RE:17:ASP:OD2	2.46	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.97	0.47
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.14	0.47
32:RI:69:LYS:O	32:RI:73:GLU:HB2	2.15	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.14	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
45:RZ:35:ARG:HH11	45:RZ:35:ARG:HB3	1.79	0.47
45:RZ:165:VAL:HG12	45:RZ:166:SER:N	2.30	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.47
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:16:A:N1	1:XA:919:A:H2	2.13	0.47
1:XA:345:C:H4'	1:XA:346:G:O5'	2.15	0.47
1:XA:433:C:H6	1:XA:433:C:O5'	1.97	0.47
1:XA:745:C:OP1	1:XA:851:G:O2'	2.27	0.47
1:XA:1122:U:C4	1:XA:1123:A:N7	2.83	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.47
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.47
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.47
25:YA:902:C:O2'	25:YA:903:C:H5'	2.15	0.47
25:YA:2055:C:H4'	25:YA:2056:G:H5''	1.97	0.47
25:YA:2469:A:H2	25:YA:2481:G:N2	2.10	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.47
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.79	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
36:YQ:80:GLU:HG3	36:YQ:81:VAL:N	2.27	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.48	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.47
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.47
1:QA:20:U:H1'	1:QA:916:G:N2	2.29	0.47
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.50	0.47
1:QA:1190:G:P	3:QC:5:ILE:HG23	2.55	0.47
1:QA:1362:C:H2'	1:QA:1362(A):C:H5''	1.96	0.47
1:QA:1401:G:N2	1:QA:1501:C:O2	2.43	0.47
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.47
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.47
13:QM:77:ASN:CG	50:R4:71:ARG:CZ	2.83	0.47
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
25:RA:76:C:H1'	48:R2:62:THR:HG21	1.96	0.47
25:RA:134:C:H2'	25:RA:135:G:C8	2.50	0.47
25:RA:322:A:C5	25:RA:340:A:C2	3.02	0.47
25:RA:971:C:H2'	25:RA:972:G:O4'	2.15	0.47
25:RA:1614:A:N1	42:RW:91:GLY:HA2	2.29	0.47
25:RA:1678:G:N2	25:RA:1989:G:N2	2.60	0.47
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.79	0.47
25:RA:2123:G:N2	25:RA:2176:A:H1'	2.30	0.47
26:RB:36:C:H42	26:RB:49:C:H1'	1.80	0.47
26:RB:46:A:H2'	26:RB:47:C:H6	1.79	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.47
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.47
32:RI:78:THR:N	32:RI:104:GLN:HE22	2.05	0.47
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.14	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.30	0.47
1:XA:224:C:H2'	1:XA:225:C:H6	1.77	0.47
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.32	0.47
1:XA:667:G:H8	1:XA:667:G:O5'	1.98	0.47
1:XA:778:G:H8	1:XA:778:G:O5'	1.98	0.47
1:XA:1094:G:HO2'	1:XA:1095:U:P	2.34	0.47
1:XA:1205:U:H5'	3:XC:190:ARG:NH2	2.30	0.47
1:XA:1309:G:C6	1:XA:1329:A:C2	3.02	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
4:XD:110:PHE:HD1	4:XD:110:PHE:H	1.62	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.47
25:YA:270(I):G:N3	25:YA:270(R):G:N2	2.63	0.47
25:YA:313:C:O5'	25:YA:313:C:H6	1.98	0.47
25:YA:980:A:C6	25:YA:981:A:N1	2.83	0.47
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	2.15	0.47
25:YA:1449:A:C2	25:YA:1530:G:H1'	2.50	0.47
25:YA:1525:G:H2'	25:YA:1526:G:C8	2.50	0.47
25:YA:1769:G:C6	25:YA:1984:G:C6	3.03	0.47
25:YA:1803:A:O2'	27:YD:259:THR:HG21	2.15	0.47
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.15	0.47
25:YA:2437:U:O2'	25:YA:2438:U:H5'	2.15	0.47
25:YA:2439:A:O2'	25:YA:2440:C:OP2	2.29	0.47
25:YA:2525:G:C2	25:YA:2539:C:C2	3.03	0.47
25:YA:2576:G:OP1	25:YA:2577:A:OP1	2.32	0.47
25:YA:2688:U:C5	25:YA:2720:U:OP2	2.67	0.47
25:YA:2857:G:N1	25:YA:2861:G:C6	2.83	0.47
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.47
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.47
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.15	0.47
31:YH:94:TYR:N	31:YH:94:TYR:CD1	2.82	0.47
32:YI:120:ILE:HD11	32:YI:126:TYR:CZ	2.50	0.47
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.47
35:YP:12:ALA:C	35:YP:14:LYS:H	2.16	0.47
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.47
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.47
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.15	0.47
1:QA:56:U:H4'	32:YI:82:ARG:HH12	1.79	0.46
1:QA:73:G:C2	1:QA:74:C:C2	3.04	0.46
1:QA:252:U:C4	1:QA:253:U:O4	2.68	0.46
1:QA:410:G:H5''	1:QA:411:A:OP1	2.15	0.46
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.49	0.46
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.49	0.46
1:QA:1523:G:H2'	1:QA:1524:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
15:QO:82:ILE:O	15:QO:86:GLY:N	2.49	0.46
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.46
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.46
25:RA:154:G:C2	25:RA:173:G:C2	3.03	0.46
25:RA:270(S):G:C2'	25:RA:270(T):G:H5'	2.45	0.46
25:RA:571:A:C5	25:RA:575:A:N7	2.83	0.46
25:RA:733:G:O6	25:RA:761:A:C8	2.68	0.46
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.30	0.46
25:RA:1605:C:H5'	25:RA:1610:A:N6	2.30	0.46
25:RA:2380:C:H2'	25:RA:2381:C:O4'	2.16	0.46
25:RA:2590:A:O2'	25:RA:2591:C:H5'	2.14	0.46
26:RB:43:C:H1'	30:RG:93:THR:O	2.15	0.46
26:RB:80:U:O2'	26:RB:81:G:H5''	2.15	0.46
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.46
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.46
27:RD:183:ARG:CG	27:RD:183:ARG:NH1	2.69	0.46
28:RE:47:VAL:O	28:RE:48:GLN:C	2.51	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.48	0.46
28:RE:188:VAL:O	28:RE:188:VAL:HG13	2.15	0.46
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.46
32:RI:11:ASN:O	32:RI:12:LEU:HB2	2.15	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
37:RR:78:LYS:O	37:RR:78:LYS:HG2	2.15	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.46
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.46
55:R9:19:ARG:NH2	55:R9:26:ILE:HD11	2.30	0.46
1:XA:338:A:C6	1:XA:339:C:C4	3.03	0.46
1:XA:342:C:C2	1:XA:348:G:N2	2.83	0.46
1:XA:1187:G:C4	1:XA:1188:A:C8	3.03	0.46
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.50	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
13:XM:119:GLY:HA3	22:XV:29:G:OP1	2.15	0.46
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.46
25:YA:754:C:H2'	25:YA:755:C:C6	2.51	0.46
25:YA:851:U:H5'	49:Y3:49:LYS:HD2	1.97	0.46
25:YA:928:G:H5''	25:YA:929:G:OP2	2.14	0.46
25:YA:1021:A:H62	25:YA:1141:U:H3	1.63	0.46
25:YA:1471:A:C8	25:YA:1521:G:N2	2.83	0.46
25:YA:2084:C:O2'	25:YA:2085:C:H5'	2.15	0.46
25:YA:2293:C:H42	25:YA:2339:G:H1	1.63	0.46
25:YA:2824:C:C4	25:YA:2825:C:C4	3.03	0.46
25:YA:2869:G:H2'	25:YA:2870:C:O4'	2.15	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.16	0.46
33:YN:35:ARG:HG3	33:YN:35:ARG:O	2.16	0.46
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.31	0.46
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.46
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.46
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.46
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.13	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
1:QA:540:G:H2'	1:QA:541:G:O4'	2.15	0.46
1:QA:618:C:N4	1:QA:621:A:N7	2.62	0.46
1:QA:953:G:C6	1:QA:954:G:C4	3.04	0.46
1:QA:980:C:H3'	1:QA:981:U:H6	1.80	0.46
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.46
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.33	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
25:RA:224:G:C2	25:RA:225:A:C4	3.03	0.46
25:RA:612:G:C2	25:RA:617:G:C5	3.03	0.46
25:RA:1365:A:OP2	47:R1:3:LYS:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1542:G:O6	25:RA:1543:A:C6	2.65	0.46
25:RA:1662:C:O2'	25:RA:2687:U:OP1	2.29	0.46
25:RA:1846:G:H5'	25:RA:1847:A:OP2	2.15	0.46
25:RA:2071:A:H2	25:RA:2441:C:N3	2.12	0.46
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.50	0.46
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.15	0.46
25:RA:2538:C:H2'	25:RA:2539:C:C6	2.50	0.46
25:RA:2711:A:H5''	25:RA:2712:U:H5'	1.97	0.46
26:RB:33:G:O2'	26:RB:34:U:H5'	2.16	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
31:RH:4:ILE:H	31:RH:4:ILE:CD1	2.25	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.78	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.46
41:RV:30:GLY:O	41:RV:31:ALA:O	2.34	0.46
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.15	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
1:XA:44:G:H2'	1:XA:45:U:O4'	2.15	0.46
1:XA:655:A:C2	1:XA:754:C:C4	3.04	0.46
1:XA:977:A:H1'	1:XA:982:U:O4	2.15	0.46
1:XA:986:A:H2'	1:XA:987:G:C8	2.50	0.46
1:XA:1124:G:OP2	1:XA:1124:G:C8	2.67	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.15	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.79	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
9:XI:112:LYS:HD3	9:XI:112:LYS:C	2.35	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
25:YA:24:G:C5	25:YA:25:U:C5	3.03	0.46
25:YA:83:G:O2'	25:YA:84:A:P	2.74	0.46
25:YA:273:G:C2	25:YA:273(A):G:C8	3.03	0.46
25:YA:531:C:H4'	25:YA:532:A:H5''	1.97	0.46
25:YA:1004:C:H5''	25:YA:1005:C:OP1	2.15	0.46
25:YA:1104:C:H2'	25:YA:1105:U:C6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1203:G:N1	25:YA:1241:A:OP2	2.44	0.46
25:YA:1319:G:O6	25:YA:1333:C:N4	2.46	0.46
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.48	0.46
26:YB:77:U:P	45:YZ:19:ARG:HH22	2.38	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.46
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.46
29:YF:46:ARG:CG	29:YF:46:ARG:NH1	2.71	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.79	0.46
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.80	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.79	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.98	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.97	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.97	0.46
47:Y1:76:ARG:H	47:Y1:76:ARG:CD	2.28	0.46
1:QA:509:A:H3'	1:QA:509:A:C8	2.51	0.46
1:QA:513:C:H42	1:QA:538:G:H1	1.62	0.46
1:QA:540:G:H2'	1:QA:541:G:H8	1.77	0.46
1:QA:715:A:H2'	1:QA:716:A:C8	2.51	0.46
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.31	0.46
1:QA:1054:C:P	1:QA:1197:G:OP2	2.67	0.46
1:QA:1122:U:C4	1:QA:1123:A:N7	2.83	0.46
1:QA:1154:G:N3	1:QA:1155:G:C8	2.84	0.46
1:QA:1321:C:N4	1:QA:1322:C:N3	2.64	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.19	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.47	0.46
25:RA:309:G:O3'	44:RY:18:GLY:HA2	2.15	0.46
25:RA:587:C:C5	25:RA:671:C:H1'	2.50	0.46
25:RA:869:G:N2	25:RA:908:C:O2	2.48	0.46
25:RA:1749:A:H2'	25:RA:1750:G:O4'	2.15	0.46
25:RA:1777:U:O2'	25:RA:1778:U:H5'	2.15	0.46
25:RA:2197:U:H1'	25:RA:2198:A:N7	2.30	0.46
25:RA:2327:A:N6	25:RA:2387:U:O4	2.48	0.46
25:RA:2419:U:O4	54:R8:30:ARG:CZ	2.63	0.46
26:RB:48:A:H2'	26:RB:49:C:C6	2.50	0.46
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
43:RX:12:VAL:O	43:RX:12:VAL:HG13	2.15	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
45:RZ:43:GLU:O	45:RZ:47:VAL:HG23	2.15	0.46
48:R2:7:ARG:HG3	48:R2:7:ARG:NH1	2.25	0.46
1:XA:60:A:P	1:XA:60:A:H8	2.37	0.46
1:XA:278:G:N2	17:XQ:95:TYR:HB3	2.30	0.46
1:XA:735:C:H2'	1:XA:736:C:C6	2.50	0.46
1:XA:980:C:H5'	1:XA:981:U:OP2	2.16	0.46
1:XA:987:G:H1	1:XA:1218:C:N4	2.08	0.46
1:XA:1096:C:H2'	1:XA:1097:C:C6	2.49	0.46
1:XA:1112:C:O2	3:XC:178:LEU:HB2	2.15	0.46
1:XA:1150:U:O2	10:XJ:39:PRO:HG2	2.16	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
25:YA:270(S):G:H8	25:YA:270(S):G:O5'	1.96	0.46
25:YA:282:A:C8	25:YA:359:A:C6	3.04	0.46
25:YA:377:C:H2'	25:YA:378:C:C6	2.50	0.46
25:YA:971:C:N4	25:YA:972:G:C2	2.84	0.46
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.44	0.46
25:YA:1568:G:OP1	27:YD:61:LEU:N	2.48	0.46
25:YA:1605:C:C5	25:YA:1606:G:C5	3.03	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
32:YI:53:ALA:O	32:YI:56:LYS:HG3	2.14	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.63	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.96	0.46
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.46
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.46
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
55:Y9:19:ARG:NH2	55:Y9:26:ILE:HD11	2.31	0.46
1:QA:230:G:C2	1:QA:231:G:C4	3.04	0.46
1:QA:451:A:H1'	1:QA:452:A:C8	2.51	0.46
1:QA:474:G:H5''	16:QP:81:ARG:HE	1.81	0.46
1:QA:590:C:H2'	1:QA:591:U:C6	2.49	0.46
1:QA:1415:G:C6	1:QA:1486:G:C6	3.04	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
25:RA:195:A:H2'	25:RA:198:C:N4	2.30	0.46
25:RA:219:G:O2'	25:RA:220:G:H5'	2.16	0.46
25:RA:966:G:H2'	25:RA:967:C:C6	2.50	0.46
25:RA:1135:C:N4	25:RA:1139:G:C6	2.84	0.46
25:RA:1309:G:HO2'	25:RA:1611:C:HO2'	1.60	0.46
25:RA:2156:G:C6	25:RA:2157:G:N2	2.83	0.46
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.39	0.46
25:RA:2320:A:H2'	25:RA:2320:A:N3	2.31	0.46
25:RA:2667:C:O2	31:RH:109:PHE:HB3	2.15	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.46
32:RI:48:GLU:O	32:RI:51:ILE:HB	2.15	0.46
32:RI:112:LYS:H	32:RI:112:LYS:HG2	1.33	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
37:RR:29:LEU:N	37:RR:29:LEU:CD1	2.79	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.48	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.16	0.46
44:RY:35:TYR:CD1	44:RY:35:TYR:O	2.69	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.28	0.46
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
1:XA:352:C:H4'	1:XA:354:G:OP1	2.15	0.46
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.30	0.46
1:XA:1206:G:C5	1:XA:1207:G:N7	2.84	0.46
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.80	0.46
1:XA:1446:A:O2'	1:XA:1447:G:O4'	2.34	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.46
4:XD:135:LEU:O	4:XD:137:SER:N	2.48	0.46
6:XF:100:ASN:HD22	6:XF:100:ASN:HA	1.48	0.46
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
12:XL:43:VAL:HG13	12:XL:55:VAL:CG2	2.45	0.46
14:XN:36:PHE:CD1	14:XN:36:PHE:C	2.88	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.95	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46
25:YA:65:C:H5'	43:YX:71:GLY:HA3	1.96	0.46
25:YA:846:C:C4	25:YA:930:U:C4	3.04	0.46
25:YA:1166:C:N4	25:YA:1183:G:H1	2.11	0.46
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.96	0.46
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.51	0.46
25:YA:1374:G:C6	25:YA:1375:C:N3	2.83	0.46
25:YA:1608:A:C8	25:YA:1611:C:N4	2.83	0.46
25:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.30	0.46
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.83	0.46
25:YA:2822:G:H2'	25:YA:2823:A:H5''	1.97	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
27:YD:198:ASN:C	27:YD:198:ASN:ND2	2.69	0.46
28:YE:54:GLN:HE21	28:YE:54:GLN:CA	2.27	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:144:GLU:OE1	35:YP:144:GLU:N	2.48	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
1:QA:564:C:C4	1:QA:565:U:C4	3.04	0.46
1:QA:579:G:C6	1:QA:580:U:C4	3.04	0.46
1:QA:688:G:H2'	1:QA:689:C:H6	1.80	0.46
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.79	0.46
1:QA:1310:G:OP1	13:QM:77:ASN:ND2	2.46	0.46
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.18	0.46
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.81	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	2.28	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.30	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.46
25:RA:588:U:O4	25:RA:670:A:H1'	2.16	0.46
25:RA:1204:A:C2	25:RA:1206:G:C2	3.04	0.46
25:RA:1818:U:H2'	27:RD:157:ARG:HG3	1.98	0.46
25:RA:1988:C:H2'	25:RA:1989:G:O4'	2.16	0.46
25:RA:2703:C:H2'	25:RA:2703:C:O2	2.14	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.15	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.31	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.46	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
1:XA:51:A:N7	1:XA:114:U:O2'	2.44	0.46
1:XA:437:U:H2'	1:XA:438:G:O4'	2.15	0.46
1:XA:468:A:O3'	16:XP:80:PHE:O	2.33	0.46
1:XA:833:U:H3	1:XA:853:G:H1	1.64	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
25:YA:682:G:C6	25:YA:683:C:C4	3.03	0.46
25:YA:1180:C:H5'	25:YA:1181:C:OP2	2.15	0.46
25:YA:1862:G:C2	25:YA:1863:G:N7	2.84	0.46
25:YA:2031:A:N7	25:YA:2498:C:H1'	2.30	0.46
25:YA:2073:C:H2'	25:YA:2074:U:C6	2.47	0.46
25:YA:2301:C:C4	25:YA:2302:G:N7	2.84	0.46
25:YA:2532:G:H4'	25:YA:2657:A:C2	2.50	0.46
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.14	0.46
26:YB:111:U:H2'	26:YB:112:G:C8	2.51	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
27:YD:48:ARG:HG3	27:YD:48:ARG:NH1	2.31	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
31:YH:53:GLU:OE1	31:YH:53:GLU:HA	2.16	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.97	0.46
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
35:YP:23:PRO:HG2	35:YP:23:PRO:O	2.15	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.15	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.54	0.46
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.46
1:QA:429:U:C4'	1:QA:430:A:H5''	2.45	0.46
1:QA:1195:C:N3	1:QA:1197:G:C8	2.84	0.46
1:QA:1223:C:OP1	19:QS:78:ARG:NH1	2.48	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.68	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
20:QT:26:ASN:N	20:QT:26:ASN:ND2	2.62	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
25:RA:26:G:C6	25:RA:27:G:N1	2.84	0.46
25:RA:145:G:H2'	25:RA:146:G:C8	2.51	0.46
25:RA:256:A:C2	25:RA:257:A:C4	3.03	0.46
25:RA:345:A:C2'	25:RA:347:A:H62	2.29	0.46
25:RA:1461:G:H2'	25:RA:1462:C:H6	1.79	0.46
25:RA:1797:C:C4	25:RA:1798:U:C5	3.04	0.46
25:RA:2197:U:O2'	25:RA:2198:A:H5''	2.16	0.46
25:RA:2211:G:N3	25:RA:2211:G:H2'	2.31	0.46
26:RB:29:A:P	38:RS:32:LEU:HG	2.56	0.46
26:RB:116:G:H4'	38:RS:54:LEU:O	2.16	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
27:RD:136:ILE:HD12	27:RD:136:ILE:N	2.30	0.46
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.16	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.97	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
46:R0:43:THR:O	46:R0:43:THR:HG23	2.16	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:156:G:H1	1:XA:165:C:H42	1.63	0.46
1:XA:890:G:O2'	1:XA:906:G:N1	2.47	0.46
1:XA:948:C:C5	13:XM:106:ASN:ND2	2.78	0.46
1:XA:1157:A:N1	1:XA:1180:A:C5	2.84	0.46
1:XA:1178:G:C8	1:XA:1180:A:OP2	2.69	0.46
1:XA:1492:A:OP1	12:XL:47:LYS:HG3	2.16	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.79	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
5:XE:93:PRO:HG3	8:XH:105:ARG:HG3	1.98	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
19:XS:5:LEU:CD2	50:Y4:66:SER:HB2	2.45	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
24:XY:40:G:H2'	24:XY:41:A:C8	2.51	0.46
25:YA:195:A:H5''	35:YP:46:LYS:HZ3	1.81	0.46
25:YA:348:G:C2	25:YA:349:G:C8	3.03	0.46
25:YA:1587:A:H2'	25:YA:1588:C:C6	2.51	0.46
25:YA:1843:C:N4	25:YA:1844:C:N4	2.64	0.46
25:YA:2024:G:C6	25:YA:2025:C:C4	3.04	0.46
25:YA:2063:C:C4	25:YA:2064:C:C5	3.04	0.46
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.16	0.46
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.28	0.46
25:YA:2389:G:H5''	25:YA:2390:U:C5'	2.45	0.46
25:YA:2592:G:C6	25:YA:2593:U:N3	2.84	0.46
25:YA:2661:G:H2'	25:YA:2662:A:C8	2.51	0.46
25:YA:2674:G:H2'	25:YA:2675:A:C8	2.51	0.46
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.16	0.46
26:YB:95:U:H2'	26:YB:96:G:H8	1.79	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.80	0.46
36:YQ:87:LYS:O	36:YQ:87:LYS:HG2	2.15	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.16	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46
1:QA:156:G:N2	1:QA:165:C:N3	2.57	0.46
1:QA:701:C:O2'	1:QA:702:A:OP2	2.29	0.46
1:QA:1349:A:H2'	1:QA:1350:A:H8	1.81	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
3:QC:124:ILE:C	3:QC:126:ARG:H	2.19	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
22:QV:49:G:O6	22:QV:65:C:N4	2.49	0.46
25:RA:78:A:H2'	25:RA:79:G:H8	1.81	0.46
25:RA:140:A:C8	25:RA:1408:C:O2'	2.66	0.46
25:RA:186:G:H2'	25:RA:187:G:H8	1.81	0.46
25:RA:250:G:H2'	25:RA:251:A:C8	2.51	0.46
25:RA:451:C:H4'	29:RF:52:LYS:HZ1	1.79	0.46
25:RA:462:C:C2	25:RA:463:G:C8	3.03	0.46
25:RA:787:U:H5''	25:RA:788:A:H5'	1.97	0.46
25:RA:1386:C:C5'	25:RA:1396:U:H5	2.28	0.46
25:RA:1632:A:N7	25:RA:1633:G:C6	2.83	0.46
25:RA:1638:C:H2'	25:RA:1639:U:O4'	2.15	0.46
25:RA:1764:G:H4'	25:RA:1764:G:OP2	2.16	0.46
25:RA:2100:G:H1	25:RA:2189:U:H3	1.63	0.46
25:RA:2376:A:N6	38:RS:89:ARG:HH11	2.12	0.46
25:RA:2426:A:H3'	25:RA:2427:C:H5'	1.98	0.46
25:RA:2801:A:H8	25:RA:2801:A:O5'	1.98	0.46
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.45	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.96	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
35:RP:6:LEU:N	35:RP:6:LEU:HD22	2.31	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
43:RX:35:THR:O	43:RX:35:THR:HG23	2.16	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
45:RZ:48:PHE:CZ	45:RZ:52:SER:HA	2.51	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.46
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.16	0.46
1:XA:1127:G:N2	1:XA:1145:C:C2	2.82	0.46
4:XD:146:ILE:N	4:XD:146:ILE:CD1	2.73	0.46
8:XH:49:GLU:HG3	8:XH:49:GLU:O	2.14	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.15	0.46
25:YA:78:A:H2'	25:YA:79:G:C8	2.50	0.46
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.30	0.46
25:YA:524:U:H2'	25:YA:525:U:C6	2.51	0.46
25:YA:841:A:H2'	25:YA:842:G:C8	2.51	0.46
25:YA:937:U:H2'	25:YA:938:G:O4'	2.15	0.46
25:YA:1174:A:N3	25:YA:1174:A:H2'	2.31	0.46
25:YA:1621:U:HO2'	25:YA:1622:G:H8	1.64	0.46
25:YA:2171:A:O2'	25:YA:2172:U:O5'	2.34	0.46
25:YA:2209:C:O2	25:YA:2216:G:C2	2.68	0.46
25:YA:2277:G:H5''	36:YQ:85:LYS:CB	2.46	0.46
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.15	0.46
25:YA:2682:U:O4	25:YA:2728:U:H1'	2.16	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.41	0.46
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
41:YV:36:PRO:HA	41:YV:56:SER:HG	1.81	0.46
45:YZ:73:GLN:HB3	45:YZ:87:ASP:OD1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46
1:QA:458:C:C2	1:QA:464:G:C8	3.04	0.46
1:QA:784:C:H4'	25:RA:1837:C:OP1	2.16	0.46
1:QA:1510:U:O2	1:QA:1526:G:C2	2.68	0.46
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.46
4:QD:187:ARG:HH11	4:QD:187:ARG:HG2	1.81	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.16	0.46
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.46
25:RA:271:G:H2'	25:RA:272:G:H8	1.81	0.46
25:RA:807:U:H2'	25:RA:808:G:H8	1.80	0.46
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.51	0.46
25:RA:2128:C:O2'	25:RA:2129:C:H5'	2.16	0.46
25:RA:2226:C:H2'	25:RA:2227:A:O4'	2.16	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.40	0.46
32:RI:13:GLY:HA3	32:RI:17:GLN:OE1	2.16	0.46
34:RO:86:ILE:H	34:RO:86:ILE:CD1	2.28	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
39:RT:58:ASN:HD22	39:RT:58:ASN:N	2.10	0.46
45:RZ:5:LEU:HB3	45:RZ:59:LEU:HA	1.98	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
1:XA:636:U:H2'	1:XA:637:G:H8	1.78	0.46
1:XA:1126:U:C5	1:XA:1127:G:C4	3.04	0.46
1:XA:1314:C:C5	19:XS:4:SER:HB2	2.47	0.46
1:XA:1497:G:C2'	1:XA:1498:U:H5'	2.38	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
25:YA:273:G:N3	25:YA:273(A):G:C8	2.84	0.46
25:YA:696:G:N2	25:YA:697:C:C2	2.84	0.46
25:YA:952:G:P	36:YQ:16:ARG:HH12	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1473:G:H8	25:YA:1473:G:O5'	1.98	0.46
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.81	0.46
25:YA:2236:C:H2'	25:YA:2237:G:O4'	2.15	0.46
25:YA:2439:A:H8	25:YA:2439:A:C5'	2.26	0.46
25:YA:2469:A:H4'	25:YA:2469:A:OP1	2.14	0.46
25:YA:2547:U:H2'	25:YA:2548:G:C8	2.50	0.46
25:YA:2592:G:C6	25:YA:2593:U:C2	3.04	0.46
25:YA:2831:G:O2'	25:YA:2883:A:H2'	2.16	0.46
26:YB:74:U:H2'	26:YB:75:G:O4'	2.16	0.46
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.46
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.51	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
1:QA:46:G:O2'	1:QA:365:U:H1'	2.16	0.46
1:QA:153:C:H6	1:QA:153:C:O5'	1.99	0.46
1:QA:468:A:H1'	16:QP:82:GLN:HE21	1.79	0.46
1:QA:493:G:H2'	1:QA:494:U:C5	2.50	0.46
1:QA:578:C:H1'	1:QA:729:A:H1'	1.98	0.46
1:QA:598:U:H2'	1:QA:599:C:C6	2.50	0.46
1:QA:937:A:C2	1:QA:1379:G:C6	3.03	0.46
1:QA:1061:G:O4'	10:QJ:56:HIS:CD2	2.69	0.46
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.51	0.46
1:QA:1101:A:H4'	1:QA:1102:A:O5'	2.16	0.46
1:QA:1502:A:H2	1:QA:1505:G:H22	1.64	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.19	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.64	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.14	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
25:RA:49:A:H5''	25:RA:51:G:H5'	1.97	0.46
25:RA:452:G:C2	25:RA:458:G:C5	3.04	0.46
25:RA:686:G:N7	53:R7:5:TRP:CH2	2.84	0.46
25:RA:689:A:H2'	25:RA:690:G:C8	2.51	0.46
25:RA:879:G:N3	25:RA:880:G:H1'	2.31	0.46
25:RA:1312:U:H5'	25:RA:1312:U:H6	1.81	0.46
25:RA:1654:A:OP1	37:RR:1:MET:O	2.33	0.46
25:RA:1853:A:N3	25:RA:2233:U:O2'	2.43	0.46
25:RA:1854:A:N1	25:RA:2087:G:O2'	2.36	0.46
25:RA:2298:A:C8	25:RA:2299:G:C8	3.04	0.46
25:RA:2466:C:H5'	55:R9:5:ALA:HB3	1.98	0.46
25:RA:2723:C:O3'	37:RR:1:MET:HE2	2.16	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.31	0.46
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.46
28:RE:47:VAL:O	28:RE:47:VAL:HG23	2.16	0.46
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.98	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.16	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.46
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.36	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.46
46:R0:51:VAL:HG21	46:R0:79:VAL:O	2.16	0.46
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.46
1:XA:385:C:H2'	1:XA:386:C:C6	2.51	0.46
1:XA:503:C:OP2	12:XL:116:SER:HB3	2.16	0.46
1:XA:1145:C:H5'	1:XA:1146:A:OP1	2.16	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.46
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.97	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
25:YA:357:A:H2'	25:YA:358:U:H6	1.81	0.46
25:YA:596:G:C4	25:YA:662:G:N2	2.84	0.46
25:YA:618(A):C:O2	25:YA:618(A):C:H2'	2.16	0.46
25:YA:742:G:H2'	25:YA:743:G:H8	1.80	0.46
25:YA:1222:C:H2'	25:YA:1223:C:C6	2.48	0.46
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.51	0.46
25:YA:1727:U:H2'	25:YA:1728:G:O4'	2.16	0.46
25:YA:1777:U:O2	25:YA:1777:U:H2'	2.16	0.46
25:YA:1832:C:N4	25:YA:1833:U:C4	2.84	0.46
25:YA:2127:G:O6	25:YA:2161:C:N4	2.49	0.46
25:YA:2271:G:OP1	46:Y0:18:ALA:HB1	2.15	0.46
25:YA:2612:C:C5	25:YA:2613:U:H5	2.34	0.46
25:YA:2724:C:OP1	28:YE:118:LYS:NZ	2.49	0.46
26:YB:7:G:N3	26:YB:114:G:N2	2.64	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
31:YH:51:ARG:HG3	31:YH:51:ARG:NH1	2.30	0.46
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.46
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46
45:YZ:165:VAL:O	45:YZ:166:SER:OG	2.31	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.44	0.46
51:Y5:43:HIS:ND1	51:Y5:43:HIS:N	2.63	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
1:QA:392:G:H2'	1:QA:393:A:C8	2.51	0.46
1:QA:421:U:H5''	1:QA:422:C:OP2	2.16	0.46
1:QA:1087:G:N2	1:QA:1099:G:N3	2.64	0.46
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1411:C:C2	1:QA:1412:C:C5	3.04	0.46
1:QA:1511:G:C6	1:QA:1512:U:C2	3.03	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.31	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.46
20:QT:93:GLU:HG2	20:QT:93:GLU:O	2.15	0.46
24:QY:40:G:H2'	24:QY:41:A:C8	2.51	0.46
25:RA:29:U:H2'	25:RA:30:G:H8	1.78	0.46
25:RA:34:C:H41	25:RA:447:A:H61	1.64	0.46
25:RA:307:G:H22	25:RA:310:A:P	2.39	0.46
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.51	0.46
25:RA:709:U:O2	25:RA:723:G:N2	2.49	0.46
25:RA:1090:U:H3	25:RA:1102:C:H1'	1.81	0.46
25:RA:1731:G:N2	25:RA:1732:A:C4	2.84	0.46
25:RA:1870:C:O5'	25:RA:1870:C:H6	1.98	0.46
25:RA:2094:G:N2	25:RA:2196:C:H1'	2.31	0.46
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.16	0.46
25:RA:2455:G:H8	25:RA:2455:G:O5'	1.98	0.46
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.43	0.46
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.46
32:RI:88:ILE:HD11	32:RI:122:GLU:O	2.16	0.46
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.80	0.46
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
55:R9:25:VAL:HG11	55:R9:34:GLN:HE21	1.79	0.46
1:XA:622:A:C8	1:XA:623:C:C6	3.03	0.46
1:XA:781:A:C6	1:XA:802:A:C2	3.03	0.46
1:XA:1415:G:H2'	1:XA:1416:G:H8	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.46
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.31	0.46
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.46
7:XG:54:THR:O	7:XG:54:THR:HG23	2.16	0.46
11:XK:17:GLY:HA3	11:XK:77:MET:HE1	1.97	0.46
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.46
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
25:YA:299:A:H8	25:YA:299:A:H5''	1.81	0.46
25:YA:381:G:C5	25:YA:394:A:C2	3.04	0.46
25:YA:467:G:OP1	53:Y7:33:ARG:NH1	2.49	0.46
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.30	0.46
25:YA:910:A:N6	25:YA:911:A:N6	2.64	0.46
25:YA:1022:G:HO2'	25:YA:1023:U:P	2.38	0.46
25:YA:1624:G:H2'	25:YA:1625:C:H6	1.81	0.46
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	2.49	0.46
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.15	0.46
25:YA:2692:C:OP1	25:YA:2871:C:H5'	2.16	0.46
25:YA:2752:C:H5'	25:YA:2753:A:OP2	2.16	0.46
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.46
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.46
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.46	0.46
32:YI:67:ARG:NH2	32:YI:68:LEU:HB2	2.31	0.46
33:YN:96:GLU:O	33:YN:99:LEU:N	2.34	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.46
45:YZ:114:GLY:HA3	45:YZ:177:PRO:HG3	1.97	0.46
46:Y0:21:LEU:HD11	46:Y0:41:ARG:CZ	2.46	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.46
55:Y9:25:VAL:HG11	55:Y9:34:GLN:HE21	1.81	0.46
1:QA:9:G:C2	1:QA:10:A:C4	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:15:G:O4'	5:QE:24:ARG:NH1	2.49	0.45
1:QA:918:A:H2'	1:QA:919:A:O4'	2.15	0.45
1:QA:953:G:H5''	1:QA:965:A:H61	1.81	0.45
1:QA:1036:G:H3'	1:QA:1037:C:C6	2.51	0.45
1:QA:1360:A:H2'	1:QA:1361:G:C8	2.51	0.45
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.45
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.51	0.45
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.45
5:QE:64:ARG:HH11	5:QE:64:ARG:HG3	1.81	0.45
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.16	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.45
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
25:RA:270(L):U:C4	32:RI:50:ARG:NH1	2.84	0.45
25:RA:399:G:O6	25:RA:400:G:C2	2.68	0.45
25:RA:637:A:C8	35:RP:117:GLU:OE2	2.69	0.45
25:RA:719:C:H6	25:RA:719:C:O5'	1.99	0.45
25:RA:1266:G:N7	42:RW:15:ARG:NH1	2.64	0.45
25:RA:1558:A:H4'	25:RA:1559:G:O5'	2.16	0.45
25:RA:1731:G:C2	25:RA:1732:A:C4	3.04	0.45
25:RA:2134:A:H62	25:RA:2157:G:H1'	1.80	0.45
25:RA:2252:G:H2'	25:RA:2253:G:C8	2.51	0.45
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.98	0.45
25:RA:2536:G:C6	25:RA:2537:U:C4	3.04	0.45
26:RB:71:C:C4	26:RB:72:G:N7	2.84	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
30:RG:52:ILE:HG22	30:RG:52:ILE:O	2.15	0.45
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.45
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.45
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
44:RY:19:LYS:O	44:RY:19:LYS:CG	2.60	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.99	0.45
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.45
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:48:PHE:N	54:R8:48:PHE:HD1	2.14	0.45
1:XA:18:C:H5''	5:XE:127:ASN:HD21	1.80	0.45
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.16	0.45
1:XA:376:G:H2'	1:XA:377:G:H8	1.77	0.45
1:XA:1396:A:O4'	1:XA:1398:A:H1'	2.16	0.45
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.45
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.50	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.17	0.45
16:XP:40:ASP:O	16:XP:42:ARG:N	2.50	0.45
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.45
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:17:G:H2'	25:YA:18:C:C6	2.51	0.45
25:YA:242:G:N2	25:YA:254:G:H2'	2.31	0.45
25:YA:270(G):C:H2'	25:YA:270(H):C:C6	2.51	0.45
25:YA:547:A:H8	25:YA:547:A:OP2	1.99	0.45
25:YA:565:C:H4'	25:YA:1253:A:C6	2.51	0.45
25:YA:1654:A:C2	28:YE:113:PHE:CD1	3.04	0.45
25:YA:1669:A:H5''	25:YA:1670:C:OP2	2.16	0.45
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.97	0.45
25:YA:2346:A:C2	25:YA:2383:G:C2	3.04	0.45
25:YA:2375:G:H8	25:YA:2375:G:O5'	1.99	0.45
25:YA:2412:A:N6	25:YA:2413:G:N3	2.64	0.45
25:YA:2820:A:N3	37:YR:4:LEU:HD21	2.31	0.45
26:YB:55:U:H2'	26:YB:56:G:C8	2.51	0.45
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.45
27:YD:241:PRO:O	27:YD:242:ARG:C	2.53	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HD23	1.98	0.45
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
55:Y9:1:MET:SD	55:Y9:31:LYS:O	2.74	0.45
1:QA:62:U:H2'	1:QA:63:C:C6	2.51	0.45
1:QA:189:U:C4	17:QQ:72:ARG:NH2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:377:G:P	16:QP:5:ARG:HH11	2.38	0.45
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.16	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
2:QB:96:ARG:HD2	2:QB:96:ARG:N	2.20	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.98	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
9:QL:11:LYS:O	9:QL:12:GLU:HB2	2.16	0.45
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
24:QY:39:C:O2'	24:QY:40:G:P	2.75	0.45
25:RA:177:G:H3'	25:RA:178:G:C8	2.50	0.45
25:RA:292:C:O5'	25:RA:292:C:H6	1.98	0.45
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.28	0.45
25:RA:1321:A:H2'	25:RA:1322:A:O4'	2.16	0.45
25:RA:1533:C:H2'	25:RA:1534:G:N7	2.31	0.45
25:RA:1628:G:H2'	25:RA:1629:U:C6	2.51	0.45
25:RA:2116:G:H1	25:RA:2162:G:P	2.40	0.45
25:RA:2505:G:H2'	25:RA:2576:G:O6	2.17	0.45
25:RA:2712:U:C2'	25:RA:2712(A):A:O5'	2.64	0.45
25:RA:2776:A:C6	25:RA:2778:A:C6	3.04	0.45
26:RB:16:G:C2	26:RB:17:C:C4	3.04	0.45
26:RB:17:C:H2'	26:RB:18:G:O4'	2.15	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.45
30:RG:88:ILE:O	30:RG:88:ILE:CD1	2.54	0.45
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
32:RI:14:ASP:H	32:RI:17:GLN:HB2	1.81	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.98	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
45:RZ:165:VAL:HG12	45:RZ:166:SER:OG	2.17	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:75:C:H2'	1:XA:76:G:O4'	2.16	0.45
1:XA:105:G:H2'	1:XA:106:C:C6	2.51	0.45
1:XA:475:G:H2'	1:XA:476:G:C8	2.50	0.45
1:XA:1216:G:N1	1:XA:1217:C:C4	2.84	0.45
1:XA:1306:A:H61	1:XA:1331:G:H1'	1.79	0.45
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
10:XJ:29:ARG:HG2	10:XJ:29:ARG:HH11	1.81	0.45
10:XJ:95:GLU:OE2	10:XJ:95:GLU:HA	2.16	0.45
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.63	0.45
12:XL:47:LYS:HB2	12:XL:48:PRO:HD3	1.98	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.33	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.17	0.45
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
25:YA:97:C:O2	25:YA:97:C:H2'	2.17	0.45
25:YA:389:G:H22	35:YP:72:PRO:CD	2.29	0.45
25:YA:811:U:O2'	25:YA:812:C:H5''	2.16	0.45
25:YA:855:G:C6	25:YA:856:C:N4	2.85	0.45
25:YA:1021:A:O2'	25:YA:1123:C:H5''	2.16	0.45
25:YA:1036:G:H1	25:YA:1119:C:H42	1.64	0.45
25:YA:1140:C:P	33:YN:24:GLY:HA3	2.56	0.45
25:YA:1245:G:N2	25:YA:1246:A:H1'	2.30	0.45
25:YA:1252:G:O4'	40:YU:33:ARG:HD3	2.16	0.45
25:YA:1374:G:H2'	25:YA:1375:C:O4'	2.17	0.45
25:YA:1488:G:C6	25:YA:1489:U:C4	3.04	0.45
25:YA:1785:A:OP2	25:YA:1982:C:H5'	2.17	0.45
25:YA:1838:C:C2	25:YA:1898:U:C4	3.03	0.45
25:YA:1936:A:H3'	25:YA:1937:A:H5'	1.98	0.45
25:YA:2405:G:H8	25:YA:2405:G:O5'	2.00	0.45
25:YA:2766:G:C2	25:YA:2767:C:C6	3.03	0.45
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.50	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.85	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.46	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.16	0.45
44:YY:35:TYR:CD1	44:YY:35:TYR:O	2.69	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
1:QA:1129:C:O2'	1:QA:1131:G:N7	2.46	0.45
1:QA:1237:C:C5	1:QA:1336:C:C4	3.04	0.45
1:QA:1288:A:C4	1:QA:1289:A:C8	3.03	0.45
1:QA:1346:A:H5'	9:QI:120:ARG:NH1	2.22	0.45
1:QA:1385:G:C6	1:QA:1386:G:N7	2.84	0.45
1:QA:1525:G:H2'	1:QA:1526:G:C8	2.51	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.81	0.45
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
25:RA:570:G:H2'	25:RA:2030:A:C5	2.51	0.45
25:RA:675:A:C8	25:RA:804:A:C6	3.05	0.45
25:RA:910:A:H2	25:RA:2264:C:O2	1.99	0.45
25:RA:1540:G:C6	25:RA:1541:U:C4	3.05	0.45
25:RA:2405:G:HO2'	25:RA:2406:U:P	2.39	0.45
25:RA:2584:U:H5''	56:Z6:76:PPU:H92	1.97	0.45
26:RB:70:C:H2'	26:RB:71:C:C6	2.52	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
27:RD:198:ASN:C	27:RD:198:ASN:ND2	2.69	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.81	0.45
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.34	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.64	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
45:RZ:54:HIS:NE2	45:RZ:101:PRO:HG3	2.31	0.45
45:RZ:94:GLU:HB2	45:RZ:130:PRO:CD	2.39	0.45
46:R0:26:TYR:H	46:R0:29:GLN:NE2	2.13	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
1:XA:17:U:C1'	1:XA:1080:A:H1'	2.46	0.45
1:XA:260:G:H2'	1:XA:261:U:C6	2.52	0.45
1:XA:346:G:H1'	1:XA:347:G:H5'	1.97	0.45
1:XA:564:C:C6	17:XQ:31:LEU:HD11	2.51	0.45
1:XA:701:C:HO2'	1:XA:702:A:P	2.33	0.45
1:XA:1412:C:N4	1:XA:1488:G:H1	2.13	0.45
1:XA:1422:G:C2	1:XA:1423:G:C5	3.05	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.81	0.45
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.29	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.17	0.45
25:YA:298:G:N2	25:YA:341:G:O6	2.50	0.45
25:YA:583:G:H5''	40:YU:10:ARG:NH1	2.26	0.45
25:YA:855:G:O2'	46:Y0:27:GLU:OE2	2.20	0.45
25:YA:972:G:OP2	25:YA:974:G:H5''	2.16	0.45
25:YA:996:A:H2'	25:YA:997:G:H8	1.80	0.45
25:YA:1412:A:C6	25:YA:1413:G:C6	3.05	0.45
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2013:A:H2'	25:YA:2014:A:H5'	1.98	0.45
26:YB:7:G:H2'	26:YB:8:U:O4'	2.16	0.45
26:YB:50:G:P	38:YS:62:LYS:HB2	2.57	0.45
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.98	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
34:YO:86:ILE:H	34:YO:86:ILE:CD1	2.28	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.34	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.81	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.19	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.37	0.45
45:YZ:163:LEU:H	45:YZ:163:LEU:HG	1.61	0.45
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.79	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.64	0.45
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.45
1:QA:248:C:H2'	1:QA:249:U:C6	2.51	0.45
1:QA:920:U:O4'	1:QA:1080:A:C2	2.70	0.45
1:QA:988:G:C2	1:QA:989:C:C2	3.03	0.45
1:QA:1091:U:O2	1:QA:1093:A:C8	2.70	0.45
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.85	0.45
1:QA:1405:G:C2	1:QA:1406:U:C5	3.05	0.45
1:QA:1428:A:H2'	1:QA:1429:C:O4'	2.17	0.45
1:QA:1476:G:C6	1:QA:1477:C:C4	3.04	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.99	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.32	0.45
25:RA:85:G:C5	25:RA:98:G:C2	3.05	0.45
25:RA:92:G:H2'	25:RA:93:C:C6	2.52	0.45
25:RA:977:G:C6	25:RA:987:G:C6	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1061:U:H2'	25:RA:1063:G:OP1	2.16	0.45
25:RA:1658:C:H42	25:RA:2002:G:H1	1.64	0.45
25:RA:1848:A:H2'	25:RA:1849:G:O4'	2.17	0.45
25:RA:2046:G:C4	25:RA:2047:U:C5	3.04	0.45
25:RA:2736:G:C2	25:RA:2737:G:C8	3.04	0.45
27:RD:166:GLN:CA	27:RD:166:GLN:NE2	2.78	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45
31:RH:89:ILE:H	31:RH:89:ILE:HD13	1.81	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.97	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.84	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.97	0.45
36:RQ:93:TYR:CD1	36:RQ:93:TYR:N	2.84	0.45
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.36	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.17	0.45
1:XA:538:G:H5''	12:XL:114:LYS:HB2	1.97	0.45
1:XA:947:G:O2'	1:XA:1306:A:H4'	2.17	0.45
1:XA:987:G:C2	1:XA:988:G:N7	2.85	0.45
1:XA:1097:C:H2'	1:XA:1098:C:H6	1.82	0.45
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.32	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.86	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.81	0.45
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.45
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.80	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.32	0.45
25:YA:851:U:C1'	49:Y3:46:ASN:HD21	2.26	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1058:G:C2	25:YA:1059:G:N7	2.85	0.45
25:YA:1589:C:H2'	25:YA:1590:U:H6	1.82	0.45
25:YA:2072:G:N2	25:YA:2073:C:C2	2.84	0.45
25:YA:2146:C:H4'	25:YA:2147:G:C8	2.52	0.45
25:YA:2250:G:C5	36:YQ:82:ARG:HD2	2.52	0.45
25:YA:2277:G:H5''	36:YQ:85:LYS:HG3	1.98	0.45
25:YA:2532:G:H8	25:YA:2532:G:O5'	2.00	0.45
25:YA:2592:G:N1	25:YA:2601:C:N3	2.52	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.85	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
32:YI:69:LYS:HG3	32:YI:136:VAL:HB	1.99	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
37:YR:29:LEU:N	37:YR:29:LEU:CD1	2.79	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.99	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
46:Y0:42:GLY:C	46:Y0:57:PHE:HD1	2.19	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.51	0.45
1:QA:575:G:OP1	1:QA:575:G:H4'	2.16	0.45
1:QA:835:U:H2'	1:QA:836:G:H8	1.82	0.45
1:QA:1224:G:O2'	1:QA:1322:C:OP2	2.33	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
4:QD:13:ARG:CB	4:QD:33:MET:HE2	2.47	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
13:QM:65:LYS:HZ1	50:R4:52:THR:CB	2.29	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
25:RA:35:G:H1'	25:RA:454:A:C4	2.51	0.45
25:RA:54:G:C6	25:RA:117:G:N2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:172:C:H2'	25:RA:173:G:C8	2.52	0.45
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.52	0.45
25:RA:698:C:O2'	25:RA:734:A:N6	2.49	0.45
25:RA:774:A:HO2'	25:RA:775:G:P	2.38	0.45
25:RA:1943:U:C4	25:RA:1945:G:O4'	2.69	0.45
25:RA:1986:A:H2'	25:RA:1987:G:C8	2.51	0.45
25:RA:2272:U:H5''	25:RA:2273:A:OP1	2.16	0.45
25:RA:2468:G:H5''	36:RQ:120:ILE:HD12	1.97	0.45
26:RB:87:G:N2	26:RB:90:C:C2	2.84	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
32:RI:6:LEU:HB2	32:RI:35:LEU:HA	1.97	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.48	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
40:RU:53:ARG:C	40:RU:55:ARG:H	2.20	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.54	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
45:RZ:25:PRO:HD2	45:RZ:84:GLU:O	2.15	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
1:XA:123:C:O2'	1:XA:290:C:O2	2.34	0.45
1:XA:317:G:C5	1:XA:318:G:N7	2.84	0.45
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.30	0.45
1:XA:1158:C:C2	1:XA:1160:G:C8	3.04	0.45
1:XA:1446:A:C5	39:YT:118:ARG:NH1	2.84	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
2:XB:240:GLN:HG2	2:XB:240:GLN:O	2.16	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.98	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.30	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:187:G:C6	25:YA:188:G:C5	3.05	0.45
25:YA:205:G:HO2'	25:YA:206:U:P	2.38	0.45
25:YA:701:G:H5''	25:YA:701:G:H8	1.81	0.45
25:YA:1050:A:C8	25:YA:2751:G:C4	3.04	0.45
25:YA:1412:A:H2'	25:YA:1413:G:O4'	2.17	0.45
25:YA:1541:U:H2'	25:YA:1542:G:O4'	2.17	0.45
25:YA:1641:A:H3'	25:YA:1642:G:C8	2.52	0.45
25:YA:1834:U:H1'	25:YA:1969:A:C2	2.52	0.45
25:YA:1965:C:H3'	25:YA:1966:A:H2'	1.98	0.45
25:YA:2020:A:C2	25:YA:2022:U:O4'	2.70	0.45
25:YA:2228:G:H5''	25:YA:2229:C:OP2	2.16	0.45
25:YA:2310:A:H62	30:YG:77:ILE:CG2	2.27	0.45
25:YA:2335:A:N7	25:YA:2337:G:C5	2.84	0.45
25:YA:2412:A:N6	25:YA:2413:G:C2	2.84	0.45
25:YA:2447:G:O6	25:YA:2504:U:O4	2.35	0.45
25:YA:2470:G:C5'	36:YQ:56:ARG:HH22	2.29	0.45
25:YA:2615:U:C2	51:Y5:7:PRO:HA	2.52	0.45
26:YB:88:C:H2'	26:YB:89:G:C8	2.51	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.65	0.45
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.81	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
1:QA:248:C:O2'	1:QA:249:U:H5'	2.16	0.45
1:QA:686:U:O2'	1:QA:687:A:O5'	2.35	0.45
1:QA:814:A:C8	1:QA:816:A:C8	3.04	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:991:U:O2	1:QA:993:G:H8	2.00	0.45
1:QA:1060:C:O2	10:QJ:56:HIS:CE1	2.70	0.45
1:QA:1127:G:N2	1:QA:1147:C:H41	2.14	0.45
1:QA:1129:C:C4'	1:QA:1130:A:H5'	2.44	0.45
1:QA:1179:A:C6	1:QA:1180:A:C2	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1237:C:HO2'	1:QA:1300:G:H22	1.57	0.45
1:QA:1298:C:HO2'	1:QA:1299:A:P	2.37	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
3:QC:34:LEU:HD23	3:QC:34:LEU:C	2.37	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.97	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
17:QQ:41:LYS:HZ3	17:QQ:92:ARG:HH22	1.60	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.17	0.45
25:RA:70:G:C2	25:RA:114:U:C4	3.04	0.45
25:RA:241:A:H5'	25:RA:243:U:O4'	2.17	0.45
25:RA:1534:G:H1	25:RA:1538:G:H21	1.63	0.45
25:RA:2396:G:C2'	25:RA:2397:G:H5'	2.47	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.98	0.45
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
45:RZ:104:PHE:HB3	45:RZ:141:VAL:CG1	2.47	0.45
47:R1:80:LEU:CB	47:R1:81:LYS:HE2	2.44	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
1:XA:186(A):C:H1'	20:XT:104:LEU:HD13	1.99	0.45
1:XA:243:A:H4'	1:XA:244:U:O5'	2.17	0.45
1:XA:592:G:C2	1:XA:593:G:C8	3.05	0.45
1:XA:730:G:C5	1:XA:731:G:H1'	2.52	0.45
1:XA:974:A:N3	14:YN:31:ARG:NE	2.64	0.45
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.32	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.81	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
13:XM:65:LYS:NZ	50:Y4:52:THR:CG2	2.78	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.45
25:YA:213:A:H2'	25:YA:214:G:O4'	2.16	0.45
25:YA:222:A:HO2'	25:YA:223:A:P	2.39	0.45
25:YA:807:U:H2'	25:YA:808:G:H8	1.82	0.45
25:YA:1092:C:O2'	31:YH:170:ARG:NE	2.49	0.45
25:YA:1318:C:H5''	25:YA:1319:G:OP2	2.17	0.45
25:YA:1423:G:H2'	25:YA:1424:G:H8	1.82	0.45
25:YA:1580:A:H8	25:YA:1580:A:OP2	2.00	0.45
25:YA:1637:A:H4'	25:YA:2711:A:O2'	2.17	0.45
25:YA:2397:G:H5''	47:Y1:28:GLY:HA2	1.99	0.45
25:YA:2436:G:C5	25:YA:2437:U:C5	3.04	0.45
25:YA:2574:G:H2'	25:YA:2575:C:C6	2.52	0.45
25:YA:2652:C:H2'	25:YA:2653:U:O4'	2.16	0.45
25:YA:2881:C:O3'	37:YR:96:ARG:HG3	2.17	0.45
26:YB:72:G:H5''	26:YB:73:A:OP1	2.16	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.45
45:YZ:3:TYR:O	45:YZ:58:VAL:HG23	2.16	0.45
45:YZ:95:PRO:HG2	45:YZ:127:LYS:HD3	1.99	0.45
1:QA:96:G:H2'	1:QA:97:U:O4'	2.17	0.45
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.52	0.45
1:QA:339:C:H2'	1:QA:340:U:C6	2.51	0.45
1:QA:342:C:H2'	1:QA:343:U:O4'	2.17	0.45
1:QA:368:U:OP1	32:YI:91:SER:OG	2.31	0.45
1:QA:392:G:H2'	1:QA:393:A:H8	1.82	0.45
1:QA:701:C:H1'	1:QA:703:G:C6	2.52	0.45
1:QA:895:G:H1	1:QA:904:C:H42	1.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.31	0.45
1:QA:1089:G:H1	1:QA:1096:C:H42	1.64	0.45
1:QA:1114:C:O2	14:QN:60:SER:HB3	2.17	0.45
1:QA:1216:G:H5''	14:QN:5:ALA:HB2	1.99	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.64	0.45
2:QB:178:ARG:HE	8:QH:71:GLY:H	1.62	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.46	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.98	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
25:RA:27:G:C4	25:RA:512:G:N2	2.85	0.45
25:RA:48:G:C2	25:RA:178:G:C6	3.05	0.45
25:RA:557:U:O2	33:RN:45:ASN:HB2	2.16	0.45
25:RA:590:A:H2'	25:RA:591:C:C6	2.52	0.45
25:RA:1022:G:N2	25:RA:1142(A):A:H2	2.14	0.45
25:RA:1032:A:H4'	55:R9:16:VAL:HG11	1.98	0.45
25:RA:1429:G:C5	25:RA:1568:G:C6	3.05	0.45
25:RA:1510:A:H2'	25:RA:1510:A:N3	2.32	0.45
25:RA:1831:G:H1	25:RA:1974:C:H42	1.65	0.45
25:RA:2649:U:H2'	25:RA:2650:U:C6	2.52	0.45
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	1.98	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
33:RN:35:ARG:HG3	33:RN:35:ARG:O	2.16	0.45
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.45
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.45
46:R0:50:ASN:HB3	46:R0:63:VAL:HG22	1.98	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.98	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
1:XA:598:U:H2'	1:XA:599:C:C6	2.51	0.45
1:XA:775:G:O2'	1:XA:776:G:H5'	2.17	0.45
1:XA:960:U:H1'	1:XA:1223:C:H5'	1.99	0.45
1:XA:1129:C:N3	1:XA:1132:C:N4	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1237:C:O2'	1:XA:1300:G:N1	2.49	0.45
1:XA:1314:C:H5''	19:XS:6:LYS:HZ1	1.81	0.45
1:XA:1322:C:OP2	19:XS:78:ARG:NH2	2.50	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.81	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.41	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.17	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
25:YA:383:U:H5''	25:YA:384:U:OP2	2.16	0.45
25:YA:489:G:C5	25:YA:1284:A:C2	3.04	0.45
25:YA:564:C:H2'	25:YA:565:C:O4'	2.17	0.45
25:YA:581:C:H2'	25:YA:582:G:H8	1.81	0.45
25:YA:747:U:O5'	25:YA:747:U:H6	1.99	0.45
25:YA:1049:C:C2'	25:YA:1050:A:H5''	2.40	0.45
25:YA:1446:C:C2	25:YA:1447:G:C8	3.05	0.45
25:YA:1821:A:N6	25:YA:1822:G:O6	2.50	0.45
25:YA:1845:G:OP1	27:YD:258:LYS:NZ	2.43	0.45
25:YA:2038:G:H2'	25:YA:2039:C:O4'	2.17	0.45
25:YA:2131:G:C4'	25:YA:2132:U:H4'	2.46	0.45
25:YA:2493:U:H2'	25:YA:2494:G:O4'	2.16	0.45
25:YA:2639:A:H1'	25:YA:2778:A:C2	2.52	0.45
25:YA:2737:G:H2'	25:YA:2738:A:H8	1.80	0.45
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	1.99	0.45
26:YB:24:G:C2	26:YB:56:G:C2	3.04	0.45
26:YB:34:U:O2'	26:YB:44:G:O6	2.34	0.45
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
32:YI:56:LYS:NZ	32:YI:57:ARG:HA	2.31	0.45
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
35:YP:45:LEU:CD1	35:YP:45:LEU:N	2.79	0.45
35:YP:88:LEU:C	35:YP:88:LEU:HD23	2.37	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
45:YZ:29:TYR:HE2	45:YZ:87:ASP:HB3	1.81	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
1:QA:341:C:C2'	1:QA:342:C:H5'	2.47	0.45
1:QA:518:C:H5'	1:QA:530:G:O4'	2.17	0.45
1:QA:921:U:O2'	5:QE:19:MET:N	2.48	0.45
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.99	0.45
1:QA:1051:C:C4	1:QA:1052:U:C4	3.05	0.45
1:QA:1118:C:O5'	1:QA:1118:C:H6	1.99	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.80	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.52	0.45
25:RA:330:A:H2	25:RA:1210:A:H2'	1.80	0.45
25:RA:902:C:H2'	25:RA:903:C:H6	1.81	0.45
25:RA:1181:C:H2'	25:RA:1182:A:H8	1.81	0.45
25:RA:1303:G:H1'	25:RA:1641:A:N1	2.32	0.45
25:RA:1693:U:C5	25:RA:1977:A:H1'	2.52	0.45
25:RA:1937:A:N7	25:RA:1939:U:H2'	2.32	0.45
25:RA:2075:U:H2'	25:RA:2238:G:N2	2.32	0.45
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.52	0.45
26:RB:105:G:C2	26:RB:106:G:C8	3.05	0.45
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.45
28:RE:36:ARG:HH11	28:RE:36:ARG:CB	2.28	0.45
29:RF:119:ARG:HH11	29:RF:119:ARG:CG	2.29	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.16	0.45
32:RI:133:HIS:HB2	32:RI:134:PRO:HD2	1.98	0.45
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.98	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.45
45:RZ:74:VAL:HG22	45:RZ:86:VAL:HG22	1.98	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.45
1:XA:186(A):C:O4'	20:XT:85:MET:SD	2.75	0.45
1:XA:265:G:N2	1:XA:267:C:H5'	2.32	0.45
1:XA:440:A:H5''	1:XA:442:C:H5	1.81	0.45
1:XA:559:A:H4'	1:XA:560:U:H5''	1.98	0.45
1:XA:598:U:H2'	1:XA:599:C:H6	1.82	0.45
1:XA:652:U:C4	1:XA:752:G:N3	2.84	0.45
1:XA:993:G:H2'	1:XA:993:G:N3	2.32	0.45
1:XA:1054:C:H6	1:XA:1054:C:H5''	1.81	0.45
1:XA:1060:C:C2	1:XA:1198:G:C2	3.05	0.45
1:XA:1084:G:N7	1:XA:1085:U:C4	2.85	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
10:XJ:63:PHE:HB3	14:XN:57:ARG:O	2.17	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.21	0.45
25:YA:7:G:H2'	25:YA:8:A:H8	1.82	0.45
25:YA:126:A:OP2	53:Y7:18:PHE:N	2.50	0.45
25:YA:205:G:O2'	25:YA:206:U:P	2.75	0.45
25:YA:221:A:N3	25:YA:233:A:H1'	2.30	0.45
25:YA:228:A:C5	25:YA:230:U:O2	2.70	0.45
25:YA:565:C:H2'	25:YA:566:U:O4'	2.16	0.45
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.98	0.45
25:YA:1273:U:H4'	25:YA:1275:A:OP1	2.17	0.45
25:YA:2011:U:C2'	25:YA:2012:G:H5'	2.46	0.45
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.51	0.45
25:YA:2118:U:H3	25:YA:2147:G:HO2'	1.65	0.45
25:YA:2196:C:H2'	25:YA:2197:U:H6	1.82	0.45
25:YA:2457:U:C4	25:YA:2458:G:C6	3.04	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.82	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.19	0.45
31:YH:7:LEU:C	31:YH:7:LEU:HD12	2.37	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
39:YT:57:PHE:O	39:YT:58:ASN:C	2.53	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
42:YW:21:VAL:HG12	42:YW:21:VAL:O	2.17	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.98	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.98	0.45
1:QA:37:U:O2'	1:QA:500:G:H4'	2.16	0.45
1:QA:588:G:C4	1:QA:589:C:C5	3.04	0.45
1:QA:607:A:C2	16:QP:31:LYS:HB2	2.52	0.45
1:QA:797:C:O2'	1:QA:798:G:H5'	2.17	0.45
1:QA:976:G:C6	1:QA:1363:A:C2	3.05	0.45
1:QA:982:U:H5''	14:QN:6:LEU:CD1	2.47	0.45
1:QA:1271:G:H5'	1:QA:1314:C:H5'	1.99	0.45
1:QA:1346:A:O2'	1:QA:1347:G:P	2.75	0.45
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.45
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.45
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.45
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.45
25:RA:264:C:C2'	25:RA:265:A:H5''	2.47	0.45
25:RA:783:A:H8	25:RA:783:A:H2'	1.46	0.45
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.81	0.45
25:RA:1167:U:C2	25:RA:1183:G:N2	2.85	0.45
25:RA:1310:G:OP2	53:R7:9:ARG:NH1	2.49	0.45
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.82	0.45
25:RA:1567:A:HO2'	25:RA:1568:G:P	2.40	0.45
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.81	0.45
25:RA:2510:C:H2'	25:RA:2511:U:C6	2.52	0.45
25:RA:2562:U:C1'	34:RO:23:ARG:NH1	2.76	0.45
25:RA:2655:G:O2'	25:RA:2656:U:C5	2.70	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.45
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
28:RE:77:ILE:O	28:RE:78:LEU:O	2.34	0.45
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.45
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:88:LEU:C	35:RP:88:LEU:HD23	2.37	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.47	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.82	0.45
47:R1:82:LEU:HD13	47:R1:83:GLU:C	2.36	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
1:XA:47:C:H5''	1:XA:365:U:C6	2.52	0.45
1:XA:246:A:C4	1:XA:282:A:N6	2.85	0.45
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.48	0.45
1:XA:392:G:P	16:XP:12:LYS:HG3	2.57	0.45
1:XA:665:A:H1'	1:XA:733:A:O4'	2.16	0.45
1:XA:831:U:H2'	1:XA:832:C:H6	1.82	0.45
1:XA:961:U:H2'	1:XA:962:C:H6	1.81	0.45
1:XA:977:A:O2'	1:XA:981:U:N3	2.38	0.45
1:XA:1031:G:O6	1:XA:1032:A:N6	2.49	0.45
1:XA:1077:G:H2'	1:XA:1079:G:N7	2.32	0.45
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.52	0.45
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.99	0.45
1:XA:1207:G:H2'	1:XA:1208:C:C6	2.52	0.45
1:XA:1388:C:H2'	1:XA:1389:C:C6	2.51	0.45
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.52	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.34	0.45
2:XB:229:VAL:HG12	2:XB:229:VAL:O	2.17	0.45
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.45
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
13:XM:108:ARG:O	13:XM:111:LYS:N	2.47	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.56	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	2.16	0.45
25:YA:298:G:OP1	44:YY:85:VAL:HG22	2.17	0.45
25:YA:479:A:N3	25:YA:481:G:H5''	2.32	0.45
25:YA:528:A:H3'	25:YA:528:A:C8	2.52	0.45
25:YA:558:G:OP2	33:YN:111:PRO:HD2	2.17	0.45
25:YA:721:C:H3'	25:YA:722:A:H8	1.81	0.45
25:YA:780:G:H21	25:YA:783:A:N6	2.15	0.45
25:YA:828:U:H2'	25:YA:829:A:C8	2.52	0.45
25:YA:1169:G:N2	25:YA:1181:C:O2	2.49	0.45
25:YA:1416:G:HO2'	25:YA:1417:C:H6	1.60	0.45
25:YA:1422:G:N2	25:YA:1577:C:H1'	2.32	0.45
25:YA:2470:G:H5'	36:YQ:56:ARG:HH22	1.81	0.45
25:YA:2649:U:H2'	25:YA:2650:U:C6	2.51	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.45
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.45
32:YI:56:LYS:CE	32:YI:57:ARG:HG2	2.46	0.45
34:YO:53:LYS:N	34:YO:53:LYS:CD	2.69	0.45
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
36:YQ:58:PHE:O	36:YQ:58:PHE:CD1	2.70	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.16	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
54:Y8:52:LYS:O	54:Y8:52:LYS:CG	2.64	0.45
1:QA:410:G:C2	1:QA:429:U:C2	3.05	0.45
1:QA:545:C:H5''	4:QD:72:GLU:HG2	1.99	0.45
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.31	0.45
1:QA:823:G:H2'	1:QA:824:C:O4'	2.17	0.45
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.98	0.45
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
4:QD:166:LYS:HG2	27:YD:135:PHE:CZ	2.51	0.45
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
7:QG:40:ALA:O	7:QG:41:ARG:C	2.54	0.45
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.17	0.45
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.45
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.45
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.45
23:QX:5:C:H2'	23:QX:6:C:C6	2.51	0.45
25:RA:459:U:H2'	25:RA:460:A:H8	1.80	0.45
25:RA:547:A:H3'	25:RA:548:A:H8	1.79	0.45
25:RA:710:G:H2'	25:RA:711:G:C8	2.52	0.45
25:RA:781:A:H2	25:RA:1776:G:N3	2.15	0.45
25:RA:1258:C:O4'	29:RF:84:VAL:HG11	2.17	0.45
25:RA:1431:U:H2'	25:RA:1432:C:C6	2.52	0.45
25:RA:1977:A:H2'	25:RA:1978:A:O4'	2.17	0.45
25:RA:2188:C:H2'	25:RA:2189:U:O4'	2.17	0.45
25:RA:2216:G:H2'	25:RA:2217:G:C8	2.52	0.45
25:RA:2525:G:N2	25:RA:2539:C:C2	2.85	0.45
25:RA:2817:G:C2	25:RA:2830:G:N3	2.85	0.45
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.45
32:RI:19:VAL:HG22	32:RI:20:ASP:N	2.32	0.45
33:RN:63:THR:HG22	33:RN:66:LYS:HZ1	1.82	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
34:RO:19:ILE:HD13	34:RO:19:ILE:H	1.82	0.45
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.70	0.45
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.45
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.47	0.45
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.45
42:RW:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.45
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.45
45:RZ:9:TYR:CE2	45:RZ:61:LEU:HD13	2.53	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.17	0.45
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.45
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
1:XA:524:G:H2'	1:XA:525:C:C6	2.52	0.45
1:XA:580:U:H5''	15:XO:58:MET:HG2	1.98	0.45
1:XA:771:G:C5	1:XA:772:U:C4	3.04	0.45
1:XA:963:G:H1	1:XA:972:C:H42	1.64	0.45
1:XA:976:G:P	14:XN:32:SER:H	2.40	0.45
1:XA:1266:G:N2	1:XA:1270:C:C2	2.85	0.45
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.46	0.45
4:XD:94:LEU:O	4:XD:98:GLU:N	2.50	0.45
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.45
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.45
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.45
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.45
25:YA:66:C:H2'	25:YA:67:U:H6	1.82	0.45
25:YA:181:A:H2'	25:YA:182:A:C8	2.52	0.45
25:YA:295:G:H1	25:YA:343:C:N4	2.15	0.45
25:YA:455:C:HO2'	25:YA:472:A:H2	1.62	0.45
25:YA:1827:C:H2'	25:YA:1828:G:O4'	2.17	0.45
25:YA:1846:G:N2	25:YA:1895:C:C2	2.84	0.45
25:YA:2050:C:N4	25:YA:2618:G:H1	2.13	0.45
25:YA:2452:C:O4'	56:Z8:76:PPU:HB2	2.17	0.45
25:YA:2463:C:O2	25:YA:2488:A:C2	2.70	0.45
25:YA:2472:G:H2'	25:YA:2475:C:H42	1.82	0.45
25:YA:2584:U:H5''	56:Z8:76:PPU:H92	1.99	0.45
25:YA:2677:G:H2'	25:YA:2678:C:C6	2.49	0.45
25:YA:2751:G:O5'	25:YA:2751:G:C8	2.70	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.45
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
38:YS:89:ARG:O	38:YS:90:GLY:C	2.54	0.45
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.45
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.99	0.45
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.45
1:QA:6:G:C8	5:QE:119:LEU:HD11	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:430:A:C2	1:QA:431:A:H1'	2.51	0.44
1:QA:926:G:H2'	1:QA:1505:G:N3	2.31	0.44
1:QA:1031:G:O6	25:YA:2167:U:N3	2.50	0.44
1:QA:1122:U:C2	1:QA:1123:A:C8	3.05	0.44
1:QA:1216:G:H2'	1:QA:1217:C:H6	1.83	0.44
1:QA:1225:A:OP1	13:QM:102:ARG:HA	2.17	0.44
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.52	0.44
1:QA:1297:C:O2'	1:QA:1298:C:P	2.75	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.31	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.82	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.44
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.44
20:QT:84:LEU:C	20:QT:84:LEU:HD13	2.36	0.44
25:RA:142:G:H2'	25:RA:143:C:H6	1.82	0.44
25:RA:476:G:N1	25:RA:479:A:OP2	2.49	0.44
25:RA:520:G:H2'	25:RA:521:G:H8	1.82	0.44
25:RA:612:G:N2	25:RA:617:G:C5	2.85	0.44
25:RA:974(A):C:H2'	25:RA:974(A):C:O2	2.16	0.44
25:RA:1005:C:N4	25:RA:1006:C:H41	2.15	0.44
25:RA:1115:G:C6	25:RA:1116:C:N4	2.85	0.44
25:RA:1131:G:C2	25:RA:1132:A:C5	3.05	0.44
25:RA:1286:A:O2'	25:RA:1287:A:H5''	2.17	0.44
25:RA:1319:G:C6	25:RA:1320:C:N4	2.85	0.44
25:RA:2026:C:C2	25:RA:2027:G:C8	3.05	0.44
25:RA:2252:G:H2'	25:RA:2253:G:H8	1.81	0.44
25:RA:2303:G:C2'	25:RA:2304:G:H5'	2.47	0.44
25:RA:2311:A:C8	30:RG:82:LEU:HD11	2.52	0.44
25:RA:2517:C:C6	25:RA:2542:A:N7	2.86	0.44
25:RA:2532:G:H1'	25:RA:2663:G:N2	2.33	0.44
25:RA:2630:G:H2'	25:RA:2631:G:C8	2.51	0.44
25:RA:2631:G:N3	25:RA:2810:A:H2	2.15	0.44
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.97	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.44
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.44
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.43	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
36:RQ:119:ARG:HH11	36:RQ:119:ARG:CG	2.25	0.44
39:RT:54:ARG:NH1	39:RT:54:ARG:CG	2.80	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.98	0.44
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.44
45:RZ:93:ASP:OD1	45:RZ:93:ASP:N	2.47	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.44
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
1:XA:20:U:O2'	1:XA:21:G:H5'	2.17	0.44
1:XA:511:C:O2'	1:XA:534:U:H1'	2.17	0.44
1:XA:803:G:C6	1:XA:804:U:N3	2.85	0.44
1:XA:895:G:H1	1:XA:904:C:N4	2.02	0.44
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.17	0.44
1:XA:1343:G:C6	1:XA:1344:C:N4	2.85	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.44
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
13:XM:110:ARG:HH11	13:XM:110:ARG:HG3	1.82	0.44
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.44
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.44
25:YA:503:A:C8	25:YA:506:G:N7	2.85	0.44
25:YA:729:G:H2'	25:YA:1775:U:O2	2.17	0.44
25:YA:978:G:C2	25:YA:986:C:C2	3.05	0.44
25:YA:1778:U:H2'	25:YA:1784:A:H62	1.80	0.44
25:YA:2331:G:N2	25:YA:2385:C:C4	2.85	0.44
25:YA:2419:U:O4	54:Y8:30:ARG:NE	2.50	0.44
25:YA:2557:G:C6	25:YA:2558:C:C4	3.05	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.52	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.44
32:YI:79:ILE:N	32:YI:141:LYS:O	2.49	0.44
33:YN:5:VAL:O	33:YN:5:VAL:HG13	2.17	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.44
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.44
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.44
45:YZ:112:ARG:O	45:YZ:114:GLY:N	2.50	0.44
45:YZ:123:ASP:O	45:YZ:124:ILE:HG13	2.17	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.44
1:QA:491:G:C2	1:QA:492:G:C4	3.05	0.44
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.47	0.44
1:QA:1426:C:H1'	1:QA:1475:G:N2	2.31	0.44
1:QA:1521:G:H2'	1:QA:1522:U:C6	2.53	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ2	1.82	0.44
13:QM:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.51	0.44
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
25:RA:118:A:H1'	25:RA:178:G:O4'	2.18	0.44
25:RA:934:G:H2'	25:RA:935:C:H6	1.82	0.44
25:RA:1077:A:H2	25:RA:1078:U:H4'	1.82	0.44
25:RA:1301:A:H2	25:RA:1626:G:N3	2.14	0.44
25:RA:1498:C:O4'	25:RA:1577:C:H4'	2.17	0.44
25:RA:1509:C:H2'	25:RA:1511:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2261:C:HO2'	25:RA:2327:A:H2	1.65	0.44
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.17	0.44
25:RA:2518:A:H8	25:RA:2518:A:O5'	1.99	0.44
25:RA:2528:U:O3'	25:RA:2529:G:H8	2.01	0.44
25:RA:2572:A:H62	28:RE:145:LYS:HG3	1.82	0.44
25:RA:2641:G:H5''	33:RN:76:SER:HB3	1.99	0.44
26:RB:75:G:HO2'	45:RZ:85:HIS:CD2	2.31	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.83	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
29:RF:7:TYR:N	29:RF:7:TYR:CD1	2.85	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	1.99	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.81	0.44
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.44
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.64	0.44
39:RT:49:VAL:O	39:RT:49:VAL:CG1	2.64	0.44
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.44
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.44
45:RZ:53:ILE:HA	45:RZ:70:LEU:HD21	2.00	0.44
45:RZ:177:PRO:HB2	45:RZ:178:GLU:H	1.58	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
1:XA:5:U:O2'	1:XA:6:G:N3	2.50	0.44
1:XA:289:G:H2'	1:XA:290:C:H6	1.82	0.44
1:XA:729:A:H2'	1:XA:730:G:H8	1.82	0.44
1:XA:883:C:N3	1:XA:884:U:C4	2.85	0.44
1:XA:1357:A:C5	1:XA:1358:U:C4	3.05	0.44
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.85	0.44
13:XM:65:LYS:HB3	50:Y4:50:VAL:HG21	1.97	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.71	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
24:XY:39:C:O2'	24:XY:40:G:P	2.74	0.44
25:YA:120:U:C2	25:YA:149:A:C6	3.06	0.44
25:YA:529:A:H8	25:YA:530:G:C6	2.36	0.44
25:YA:592:G:N2	25:YA:665:C:N3	2.57	0.44
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.44
25:YA:722:A:H2'	25:YA:723:G:C8	2.53	0.44
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.31	0.44
25:YA:902:C:H2'	25:YA:903:C:C6	2.53	0.44
25:YA:1654:A:OP1	37:YR:1:MET:O	2.34	0.44
25:YA:1840:G:H1	25:YA:1902:C:H42	1.63	0.44
25:YA:2228:G:OP1	27:YD:261:LYS:HE2	2.17	0.44
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.16	0.44
25:YA:2458:G:C4	25:YA:2490:G:C6	3.04	0.44
25:YA:2557:G:C6	25:YA:2558:C:N4	2.85	0.44
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.52	0.44
25:YA:2711:A:OP1	25:YA:2712(A):A:P	2.74	0.44
26:YB:32:C:C2	26:YB:33:G:C8	3.05	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
35:YP:45:LEU:N	35:YP:45:LEU:HD12	2.32	0.44
36:YQ:93:TYR:CD1	36:YQ:93:TYR:N	2.85	0.44
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.19	0.44
52:Y6:19:ARG:HD2	52:Y6:19:ARG:HA	1.77	0.44
1:QA:133:U:H5''	1:QA:134:A:OP1	2.17	0.44
1:QA:730:G:H3'	1:QA:731:G:O4'	2.16	0.44
1:QA:819:A:N7	1:QA:1529:G:C2	2.85	0.44
1:QA:877:C:H5''	8:QH:88:LYS:CD	2.47	0.44
1:QA:1323:G:N2	1:QA:1361:G:O2'	2.50	0.44
1:QA:1329:A:OP1	13:QM:28:ALA:HB3	2.17	0.44
1:QA:1507:A:H2'	1:QA:1508:G:O4'	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
25:RA:44:A:O2'	25:RA:45:G:H5'	2.16	0.44
25:RA:264:C:O2'	25:RA:265:A:H5''	2.17	0.44
25:RA:270(S):G:H2'	25:RA:270(T):G:H5'	1.98	0.44
25:RA:322:A:C6	25:RA:340:A:C2	3.05	0.44
25:RA:428:A:H3'	25:RA:429:A:C8	2.51	0.44
25:RA:688:U:H5'	25:RA:1780:A:C2	2.52	0.44
25:RA:778:G:H8	25:RA:778:G:O5'	2.00	0.44
25:RA:1006:C:H5'	33:RN:28:THR:HG23	1.98	0.44
25:RA:1270:C:H5''	25:RA:1271:G:C5'	2.34	0.44
25:RA:1363:C:C2	25:RA:1364:G:C8	3.05	0.44
25:RA:1519:G:C6	25:RA:1520:U:C4	3.05	0.44
25:RA:1581:G:H5''	25:RA:1581:G:C8	2.52	0.44
25:RA:2261:C:C2	25:RA:2280:G:C2	3.06	0.44
25:RA:2656:U:C5	25:RA:2664:G:N2	2.85	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.44
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.72	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.98	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
42:RW:88:ARG:HH11	42:RW:88:ARG:HG2	1.82	0.44
43:RX:87:GLN:HE21	43:RX:87:GLN:HB2	1.55	0.44
45:RZ:150:LEU:HD23	45:RZ:171:ILE:HG12	2.00	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
48:R2:41:ILE:HD12	48:R2:41:ILE:O	2.16	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.81	0.44
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.64	0.44
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
1:XA:191(F):U:O2	20:XT:105:SER:HB2	2.17	0.44
1:XA:506:G:C5	1:XA:507:C:C4	3.04	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:515:G:C5	1:XA:516:U:C5	3.05	0.44
1:XA:686:U:H2'	1:XA:687:A:C8	2.52	0.44
1:XA:807:A:H2'	1:XA:808:C:O4'	2.17	0.44
1:XA:1100:C:H2'	1:XA:1102:A:O5'	2.17	0.44
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.82	0.44
1:XA:1448:C:H42	1:XA:1455:G:H1	1.64	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
10:XJ:61:GLU:CG	14:YN:58:LYS:HE2	2.47	0.44
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.44
25:YA:85:G:OP1	44:YY:8:LYS:HA	2.17	0.44
25:YA:601:C:O2'	25:YA:605:C:OP1	2.32	0.44
25:YA:728:G:H4'	27:YD:13:ARG:HD2	1.99	0.44
25:YA:729:G:H2'	25:YA:1775:U:H1'	2.00	0.44
25:YA:1352:U:O2'	25:YA:1353:A:H5'	2.18	0.44
25:YA:1620:G:O2'	25:YA:1621:U:H5'	2.17	0.44
25:YA:1820:U:H4'	25:YA:1821:A:OP2	2.17	0.44
25:YA:1942:C:C4	25:YA:1943:U:C4	3.05	0.44
25:YA:2283:C:OP2	52:Y6:5:VAL:HG13	2.18	0.44
25:YA:2312:U:C5	25:YA:2313:C:H5	2.35	0.44
25:YA:2445:G:C2'	25:YA:2446:G:H5'	2.48	0.44
25:YA:2452:C:O2	56:Z8:76:PPU:CE1	2.65	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.33	0.44
32:YI:5:LEU:HD11	32:YI:19:VAL:HG12	2.00	0.44
36:YQ:60:ARG:HB2	36:YQ:60:ARG:HH21	1.82	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
45:YZ:179:ASP:CG	45:YZ:180:VAL:HG22	2.37	0.44
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.15	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44
1:QA:273:A:N6	1:QA:274:A:C6	2.85	0.44
1:QA:373:A:C2	1:QA:374:A:C8	3.05	0.44
1:QA:571:U:O2	1:QA:918:A:H5'	2.17	0.44
1:QA:1340:A:O2'	22:QV:31:G:O3'	2.35	0.44
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.18	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
4:QD:166:LYS:CD	27:YD:135:PHE:HZ	2.30	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
25:RA:278:A:H8	25:RA:278:A:OP2	2.01	0.44
25:RA:681:G:H2'	25:RA:682:G:C8	2.53	0.44
25:RA:780:G:H21	25:RA:783:A:H62	1.63	0.44
25:RA:929:G:H8	25:RA:929:G:O5'	2.01	0.44
25:RA:1061:U:H3'	25:RA:1062:G:H5''	1.98	0.44
25:RA:1464:C:H2'	25:RA:1465:G:H8	1.82	0.44
25:RA:1466:G:H2'	25:RA:1547:C:C5	2.53	0.44
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.17	0.44
25:RA:1948:G:N2	25:RA:1958:C:O2	2.43	0.44
25:RA:2458:G:O2'	25:RA:2490:G:O6	2.24	0.44
25:RA:2584:U:C6	25:RA:2585:U:N3	2.86	0.44
25:RA:2623:G:C2	25:RA:2624:G:C8	3.05	0.44
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.81	0.44
25:RA:2837:G:C2'	25:RA:2838:G:H5'	2.47	0.44
27:RD:155:LEU:N	27:RD:155:LEU:HD12	2.32	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
35:RP:45:LEU:N	35:RP:45:LEU:HD12	2.32	0.44
36:RQ:81:VAL:HG23	46:R0:7:LEU:CD1	2.48	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.20	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
45:RZ:1:MET:HG2	45:RZ:2:GLU:H	1.81	0.44
45:RZ:54:HIS:CE1	45:RZ:101:PRO:HG3	2.53	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
1:XA:765:G:N2	1:XA:813:U:OP2	2.45	0.44
1:XA:818:G:HO2'	1:XA:820:U:H6	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:922:G:C2	1:XA:1396:A:C6	3.05	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.99	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
16:XP:50:LYS:HD3	16:XP:50:LYS:O	2.17	0.44
16:XP:72:ARG:HD3	16:XP:72:ARG:O	2.18	0.44
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.44
22:XV:35:A:C2	23:XX:3:G:C2	3.05	0.44
25:YA:655:A:C8	25:YA:656:G:O4'	2.70	0.44
25:YA:1263:U:O2'	51:Y5:11:THR:HG23	2.17	0.44
25:YA:1266:G:C8	42:YW:15:ARG:NH1	2.86	0.44
25:YA:1423:G:C2	25:YA:1424:G:C8	3.06	0.44
25:YA:1729:A:N6	25:YA:1731:G:C2	2.86	0.44
25:YA:2145:C:H2'	25:YA:2147:G:N2	2.33	0.44
25:YA:2196:C:H2'	25:YA:2197:U:C6	2.52	0.44
25:YA:2280:G:C2'	25:YA:2281:C:H5'	2.48	0.44
26:YB:13:A:C6	26:YB:70:C:H5'	2.52	0.44
26:YB:79:C:H42	26:YB:97:G:H1	1.64	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
42:YW:1:MET:CE	42:YW:2:GLU:H	2.31	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
1:QA:507:C:H3'	1:QA:508:C:H2'	2.00	0.44
1:QA:532:A:H2	3:QC:156:ARG:HH12	1.63	0.44
1:QA:741:G:H2'	1:QA:742:G:O4'	2.17	0.44
1:QA:779:C:O2'	1:QA:780:A:H5'	2.18	0.44
1:QA:830:G:C2	1:QA:857:C:C2	3.05	0.44
1:QA:977:A:C2	1:QA:1224:G:C6	3.06	0.44
1:QA:1052:U:O2	1:QA:1207:G:N2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1158:C:N3	1:QA:1160:G:N7	2.66	0.44
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.47	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.47	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
25:RA:301:G:C4	25:RA:302:C:C5	3.05	0.44
25:RA:445:C:O2'	25:RA:446:G:H5'	2.17	0.44
25:RA:671:C:H5	35:RP:33:ARG:HE	1.66	0.44
25:RA:715:G:H2'	25:RA:716:A:C8	2.52	0.44
25:RA:1437:C:C4	25:RA:1438:U:C4	3.05	0.44
25:RA:2061:G:H5''	25:RA:2503:A:N1	2.32	0.44
25:RA:2088:G:C2	25:RA:2089:U:C2	3.05	0.44
25:RA:2404:C:C2	25:RA:2414:G:C2	3.06	0.44
25:RA:2494:G:H2'	25:RA:2495:G:H8	1.81	0.44
25:RA:2539:C:H5''	55:R9:3:VAL:HG21	1.99	0.44
25:RA:2623:G:H2'	25:RA:2624:G:H8	1.82	0.44
25:RA:2693:A:H2'	25:RA:2694:G:C8	2.53	0.44
25:RA:2805:G:H2'	25:RA:2807:G:C8	2.53	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
29:RF:174:VAL:CG1	29:RF:174:VAL:O	2.65	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.16	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
45:RZ:102:LEU:HD13	45:RZ:123:ASP:HA	1.99	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.56	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.18	0.44
1:XA:598:U:H4'	8:XH:94:TYR:CG	2.52	0.44
1:XA:652:U:HO2'	1:XA:653:A:P	2.40	0.44
1:XA:864:A:H2'	1:XA:865:A:C8	2.52	0.44
1:XA:1316:G:H2'	1:XA:1317:C:H5''	2.00	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
25:YA:20:C:C2	25:YA:521:G:N2	2.86	0.44
25:YA:407:G:H2'	25:YA:408:G:H8	1.83	0.44
25:YA:1027:A:N6	25:YA:1126:A:C4	2.86	0.44
25:YA:1426:G:O2'	25:YA:1572:A:N6	2.47	0.44
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.82	0.44
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.52	0.44
25:YA:2087:G:C2'	25:YA:2088:G:H5'	2.48	0.44
25:YA:2720:U:O4	25:YA:2872:G:C6	2.70	0.44
25:YA:2808:U:H3	25:YA:2892:A:H62	1.64	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
35:YP:6:LEU:N	35:YP:6:LEU:HD22	2.31	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
1:QA:502:G:C6	1:QA:503:C:C4	3.06	0.44
1:QA:728:A:N6	1:QA:729:A:N6	2.66	0.44
1:QA:1069:C:H5''	5:QE:20:GLN:NE2	2.32	0.44
1:QA:1072:G:H2'	1:QA:1073:U:O4'	2.18	0.44
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.30	0.44
1:QA:1376:U:OP1	7:QG:98:SER:HB3	2.18	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.83	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
12:QL:7:ILE:HG23	17:QQ:32:TYR:HB3	1.98	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
22:QV:58:A:O2'	22:QV:60:U:OP2	2.16	0.44
25:RA:428:A:H3'	25:RA:429:A:H8	1.83	0.44
25:RA:588:U:H1'	29:RF:90:PHE:CG	2.52	0.44
25:RA:1221:C:OP1	41:RV:68:LYS:HE2	2.18	0.44
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.18	0.44
25:RA:2176:A:C5	25:RA:2177:C:C4	3.06	0.44
25:RA:2845:G:C2'	25:RA:2846:G:H5'	2.47	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
32:RI:102:SER:OG	32:RI:108:THR:HG22	2.18	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
1:XA:538:G:H8	1:XA:538:G:O5'	2.01	0.44
1:XA:657:G:C2	1:XA:750:G:C5	3.06	0.44
1:XA:771:G:H2'	1:XA:772:U:C6	2.53	0.44
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.52	0.44
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.53	0.44
1:XA:1100:C:OP2	2:XB:96:ARG:HG2	2.17	0.44
1:XA:1309:G:H2'	1:XA:1310:G:O4'	2.17	0.44
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.82	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	2.00	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
25:YA:270(T):G:H5''	47:Y1:97:LEU:CD2	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:463:G:N1	25:YA:467:G:C6	2.85	0.44
25:YA:467:G:H8	25:YA:467:G:O5'	1.99	0.44
25:YA:1690:A:H2'	25:YA:1691:C:O4'	2.17	0.44
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.17	0.44
25:YA:2219:G:H5''	27:YD:269:PHE:CZ	2.53	0.44
25:YA:2262:U:OP2	46:Y0:19:LYS:HE3	2.17	0.44
25:YA:2283:C:C2	25:YA:2389:G:C2	3.06	0.44
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.99	0.44
25:YA:2748:A:H2'	25:YA:2749:A:H8	1.82	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.53	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	0.44
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
1:QA:51:A:N1	1:QA:314:C:O2'	2.46	0.44
1:QA:109:A:C6	1:QA:327:A:C6	3.06	0.44
1:QA:416:G:N7	1:QA:417:C:C4	2.86	0.44
1:QA:539:A:C6	1:QA:540:G:C6	3.05	0.44
1:QA:636:U:H2'	1:QA:637:G:H8	1.78	0.44
1:QA:694:A:N1	1:QA:787:A:O2'	2.50	0.44
1:QA:867:G:O2'	1:QA:868:C:H5'	2.18	0.44
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.52	0.44
1:QA:1160:G:H1	1:QA:1177:G:H21	1.64	0.44
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.83	0.44
1:QA:1347:G:H2'	1:QA:1373:G:O6	2.18	0.44
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.44
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
7:QG:21:VAL:HG23	7:QG:22:LEU:N	2.32	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.17	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:53:G:HO2'	22:QV:54:U:H6	1.64	0.44
25:RA:57:C:O5'	25:RA:57:C:H6	2.01	0.44
25:RA:997:G:OP2	40:RU:58:ARG:HD2	2.18	0.44
25:RA:1199:U:H2'	25:RA:1200:C:C6	2.53	0.44
25:RA:1334:G:H2'	25:RA:1335:U:H6	1.82	0.44
25:RA:1373:A:C6	25:RA:1374:G:C4	3.05	0.44
25:RA:1448:G:H5'	25:RA:1543:A:OP1	2.18	0.44
25:RA:2055:C:H4'	25:RA:2056:G:H5''	2.00	0.44
25:RA:2562:U:C2'	34:RO:23:ARG:HH12	2.30	0.44
25:RA:2702:U:O2	25:RA:2702:U:H2'	2.17	0.44
25:RA:2821:A:OP2	25:RA:2822:G:OP2	2.36	0.44
25:RA:2867:G:O2'	25:RA:2868:A:O5'	2.36	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
28:RE:199:ARG:HH11	28:RE:199:ARG:HG3	1.82	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
30:RG:67:LYS:HD2	30:RG:67:LYS:N	2.33	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.33	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.44
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
1:XA:79:G:N2	1:XA:90:C:O2	2.45	0.44
1:XA:179:A:H2'	1:XA:180:U:H6	1.82	0.44
1:XA:416:G:H1	1:XA:427:U:H3	1.66	0.44
1:XA:546:G:P	4:XD:72:GLU:HB3	2.58	0.44
1:XA:837:G:C2	1:XA:850:U:O2	2.71	0.44
1:XA:948:C:H5	13:XM:106:ASN:HD22	1.58	0.44
1:XA:981:U:H5'	14:XN:21:TYR:CZ	2.52	0.44
1:XA:1183:A:O2'	1:XA:1184:G:OP1	2.25	0.44
1:XA:1202:G:C1'	14:XN:29:ARG:HD2	2.47	0.44
1:XA:1432:G:H8	1:XA:1432:G:O5'	2.01	0.44
1:XA:1446:A:HO2'	1:XA:1447:G:P	2.41	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
10:XJ:53:PRO:C	14:YN:41:ARG:NH2	2.71	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
11:XK:70:LYS:HA	11:XK:73:MET:HE2	1.99	0.44
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.44
14:YN:47:LEU:O	14:YN:48:ALA:C	2.56	0.44
15:XO:87:ILE:CG2	15:XO:88:ARG:N	2.71	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
25:YA:84:A:H2	25:YA:98:G:N3	2.15	0.44
25:YA:377:C:H2'	25:YA:378:C:H6	1.83	0.44
25:YA:381:G:H1	25:YA:393:C:H42	1.66	0.44
25:YA:971:C:N4	25:YA:972:G:C4	2.86	0.44
25:YA:1053:C:N4	25:YA:1054:A:N7	2.66	0.44
25:YA:1288:U:C2	25:YA:1327:C:O2	2.70	0.44
25:YA:1494:A:O2'	25:YA:1495:A:H5'	2.17	0.44
25:YA:2033:A:N6	25:YA:2036:C:C2	2.86	0.44
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.53	0.44
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.18	0.44
25:YA:2399:G:H2'	25:YA:2400:G:O4'	2.17	0.44
25:YA:2636:U:H2'	25:YA:2637:U:C6	2.53	0.44
25:YA:2655:G:HO2'	25:YA:2656:U:P	2.38	0.44
25:YA:2734:A:N6	25:YA:2770:G:O2'	2.49	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
29:YF:24:LEU:HD12	29:YF:24:LEU:N	2.33	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
32:YI:76:THR:OG1	32:YI:139:GLN:OE1	2.33	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
40:YU:79:PHE:CE2	40:YU:83:LEU:CD1	3.00	0.44
40:YU:97:ASP:HA	40:YU:100:VAL:CG2	2.47	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
1:QA:323:U:H5'	20:QT:23:ARG:HB2	2.00	0.44
1:QA:363:A:C4	12:QL:31:PRO:HD2	2.53	0.44
1:QA:474:G:H5''	16:QP:81:ARG:NE	2.32	0.44
1:QA:502:G:H1	1:QA:543:C:H42	1.64	0.44
1:QA:593:G:H1	1:QA:646:U:H3	1.65	0.44
1:QA:616:G:H2'	1:QA:617:G:H5'	2.00	0.44
1:QA:854:G:C2	1:QA:855:G:C8	3.05	0.44
1:QA:1034:G:H2'	1:QA:1035:A:H8	1.80	0.44
1:QA:1187:G:H5'	1:QA:1188:A:OP2	2.17	0.44
1:QA:1333:A:H2'	1:QA:1334:G:O4'	2.18	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.44
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.44
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.85	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
20:QT:101:GLY:C	20:QT:103:GLY:H	2.21	0.44
24:QY:39:C:HO2'	24:QY:40:G:P	2.40	0.44
25:RA:455:C:C4	25:RA:472:A:C5	3.06	0.44
25:RA:526:A:N1	25:RA:2625:G:O2'	2.44	0.44
25:RA:1264:G:H5'	51:R5:11:THR:HG21	2.00	0.44
25:RA:1339:G:H21	25:RA:1603:A:H1'	1.79	0.44
25:RA:1359:A:C6	25:RA:1373:A:C4	3.05	0.44
25:RA:1460:A:H5''	25:RA:1461:G:O5'	2.18	0.44
25:RA:1523:U:O5'	25:RA:1523:U:H6	2.00	0.44
25:RA:1680:U:H5''	25:RA:1681:G:OP2	2.18	0.44
25:RA:1946:U:H2'	25:RA:1947:C:C6	2.53	0.44
25:RA:1954:G:H1'	25:RA:1956:U:O4	2.18	0.44
25:RA:2083:G:C6	25:RA:2084:C:C4	3.06	0.44
25:RA:2241:A:H2'	25:RA:2242:G:C8	2.53	0.44
25:RA:2262:U:O4	46:R0:15:ASP:HA	2.18	0.44
25:RA:2458:G:C4	25:RA:2490:G:C6	3.06	0.44
25:RA:2626:C:H2'	25:RA:2627:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.44
32:RI:144:VAL:HG22	32:RI:145:VAL:H	1.83	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
37:RR:79:LEU:HD23	37:RR:79:LEU:O	2.16	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.00	0.44
41:RV:35:LEU:HD22	41:RV:35:LEU:N	2.23	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
1:XA:262:A:H2'	1:XA:263:A:C8	2.53	0.44
1:XA:428:G:C5	1:XA:430:A:C6	3.05	0.44
1:XA:498:A:N6	1:XA:547:A:C8	2.85	0.44
1:XA:1061:G:C5	1:XA:1062:U:C5	3.06	0.44
1:XA:1207:G:C2	1:XA:1208:C:C2	3.05	0.44
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.17	0.44
2:XB:33:TYR:HD1	2:XB:33:TYR:O	2.00	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
8:XH:1:MET:H3	8:XH:1:MET:CE	2.31	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.66	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.44
25:YA:273(D):C:H2'	25:YA:273(E):U:C6	2.53	0.44
25:YA:323:G:O2'	25:YA:1205:U:N3	2.48	0.44
25:YA:347:A:H2'	25:YA:348:G:H8	1.83	0.44
25:YA:415:A:N1	25:YA:2409:G:C6	2.86	0.44
25:YA:442:G:O4'	29:YF:46:ARG:HD3	2.18	0.44
25:YA:679:C:H2'	25:YA:680:G:H8	1.83	0.44
25:YA:1319:G:H2'	25:YA:1319:G:N3	2.32	0.44
25:YA:1793:C:N4	25:YA:1826:G:H1	2.15	0.44
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2063:C:N4	25:YA:2064:C:C4	2.86	0.44
25:YA:2621:A:N6	25:YA:2622:C:N4	2.66	0.44
25:YA:2794:C:N4	25:YA:2795:G:O6	2.50	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.44
32:YI:56:LYS:HZ1	32:YI:57:ARG:HG2	1.83	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
35:YP:70:GLN:N	35:YP:70:GLN:OE1	2.51	0.44
37:YR:41:ALA:C	37:YR:43:GLU:H	2.21	0.44
39:YT:49:VAL:O	39:YT:49:VAL:CG1	2.64	0.44
42:YW:88:ARG:HH11	42:YW:88:ARG:HG2	1.82	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
45:YZ:24:LEU:N	45:YZ:39:VAL:O	2.49	0.44
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.82	0.44
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.82	0.44
1:QA:585:G:H8	1:QA:585:G:O5'	2.00	0.44
1:QA:731:G:OP1	1:QA:766:A:H1'	2.17	0.44
1:QA:778:G:H2'	1:QA:779:C:O4'	2.17	0.44
1:QA:1122:U:H2'	1:QA:1123:A:C8	2.53	0.44
1:QA:1137:C:O2'	1:QA:1138:G:C2	2.69	0.44
1:QA:1239:A:H62	1:QA:1299:A:N6	2.15	0.44
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.17	0.44
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.44
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.44
25:RA:76:C:O2'	25:RA:77:C:H5'	2.18	0.44
25:RA:140:A:C6	25:RA:141:A:N6	2.86	0.44
25:RA:270(I):G:H2'	25:RA:270(J):G:C8	2.52	0.44
25:RA:324:A:H61	25:RA:338:G:C2'	2.30	0.44
25:RA:738:G:C2	25:RA:759:G:C5	3.06	0.44
25:RA:922:U:C4	25:RA:923:C:N4	2.86	0.44
25:RA:1022:G:HO2'	25:RA:1023:U:P	2.37	0.44
25:RA:1022:G:N1	25:RA:1140:C:N3	2.65	0.44
25:RA:1027:A:C6	25:RA:1126:A:C4	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2877:G:C2'	25:RA:2878:U:H5'	2.48	0.44
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.48	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.44
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.44
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.44
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.44
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	2.00	0.44
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.44
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.44
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.44
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.44
1:XA:57:G:H2'	1:XA:58:C:O4'	2.18	0.44
1:XA:319:G:H5'	1:XA:1468:A:H4'	2.00	0.44
1:XA:775:G:H2'	1:XA:776:G:H8	1.83	0.44
1:XA:971:G:N2	1:XA:1363:A:OP2	2.44	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.44
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.44
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:83:G:N2	25:YA:103:A:OP2	2.47	0.44
25:YA:701:G:H5''	25:YA:701:G:C8	2.53	0.44
25:YA:725:G:C6	25:YA:726:G:N1	2.86	0.44
25:YA:943:U:P	35:YP:36:LYS:HD3	2.58	0.44
25:YA:1067:A:OP1	25:YA:1067:A:H8	2.01	0.44
25:YA:1517:G:H2'	25:YA:1518:C:C6	2.53	0.44
25:YA:1683:C:H2'	25:YA:1684:C:C6	2.53	0.44
25:YA:1776:G:H2'	25:YA:1777:U:H5'	2.00	0.44
25:YA:2416:C:N3	25:YA:2417:C:C5	2.86	0.44
25:YA:2422:A:C8	25:YA:2424:C:H5	2.35	0.44
25:YA:2552:U:C2	25:YA:2554:U:H5''	2.53	0.44
26:YB:9:G:H1	26:YB:111:U:H3	1.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
31:YH:109:PHE:C	31:YH:111:HIS:H	2.21	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.79	0.44
32:YI:47:LEU:O	32:YI:51:ILE:N	2.47	0.44
32:YI:56:LYS:HZ2	32:YI:57:ARG:HA	1.83	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
34:YO:91:LEU:N	34:YO:91:LEU:CD2	2.80	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.44
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.44
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.44
42:YW:67:ASP:OD2	42:YW:67:ASP:N	2.50	0.44
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
1:QA:391:G:C6	1:QA:392:G:C5	3.06	0.43
1:QA:557:G:H2'	1:QA:558:G:C8	2.52	0.43
1:QA:1058:G:H2'	1:QA:1059:C:O4'	2.18	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.43
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
25:RA:16:G:H2'	25:RA:17:G:H8	1.82	0.43
25:RA:145:G:H2'	25:RA:146:G:H8	1.83	0.43
25:RA:222:A:H5''	25:RA:421:U:OP1	2.17	0.43
25:RA:259:G:H21	25:RA:621:A:H8	1.66	0.43
25:RA:312:G:H4'	25:RA:331:A:C2	2.52	0.43
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.99	0.43
25:RA:512:G:O2'	25:RA:513:A:P	2.76	0.43
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.17	0.43
25:RA:612:G:C4	25:RA:613:U:O2	2.71	0.43
25:RA:776:G:C6	25:RA:793:A:C8	3.06	0.43
25:RA:846:C:N4	25:RA:931:G:H1	2.10	0.43
25:RA:1046:A:H3'	25:RA:1046:A:N3	2.33	0.43
25:RA:1306:C:O2	25:RA:1623:G:C2	2.71	0.43
25:RA:1441:G:H4'	25:RA:1627:G:O3'	2.18	0.43
25:RA:1592:C:H2'	25:RA:1593:G:H8	1.83	0.43
25:RA:1638:C:H5''	25:RA:2710:C:O2'	2.18	0.43
25:RA:1676:A:N6	25:RA:1677:A:C6	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1678:G:N3	25:RA:1678:G:H2'	2.33	0.43
25:RA:1858:G:O2'	25:RA:1884:A:N6	2.51	0.43
25:RA:1900:A:N1	25:RA:1970:A:C6	2.86	0.43
25:RA:1975:G:C4	25:RA:1976:U:C6	3.05	0.43
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.53	0.43
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.53	0.43
25:RA:2704:C:H2'	25:RA:2705:A:O4'	2.18	0.43
25:RA:2737:G:C2	25:RA:2738:A:C4	3.06	0.43
27:RD:44:ASN:H	27:RD:44:ASN:ND2	1.97	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.48	0.43
28:RE:13:ARG:HH11	28:RE:13:ARG:HB3	1.82	0.43
29:RF:24:LEU:HD12	29:RF:24:LEU:N	2.33	0.43
32:RI:60:GLU:HG3	32:RI:61:ARG:HH12	1.83	0.43
32:RI:129:THR:HA	32:RI:137:PRO:HA	2.00	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.43
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.43
39:RT:99:LEU:CD1	39:RT:99:LEU:O	2.65	0.43
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.43
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.28	0.43
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.43
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.43
1:XA:143:A:H2	1:XA:220:G:H22	1.66	0.43
1:XA:161:A:C6	1:XA:162:A:C6	3.06	0.43
1:XA:280:C:N3	17:XQ:38:ARG:HG3	2.33	0.43
1:XA:313:A:H2'	1:XA:314:C:C6	2.53	0.43
1:XA:450:G:N7	1:XA:481:G:C6	2.85	0.43
1:XA:1054:C:C5	1:XA:1196:U:C5	3.05	0.43
1:XA:1286:A:H2'	1:XA:1287:A:H4'	2.00	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.38	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:20:GLN:O	5:XE:21:ALA:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.43
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.43
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.83	0.43
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.43
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
14:YN:17:LYS:HG3	14:YN:18:VAL:N	2.33	0.43
17:XQ:41:LYS:HZ3	17:XQ:92:ARG:HH22	1.61	0.43
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.43
25:YA:242:G:H5'	54:Y8:3:LYS:CE	2.39	0.43
25:YA:290:G:H2'	25:YA:291:C:H6	1.83	0.43
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.83	0.43
25:YA:422:A:C6	25:YA:423:A:C5	3.06	0.43
25:YA:663:G:C5	25:YA:664:C:C5	3.06	0.43
25:YA:869:G:H2'	25:YA:870:A:C8	2.53	0.43
25:YA:1065:U:H5''	25:YA:1066:U:H6	1.82	0.43
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.18	0.43
25:YA:1360:A:C6	25:YA:1372:U:C4	3.06	0.43
25:YA:1567:A:H5'	27:YD:58:HIS:ND1	2.32	0.43
25:YA:1783:A:H5'	25:YA:2608:G:H4'	2.00	0.43
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.53	0.43
25:YA:2762:G:H2'	25:YA:2763:G:H5'	2.00	0.43
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.43
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.43
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.43
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.43
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.43
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.18	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.36	0.43
1:QA:443:C:C2	1:QA:492:G:N2	2.86	0.43
1:QA:444:C:H2'	1:QA:445:G:C8	2.53	0.43
1:QA:624:C:O3'	16:QP:10:GLY:HA2	2.18	0.43
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.43
25:RA:479:A:N3	25:RA:481:G:H5''	2.33	0.43
25:RA:571:A:N1	25:RA:575:A:OP1	2.51	0.43
25:RA:780:G:H21	25:RA:783:A:N6	2.16	0.43
25:RA:1337:G:C4	25:RA:1338:G:C8	3.06	0.43
25:RA:1442:G:O2'	25:RA:1443:G:H5'	2.18	0.43
25:RA:1557:C:H5''	25:RA:1558:A:OP2	2.19	0.43
25:RA:1627:G:N2	25:RA:1640:C:H1'	2.32	0.43
25:RA:2142:C:H2'	25:RA:2143:C:H6	1.82	0.43
25:RA:2154:G:H2'	25:RA:2155:G:H8	1.83	0.43
25:RA:2315:G:H2'	25:RA:2316:C:C6	2.53	0.43
25:RA:2353:G:H2'	25:RA:2354:G:O4'	2.17	0.43
25:RA:2419:U:H2'	25:RA:2420:C:H6	1.83	0.43
25:RA:2549:G:H5''	25:RA:2549:G:H8	1.83	0.43
25:RA:2591:C:OP1	27:RD:239:ARG:HG3	2.17	0.43
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.18	0.43
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.43
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.49	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.17	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
31:RH:109:PHE:C	31:RH:111:HIS:H	2.22	0.43
32:RI:5:LEU:HA	32:RI:36:ALA:HA	1.99	0.43
32:RI:114:LEU:HD12	32:RI:129:THR:O	2.18	0.43
32:RI:118:LYS:HA	32:RI:119:PRO:HD3	1.82	0.43
32:RI:128:LEU:N	32:RI:138:ILE:O	2.47	0.43
34:RO:63:VAL:O	34:RO:63:VAL:HG23	2.18	0.43
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.43
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.66	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.83	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:49:PHE:N	50:R4:49:PHE:HD1	2.16	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
1:XA:101:A:H8	1:XA:101:A:OP2	2.00	0.43
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1054:C:P	1:XA:1197:G:OP1	2.76	0.43
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.18	0.43
1:XA:1256:A:H2	1:XA:1277:C:C6	2.36	0.43
1:XA:1468:A:H8	1:XA:1468:A:O5'	2.01	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
10:XJ:96:ILE:HD13	10:XJ:96:ILE:H	1.83	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
25:YA:181:A:C2	25:YA:182:A:C4	3.06	0.43
25:YA:307:G:H8	25:YA:307:G:O5'	2.01	0.43
25:YA:635:C:O2'	25:YA:639:U:OP1	2.35	0.43
25:YA:722:A:C2	25:YA:723:G:C4	3.06	0.43
25:YA:1310:G:OP2	53:Y7:9:ARG:NH1	2.51	0.43
25:YA:1326:U:O2'	25:YA:1327:C:H5'	2.18	0.43
25:YA:2060:A:N7	25:YA:2502:G:C2	2.86	0.43
25:YA:2114:A:H3'	25:YA:2114:A:N3	2.33	0.43
25:YA:2511:U:H2'	25:YA:2512:C:O4'	2.18	0.43
26:YB:40:U:C2	26:YB:43:C:OP2	2.71	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.43
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.43
27:YD:213:ARG:HD2	27:YD:213:ARG:HA	1.60	0.43
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.46	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
39:YT:114:LEU:HA	39:YT:114:LEU:HD23	1.74	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
53:Y7:19:ARG:HG2	53:Y7:19:ARG:NH1	2.33	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.67	0.43
1:QA:191(E):G:H2'	1:QA:191(F):U:H6	1.81	0.43
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1247:U:H2'	1:QA:1248:A:O4'	2.18	0.43
1:QA:1472:U:N3	1:QA:1473:A:N7	2.65	0.43
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
4:QD:9:CYS:HG	4:QD:31:CYS:C	2.05	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
22:QV:4:G:C6	22:QV:70:G:N1	2.86	0.43
24:QY:39:C:H4'	24:QY:40:G:OP1	2.18	0.43
25:RA:27:G:O2'	25:RA:28:A:C8	2.68	0.43
25:RA:186:G:C2	25:RA:211:A:C2	3.06	0.43
25:RA:298:G:P	44:RY:85:VAL:HG22	2.58	0.43
25:RA:1056:G:N1	25:RA:1104:C:N4	2.67	0.43
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.83	0.43
25:RA:1197:G:N2	25:RA:1250:G:C5	2.87	0.43
25:RA:1485:G:H5''	25:RA:1485:G:C8	2.51	0.43
25:RA:1653:G:H4'	25:RA:1654:A:O5'	2.18	0.43
25:RA:1725:G:H5'	25:RA:1726:G:OP2	2.17	0.43
25:RA:1954:G:N2	25:RA:1956:U:H3	2.16	0.43
25:RA:2273:A:O2'	25:RA:2274:A:H5'	2.18	0.43
25:RA:2536:G:C5	25:RA:2537:U:C5	3.06	0.43
25:RA:2674:G:H2'	25:RA:2675:A:C8	2.53	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.97	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.01	0.43
29:RF:144:LYS:C	29:RF:146:ALA:H	2.20	0.43
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.43
31:RH:136:ILE:HD12	31:RH:136:ILE:N	2.31	0.43
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.51	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
36:RQ:62:GLY:O	45:RZ:178:GLU:HG2	2.18	0.43
37:RR:81:ASP:N	37:RR:81:ASP:OD2	2.50	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.43
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.71	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
1:XA:411:A:C5	1:XA:413:G:N3	2.86	0.43
1:XA:661:G:H1	1:XA:744:C:H42	1.66	0.43
1:XA:927:G:OP2	1:XA:927:G:H4'	2.18	0.43
1:XA:1322:C:H5'	13:XM:100:GLY:HA2	1.99	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
4:XD:180:GLY:O	4:XD:181:MET:C	2.55	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.56	0.43
7:XG:78:ARG:HH11	7:XG:78:ARG:CG	2.30	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.01	0.43
22:XV:49:G:O6	22:XV:65:C:N4	2.49	0.43
22:XV:54:U:C4	22:XV:55:U:C4	3.06	0.43
25:YA:384:U:H2'	25:YA:385:C:H6	1.83	0.43
25:YA:629:G:H5'	25:YA:650:C:O2'	2.19	0.43
25:YA:695:G:C2	25:YA:696:G:C8	3.07	0.43
25:YA:1145:C:H2'	25:YA:1146:C:H6	1.84	0.43
25:YA:1176:G:OP1	25:YA:1176:G:H4'	2.19	0.43
25:YA:1341:U:H2'	25:YA:1397:U:O2	2.18	0.43
25:YA:1504:C:H5'	25:YA:1505:C:OP2	2.18	0.43
25:YA:1906:G:N2	25:YA:1925:C:O2	2.51	0.43
25:YA:2018:G:C6	25:YA:2019:A:C5	3.07	0.43
25:YA:2416:C:H2'	25:YA:2417:C:H6	1.83	0.43
25:YA:2502:G:H5''	25:YA:2503:A:H5''	2.00	0.43
25:YA:2869:G:H2'	25:YA:2870:C:C6	2.53	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.01	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
32:YI:5:LEU:HD12	32:YI:5:LEU:N	2.33	0.43
33:YN:87:LEU:C	33:YN:87:LEU:CD2	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
1:QA:35:G:N2	12:QL:118:SER:OG	2.51	0.43
1:QA:187:C:N4	1:QA:188:U:C2	2.85	0.43
1:QA:234:C:H2'	1:QA:235:C:C6	2.53	0.43
1:QA:620:C:C2	4:QD:135:LEU:HG	2.53	0.43
1:QA:818:G:C3'	1:QA:819:A:H5''	2.48	0.43
1:QA:1437:C:H2'	1:QA:1438:G:C8	2.54	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.52	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
9:QI:41:VAL:HG12	9:QI:41:VAL:O	2.18	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	0.43
12:QL:25:PRO:C	12:QL:27:LEU:N	2.70	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
22:QV:12:G:N3	25:RA:1923:U:O2'	2.50	0.43
22:QV:15:G:N2	22:QV:48:C:H42	2.17	0.43
22:QV:74:C:N3	25:RA:2252:G:N2	2.61	0.43
25:RA:111:A:C2	25:RA:112:U:C2	3.06	0.43
25:RA:693:C:O2'	25:RA:1353:A:N3	2.46	0.43
25:RA:856:C:C6	25:RA:856:C:C3'	3.02	0.43
25:RA:1500:G:O2'	27:RD:100:GLY:O	2.28	0.43
25:RA:2016:U:H2'	25:RA:2017:U:O4'	2.18	0.43
25:RA:2133:G:H2'	25:RA:2157:G:N2	2.33	0.43
25:RA:2159:G:H2'	25:RA:2160:G:C8	2.54	0.43
26:RB:45:A:C2	26:RB:46:A:H1'	2.54	0.43
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.30	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.99	0.43
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.53	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.19	0.43
39:RT:114:LEU:HD23	39:RT:114:LEU:HA	1.74	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.43
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.43
1:XA:638:G:H2'	1:XA:639:G:O4'	2.18	0.43
1:XA:853:G:O2'	1:XA:854:G:H5'	2.18	0.43
1:XA:920:U:H5''	1:XA:921:U:OP2	2.18	0.43
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.45	0.43
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.36	0.43
1:XA:1365:G:H3'	1:XA:1365:G:OP2	2.19	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
3:XC:27:LYS:HB3	3:XC:27:LYS:NZ	2.34	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.43
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.85	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
25:YA:24:G:C4	25:YA:25:U:C6	3.06	0.43
25:YA:252:G:H21	25:YA:253:C:H1'	1.82	0.43
25:YA:552:G:H2'	25:YA:553:U:O4'	2.18	0.43
25:YA:683:C:H42	25:YA:794:G:H1	1.64	0.43
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.83	0.43
25:YA:1445:C:C2	25:YA:1446:C:C5	3.07	0.43
25:YA:1454:U:O2	37:YR:64:ARG:NH1	2.41	0.43
25:YA:2259:G:H1'	25:YA:2427:C:C2	2.53	0.43
25:YA:2400:G:N3	25:YA:2400:G:H2'	2.33	0.43
25:YA:2637:U:C4	25:YA:2638:G:C6	3.07	0.43
25:YA:2667:C:H2'	25:YA:2668:G:O4'	2.19	0.43
26:YB:77:U:H4'	45:YZ:84:GLU:OE1	2.17	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:48:GLN:HE21	28:YE:48:GLN:HB3	1.55	0.43
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.00	0.43
30:YG:31:VAL:O	30:YG:31:VAL:HG13	2.18	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	2.00	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.18	0.43
34:YO:63:VAL:O	34:YO:63:VAL:HG23	2.17	0.43
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.42	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
41:YV:1:MET:HE1	41:YV:43:GLU:HG2	2.00	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
46:Y0:74:ARG:O	46:Y0:74:ARG:HD3	2.18	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
1:QA:189:U:HO2'	1:QA:190:G:P	2.41	0.43
1:QA:901:A:H8	1:QA:901:A:O5'	2.01	0.43
1:QA:1208:C:H2'	1:QA:1209:C:H6	1.84	0.43
1:QA:1216:G:H2'	1:QA:1217:C:C6	2.53	0.43
1:QA:1240:U:C5	7:QG:32:ARG:HD2	2.54	0.43
1:QA:1255:G:O2'	1:QA:1258:G:O2'	2.20	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.51	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
3:QC:27:LYS:NZ	3:QC:27:LYS:HB3	2.34	0.43
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.81	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
10:QJ:16:LEU:HD13	10:QJ:16:LEU:C	2.38	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.81	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.19	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.18	0.43
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
25:RA:571:A:C6	25:RA:575:A:H8	2.37	0.43
25:RA:728:G:H4'	27:RD:13:ARG:HD2	1.99	0.43
25:RA:832:G:P	35:RP:38:GLN:HB3	2.59	0.43
25:RA:846:C:O2'	25:RA:847:U:OP2	2.16	0.43
25:RA:864:G:N2	25:RA:913:U:C2	2.87	0.43
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.30	0.43
25:RA:1747:G:C2'	25:RA:1748:G:H5'	2.48	0.43
25:RA:1774:C:O5'	25:RA:1774:C:H6	2.00	0.43
25:RA:2114:A:H5''	25:RA:2117:A:O5'	2.18	0.43
25:RA:2163:C:OP1	25:RA:2172:U:H5''	2.19	0.43
25:RA:2400:G:N2	25:RA:2417:C:C2	2.86	0.43
25:RA:2417:C:H2'	25:RA:2418:A:C8	2.52	0.43
26:RB:28:C:OP2	38:RS:33:LYS:HE3	2.18	0.43
27:RD:206:LEU:HD23	27:RD:206:LEU:HA	1.49	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.19	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.84	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
32:RI:109:ILE:HB	32:RI:130:TYR:OH	2.19	0.43
33:RN:103:VAL:O	33:RN:104:LYS:C	2.57	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.43
45:RZ:14:LYS:HA	45:RZ:15:PRO:HD3	1.87	0.43
1:XA:486:U:C2	1:XA:487:A:C8	3.06	0.43
1:XA:590:C:H42	1:XA:649:G:H1	1.66	0.43
1:XA:1041:A:C6	1:XA:1042:G:C5	3.06	0.43
1:XA:1154:G:H2'	1:XA:1155:G:H8	1.84	0.43
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.18	0.43
1:XA:1502:A:H2	1:XA:1505:G:N1	2.15	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.43
4:XD:163:GLU:OE2	4:XD:163:GLU:HA	2.19	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.43
25:YA:188:G:H1	25:YA:208:C:N4	2.11	0.43
25:YA:304:G:C2	25:YA:314:A:C2	3.07	0.43
25:YA:380:U:H2'	25:YA:381:G:C8	2.47	0.43
25:YA:448:U:H1'	29:YF:84:VAL:CG2	2.49	0.43
25:YA:1423:G:N3	25:YA:1424:G:C8	2.86	0.43
25:YA:1710:C:N3	25:YA:1749:A:C2	2.86	0.43
25:YA:1964:G:N2	25:YA:1967:C:C2	2.87	0.43
25:YA:2094:G:C2	25:YA:2095:C:C2	3.06	0.43
25:YA:2119:A:N1	25:YA:2170:A:N7	2.67	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.49	0.43
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43
1:QA:417:C:O2'	1:QA:418:C:H5'	2.18	0.43
1:QA:514:C:N3	1:QA:537:G:N1	2.58	0.43
1:QA:1215:G:C6	1:QA:1216:G:N7	2.87	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
22:QV:54:U:C4	22:QV:55:U:C4	3.06	0.43
25:RA:70:G:H4'	25:RA:71:A:OP1	2.18	0.43
25:RA:270(V):G:H2'	25:RA:270(W):G:H8	1.83	0.43
25:RA:464:U:H2'	25:RA:465:G:O4'	2.19	0.43
25:RA:572:A:C5	25:RA:573:G:C8	3.07	0.43
25:RA:602:G:O2'	25:RA:604:G:O2'	2.23	0.43
25:RA:620:G:H4'	25:RA:621:A:C5'	2.47	0.43
25:RA:1332:G:H8	25:RA:1332:G:H2'	1.70	0.43
25:RA:1434:A:N6	25:RA:1558:A:H62	1.95	0.43
25:RA:1718:G:C2	25:RA:1742:C:C2	3.07	0.43
25:RA:1853:A:C6	25:RA:1889:A:C5	3.05	0.43
25:RA:1929:G:H4'	25:RA:1930:G:OP1	2.19	0.43
25:RA:1995:U:C2	25:RA:1996:C:C5	3.07	0.43
25:RA:2329:G:H2'	25:RA:2330:G:C8	2.54	0.43
25:RA:2338:G:C2	25:RA:2339:G:N7	2.86	0.43
25:RA:2645:G:O5'	25:RA:2645:G:H8	2.01	0.43
25:RA:2847:U:C5	25:RA:2848:G:C6	3.06	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.19	0.43
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.53	0.43
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.00	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.43
1:XA:908:A:H2'	1:XA:909:A:H8	1.81	0.43
1:XA:925:G:C2	1:XA:927:G:C8	3.06	0.43
1:XA:957:U:N3	1:XA:960:U:OP2	2.51	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
14:YN:12:ARG:C	14:YN:14:PRO:CD	2.81	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
25:YA:231:C:C5	25:YA:232:G:C5	3.07	0.43
25:YA:704:G:O2'	25:YA:705:A:O5'	2.33	0.43
25:YA:856:C:H1'	46:Y0:27:GLU:CB	2.47	0.43
25:YA:950:G:C6	25:YA:951:C:C4	3.06	0.43
25:YA:1375:C:H2'	25:YA:1376:C:H6	1.83	0.43
25:YA:1524:G:C6	25:YA:1525:G:N7	2.86	0.43
25:YA:2090:G:H2'	25:YA:2091:U:O4'	2.19	0.43
25:YA:2375:G:H3'	25:YA:2375:G:C8	2.54	0.43
25:YA:2388:A:N7	25:YA:2389:G:C5	2.87	0.43
25:YA:2414:G:H21	35:YP:67:MET:CE	2.32	0.43
25:YA:2470:G:C5'	36:YQ:56:ARG:NH2	2.81	0.43
25:YA:2805:G:N2	25:YA:2807:G:C2	2.87	0.43
25:YA:2816:C:O3'	37:YR:99:LYS:NZ	2.51	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.81	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
28:YE:143:ASN:N	28:YE:143:ASN:ND2	2.65	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.83	0.43
31:YH:59:ARG:CG	31:YH:59:ARG:NH1	2.79	0.43
31:YH:136:ILE:HD12	31:YH:136:ILE:N	2.31	0.43
33:YN:118:LYS:C	33:YN:120:LEU:H	2.20	0.43
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
1:QA:321:A:N6	1:QA:329:A:OP2	2.52	0.43
1:QA:596:C:N4	1:QA:644:G:H1	2.16	0.43
1:QA:669:U:H2'	1:QA:670:G:O4'	2.17	0.43
1:QA:828:A:H5'	1:QA:870:U:O4	2.18	0.43
1:QA:874:G:H2'	1:QA:875:C:C6	2.52	0.43
1:QA:1346:A:C5	7:QG:10:ARG:NH1	2.87	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:12:LEU:C	3:QC:14:ILE:H	2.21	0.43
4:QD:24:GLU:O	4:QD:28:SER:OG	2.21	0.43
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.43
5:QE:78:HIS:HE1	5:QE:143:ARG:N	2.12	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
25:RA:26:G:C2	25:RA:27:G:N2	2.87	0.43
25:RA:220:G:H21	25:RA:429:A:N6	2.17	0.43
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.53	0.43
25:RA:847:U:OP2	25:RA:929:G:O6	2.36	0.43
25:RA:1022:G:O6	33:RN:66:LYS:HE2	2.18	0.43
25:RA:1027:A:C6	25:RA:1126:A:C5	3.06	0.43
25:RA:1068:G:O2'	25:RA:1096:A:N3	2.52	0.43
25:RA:1526:G:C6	25:RA:1527:G:C2	3.06	0.43
25:RA:2029:G:H2'	25:RA:2031:A:OP2	2.19	0.43
25:RA:2255:G:H21	46:R0:9:SER:HB3	1.83	0.43
25:RA:2642:G:C2	25:RA:2643:G:C4	3.07	0.43
25:RA:2653:U:O2'	31:RH:110:SER:HB2	2.19	0.43
26:RB:52:A:O2'	26:RB:53:A:N7	2.52	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.79	0.43
28:RE:203:LYS:HD2	28:RE:203:LYS:C	2.39	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
33:RN:1:MET:HG3	33:RN:1:MET:O	2.19	0.43
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
36:RQ:83:MET:H	46:R0:7:LEU:CD1	2.32	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
53:R7:19:ARG:HG2	53:R7:19:ARG:NH1	2.33	0.43
55:R9:7:VAL:HG21	55:R9:36:GLN:HB2	2.00	0.43
1:XA:329:A:C5	1:XA:332:G:C6	3.07	0.43
1:XA:1324:A:C5	1:XA:1325:C:C5	3.07	0.43
1:XA:1486:G:H5''	1:XA:1487:G:OP2	2.18	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.43
3:XC:101:LEU:HD23	3:XC:101:LEU:C	2.39	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
25:YA:124:G:N2	25:YA:126:A:O2'	2.51	0.43
25:YA:140:A:H1'	25:YA:1408:C:O2'	2.19	0.43
25:YA:273(E):U:H2'	25:YA:273(F):C:H6	1.83	0.43
25:YA:275:G:N2	25:YA:276:A:H62	2.17	0.43
25:YA:476:G:N2	25:YA:479:A:C8	2.86	0.43
25:YA:729:G:C4	25:YA:1775:U:C2	3.07	0.43
25:YA:735:A:H5''	25:YA:736:C:OP2	2.18	0.43
25:YA:1027:A:C6	25:YA:1126:A:C5	3.07	0.43
25:YA:1288:U:H4'	25:YA:1289:C:OP2	2.19	0.43
25:YA:1346:G:C5	25:YA:1347:G:N7	2.87	0.43
25:YA:1365:A:N6	25:YA:1366:A:C6	2.87	0.43
25:YA:1409:C:H2'	25:YA:1410:G:O4'	2.19	0.43
25:YA:2001:A:C2	25:YA:2002:G:C5	3.06	0.43
25:YA:2069:G:N2	25:YA:2070:G:C4	2.87	0.43
25:YA:2456:C:C4	25:YA:2457:U:C5	3.06	0.43
25:YA:2662:A:H2'	25:YA:2663:G:O4'	2.18	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.29	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
36:YQ:83:MET:H	46:Y0:7:LEU:CD2	2.25	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
39:YT:64:ARG:HH11	39:YT:64:ARG:HG2	1.84	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.18	0.43
43:YX:70:LEU:HD23	43:YX:70:LEU:H	1.77	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
50:Y4:15:ILE:N	50:Y4:15:ILE:CD1	2.78	0.43
1:QA:7:G:H5'	1:QA:298:A:O4'	2.19	0.43
1:QA:59:A:C5	1:QA:354:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:392:G:OP2	16:QP:12:LYS:HG3	2.19	0.43
1:QA:454:C:N4	1:QA:479:C:N3	2.67	0.43
1:QA:515:G:C6	1:QA:516:U:C4	3.06	0.43
1:QA:825:G:H2'	1:QA:826:C:O4'	2.18	0.43
1:QA:935:A:H1'	1:QA:1384:C:N3	2.33	0.43
1:QA:1069:C:H5''	5:QE:20:GLN:HE21	1.84	0.43
1:QA:1107:C:C4	1:QA:1108:G:C8	3.07	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
25:RA:144:C:H2'	25:RA:145:G:C8	2.54	0.43
25:RA:624:C:H2'	25:RA:625:G:H5'	2.01	0.43
25:RA:1069:A:H4'	25:RA:1070:A:H5''	2.01	0.43
25:RA:1285:G:H21	25:RA:1328:G:H5''	1.83	0.43
25:RA:1527:G:H5''	25:RA:1528:A:OP1	2.19	0.43
25:RA:2056:G:C2	25:RA:2057:A:C8	3.06	0.43
25:RA:2128:C:H2'	25:RA:2129:C:C6	2.53	0.43
25:RA:2422:A:N7	25:RA:2424:C:C5	2.87	0.43
25:RA:2516:G:C6	25:RA:2517:C:C4	3.07	0.43
25:RA:2572:A:C2	28:RE:144:ARG:NH2	2.87	0.43
26:RB:39:A:O2'	26:RB:46:A:N1	2.34	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.33	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.18	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.43
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
1:XA:881:G:H2'	1:XA:882:C:O4'	2.18	0.43
1:XA:967:C:O5'	1:XA:967:C:H6	2.02	0.43
1:XA:977:A:C8	1:XA:1223:C:C4	3.07	0.43
1:XA:1025:U:O2'	1:XA:1026:G:H8	2.02	0.43
1:XA:1311:G:N2	1:XA:1327:C:C2	2.87	0.43
1:XA:1347:G:HO2'	1:XA:1348:U:P	2.42	0.43
1:XA:1439:C:C4	1:XA:1440:C:C5	3.07	0.43
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.18	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
25:YA:120:U:O2	25:YA:120:U:O4'	2.37	0.43
25:YA:137(A):G:H1'	43:YX:41:ASN:HD22	1.84	0.43
25:YA:481:G:C4	25:YA:507:A:C2	3.07	0.43
25:YA:593:G:C6	25:YA:594:U:C4	3.06	0.43
25:YA:971:C:C4	25:YA:972:G:C4	3.06	0.43
25:YA:1019:U:O2'	25:YA:1021:A:H2	1.95	0.43
25:YA:1199:U:H2'	25:YA:1200:C:C6	2.54	0.43
25:YA:1485:G:C2'	25:YA:1486:A:H5'	2.48	0.43
25:YA:1816:G:C8	27:YD:62:TYR:CE1	3.07	0.43
25:YA:1894:C:H2'	25:YA:1895:C:H6	1.84	0.43
25:YA:2277:G:H5''	36:YQ:85:LYS:HB2	2.00	0.43
25:YA:2492:U:O2'	25:YA:2493:U:H5'	2.19	0.43
25:YA:2584:U:H2'	25:YA:2585:U:C6	2.54	0.43
25:YA:2621:A:C6	25:YA:2622:C:C4	3.07	0.43
25:YA:2632:A:H2'	25:YA:2632:A:N3	2.34	0.43
25:YA:2675:A:N6	25:YA:2676:C:C4	2.87	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
31:YH:86:GLU:H	31:YH:86:GLU:CD	2.16	0.43
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.18	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
41:YV:35:LEU:HD22	41:YV:35:LEU:N	2.23	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
46:Y0:57:PHE:HD2	46:Y0:57:PHE:N	2.17	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.55	0.43
1:QA:49:U:H5	1:QA:365:U:O4	2.01	0.43
1:QA:132:C:H2'	1:QA:133:U:O4'	2.19	0.43
1:QA:596:C:H42	1:QA:644:G:H1	1.66	0.43
1:QA:701:C:O2'	1:QA:702:A:P	2.76	0.43
1:QA:973:G:O6	1:QA:974:A:N6	2.52	0.43
1:QA:1060:C:N4	1:QA:1198:G:O6	2.51	0.43
1:QA:1154:G:H2'	1:QA:1155:G:C8	2.41	0.43
1:QA:1307:U:O5'	1:QA:1307:U:H6	2.00	0.43
1:QA:1312:G:N7	19:QS:2:PRO:HD2	2.34	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.43
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43
25:RA:84:A:N1	25:RA:98:G:O2'	2.39	0.43
25:RA:107:C:H2'	25:RA:108:U:C6	2.53	0.43
25:RA:482:A:O2'	25:RA:497:A:N1	2.45	0.43
25:RA:615:G:C8	29:RF:44:ARG:NH1	2.87	0.43
25:RA:715:G:C6	25:RA:716:A:C6	3.06	0.43
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.50	0.43
25:RA:1590:U:C2	25:RA:1591:G:C8	3.06	0.43
25:RA:1666:G:N2	25:RA:1995:U:C2	2.86	0.43
25:RA:2087:G:C4	25:RA:2088:G:C8	3.06	0.43
25:RA:2128:C:C2'	25:RA:2129:C:H5'	2.49	0.43
25:RA:2168:G:H2'	25:RA:2168:G:N3	2.34	0.43
25:RA:2317:C:H2'	25:RA:2318:G:O4'	2.19	0.43
25:RA:2560:C:H2'	25:RA:2561:A:C8	2.54	0.43
25:RA:2578:G:O2'	25:RA:2579:C:H5'	2.18	0.43
25:RA:2728:U:O2'	25:RA:2729:G:H5'	2.18	0.43
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.49	0.43
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.43
32:RI:79:ILE:HD13	32:RI:79:ILE:HA	1.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:7:LYS:HD2	33:RN:7:LYS:N	2.29	0.43
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.86	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.43
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.43
46:R0:7:LEU:N	46:R0:7:LEU:HD23	2.34	0.43
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.43
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.87	0.43
1:XA:32:A:H2'	1:XA:33:A:H8	1.81	0.43
1:XA:262:A:C6	1:XA:263:A:C6	3.06	0.43
1:XA:411:A:C5	1:XA:429:U:C5	3.07	0.43
1:XA:415:A:H2'	1:XA:416:G:H8	1.83	0.43
1:XA:422:C:OP2	1:XA:422:C:O4'	2.37	0.43
1:XA:524:G:C6	1:XA:525:C:N4	2.87	0.43
1:XA:530:G:H4'	1:XA:531:U:OP2	2.19	0.43
1:XA:554:C:H2'	1:XA:555:C:C6	2.54	0.43
1:XA:756:C:H2'	1:XA:757:U:O4'	2.18	0.43
1:XA:935:A:O2'	1:XA:1383:C:N3	2.48	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.33	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	2.21	0.43
22:XV:53:G:HO2'	22:XV:54:U:H6	1.65	0.43
25:YA:118:A:N3	25:YA:178:G:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:579:G:C8	25:YA:2017:U:C4	3.07	0.43
25:YA:607:U:N3	25:YA:621:A:C2	2.81	0.43
25:YA:951:C:H42	25:YA:966:G:H1	1.67	0.43
25:YA:1327:C:C4	25:YA:1328:G:C6	3.07	0.43
25:YA:1628:G:O2'	25:YA:1629:U:H5'	2.19	0.43
25:YA:2517:C:C4	25:YA:2542:A:C6	3.07	0.43
25:YA:2792:G:C5	25:YA:2805:G:N2	2.86	0.43
25:YA:2827:C:H6	25:YA:2827:C:O5'	2.01	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.19	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
32:YI:96:ASP:OD2	32:YI:96:ASP:N	2.49	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.79	0.43
48:Y2:27:GLU:H	48:Y2:27:GLU:CD	2.17	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
1:QA:9:G:C6	1:QA:26:A:N6	2.87	0.43
1:QA:303:A:H2'	1:QA:304:U:O4'	2.18	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
1:QA:683:G:C6	1:QA:684:A:C6	3.07	0.43
1:QA:1272:G:H2'	1:QA:1273:G:O4'	2.19	0.43
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.22	0.43
2:QB:33:TYR:C	2:QB:33:TYR:CD1	2.92	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.18	0.43
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.70	0.43
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.43
6:QF:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.43
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.01	0.43
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.31	0.43
22:QV:43:A:H2'	22:QV:44:A:C8	2.54	0.43
25:RA:273(A):G:C2	25:RA:273(B):C:C2	3.07	0.43
25:RA:316:C:H6	25:RA:316:C:H5''	1.84	0.43
25:RA:448:U:O4	25:RA:583:G:H1'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:535:C:H1'	25:RA:559:G:N2	2.34	0.43
25:RA:1006:C:H2'	25:RA:1007:C:C6	2.54	0.43
25:RA:1026:U:H1'	25:RA:1027:A:O5'	2.19	0.43
25:RA:1341:U:H4'	25:RA:1342:A:OP2	2.19	0.43
25:RA:1640:C:H5'	25:RA:1641:A:OP2	2.19	0.43
25:RA:1728:G:C6	25:RA:1730:U:OP2	2.72	0.43
25:RA:1933:G:C2	25:RA:1934:C:C2	3.07	0.43
25:RA:2094:G:C6	25:RA:2095:C:C4	3.07	0.43
25:RA:2104:G:H1	25:RA:2185:C:H42	1.67	0.43
25:RA:2340:G:O2'	25:RA:2341:G:H5'	2.19	0.43
25:RA:2370:G:H21	52:R6:45:LYS:CE	2.32	0.43
25:RA:2539:C:C5'	55:R9:3:VAL:HG21	2.49	0.43
27:RD:17:THR:HG21	27:RD:204:ILE:HA	1.99	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.56	0.43
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.43
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.43
32:RI:37:VAL:CG1	32:RI:38:LEU:HD12	2.49	0.43
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.49	0.43
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.43
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.43
42:RW:28:SER:O	42:RW:30:GLU:N	2.50	0.43
45:RZ:1:MET:HG2	45:RZ:2:GLU:N	2.34	0.43
45:RZ:5:LEU:O	45:RZ:6:LYS:HB2	2.19	0.43
45:RZ:158:PRO:HG2	45:RZ:161:VAL:HG21	2.01	0.43
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.43
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.19	0.43
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.19	0.43
54:R8:28:GLY:O	54:R8:29:LYS:O	2.36	0.43
1:XA:398:C:O5'	1:XA:398:C:H6	2.02	0.43
1:XA:684:A:H2'	1:XA:685:G:C8	2.54	0.43
1:XA:748:C:OP2	1:XA:748:C:H6	2.02	0.43
1:XA:764:C:H3'	1:XA:765:G:H8	1.83	0.43
1:XA:842:C:H5'	1:XA:843:U:OP1	2.19	0.43
1:XA:892:A:C6	1:XA:893:C:C4	3.06	0.43
1:XA:1222:G:P	19:XS:77:THR:HG21	2.58	0.43
1:XA:1226:C:H42	13:XM:104:ARG:HD2	1.84	0.43
1:XA:1352:C:N4	1:XA:1370:G:H1	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1357:A:N6	1:XA:1358:U:O4	2.52	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.43
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
14:YN:44:LEU:CD1	14:YN:48:ALA:HB2	2.47	0.43
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.43
25:YA:99:U:H4'	25:YA:101:G:H5''	2.00	0.43
25:YA:180:G:H5''	25:YA:181:A:P	2.59	0.43
25:YA:389:G:C6	35:YP:70:GLN:HB3	2.54	0.43
25:YA:426:C:O2'	25:YA:427:U:H5'	2.18	0.43
25:YA:653:A:HO2'	25:YA:654:A:P	2.40	0.43
25:YA:910:A:H2'	25:YA:2264:C:O2'	2.19	0.43
25:YA:993:G:OP1	40:YU:50:ARG:CZ	2.66	0.43
25:YA:1459:G:C2'	25:YA:1460:A:H5'	2.48	0.43
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	2.19	0.43
25:YA:2443:C:O2'	25:YA:2444:G:H5'	2.18	0.43
26:YB:15:A:H1'	26:YB:109:G:C8	2.53	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.43
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.66	0.43
37:YR:94:TYR:N	37:YR:94:TYR:CD2	2.87	0.43
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.39	0.43
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.43
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
1:QA:265:G:H5'	17:QQ:64:PRO:O	2.19	0.42
1:QA:451:A:N6	1:QA:481:G:C4	2.87	0.42
1:QA:728:A:C5	15:QO:54:ARG:HD2	2.53	0.42
1:QA:766:A:H2'	1:QA:767:A:O4'	2.19	0.42
1:QA:877:C:H5''	8:QH:88:LYS:HD3	2.00	0.42
1:QA:937:A:H1'	1:QA:1379:G:N2	2.33	0.42
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.42
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.42
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.84	0.42
25:RA:28:A:C4	25:RA:513:A:C8	3.07	0.42
25:RA:234:C:H2'	25:RA:235:U:O4'	2.19	0.42
25:RA:291:C:H2'	25:RA:292:C:C6	2.53	0.42
25:RA:532:A:N7	25:RA:2021:C:H2'	2.34	0.42
25:RA:784:A:O2'	25:RA:785:G:H5''	2.19	0.42
25:RA:945:A:C6	25:RA:2448:A:C5	3.07	0.42
25:RA:1743:G:C2	25:RA:1746:G:C8	3.07	0.42
25:RA:1924:C:H2'	25:RA:1925:C:O4'	2.18	0.42
25:RA:2538:C:C2	25:RA:2539:C:C5	3.07	0.42
25:RA:2562:U:C2'	25:RA:2563:U:H5'	2.49	0.42
25:RA:2650:U:H2'	25:RA:2651:C:H6	1.84	0.42
25:RA:2752:C:H5'	25:RA:2753:A:OP2	2.19	0.42
26:RB:15:A:H1'	26:RB:109:G:C8	2.54	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.42
27:RD:134:ARG:H	27:RD:134:ARG:HG3	1.55	0.42
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.42
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.42
29:RF:183:VAL:O	29:RF:184:TYR:C	2.57	0.42
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.42
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.42
32:RI:78:THR:OG1	32:RI:104:GLN:NE2	2.52	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.39	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
45:RZ:121:HIS:CE1	45:RZ:169:GLU:HG2	2.54	0.42
46:R0:47:PRO:HB2	46:R0:51:VAL:O	2.19	0.42
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.76	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
1:XA:273:A:N6	1:XA:274:A:N6	2.67	0.42
1:XA:428:G:H4'	1:XA:429:U:OP1	2.18	0.42
1:XA:439:A:OP2	1:XA:493:G:N2	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.83	0.42
1:XA:978:A:O2'	1:XA:1322:C:N3	2.42	0.42
1:XA:1028:C:C4	1:XA:1034:G:C2	3.07	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.71	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.42
2:XB:178:ARG:HH22	8:XH:68:ARG:HH22	1.66	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.42
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.42
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.90	0.42
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.42
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.42
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.42
22:XV:4:G:C6	22:XV:70:G:N1	2.86	0.42
25:YA:103:A:H5''	25:YA:104:U:OP2	2.18	0.42
25:YA:322:A:H3'	25:YA:323:G:H5'	1.99	0.42
25:YA:669:G:N1	25:YA:801:G:O6	2.52	0.42
25:YA:942:G:O2'	25:YA:1189:A:H2'	2.18	0.42
25:YA:1053:C:N3	25:YA:1106:G:N2	2.59	0.42
25:YA:1244:G:C2	25:YA:1245:G:C8	3.07	0.42
25:YA:1798:U:C4	25:YA:1819:A:C2	3.07	0.42
25:YA:1852:C:H5''	25:YA:1853:A:OP1	2.18	0.42
25:YA:1954:G:N3	25:YA:2551:C:H5''	2.34	0.42
25:YA:2027:G:H8	25:YA:2027:G:H5''	1.84	0.42
26:YB:61:G:N1	26:YB:62:C:C4	2.87	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.39	0.42
28:YE:203:LYS:HD2	28:YE:203:LYS:C	2.39	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.34	0.42
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.42
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.42
32:YI:9:LEU:HD11	32:YI:12:LEU:HD23	2.01	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.42
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.42
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:72:ARG:NH2	45:YZ:97:GLU:HB2	2.34	0.42
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.42
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.84	0.42
1:QA:148:G:N2	1:QA:149:A:C4	2.87	0.42
1:QA:451:A:N7	1:QA:481:G:C2	2.87	0.42
1:QA:575:G:N1	1:QA:821:G:N7	2.67	0.42
1:QA:756:C:H2'	1:QA:757:U:O4'	2.19	0.42
1:QA:1063:C:C6	1:QA:1064:G:C8	3.07	0.42
1:QA:1178:G:H2'	1:QA:1180:A:OP2	2.20	0.42
1:QA:1216:G:N2	1:QA:1217:C:C2	2.87	0.42
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.54	0.42
1:QA:1324:A:C5	1:QA:1325:C:C5	3.07	0.42
1:QA:1396:A:H4'	1:QA:1397:C:C5'	2.48	0.42
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.42
5:QE:75:THR:CG2	5:QE:76:ILE:N	2.80	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.34	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.23	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
22:QV:11:A:H4'	25:RA:1909:C:O2'	2.19	0.42
25:RA:110:G:C2	25:RA:111:A:C8	3.07	0.42
25:RA:270(O):U:H5''	25:RA:270(P):C:OP2	2.19	0.42
25:RA:418:G:C2'	25:RA:419:C:H5'	2.48	0.42
25:RA:833:U:C4	25:RA:834:C:N4	2.87	0.42
25:RA:994:C:H3'	40:RU:54:LYS:HE3	2.00	0.42
25:RA:1487:G:C4	25:RA:1488:G:C8	3.06	0.42
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2050:C:C4	25:RA:2051:A:C6	3.07	0.42
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.31	0.42
25:RA:2210:G:C3'	25:RA:2211:G:H8	2.26	0.42
25:RA:2410:G:H2'	25:RA:2411:A:O4'	2.20	0.42
25:RA:2891:G:H8	25:RA:2891:G:OP2	2.02	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.47	0.42
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.49	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.67	0.42
33:RN:15:LEU:C	33:RN:15:LEU:HD13	2.40	0.42
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.18	0.42
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	2.00	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.42
45:RZ:27:VAL:HG12	45:RZ:87:ASP:HB3	2.00	0.42
51:R5:3:LYS:HA	51:R5:3:LYS:CE	2.36	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
1:XA:162:A:N7	1:XA:163:C:H1'	2.35	0.42
1:XA:380:G:N2	1:XA:384:G:C6	2.87	0.42
1:XA:451:A:H4'	1:XA:452:A:O4'	2.20	0.42
1:XA:456:C:C2	1:XA:477:G:N2	2.87	0.42
1:XA:560:U:O2'	1:XA:561:U:OP2	2.26	0.42
1:XA:658:G:H2'	1:XA:659:U:H6	1.84	0.42
1:XA:1299:A:H2'	1:XA:1301:U:H1'	2.01	0.42
1:XA:1370:G:O2'	1:XA:1371:G:H5'	2.19	0.42
1:XA:1446:A:N3	39:YT:118:ARG:HD2	2.34	0.42
1:XA:1461:G:H2'	1:XA:1462:G:H8	1.81	0.42
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42
14:XN:48:ALA:HA	14:XN:53:LEU:HD12	2.01	0.42
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.82	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD22	2.19	0.42
25:YA:426:C:C2'	25:YA:427:U:H5'	2.48	0.42
25:YA:451:C:H4'	29:YF:52:LYS:HZ1	1.80	0.42
25:YA:559:G:N2	40:YU:49:HIS:CE1	2.81	0.42
25:YA:685:A:C8	25:YA:774:A:C6	3.07	0.42
25:YA:696:G:O2'	25:YA:697:C:H5'	2.18	0.42
25:YA:1026:U:O2	25:YA:1027:A:H3'	2.18	0.42
25:YA:1071:G:H8	25:YA:1071:G:O5'	2.02	0.42
25:YA:1350:C:N3	25:YA:1382:G:N2	2.66	0.42
25:YA:1510:A:H2'	25:YA:1510:A:N3	2.34	0.42
25:YA:1530:G:C6	25:YA:1531:C:C4	3.07	0.42
25:YA:1592:C:H2'	25:YA:1593:G:H8	1.84	0.42
25:YA:1761:C:H42	25:YA:1762:A:N6	2.13	0.42
25:YA:1786:A:H4'	25:YA:1787:A:OP2	2.18	0.42
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.39	0.42
25:YA:2086:U:H2'	25:YA:2087:G:H8	1.75	0.42
25:YA:2600:A:H62	27:YD:237:GLU:HG2	1.83	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
35:YP:119:GLU:HA	35:YP:119:GLU:OE1	2.18	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
46:Y0:66:VAL:O	46:Y0:81:VAL:HA	2.19	0.42
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.42
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.47	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
1:QA:408:A:C6	1:QA:409:G:C5	3.07	0.42
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.52	0.42
1:QA:728:A:C6	1:QA:729:A:N6	2.88	0.42
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.42
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.22	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
2:QB:204:ASN:HD22	2:QB:204:ASN:C	2.22	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.19	0.42
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.57	0.42
25:RA:299:A:N3	25:RA:319:C:O2'	2.41	0.42
25:RA:345:A:H5''	25:RA:346:A:OP1	2.19	0.42
25:RA:459:U:OP1	53:R7:39:ARG:HA	2.19	0.42
25:RA:817:C:H3'	25:RA:818:G:H8	1.84	0.42
25:RA:867:C:C4	25:RA:868:U:C4	3.08	0.42
25:RA:1021:A:N6	25:RA:1141:U:H3	2.07	0.42
25:RA:1285:G:H22	25:RA:1329:U:P	2.38	0.42
25:RA:1568:G:H1'	27:RD:58:HIS:HE1	1.83	0.42
25:RA:1779:U:C6	25:RA:1783:A:C5	3.07	0.42
25:RA:1889:A:C6	25:RA:1890:A:C6	3.07	0.42
25:RA:1899:G:O4'	25:RA:1901:A:C8	2.73	0.42
25:RA:2053:G:O6	25:RA:2614:A:H2	2.03	0.42
25:RA:2128:C:H2'	25:RA:2129:C:H6	1.85	0.42
25:RA:2207:C:O2'	27:RD:151:LYS:NZ	2.41	0.42
25:RA:2261:C:C2	25:RA:2280:G:N2	2.87	0.42
25:RA:2289:G:N2	25:RA:2344:U:C2	2.86	0.42
25:RA:2839:G:N2	37:RR:92:GLY:HA3	2.33	0.42
26:RB:43:C:C4	26:RB:45:A:C6	3.07	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
28:RE:48:GLN:HE21	28:RE:48:GLN:HB3	1.55	0.42
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.33	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
45:RZ:24:LEU:HD12	45:RZ:25:PRO:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:150:LEU:HD21	45:RZ:172:ALA:HB3	2.01	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
1:XA:777:A:H2'	1:XA:778:G:C8	2.55	0.42
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.84	0.42
1:XA:1129:C:C4'	1:XA:1130:A:H5'	2.45	0.42
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.19	0.42
1:XA:1306:A:H2'	1:XA:1307:U:C6	2.53	0.42
1:XA:1342:C:O2'	9:XI:124:GLN:HA	2.19	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.19	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.20	0.42
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.42
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
25:YA:154:G:H2'	25:YA:155:C:O4'	2.18	0.42
25:YA:568:U:O2'	25:YA:570:G:N7	2.41	0.42
25:YA:1429:G:N3	25:YA:1430:C:C6	2.87	0.42
25:YA:1901:A:H2'	25:YA:1901:A:N3	2.33	0.42
25:YA:1964:G:H4'	25:YA:1965:C:OP2	2.20	0.42
25:YA:2061:G:H5''	25:YA:2503:A:C2	2.54	0.42
25:YA:2312:U:H6	25:YA:2312:U:H3'	1.84	0.42
25:YA:2357:U:OP1	46:Y0:20:ARG:NE	2.52	0.42
25:YA:2489:G:O6	25:YA:2490:G:O6	2.37	0.42
25:YA:2758:A:C6	25:YA:2759:G:C8	3.07	0.42
25:YA:2863:C:O2'	25:YA:2864:G:H5'	2.19	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.73	0.42
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.49	0.42
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
32:YI:32:PRO:C	32:YI:34:GLY:H	2.23	0.42
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.42
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
45:YZ:96:VAL:O	45:YZ:127:LYS:HA	2.18	0.42
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.85	0.42
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.36	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
1:QA:949:A:C1'	1:QA:1364:U:H3	2.22	0.42
1:QA:1046:A:N3	1:QA:1046:A:H2'	2.34	0.42
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.55	0.42
1:QA:1156:G:H2'	1:QA:1157:A:H5''	2.01	0.42
1:QA:1353:G:C2	1:QA:1370:G:C2	3.07	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.72	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.35	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
9:QI:128:ARG:CD	22:QV:32:C:OP2	2.66	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
22:QV:1:C:O2'	22:QV:2:G:H5'	2.19	0.42
25:RA:301:G:HO2'	25:RA:302:C:H6	1.67	0.42
25:RA:686:G:O6	53:R7:12:ARG:NH1	2.51	0.42
25:RA:727:A:C2	27:RD:9:TYR:CD2	3.07	0.42
25:RA:822:U:H5	25:RA:944:G:H1'	1.84	0.42
25:RA:859:G:O2'	25:RA:860:U:O5'	2.37	0.42
25:RA:948:G:C2	25:RA:970:C:O2	2.71	0.42
25:RA:977:G:H2'	25:RA:978:G:H8	1.84	0.42
25:RA:1003:G:N2	25:RA:1153:C:C2	2.87	0.42
25:RA:1069:A:H2'	25:RA:1073:A:N7	2.34	0.42
25:RA:1161:C:O2'	41:RV:8:GLY:HA2	2.19	0.42
25:RA:1416:G:H2'	25:RA:1417:C:C5	2.54	0.42
25:RA:1494:A:C6	25:RA:1495:A:C6	3.06	0.42
25:RA:1507:A:N6	25:RA:1508:A:N7	2.67	0.42
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.99	0.42
25:RA:2756:U:OP2	55:R9:19:ARG:NE	2.53	0.42
25:RA:2795:G:H3'	25:RA:2797:U:H5'	2.01	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.01	0.42
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.00	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.20	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.39	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
31:RH:89:ILE:CD1	31:RH:89:ILE:H	2.32	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42
42:RW:8:ARG:HG3	42:RW:8:ARG:NH1	2.34	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
1:XA:67:C:O2'	1:XA:171:A:N3	2.39	0.42
1:XA:130:A:O2'	1:XA:263:A:O2'	2.36	0.42
1:XA:139:G:N2	1:XA:225:C:C2	2.87	0.42
1:XA:176:C:O2'	1:XA:1451:A:N1	2.51	0.42
1:XA:295:C:H2'	1:XA:296:U:C6	2.49	0.42
1:XA:363:A:C4	12:XL:31:PRO:HD2	2.54	0.42
1:XA:409:G:H2'	1:XA:410:G:C8	2.54	0.42
1:XA:1287:A:N6	1:XA:1288:A:N6	2.67	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.22	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.26	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.42
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.84	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
9:XI:128:ARG:HD3	22:XV:32:C:OP2	2.19	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
24:XY:39:C:H4'	24:XY:40:G:OP1	2.18	0.42
25:YA:8:A:H5''	33:YN:51:PHE:CZ	2.54	0.42
25:YA:77:C:C4	25:YA:78:A:N7	2.88	0.42
25:YA:237:C:O2'	25:YA:238:C:H5'	2.18	0.42
25:YA:428:A:N6	25:YA:429:A:C6	2.88	0.42
25:YA:644:A:C6	25:YA:646:A:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:980:A:N6	25:YA:981:A:N1	2.67	0.42
25:YA:1138:G:H21	33:YN:106:MET:CE	2.16	0.42
25:YA:1364:G:C8	47:Y1:2:SER:N	2.87	0.42
25:YA:1422:G:C6	25:YA:1423:G:C5	3.07	0.42
25:YA:1931:U:C6	25:YA:1932:A:C8	3.07	0.42
25:YA:2090:G:C2	25:YA:2230:G:C5	3.07	0.42
25:YA:2282:G:H4'	25:YA:2389:G:O2'	2.19	0.42
25:YA:2283:C:C5	25:YA:2389:G:H2'	2.55	0.42
25:YA:2306:C:N4	30:YG:42:GLY:O	2.51	0.42
25:YA:2372:G:H4'	52:Y6:46:HIS:CD2	2.54	0.42
25:YA:2492:U:C2	25:YA:2493:U:C5	3.07	0.42
25:YA:2498:C:OP2	25:YA:2499:C:OP2	2.37	0.42
25:YA:2529:G:O6	55:Y9:31:LYS:NZ	2.53	0.42
25:YA:2689:U:OP1	25:YA:2719:G:N1	2.42	0.42
25:YA:2785:C:O2'	28:YE:64:LYS:HD3	2.20	0.42
26:YB:16:G:H2'	26:YB:17:C:C6	2.54	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.42
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.24	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.01	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
1:QA:185:A:C2	1:QA:193:C:C2	3.07	0.42
1:QA:189:U:O2'	1:QA:190:G:OP1	2.37	0.42
1:QA:521:G:O2'	1:QA:522:C:H5'	2.20	0.42
1:QA:730:G:H5''	1:QA:731:G:OP2	2.19	0.42
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.84	0.42
1:QA:1022:G:C6	1:QA:1023:G:C6	3.07	0.42
1:QA:1202:G:O4'	14:QN:29:ARG:HD2	2.19	0.42
1:QA:1409:C:H5'	25:RA:1916:A:C2	2.54	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
25:RA:16:G:O2'	25:RA:17:G:H5'	2.19	0.42
25:RA:532:A:C8	25:RA:2021:C:C5	3.07	0.42
25:RA:822:U:H2'	25:RA:823:G:C8	2.55	0.42
25:RA:856:C:H3'	25:RA:857:C:H5	1.85	0.42
25:RA:1716:U:O2'	25:RA:1717:G:H5'	2.20	0.42
25:RA:1824:G:O2'	25:RA:1825:A:H5'	2.20	0.42
25:RA:1837:C:H42	25:RA:1903:G:H1	1.67	0.42
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.20	0.42
25:RA:2088:G:C6	25:RA:2089:U:C4	3.07	0.42
25:RA:2405:G:P	35:RP:77:ARG:HH21	2.41	0.42
25:RA:2509:G:C2'	25:RA:2510:C:H5'	2.49	0.42
25:RA:2583:G:C6	25:RA:2584:U:C5	3.07	0.42
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.42	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.46	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42
46:R0:53:MET:HA	46:R0:58:THR:O	2.18	0.42
46:R0:66:VAL:O	46:R0:82:ARG:N	2.52	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.19	0.42
1:XA:445:G:N1	1:XA:446:G:C6	2.87	0.42
1:XA:525:C:H2'	1:XA:526:C:H6	1.85	0.42
1:XA:620:C:C2	4:XD:135:LEU:HG	2.55	0.42
1:XA:654:G:C4	1:XA:753:A:C6	3.07	0.42
1:XA:729:A:H2'	1:XA:730:G:C8	2.55	0.42
1:XA:1000:A:H8	1:XA:1000:A:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1061:G:H2'	1:XA:1062:U:O4'	2.19	0.42
1:XA:1312:G:H5''	50:Y4:67:TYR:OH	2.20	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
14:YN:9:LYS:HG2	14:YN:9:LYS:O	2.19	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
22:XV:15:G:N2	22:XV:48:C:H42	2.17	0.42
25:YA:7:G:H1	25:YA:2896:C:H42	1.67	0.42
25:YA:78:A:H2'	25:YA:79:G:H8	1.83	0.42
25:YA:191:A:H2'	25:YA:192:C:O4'	2.19	0.42
25:YA:243:U:H6	25:YA:243:U:O5'	2.03	0.42
25:YA:774:A:H2	25:YA:787:U:HO2'	1.64	0.42
25:YA:863:A:O2'	25:YA:864:G:H5'	2.19	0.42
25:YA:1085:A:H4'	25:YA:1086:A:OP1	2.19	0.42
25:YA:1851:U:H5''	25:YA:1852:C:OP2	2.19	0.42
25:YA:1860:G:O5'	25:YA:1860:G:H8	2.02	0.42
25:YA:2123:G:H2'	25:YA:2124:G:H8	1.84	0.42
25:YA:2656:U:H3	25:YA:2665:A:H2	1.67	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
28:YE:176:ILE:HD12	28:YE:176:ILE:N	2.35	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.84	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.50	0.42
32:YI:110:ASP:HB3	32:YI:112:LYS:N	2.34	0.42
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.40	0.42
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.20	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
45:YZ:150:LEU:HD22	45:YZ:171:ILE:HB	2.01	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.55	0.42
1:QA:347:G:O2'	1:QA:348:G:P	2.78	0.42
1:QA:686:U:O4	1:QA:703:G:O2'	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:957:U:H2'	1:QA:959:A:OP2	2.20	0.42
1:QA:1329:A:C5'	13:QM:29:ARG:HG3	2.50	0.42
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.54	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.39	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.02	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
9:QI:118:LYS:CB	9:QI:118:LYS:NZ	2.76	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
24:QY:36:G:C2	24:QY:37:1MG:C4	3.07	0.42
25:RA:142:G:H1'	43:RX:37:THR:HG22	2.01	0.42
25:RA:271(A):C:H1'	25:RA:272:G:H1'	2.02	0.42
25:RA:319:C:H2'	25:RA:320:A:C8	2.54	0.42
25:RA:598:G:O2'	29:RF:31:HIS:NE2	2.46	0.42
25:RA:604:G:H2'	25:RA:605:C:C6	2.55	0.42
25:RA:638:G:C6	25:RA:639:U:C4	3.07	0.42
25:RA:685:A:C2	25:RA:689:A:C6	3.07	0.42
25:RA:820:A:H2'	25:RA:821:A:O4'	2.20	0.42
25:RA:911:A:H2'	36:RQ:9:TYR:OH	2.19	0.42
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.55	0.42
25:RA:1464:C:H2'	25:RA:1465:G:C8	2.54	0.42
25:RA:1567:A:H4'	27:RD:58:HIS:CE1	2.54	0.42
25:RA:2396:G:N2	25:RA:2421:G:C8	2.81	0.42
25:RA:2464:C:O2	25:RA:2487:G:C2	2.73	0.42
25:RA:2555:U:C2	56:Z6:74:C:C6	3.07	0.42
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.55	0.42
25:RA:2870:C:H5''	37:RR:65:LEU:HD21	2.02	0.42
26:RB:6:C:H42	26:RB:114:G:H1	1.67	0.42
26:RB:45:A:H2'	26:RB:46:A:O4'	2.19	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.00	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:131:GLN:HE21	33:RN:131:GLN:HB3	1.57	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
45:RZ:69:THR:HB	45:RZ:88:PHE:HB3	2.01	0.42
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
1:XA:487:A:H5''	1:XA:488:C:OP2	2.20	0.42
1:XA:498:A:H4'	1:XA:500:G:OP1	2.19	0.42
1:XA:693:G:C2	1:XA:694:A:C4	3.07	0.42
1:XA:1036:G:C8	1:XA:1037:C:C4	3.08	0.42
1:XA:1126:U:H5	1:XA:1127:G:C4	2.38	0.42
1:XA:1348:U:C6	1:XA:1349:A:C8	3.07	0.42
1:XA:1399:C:C2	1:XA:1401:G:C5	3.07	0.42
1:XA:1490:C:O2'	1:XA:1491:G:H5'	2.19	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.19	0.42
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.85	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
13:XM:77:ASN:CG	50:Y4:71:ARG:NH1	2.72	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.20	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
24:XY:36:G:C2	24:XY:37:1MG:C4	3.07	0.42
25:YA:66:C:H2'	25:YA:67:U:C6	2.54	0.42
25:YA:89:G:N1	25:YA:90:U:O4	2.52	0.42
25:YA:99:U:C6	25:YA:102:G:C2	3.08	0.42
25:YA:278:A:H4'	25:YA:279:C:OP1	2.20	0.42
25:YA:396:G:H1'	47:Y1:42:GLN:HB3	2.02	0.42
25:YA:1788:C:H5''	27:YD:222:ARG:NH2	2.35	0.42
25:YA:2467:C:OP1	55:Y9:6:SER:OG	2.26	0.42
25:YA:2675:A:C5	25:YA:2676:C:C5	3.07	0.42
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.20	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.02	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.19	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
31:YH:105:LEU:CD1	31:YH:105:LEU:N	2.81	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.57	0.42
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.42
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
39:YT:96:ARG:HB2	39:YT:96:ARG:CZ	2.49	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
46:Y0:74:ARG:HD3	46:Y0:74:ARG:C	2.40	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
1:QA:122:G:H2'	1:QA:123:C:O4'	2.19	0.42
1:QA:413:G:H22	1:QA:429:U:H5''	1.83	0.42
1:QA:494:U:H6	1:QA:494:U:O5'	2.03	0.42
1:QA:687:A:C6	1:QA:704:A:N7	2.88	0.42
1:QA:927:G:C2	1:QA:1391:U:O2	2.73	0.42
1:QA:936:C:H2'	1:QA:937:A:O4'	2.20	0.42
1:QA:1050:G:C6	1:QA:1051:C:C4	3.08	0.42
1:QA:1183:A:O2'	1:QA:1184:G:OP1	2.30	0.42
1:QA:1332:A:C2'	1:QA:1333:A:H5'	2.50	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
8:QH:95:VAL:O	8:QH:95:VAL:HG23	2.20	0.42
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
18:QR:76:LEU:N	18:QR:76:LEU:HD22	2.35	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
22:QV:17:C:H2'	22:QV:17:C:O2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:74:C:N4	25:RA:2252:G:H1	2.15	0.42
25:RA:90:U:H6	25:RA:90:U:OP1	2.02	0.42
25:RA:190:A:C8	25:RA:207:A:C6	3.08	0.42
25:RA:250:G:OP1	54:R8:13:ARG:NH2	2.53	0.42
25:RA:302:C:H2'	25:RA:303:U:H6	1.83	0.42
25:RA:792:G:H5''	25:RA:793:A:H5'	2.02	0.42
25:RA:1411:C:N4	25:RA:1591:G:H1	2.17	0.42
25:RA:1414:G:C6	25:RA:1415:U:C4	3.07	0.42
25:RA:1966:A:H4'	25:RA:1967:C:OP1	2.19	0.42
25:RA:2255:G:H1	25:RA:2275:C:N4	2.18	0.42
25:RA:2324:C:H5''	25:RA:2325:G:C5'	2.49	0.42
25:RA:2335:A:C8	25:RA:2337:G:C5	3.07	0.42
25:RA:2352:A:C2	46:R0:33:ALA:O	2.72	0.42
25:RA:2399:G:C2	25:RA:2400:G:C4	3.08	0.42
26:RB:85:G:H2'	26:RB:86:G:H8	1.85	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.01	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.26	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.02	0.42
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.02	0.42
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.42
38:RS:83:LYS:CE	38:RS:109:GLY:HA2	2.47	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.49	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
45:RZ:110:GLY:HA2	45:RZ:111:VAL:O	2.20	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.20	0.42
48:R2:41:ILE:C	48:R2:41:ILE:CD1	2.81	0.42
55:R9:2:LYS:HD2	55:R9:2:LYS:HA	1.93	0.42
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.33	0.42
1:XA:445:G:H2'	1:XA:446:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:544:G:C6	1:XA:545:C:N4	2.88	0.42
1:XA:564:C:H5'	17:XQ:32:TYR:CE2	2.54	0.42
1:XA:811:C:C2'	1:XA:812:C:H5'	2.50	0.42
1:XA:818:G:O2'	1:XA:819:A:H5''	2.19	0.42
1:XA:909:A:OP1	12:XL:21:LYS:HG2	2.20	0.42
1:XA:1310:G:C2	1:XA:1328:C:N3	2.88	0.42
1:XA:1398:A:H5''	1:XA:1399:C:OP1	2.20	0.42
1:XA:1403:C:H1'	1:XA:1500:A:N1	2.35	0.42
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.55	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
25:YA:49:A:N7	25:YA:120:U:C5	2.87	0.42
25:YA:429:A:C6	25:YA:430:G:N1	2.88	0.42
25:YA:507:A:H5''	25:YA:508:G:H5'	2.01	0.42
25:YA:846:C:N4	25:YA:931:G:H1	2.17	0.42
25:YA:1029:A:N6	25:YA:1125:G:O2'	2.47	0.42
25:YA:1431:U:H2'	25:YA:1432:C:O4'	2.19	0.42
25:YA:1973:G:H2'	25:YA:1974:C:C6	2.54	0.42
25:YA:2009:G:C2'	25:YA:2010:G:H5'	2.49	0.42
25:YA:2063:C:H2'	25:YA:2064:C:H5'	2.00	0.42
25:YA:2286:A:H8	52:Y6:37:ARG:HH11	1.68	0.42
25:YA:2317:C:H2'	25:YA:2318:G:O4'	2.20	0.42
25:YA:2420:C:N4	54:Y8:30:ARG:HD2	2.34	0.42
25:YA:2646:C:H6	25:YA:2646:C:O5'	2.02	0.42
26:YB:34:U:OP1	30:YG:2:PRO:HG2	2.19	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
27:YD:263:ARG:NH1	27:YD:263:ARG:CB	2.75	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.46	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.19	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.00	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.38	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.02	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.84	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.01	0.42
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.27	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
49:Y3:7:LYS:O	49:Y3:7:LYS:HG2	2.19	0.42
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
1:QA:35:G:C5	1:QA:36:C:N4	2.87	0.42
1:QA:49:U:C5	1:QA:364:A:C6	3.08	0.42
1:QA:145:G:H2'	1:QA:146:G:O4'	2.20	0.42
1:QA:309:G:H1'	1:QA:608:A:C2	2.54	0.42
1:QA:392:G:OP1	16:QP:13:HIS:N	2.42	0.42
1:QA:598:U:H2'	1:QA:599:C:H6	1.85	0.42
1:QA:833:U:O2	1:QA:854:G:C2	2.73	0.42
1:QA:978:A:HO2'	1:QA:1322:C:N4	2.17	0.42
1:QA:1015:A:C6	1:QA:1016:A:C6	3.08	0.42
1:QA:1151:A:N3	10:QJ:39:PRO:HG3	2.35	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42
25:RA:92:G:O2'	25:RA:93:C:H5'	2.20	0.42
25:RA:171:G:N2	25:RA:172:C:C2	2.88	0.42
25:RA:528:A:C2	25:RA:2043:C:H4'	2.55	0.42
25:RA:974(A):C:H4'	25:RA:975:G:C5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1137:G:H2'	25:RA:1138:G:O4'	2.20	0.42
25:RA:1216:G:P	40:RU:12:ARG:HH21	2.43	0.42
25:RA:1326:U:O2'	25:RA:1327:C:H5'	2.20	0.42
25:RA:1475:G:C2	25:RA:1519:G:C2	3.08	0.42
25:RA:1844:C:O2'	25:RA:1845:G:H5'	2.20	0.42
25:RA:2441:C:H2'	25:RA:2442:C:H6	1.85	0.42
25:RA:2588:G:O6	25:RA:2607:G:C6	2.73	0.42
25:RA:2787:C:O2'	28:RE:61:ARG:HB3	2.20	0.42
25:RA:2831:G:O2'	25:RA:2883:A:H2'	2.19	0.42
26:RB:42:C:C4	26:RB:43:C:C5	3.07	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.19	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
30:RG:51:ARG:NH1	30:RG:51:ARG:CB	2.83	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.02	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.23	0.42
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
1:XA:92:G:C5	1:XA:93:U:C4	3.08	0.42
1:XA:122:G:H2'	1:XA:123:C:O4'	2.19	0.42
1:XA:259:G:N2	1:XA:260:G:H1'	2.34	0.42
1:XA:376:G:H1	1:XA:387:U:H3	1.67	0.42
1:XA:587:G:N2	1:XA:755:G:C5	2.88	0.42
1:XA:1206:G:C5	1:XA:1207:G:C8	3.07	0.42
1:XA:1234:C:O2'	1:XA:1235:U:H5'	2.19	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.34	0.42
8:XH:4:ASP:HA	8:XH:5:PRO:HD3	1.85	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
16:XP:1:MET:H2	16:XP:24:ALA:HB3	1.84	0.42
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.42
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.42
22:XV:43:A:H2'	22:XV:44:A:C8	2.54	0.42
25:YA:250:G:H2'	25:YA:251:A:O4'	2.19	0.42
25:YA:270:A:C2	25:YA:366:C:H4'	2.55	0.42
25:YA:401:A:H2'	25:YA:402:A:C8	2.55	0.42
25:YA:416:C:H2'	25:YA:417:C:C6	2.55	0.42
25:YA:516:C:OP1	51:Y5:13:LYS:NZ	2.52	0.42
25:YA:547:A:OP2	25:YA:547:A:C8	2.72	0.42
25:YA:571:A:O2'	25:YA:573:G:O5'	2.37	0.42
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.54	0.42
25:YA:1316:U:O2'	25:YA:1317:A:H5'	2.20	0.42
25:YA:1471:A:C2	25:YA:1472:A:C4	3.08	0.42
25:YA:1526:G:O2'	25:YA:1527:G:H5'	2.19	0.42
25:YA:1770:G:C5	25:YA:1771:C:C5	3.08	0.42
25:YA:1991:U:C2'	25:YA:1992:G:H5''	2.49	0.42
25:YA:2060:A:C5	25:YA:2502:G:C2	3.08	0.42
25:YA:2419:U:O2'	25:YA:2420:C:H5'	2.20	0.42
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.20	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.42
28:YE:18:ASP:O	28:YE:19:ARG:C	2.55	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.53	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD11	2.50	0.42
40:YU:27:LEU:C	40:YU:29:SER:N	2.73	0.42
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.29	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
46:Y0:38:VAL:O	46:Y0:58:THR:HG23	2.19	0.42
46:Y0:57:PHE:N	46:Y0:57:PHE:CD2	2.88	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.42
55:Y9:17:ILE:CG2	55:Y9:18:ARG:N	2.82	0.42
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.54	0.42
1:QA:337:C:H2'	1:QA:338:A:H8	1.85	0.42
1:QA:481:G:O2'	1:QA:482:A:P	2.78	0.42
1:QA:524:G:C6	1:QA:525:C:N4	2.88	0.42
1:QA:769:G:H4'	1:QA:1513:A:H4'	2.02	0.42
1:QA:892:A:H2'	1:QA:893:C:H6	1.84	0.42
1:QA:960:U:O2	1:QA:960:U:C2'	2.67	0.42
1:QA:1348:U:C5	1:QA:1349:A:N7	2.88	0.42
1:QA:1349:A:C4	1:QA:1350:A:C8	3.07	0.42
1:QA:1368:G:O2'	1:QA:1369:C:H5'	2.19	0.42
1:QA:1370:G:O3'	9:QI:12:GLU:HG3	2.20	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.72	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.42
4:QD:201:GLN:HE22	5:QE:116:THR:HG23	1.83	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
8:QH:74:PRO:O	8:QH:75:ARG:C	2.58	0.42
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
22:QV:75:C:OP1	25:RA:2602:A:OP1	2.37	0.42
25:RA:28:A:C2	25:RA:513:A:C8	3.08	0.42
25:RA:195:A:OP1	35:RP:46:LYS:HE2	2.19	0.42
25:RA:570:G:H2'	25:RA:2030:A:N6	2.35	0.42
25:RA:714:U:O2	25:RA:716:A:C8	2.72	0.42
25:RA:1335:U:OP1	43:RX:65:ARG:NE	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1612:C:N4	25:RA:1619:G:H1	2.18	0.42
25:RA:1785:A:O2'	25:RA:1786:A:H2'	2.20	0.42
25:RA:1835:G:N3	25:RA:1931:U:N3	2.67	0.42
25:RA:1975:G:C5	25:RA:1976:U:C5	3.08	0.42
25:RA:2123:G:N1	25:RA:2176:A:C4	2.88	0.42
25:RA:2259:G:C2	25:RA:2282:G:N1	2.88	0.42
25:RA:2341:G:C6	25:RA:2342:C:C4	3.08	0.42
25:RA:2508:G:C2	25:RA:2582:G:O6	2.73	0.42
25:RA:2627:G:N3	25:RA:2781:A:C2	2.87	0.42
26:RB:63:G:C2	26:RB:64:C:C2	3.07	0.42
26:RB:70:C:H2'	26:RB:71:C:H6	1.84	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
27:RD:196:VAL:O	27:RD:196:VAL:CG1	2.68	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.42
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
33:RN:27:ALA:O	33:RN:28:THR:C	2.57	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.01	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.42
42:RW:59:VAL:CG1	42:RW:60:ASN:N	2.78	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.42
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
1:XA:154:C:H6	1:XA:154:C:O5'	2.03	0.42
1:XA:289:G:H2'	1:XA:290:C:C6	2.54	0.42
1:XA:539:A:OP2	12:XL:115:LYS:HE3	2.20	0.42
1:XA:588:G:C2	1:XA:589:C:C5	3.08	0.42
1:XA:691:G:N7	11:XK:26:ASN:ND2	2.68	0.42
1:XA:895:G:H2'	1:XA:896:C:H6	1.83	0.42
1:XA:1320:C:H5'	1:XA:1320:C:H6	1.85	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:109:SER:C	2:XB:111:ARG:H	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
19:XS:58:VAL:O	19:XS:58:VAL:HG23	2.20	0.42
19:XS:66:MET:O	19:XS:66:MET:HG3	2.19	0.42
20:XT:63:ILE:CG2	20:XT:77:ALA:HB1	2.47	0.42
25:YA:60:G:N2	25:YA:74:A:C4	2.88	0.42
25:YA:104:U:H5'	25:YA:105:C:OP2	2.20	0.42
25:YA:190:A:C4	25:YA:207:A:C2	3.08	0.42
25:YA:625:G:OP1	54:Y8:64:TYR:HD1	2.03	0.42
25:YA:871:U:OP1	36:YQ:5:ARG:HG2	2.20	0.42
25:YA:1061:U:H4'	25:YA:1070:A:H1'	2.02	0.42
25:YA:1270:C:N4	25:YA:1648:C:N4	2.67	0.42
25:YA:1279:G:H4'	37:YR:31:HIS:CD2	2.44	0.42
25:YA:1429:G:C4	25:YA:1430:C:C5	3.08	0.42
25:YA:1509:C:N4	25:YA:1511:A:H62	2.17	0.42
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.19	0.42
25:YA:2123:G:H1	25:YA:2175:C:N4	2.13	0.42
25:YA:2413:G:H2'	25:YA:2414:G:O4'	2.19	0.42
25:YA:2629:A:N6	25:YA:2895:U:C2	2.88	0.42
25:YA:2716:U:C2'	25:YA:2717:G:H5'	2.50	0.42
25:YA:2756:U:H6	25:YA:2756:U:O5'	2.02	0.42
26:YB:60:C:C2	26:YB:61:G:C8	3.07	0.42
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.83	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.20	0.42
32:YI:47:LEU:O	32:YI:51:ILE:HG13	2.19	0.42
32:YI:48:GLU:O	32:YI:51:ILE:HB	2.20	0.42
37:YR:28:LEU:HD13	37:YR:28:LEU:C	2.40	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:105:LEU:O	39:YT:105:LEU:HG	2.19	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
45:YZ:10:ARG:HH11	45:YZ:36:LYS:HD3	1.85	0.42
46:Y0:14:ARG:O	46:Y0:15:ASP:HB2	2.20	0.42
46:Y0:42:GLY:O	46:Y0:57:PHE:HD1	2.02	0.42
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.42
1:QA:76:G:C6	1:QA:77:C:C4	3.08	0.42
1:QA:198:G:H2'	1:QA:199:G:O4'	2.20	0.42
1:QA:464:G:O6	1:QA:466:C:H5'	2.20	0.42
1:QA:1350:A:H2'	1:QA:1351:U:O4'	2.20	0.42
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.37	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.42
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.42
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.42
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.42
25:RA:39:C:H2'	25:RA:40:C:C6	2.53	0.42
25:RA:579:G:H2'	25:RA:580:C:H6	1.85	0.42
25:RA:629:G:H1	25:RA:634:C:H42	1.68	0.42
25:RA:747:U:OP1	51:R5:3:LYS:HG2	2.20	0.42
25:RA:859:G:O2'	25:RA:860:U:P	2.77	0.42
25:RA:1024:G:O6	25:RA:1025:G:C2	2.73	0.42
25:RA:1197:G:H8	25:RA:1197:G:O5'	2.03	0.42
25:RA:1418:G:N1	25:RA:1579:A:OP2	2.35	0.42
25:RA:1495:A:H2'	25:RA:1496:A:N3	2.35	0.42
25:RA:1718:G:N2	25:RA:1742:C:C2	2.88	0.42
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.19	0.42
25:RA:1948:G:C2'	25:RA:1949:G:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2250:G:C5	36:RQ:82:ARG:HD2	2.54	0.42
25:RA:2347:C:C2	25:RA:2348:U:C5	3.08	0.42
25:RA:2745:C:H2'	25:RA:2746:U:C6	2.54	0.42
25:RA:2757:A:C2	31:RH:63:SER:HB3	2.54	0.42
25:RA:2773:C:O2'	25:RA:2774:C:H5'	2.20	0.42
25:RA:2817:G:N2	25:RA:2830:G:H1'	2.35	0.42
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	2.02	0.42
26:RB:63:G:H2'	26:RB:64:C:C6	2.55	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
29:RF:61:GLY:O	29:RF:62:ARG:C	2.58	0.42
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
31:RH:105:LEU:CD1	31:RH:105:LEU:N	2.81	0.42
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.20	0.42
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
35:RP:107:LYS:O	35:RP:108:LYS:C	2.58	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
36:RQ:134:ARG:HD3	45:RZ:122:ARG:NH1	2.34	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.72	0.42
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.42
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.49	0.42
42:RW:19:LEU:HA	42:RW:19:LEU:HD12	1.79	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
47:R1:76:ARG:H	47:R1:76:ARG:CD	2.29	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.42
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
1:XA:102:G:C4	1:XA:103:C:C5	3.08	0.42
1:XA:195:A:N7	1:XA:196:A:C6	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:674:G:N2	1:XA:717:C:O2	2.52	0.42
1:XA:825:G:H2'	1:XA:826:C:O4'	2.19	0.42
1:XA:972:C:O3'	10:XJ:57:LYS:HG2	2.19	0.42
1:XA:1095:U:P	1:XA:1108:G:H22	2.43	0.42
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.53	0.42
1:XA:1312:G:C2	1:XA:1326:C:N3	2.88	0.42
1:XA:1336:C:O2'	1:XA:1337:G:O5'	2.37	0.42
1:XA:1413:A:C2	1:XA:1488:G:C2	3.08	0.42
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.42
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.42
5:XE:153:LYS:HD3	5:XE:153:LYS:C	2.41	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.01	0.42
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.42
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
14:YN:9:LYS:HB3	14:YN:9:LYS:HE2	1.85	0.42
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.01	0.42
19:XS:42:PRO:HD3	50:Y4:63:TYR:CE2	2.50	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.52	0.42
25:YA:1061:U:H3'	25:YA:1062:G:C5'	2.50	0.42
25:YA:1252:G:O2'	25:YA:1253:A:H5''	2.20	0.42
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.36	0.42
25:YA:2095:C:H2'	25:YA:2096:U:O4'	2.19	0.42
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.84	0.42
26:YB:44:G:C2	26:YB:48:A:C2	3.07	0.42
27:YD:196:VAL:O	27:YD:196:VAL:CG1	2.68	0.42
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.42
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.42
32:YI:128:LEU:HD13	32:YI:128:LEU:HA	1.68	0.42
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.42
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
34:YO:2:ILE:N	34:YO:2:ILE:CD1	2.82	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
42:YW:96:ILE:O	42:YW:96:ILE:CG2	2.68	0.42
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
45:YZ:150:LEU:H	45:YZ:150:LEU:CD1	2.33	0.42
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
1:QA:177:C:H2'	1:QA:178:C:H6	1.85	0.41
1:QA:363:A:H2'	1:QA:364:A:O4'	2.20	0.41
1:QA:559:A:H4'	1:QA:560:U:C5'	2.50	0.41
1:QA:803:G:H2'	1:QA:804:U:O4'	2.20	0.41
1:QA:811:C:C5	1:QA:812:C:N4	2.88	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.41
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.41
2:QB:155:LEU:C	2:QB:157:ARG:H	2.23	0.41
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	0.41
4:QD:13:ARG:NH2	4:QD:36:ARG:CZ	2.83	0.41
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	0.41
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.41
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.41
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.50	0.41
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.49	0.41
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.41
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	0.41
12:QL:52:LEU:O	12:QL:54:LYS:NZ	2.30	0.41
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.92	0.41
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.41
25:RA:78:A:C2	25:RA:109:G:C2	3.08	0.41
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.19	0.41
25:RA:415:A:N1	25:RA:2409:G:C6	2.88	0.41
25:RA:452:G:C6	25:RA:453:C:N4	2.88	0.41
25:RA:510:C:H2'	25:RA:511:U:O4'	2.20	0.41
25:RA:1053:C:C4	25:RA:1054:A:N7	2.88	0.41
25:RA:1677:A:H2'	25:RA:1678:G:C8	2.54	0.41
25:RA:1798:U:H5''	27:RD:259:THR:HG22	2.01	0.41
25:RA:2399:G:C6	25:RA:2418:A:C6	3.08	0.41
25:RA:2469:A:H3'	25:RA:2470:G:H8	1.83	0.41
25:RA:2620:C:O5'	25:RA:2620:C:H6	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2837:G:O5'	25:RA:2837:G:H8	2.03	0.41
26:RB:116:G:H5'	38:RS:55:ALA:HA	2.02	0.41
28:RE:11:MET:HE3	28:RE:186:GLY:HA2	2.02	0.41
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.41
28:RE:176:ILE:HD12	28:RE:176:ILE:N	2.35	0.41
30:RG:60:LEU:HD23	30:RG:60:LEU:C	2.41	0.41
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.41
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.55	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.41
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.41
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.41
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.41
45:RZ:71:VAL:HB	45:RZ:88:PHE:CE2	2.55	0.41
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.41
47:R1:81:LYS:N	47:R1:81:LYS:CD	2.83	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.41
1:XA:104:G:C4	1:XA:105:G:C8	3.08	0.41
1:XA:113:G:H2'	1:XA:114:U:C6	2.54	0.41
1:XA:1104:G:H2'	1:XA:1105:A:O4'	2.20	0.41
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.41
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.41
14:XN:3:ARG:CG	14:XN:4:LYS:N	2.83	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.41
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.41
21:XU:2:GLY:C	21:XU:4:GLY:H	2.23	0.41
25:YA:1282:U:H2'	25:YA:1283:G:O4'	2.20	0.41
25:YA:1316:U:H1'	25:YA:1392:A:H2	1.85	0.41
25:YA:1322:A:C5	25:YA:1323:U:C5	3.08	0.41
25:YA:1350:C:N3	25:YA:1382:G:C2	2.88	0.41
25:YA:1408:C:C2	25:YA:1595:G:N2	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1682:G:C5	25:YA:1683:C:C4	3.07	0.41
25:YA:1778:U:O2'	25:YA:1779:U:H5'	2.20	0.41
25:YA:1816:G:N7	27:YD:62:TYR:CE1	2.88	0.41
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.31	0.41
25:YA:1925:C:C2'	25:YA:1926:U:H5'	2.49	0.41
25:YA:1999:C:H5''	25:YA:2723:C:O2'	2.20	0.41
25:YA:2037:G:H2'	25:YA:2038:G:H8	1.79	0.41
25:YA:2080:G:N2	25:YA:2241:A:C4	2.87	0.41
25:YA:2309:A:C8	25:YA:2309:A:H3'	2.55	0.41
25:YA:2837:G:C5	25:YA:2838:G:N7	2.88	0.41
26:YB:87:G:C2	26:YB:90:C:N3	2.88	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.02	0.41
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.02	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.41
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.03	0.41
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.41
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.41
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.41
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.02	0.41
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
43:YX:57:LEU:HD12	43:YX:57:LEU:H	1.85	0.41
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.41
45:YZ:100:VAL:HA	45:YZ:101:PRO:HD3	1.86	0.41
50:Y4:49:PHE:N	50:Y4:49:PHE:HD1	2.17	0.41
1:QA:296:U:O2'	1:QA:556:C:O2	2.31	0.41
1:QA:634:C:O2'	1:QA:635:G:H5'	2.20	0.41
1:QA:1004:A:C8	1:QA:1026:G:N7	2.89	0.41
1:QA:1084:G:H2'	1:QA:1085:U:C6	2.55	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.41
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	3.03	0.41
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:88:ARG:HD2	13:QM:88:ARG:O	2.19	0.41
14:QN:9:LYS:HG2	14:QN:9:LYS:O	2.19	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
22:QV:23:C:H2'	22:QV:24:U:C6	2.55	0.41
25:RA:270(E):G:C2	25:RA:270(F):U:C2	3.08	0.41
25:RA:270(I):G:H2'	25:RA:270(J):G:H8	1.86	0.41
25:RA:328:U:H4'	44:RY:68:HIS:NE2	2.35	0.41
25:RA:432:A:H2'	25:RA:433:C:O4'	2.20	0.41
25:RA:544:C:C2	25:RA:550:G:N2	2.88	0.41
25:RA:825:C:O2'	25:RA:2428:G:H2'	2.20	0.41
25:RA:1229(A):G:C6	25:RA:1230:C:C4	3.09	0.41
25:RA:1535:U:H5''	25:RA:1537:C:C4	2.55	0.41
25:RA:1783:A:C6	25:RA:2587:A:C2	3.08	0.41
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.21	0.41
25:RA:2397:G:H5''	47:R1:28:GLY:HA2	2.01	0.41
25:RA:2712:U:H1'	25:RA:2712(A):A:N7	2.35	0.41
26:RB:31:C:C2'	26:RB:32:C:H5'	2.50	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
28:RE:94:GLU:C	28:RE:96:PHE:N	2.73	0.41
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.41
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.41
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.20	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.41
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.41
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
1:XA:198:G:N7	1:XA:220:G:N2	2.68	0.41
1:XA:414:A:H2'	1:XA:415:A:H8	1.83	0.41
1:XA:416:G:H2'	1:XA:417:C:C6	2.55	0.41
1:XA:428:G:O4'	1:XA:430:A:C8	2.74	0.41
1:XA:695:A:OP1	11:XK:52:GLY:HA3	2.20	0.41
1:XA:891:U:C2	1:XA:892:A:C8	3.08	0.41
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.55	0.41
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1226:C:H4'	19:XS:80:TYR:CZ	2.55	0.41
1:XA:1279:A:HO2'	1:XA:1282:C:N4	2.18	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
13:XM:77:ASN:HA	50:Y4:71:ARG:HH22	1.71	0.41
14:YN:18:VAL:CG2	14:YN:19:ARG:N	2.82	0.41
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.20	0.41
25:YA:570:G:H2'	25:YA:2030:A:C6	2.55	0.41
25:YA:588:U:H1'	29:YF:90:PHE:CG	2.55	0.41
25:YA:630:G:H4'	25:YA:640:C:H4'	2.02	0.41
25:YA:680:G:C4	25:YA:798:G:N2	2.88	0.41
25:YA:684:G:C4	25:YA:794:G:N2	2.88	0.41
25:YA:928:G:O6	25:YA:929:G:C2	2.73	0.41
25:YA:1053:C:C4	25:YA:1054:A:C8	3.08	0.41
25:YA:1169:G:H1	25:YA:1180:C:N4	2.18	0.41
25:YA:1717:G:H2'	25:YA:1718:G:O4'	2.20	0.41
25:YA:1769:G:C2	25:YA:1984:G:C5	3.08	0.41
25:YA:1936:A:C8	25:YA:1940:U:O2	2.73	0.41
25:YA:2263:C:O2	25:YA:2277:G:N2	2.35	0.41
25:YA:2766:G:C2	25:YA:2767:C:C5	3.08	0.41
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.85	0.41
25:YA:2887:U:C2	25:YA:2888:C:C5	3.08	0.41
26:YB:110:G:C5	26:YB:111:U:C6	3.08	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.41
35:YP:81:GLN:HE21	35:YP:81:GLN:HB2	1.59	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.41
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.41
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.02	0.41
1:QA:16:A:N1	1:QA:919:A:C2	2.88	0.41
1:QA:128:G:C6	1:QA:129:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:378:G:O2'	1:QA:379:C:H5'	2.20	0.41
1:QA:396:G:O2'	1:QA:398:C:OP1	2.18	0.41
1:QA:849:C:H2'	1:QA:850:U:O4'	2.20	0.41
1:QA:965:A:C2	1:QA:969:A:C2	3.09	0.41
1:QA:1099:G:C6	1:QA:1100:C:N3	2.89	0.41
1:QA:1316:G:N2	1:QA:1318:A:H3'	2.35	0.41
1:QA:1348:U:N3	1:QA:1374:A:H2	2.18	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
9:QL:118:LYS:NZ	9:QL:118:LYS:HB3	2.34	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
23:QX:4:C:H2'	23:QX:4:C:O2	2.20	0.41
25:RA:648:G:H1'	25:RA:2351:G:OP1	2.20	0.41
25:RA:709:U:H2'	25:RA:710:G:H8	1.85	0.41
25:RA:816:C:C4	25:RA:1192:G:C2	3.07	0.41
25:RA:834:C:H2'	25:RA:835:A:H8	1.85	0.41
25:RA:1389:G:C2	25:RA:1399:C:O2	2.72	0.41
25:RA:1437:C:N4	25:RA:1438:U:O4	2.53	0.41
25:RA:1569:A:H2'	25:RA:1570:A:O4'	2.20	0.41
25:RA:2259:G:C2	25:RA:2282:G:C2	3.08	0.41
25:RA:2621:A:OP1	28:RE:119:ARG:NH2	2.53	0.41
26:RB:9:G:H5'	38:RS:19:LYS:HZ3	1.84	0.41
26:RB:45:A:C4'	30:RG:95:ARG:NH1	2.83	0.41
27:RD:13:ARG:HG2	27:RD:13:ARG:O	2.20	0.41
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.82	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.35	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
32:RI:94:ALA:HB1	32:RI:114:LEU:HD23	2.02	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.51	0.41
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.92	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.56	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.68	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:94:GLU:HG3	45:RZ:129:SER:OG	2.21	0.41
1:XA:29:G:N2	1:XA:554:C:O2	2.40	0.41
1:XA:186:C:C5'	20:XT:78:ALA:HB1	2.49	0.41
1:XA:776:G:O2'	1:XA:777:A:C8	2.74	0.41
1:XA:1240:U:O2'	7:XG:38:LEU:HD23	2.19	0.41
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.54	0.41
1:XA:1336:C:O2	1:XA:1336:C:H2'	2.20	0.41
1:XA:1347:G:H22	1:XA:1373:G:H2'	1.86	0.41
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.02	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.85	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
25:YA:237:C:H2'	25:YA:238:C:H6	1.84	0.41
25:YA:479:A:C2	25:YA:481:G:H5''	2.56	0.41
25:YA:503:A:C6	25:YA:506:G:C6	3.08	0.41
25:YA:624:C:H5''	25:YA:624:C:C6	2.55	0.41
25:YA:878:A:N6	25:YA:899:A:HO2'	2.18	0.41
25:YA:1332:G:H8	25:YA:1332:G:H2'	1.46	0.41
25:YA:1589:C:H2'	25:YA:1590:U:C6	2.55	0.41
25:YA:1651:G:C2	25:YA:2007:C:N3	2.89	0.41
25:YA:1747:G:O2'	25:YA:1748:G:H5'	2.20	0.41
25:YA:1767:C:H2'	25:YA:1768:U:O4'	2.20	0.41
25:YA:1799:G:H5'	25:YA:1819:A:H61	1.85	0.41
25:YA:1857:G:N2	25:YA:1886:C:N4	2.68	0.41
25:YA:2404:C:H1'	35:YP:67:MET:HE2	2.03	0.41
25:YA:2584:U:H4'	56:Z8:76:PPU:C5	2.49	0.41
25:YA:2630:G:C2	25:YA:2631:G:C4	3.07	0.41
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.85	0.41
27:YD:134:ARG:H	27:YD:134:ARG:HG3	1.55	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.41
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	2.02	0.41
32:YI:88:ILE:H	32:YI:122:GLU:H	1.69	0.41
33:YN:1:MET:O	33:YN:1:MET:HG3	2.19	0.41
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.41
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.41
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.41
39:YT:62:THR:HG22	39:YT:75:ILE:CG1	2.35	0.41
39:YT:134:GLU:O	39:YT:135:ALA:CB	2.69	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.02	0.41
42:YW:8:ARG:HG3	42:YW:8:ARG:NH1	2.34	0.41
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
45:YZ:10:ARG:NH2	45:YZ:26:GLY:H	2.16	0.41
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.82	0.41
1:QA:354:G:H2'	1:QA:355:C:H5'	2.01	0.41
1:QA:521:G:O5'	12:QL:73:GLU:HG3	2.20	0.41
1:QA:675:A:H2'	1:QA:676:A:O4'	2.19	0.41
1:QA:765:G:H5''	1:QA:766:A:OP1	2.20	0.41
1:QA:858:G:H8	1:QA:858:G:OP2	2.03	0.41
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.20	0.41
1:QA:1253:G:H2'	1:QA:1254:C:C6	2.56	0.41
1:QA:1381:U:C4	1:QA:1382:C:C4	3.09	0.41
1:QA:1394:A:H4'	1:QA:1395:C:OP2	2.20	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
6:QF:92:LYS:HB2	6:QF:92:LYS:HZ2	1.84	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.02	0.41
10:QJ:45:ARG:HG3	10:QJ:45:ARG:HH11	1.86	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.39	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.01	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.53	0.41
25:RA:9:U:O4	25:RA:2629:A:C8	2.74	0.41
25:RA:142:G:H1'	43:RX:37:THR:CG2	2.50	0.41
25:RA:270(A):A:O2'	25:RA:270(B):A:H5'	2.19	0.41
25:RA:527:C:H2'	25:RA:2779:U:C5	2.56	0.41
25:RA:534:U:O2	40:RU:49:HIS:HE1	2.04	0.41
25:RA:871:U:OP1	36:RQ:5:ARG:HG2	2.21	0.41
25:RA:1371:G:H8	25:RA:1371:G:O5'	2.03	0.41
25:RA:2037:G:C6	25:RA:2038:G:C6	3.08	0.41
25:RA:2257:U:C4	25:RA:2258:C:N4	2.88	0.41
25:RA:2413:G:N2	25:RA:2414:G:H1'	2.35	0.41
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.78	0.41
26:RB:109:G:C6	26:RB:110:G:C5	3.09	0.41
27:RD:269:PHE:CD2	27:RD:269:PHE:N	2.88	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.23	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.82	0.41
46:R0:48:GLY:H	46:R0:51:VAL:HB	1.86	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
1:XA:20:U:H2'	1:XA:21:G:O4'	2.21	0.41
1:XA:114:U:H2'	1:XA:115:G:C8	2.55	0.41
1:XA:147:G:C4	1:XA:148:G:C8	3.08	0.41
1:XA:164:U:H2'	1:XA:165:C:C6	2.55	0.41
1:XA:233:C:H2'	1:XA:234:C:H6	1.86	0.41
1:XA:254:G:O2'	17:XQ:16:GLN:O	2.37	0.41
1:XA:358:U:H2'	1:XA:359:U:O4'	2.20	0.41
1:XA:571:U:O2	1:XA:918:A:H5'	2.21	0.41
1:XA:683:G:C6	1:XA:684:A:C6	3.08	0.41
1:XA:779:C:H4'	11:XK:121:PRO:O	2.20	0.41
1:XA:836:G:C6	1:XA:851:G:C6	3.08	0.41
1:XA:969:A:C2	1:XA:970:C:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1191:A:OP1	3:XC:4:LYS:HG3	2.20	0.41
1:XA:1296:C:H1'	1:XA:1302:U:H5	1.84	0.41
1:XA:1316:G:H5''	14:YN:17:LYS:CE	2.50	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.33	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
7:XG:141:VAL:O	7:XG:141:VAL:CG1	2.65	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
25:YA:422:A:C6	25:YA:423:A:C6	3.08	0.41
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	2.02	0.41
25:YA:1216:G:OP2	40:YU:12:ARG:NH2	2.43	0.41
25:YA:1448:G:H1'	25:YA:1528:A:N6	2.35	0.41
25:YA:1449:A:N3	25:YA:1530:G:H1'	2.35	0.41
25:YA:1764:G:C5	25:YA:1989:G:N2	2.89	0.41
25:YA:1869:G:N2	25:YA:1878:G:C5	2.88	0.41
25:YA:1922:G:C2'	25:YA:1923:U:H5'	2.50	0.41
25:YA:1984:G:C2	25:YA:1985:G:C8	3.08	0.41
25:YA:2081:C:C5	25:YA:2237:G:N2	2.88	0.41
25:YA:2355:C:H5''	25:YA:2356:C:OP2	2.20	0.41
25:YA:2572:A:N3	28:YE:144:ARG:NH2	2.68	0.41
25:YA:2581:G:H2'	25:YA:2581:G:N3	2.36	0.41
25:YA:2616:C:O2	25:YA:2616:C:H2'	2.19	0.41
26:YB:106:G:C2	26:YB:107:U:C5	3.09	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.41
30:YG:51:ARG:NH1	30:YG:51:ARG:CB	2.82	0.41
32:YI:112:LYS:H	32:YI:112:LYS:HG2	1.39	0.41
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.41
36:YQ:80:GLU:OE1	46:Y0:7:LEU:HG	2.20	0.41
36:YQ:132:VAL:HG11	45:YZ:81:ARG:NH1	2.35	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.41
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.41
42:YW:25:ARG:NH1	42:YW:25:ARG:CB	2.79	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
44:YY:95:LYS:H	44:YY:95:LYS:CD	2.32	0.41
49:Y3:37:LEU:HD23	49:Y3:37:LEU:N	2.35	0.41
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
1:QA:258:G:H1	1:QA:268:C:H42	1.68	0.41
1:QA:590:C:O2'	1:QA:591:U:H5'	2.21	0.41
1:QA:935:A:N6	7:QG:3:ARG:HG3	2.36	0.41
1:QA:1064:G:O2'	1:QA:1065:U:P	2.77	0.41
1:QA:1072:G:OP1	5:QE:49:PRO:HD2	2.20	0.41
1:QA:1234:C:C4'	1:QA:1364:U:H1'	2.50	0.41
1:QA:1504:G:H4'	1:QA:1505:G:O4'	2.20	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
25:RA:121:G:H1'	25:RA:148:C:C2	2.56	0.41
25:RA:363:G:H2'	25:RA:363(A):A:H8	1.84	0.41
25:RA:685:A:H5''	25:RA:788:A:H62	1.86	0.41
25:RA:686:G:C2	53:R7:11:LYS:HE3	2.54	0.41
25:RA:871:U:H2'	25:RA:872:A:C8	2.55	0.41
25:RA:1021:A:C8	25:RA:1021:A:C3'	3.03	0.41
25:RA:1085:A:O2'	25:RA:1086:A:P	2.78	0.41
25:RA:1337:G:O5'	25:RA:1337:G:H8	2.02	0.41
25:RA:1451:C:H4'	25:RA:1453:A:H5'	2.03	0.41
25:RA:1565:C:C2	25:RA:1567:A:C8	3.08	0.41
25:RA:1820:U:O2	27:RD:202:LYS:N	2.53	0.41
25:RA:2318:G:N2	38:RS:2:ALA:HA	2.35	0.41
25:RA:2456:C:C4	25:RA:2457:U:C5	3.08	0.41
25:RA:2572:A:N3	28:RE:144:ARG:NH2	2.68	0.41
26:RB:31:C:H2'	26:RB:32:C:H5'	2.02	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.02	0.41
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.21	0.41
32:RI:37:VAL:HG12	32:RI:38:LEU:HD12	2.03	0.41
41:RV:61:VAL:CG2	41:RV:61:VAL:O	2.68	0.41
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.21	0.41
44:RY:86:ARG:HD2	44:RY:86:ARG:HA	1.91	0.41
46:R0:70:GLN:NE2	46:R0:72:ARG:HD3	2.36	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.34	0.41
1:XA:23:C:H2'	1:XA:24:U:O4'	2.20	0.41
1:XA:53:A:N1	1:XA:54:C:C2	2.88	0.41
1:XA:126:G:H4'	1:XA:634:C:O2	2.19	0.41
1:XA:160:A:H2'	1:XA:161:A:O4'	2.21	0.41
1:XA:442:C:H2'	1:XA:443:C:C6	2.54	0.41
1:XA:1039:C:H6	1:XA:1039:C:OP2	2.04	0.41
1:XA:1259:C:H1'	1:XA:1283:G:H21	1.85	0.41
1:XA:1451:A:N3	1:XA:1451:A:H2'	2.36	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.20	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
9:XI:127:LYS:CE	22:XV:34:C:OP2	2.68	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
12:XL:41:ARG:NH2	12:XL:43:VAL:HG12	2.35	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
14:XN:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
22:XV:17:C:O2	22:XV:17:C:H2'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:270(T):G:H2'	25:YA:270(U):C:C6	2.54	0.41
25:YA:456:C:C5	43:YX:69:TYR:CE1	3.09	0.41
25:YA:729:G:N7	27:YD:208:LYS:HB2	2.36	0.41
25:YA:811:U:O2	25:YA:1250:G:H5''	2.21	0.41
25:YA:947:G:N2	25:YA:971:C:C2	2.89	0.41
25:YA:1026:U:H1'	25:YA:1027:A:C5'	2.51	0.41
25:YA:1081:U:H3'	25:YA:1082:U:C5'	2.50	0.41
25:YA:1105:U:OP2	25:YA:1105:U:H6	2.03	0.41
25:YA:1398:C:H6	25:YA:1398:C:O5'	2.03	0.41
25:YA:1432:C:H2'	25:YA:1433:U:O4'	2.20	0.41
25:YA:1508:A:O2'	25:YA:1509:C:O4'	2.35	0.41
25:YA:1674:G:H1'	25:YA:1676:A:N6	2.36	0.41
25:YA:2584:U:C6	25:YA:2585:U:C4	3.09	0.41
25:YA:2662:A:H8	25:YA:2662:A:O5'	2.03	0.41
25:YA:2749:A:H1'	31:YH:63:SER:OG	2.21	0.41
26:YB:89(A):A:O5'	26:YB:89(A):A:H8	2.04	0.41
26:YB:116:G:H4'	38:YS:54:LEU:HD13	2.01	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
27:YD:269:PHE:CD2	27:YD:269:PHE:N	2.88	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.47	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.03	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.41
36:YQ:83:MET:SD	46:Y0:7:LEU:HD13	2.60	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.49	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.41
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
45:YZ:5:LEU:HD12	45:YZ:7:ALA:HB2	2.01	0.41
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	2.20	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.50	0.41
1:QA:77:C:H42	1:QA:92:G:H1	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:255:G:OP1	17:QQ:69:LYS:NZ	2.54	0.41
1:QA:515:G:C5	1:QA:516:U:C5	3.08	0.41
1:QA:1079:G:H5'	5:QE:129:ILE:HG21	2.03	0.41
1:QA:1095:U:H2'	1:QA:1096:C:O4'	2.20	0.41
1:QA:1149:C:O5'	1:QA:1149:C:H6	2.03	0.41
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.41	0.41
1:QA:1337:G:H5''	1:QA:1338:G:OP1	2.20	0.41
1:QA:1385:G:C2	1:QA:1386:G:C8	3.09	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.00	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
6:QF:92:LYS:NZ	6:QF:92:LYS:CB	2.84	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.52	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.84	0.41
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
22:QV:16:C:O2'	22:QV:17:C:OP1	2.39	0.41
22:QV:21:A:N6	22:QV:46:G:H2'	2.36	0.41
25:RA:78:A:H2'	25:RA:79:G:C8	2.55	0.41
25:RA:226:G:O2'	25:RA:227:A:H5'	2.21	0.41
25:RA:639:U:H2'	25:RA:640:C:H6	1.85	0.41
25:RA:912:C:O2	25:RA:912:C:H2'	2.19	0.41
25:RA:1065:U:O2'	25:RA:1074:G:N2	2.54	0.41
25:RA:1619:G:H8	25:RA:1619:G:O5'	2.03	0.41
25:RA:1649:G:C6	25:RA:2009:G:C6	3.08	0.41
25:RA:1668:A:N7	25:RA:1674:G:C6	2.88	0.41
25:RA:1716:U:H2'	25:RA:1717:G:H8	1.84	0.41
25:RA:2259:G:H1'	25:RA:2427:C:H2'	2.01	0.41
25:RA:2415:G:C6	25:RA:2416:C:C4	3.08	0.41
25:RA:2871:C:H5''	25:RA:2872:G:OP1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
30:RG:47:LYS:HB2	30:RG:47:LYS:HE3	1.80	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.03	0.41
37:RR:28:LEU:HD13	37:RR:28:LEU:C	2.40	0.41
42:RW:29:LEU:HD23	42:RW:29:LEU:C	2.41	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
46:R0:12:ASN:HB3	46:R0:13:GLY:H	1.57	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.20	0.41
1:XA:104:G:O2'	1:XA:105:G:H5'	2.20	0.41
1:XA:126:G:C2	1:XA:127:G:H1'	2.55	0.41
1:XA:227:G:H2'	1:XA:228:A:O4'	2.19	0.41
1:XA:242:C:C2	1:XA:285:G:N2	2.88	0.41
1:XA:337:C:H2'	1:XA:338:A:H8	1.83	0.41
1:XA:402:G:C2'	1:XA:403:C:H5'	2.50	0.41
1:XA:411:A:C5	1:XA:413:G:H1'	2.55	0.41
1:XA:939:G:H2'	1:XA:940:C:H6	1.83	0.41
1:XA:1410:G:C2	1:XA:1491:G:C2	3.09	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
25:YA:284:U:H2'	25:YA:285:C:O4'	2.20	0.41
25:YA:301:G:C6	25:YA:317:G:C5	3.09	0.41
25:YA:465:G:C2	25:YA:466:A:C2	3.09	0.41
25:YA:747:U:O2'	42:YW:88:ARG:HG3	2.21	0.41
25:YA:770:G:N3	25:YA:1354:A:H2	2.18	0.41
25:YA:873:G:H1	25:YA:904:C:H42	1.68	0.41
25:YA:915:C:O2'	26:YB:100:G:H5''	2.20	0.41
25:YA:1047:G:HO2'	25:YA:1048:A:H8	1.64	0.41
25:YA:1056:G:H5'	25:YA:1085:A:C2	2.56	0.41
25:YA:1171:G:C6	25:YA:1174:A:N6	2.89	0.41
25:YA:1534:G:O2'	25:YA:1535:U:H4'	2.21	0.41
25:YA:1547:C:H2'	25:YA:1548:C:C6	2.55	0.41
25:YA:1627:G:H2'	25:YA:1628:G:H8	1.86	0.41
25:YA:1761:C:C4	25:YA:1762:A:N7	2.89	0.41
25:YA:1945:G:O2'	25:YA:1946:U:H5'	2.21	0.41
25:YA:2263:C:H42	25:YA:2278:A:N6	2.18	0.41
25:YA:2458:G:C5	25:YA:2490:G:C6	3.08	0.41
25:YA:2488:A:N6	25:YA:2489:G:C6	2.88	0.41
25:YA:2677:G:O2'	25:YA:2678:C:H5'	2.21	0.41
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.20	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
32:YI:114:LEU:HD13	32:YI:130:TYR:CD1	2.56	0.41
35:YP:12:ALA:C	35:YP:14:LYS:N	2.73	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.20	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
45:YZ:39:VAL:HG21	45:YZ:44:PHE:HB2	2.02	0.41
45:YZ:150:LEU:H	45:YZ:150:LEU:HD13	1.86	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.41
52:Y6:27:LYS:NZ	52:Y6:27:LYS:CB	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
1:QA:132:C:C2	1:QA:231:G:N2	2.88	0.41
1:QA:198:G:C6	1:QA:220:G:C2	3.09	0.41
1:QA:310:G:H4'	16:QP:31:LYS:HD3	2.03	0.41
1:QA:448:A:C2	1:QA:449:C:C4	3.09	0.41
1:QA:767:A:H2'	1:QA:768:A:O4'	2.21	0.41
1:QA:972:C:O3'	10:QJ:57:LYS:HG2	2.21	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:55:VAL:HG12	3:QC:55:VAL:O	2.20	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
4:QD:120:LEU:HD23	4:QD:120:LEU:HA	1.83	0.41
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.02	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.86	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.92	0.41
25:RA:297:C:H5''	44:RY:85:VAL:HG21	2.03	0.41
25:RA:312:G:C6	25:RA:313:C:N3	2.89	0.41
25:RA:556:G:C6	25:RA:557:U:C4	3.08	0.41
25:RA:668:G:N7	25:RA:670:A:C8	2.89	0.41
25:RA:780:G:C2	25:RA:782:A:C2	3.09	0.41
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	2.21	0.41
25:RA:1050:A:C8	25:RA:2751:G:C8	3.09	0.41
25:RA:1155:A:HO2'	25:RA:1156:A:H2'	1.85	0.41
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.56	0.41
25:RA:1443:G:H1	25:RA:1548:C:H42	1.69	0.41
25:RA:2338:G:N1	25:RA:2339:G:C5	2.89	0.41
25:RA:2451:A:N1	56:Z6:76:PPU:HE2	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2463:C:O5'	25:RA:2463:C:H6	2.04	0.41
25:RA:2653:U:C2	25:RA:2668:G:N2	2.89	0.41
25:RA:2654:A:N6	25:RA:2667:C:N4	2.69	0.41
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
32:RI:97:ILE:HD12	32:RI:140:LEU:CD1	2.51	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.20	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
45:RZ:4:ARG:HH12	45:RZ:58:VAL:HG21	1.86	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.50	0.41
1:XA:108:G:H5''	1:XA:109:A:C5'	2.48	0.41
1:XA:848:C:H6	1:XA:848:C:O5'	2.04	0.41
1:XA:892:A:C6	1:XA:907:A:C8	3.09	0.41
1:XA:998(A):C:H2'	1:XA:999:U:H6	1.85	0.41
1:XA:1141:C:O2'	1:XA:1142:G:H5'	2.21	0.41
1:XA:1176:A:N6	1:XA:1177:G:C6	2.89	0.41
1:XA:1221:G:H4'	19:XS:53:ASN:O	2.21	0.41
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.43	0.41
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.55	0.41
1:XA:1430:C:C2	1:XA:1471:G:N2	2.89	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
25:YA:270(U):C:H2'	25:YA:270(V):G:C8	2.56	0.41
25:YA:540:G:H2'	25:YA:540:G:N3	2.35	0.41
25:YA:592:G:H21	54:Y8:4:MET:HE1	1.85	0.41
25:YA:701:G:N2	25:YA:732:C:C4	2.89	0.41
25:YA:705:A:C2	25:YA:727:A:H1'	2.55	0.41
25:YA:823:G:C6	25:YA:835:A:C2	3.09	0.41
25:YA:989:G:OP1	25:YA:1157:G:H4'	2.20	0.41
25:YA:1374:G:C6	25:YA:1375:C:C4	3.09	0.41
25:YA:1776:G:N3	25:YA:1777:U:C6	2.88	0.41
25:YA:1798:U:C2	25:YA:1822:G:C2	3.09	0.41
25:YA:2056:G:C8	25:YA:2577:A:C6	3.09	0.41
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.44	0.41
25:YA:2366:A:N6	25:YA:2367:G:C2	2.89	0.41
26:YB:101:A:H8	26:YB:101:A:OP2	2.04	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.51	0.41
34:YO:1:MET:HE2	34:YO:67:LYS:HG2	2.03	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.20	0.41
44:YY:95:LYS:HB2	44:YY:95:LYS:HZ1	1.86	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
1:QA:102:G:C6	1:QA:103:C:N4	2.89	0.41
1:QA:107:G:H2'	1:QA:108:G:O4'	2.20	0.41
1:QA:151:A:H2'	1:QA:152:A:O4'	2.21	0.41
1:QA:562:C:H4'	1:QA:563:A:O5'	2.21	0.41
1:QA:612:C:O2	1:QA:629:G:N2	2.53	0.41
1:QA:674:G:C2'	1:QA:675:A:H5'	2.51	0.41
1:QA:709:G:H2'	1:QA:710:G:C8	2.51	0.41
1:QA:988:G:C6	1:QA:989:C:C4	3.09	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.41
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
25:RA:80:G:C2	25:RA:81:G:C4	3.09	0.41
25:RA:83:G:O2'	25:RA:84:A:C8	2.74	0.41
25:RA:298:G:H5''	25:RA:299:A:OP1	2.21	0.41
25:RA:415:A:H2'	25:RA:416:C:C6	2.56	0.41
25:RA:422:A:H2'	25:RA:423:A:C8	2.56	0.41
25:RA:546:C:C5	25:RA:547:A:C4	3.08	0.41
25:RA:870:A:H2'	25:RA:871:U:H6	1.82	0.41
25:RA:1530:G:H2'	25:RA:1531:C:H6	1.86	0.41
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.35	0.41
25:RA:2032:G:O4'	25:RA:2032:G:N3	2.50	0.41
25:RA:2125:G:O2'	25:RA:2173:A:N6	2.54	0.41
25:RA:2164:C:H2'	25:RA:2165:G:O4'	2.20	0.41
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.55	0.41
25:RA:2308:G:H2'	25:RA:2308:G:N3	2.35	0.41
25:RA:2311:A:C1'	30:RG:82:LEU:HD11	2.51	0.41
25:RA:2445:G:C2'	25:RA:2446:G:H5'	2.51	0.41
25:RA:2625:G:C2	25:RA:2626:C:C2	3.08	0.41
25:RA:2647:U:H2'	25:RA:2648:C:C6	2.56	0.41
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.41
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	0.41
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.50	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
35:RP:55:ARG:HG2	35:RP:55:ARG:NH2	2.36	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
37:RR:94:TYR:N	37:RR:94:TYR:CD2	2.87	0.41
39:RT:84:GLN:HG2	39:RT:85:LYS:N	2.36	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
41:RV:67:GLY:O	41:RV:68:LYS:C	2.59	0.41
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.41
42:RW:96:ILE:O	42:RW:96:ILE:CG2	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.81	0.41
48:R2:18:PRO:C	48:R2:20:GLU:N	2.74	0.41
54:R8:3:LYS:HE2	54:R8:3:LYS:HB3	1.82	0.41
1:XA:259:G:C2	1:XA:260:G:H1'	2.55	0.41
1:XA:304:U:H2'	1:XA:305:G:C8	2.56	0.41
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.60	0.41
1:XA:688:G:H2'	1:XA:689:C:O4'	2.20	0.41
1:XA:1015:A:H2'	1:XA:1016:A:H8	1.85	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.88	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.85	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
14:XN:15:LYS:HD3	14:XN:15:LYS:HA	1.86	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.55	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	0.41
25:YA:222:A:H8	25:YA:222:A:H2'	1.76	0.41
25:YA:460:A:C2	25:YA:470:A:C4	3.09	0.41
25:YA:554:U:H2'	25:YA:556:G:H8	1.85	0.41
25:YA:1445:C:H2'	25:YA:1446:C:H6	1.86	0.41
25:YA:1519:G:C5	25:YA:1520:U:C5	3.08	0.41
25:YA:1797:C:C2'	25:YA:1798:U:H5'	2.51	0.41
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.56	0.41
25:YA:2417:C:O2'	25:YA:2418:A:H5'	2.20	0.41
25:YA:2487:G:H2'	25:YA:2488:A:O4'	2.21	0.41
25:YA:2610:C:H4'	25:YA:2611:U:OP2	2.21	0.41
25:YA:2680:C:O2'	25:YA:2681:C:H5'	2.21	0.41
25:YA:2702:U:O2	25:YA:2702:U:H2'	2.20	0.41
26:YB:55:U:N3	26:YB:56:G:N7	2.69	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
27:YD:215:LEU:H	27:YD:215:LEU:HG	1.59	0.41
28:YE:11:MET:HE3	28:YE:186:GLY:HA2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.26	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41
45:YZ:1:MET:HG2	45:YZ:2:GLU:N	2.35	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41
1:QA:18:C:O3'	5:QE:127:ASN:ND2	2.49	0.41
1:QA:129(A):G:H4'	1:QA:130:A:H5''	2.02	0.41
1:QA:199:G:C2'	1:QA:200:G:H5'	2.50	0.41
1:QA:572:A:C2	1:QA:916:G:N2	2.89	0.41
1:QA:587:G:C2	1:QA:755:G:C5	3.09	0.41
1:QA:724:G:H2'	1:QA:725:G:C8	2.52	0.41
1:QA:855:G:H2'	1:QA:856:C:C6	2.55	0.41
1:QA:946:A:H2'	1:QA:947:G:C8	2.56	0.41
1:QA:1092:A:C2	1:QA:1183:A:C2	3.09	0.41
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.56	0.41
1:QA:1160:G:H2'	1:QA:1161:C:O5'	2.20	0.41
1:QA:1162:C:C2	1:QA:1175:G:N2	2.88	0.41
1:QA:1238:A:H62	1:QA:1299:A:N6	2.18	0.41
1:QA:1275:A:C2	1:QA:1276:G:H1'	2.56	0.41
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.56	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
4:QD:27:TYR:CZ	6:XF:15:ASP:OD2	2.69	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.47	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
14:QN:26:ARG:HB3	14:QN:27:CYS:H	1.64	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
16:QP:50:LYS:HD3	16:QP:50:LYS:C	2.42	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
17:QQ:60:ILE:O	17:QQ:60:ILE:HG23	2.21	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
25:RA:24:G:C5	25:RA:25:U:C5	3.09	0.41
25:RA:51:G:N2	25:RA:120:U:O2'	2.53	0.41
25:RA:194:G:H2'	25:RA:195:A:O4'	2.21	0.41
25:RA:224:G:H2'	25:RA:225:A:O4'	2.21	0.41
25:RA:304:G:N1	25:RA:305:U:C2	2.89	0.41
25:RA:312:G:H5''	25:RA:313:C:OP2	2.20	0.41
25:RA:370:G:H3'	25:RA:423:A:C2	2.56	0.41
25:RA:503:A:C4	25:RA:506:G:N7	2.89	0.41
25:RA:529:A:H2'	25:RA:529:A:N3	2.36	0.41
25:RA:537:C:H5'	25:RA:539:G:OP2	2.20	0.41
25:RA:658:C:H2'	25:RA:659:C:C6	2.55	0.41
25:RA:893:C:H5'	25:RA:894:C:OP2	2.21	0.41
25:RA:944:G:H5''	25:RA:945:A:O5'	2.21	0.41
25:RA:951:C:O2'	25:RA:952:G:H5'	2.21	0.41
25:RA:959:A:N3	25:RA:2457:U:O2'	2.45	0.41
25:RA:978:G:H1	25:RA:985:C:N4	2.19	0.41
25:RA:1008:C:N4	25:RA:1136:G:C6	2.89	0.41
25:RA:1110:G:H2'	25:RA:1111:A:C8	2.56	0.41
25:RA:1132:A:O2'	25:RA:1133:U:H5'	2.20	0.41
25:RA:1268:A:C2	25:RA:2013:A:C4	3.08	0.41
25:RA:1271:G:N2	25:RA:1617:C:O4'	2.54	0.41
25:RA:1401:G:C6	25:RA:1402:C:C4	3.09	0.41
25:RA:1484:G:H2'	25:RA:1485:G:H5''	2.03	0.41
25:RA:1579:A:H2'	25:RA:1580:A:O4'	2.20	0.41
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.20	0.41
25:RA:1821:A:H8	25:RA:1821:A:O5'	2.04	0.41
25:RA:1837:C:C2	25:RA:1903:G:N2	2.83	0.41
25:RA:2152:G:H2'	25:RA:2153:G:C8	2.51	0.41
25:RA:2250:G:H8	25:RA:2496:C:H5''	1.82	0.41
25:RA:2256:G:C2	25:RA:2275:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2287:A:N6	25:RA:2344:U:N3	2.66	0.41
25:RA:2351:G:H2'	25:RA:2365:G:N2	2.36	0.41
25:RA:2633:G:H1'	28:RE:62:PRO:HG2	2.03	0.41
25:RA:2767:C:H2'	25:RA:2768:C:C6	2.55	0.41
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.50	0.41
26:RB:42:C:N4	26:RB:43:C:C4	2.89	0.41
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.83	0.41
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.41
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
32:RI:16:GLY:O	32:RI:18:VAL:HG23	2.21	0.41
32:RI:88:ILE:H	32:RI:88:ILE:HG12	1.46	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.41
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.41
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.21	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.36	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
44:RY:43:ASN:O	44:RY:43:ASN:OD1	2.39	0.41
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.41
46:R0:40:GLN:OE1	46:R0:45:PHE:N	2.54	0.41
47:R1:18:ILE:O	47:R1:18:ILE:HG22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
1:XA:51:A:C6	1:XA:353:A:C2	3.09	0.41
1:XA:189:U:O2	17:XQ:63:ARG:NH2	2.54	0.41
1:XA:456:C:H2'	1:XA:457:C:H6	1.86	0.41
1:XA:582:U:H5'	15:XO:64:ARG:NH2	2.35	0.41
1:XA:728:A:C5	15:XO:54:ARG:HD2	2.56	0.41
1:XA:746:A:H8	1:XA:746:A:O5'	2.04	0.41
1:XA:921:U:C4	1:XA:922:G:N7	2.89	0.41
1:XA:960:U:C2	1:XA:1225:A:C8	3.08	0.41
1:XA:1039:C:H2'	1:XA:1040:U:O4'	2.20	0.41
1:XA:1068:G:C8	1:XA:1094:G:C8	3.08	0.41
1:XA:1118:C:OP1	9:XI:9:ARG:HD3	2.21	0.41
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.55	0.41
1:XA:1221:G:O3'	19:XS:77:THR:CG2	2.68	0.41
1:XA:1221:G:C6	1:XA:1222:G:C5	3.08	0.41
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.86	0.41
1:XA:1310:G:N2	1:XA:1328:C:C2	2.89	0.41
1:XA:1320:C:C5'	19:XS:70:LYS:HG3	2.51	0.41
1:XA:1502:A:H2	1:XA:1505:G:N2	2.18	0.41
1:XA:1523:G:C5	1:XA:1524:C:C5	3.09	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.41
4:XD:15:GLU:N	4:XD:15:GLU:OE1	2.54	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.41
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
9:XI:105:ASP:C	9:XI:107:ARG:N	2.74	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.41
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.59	0.41
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:18:C:N3	25:YA:522:G:N1	2.63	0.41
25:YA:38:A:H1'	29:YF:48:THR:OG1	2.21	0.41
25:YA:48:G:H22	25:YA:177:G:H5'	1.86	0.41
25:YA:219:G:H2'	25:YA:220:G:O4'	2.20	0.41
25:YA:270(T):G:H2'	25:YA:270(U):C:H6	1.86	0.41
25:YA:373:U:H1'	25:YA:423:A:N3	2.36	0.41
25:YA:456:C:N4	43:YX:69:TYR:CE2	2.89	0.41
25:YA:534:U:O2	40:YU:49:HIS:CE1	2.73	0.41
25:YA:596:G:H2'	25:YA:597:U:O4'	2.20	0.41
25:YA:826:U:H2'	25:YA:828:U:O4'	2.21	0.41
25:YA:867:C:C4	25:YA:868:U:C4	3.09	0.41
25:YA:871:U:H5'	25:YA:872:A:P	2.60	0.41
25:YA:918:A:H1'	26:YB:80:U:O2'	2.21	0.41
25:YA:1042:G:C2	25:YA:1043:C:C2	3.08	0.41
25:YA:1187:G:H5''	41:YV:81:TYR:HE2	1.76	0.41
25:YA:1376:C:O2'	25:YA:1377:G:H5'	2.20	0.41
25:YA:1494:A:C6	25:YA:1495:A:C5	3.08	0.41
25:YA:1537:C:H2'	25:YA:1538:G:O4'	2.21	0.41
25:YA:1564:C:O2'	25:YA:1565:C:H5'	2.21	0.41
25:YA:1576:U:H2'	25:YA:1577:C:H6	1.86	0.41
25:YA:1637:A:C6	25:YA:1638:C:C4	3.09	0.41
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.53	0.41
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.54	0.41
25:YA:2056:G:C5	25:YA:2577:A:C4	3.08	0.41
25:YA:2197:U:O2'	25:YA:2198:A:H2'	2.21	0.41
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	2.03	0.41
25:YA:2290:G:C6	25:YA:2291:U:C4	3.09	0.41
25:YA:2406:U:O4'	35:YP:75:ILE:HG22	2.21	0.41
25:YA:2537:U:H2'	25:YA:2538:C:H6	1.83	0.41
25:YA:2550:G:C5	25:YA:2551:C:C5	3.08	0.41
25:YA:2641:G:H2'	25:YA:2642:G:O4'	2.20	0.41
25:YA:2688:U:H1'	25:YA:2721:A:H61	1.85	0.41
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.55	0.41
25:YA:2720:U:H2'	25:YA:2721:A:C8	2.56	0.41
25:YA:2756:U:OP2	55:Y9:19:ARG:CZ	2.68	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
30:YG:18:GLU:HA	30:YG:18:GLU:OE2	2.21	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.20	0.41
32:YI:109:ILE:HB	32:YI:130:TYR:OH	2.21	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.56	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.99	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.24	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
45:YZ:103:ARG:HD3	45:YZ:138:GLU:OE1	2.20	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.56	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.21	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
1:QA:63:C:OP1	1:QA:383:A:N6	2.53	0.41
1:QA:157:G:H1	1:QA:164:U:H3	1.69	0.41
1:QA:668:G:O2'	1:QA:669:U:H5'	2.21	0.41
1:QA:759:A:H2'	1:QA:760:G:H5'	2.03	0.41
1:QA:1074:G:H5''	1:QA:1075:C:OP2	2.21	0.41
1:QA:1431:C:C2	1:QA:1470:G:N2	2.90	0.41
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.41
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
4:QD:29:PRO:HD2	4:QD:30:LYS:HE2	2.03	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.41
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.59	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.41
25:RA:188:G:N2	25:RA:209:C:C2	2.89	0.41
25:RA:229:A:OP1	25:RA:229:A:H4'	2.21	0.41
25:RA:244:A:C8	25:RA:245:G:C8	3.09	0.41
25:RA:303:U:H6	25:RA:303:U:O5'	2.02	0.41
25:RA:553:U:H2'	25:RA:554:U:O4'	2.21	0.41
25:RA:581:C:N4	25:RA:582:G:O6	2.53	0.41
25:RA:663:G:C6	25:RA:664:C:C4	3.09	0.41
25:RA:816:C:N4	25:RA:1192:G:N1	2.68	0.41
25:RA:921:G:H2'	25:RA:922:U:O4'	2.20	0.41
25:RA:1123:C:H2'	25:RA:1124:C:C6	2.56	0.41
25:RA:1130:U:O2'	25:RA:1131:G:O5'	2.36	0.41
25:RA:1188:U:H2'	25:RA:1189:A:H5'	2.03	0.41
25:RA:1350:C:C2'	25:RA:1351:C:H5'	2.51	0.41
25:RA:1910:G:N2	25:RA:1921:G:C4	2.89	0.41
25:RA:2305:A:H2'	25:RA:2306:C:C6	2.56	0.41
25:RA:2331:G:H4'	46:R0:43:THR:N	2.36	0.41
25:RA:2536:G:H2'	25:RA:2537:U:O4'	2.21	0.41
25:RA:2563:U:O2	25:RA:2565:A:H8	2.04	0.41
26:RB:14:U:H2'	26:RB:15:A:C2	2.56	0.41
26:RB:46:A:C4	26:RB:47:C:C6	3.08	0.41
26:RB:54:G:H2'	26:RB:55:U:H5'	2.03	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.41
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.94	0.41
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.41
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.36	0.41
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.41
40:RU:27:LEU:C	40:RU:29:SER:N	2.74	0.41
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
1:XA:148:G:H1	1:XA:174:C:H42	1.68	0.41
1:XA:357:G:C2	1:XA:358:U:C5	3.09	0.41
1:XA:453:A:H4'	16:XP:72:ARG:HB2	2.03	0.41
1:XA:484:G:N7	1:XA:486:U:C2	2.89	0.41
1:XA:700:G:H4'	1:XA:704:A:H1'	2.03	0.41
1:XA:775:G:H2'	1:XA:776:G:C8	2.56	0.41
1:XA:1044:A:C5	1:XA:1045:C:H1'	2.56	0.41
1:XA:1104:G:N2	1:XA:1105:A:H1'	2.36	0.41
1:XA:1285:A:H4'	1:XA:1286:A:C5'	2.50	0.41
1:XA:1415:G:H2'	1:XA:1416:G:C8	2.55	0.41
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.41
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.41
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.41
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	0.41
14:YN:43:CYS:C	14:YN:45:ARG:N	2.73	0.41
14:YN:44:LEU:HD12	14:YN:53:LEU:HD12	1.94	0.41
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.41
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.41
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.41
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.41
22:XV:23:C:H2'	22:XV:24:U:C6	2.55	0.41
25:YA:48:G:C2	25:YA:178:G:C5	3.09	0.41
25:YA:153:C:H6	25:YA:153:C:O5'	2.04	0.41
25:YA:191:A:O5'	25:YA:191:A:H8	2.04	0.41
25:YA:374:A:H3'	25:YA:375:C:C6	2.56	0.41
25:YA:690:G:H2'	25:YA:691:C:O4'	2.21	0.41
25:YA:730:C:OP2	25:YA:731:C:OP2	2.38	0.41
25:YA:784:A:C5	27:YD:229:VAL:HG21	2.56	0.41
25:YA:910:A:H2	25:YA:2264:C:O2	2.03	0.41
25:YA:1033:U:H6	25:YA:1033:U:H2'	1.67	0.41
25:YA:1085:A:C2	25:YA:1086:A:C8	3.09	0.41
25:YA:1423:G:O2'	25:YA:1424:G:H5'	2.21	0.41
25:YA:1654:A:H2'	25:YA:1655:A:H8	1.86	0.41
25:YA:1729:A:HO2'	25:YA:1730:U:P	2.44	0.41
25:YA:2391:G:OP2	54:Y8:32:LEU:HD13	2.21	0.41
25:YA:2457:U:C2'	25:YA:2458:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2472:G:H22	25:YA:2477:C:H5'	1.85	0.41
25:YA:2864:G:N2	25:YA:2865:U:O2	2.54	0.41
26:YB:4:C:H42	26:YB:116:G:H1	1.68	0.41
26:YB:40:U:N3	26:YB:43:C:H5''	2.23	0.41
26:YB:55:U:C2	26:YB:56:G:C8	3.09	0.41
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.41
27:YD:68:LYS:O	27:YD:68:LYS:HG3	2.20	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.41
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.41
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.41
32:YI:92:VAL:HG13	32:YI:120:ILE:CG2	2.39	0.41
33:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.41
34:YO:31:LYS:HA	34:YO:31:LYS:HD3	1.92	0.41
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
40:YU:5:LYS:C	40:YU:7:GLY:N	2.74	0.41
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.41
45:YZ:24:LEU:HA	45:YZ:25:PRO:HD3	1.88	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.36	0.41
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.41
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.41
52:Y6:6:ARG:HA	52:Y6:6:ARG:NE	2.35	0.41
1:QA:97:U:H2'	1:QA:99:C:C6	2.55	0.40
1:QA:219:C:C4	1:QA:220:G:C8	3.08	0.40
1:QA:385:C:H2'	1:QA:386:C:O4'	2.21	0.40
1:QA:654:G:C2	1:QA:753:A:C4	3.08	0.40
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.86	0.40
1:QA:1157:A:O2'	1:QA:1158:C:H5''	2.21	0.40
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.21	0.40
2:QB:212:GLN:NE2	2:QB:212:GLN:O	2.54	0.40
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.40
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.04	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.40
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.41	0.40
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.40
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.21	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.40
25:RA:282:A:C6	25:RA:284:U:C2	3.09	0.40
25:RA:841:A:C2	25:RA:938:G:C2	3.09	0.40
25:RA:852:G:O2'	25:RA:853:G:H5'	2.21	0.40
25:RA:1216:G:N2	25:RA:1233:C:O2	2.28	0.40
25:RA:1574:C:O5'	25:RA:1574:C:H6	2.03	0.40
25:RA:1587:A:H8	25:RA:1587:A:OP2	2.05	0.40
25:RA:2134:A:H62	25:RA:2157:G:C1'	2.34	0.40
25:RA:2193:G:C5	25:RA:2194:G:N7	2.89	0.40
25:RA:2360:A:H2'	25:RA:2361:A:O4'	2.21	0.40
25:RA:2485:G:C2	25:RA:2486:G:C8	3.09	0.40
25:RA:2600:A:H2'	25:RA:2601:C:C6	2.56	0.40
25:RA:2839:G:H5'	37:RR:46:GLY:HA2	2.03	0.40
25:RA:2846:G:C6	25:RA:2847:U:C4	3.09	0.40
26:RB:113:C:C2	26:RB:114:G:C8	3.08	0.40
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.40
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.40
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.40
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.22	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.21	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
42:RW:88:ARG:HA	42:RW:88:ARG:HD2	1.92	0.40
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.40
46:R0:36:ILE:HD13	46:R0:36:ILE:O	2.21	0.40
46:R0:64:ASP:HB3	46:R0:65:GLY:H	1.61	0.40
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.40
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.40
48:R2:32:LEU:O	48:R2:32:LEU:HD23	2.21	0.40
50:R4:26:SER:O	50:R4:27:THR:O	2.40	0.40
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.57	0.40
1:XA:34:C:H6	1:XA:34:C:O5'	2.04	0.40
1:XA:89:U:O2'	1:XA:90:C:OP1	2.33	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:122:G:C2	1:XA:123:C:C2	3.10	0.40
1:XA:163:C:H2'	1:XA:164:U:H6	1.86	0.40
1:XA:375:U:H4'	16:XP:17:TYR:CE2	2.53	0.40
1:XA:435:C:H5'	1:XA:436:C:OP2	2.21	0.40
1:XA:452:A:N6	1:XA:480:U:C2	2.89	0.40
1:XA:537:G:H2'	1:XA:538:G:C8	2.56	0.40
1:XA:538:G:H2'	1:XA:539:A:O4'	2.21	0.40
1:XA:684:A:C5	1:XA:685:G:N7	2.89	0.40
1:XA:920:U:H1'	1:XA:1080:A:C2	2.56	0.40
1:XA:924:C:H2'	1:XA:925:G:C8	2.55	0.40
1:XA:1157:A:H62	1:XA:1178:G:N2	2.19	0.40
1:XA:1415:G:C4	1:XA:1486:G:C2	3.09	0.40
1:XA:1464:G:H2'	1:XA:1465:C:H6	1.85	0.40
1:XA:1500:A:OP1	1:XA:1508:G:OP1	2.39	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:37:ASN:C	2:XB:39:ILE:N	2.74	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.22	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.34	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.85	0.40
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.40
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.40
22:XV:21:A:N6	22:XV:46:G:H2'	2.36	0.40
25:YA:918:A:C6	25:YA:919:G:H1'	2.55	0.40
25:YA:1219:G:OP2	40:YU:19:LYS:HD2	2.21	0.40
25:YA:1449:A:O2'	25:YA:1530:G:N2	2.50	0.40
25:YA:1506:C:H5'	25:YA:1507:A:OP2	2.20	0.40
25:YA:1590:U:H2'	25:YA:1591:G:H8	1.85	0.40
25:YA:1835:G:N3	25:YA:1931:U:N3	2.67	0.40
25:YA:2018:G:C6	25:YA:2019:A:C6	3.09	0.40
25:YA:2056:G:H1	51:Y5:4:HIS:HD2	1.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2286:A:H8	52:Y6:37:ARG:NH1	2.19	0.40
25:YA:2564:A:C5	25:YA:2565:A:C6	3.08	0.40
26:YB:40:U:H3	26:YB:43:C:C5'	2.23	0.40
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.40
29:YF:62:ARG:HB3	29:YF:62:ARG:CZ	2.52	0.40
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.40
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.86	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	0.40
34:YO:106:LEU:HD23	34:YO:106:LEU:HA	1.88	0.40
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.22	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.86	0.40
38:YS:24:LEU:HD22	38:YS:24:LEU:N	2.36	0.40
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.40
39:YT:10:VAL:O	39:YT:11:GLU:C	2.60	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.40
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.40
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.40
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.40
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.85	0.40
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.40
48:Y2:47:ASN:HD22	48:Y2:47:ASN:N	1.99	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.37	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
55:Y9:2:LYS:HD2	55:Y9:2:LYS:HA	1.96	0.40
1:QA:52:G:O2'	1:QA:53:A:H5'	2.21	0.40
1:QA:126:G:H1	1:QA:235:C:N4	2.18	0.40
1:QA:255:G:C4	1:QA:256:U:C5	3.09	0.40
1:QA:310:G:OP2	16:QP:27:LYS:HE3	2.21	0.40
1:QA:390:C:H4'	16:QP:28:ARG:HH21	1.87	0.40
1:QA:509:A:H5''	4:QD:55:ALA:HB2	2.02	0.40
1:QA:838:G:C5	1:QA:842:C:H1'	2.56	0.40
1:QA:960:U:O2	1:QA:1225:A:C5	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:995:C:H5'	14:QN:8:GLU:HG2	2.03	0.40
1:QA:1057:G:C2	1:QA:1204:A:N3	2.89	0.40
1:QA:1079:G:H4'	5:QE:14:ARG:HH22	1.86	0.40
1:QA:1424:C:H2'	1:QA:1425:U:O4'	2.21	0.40
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.85	0.40
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.40
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.40
7:QG:140:ASP:C	7:QG:142:GLU:N	2.68	0.40
10:QJ:22:LYS:C	10:QJ:22:LYS:CD	2.89	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.01	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
25:RA:14:A:N1	25:RA:2044:C:O2'	2.34	0.40
25:RA:472:A:H2'	25:RA:473:G:H5'	2.03	0.40
25:RA:478:A:N6	25:RA:480:A:N1	2.69	0.40
25:RA:563:G:C6	25:RA:564:C:C4	3.09	0.40
25:RA:1022:G:H4'	25:RA:1023:U:H5'	2.02	0.40
25:RA:1079:C:O4'	25:RA:1088:A:N6	2.53	0.40
25:RA:1252:G:O4'	40:RU:33:ARG:HD3	2.20	0.40
25:RA:1439:A:H2'	25:RA:1440:G:O4'	2.21	0.40
25:RA:1487:G:H1	25:RA:1502:C:H42	1.69	0.40
25:RA:1644:C:O2	25:RA:1644:C:H2'	2.20	0.40
25:RA:1691:C:H2'	25:RA:1692:U:O4'	2.20	0.40
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.84	0.40
25:RA:2116:G:H22	25:RA:2162:G:P	2.45	0.40
25:RA:2193:G:C4	25:RA:2194:G:C8	3.09	0.40
25:RA:2259:G:C1'	25:RA:2427:C:H2'	2.52	0.40
25:RA:2320:A:H1'	25:RA:2321:G:C6	2.56	0.40
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.56	0.40
25:RA:2439:A:C5'	25:RA:2439:A:H8	2.32	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2534:A:C6	25:RA:2535:G:N7	2.89	0.40
25:RA:2623:G:N3	25:RA:2624:G:C8	2.89	0.40
25:RA:2841:C:C2	25:RA:2877:G:N2	2.89	0.40
25:RA:2847:U:C2'	25:RA:2848:G:H5'	2.52	0.40
26:RB:66:A:N3	26:RB:108:C:C4	2.90	0.40
26:RB:83:G:N2	26:RB:84:C:C2	2.89	0.40
26:RB:104:A:H4'	45:RZ:89:PHE:CE2	2.57	0.40
27:RD:176:ARG:HH11	27:RD:176:ARG:CG	2.30	0.40
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
33:RN:137:LYS:HA	33:RN:137:LYS:HD2	1.88	0.40
34:RO:106:LEU:HA	34:RO:106:LEU:HD23	1.89	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40
38:RS:106:ARG:HB2	38:RS:106:ARG:CZ	2.49	0.40
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.40
40:RU:34:LYS:CE	40:RU:34:LYS:CA	2.96	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
52:R6:7:ILE:CG1	52:R6:8:LYS:N	2.75	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.37	0.40
1:XA:52:G:C4	1:XA:53:A:C8	3.09	0.40
1:XA:78:G:O2'	1:XA:79:G:OP1	2.30	0.40
1:XA:648:A:C6	1:XA:649:G:C6	3.09	0.40
1:XA:719:C:O2'	18:XR:50:ILE:O	2.35	0.40
1:XA:724:G:C2	1:XA:725:G:C8	3.09	0.40
1:XA:825:G:C6	1:XA:826:C:N3	2.89	0.40
1:XA:936:C:H1'	1:XA:1382:C:N4	2.36	0.40
1:XA:939:G:C6	1:XA:940:C:N4	2.89	0.40
1:XA:949:A:H61	1:XA:1232:U:H3	1.69	0.40
1:XA:980:C:H5''	1:XA:981:U:C5	2.55	0.40
1:XA:1089:G:H2'	1:XA:1090:U:O4'	2.21	0.40
1:XA:1121:U:C4	1:XA:1122:U:C5	3.09	0.40
1:XA:1142:G:H2'	1:XA:1143:G:C8	2.56	0.40
1:XA:1259:C:O2'	1:XA:1283:G:N2	2.54	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.51	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
2:XB:172:ILE:H	2:XB:172:ILE:CD1	2.18	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.20	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
14:YN:47:LEU:O	14:YN:50:LYS:N	2.52	0.40
14:YN:48:ALA:O	14:YN:51:GLY:N	2.53	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:XV:16:C:O2'	22:XV:17:C:OP1	2.39	0.40
25:YA:388:G:OP2	47:Y1:32:LYS:HG2	2.21	0.40
25:YA:517:C:O2'	42:YW:18:ARG:NH2	2.55	0.40
25:YA:540:G:H5'	25:YA:541:C:OP2	2.21	0.40
25:YA:707:G:C6	25:YA:708:C:C4	3.10	0.40
25:YA:997:G:OP1	40:YU:93:LYS:HD3	2.21	0.40
25:YA:1214:A:N6	25:YA:1235:G:O2'	2.53	0.40
25:YA:1246:A:N1	25:YA:1247:A:C4	2.89	0.40
25:YA:1374:G:C2'	25:YA:1375:C:H5'	2.51	0.40
25:YA:1449:A:C6	25:YA:1449(A):G:C4	3.09	0.40
25:YA:1578:U:C2'	25:YA:1579:A:H5'	2.51	0.40
25:YA:1628:G:C2	25:YA:1629:U:C4	3.08	0.40
25:YA:1660:C:O2	25:YA:2000:G:N2	2.52	0.40
25:YA:1769:G:N2	25:YA:1984:G:C4	2.90	0.40
25:YA:1926:U:O2	25:YA:1928:A:C8	2.74	0.40
25:YA:2320:A:C8	25:YA:2333:A:N6	2.90	0.40
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.22	0.40
25:YA:2486:G:N2	25:YA:2487:G:H1'	2.36	0.40
25:YA:2506:U:H6	56:Z8:76:PPU:HN'3	1.69	0.40
25:YA:2517:C:C6	25:YA:2542:A:N7	2.88	0.40
25:YA:2629:A:O2'	25:YA:2630:G:H5''	2.21	0.40
25:YA:2762:G:C6	25:YA:2763:G:C4	3.09	0.40
25:YA:2818:G:N2	25:YA:2819:G:C4	2.89	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.40
32:YI:124:GLY:H	32:YI:142:VAL:HG23	1.86	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.67	0.40
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.37	0.40
42:YW:82:LEU:N	42:YW:98:LYS:O	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.52	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
46:Y0:37:LEU:O	46:Y0:38:VAL:HG23	2.20	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.54	0.40
1:QA:109:A:C6	1:QA:326:G:C6	3.10	0.40
1:QA:187:C:H6	1:QA:187:C:O5'	2.04	0.40
1:QA:645:C:C4	1:QA:646:U:C4	3.09	0.40
1:QA:689:C:C2'	1:QA:690:G:H5'	2.51	0.40
1:QA:977:A:H8	1:QA:982:U:O4	2.04	0.40
1:QA:1320:C:C4	1:QA:1321:C:N3	2.90	0.40
1:QA:1336:C:O2	1:QA:1336:C:H2'	2.20	0.40
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.21	0.40
1:QA:1409:C:H5'	25:RA:1916:A:N1	2.36	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
25:RA:14:A:C6	25:RA:526:A:C2	3.10	0.40
25:RA:572:A:H2'	25:RA:573:G:O4'	2.21	0.40
25:RA:1026:U:H4'	25:RA:1027:A:OP1	2.20	0.40
25:RA:1360:A:C6	25:RA:1372:U:C4	3.10	0.40
25:RA:1543:A:H2	25:RA:1545:A:N7	2.20	0.40
25:RA:1563:G:C5	25:RA:1564:C:C5	3.09	0.40
25:RA:1797:C:H4'	27:RD:257:LEU:O	2.22	0.40
25:RA:1839:G:N3	25:RA:1839:G:H2'	2.35	0.40
25:RA:2067:G:C2	25:RA:2069:G:C8	3.09	0.40
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.55	0.40
25:RA:2171:A:C2	25:RA:2172:U:C2	3.08	0.40
25:RA:2352:A:C5	25:RA:2366:A:C2	3.09	0.40
25:RA:2623:G:H5'	25:RA:2826:A:H1'	2.04	0.40
26:RB:111:U:H2'	26:RB:112:G:H8	1.85	0.40
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.36	0.40
27:RD:228:PRO:HD3	27:RD:234:GLY:O	2.21	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.40
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
32:RI:45:LYS:O	32:RI:48:GLU:N	2.54	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.84	0.40
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
38:RS:24:LEU:HD22	38:RS:24:LEU:N	2.36	0.40
38:RS:62:LYS:HD3	38:RS:97:ARG:CZ	2.52	0.40
41:RV:95:LEU:C	41:RV:95:LEU:HD13	2.42	0.40
44:RY:5:MET:CE	44:RY:32:PRO:HB3	2.51	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
45:RZ:111:VAL:HG22	45:RZ:112:ARG:N	2.34	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
51:R5:6:VAL:HA	51:R5:7:PRO:HD3	1.81	0.40
52:R6:36:LEU:CD1	52:R6:50:ARG:NH1	2.82	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.84	0.40
1:XA:59:A:H1'	1:XA:354:G:C2	2.56	0.40
1:XA:192:U:C4'	20:XT:103:GLY:HA2	2.51	0.40
1:XA:490:G:H2'	1:XA:491:G:C8	2.56	0.40
1:XA:738:C:H5''	6:XF:69:GLU:HB2	2.02	0.40
1:XA:792:A:C8	1:XA:794:A:C5	3.09	0.40
1:XA:1060:C:C5	3:XC:2:GLY:HA2	2.56	0.40
1:XA:1178:G:H3'	1:XA:1178:G:H8	1.85	0.40
1:XA:1205:U:O2'	3:XC:195:VAL:HG23	2.21	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:178:LEU:N	3:XC:178:LEU:CD2	2.85	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.22	0.40
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.40
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.22	0.40
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.40
9:XI:56:LEU:HB3	9:XI:57:GLY:H	1.66	0.40
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.22	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
25:YA:99:U:H4'	25:YA:101:G:C5'	2.52	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:482:A:C4'	44:YY:47:LYS:HD2	2.28	0.40
25:YA:860:U:C5	25:YA:861:A:N7	2.89	0.40
25:YA:1093:G:H4'	31:YH:170:ARG:CZ	2.52	0.40
25:YA:1216:G:P	40:YU:12:ARG:HH21	2.44	0.40
25:YA:1291:C:H2'	25:YA:1292:U:C5	2.57	0.40
25:YA:1380:G:N2	25:YA:1570:A:N1	2.65	0.40
25:YA:1387:C:C2	25:YA:1388:G:C8	3.10	0.40
25:YA:1436:G:H1'	25:YA:1477:A:O2'	2.21	0.40
25:YA:1509:C:N3	25:YA:1511:A:N6	2.69	0.40
25:YA:1778:U:C5	25:YA:1784:A:C5	3.09	0.40
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.86	0.40
25:YA:2308:G:N2	25:YA:2311:A:C2	2.89	0.40
25:YA:2316:C:H1'	30:YG:128:ARG:HH22	1.86	0.40
25:YA:2507:C:H2'	25:YA:2508:G:C8	2.54	0.40
25:YA:2655:G:O2'	25:YA:2656:U:P	2.80	0.40
25:YA:2824:C:C5	25:YA:2825:C:C5	3.09	0.40
25:YA:2845:G:H5''	39:YT:55:ASN:HA	2.03	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.23	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
29:YF:119:ARG:HH11	29:YF:119:ARG:CG	2.29	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
32:YI:115:ALA:HB3	32:YI:128:LEU:HD12	2.02	0.40
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.81	0.40
34:YO:86:ILE:N	34:YO:86:ILE:CD1	2.83	0.40
35:YP:126:VAL:HG12	35:YP:147:LEU:CD2	2.23	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40
45:YZ:15:PRO:O	45:YZ:19:ARG:HB2	2.21	0.40
45:YZ:23:LYS:HB3	45:YZ:38:TYR:HD1	1.87	0.40
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.32	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:51:ASP:O	50:Y4:51:ASP:CG	2.60	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.40
54:Y8:39:LYS:HD2	54:Y8:39:LYS:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:475:G:O2'	1:QA:476:G:H5'	2.21	0.40
1:QA:673:G:C4	1:QA:734:G:N2	2.89	0.40
1:QA:757:U:H2'	1:QA:758:G:O4'	2.22	0.40
1:QA:995:C:H6	1:QA:995:C:O5'	2.03	0.40
1:QA:1002:G:H1	1:QA:1038:C:H42	1.69	0.40
1:QA:1122:U:H2'	1:QA:1123:A:O4'	2.22	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
4:QD:11:LEU:O	4:QD:12:CYS:C	2.59	0.40
4:QD:73:ARG:O	4:QD:74:GLN:C	2.58	0.40
4:QD:129:ASN:CA	4:QD:145:GLU:HB2	2.51	0.40
6:QF:8:ILE:HG22	6:QF:10:LEU:HD12	2.03	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
8:QH:105:ARG:O	8:QH:107:LEU:N	2.47	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
22:QV:75:C:OP1	25:RA:2602:A:P	2.80	0.40
25:RA:43:G:C6	25:RA:44:A:C5	3.09	0.40
25:RA:88:G:N3	25:RA:88:G:H2'	2.34	0.40
25:RA:191:A:H2'	25:RA:192:C:C6	2.57	0.40
25:RA:259:G:C2'	25:RA:621:A:O2'	2.70	0.40
25:RA:270(T):G:C6	25:RA:270(U):C:C4	3.09	0.40
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.70	0.40
25:RA:1005:C:O2	25:RA:1143:A:C5	2.75	0.40
25:RA:1007:C:OP2	25:RA:1008:C:O2'	2.31	0.40
25:RA:1309:G:P	53:R7:9:ARG:HD3	2.61	0.40
25:RA:1312:U:H4'	25:RA:1313:U:O5'	2.21	0.40
25:RA:1973:G:H2'	25:RA:1974:C:C6	2.56	0.40
25:RA:1985:G:C2'	25:RA:1986:A:H5'	2.52	0.40
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.57	0.40
25:RA:2376:A:OP1	25:RA:2376:A:H8	2.04	0.40
25:RA:2422:A:OP2	52:R6:6:ARG:NH1	2.54	0.40
25:RA:2592:G:H2'	25:RA:2593:U:O4'	2.22	0.40
25:RA:2882:A:P	37:RR:96:ARG:NH1	2.95	0.40
26:RB:5:C:H2'	26:RB:6:C:C6	2.57	0.40
27:RD:72:LYS:HG3	27:RD:97:TYR:CE2	2.56	0.40
27:RD:185:VAL:HG12	27:RD:186:HIS:N	2.37	0.40
28:RE:93:VAL:C	28:RE:95:ILE:N	2.75	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
32:RI:52:ARG:HB3	32:RI:52:ARG:HH11	1.87	0.40
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:13:ASN:HD21	34:RO:97:ARG:HB3	1.86	0.40
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.40
36:RQ:66:ILE:O	36:RQ:67:ARG:HB2	2.22	0.40
37:RR:18:LEU:HD11	37:RR:22:ARG:NE	2.36	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.40
44:RY:98:VAL:O	44:RY:99:CYS:HB3	2.21	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
54:R8:32:LEU:HD23	54:R8:32:LEU:HA	1.94	0.40
55:R9:10:ILE:HD12	55:R9:32:HIS:CG	2.56	0.40
1:XA:8:A:N6	4:XD:205:GLU:O	2.53	0.40
1:XA:89:U:H2'	1:XA:90:C:H6	1.86	0.40
1:XA:489:C:P	4:XD:132:ARG:HH22	2.42	0.40
1:XA:665:A:C5	1:XA:733:A:C5	3.09	0.40
1:XA:1073:U:OP2	5:XE:57:LYS:NZ	2.34	0.40
1:XA:1178:G:C8	1:XA:1178:G:H3'	2.57	0.40
1:XA:1327:C:OP1	21:XU:21:TYR:HD1	2.05	0.40
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.21	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.40
13:XM:56:LEU:HD13	13:XM:60:VAL:CG2	2.51	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.21	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.42	0.40
17:XQ:8:GLY:HA3	17:XQ:21:VAL:HG12	2.03	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
22:XV:74:C:H2'	22:XV:75:C:H5'	2.03	0.40
25:YA:270(F):U:H2'	25:YA:270(G):C:H6	1.86	0.40
25:YA:330:A:O2'	25:YA:331:A:C8	2.58	0.40
25:YA:764:A:H5'	27:YD:210:GLY:HA2	2.04	0.40
25:YA:911:A:H5''	25:YA:912:C:H5''	2.04	0.40
25:YA:1613:G:C2	25:YA:1617:C:C2	3.09	0.40
25:YA:2043:C:C2	25:YA:2777:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2585:U:H5	56:Z8:76:PPU:O2'	2.04	0.40
25:YA:2624:G:C2'	25:YA:2625:G:H5'	2.51	0.40
25:YA:2705:A:H2'	25:YA:2706:G:O4'	2.21	0.40
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.51	0.40
30:YG:98:ARG:CA	30:YG:101:ILE:HG12	2.40	0.40
34:YO:31:LYS:C	34:YO:32:TYR:CD2	2.95	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
42:YW:19:LEU:HD12	42:YW:19:LEU:HA	1.79	0.40
42:YW:74:ALA:C	42:YW:75:TYR:HD1	2.24	0.40
44:YY:21:LYS:HE2	44:YY:21:LYS:HB2	1.96	0.40
45:YZ:14:LYS:O	45:YZ:18:LEU:HD12	2.21	0.40
47:Y1:94:LEU:HD23	47:Y1:94:LEU:HA	1.82	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
49:Y3:17:LYS:O	49:Y3:20:LYS:HB2	2.21	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.57	0.40
1:QA:111:G:H8	1:QA:111:G:O5'	2.04	0.40
1:QA:149:A:C2	1:QA:172:A:N6	2.89	0.40
1:QA:230:G:H2'	1:QA:231:G:O4'	2.22	0.40
1:QA:1267:C:O2'	21:QU:20:LYS:HG3	2.21	0.40
1:QA:1347:G:H2'	1:QA:1373:G:C6	2.57	0.40
1:QA:1349:A:H2'	1:QA:1350:A:C8	2.56	0.40
2:QB:75:LYS:C	2:QB:77:ALA:H	2.24	0.40
2:QB:114:ARG:O	2:QB:118:LEU:HG	2.21	0.40
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.40
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.40
7:QG:122:HIS:ND1	7:QG:122:HIS:N	2.69	0.40
8:QH:36:LEU:O	8:QH:45:ILE:HD11	2.22	0.40
8:QH:109:ILE:HG13	8:QH:120:THR:HB	2.03	0.40
9:QI:128:ARG:HH21	22:QV:35:A:P	2.44	0.40
11:QK:21:ILE:CD1	11:QK:82:VAL:HG13	2.51	0.40
13:QM:4:ILE:O	13:QM:5:ALA:C	2.60	0.40
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40
15:QO:77:ARG:CA	15:QO:80:ALA:HB3	2.52	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
17:QQ:8:GLY:HA3	17:QQ:21:VAL:HG12	2.03	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.22	0.40
19:QS:39:THR:O	19:QS:40:ILE:HB	2.20	0.40
20:QT:89:ARG:HH12	20:QT:106:ALA:CB	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:199:A:N1	25:RA:2434:A:C2	2.90	0.40
25:RA:511:U:C5	25:RA:512:G:C5	3.10	0.40
25:RA:1204:A:C2	25:RA:1206:G:N2	2.90	0.40
25:RA:1225:C:O2'	41:RV:85:LYS:HA	2.21	0.40
25:RA:1480:G:C2	25:RA:1514:U:O2	2.74	0.40
25:RA:1771:C:H2'	25:RA:1772:G:C8	2.56	0.40
25:RA:1799:G:H5'	25:RA:1819:A:N6	2.33	0.40
25:RA:2451:A:C2	56:Z6:76:PPU:HD2	2.56	0.40
25:RA:2464:C:O2	25:RA:2487:G:N2	2.54	0.40
25:RA:2472:G:H21	25:RA:2478:A:H62	1.69	0.40
25:RA:2654:A:O3'	25:RA:2655:G:H4'	2.22	0.40
25:RA:2684:U:O2'	34:RO:68:GLU:HG3	2.21	0.40
25:RA:2711:A:C8	25:RA:2714:G:O4'	2.75	0.40
27:RD:92:ILE:CD1	27:RD:104:TYR:CD2	3.05	0.40
27:RD:142:VAL:HA	27:RD:194:GLY:H	1.86	0.40
29:RF:33:LEU:O	29:RF:37:VAL:HG23	2.21	0.40
29:RF:64:ILE:HD12	29:RF:64:ILE:HA	1.89	0.40
30:RG:114:ILE:HG22	30:RG:117:PHE:HB2	2.01	0.40
33:RN:75:TYR:O	33:RN:76:SER:O	2.40	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
34:RO:112:MET:O	34:RO:115:VAL:HG23	2.22	0.40
35:RP:2:LYS:O	35:RP:5:ASP:CB	2.70	0.40
37:RR:34:ILE:HG22	37:RR:35:THR:N	2.35	0.40
38:RS:5:THR:HG1	38:RS:7:TYR:HB3	1.86	0.40
38:RS:89:ARG:HG2	38:RS:89:ARG:NH1	2.36	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
39:RT:50:ILE:HD11	39:RT:102:ILE:CG1	2.52	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
40:RU:62:ILE:HG23	40:RU:76:TYR:CE1	2.57	0.40
45:RZ:119:GLU:HG3	45:RZ:122:ARG:HD2	2.03	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
49:R3:7:LYS:O	49:R3:7:LYS:HG2	2.20	0.40
52:R6:36:LEU:HD23	52:R6:36:LEU:N	2.37	0.40
1:XA:799:G:C6	1:XA:800:G:C4	3.09	0.40
1:XA:1225:A:H3'	1:XA:1226:C:C6	2.57	0.40
1:XA:1327:C:H2'	1:XA:1328:C:C6	2.57	0.40
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.57	0.40
2:XB:183:PRO:HA	2:XB:198:ASP:OD1	2.22	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
4:XD:190:ASP:OD1	4:XD:191:ARG:N	2.55	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
6:XF:98:LEU:HD12	6:XF:98:LEU:C	2.41	0.40
7:XG:46:ALA:O	7:XG:49:ILE:HB	2.21	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
10:XJ:65:LEU:HA	14:YN:55:GLY:O	2.21	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.52	0.40
13:XM:88:ARG:HG2	13:XM:98:VAL:CG1	2.52	0.40
15:XO:74:ASP:C	15:XO:76:GLU:H	2.24	0.40
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.40
25:YA:136:G:N2	25:YA:143:C:N3	2.53	0.40
25:YA:263:C:H2'	25:YA:264:C:O4'	2.21	0.40
25:YA:740:U:H2'	25:YA:741:G:H8	1.85	0.40
25:YA:996:A:H2'	25:YA:997:G:C8	2.55	0.40
25:YA:1002:G:H2'	25:YA:1003:G:O4'	2.21	0.40
25:YA:1071:G:N2	25:YA:1090:U:C5	2.89	0.40
25:YA:1111:A:OP1	31:YH:3:ARG:NH1	2.55	0.40
25:YA:1183:G:H4'	49:Y3:29:ARG:NH2	2.36	0.40
25:YA:1446:C:C2'	25:YA:1447:G:H5'	2.52	0.40
25:YA:1448:G:H1'	25:YA:1528:A:H62	1.86	0.40
25:YA:1776:G:N2	25:YA:1777:U:H1'	2.37	0.40
25:YA:1957:C:O2'	25:YA:1985:G:H1'	2.21	0.40
25:YA:2518:A:H4'	25:YA:2519:U:OP1	2.21	0.40
25:YA:2639:A:H2'	25:YA:2640:G:O4'	2.22	0.40
25:YA:2823:A:C5	25:YA:2824:C:C5	3.09	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
28:YE:92:THR:HB	28:YE:93:VAL:H	1.57	0.40
28:YE:154:LYS:HD3	28:YE:154:LYS:C	2.42	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
30:YG:11:TYR:O	30:YG:16:ARG:HB2	2.22	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
31:YH:170:ARG:HB3	31:YH:171:LEU:H	1.47	0.40
33:YN:53:VAL:HG22	33:YN:121:LYS:HB2	2.04	0.40
33:YN:56:ASN:ND2	33:YN:126:PRO:N	2.69	0.40
33:YN:133:GLN:C	33:YN:134:ARG:HG2	2.41	0.40
35:YP:2:LYS:O	35:YP:5:ASP:CB	2.70	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
36:YQ:79:LEU:CD1	46:Y0:5:LYS:HD3	2.52	0.40
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:22:ARG:O	37:YR:26:LYS:HG3	2.21	0.40
37:YR:31:HIS:C	37:YR:33:ARG:H	2.25	0.40
38:YS:59:LYS:CG	38:YS:60:GLY:N	2.80	0.40
38:YS:83:LYS:HE3	38:YS:84:GLN:HG3	2.02	0.40
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.40
39:YT:26:ASP:HB3	39:YT:92:GLY:H	1.86	0.40
39:YT:125:ARG:O	39:YT:128:GLU:N	2.50	0.40
41:YV:35:LEU:C	41:YV:37:VAL:N	2.75	0.40
41:YV:70:ILE:O	41:YV:70:ILE:HG22	2.21	0.40
41:YV:95:LEU:HD13	41:YV:95:LEU:C	2.42	0.40
43:YX:9:LEU:HA	48:Y2:36:ARG:HH21	1.86	0.40
45:YZ:76:LEU:HA	45:YZ:83:PRO:HA	2.03	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
54:Y8:32:LEU:HD23	54:Y8:32:LEU:HA	1.94	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.02	0.18

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0 5
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0 5
3	QC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	0 12
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0 12
4	QD	206/209 (99%)	136 (66%)	50 (24%)	20 (10%)	0 11

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
4	XD	206/209 (99%)	135 (66%)	49 (24%)	22 (11%)	0	8
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	10
5	XE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	8
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	12
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	12
7	QG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	0	10
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	1	12
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	8
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0	8
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	5
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0	5
10	QJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	0	12
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0	9
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	15
11	XK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1	18
12	QL	123/132 (93%)	84 (68%)	24 (20%)	15 (12%)	0	6
12	XL	123/132 (93%)	83 (68%)	24 (20%)	16 (13%)	0	5
13	QM	119/126 (94%)	71 (60%)	29 (24%)	19 (16%)	0	3
13	XM	119/126 (94%)	72 (60%)	25 (21%)	22 (18%)	0	2
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0	2
14	XN	58/61 (95%)	32 (55%)	14 (24%)	12 (21%)	0	2
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	17
15	XO	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1	17
16	QP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	4
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0	4
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	14
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	14
18	QR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	6
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	6
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0	2
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0	2
21	QU	23/27 (85%)	16 (70%)	3 (13%)	4 (17%)	0	3
21	XU	23/27 (85%)	16 (70%)	3 (13%)	4 (17%)	0	3
27	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1	17
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	17
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	10
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	10
30	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	6
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	6
31	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
31	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
32	RI	144/148 (97%)	99 (69%)	32 (22%)	13 (9%)	1	13
32	YI	144/148 (97%)	93 (65%)	30 (21%)	21 (15%)	0	4
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	16
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	16
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
36	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0	10
36	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0	10
37	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	6
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	6
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	3
38	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	3
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	15
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	10
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	10
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	5
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	5
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	21
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	21
44	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0	1
44	YY	100/110 (91%)	57 (57%)	16 (16%)	27 (27%)	0	1
45	RZ	181/206 (88%)	113 (62%)	46 (25%)	22 (12%)	0	6
45	YZ	181/206 (88%)	128 (71%)	36 (20%)	17 (9%)	0	12
46	R0	80/85 (94%)	66 (82%)	10 (12%)	4 (5%)	2	23
46	Y0	80/85 (94%)	66 (82%)	10 (12%)	4 (5%)	2	23
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	6
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	6
48	R2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	4
48	Y2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	4
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	22
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	22
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	19
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	19
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
55	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
All	All	11470/12128 (95%)	7621 (66%)	2356 (20%)	1493 (13%)	0 5

All (1493) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG
4	QD	28	SER
4	QD	29	PRO
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU
4	QD	178	VAL
5	QE	146	ALA
7	QG	5	ARG
7	QG	7	ALA
8	QH	50	ARG
8	QH	129	VAL
9	QI	23	ASN
9	QI	56	LEU
9	QI	95	LYS
9	QI	111	ARG
9	QI	117	HIS
10	QJ	30	SER
10	QJ	33	GLN
11	QK	91	ARG
12	QL	18	VAL

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Mol	Chain	Res	Type
12	QL	27	LEU
12	QL	45	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU
13	QM	70	LEU
13	QM	83	ASP
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
14	QN	24	CYS
14	QN	44	LEU
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
27	RD	26	LYS
27	RD	28	GLU

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Mol	Chain	Res	Type
27	RD	123	ALA
27	RD	231	HIS
28	RE	4	ILE
28	RE	7	VAL
28	RE	9	VAL
28	RE	22	PRO
28	RE	54	GLN
28	RE	57	LYS
28	RE	60	ASN
28	RE	63	LEU
28	RE	64	LYS
28	RE	68	ALA
28	RE	70	ALA
28	RE	73	GLU
28	RE	90	THR
28	RE	92	THR
28	RE	93	VAL
28	RE	169	ASN
28	RE	187	ALA
28	RE	189	PRO
29	RF	25	PRO
29	RF	66	PRO
29	RF	68	LYS
29	RF	73	ALA
29	RF	89	VAL
29	RF	128	ALA
29	RF	176	LEU
30	RG	4	ASP
30	RG	14	GLU
30	RG	79	ASN
30	RG	86	MET
31	RH	10	PRO
31	RH	12	PRO
31	RH	83	TYR
31	RH	85	LYS
31	RH	86	GLU
31	RH	87	LEU
31	RH	90	LYS
31	RH	92	ILE
31	RH	126	PRO
31	RH	127	GLU
31	RH	128	PRO

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Mol	Chain	Res	Type
31	RH	137	ASP
31	RH	138	LYS
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	169	VAL
32	RI	10	GLU
32	RI	117	GLU
32	RI	133	HIS
33	RN	6	PRO
33	RN	9	VAL
33	RN	22	THR
33	RN	36	GLY
33	RN	58	ASP
33	RN	95	PRO
33	RN	97	ARG
33	RN	119	ARG
33	RN	131	GLN
33	RN	133	GLN
33	RN	134	ARG
34	RO	49	ARG
35	RP	5	ASP
35	RP	10	PRO
35	RP	15	ARG
35	RP	19	VAL
35	RP	21	ARG
35	RP	25	SER
35	RP	27	HIS
35	RP	36	LYS
35	RP	38	GLN
35	RP	42	SER
35	RP	65	ARG
35	RP	95	VAL
35	RP	106	LEU
35	RP	107	LYS
35	RP	141	ALA
35	RP	148	LEU
36	RQ	6	ARG
36	RQ	18	LYS
36	RQ	22	LYS
36	RQ	27	VAL
36	RQ	81	VAL

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Mol	Chain	Res	Type
36	RQ	90	VAL
36	RQ	134	ARG
37	RR	2	ARG
37	RR	3	HIS
37	RR	4	LEU
37	RR	14	SER
37	RR	58	GLY
37	RR	86	ARG
37	RR	117	VAL
38	RS	4	LEU
38	RS	12	PHE
38	RS	14	VAL
38	RS	23	ARG
38	RS	56	LEU
38	RS	57	LYS
38	RS	88	ASP
38	RS	89	ARG
38	RS	90	GLY
38	RS	107	GLU
39	RT	2	ASN
39	RT	3	ARG
39	RT	39	ARG
39	RT	55	ASN
39	RT	58	ASN
39	RT	90	GLN
39	RT	94	ALA
39	RT	97	ALA
39	RT	106	SER
39	RT	107	ASP
41	RV	28	GLU
41	RV	31	ALA
41	RV	45	THR
41	RV	48	GLY
41	RV	49	THR
41	RV	50	PRO
41	RV	53	GLU
41	RV	79	VAL
42	RW	59	VAL
42	RW	67	ASP
42	RW	75	TYR
42	RW	111	HIS
43	RX	36	LYS

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Mol	Chain	Res	Type
44	RY	3	VAL
44	RY	23	ARG
44	RY	48	ALA
44	RY	49	VAL
44	RY	50	ARG
44	RY	53	PRO
44	RY	58	GLY
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	51	ALA
45	RZ	179	ASP
47	R1	30	VAL
47	R1	54	ALA
47	R1	81	LYS
47	R1	82	LEU
47	R1	95	LEU
48	R2	16	LEU
48	R2	43	GLN
48	R2	47	ASN
48	R2	48	HIS
48	R2	71	ASN
49	R3	3	ARG
50	R4	5	ILE
50	R4	14	ILE
50	R4	16	CYS
50	R4	22	ILE
50	R4	23	GLU
50	R4	36	CYS
50	R4	37	SER
50	R4	40	HIS
50	R4	42	PHE
50	R4	43	TYR
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	62	ARG
50	R4	66	SER
50	R4	68	ARG

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Mol	Chain	Res	Type
51	R5	3	LYS
51	R5	4	HIS
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA

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Mol	Chain	Res	Type
7	XG	5	ARG
7	XG	7	ALA
8	XH	50	ARG
8	XH	129	VAL
9	XI	23	ASN
9	XI	56	LEU
9	XI	95	LYS
9	XI	111	ARG
9	XI	117	HIS
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	46	LYS
12	XL	62	SER
12	XL	121	GLY
13	XM	70	LEU
13	XM	83	ASP
13	XM	106	ASN
13	XM	108	ARG
13	XM	118	ALA
14	XN	3	ARG
14	XN	16	PHE
14	XN	23	ARG
14	XN	43	CYS
14	XN	44	LEU
15	XO	88	ARG
16	XP	44	THR
16	XP	67	THR
17	XQ	34	LYS
17	XQ	49	GLU
18	XR	22	VAL
19	XS	3	ARG
19	XS	12	ASP
19	XS	14	HIS
19	XS	25	LYS
19	XS	26	GLY
19	XS	31	ILE
19	XS	41	VAL
19	XS	70	LYS
19	XS	78	ARG

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Mol	Chain	Res	Type
19	XS	79	THR
20	XT	48	LYS
20	XT	49	ALA
20	XT	74	LYS
20	XT	95	ALA
20	XT	96	GLY
20	XT	100	ILE
21	XU	7	ARG
21	XU	9	ARG
21	XU	22	ARG
27	YD	26	LYS
27	YD	28	GLU
27	YD	123	ALA
27	YD	231	HIS
28	YE	4	ILE
28	YE	7	VAL
28	YE	9	VAL
28	YE	22	PRO
28	YE	54	GLN
28	YE	57	LYS
28	YE	60	ASN
28	YE	63	LEU
28	YE	64	LYS
28	YE	68	ALA
28	YE	70	ALA
28	YE	73	GLU
28	YE	90	THR
28	YE	92	THR
28	YE	93	VAL
28	YE	169	ASN
28	YE	187	ALA
28	YE	189	PRO
29	YF	25	PRO
29	YF	66	PRO
29	YF	68	LYS
29	YF	73	ALA
29	YF	89	VAL
29	YF	128	ALA
29	YF	176	LEU
30	YG	4	ASP
30	YG	14	GLU
30	YG	79	ASN

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Mol	Chain	Res	Type
30	YG	86	MET
31	YH	10	PRO
31	YH	12	PRO
31	YH	83	TYR
31	YH	85	LYS
31	YH	86	GLU
31	YH	87	LEU
31	YH	90	LYS
31	YH	92	ILE
31	YH	126	PRO
31	YH	127	GLU
31	YH	128	PRO
31	YH	137	ASP
31	YH	138	LYS
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	169	VAL
32	YI	10	GLU
32	YI	72	LEU
32	YI	133	HIS
32	YI	145	VAL
33	YN	6	PRO
33	YN	9	VAL
33	YN	22	THR
33	YN	36	GLY
33	YN	58	ASP
33	YN	95	PRO
33	YN	97	ARG
33	YN	119	ARG
33	YN	131	GLN
33	YN	133	GLN
33	YN	134	ARG
34	YO	49	ARG
35	YP	5	ASP
35	YP	10	PRO
35	YP	15	ARG
35	YP	19	VAL
35	YP	21	ARG
35	YP	25	SER
35	YP	27	HIS
35	YP	36	LYS

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Mol	Chain	Res	Type
35	YP	38	GLN
35	YP	42	SER
35	YP	65	ARG
35	YP	95	VAL
35	YP	106	LEU
35	YP	107	LYS
35	YP	141	ALA
35	YP	148	LEU
36	YQ	6	ARG
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP

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Mol	Chain	Res	Type
41	YV	28	GLU
41	YV	31	ALA
41	YV	45	THR
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	51	ALA
45	YZ	146	ILE
45	YZ	152	ALA
45	YZ	166	SER
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS

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Mol	Chain	Res	Type
50	Y4	22	ILE
50	Y4	23	GLU
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO

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Mol	Chain	Res	Type
4	QD	20	TYR
4	QD	164	ALA
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
8	QH	128	GLY
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
16	QP	49	LEU

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Mol	Chain	Res	Type
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	5	VAL
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU

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Mol	Chain	Res	Type
30	RG	96	ARG
30	RG	110	ALA
30	RG	115	ARG
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	11	ASN
32	RI	13	GLY
32	RI	72	LEU
32	RI	115	ALA
32	RI	145	VAL
33	RN	23	LEU
33	RN	76	SER
34	RO	51	ALA
34	RO	56	ASP
34	RO	68	GLU
35	RP	6	LEU
35	RP	11	GLY
35	RP	12	ALA
35	RP	16	ARG
36	RQ	13	GLN
36	RQ	24	GLY
36	RQ	28	ALA
36	RQ	57	HIS
37	RR	11	ASN
38	RS	87	PHE
38	RS	96	GLY
38	RS	100	ALA
38	RS	109	GLY
38	RS	111	GLU
39	RT	4	GLY
39	RT	36	GLU
39	RT	43	GLN
39	RT	67	SER
39	RT	124	ASP

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Mol	Chain	Res	Type
40	RU	9	VAL
40	RU	28	ARG
40	RU	73	GLY
40	RU	90	VAL
42	RW	63	ASP
42	RW	66	GLU
42	RW	68	ARG
43	RX	67	GLY
44	RY	4	LYS
44	RY	41	GLY
44	RY	56	PRO
44	RY	57	GLN
44	RY	99	CYS
45	RZ	66	SER
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	116	VAL
45	RZ	130	PRO
45	RZ	158	PRO
45	RZ	177	PRO
46	R0	3	HIS
46	R0	64	ASP
47	R1	45	ASN
47	R1	55	GLY
47	R1	84	GLY
48	R2	24	LEU
48	R2	44	LEU
48	R2	70	GLN
50	R4	9	LEU
50	R4	24	THR
51	R5	43	HIS
51	R5	55	ARG
53	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY

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Mol	Chain	Res	Type
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	67	GLU
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
14	XN	40	CYS

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Mol	Chain	Res	Type
15	XO	77	ARG
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG
28	YE	53	PRO
28	YE	61	ARG
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	5	VAL

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Mol	Chain	Res	Type
30	YG	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO
32	YI	11	ASN
32	YI	15	VAL
32	YI	29	TYR
32	YI	84	GLY
32	YI	87	LYS
32	YI	102	SER
32	YI	113	ARG
32	YI	118	LYS
33	YN	23	LEU
33	YN	76	SER
34	YO	51	ALA
34	YO	56	ASP
34	YO	68	GLU
35	YP	6	LEU
35	YP	11	GLY
35	YP	12	ALA
35	YP	16	ARG
36	YQ	13	GLN
36	YQ	24	GLY
36	YQ	28	ALA
37	YR	11	ASN
38	YS	61	ASN
38	YS	87	PHE
38	YS	96	GLY
38	YS	100	ALA
38	YS	109	GLY
38	YS	111	GLU

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Mol	Chain	Res	Type
39	YT	4	GLY
39	YT	36	GLU
39	YT	43	GLN
39	YT	67	SER
39	YT	124	ASP
40	YU	9	VAL
40	YU	28	ARG
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS
44	YY	41	GLY
44	YY	53	PRO
44	YY	56	PRO
44	YY	57	GLN
44	YY	99	CYS
45	YZ	13	GLU
45	YZ	81	ARG
45	YZ	153	SER
45	YZ	159	PRO
46	Y0	12	ASN
46	Y0	18	ALA
46	Y0	55	ARG
47	Y1	45	ASN
47	Y1	55	GLY
47	Y1	84	GLY
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	70	GLN
50	Y4	9	LEU
50	Y4	24	THR
51	Y5	43	HIS
51	Y5	55	ARG
53	Y7	39	ARG
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY

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Mol	Chain	Res	Type
4	QD	26	CYS
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
14	QN	48	ALA
15	QO	14	GLU
15	QO	23	GLY
16	QP	8	ARG
16	QP	83	GLU
17	QQ	30	PRO
17	QQ	99	SER
18	QR	55	ARG
19	QS	6	LYS
19	QS	27	GLU
20	QT	82	SER
20	QT	98	PRO
27	RD	111	LEU
27	RD	242	ARG
27	RD	262	ARG
28	RE	20	ALA
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS
30	RG	128	ARG

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Mol	Chain	Res	Type
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	15	VAL
32	RI	112	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	132	ALA
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA
38	RS	75	GLU
39	RT	112	ARG
40	RU	46	ALA
40	RU	58	ARG
40	RU	93	LYS
41	RV	54	GLY
42	RW	93	ALA
43	RX	48	LYS
43	RX	87	GLN
44	RY	21	LYS
44	RY	39	VAL
44	RY	42	VAL
44	RY	69	ALA
44	RY	91	GLU
44	RY	102	CYS
45	RZ	61	LEU
45	RZ	81	ARG

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Mol	Chain	Res	Type
45	RZ	108	PRO
45	RZ	166	SER
46	R0	15	ASP
46	R0	57	PHE
47	R1	74	VAL
47	R1	91	LYS
47	R1	93	GLU
50	R4	27	THR
50	R4	46	GLN
52	R6	18	ARG
53	R7	32	LYS
54	R8	46	ARG
54	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
8	XH	128	GLY
9	XI	12	GLU
9	XI	13	ALA
12	XL	45	PRO
12	XL	51	ALA
12	XL	123	LYS
13	XM	12	ASN
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	48	ALA
15	XO	14	GLU
15	XO	23	GLY
16	XP	8	ARG

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Mol	Chain	Res	Type
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	12	SER
27	YD	111	LEU
27	YD	239	ARG
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	71	GLY
28	YE	82	ARG
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	115	ARG
30	YG	128	ARG
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU
31	YH	152	ARG
31	YH	159	GLU
32	YI	9	LEU
32	YI	104	GLN
32	YI	114	LEU
32	YI	115	ALA
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	57	HIS
36	YQ	88	GLY

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Mol	Chain	Res	Type
36	YQ	91	GLU
37	YR	42	LYS
37	YR	45	ARG
37	YR	71	GLN
37	YR	107	ASP
38	YS	19	LYS
38	YS	74	ALA
38	YS	75	GLU
39	YT	78	LEU
39	YT	112	ARG
40	YU	46	ALA
40	YU	58	ARG
40	YU	93	LYS
41	YV	54	GLY
42	YW	68	ARG
42	YW	93	ALA
43	YX	48	LYS
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	91	GLU
44	YY	102	CYS
47	Y1	74	VAL
47	Y1	91	LYS
47	Y1	93	GLU
50	Y4	27	THR
50	Y4	46	GLN
52	Y6	18	ARG
53	Y7	32	LYS
54	Y8	46	ARG
54	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY

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Mol	Chain	Res	Type
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	109	ASN
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
19	QS	28	LYS
19	QS	44	MET
19	QS	64	GLU
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER
27	RD	73	VAL
27	RD	238	GLY
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	136	THR
29	RF	145	GLU
30	RG	12	TYR
30	RG	117	PHE
30	RG	146	TYR
31	RH	13	LYS
31	RH	109	PHE
31	RH	159	GLU
32	RI	80	PRO
33	RN	96	GLU

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Mol	Chain	Res	Type
33	RN	127	ASP
34	RO	17	ARG
34	RO	97	ARG
35	RP	29	LYS
35	RP	47	ASP
35	RP	139	LYS
39	RT	37	GLY
39	RT	78	LEU
39	RT	95	ARG
40	RU	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	13	GLU
45	RZ	59	LEU
45	RZ	62	PRO
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	45	VAL
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG
2	XB	19	HIS
2	XB	131	PRO
2	XB	160	ASP
3	XC	168	ALA
4	XD	151	LYS
5	XE	70	PRO
5	XE	72	GLN
5	XE	124	GLY
6	XF	13	ASN
6	XF	40	VAL
6	XF	42	GLU
7	XG	35	LYS
7	XG	41	ARG
7	XG	116	ALA
7	XG	117	ALA

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Mol	Chain	Res	Type
8	XH	27	PRO
8	XH	29	SER
8	XH	49	GLU
10	XJ	57	LYS
10	XJ	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	22	THR
15	XO	86	GLY
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
19	XS	64	GLU
20	XT	40	ALA
20	XT	51	GLU
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO
29	YF	43	LYS
29	YF	130	ALA
29	YF	136	THR
29	YF	145	GLU
30	YG	12	TYR
30	YG	117	PHE
30	YG	146	TYR
31	YH	13	LYS
31	YH	109	PHE
32	YI	18	VAL
32	YI	83	ALA
33	YN	96	GLU
33	YN	127	ASP
33	YN	132	ALA
34	YO	17	ARG
34	YO	97	ARG
35	YP	29	LYS
35	YP	47	ASP
35	YP	139	LYS

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Mol	Chain	Res	Type
39	YT	37	GLY
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
45	YZ	59	LEU
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA

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Mol	Chain	Res	Type
11	QK	105	VAL
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
27	RD	33	LEU
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU
31	RH	77	LYS
31	RH	170	ARG
32	RI	118	LYS
33	RN	29	LYS
33	RN	104	LYS
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
44	RY	7	VAL
45	RZ	5	LEU
45	RZ	7	ALA
45	RZ	153	SER
45	RZ	165	VAL
49	R3	13	ILE
50	R4	30	GLU
50	R4	33	VAL
51	R5	42	PRO
52	R6	35	GLU
54	R8	64	TYR
2	XB	23	ARG
2	XB	25	ASN
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL

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Mol	Chain	Res	Type
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
10	XJ	75	ILE
11	XK	64	ALA
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
32	YI	12	LEU
33	YN	29	LYS
33	YN	104	LYS
33	YN	128	HIS
34	YO	25	LEU
35	YP	50	ARG
35	YP	97	PRO
35	YP	108	LYS
37	YR	85	PRO
40	YU	91	ASP

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Mol	Chain	Res	Type
42	YW	32	ALA
44	YY	7	VAL
45	YZ	53	ILE
45	YZ	117	LEU
46	Y0	15	ASP
49	Y3	13	ILE
50	Y4	30	GLU
50	Y4	33	VAL
50	Y4	70	GLY
51	Y5	42	PRO
52	Y6	35	GLU
53	Y7	44	PRO
54	Y8	57	ARG
54	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL
9	QI	88	TYR
11	QK	106	LYS
12	QL	48	PRO
14	QN	20	ALA
16	QP	57	ARG
27	RD	178	PRO
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
39	RT	38	ASN
41	RV	36	PRO
42	RW	11	ARG
42	RW	33	ARG
43	RX	19	ALA
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
53	R7	44	PRO
3	XC	51	GLY
5	XE	115	VAL
6	XF	32	ASN
10	XJ	85	LEU
13	XM	13	LYS
13	XM	48	LEU
13	XM	109	THR

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Mol	Chain	Res	Type
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
27	YD	241	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL
39	YT	38	ASN
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
43	YX	19	ALA
44	YY	33	LYS
45	YZ	61	LEU
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
2	QB	239	VAL
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
18	QR	37	VAL
20	QT	63	ILE
28	RE	86	PRO
28	RE	184	VAL
36	RQ	86	GLY
37	RR	32	GLY
42	RW	35	ILE
45	RZ	53	ILE
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
5	XE	49	PRO
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE

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Mol	Chain	Res	Type
28	YE	86	PRO
28	YE	184	VAL
32	YI	71	ILE
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
2	QB	227	GLY
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
16	QP	53	VAL
27	RD	241	PRO
44	RY	27	VAL
44	RY	32	PRO
51	R5	46	CYS
2	XB	227	GLY
3	XC	134	ILE
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
30	YG	52	ILE
44	YY	27	VAL
44	YY	32	PRO
45	YZ	171	ILE
51	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	51	VAL
51	R5	34	PRO
12	XL	48	PRO
13	XM	84	ILE
27	YD	34	VAL
34	YO	114	ILE
44	YY	51	VAL

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Mol	Chain	Res	Type
45	YZ	94	GLU
45	YZ	160	GLY
51	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
16	QP	41	PRO
28	RE	52	LEU
28	RE	55	ASN
32	RI	18	VAL
34	RO	27	GLY
49	R3	40	THR
9	XI	21	PRO
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
32	YI	110	ASP
34	YO	27	GLY
45	YZ	143	GLY
49	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
20	QT	97	ALA
5	XE	129	ILE
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
48	R2	18	PRO
48	Y2	18	PRO

5.3.2 Protein sidechains [i](#)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	QB	205/220 (93%)	181 (88%)	24 (12%)	5 25
2	XB	205/220 (93%)	181 (88%)	24 (12%)	5 25
3	QC	159/188 (85%)	143 (90%)	16 (10%)	7 30

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
3	XC	159/188 (85%)	143 (90%)	16 (10%)	7	30
4	QD	180/181 (99%)	160 (89%)	20 (11%)	6	27
4	XD	180/181 (99%)	165 (92%)	15 (8%)	11	39
5	QE	116/123 (94%)	107 (92%)	9 (8%)	12	41
5	XE	116/123 (94%)	107 (92%)	9 (8%)	12	41
6	QF	90/90 (100%)	76 (84%)	14 (16%)	2	17
6	XF	90/90 (100%)	76 (84%)	14 (16%)	2	17
7	QG	126/127 (99%)	115 (91%)	11 (9%)	10	37
7	XG	126/127 (99%)	115 (91%)	11 (9%)	10	37
8	QH	119/119 (100%)	106 (89%)	13 (11%)	6	28
8	XH	119/119 (100%)	106 (89%)	13 (11%)	6	28
9	QI	98/99 (99%)	87 (89%)	11 (11%)	6	27
9	XI	98/99 (99%)	87 (89%)	11 (11%)	6	27
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	9	35
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	9	35
11	QK	90/99 (91%)	81 (90%)	9 (10%)	7	30
11	XK	90/99 (91%)	81 (90%)	9 (10%)	7	30
12	QL	104/109 (95%)	90 (86%)	14 (14%)	4	22
12	XL	104/109 (95%)	89 (86%)	15 (14%)	3	19
13	QM	97/101 (96%)	81 (84%)	16 (16%)	2	15
13	XM	97/101 (96%)	81 (84%)	16 (16%)	2	15
14	QN	49/50 (98%)	40 (82%)	9 (18%)	1	11
14	XN	49/50 (98%)	44 (90%)	5 (10%)	7	30
15	QO	79/80 (99%)	73 (92%)	6 (8%)	13	42
15	XO	79/80 (99%)	73 (92%)	6 (8%)	13	42
16	QP	72/74 (97%)	63 (88%)	9 (12%)	4	23
16	XP	72/74 (97%)	63 (88%)	9 (12%)	4	23
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	18	47
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	18	47
18	QR	61/77 (79%)	54 (88%)	7 (12%)	5	26
18	XR	61/77 (79%)	54 (88%)	7 (12%)	5	26

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3	18
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3	18
20	QT	76/82 (93%)	68 (90%)	8 (10%)	7	29
20	XT	76/82 (93%)	68 (90%)	8 (10%)	7	29
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24	53
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24	53
27	RD	214/218 (98%)	177 (83%)	37 (17%)	2	13
27	YD	214/218 (98%)	178 (83%)	36 (17%)	2	15
28	RE	165/166 (99%)	128 (78%)	37 (22%)	1	6
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1	6
29	RF	161/166 (97%)	140 (87%)	21 (13%)	4	22
29	YF	161/166 (97%)	140 (87%)	21 (13%)	4	22
30	RG	155/156 (99%)	130 (84%)	25 (16%)	2	16
30	YG	155/156 (99%)	130 (84%)	25 (16%)	2	16
31	RH	142/148 (96%)	114 (80%)	28 (20%)	1	9
31	YH	142/148 (96%)	114 (80%)	28 (20%)	1	9
32	RI	122/124 (98%)	94 (77%)	28 (23%)	1	6
32	YI	122/124 (98%)	92 (75%)	30 (25%)	0	5
33	RN	117/119 (98%)	98 (84%)	19 (16%)	2	16
33	YN	117/119 (98%)	98 (84%)	19 (16%)	2	16
34	RO	100/100 (100%)	90 (90%)	10 (10%)	7	30
34	YO	100/100 (100%)	90 (90%)	10 (10%)	7	30
35	RP	116/116 (100%)	89 (77%)	27 (23%)	1	5
35	YP	116/116 (100%)	89 (77%)	27 (23%)	1	5
36	RQ	111/111 (100%)	93 (84%)	18 (16%)	2	16
36	YQ	111/111 (100%)	93 (84%)	18 (16%)	2	16
37	RR	101/101 (100%)	84 (83%)	17 (17%)	2	15
37	YR	101/101 (100%)	84 (83%)	17 (17%)	2	15
38	RS	87/88 (99%)	74 (85%)	13 (15%)	3	18
38	YS	87/88 (99%)	74 (85%)	13 (15%)	3	18
39	RT	120/127 (94%)	97 (81%)	23 (19%)	1	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
39	YT	120/127 (94%)	97 (81%)	23 (19%)	1	10
40	RU	93/94 (99%)	80 (86%)	13 (14%)	3	21
40	YU	93/94 (99%)	80 (86%)	13 (14%)	3	21
41	RV	82/82 (100%)	71 (87%)	11 (13%)	4	22
41	YV	82/82 (100%)	71 (87%)	11 (13%)	4	22
42	RW	92/92 (100%)	77 (84%)	15 (16%)	2	16
42	YW	92/92 (100%)	77 (84%)	15 (16%)	2	16
43	RX	74/78 (95%)	63 (85%)	11 (15%)	3	18
43	YX	74/78 (95%)	63 (85%)	11 (15%)	3	18
44	RY	85/91 (93%)	70 (82%)	15 (18%)	2	13
44	YY	85/91 (93%)	70 (82%)	15 (18%)	2	13
45	RZ	162/179 (90%)	133 (82%)	29 (18%)	2	12
45	YZ	162/179 (90%)	131 (81%)	31 (19%)	1	10
46	R0	65/67 (97%)	58 (89%)	7 (11%)	6	28
46	Y0	65/67 (97%)	58 (89%)	7 (11%)	6	28
47	R1	82/83 (99%)	67 (82%)	15 (18%)	1	11
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	1	11
48	R2	64/67 (96%)	57 (89%)	7 (11%)	6	28
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	6	28
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1	6
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	6
50	R4	63/63 (100%)	44 (70%)	19 (30%)	0	2
50	Y4	63/63 (100%)	44 (70%)	19 (30%)	0	2
51	R5	51/52 (98%)	39 (76%)	12 (24%)	1	5
51	Y5	51/52 (98%)	39 (76%)	12 (24%)	1	5
52	R6	48/52 (92%)	38 (79%)	10 (21%)	1	7
52	Y6	48/52 (92%)	38 (79%)	10 (21%)	1	7
53	R7	42/42 (100%)	39 (93%)	3 (7%)	14	44
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	14	44
54	R8	54/55 (98%)	39 (72%)	15 (28%)	0	3
54	Y8	54/55 (98%)	39 (72%)	15 (28%)	0	3

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
55	R9	34/34 (100%)	32 (94%)	2 (6%)	19	49
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	19	49
All	All	9702/10066 (96%)	8266 (85%)	1436 (15%)	3	18

All (1436) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE
2	QB	8	LYS
2	QB	16	HIS
2	QB	23	ARG
2	QB	24	TRP
2	QB	33	TYR
2	QB	36	ARG
2	QB	63	MET
2	QB	67	THR
2	QB	73	THR
2	QB	82	ARG
2	QB	92	TYR
2	QB	94	ASN
2	QB	121	LEU
2	QB	155	LEU
2	QB	163	PHE
2	QB	165	VAL
2	QB	168	THR
2	QB	172	ILE
2	QB	174	VAL
2	QB	178	ARG
2	QB	196	LEU
2	QB	204	ASN
2	QB	215	LEU
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	29	TYR
3	QC	56	ASP
3	QC	69	HIS
3	QC	94	LEU
3	QC	127	ARG

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Mol	Chain	Res	Type
3	QC	131	ARG
3	QC	154	SER
3	QC	184	TYR
3	QC	192	THR
3	QC	193	TYR
3	QC	196	LEU
4	QD	3	ARG
4	QD	7	PRO
4	QD	9	CYS
4	QD	12	CYS
4	QD	13	ARG
4	QD	14	ARG
4	QD	30	LYS
4	QD	31	CYS
4	QD	50	ARG
4	QD	53	ASP
4	QD	73	ARG
4	QD	79	PHE
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	114	ARG
4	QD	122	ARG
4	QD	131	ARG
4	QD	181	MET
4	QD	200	GLU
5	QE	10	MET
5	QE	13	ILE
5	QE	16	THR
5	QE	31	LEU
5	QE	53	LEU
5	QE	73	ASN
5	QE	79	GLU
5	QE	101	ILE
5	QE	153	LYS
6	QF	17	SER
6	QF	21	LEU
6	QF	27	GLN
6	QF	36	ARG
6	QF	55	ASP
6	QF	63	TYR
6	QF	69	GLU

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Mol	Chain	Res	Type
6	QF	74	ASP
6	QF	77	ARG
6	QF	87	ARG
6	QF	92	LYS
6	QF	94	GLN
6	QF	97	PHE
6	QF	100	ASN
7	QG	8	GLU
7	QG	12	LEU
7	QG	78	ARG
7	QG	84	ASN
7	QG	98	SER
7	QG	111	ARG
7	QG	114	ARG
7	QG	124	LEU
7	QG	137	LYS
7	QG	148	ASN
7	QG	155	ARG
8	QH	1	MET
8	QH	10	LEU
8	QH	27	PRO
8	QH	41	ARG
8	QH	52	ASP
8	QH	63	LEU
8	QH	69	ARG
8	QH	81	HIS
8	QH	99	GLU
8	QH	119	LEU
8	QH	121	ASP
8	QH	129	VAL
8	QH	137	VAL
9	QI	7	THR
9	QI	9	ARG
9	QI	48	GLU
9	QI	65	VAL
9	QI	83	ARG
9	QI	95	LYS
9	QI	104	ARG
9	QI	113	LYS
9	QI	114	TYR
9	QI	121	ARG
9	QI	128	ARG

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Mol	Chain	Res	Type
10	QJ	22	LYS
10	QJ	47	PHE
10	QJ	57	LYS
10	QJ	62	HIS
10	QJ	74	ILE
10	QJ	80	LYS
10	QJ	84	GLN
10	QJ	96	ILE
11	QK	26	ASN
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
11	QK	116	HIS
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	27	LEU
12	QL	41	ARG
12	QL	53	ARG
12	QL	57	LYS
12	QL	60	LEU
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	89	ARG
12	QL	112	ASP
12	QL	120	TYR
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG

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Mol	Chain	Res	Type
13	QM	90	LEU
13	QM	101	GLN
13	QM	115	LYS
13	QM	116	THR
13	QM	122	LYS
14	QN	3	ARG
14	QN	12	ARG
14	QN	14	PRO
14	QN	16	PHE
14	QN	26	ARG
14	QN	29	ARG
14	QN	41	ARG
14	QN	43	CYS
14	QN	44	LEU
15	QO	3	ILE
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG
16	QP	1	MET
16	QP	26	ARG
16	QP	28	ARG
16	QP	59	TRP
16	QP	62	VAL
16	QP	69	THR
16	QP	71	ARG
16	QP	72	ARG
16	QP	82	GLN
17	QQ	12	SER
17	QQ	48	GLU
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	68	ARG
17	QQ	74	LEU
18	QR	26	LEU
18	QR	29	PHE
18	QR	32	ARG
18	QR	36	ASN
18	QR	46	GLU
18	QR	54	ARG
18	QR	55	ARG

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Mol	Chain	Res	Type
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	13	ASP
19	QS	15	LEU
19	QS	29	ARG
19	QS	30	LEU
19	QS	41	VAL
19	QS	63	THR
19	QS	65	ASN
19	QS	83	HIS
20	QT	11	SER
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	62	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
21	QU	6	ARG
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	61	LEU
27	RD	65	ILE
27	RD	67	PHE
27	RD	71	ASP
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL

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Mol	Chain	Res	Type
27	RD	183	ARG
27	RD	192	THR
27	RD	198	ASN
27	RD	200	ASP
27	RD	215	LEU
27	RD	217	ARG
27	RD	218	ARG
27	RD	226	MET
27	RD	230	ASP
27	RD	237	GLU
27	RD	257	LEU
27	RD	259	THR
27	RD	261	LYS
27	RD	262	ARG
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	13	ARG
28	RE	16	ARG
28	RE	17	ASP
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	37	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	54	GLN
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	79	ARG
28	RE	80	GLU
28	RE	101	ARG
28	RE	113	PHE
28	RE	117	MET
28	RE	119	ARG

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Mol	Chain	Res	Type
28	RE	143	ASN
28	RE	146	THR
28	RE	154	LYS
28	RE	167	VAL
28	RE	179	GLU
28	RE	184	VAL
28	RE	196	VAL
28	RE	200	GLU
28	RE	202	LYS
28	RE	203	LYS
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	117	ARG
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	164	ARG
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	33	ARG
30	RG	34	LEU
30	RG	35	GLU
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR

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Mol	Chain	Res	Type
30	RG	88	ILE
30	RG	94	LEU
30	RG	96	ARG
30	RG	97	ASP
30	RG	103	LEU
30	RG	115	ARG
30	RG	118	ARG
30	RG	133	LEU
30	RG	147	ASP
30	RG	155	MET
30	RG	156	ASP
30	RG	159	VAL
30	RG	167	GLU
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	85	LYS
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	132	ARG
31	RH	139	GLN
31	RH	143	GLN
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	158	HIS
31	RH	169	VAL

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Mol	Chain	Res	Type
32	RI	1	MET
32	RI	2	LYS
32	RI	3	VAL
32	RI	10	GLU
32	RI	27	ARG
32	RI	31	LEU
32	RI	33	ARG
32	RI	38	LEU
32	RI	40	THR
32	RI	42	SER
32	RI	51	ILE
32	RI	56	LYS
32	RI	57	ARG
32	RI	67	ARG
32	RI	70	GLU
32	RI	85	GLU
32	RI	88	ILE
32	RI	93	THR
32	RI	101	LEU
32	RI	112	LYS
32	RI	113	ARG
32	RI	118	LYS
32	RI	129	THR
32	RI	135	GLU
32	RI	138	ILE
32	RI	139	GLN
32	RI	142	VAL
32	RI	145	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	101	HIS
33	RN	109	LYS

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Mol	Chain	Res	Type
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	17	ARG
34	RO	19	ILE
34	RO	23	ARG
34	RO	31	LYS
34	RO	39	ILE
34	RO	49	ARG
34	RO	53	LYS
34	RO	65	THR
35	RP	5	ASP
35	RP	9	ASN
35	RP	10	PRO
35	RP	16	ARG
35	RP	21	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	30	THR
35	RP	32	THR
35	RP	36	LYS
35	RP	38	GLN
35	RP	41	ARG
35	RP	50	ARG
35	RP	55	ARG
35	RP	61	ARG
35	RP	62	LEU
35	RP	64	LYS
35	RP	65	ARG
35	RP	75	ILE
35	RP	81	GLN
35	RP	88	LEU
35	RP	91	PHE
35	RP	99	LEU
35	RP	100	LEU
35	RP	108	LYS
35	RP	144	GLU
35	RP	146	VAL

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Mol	Chain	Res	Type
36	RQ	2	LEU
36	RQ	25	ASP
36	RQ	26	TYR
36	RQ	27	VAL
36	RQ	45	GLN
36	RQ	46	GLN
36	RQ	54	MET
36	RQ	55	VAL
36	RQ	58	PHE
36	RQ	60	ARG
36	RQ	79	LEU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU
36	RQ	130	LYS
36	RQ	135	ASP
36	RQ	139	GLU
37	RR	14	SER
37	RR	31	HIS
37	RR	37	THR
37	RR	44	LEU
37	RR	51	LEU
37	RR	57	ARG
37	RR	66	VAL
37	RR	67	LEU
37	RR	71	GLN
37	RR	75	LEU
37	RR	76	VAL
37	RR	81	ASP
37	RR	95	THR
37	RR	104	ARG
37	RR	105	ARG
37	RR	107	ASP
37	RR	113	LEU
38	RS	4	LEU
38	RS	12	PHE
38	RS	17	ARG
38	RS	18	ILE
38	RS	20	ARG
38	RS	44	LYS
38	RS	56	LEU

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Mol	Chain	Res	Type
38	RS	57	LYS
38	RS	89	ARG
38	RS	101	LEU
38	RS	103	GLU
38	RS	106	ARG
38	RS	111	GLU
39	RT	2	ASN
39	RT	14	TYR
39	RT	22	PHE
39	RT	23	ARG
39	RT	26	ASP
39	RT	27	THR
39	RT	42	ILE
39	RT	51	ARG
39	RT	58	ASN
39	RT	65	LYS
39	RT	73	GLU
39	RT	78	LEU
39	RT	86	ILE
39	RT	87	ASP
39	RT	99	LEU
39	RT	100	TYR
39	RT	104	ASN
39	RT	107	ASP
39	RT	111	ARG
39	RT	112	ARG
39	RT	115	ARG
39	RT	128	GLU
39	RT	134	GLU
40	RU	5	LYS
40	RU	9	VAL
40	RU	31	SER
40	RU	52	ARG
40	RU	74	LEU
40	RU	76	TYR
40	RU	79	PHE
40	RU	88	ILE
40	RU	92	ARG
40	RU	98	LEU
40	RU	108	GLU
40	RU	114	LYS
40	RU	117	GLN

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Mol	Chain	Res	Type
41	RV	13	ARG
41	RV	14	VAL
41	RV	18	LEU
41	RV	35	LEU
41	RV	38	LEU
41	RV	39	LEU
41	RV	40	LEU
41	RV	66	ARG
41	RV	75	PHE
41	RV	91	TYR
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO
42	RW	16	LYS
42	RW	18	ARG
42	RW	19	LEU
42	RW	20	VAL
42	RW	63	ASP
42	RW	67	ASP
42	RW	69	LEU
42	RW	70	TYR
42	RW	87	PRO
42	RW	88	ARG
42	RW	92	ARG
42	RW	107	LEU
42	RW	109	GLU
43	RX	3	THR
43	RX	6	ASP
43	RX	15	GLU
43	RX	27	THR
43	RX	30	VAL
43	RX	55	ASN
43	RX	57	LEU
43	RX	65	ARG
43	RX	70	LEU
43	RX	80	ILE
43	RX	88	LYS
44	RY	7	VAL
44	RY	11	ASP
44	RY	27	VAL
44	RY	45	VAL
44	RY	57	GLN

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Mol	Chain	Res	Type
44	RY	64	GLU
44	RY	75	ILE
44	RY	77	PRO
44	RY	79	CYS
44	RY	87	LYS
44	RY	88	LYS
44	RY	89	PHE
44	RY	90	LEU
44	RY	95	LYS
44	RY	97	ARG
45	RZ	2	GLU
45	RZ	4	ARG
45	RZ	16	SER
45	RZ	20	ARG
45	RZ	24	LEU
45	RZ	35	ARG
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	82	ARG
45	RZ	87	ASP
45	RZ	90	VAL
45	RZ	92	SER
45	RZ	93	ASP
45	RZ	94	GLU
45	RZ	112	ARG
45	RZ	117	LEU
45	RZ	121	HIS
45	RZ	123	ASP
45	RZ	128	VAL
45	RZ	145	GLU
45	RZ	148	ASP
45	RZ	150	LEU
45	RZ	151	HIS
45	RZ	163	LEU
45	RZ	166	SER
45	RZ	168	GLU
45	RZ	179	ASP
45	RZ	182	LYS
45	RZ	183	LEU
46	R0	5	LYS
46	R0	7	LEU
46	R0	10	THR

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Mol	Chain	Res	Type
46	R0	11	ARG
46	R0	36	ILE
46	R0	43	THR
46	R0	74	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	21	ARG
47	R1	30	VAL
47	R1	40	ARG
47	R1	41	ARG
47	R1	56	GLN
47	R1	76	ARG
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	92	LYS
47	R1	97	LEU
48	R2	7	ARG
48	R2	9	GLN
48	R2	16	LEU
48	R2	24	LEU
48	R2	53	LEU
48	R2	62	THR
48	R2	64	LEU
49	R3	4	LEU
49	R3	8	LEU
49	R3	9	VAL
49	R3	10	LYS
49	R3	17	LYS
49	R3	30	ARG
49	R3	31	LEU
49	R3	32	GLN
49	R3	37	LEU
49	R3	40	THR
49	R3	44	ARG
50	R4	6	HIS
50	R4	15	ILE
50	R4	18	CYS
50	R4	21	VAL
50	R4	23	GLU

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Mol	Chain	Res	Type
50	R4	39	CYS
50	R4	42	PHE
50	R4	48	ARG
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	57	GLU
50	R4	61	ARG
50	R4	62	ARG
50	R4	63	TYR
50	R4	67	TYR
50	R4	68	ARG
50	R4	71	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	6	VAL
51	R5	11	THR
51	R5	19	ARG
51	R5	25	LEU
51	R5	36	CYS
51	R5	37	LYS
51	R5	43	HIS
51	R5	52	TYR
51	R5	56	LYS
51	R5	58	LEU
52	R6	6	ARG
52	R6	8	LYS
52	R6	18	ARG
52	R6	19	ARG
52	R6	28	ARG
52	R6	34	LEU
52	R6	37	ARG
52	R6	42	TRP
52	R6	44	ARG
52	R6	46	HIS
53	R7	1	MET
53	R7	9	ARG
53	R7	43	THR
54	R8	15	LYS
54	R8	16	ILE
54	R8	30	ARG

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Mol	Chain	Res	Type
54	R8	35	GLN
54	R8	39	LYS
54	R8	43	GLN
54	R8	44	LYS
54	R8	47	LYS
54	R8	48	PHE
54	R8	49	VAL
54	R8	52	LYS
54	R8	53	PRO
54	R8	62	LEU
54	R8	63	PRO
54	R8	65	GLU
55	R9	1	MET
55	R9	17	ILE
2	XB	5	ILE
2	XB	8	LYS
2	XB	16	HIS
2	XB	23	ARG
2	XB	24	TRP
2	XB	33	TYR
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
2	XB	73	THR
2	XB	82	ARG
2	XB	92	TYR
2	XB	94	ASN
2	XB	121	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	165	VAL
2	XB	168	THR
2	XB	172	ILE
2	XB	174	VAL
2	XB	178	ARG
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG

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Mol	Chain	Res	Type
3	XC	21	ARG
3	XC	29	TYR
3	XC	56	ASP
3	XC	69	HIS
3	XC	94	LEU
3	XC	127	ARG
3	XC	131	ARG
3	XC	154	SER
3	XC	184	TYR
3	XC	192	THR
3	XC	193	TYR
3	XC	196	LEU
4	XD	3	ARG
4	XD	7	PRO
4	XD	9	CYS
4	XD	30	LYS
4	XD	50	ARG
4	XD	53	ASP
4	XD	79	PHE
4	XD	86	LYS
4	XD	94	LEU
4	XD	96	LEU
4	XD	114	ARG
4	XD	122	ARG
4	XD	131	ARG
4	XD	181	MET
4	XD	200	GLU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	53	LEU
5	XE	73	ASN
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	27	GLN
6	XF	36	ARG
6	XF	55	ASP
6	XF	63	TYR

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Mol	Chain	Res	Type
6	XF	69	GLU
6	XF	74	ASP
6	XF	77	ARG
6	XF	87	ARG
6	XF	92	LYS
6	XF	94	GLN
6	XF	97	PHE
6	XF	100	ASN
7	XG	8	GLU
7	XG	12	LEU
7	XG	78	ARG
7	XG	84	ASN
7	XG	98	SER
7	XG	111	ARG
7	XG	114	ARG
7	XG	124	LEU
7	XG	137	LYS
7	XG	148	ASN
7	XG	155	ARG
8	XH	1	MET
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
8	XH	63	LEU
8	XH	69	ARG
8	XH	81	HIS
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	121	ARG

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Mol	Chain	Res	Type
9	XI	128	ARG
10	XJ	22	LYS
10	XJ	47	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
11	XK	26	ASN
11	XK	32	ILE
11	XK	63	LEU
11	XK	75	TYR
11	XK	92	GLU
11	XK	109	VAL
11	XK	114	VAL
11	XK	116	HIS
11	XK	125	PHE
12	XL	17	LYS
12	XL	20	LYS
12	XL	27	LEU
12	XL	41	ARG
12	XL	44	THR
12	XL	53	ARG
12	XL	57	LYS
12	XL	60	LEU
12	XL	62	SER
12	XL	70	ILE
12	XL	73	GLU
12	XL	81	SER
12	XL	89	ARG
12	XL	112	ASP
12	XL	120	TYR
13	XM	3	ARG
13	XM	8	GLU
13	XM	13	LYS
13	XM	35	GLU
13	XM	47	ASP
13	XM	56	LEU
13	XM	57	ARG
13	XM	64	TRP
13	XM	66	LEU

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Mol	Chain	Res	Type
13	XM	70	LEU
13	XM	88	ARG
13	XM	90	LEU
13	XM	101	GLN
13	XM	115	LYS
13	XM	116	THR
13	XM	122	LYS
14	XN	3	ARG
14	XN	12	ARG
14	XN	14	PRO
14	XN	16	PHE
14	XN	41	ARG
15	XO	3	ILE
15	XO	8	LYS
15	XO	26	GLU
15	XO	39	LEU
15	XO	62	GLN
15	XO	65	ARG
16	XP	1	MET
16	XP	26	ARG
16	XP	28	ARG
16	XP	59	TRP
16	XP	62	VAL
16	XP	69	THR
16	XP	71	ARG
16	XP	72	ARG
16	XP	82	GLN
17	XQ	12	SER
17	XQ	48	GLU
17	XQ	52	LYS
17	XQ	59	ILE
17	XQ	68	ARG
17	XQ	74	LEU
18	XR	26	LEU
18	XR	29	PHE
18	XR	32	ARG
18	XR	36	ASN
18	XR	46	GLU
18	XR	54	ARG
18	XR	55	ARG
19	XS	5	LEU
19	XS	10	PHE

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Mol	Chain	Res	Type
19	XS	12	ASP
19	XS	13	ASP
19	XS	15	LEU
19	XS	29	ARG
19	XS	30	LEU
19	XS	41	VAL
19	XS	63	THR
19	XS	65	ASN
19	XS	83	HIS
20	XT	11	SER
20	XT	24	LEU
20	XT	26	ASN
20	XT	41	ILE
20	XT	62	LEU
20	XT	73	HIS
20	XT	75	ASN
20	XT	93	GLU
21	XU	6	ARG
27	YD	10	THR
27	YD	17	THR
27	YD	26	LYS
27	YD	33	LEU
27	YD	43	ARG
27	YD	44	ASN
27	YD	61	LEU
27	YD	65	ILE
27	YD	67	PHE
27	YD	71	ASP
27	YD	73	VAL
27	YD	94	LEU
27	YD	98	VAL
27	YD	105	ILE
27	YD	106	ILE
27	YD	131	LEU
27	YD	134	ARG
27	YD	135	PHE
27	YD	155	LEU
27	YD	157	ARG
27	YD	166	GLN
27	YD	173	VAL
27	YD	183	ARG
27	YD	192	THR

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Mol	Chain	Res	Type
27	YD	198	ASN
27	YD	200	ASP
27	YD	215	LEU
27	YD	217	ARG
27	YD	218	ARG
27	YD	226	MET
27	YD	230	ASP
27	YD	237	GLU
27	YD	257	LEU
27	YD	259	THR
27	YD	261	LYS
27	YD	262	ARG
28	YE	2	LYS
28	YE	4	ILE
28	YE	13	ARG
28	YE	16	ARG
28	YE	17	ASP
28	YE	25	VAL
28	YE	26	ILE
28	YE	27	LEU
28	YE	33	VAL
28	YE	36	ARG
28	YE	37	ARG
28	YE	38	THR
28	YE	41	LYS
28	YE	45	THR
28	YE	54	GLN
28	YE	61	ARG
28	YE	62	PRO
28	YE	66	HIS
28	YE	73	GLU
28	YE	75	VAL
28	YE	77	ILE
28	YE	78	LEU
28	YE	79	ARG
28	YE	80	GLU
28	YE	101	ARG
28	YE	113	PHE
28	YE	117	MET
28	YE	119	ARG
28	YE	143	ASN
28	YE	146	THR

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Mol	Chain	Res	Type
28	YE	154	LYS
28	YE	167	VAL
28	YE	179	GLU
28	YE	184	VAL
28	YE	196	VAL
28	YE	200	GLU
28	YE	202	LYS
28	YE	203	LYS
29	YF	7	TYR
29	YF	9	ILE
29	YF	25	PRO
29	YF	32	LEU
29	YF	45	ARG
29	YF	46	ARG
29	YF	65	TRP
29	YF	66	PRO
29	YF	67	GLN
29	YF	70	THR
29	YF	82	ILE
29	YF	106	ARG
29	YF	108	LYS
29	YF	117	ARG
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	164	ARG
29	YF	181	LEU
29	YF	183	VAL
29	YF	206	ILE
30	YG	4	ASP
30	YG	22	ARG
30	YG	26	GLN
30	YG	33	ARG
30	YG	34	LEU
30	YG	35	GLU
30	YG	43	LEU
30	YG	45	GLU
30	YG	63	ILE
30	YG	67	LYS
30	YG	71	THR
30	YG	88	ILE
30	YG	94	LEU

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Mol	Chain	Res	Type
30	YG	96	ARG
30	YG	97	ASP
30	YG	103	LEU
30	YG	115	ARG
30	YG	118	ARG
30	YG	133	LEU
30	YG	147	ASP
30	YG	155	MET
30	YG	156	ASP
30	YG	159	VAL
30	YG	167	GLU
30	YG	174	GLU
31	YH	3	ARG
31	YH	4	ILE
31	YH	9	ILE
31	YH	10	PRO
31	YH	11	VAL
31	YH	16	SER
31	YH	27	LYS
31	YH	32	GLU
31	YH	37	VAL
31	YH	41	MET
31	YH	43	VAL
31	YH	59	ARG
31	YH	64	LEU
31	YH	77	LYS
31	YH	81	GLU
31	YH	85	LYS
31	YH	88	LEU
31	YH	89	ILE
31	YH	105	LEU
31	YH	132	ARG
31	YH	139	GLN
31	YH	143	GLN
31	YH	152	ARG
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	158	HIS
31	YH	169	VAL
32	YI	1	MET
32	YI	2	LYS

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Mol	Chain	Res	Type
32	YI	3	VAL
32	YI	12	LEU
32	YI	27	ARG
32	YI	33	ARG
32	YI	38	LEU
32	YI	56	LYS
32	YI	67	ARG
32	YI	70	GLU
32	YI	72	LEU
32	YI	81	VAL
32	YI	85	GLU
32	YI	92	VAL
32	YI	93	THR
32	YI	96	ASP
32	YI	101	LEU
32	YI	105	HIS
32	YI	110	ASP
32	YI	112	LYS
32	YI	113	ARG
32	YI	118	LYS
32	YI	128	LEU
32	YI	130	TYR
32	YI	131	LYS
32	YI	135	GLU
32	YI	136	VAL
32	YI	140	LEU
32	YI	141	LYS
32	YI	142	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	101	HIS
33	YN	109	LYS

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Mol	Chain	Res	Type
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	17	ARG
34	YO	19	ILE
34	YO	23	ARG
34	YO	31	LYS
34	YO	39	ILE
34	YO	49	ARG
34	YO	53	LYS
34	YO	65	THR
35	YP	5	ASP
35	YP	9	ASN
35	YP	10	PRO
35	YP	16	ARG
35	YP	21	ARG
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	36	LYS
35	YP	38	GLN
35	YP	41	ARG
35	YP	50	ARG
35	YP	55	ARG
35	YP	61	ARG
35	YP	62	LEU
35	YP	64	LYS
35	YP	65	ARG
35	YP	75	ILE
35	YP	81	GLN
35	YP	88	LEU
35	YP	91	PHE
35	YP	99	LEU
35	YP	100	LEU
35	YP	108	LYS
35	YP	144	GLU
35	YP	146	VAL

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Mol	Chain	Res	Type
36	YQ	2	LEU
36	YQ	25	ASP
36	YQ	26	TYR
36	YQ	27	VAL
36	YQ	45	GLN
36	YQ	46	GLN
36	YQ	54	MET
36	YQ	55	VAL
36	YQ	59	ARG
36	YQ	60	ARG
36	YQ	79	LEU
36	YQ	83	MET
36	YQ	89	ASN
36	YQ	90	VAL
36	YQ	91	GLU
36	YQ	130	LYS
36	YQ	135	ASP
36	YQ	139	GLU
37	YR	14	SER
37	YR	31	HIS
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	57	ARG
37	YR	66	VAL
37	YR	67	LEU
37	YR	71	GLN
37	YR	75	LEU
37	YR	76	VAL
37	YR	81	ASP
37	YR	95	THR
37	YR	104	ARG
37	YR	105	ARG
37	YR	107	ASP
37	YR	113	LEU
38	YS	4	LEU
38	YS	12	PHE
38	YS	17	ARG
38	YS	18	ILE
38	YS	20	ARG
38	YS	44	LYS
38	YS	56	LEU

Continued on next page...

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Mol	Chain	Res	Type
38	YS	57	LYS
38	YS	89	ARG
38	YS	101	LEU
38	YS	103	GLU
38	YS	106	ARG
38	YS	111	GLU
39	YT	2	ASN
39	YT	14	TYR
39	YT	22	PHE
39	YT	23	ARG
39	YT	26	ASP
39	YT	27	THR
39	YT	42	ILE
39	YT	51	ARG
39	YT	58	ASN
39	YT	65	LYS
39	YT	73	GLU
39	YT	78	LEU
39	YT	86	ILE
39	YT	87	ASP
39	YT	99	LEU
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG
39	YT	115	ARG
39	YT	128	GLU
39	YT	134	GLU
40	YU	5	LYS
40	YU	9	VAL
40	YU	31	SER
40	YU	52	ARG
40	YU	74	LEU
40	YU	76	TYR
40	YU	79	PHE
40	YU	88	ILE
40	YU	92	ARG
40	YU	98	LEU
40	YU	108	GLU
40	YU	114	LYS
40	YU	117	GLN

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Mol	Chain	Res	Type
41	YV	13	ARG
41	YV	14	VAL
41	YV	18	LEU
41	YV	35	LEU
41	YV	38	LEU
41	YV	39	LEU
41	YV	40	LEU
41	YV	66	ARG
41	YV	75	PHE
41	YV	91	TYR
41	YV	99	ILE
42	YW	11	ARG
42	YW	14	PRO
42	YW	16	LYS
42	YW	18	ARG
42	YW	19	LEU
42	YW	20	VAL
42	YW	63	ASP
42	YW	67	ASP
42	YW	69	LEU
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	107	LEU
42	YW	109	GLU
43	YX	3	THR
43	YX	6	ASP
43	YX	15	GLU
43	YX	27	THR
43	YX	30	VAL
43	YX	55	ASN
43	YX	57	LEU
43	YX	65	ARG
43	YX	70	LEU
43	YX	80	ILE
43	YX	88	LYS
44	YY	7	VAL
44	YY	11	ASP
44	YY	27	VAL
44	YY	45	VAL
44	YY	57	GLN

Continued on next page...

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Mol	Chain	Res	Type
44	YY	64	GLU
44	YY	75	ILE
44	YY	77	PRO
44	YY	79	CYS
44	YY	87	LYS
44	YY	88	LYS
44	YY	89	PHE
44	YY	90	LEU
44	YY	95	LYS
44	YY	97	ARG
45	YZ	2	GLU
45	YZ	8	TYR
45	YZ	20	ARG
45	YZ	39	VAL
45	YZ	41	LEU
45	YZ	52	SER
45	YZ	53	ILE
45	YZ	60	GLU
45	YZ	66	SER
45	YZ	70	LEU
45	YZ	71	VAL
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	82	ARG
45	YZ	87	ASP
45	YZ	91	LEU
45	YZ	93	ASP
45	YZ	94	GLU
45	YZ	122	ARG
45	YZ	123	ASP
45	YZ	136	PHE
45	YZ	139	VAL
45	YZ	140	ASP
45	YZ	141	VAL
45	YZ	144	LEU
45	YZ	150	LEU
45	YZ	151	HIS
45	YZ	156	LYS
45	YZ	163	LEU
45	YZ	181	GLU
45	YZ	182	LYS
46	Y0	10	THR

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Mol	Chain	Res	Type
46	Y0	11	ARG
46	Y0	14	ARG
46	Y0	25	ARG
46	Y0	36	ILE
46	Y0	68	GLU
46	Y0	74	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	40	ARG
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	76	ARG
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	92	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	53	LEU
48	Y2	62	THR
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	10	LYS
49	Y3	17	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS

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Mol	Chain	Res	Type
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	67	TYR
50	Y4	68	ARG
50	Y4	71	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	43	HIS
51	Y5	52	TYR
51	Y5	56	LYS
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	18	ARG
52	Y6	19	ARG
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	46	HIS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	43	THR
54	Y8	15	LYS

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Mol	Chain	Res	Type
54	Y8	16	ILE
54	Y8	30	ARG
54	Y8	35	GLN
54	Y8	39	LYS
54	Y8	43	GLN
54	Y8	44	LYS
54	Y8	47	LYS
54	Y8	48	PHE
54	Y8	49	VAL
54	Y8	52	LYS
54	Y8	53	PRO
54	Y8	62	LEU
54	Y8	63	PRO
54	Y8	65	GLU
55	Y9	1	MET
55	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (107) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	95	GLN
2	QB	135	GLN
2	QB	204	ASN
2	QB	212	GLN
3	QC	181	ASN
5	QE	72	GLN
5	QE	73	ASN
5	QE	78	HIS
5	QE	127	ASN
6	QF	64	GLN
6	QF	100	ASN
7	QG	28	ASN
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
10	QJ	13	HIS
10	QJ	78	ASN
11	QK	117	ASN
12	QL	9	GLN
13	QM	40	ASN
13	QM	62	ASN
13	QM	101	GLN

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Mol	Chain	Res	Type
19	QS	47	HIS
19	QS	65	ASN
20	QT	26	ASN
27	RD	44	ASN
27	RD	143	HIS
27	RD	166	GLN
27	RD	198	ASN
28	RE	48	GLN
31	RH	143	GLN
31	RH	147	ASN
32	RI	104	GLN
33	RN	56	ASN
33	RN	101	HIS
33	RN	131	GLN
34	RO	5	GLN
34	RO	82	ASN
35	RP	81	GLN
35	RP	84	ASN
36	RQ	123	HIS
37	RR	3	HIS
39	RT	55	ASN
39	RT	58	ASN
40	RU	81	HIS
40	RU	94	ASN
41	RV	11	GLN
42	RW	61	ASN
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
46	R0	29	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
52	R6	32	ASN
2	XB	95	GLN
2	XB	135	GLN
2	XB	204	ASN
2	XB	212	GLN
3	XC	181	ASN
5	XE	72	GLN

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Mol	Chain	Res	Type
5	XE	73	ASN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	86	GLN
7	XG	148	ASN
10	XJ	78	ASN
12	XL	9	GLN
13	XM	77	ASN
13	XM	101	GLN
19	XS	47	HIS
19	XS	65	ASN
20	XT	26	ASN
27	YD	44	ASN
27	YD	143	HIS
27	YD	166	GLN
27	YD	198	ASN
28	YE	48	GLN
31	YH	143	GLN
31	YH	147	ASN
33	YN	56	ASN
33	YN	101	HIS
33	YN	131	GLN
34	YO	5	GLN
34	YO	82	ASN
35	YP	81	GLN
35	YP	84	ASN
39	YT	55	ASN
39	YT	58	ASN
40	YU	49	HIS
40	YU	94	ASN
41	YV	11	GLN
42	YW	61	ASN
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN
47	Y1	56	GLN
48	Y2	9	GLN
48	Y2	47	ASN
49	Y3	19	GLN
49	Y3	32	GLN

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Mol	Chain	Res	Type
52	Y6	32	ASN

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1498/1522 (98%)	385 (25%)	49 (3%)
1	XA	1498/1522 (98%)	378 (25%)	60 (4%)
22	QV	76/77 (98%)	30 (39%)	1 (1%)
22	XV	76/77 (98%)	30 (39%)	1 (1%)
23	QX	7/25 (28%)	5 (71%)	1 (14%)
23	XX	6/25 (24%)	3 (50%)	0
24	QY	13/18 (72%)	5 (38%)	1 (7%)
24	XY	13/18 (72%)	5 (38%)	1 (7%)
25	RA	2879/2916 (98%)	835 (29%)	82 (2%)
25	YA	2880/2916 (98%)	865 (30%)	93 (3%)
26	RB	119/122 (97%)	32 (26%)	3 (2%)
26	YB	119/122 (97%)	42 (35%)	2 (1%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9186/9366 (98%)	2615 (28%)	294 (3%)

All (2615) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	7	G
1	QA	9	G
1	QA	10	A
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	73	G
1	QA	76	G
1	QA	79	G
1	QA	80	G
1	QA	91	C

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Mol	Chain	Res	Type
1	QA	95	G
1	QA	101	A
1	QA	108	G
1	QA	111	G
1	QA	115	G
1	QA	116	A
1	QA	121	C
1	QA	122	G
1	QA	129(A)	G
1	QA	130	A
1	QA	142	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	169	C
1	QA	171	A
1	QA	172	A
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	183	G
1	QA	190	G
1	QA	191(A)	G
1	QA	195	A
1	QA	197	A
1	QA	200	G
1	QA	209	U
1	QA	216	G
1	QA	226	G
1	QA	243	A
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	267	C
1	QA	277	C
1	QA	278	G
1	QA	279	A
1	QA	280	C
1	QA	281	G
1	QA	282	A

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Mol	Chain	Res	Type
1	QA	289	G
1	QA	298	A
1	QA	305	G
1	QA	306	G
1	QA	316	G
1	QA	319	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	342	C
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	355	C
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	374	A
1	QA	382	A
1	QA	384	G
1	QA	388	G
1	QA	390	C
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	410	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	417	C
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	428	G

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Mol	Chain	Res	Type
1	QA	429	U
1	QA	430	A
1	QA	438	G
1	QA	439	A
1	QA	440	A
1	QA	442	C
1	QA	451	A
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	468	A
1	QA	482	A
1	QA	483	C
1	QA	484	G
1	QA	485	G
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	513	C
1	QA	518	C
1	QA	525	C
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	535	A
1	QA	547	A
1	QA	554	C
1	QA	558	G
1	QA	559	A
1	QA	560	U
1	QA	561	U
1	QA	562	C
1	QA	567	G
1	QA	568	G
1	QA	572	A
1	QA	573	A

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Mol	Chain	Res	Type
1	QA	576	G
1	QA	579	G
1	QA	588	G
1	QA	595	G
1	QA	596	C
1	QA	607	A
1	QA	614	A
1	QA	615	C
1	QA	620	C
1	QA	624	C
1	QA	630	G
1	QA	631	G
1	QA	635	G
1	QA	646	U
1	QA	652	U
1	QA	653	A
1	QA	665	A
1	QA	673	G
1	QA	674	G
1	QA	675	A
1	QA	679	C
1	QA	685	G
1	QA	687	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	717	C
1	QA	718	G
1	QA	721	G
1	QA	724	G
1	QA	729	A
1	QA	731	G
1	QA	734	G
1	QA	748	C
1	QA	749	C
1	QA	752	G
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	763	G
1	QA	774	G

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Mol	Chain	Res	Type
1	QA	785	G
1	QA	786	G
1	QA	788	U
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	804	U
1	QA	812	C
1	QA	813	U
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	826	C
1	QA	828	A
1	QA	836	G
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	870	U
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	881	G
1	QA	885	G
1	QA	889	A
1	QA	890	G
1	QA	902	G
1	QA	914	A
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	940	C
1	QA	954	G
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A

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Mol	Chain	Res	Type
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	980	C
1	QA	981	U
1	QA	982	U
1	QA	984	C
1	QA	988	G
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	995	C
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1009	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1040	U
1	QA	1053	G
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1067	A
1	QA	1074	G
1	QA	1081	G
1	QA	1094	G
1	QA	1095	U
1	QA	1099	G
1	QA	1101	A
1	QA	1111	A
1	QA	1112	C
1	QA	1113	C

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Mol	Chain	Res	Type
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1161	C
1	QA	1163	C
1	QA	1170	A
1	QA	1171	G
1	QA	1177	G
1	QA	1180	A
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1185	G
1	QA	1187	G
1	QA	1190	G
1	QA	1196	U
1	QA	1197	G
1	QA	1199	U
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1206	G
1	QA	1207	G
1	QA	1212	U
1	QA	1213	A
1	QA	1218	C
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A

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Mol	Chain	Res	Type
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1270	C
1	QA	1272	G
1	QA	1273	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1306	A
1	QA	1314	C
1	QA	1317	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1333	A
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1347	G
1	QA	1348	U
1	QA	1349	A
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1364	U
1	QA	1370	G
1	QA	1388	C

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Mol	Chain	Res	Type
1	QA	1396	A
1	QA	1397	C
1	QA	1401	G
1	QA	1411	C
1	QA	1419	G
1	QA	1426	C
1	QA	1427	U
1	QA	1439	C
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A
1	QA	1447	G
1	QA	1450	U
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1461	G
1	QA	1485	U
1	QA	1487	G
1	QA	1492	A
1	QA	1497	G
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1510	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	QV	3	C
22	QV	4	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	14	A
22	QV	16	C
22	QV	17	C
22	QV	17(A)	U
22	QV	18	G

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Mol	Chain	Res	Type
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	25	C
22	QV	31	G
22	QV	37	A
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	50	U
22	QV	51	C
22	QV	52	G
22	QV	54	U
22	QV	59	A
22	QV	63	G
22	QV	67	C
22	QV	72	A
22	QV	75	C
22	QV	76	A
23	QX	3	G
23	QX	4	C
23	QX	5	C
23	QX	7	U
23	QX	8	A
24	QY	31	G
24	QY	33	U
24	QY	36	G
24	QY	39	C
24	QY	40	G
25	RA	9	U
25	RA	10	G
25	RA	11	G
25	RA	15	G
25	RA	27	G
25	RA	34	C
25	RA	35	G
25	RA	46	C
25	RA	49	A
25	RA	50	U
25	RA	51	G
25	RA	54	G

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Mol	Chain	Res	Type
25	RA	55	G
25	RA	61	G
25	RA	63	U
25	RA	69	C
25	RA	71	A
25	RA	72	U
25	RA	73	A
25	RA	74	A
25	RA	75	G
25	RA	83	G
25	RA	84	A
25	RA	88	G
25	RA	95	G
25	RA	99	U
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	104	U
25	RA	118	A
25	RA	120	U
25	RA	121	G
25	RA	122	G
25	RA	131	G
25	RA	137(A)	G
25	RA	146	G
25	RA	149	A
25	RA	154	G
25	RA	161	U
25	RA	177	G
25	RA	181	A
25	RA	195	A
25	RA	196	A
25	RA	200	U
25	RA	201	C
25	RA	205	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	224	G
25	RA	226	G

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Mol	Chain	Res	Type
25	RA	227	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	233	A
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	249	C
25	RA	252	G
25	RA	265	A
25	RA	266	G
25	RA	269	U
25	RA	270(K)	C
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G
25	RA	270(P)	C
25	RA	270(T)	G
25	RA	270(W)	G
25	RA	271(C)	U
25	RA	271	G
25	RA	273(E)	U
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	278	A
25	RA	279	C
25	RA	283	A
25	RA	299	A
25	RA	300	A
25	RA	305	U
25	RA	306	U
25	RA	311	A
25	RA	316	C
25	RA	317	G
25	RA	323	G
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	333	G

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Mol	Chain	Res	Type
25	RA	334	C
25	RA	335	C
25	RA	338	G
25	RA	342	G
25	RA	346	A
25	RA	347	A
25	RA	350	U
25	RA	352	G
25	RA	354	G
25	RA	360	G
25	RA	363(E)	U
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	385	C
25	RA	386	G
25	RA	395	U
25	RA	396	G
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	413	C
25	RA	416	C
25	RA	428	A
25	RA	442	G
25	RA	444	C
25	RA	448	U
25	RA	454	A
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	470	A
25	RA	477	A
25	RA	481	G
25	RA	483	A
25	RA	493	G
25	RA	494	G
25	RA	498	G
25	RA	503	A
25	RA	504	U
25	RA	505	A

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Mol	Chain	Res	Type
25	RA	509	C
25	RA	513	A
25	RA	518	G
25	RA	527	C
25	RA	528	A
25	RA	529	A
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	549	G
25	RA	553	U
25	RA	556	G
25	RA	563	G
25	RA	567	A
25	RA	568	U
25	RA	571	A
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	588	U
25	RA	595	C
25	RA	598	G
25	RA	599	G
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	609(A)	G
25	RA	614	U
25	RA	615	G
25	RA	617	G
25	RA	621	A
25	RA	624	C
25	RA	627	A
25	RA	629	G
25	RA	631	A
25	RA	637	A
25	RA	638	G
25	RA	645	C

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Mol	Chain	Res	Type
25	RA	646	A
25	RA	647	G
25	RA	651	G
25	RA	652	C
25	RA	654	A
25	RA	654(B)	C
25	RA	654(V)	A
25	RA	657	U
25	RA	664	C
25	RA	668	G
25	RA	669	G
25	RA	676	A
25	RA	686	G
25	RA	690	G
25	RA	696	G
25	RA	698	C
25	RA	702	G
25	RA	704	G
25	RA	705	A
25	RA	714	U
25	RA	717	G
25	RA	722	A
25	RA	728	G
25	RA	730	C
25	RA	747	U
25	RA	751	A
25	RA	752	A
25	RA	753	C
25	RA	758	C
25	RA	765	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	790	C
25	RA	791	C
25	RA	792	G
25	RA	801	G
25	RA	805	G
25	RA	811	U

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Mol	Chain	Res	Type
25	RA	812	C
25	RA	818	G
25	RA	819	A
25	RA	822	U
25	RA	825	C
25	RA	827	U
25	RA	828	U
25	RA	831	G
25	RA	846	C
25	RA	847	U
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	861	A
25	RA	865	C
25	RA	869	G
25	RA	872	A
25	RA	875	G
25	RA	877	U
25	RA	881	G
25	RA	882	G
25	RA	884	C
25	RA	885	C
25	RA	886	C
25	RA	888	C
25	RA	889	C
25	RA	893	C
25	RA	896	A
25	RA	897	C
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	904	C
25	RA	907	U
25	RA	909	A
25	RA	910	A
25	RA	914	C
25	RA	915	C
25	RA	916	G
25	RA	917	A
25	RA	932	G

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Mol	Chain	Res	Type
25	RA	941	A
25	RA	942	G
25	RA	944	G
25	RA	945	A
25	RA	946	G
25	RA	957	A
25	RA	959	A
25	RA	961	C
25	RA	969	U
25	RA	972	G
25	RA	973	A
25	RA	974	G
25	RA	974(A)	C
25	RA	975	G
25	RA	983	A
25	RA	989	G
25	RA	990	A
25	RA	991	C
25	RA	996	A
25	RA	1003	G
25	RA	1005	C
25	RA	1008	C
25	RA	1010	A
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1020	A
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1037	G
25	RA	1038	C
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1049	C
25	RA	1050	A
25	RA	1055	G

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Mol	Chain	Res	Type
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1065	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1069	A
25	RA	1070	A
25	RA	1071	G
25	RA	1076	C
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1090	U
25	RA	1091	G
25	RA	1093	G
25	RA	1095	A
25	RA	1096	A
25	RA	1099	G
25	RA	1104	C
25	RA	1105	U
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1115	G
25	RA	1126	A
25	RA	1128	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1142	U
25	RA	1142(A)	A

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Mol	Chain	Res	Type
25	RA	1143	A
25	RA	1151	G
25	RA	1155	A
25	RA	1169	G
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1180	C
25	RA	1183	G
25	RA	1186	G
25	RA	1195	G
25	RA	1197	G
25	RA	1204	A
25	RA	1205	U
25	RA	1206	G
25	RA	1210	A
25	RA	1211	U
25	RA	1212	G
25	RA	1220	A
25	RA	1238	G
25	RA	1247	A
25	RA	1248	G
25	RA	1249	U
25	RA	1251	C
25	RA	1253	A
25	RA	1255	U
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1273	U
25	RA	1274	A
25	RA	1275	A
25	RA	1287	A
25	RA	1288	U
25	RA	1292	U
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A

Continued on next page...

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Mol	Chain	Res	Type
25	RA	1306	C
25	RA	1308	A
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1316	U
25	RA	1319	G
25	RA	1320	C
25	RA	1321	A
25	RA	1329	U
25	RA	1331	A
25	RA	1332	G
25	RA	1342	A
25	RA	1349	A
25	RA	1351	C
25	RA	1356	G
25	RA	1365	A
25	RA	1368	G
25	RA	1374	G
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1386	C
25	RA	1391	U
25	RA	1393	A
25	RA	1406	U
25	RA	1407	C
25	RA	1408	C
25	RA	1410	G
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1427	A
25	RA	1428	C
25	RA	1429	G
25	RA	1433	U
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1448	G

Continued on next page...

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Mol	Chain	Res	Type
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1479	G
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1486	A
25	RA	1493	C
25	RA	1497	U
25	RA	1502	C
25	RA	1503	U
25	RA	1504	C
25	RA	1506	C
25	RA	1507	A
25	RA	1508	A
25	RA	1510	A
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1526	G
25	RA	1529	A
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1541	U
25	RA	1543	A
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G

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Mol	Chain	Res	Type
25	RA	1568	G
25	RA	1569	A
25	RA	1578	U
25	RA	1579	A
25	RA	1580	A
25	RA	1581	G
25	RA	1582	C
25	RA	1585	C
25	RA	1586	A
25	RA	1587	A
25	RA	1592	C
25	RA	1593	G
25	RA	1595	G
25	RA	1597	A
25	RA	1602	U
25	RA	1608	A
25	RA	1609	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1639	U
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1674	G
25	RA	1681	G
25	RA	1694	C
25	RA	1695	G
25	RA	1699	G
25	RA	1701	A
25	RA	1704	G
25	RA	1725	G
25	RA	1728	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1733	G
25	RA	1741	C
25	RA	1742	C
25	RA	1743	G
25	RA	1749	A
25	RA	1752	C

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Mol	Chain	Res	Type
25	RA	1754	C
25	RA	1756	G
25	RA	1763	G
25	RA	1764	G
25	RA	1766	U
25	RA	1773	A
25	RA	1776	G
25	RA	1779	U
25	RA	1780	A
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1811	G
25	RA	1815	A
25	RA	1816	G
25	RA	1817	G
25	RA	1819	A
25	RA	1820	U
25	RA	1829	A
25	RA	1830	C
25	RA	1835	G
25	RA	1839	G
25	RA	1843	C
25	RA	1845	G
25	RA	1847	A
25	RA	1848	A
25	RA	1850	G
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1882	C
25	RA	1887	C
25	RA	1888	G
25	RA	1889	A
25	RA	1896	G
25	RA	1903	G
25	RA	1906	G
25	RA	1913	A
25	RA	1918	A

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Mol	Chain	Res	Type
25	RA	1927	A
25	RA	1930	G
25	RA	1931	U
25	RA	1934	C
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1941	C
25	RA	1947	C
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1966	A
25	RA	1967	C
25	RA	1968	G
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1981	A
25	RA	1982	C
25	RA	1991	U
25	RA	1992	G
25	RA	1993	U
25	RA	2000	G
25	RA	2004	G
25	RA	2023	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A
25	RA	2039	C
25	RA	2043	C
25	RA	2049	G
25	RA	2055	C
25	RA	2056	G
25	RA	2058	A
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G

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Mol	Chain	Res	Type
25	RA	2076	U
25	RA	2086	U
25	RA	2089	U
25	RA	2093	G
25	RA	2097	C
25	RA	2099	U
25	RA	2100	G
25	RA	2107	C
25	RA	2108	C
25	RA	2111	C
25	RA	2113	U
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2119	A
25	RA	2120	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2129	C
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2135	A
25	RA	2136	C
25	RA	2146	C
25	RA	2148	G
25	RA	2157	G
25	RA	2158	A
25	RA	2161	C
25	RA	2166	G
25	RA	2167	U
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2198	A
25	RA	2199	A
25	RA	2205	C

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Mol	Chain	Res	Type
25	RA	2208	U
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2215	G
25	RA	2225	A
25	RA	2226	C
25	RA	2238	G
25	RA	2239	G
25	RA	2248	C
25	RA	2251	G
25	RA	2257	U
25	RA	2268	A
25	RA	2273	A
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C
25	RA	2286	A
25	RA	2287	A
25	RA	2288	A
25	RA	2294	C
25	RA	2299	G
25	RA	2303	G
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2310	A
25	RA	2311	A
25	RA	2319	G
25	RA	2320	A
25	RA	2322	A
25	RA	2325	G
25	RA	2326	C
25	RA	2328	A
25	RA	2334	G
25	RA	2336	A
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2362	G

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Mol	Chain	Res	Type
25	RA	2372	G
25	RA	2376	A
25	RA	2382	G
25	RA	2383	G
25	RA	2384	G
25	RA	2385	C
25	RA	2388	A
25	RA	2392	A
25	RA	2394	C
25	RA	2397	G
25	RA	2399	G
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2426	A
25	RA	2429	G
25	RA	2430	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2445	G
25	RA	2446	G
25	RA	2448	A
25	RA	2450	A
25	RA	2452	C
25	RA	2468	G
25	RA	2469	A
25	RA	2474	C
25	RA	2475	C
25	RA	2476	A
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2494	G
25	RA	2497	A
25	RA	2498	C
25	RA	2502	G
25	RA	2505	G

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Mol	Chain	Res	Type
25	RA	2506	U
25	RA	2507	C
25	RA	2519	U
25	RA	2525	G
25	RA	2529	G
25	RA	2538	C
25	RA	2539	C
25	RA	2542	A
25	RA	2543	G
25	RA	2544	G
25	RA	2551	C
25	RA	2554	U
25	RA	2557	G
25	RA	2559	C
25	RA	2563	U
25	RA	2567	G
25	RA	2568	C
25	RA	2569	G
25	RA	2572	A
25	RA	2573	C
25	RA	2574	G
25	RA	2582	G
25	RA	2586	C
25	RA	2591	C
25	RA	2596	U
25	RA	2602	A
25	RA	2605	U
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2621	A
25	RA	2623	G
25	RA	2629	A
25	RA	2630	G
25	RA	2636	U
25	RA	2638	G
25	RA	2646	C
25	RA	2655	G
25	RA	2656	U
25	RA	2665	A

Continued on next page...

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Mol	Chain	Res	Type
25	RA	2666	C
25	RA	2667	C
25	RA	2669	G
25	RA	2673	G
25	RA	2675	A
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2693	A
25	RA	2698	U
25	RA	2702	U
25	RA	2703	C
25	RA	2707	G
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2744	G
25	RA	2748	A
25	RA	2750	A
25	RA	2751	G
25	RA	2752	C
25	RA	2757	A
25	RA	2761	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2770	G
25	RA	2771	C
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A

Continued on next page...

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Mol	Chain	Res	Type
25	RA	2812	G
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2825	C
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2838	G
25	RA	2839	G
25	RA	2844	G
25	RA	2846	G
25	RA	2849	U
25	RA	2853	C
25	RA	2866	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2878	U
25	RA	2880	C
25	RA	2886	G
25	RA	2891	G
25	RA	2892	A
25	RA	2893	G
25	RA	2894	G
26	RB	8	U
26	RB	11	C
26	RB	12	C
26	RB	13	A
26	RB	15	A
26	RB	19	G
26	RB	21	G
26	RB	24	G
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	28	C
26	RB	32	C
26	RB	33	G
26	RB	41	U
26	RB	42	C
26	RB	44	G

Continued on next page...

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Mol	Chain	Res	Type
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	59	A
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	82	G
26	RB	89	G
26	RB	90	C
26	RB	96	G
26	RB	101	A
26	RB	109	G
26	RB	112	G
1	XA	6	G
1	XA	19	C
1	XA	22	G
1	XA	32	A
1	XA	39	G
1	XA	48	C
1	XA	51	A
1	XA	54	C
1	XA	60	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	112	G
1	XA	116	A
1	XA	120	A
1	XA	121	C

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Mol	Chain	Res	Type
1	XA	122	G
1	XA	129(A)	G
1	XA	130	A
1	XA	138	G
1	XA	144	G
1	XA	147	G
1	XA	150	C
1	XA	163	C
1	XA	172	A
1	XA	173	U
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	191(A)	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	218	C
1	XA	222	U
1	XA	226	G
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	250	A
1	XA	251	G
1	XA	267	C
1	XA	270	A
1	XA	280	C
1	XA	281	G
1	XA	282	A
1	XA	289	G
1	XA	306	G
1	XA	310	G
1	XA	315	A
1	XA	316	G
1	XA	318	G
1	XA	321	A
1	XA	328	C
1	XA	329	A

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Mol	Chain	Res	Type
1	XA	332	G
1	XA	342	C
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	361	G
1	XA	367	U
1	XA	373	A
1	XA	375	U
1	XA	384	G
1	XA	388	G
1	XA	389	A
1	XA	390	C
1	XA	397	A
1	XA	406	G
1	XA	410	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	421	U
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	435	C
1	XA	440	A
1	XA	442	C
1	XA	452	A
1	XA	466	C
1	XA	467	G
1	XA	475	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	487	A

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Mol	Chain	Res	Type
1	XA	496	A
1	XA	497	U
1	XA	500	G
1	XA	505	G
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	513	C
1	XA	518	C
1	XA	527	G
1	XA	530	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	536	C
1	XA	539	A
1	XA	542	G
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	562	C
1	XA	563	A
1	XA	564	C
1	XA	565	U
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	581	G
1	XA	582	U
1	XA	595	G
1	XA	596	C
1	XA	614	A
1	XA	616	G
1	XA	618	C
1	XA	630	G
1	XA	631	G
1	XA	633	G
1	XA	652	U

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Mol	Chain	Res	Type
1	XA	653	A
1	XA	659	U
1	XA	665	A
1	XA	672	U
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	704	A
1	XA	718	G
1	XA	728	A
1	XA	731	G
1	XA	742	G
1	XA	748	C
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	764	C
1	XA	774	G
1	XA	775	G
1	XA	777	A
1	XA	786	G
1	XA	787	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	796	C
1	XA	800	G
1	XA	801	U
1	XA	810	C
1	XA	812	C
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	836	G
1	XA	841	U

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Mol	Chain	Res	Type
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	870	U
1	XA	871	U
1	XA	872	A
1	XA	873	A
1	XA	875	C
1	XA	885	G
1	XA	902	G
1	XA	914	A
1	XA	917	G
1	XA	920	U
1	XA	922	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	942	G
1	XA	945	G
1	XA	950	U
1	XA	954	G
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	967	C
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	981	U
1	XA	982	U
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	995	C
1	XA	1001	G
1	XA	1004	A

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Mol	Chain	Res	Type
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1021	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	1047	G
1	XA	1053	G
1	XA	1054	C
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1074	G
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1096	C
1	XA	1101	A
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1169	A
1	XA	1171	G

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Mol	Chain	Res	Type
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1186	G
1	XA	1189	C
1	XA	1190	G
1	XA	1193	G
1	XA	1194	U
1	XA	1196	U
1	XA	1198	G
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1225	A
1	XA	1236	A
1	XA	1237	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1264	C
1	XA	1270	C
1	XA	1272	G
1	XA	1273	G
1	XA	1277	C
1	XA	1279	A
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1290	G
1	XA	1296	C
1	XA	1298	C
1	XA	1299	A

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Mol	Chain	Res	Type
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1317	C
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1324	A
1	XA	1331	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1338	G
1	XA	1347	G
1	XA	1348	U
1	XA	1353	G
1	XA	1355	G
1	XA	1356	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1368	G
1	XA	1370	G
1	XA	1372	U
1	XA	1381	U
1	XA	1397	C
1	XA	1398	A
1	XA	1399	C
1	XA	1401	G
1	XA	1419	G
1	XA	1429	C
1	XA	1442	G
1	XA	1443	G
1	XA	1446	A
1	XA	1447	G
1	XA	1450	U
1	XA	1452	C
1	XA	1453	G

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Mol	Chain	Res	Type
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1494	G
1	XA	1497	G
1	XA	1499	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1519	A
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	3	C
22	XV	4	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	14	A
22	XV	16	C
22	XV	17	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	22	G
22	XV	25	C
22	XV	31	G
22	XV	37	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	50	U
22	XV	51	C
22	XV	52	G
22	XV	54	U
22	XV	59	A
22	XV	63	G
22	XV	67	C

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Mol	Chain	Res	Type
22	XV	72	A
22	XV	75	C
22	XV	76	A
23	XX	3	G
23	XX	4	C
23	XX	5	C
24	XY	31	G
24	XY	33	U
24	XY	36	G
24	XY	39	C
24	XY	40	G
25	YA	9	U
25	YA	14	A
25	YA	15	G
25	YA	26	G
25	YA	34	C
25	YA	35	G
25	YA	40	C
25	YA	46	C
25	YA	50	U
25	YA	51	G
25	YA	55	G
25	YA	61	G
25	YA	63	U
25	YA	71	A
25	YA	72	U
25	YA	73	A
25	YA	74	A
25	YA	75	G
25	YA	77	C
25	YA	79	G
25	YA	84	A
25	YA	97	C
25	YA	99	U
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	106	C
25	YA	110	G
25	YA	113	G
25	YA	114	U
25	YA	117	G

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Mol	Chain	Res	Type
25	YA	118	A
25	YA	120	U
25	YA	125	G
25	YA	131	G
25	YA	141(A)	C
25	YA	149	A
25	YA	155	C
25	YA	161	U
25	YA	162	U
25	YA	173	G
25	YA	177	G
25	YA	178	G
25	YA	181	A
25	YA	188	G
25	YA	196	A
25	YA	199	A
25	YA	202	U
25	YA	204	A
25	YA	206	U
25	YA	213	A
25	YA	214	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	224	G
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	233	A
25	YA	241	A
25	YA	242	G
25	YA	243	U
25	YA	245	G
25	YA	248	G
25	YA	249	C
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	269	U
25	YA	270(L)	U

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Mol	Chain	Res	Type
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(O)	U
25	YA	270(P)	C
25	YA	270(W)	G
25	YA	271(A)	C
25	YA	271(B)	G
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	275	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	284	U
25	YA	285	C
25	YA	287	C
25	YA	288	C
25	YA	294	A
25	YA	299	A
25	YA	305	U
25	YA	311	A
25	YA	316	C
25	YA	322	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	331	A
25	YA	332	A
25	YA	334	C
25	YA	338	G
25	YA	342	G
25	YA	343	C
25	YA	345	A
25	YA	349	G
25	YA	352	G
25	YA	353	G
25	YA	363(E)	U
25	YA	364	C
25	YA	365	C
25	YA	366	C

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Mol	Chain	Res	Type
25	YA	371	A
25	YA	372	G
25	YA	373	U
25	YA	374	A
25	YA	383	U
25	YA	386	G
25	YA	387	U
25	YA	388	G
25	YA	395	U
25	YA	396	G
25	YA	405	U
25	YA	406	G
25	YA	411	G
25	YA	426	C
25	YA	428	A
25	YA	441	U
25	YA	444	C
25	YA	447	A
25	YA	448	U
25	YA	454	A
25	YA	457	A
25	YA	470	A
25	YA	473	G
25	YA	478	A
25	YA	479	A
25	YA	480	A
25	YA	481	G
25	YA	483	A
25	YA	504	U
25	YA	505	A
25	YA	508	G
25	YA	509	C
25	YA	510	C
25	YA	518	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	536	A
25	YA	537	C
25	YA	539	G
25	YA	540	G
25	YA	546	C

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Mol	Chain	Res	Type
25	YA	547	A
25	YA	549	G
25	YA	556	G
25	YA	558	G
25	YA	562	U
25	YA	563	G
25	YA	571	A
25	YA	572	A
25	YA	573	G
25	YA	574	C
25	YA	575	A
25	YA	584	C
25	YA	586	A
25	YA	587	C
25	YA	588	U
25	YA	603	A
25	YA	607	U
25	YA	609(A)	G
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	618	G
25	YA	618(A)	C
25	YA	620	G
25	YA	621	A
25	YA	622	G
25	YA	624	C
25	YA	626	U
25	YA	627	A
25	YA	629	G
25	YA	630	G
25	YA	631	A
25	YA	634	C
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C

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Mol	Chain	Res	Type
25	YA	654(T)	C
25	YA	654(V)	A
25	YA	657	U
25	YA	662	G
25	YA	664	C
25	YA	668	G
25	YA	669	G
25	YA	670	A
25	YA	682	G
25	YA	686	G
25	YA	695	G
25	YA	702	G
25	YA	705	A
25	YA	715	G
25	YA	717	G
25	YA	722	A
25	YA	724	U
25	YA	730	C
25	YA	740	U
25	YA	741	G
25	YA	745	G
25	YA	747	U
25	YA	752	A
25	YA	753	C
25	YA	765	G
25	YA	771	G
25	YA	773	U
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	792	G
25	YA	794	G
25	YA	797	C
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	825	C
25	YA	827	U
25	YA	828	U
25	YA	831	G

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Mol	Chain	Res	Type
25	YA	836	G
25	YA	845	G
25	YA	846	C
25	YA	847	U
25	YA	853	G
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	871	U
25	YA	872	A
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	896	A
25	YA	897	C
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	905	U
25	YA	907	U
25	YA	910	A
25	YA	916	G
25	YA	917	A
25	YA	920	G
25	YA	928	G
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	948	G
25	YA	959	A
25	YA	961	C
25	YA	973	A
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G

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Mol	Chain	Res	Type
25	YA	978	G
25	YA	980	A
25	YA	983	A
25	YA	989	G
25	YA	990	A
25	YA	996	A
25	YA	997	G
25	YA	1003	G
25	YA	1004	C
25	YA	1005	C
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1020	A
25	YA	1022	G
25	YA	1023	U
25	YA	1024	G
25	YA	1025	G
25	YA	1026	U
25	YA	1027	A
25	YA	1033	U
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1050	A
25	YA	1054	A
25	YA	1055	G
25	YA	1057	A
25	YA	1059	G
25	YA	1060	U
25	YA	1061	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1069	A
25	YA	1070	A
25	YA	1071	G
25	YA	1076	C
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1080	C

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Mol	Chain	Res	Type
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1087	G
25	YA	1088	A
25	YA	1090	U
25	YA	1093	G
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1099	G
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1112	G
25	YA	1126	A
25	YA	1127	A
25	YA	1128	A
25	YA	1129	A
25	YA	1130	U
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U
25	YA	1142(A)	A
25	YA	1143	A
25	YA	1148	A
25	YA	1151	G
25	YA	1160	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1178	C
25	YA	1179	C
25	YA	1180	C
25	YA	1195	G
25	YA	1204	A

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Mol	Chain	Res	Type
25	YA	1205	U
25	YA	1210	A
25	YA	1211	U
25	YA	1214	A
25	YA	1218	C
25	YA	1219	G
25	YA	1220	A
25	YA	1221	C
25	YA	1225	C
25	YA	1228	G
25	YA	1234	U
25	YA	1236	G
25	YA	1238	G
25	YA	1242	A
25	YA	1244	G
25	YA	1246	A
25	YA	1247	A
25	YA	1248	G
25	YA	1250	G
25	YA	1253	A
25	YA	1256	G
25	YA	1257	C
25	YA	1259	G
25	YA	1264	G
25	YA	1265	A
25	YA	1267	U
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1275	A
25	YA	1281	G
25	YA	1289	C
25	YA	1299	G
25	YA	1300	U
25	YA	1301	A
25	YA	1302	A
25	YA	1305	C
25	YA	1309	G
25	YA	1311	G
25	YA	1312	U
25	YA	1313	U
25	YA	1316	U

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Mol	Chain	Res	Type
25	YA	1317	A
25	YA	1318	C
25	YA	1319	G
25	YA	1321	A
25	YA	1329	U
25	YA	1338	G
25	YA	1342	A
25	YA	1348	G
25	YA	1349	A
25	YA	1358	G
25	YA	1365	A
25	YA	1368	G
25	YA	1379	A
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1388	G
25	YA	1390	U
25	YA	1391	U
25	YA	1393	A
25	YA	1395	A
25	YA	1396	U
25	YA	1398	C
25	YA	1402	C
25	YA	1403	C
25	YA	1407	C
25	YA	1408	C
25	YA	1411	C
25	YA	1412	A
25	YA	1415	U
25	YA	1416	G
25	YA	1417	C
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1429	G
25	YA	1433	U
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1447	G

Continued on next page...

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Mol	Chain	Res	Type
25	YA	1448	G
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1451	C
25	YA	1455	G
25	YA	1458	C
25	YA	1459	G
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1477	A
25	YA	1480	G
25	YA	1482	U
25	YA	1483	G
25	YA	1484	G
25	YA	1485	G
25	YA	1490	A
25	YA	1493	C
25	YA	1494	A
25	YA	1495	A
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1513	C
25	YA	1514	U
25	YA	1522	G
25	YA	1527	G
25	YA	1533	C
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1546	C
25	YA	1547	C

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Mol	Chain	Res	Type
25	YA	1549	C
25	YA	1558	A
25	YA	1559	G
25	YA	1569	A
25	YA	1570	A
25	YA	1578	U
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1587	A
25	YA	1589	C
25	YA	1590	U
25	YA	1592	C
25	YA	1595	G
25	YA	1602	U
25	YA	1606	G
25	YA	1608	A
25	YA	1609	A
25	YA	1612	C
25	YA	1613	G
25	YA	1617	C
25	YA	1618	A
25	YA	1626	G
25	YA	1630(A)	C
25	YA	1640	C
25	YA	1646	C
25	YA	1648	C
25	YA	1654	A
25	YA	1660	C
25	YA	1667	G
25	YA	1669	A
25	YA	1674	G
25	YA	1678	G
25	YA	1681	G
25	YA	1682	G
25	YA	1685	C
25	YA	1686	C
25	YA	1695	G
25	YA	1698	A
25	YA	1699	G
25	YA	1700	A

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Mol	Chain	Res	Type
25	YA	1701	A
25	YA	1718	G
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1730	U
25	YA	1731	G
25	YA	1732	A
25	YA	1733	G
25	YA	1734	C
25	YA	1742	C
25	YA	1750	G
25	YA	1754	C
25	YA	1755	A
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1772	G
25	YA	1773	A
25	YA	1779	U
25	YA	1780	A
25	YA	1781	C
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C
25	YA	1801	G
25	YA	1815	A
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1834	U
25	YA	1835	G
25	YA	1839	G
25	YA	1847	A
25	YA	1848	A
25	YA	1850	G
25	YA	1851	U
25	YA	1858	G
25	YA	1860	G
25	YA	1864	U

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Mol	Chain	Res	Type
25	YA	1869	G
25	YA	1871	A
25	YA	1872	A
25	YA	1878	G
25	YA	1882	C
25	YA	1888	G
25	YA	1889	A
25	YA	1896	G
25	YA	1900	A
25	YA	1903	G
25	YA	1906	G
25	YA	1913	A
25	YA	1914	C
25	YA	1923	U
25	YA	1926	U
25	YA	1930	G
25	YA	1931	U
25	YA	1934	C
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A
25	YA	1939	U
25	YA	1940	U
25	YA	1943	U
25	YA	1944	U
25	YA	1955	U
25	YA	1956	U
25	YA	1960	A
25	YA	1963	U
25	YA	1964	G
25	YA	1967	C
25	YA	1968	G
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1981	A
25	YA	1982	C
25	YA	1991	U
25	YA	1993	U
25	YA	2010	G
25	YA	2013	A

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Mol	Chain	Res	Type
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2063	C
25	YA	2069	G
25	YA	2071	A
25	YA	2078	C
25	YA	2092	U
25	YA	2093	G
25	YA	2096	U
25	YA	2100	G
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
25	YA	2119	A
25	YA	2120	G
25	YA	2126	A
25	YA	2127	G
25	YA	2128	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2136	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2167	U
25	YA	2168	G

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Mol	Chain	Res	Type
25	YA	2169	A
25	YA	2171	A
25	YA	2173	A
25	YA	2176	A
25	YA	2178	C
25	YA	2190	G
25	YA	2191	G
25	YA	2192	G
25	YA	2198	A
25	YA	2199	A
25	YA	2209	C
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A
25	YA	2228	G
25	YA	2234	G
25	YA	2238	G
25	YA	2239	G
25	YA	2242	G
25	YA	2243	U
25	YA	2251	G
25	YA	2264	C
25	YA	2273	A
25	YA	2274	A
25	YA	2275	C
25	YA	2278	A
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2294	C
25	YA	2298	A
25	YA	2299	G
25	YA	2307	G
25	YA	2308	G
25	YA	2310	A
25	YA	2311	A
25	YA	2315	G
25	YA	2319	G
25	YA	2320	A

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Mol	Chain	Res	Type
25	YA	2324	C
25	YA	2325	G
25	YA	2334	G
25	YA	2335	A
25	YA	2336	A
25	YA	2340	G
25	YA	2342	C
25	YA	2343	C
25	YA	2345	G
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2352	A
25	YA	2355	C
25	YA	2376	A
25	YA	2379	G
25	YA	2382	G
25	YA	2383	G
25	YA	2385	C
25	YA	2386	C
25	YA	2387	U
25	YA	2389	G
25	YA	2390	U
25	YA	2392	A
25	YA	2396	G
25	YA	2400	G
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2410	G
25	YA	2413	G
25	YA	2421	G
25	YA	2422	A
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2426	A
25	YA	2428	G
25	YA	2429	G
25	YA	2430	A
25	YA	2432	A
25	YA	2434	A

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Mol	Chain	Res	Type
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2446	G
25	YA	2448	A
25	YA	2450	A
25	YA	2455	G
25	YA	2460	U
25	YA	2464	C
25	YA	2468	G
25	YA	2469	A
25	YA	2475	C
25	YA	2476	A
25	YA	2477	C
25	YA	2480	C
25	YA	2482	G
25	YA	2494	G
25	YA	2499	C
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C
25	YA	2519	U
25	YA	2520	C
25	YA	2529	G
25	YA	2542	A
25	YA	2543	G
25	YA	2551	C
25	YA	2554	U
25	YA	2559	C
25	YA	2566	A
25	YA	2567	G
25	YA	2573	C
25	YA	2574	G
25	YA	2582	G
25	YA	2586	C
25	YA	2590	A
25	YA	2599	G
25	YA	2601	C
25	YA	2602	A
25	YA	2609	U

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Mol	Chain	Res	Type
25	YA	2611	U
25	YA	2612	C
25	YA	2621	A
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2633	G
25	YA	2645	G
25	YA	2655	G
25	YA	2656	U
25	YA	2657	A
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2675	A
25	YA	2682	U
25	YA	2683	C
25	YA	2689	U
25	YA	2690	C
25	YA	2693	A
25	YA	2701	C
25	YA	2702	U
25	YA	2703	C
25	YA	2707	G
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2720	U
25	YA	2724	C
25	YA	2726	U
25	YA	2733	A
25	YA	2734	A
25	YA	2739	U
25	YA	2741	A
25	YA	2744	G
25	YA	2749	A
25	YA	2750	A
25	YA	2752	C
25	YA	2755	C
25	YA	2757	A
25	YA	2758	A

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Mol	Chain	Res	Type
25	YA	2759	G
25	YA	2761	G
25	YA	2762	G
25	YA	2765	A
25	YA	2766	G
25	YA	2770	G
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2789	C
25	YA	2790	A
25	YA	2791	C
25	YA	2794	C
25	YA	2797	U
25	YA	2807	G
25	YA	2808	U
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2830	G
25	YA	2831	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2846	G
25	YA	2849	U
25	YA	2865	U
25	YA	2866	U
25	YA	2867	G
25	YA	2868	A
25	YA	2871	C
25	YA	2872	G
25	YA	2891	G
25	YA	2892	A
25	YA	2894	G
25	YA	2897	U
26	YB	2	C
26	YB	7	G
26	YB	8	U
26	YB	10	C
26	YB	12	C
26	YB	15	A

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Mol	Chain	Res	Type
26	YB	16	G
26	YB	19	G
26	YB	21	G
26	YB	22	U
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	32	C
26	YB	34	U
26	YB	35	U
26	YB	39	A
26	YB	41	U
26	YB	42	C
26	YB	43	C
26	YB	44	G
26	YB	45	A
26	YB	47	C
26	YB	52	A
26	YB	53	A
26	YB	56	G
26	YB	64	C
26	YB	67	G
26	YB	72	G
26	YB	73	A
26	YB	75	G
26	YB	82	G
26	YB	87	G
26	YB	88	C
26	YB	89	G
26	YB	90	C
26	YB	96	G
26	YB	101	A
26	YB	105	G
26	YB	106	G
26	YB	109	G
26	YB	115	G

All (294) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	31	G
1	QA	115	G

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Mol	Chain	Res	Type
1	QA	173	U
1	QA	181	G
1	QA	190	G
1	QA	243	A
1	QA	250	A
1	QA	251	G
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	429	U
1	QA	481	G
1	QA	484	G
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	884	U
1	QA	913	A
1	QA	934	C
1	QA	960	U
1	QA	971	G
1	QA	972	C
1	QA	992	U
1	QA	1025	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1201	A
1	QA	1280	A
1	QA	1285	A
1	QA	1297	C
1	QA	1298	C
1	QA	1305	G
1	QA	1336	C
1	QA	1346	A

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Mol	Chain	Res	Type
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	QV	53	G
23	QX	6	C
24	QY	39	C
25	RA	74	A
25	RA	83	G
25	RA	99	U
25	RA	102	G
25	RA	196	A
25	RA	221	A
25	RA	222	A
25	RA	227	A
25	RA	229	A
25	RA	242	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	277	C
25	RA	345	A
25	RA	370	G
25	RA	372	G
25	RA	503	A
25	RA	508	G
25	RA	512	G
25	RA	562	U
25	RA	587	C
25	RA	620	G
25	RA	627	A
25	RA	637	A
25	RA	704	G
25	RA	746	A
25	RA	752	A
25	RA	762	U
25	RA	774	A
25	RA	846	C
25	RA	856	C
25	RA	859	G
25	RA	974(A)	C
25	RA	1022	G

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Mol	Chain	Res	Type
25	RA	1026	U
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1130	U
25	RA	1141	U
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1220	A
25	RA	1247	A
25	RA	1265	A
25	RA	1301	A
25	RA	1312	U
25	RA	1405	U
25	RA	1427	A
25	RA	1460	A
25	RA	1558	A
25	RA	1608	A
25	RA	1653	G
25	RA	1694	C
25	RA	1698	A
25	RA	1799	G
25	RA	1801	G
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1992	G
25	RA	2031	A
25	RA	2060	A
25	RA	2126	A
25	RA	2238	G
25	RA	2282	G
25	RA	2311	A
25	RA	2335	A
25	RA	2405	G
25	RA	2439	A
25	RA	2481	G
25	RA	2506	U
25	RA	2518	A
25	RA	2581	G
25	RA	2610	C

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Mol	Chain	Res	Type
25	RA	2689	U
25	RA	2712	U
25	RA	2776	A
25	RA	2832	U
25	RA	2848	G
25	RA	2867	G
26	RB	24	G
26	RB	66	A
26	RB	108	C
1	XA	31	G
1	XA	60	A
1	XA	64	G
1	XA	78	G
1	XA	89	U
1	XA	115	G
1	XA	181	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	281	G
1	XA	328	C
1	XA	345	C
1	XA	372	C
1	XA	388	G
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	530	G
1	XA	531	U
1	XA	532	A
1	XA	560	U
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	752	G
1	XA	753	A

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Mol	Chain	Res	Type
1	XA	793	U
1	XA	812	C
1	XA	815	A
1	XA	819	A
1	XA	913	A
1	XA	934	C
1	XA	960	U
1	XA	974	A
1	XA	992	U
1	XA	1027	C
1	XA	1054	C
1	XA	1065	U
1	XA	1094	G
1	XA	1182	G
1	XA	1200	C
1	XA	1201	A
1	XA	1279	A
1	XA	1285	A
1	XA	1297	C
1	XA	1301	U
1	XA	1305	G
1	XA	1336	C
1	XA	1347	G
1	XA	1364	U
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A
22	XV	53	G
24	XY	39	C
25	YA	74	A
25	YA	83	G
25	YA	99	U
25	YA	102	G
25	YA	196	A
25	YA	205	G
25	YA	221	A
25	YA	222	A
25	YA	226	G
25	YA	227	A
25	YA	229	A
25	YA	242	G
25	YA	271(B)	G

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Mol	Chain	Res	Type
25	YA	278	A
25	YA	332	A
25	YA	372	G
25	YA	404	C
25	YA	503	A
25	YA	562	U
25	YA	574	C
25	YA	587	C
25	YA	620	G
25	YA	637	A
25	YA	645	C
25	YA	653	A
25	YA	669	G
25	YA	704	G
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	858	U
25	YA	859	G
25	YA	961	C
25	YA	973	A
25	YA	974	G
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1128	A
25	YA	1130	U
25	YA	1175	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A
25	YA	1220	A
25	YA	1379	A
25	YA	1416	G
25	YA	1460	A
25	YA	1558	A
25	YA	1608	A

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Mol	Chain	Res	Type
25	YA	1653	G
25	YA	1667	G
25	YA	1694	C
25	YA	1698	A
25	YA	1799	G
25	YA	1819	A
25	YA	1899	G
25	YA	1929	G
25	YA	1930	G
25	YA	1943	U
25	YA	1955	U
25	YA	1992	G
25	YA	2035	G
25	YA	2060	A
25	YA	2092	U
25	YA	2126	A
25	YA	2211	G
25	YA	2238	G
25	YA	2318	G
25	YA	2335	A
25	YA	2351	G
25	YA	2405	G
25	YA	2439	A
25	YA	2481	G
25	YA	2506	U
25	YA	2518	A
25	YA	2566	A
25	YA	2610	C
25	YA	2655	G
25	YA	2681	C
25	YA	2689	U
25	YA	2712	U
25	YA	2751	G
25	YA	2756	U
25	YA	2776	A
25	YA	2832	U
25	YA	2867	G
25	YA	2873	A
26	YB	24	G
26	YB	66	A

5.4 Non-standard residues in protein, DNA, RNA chains (i)

4 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	1MG	QY	37	24	18,26,27	2.28	2 (11%)	19,39,42	1.55	3 (15%)
56	PPU	Z8	76	56,25	32,40,41	2.54	6 (18%)	33,57,60	2.15	5 (15%)
24	1MG	XY	37	24	18,26,27	2.29	2 (11%)	19,39,42	1.55	2 (10%)
56	PPU	Z6	76	56,25	32,40,41	2.55	5 (15%)	33,57,60	2.16	5 (15%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
24	1MG	QY	37	24	-	0/3/25/26	0/3/3/3
56	PPU	Z8	76	56,25	-	2/21/43/44	0/4/4/4
24	1MG	XY	37	24	-	0/3/25/26	0/3/3/3
56	PPU	Z6	76	56,25	-	2/21/43/44	0/4/4/4

All (15) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	O-C	9.25	1.41	1.23
56	Z8	76	PPU	O-C	9.21	1.41	1.23
24	XY	37	1MG	C2-N2	7.86	1.48	1.34
24	QY	37	1MG	C2-N2	7.81	1.48	1.34
56	Z6	76	PPU	C9-N6	-5.88	1.32	1.45
56	Z8	76	PPU	C9-N6	-5.87	1.32	1.45
56	Z6	76	PPU	C-N3'	5.78	1.46	1.34
56	Z8	76	PPU	C-N3'	5.67	1.46	1.34
56	Z8	76	PPU	C10-N6	-5.62	1.32	1.45
56	Z6	76	PPU	C10-N6	-5.62	1.32	1.45
24	XY	37	1MG	C4-N3	4.92	1.49	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	QY	37	1MG	C4-N3	4.91	1.49	1.37
56	Z6	76	PPU	O4'-C1'	2.75	1.44	1.41
56	Z8	76	PPU	O4'-C1'	2.73	1.44	1.41
56	Z8	76	PPU	C4-N3	-2.11	1.32	1.35

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C3'-N3'-C	-8.65	110.17	123.21
56	Z8	76	PPU	C3'-N3'-C	-8.63	110.20	123.21
56	Z8	76	PPU	N3-C2-N1	-4.67	121.38	128.68
56	Z6	76	PPU	N3-C2-N1	-4.66	121.39	128.68
24	QY	37	1MG	C8-N7-C5	4.16	110.91	102.99
24	XY	37	1MG	C8-N7-C5	4.15	110.90	102.99
56	Z6	76	PPU	CA-C-N3'	4.02	121.73	116.15
56	Z8	76	PPU	CA-C-N3'	3.98	121.68	116.15
24	XY	37	1MG	C2-N1-C6	3.76	124.00	120.95
24	QY	37	1MG	C2-N1-C6	3.71	123.97	120.95
56	Z6	76	PPU	CM-OC-CZ	-3.40	110.14	117.51
56	Z8	76	PPU	CM-OC-CZ	-3.36	110.22	117.51
56	Z6	76	PPU	C4-C5-N7	-3.29	105.97	109.40
56	Z8	76	PPU	C4-C5-N7	-3.25	106.01	109.40
24	QY	37	1MG	C5-C6-N1	2.05	116.98	113.90

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	Z6	76	PPU	O-C-CA-N
56	Z8	76	PPU	O-C-CA-N
56	Z6	76	PPU	N3'-C-CA-N
56	Z8	76	PPU	N3'-C-CA-N

There are no ring outliers.

4 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
24	QY	37	1MG	1	0
56	Z8	76	PPU	10	0
24	XY	37	1MG	1	0
56	Z6	76	PPU	7	0

5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 681 ligands modelled in this entry, 680 are monoatomic - leaving 1 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
59	AMP	XX	101	-	18,24,25	0.70	0	18,35,38	1.45	2 (11%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	AMP	XX	101	-	-	1/3/25/26	0/3/3/3

There are no bond length outliers.

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	XX	101	AMP	C5-C6-N6	4.34	126.94	120.35
59	XX	101	AMP	C1'-N9-C4	3.22	132.29	126.64

There are no chirality outliers.

All (1) torsion outliers are listed below:

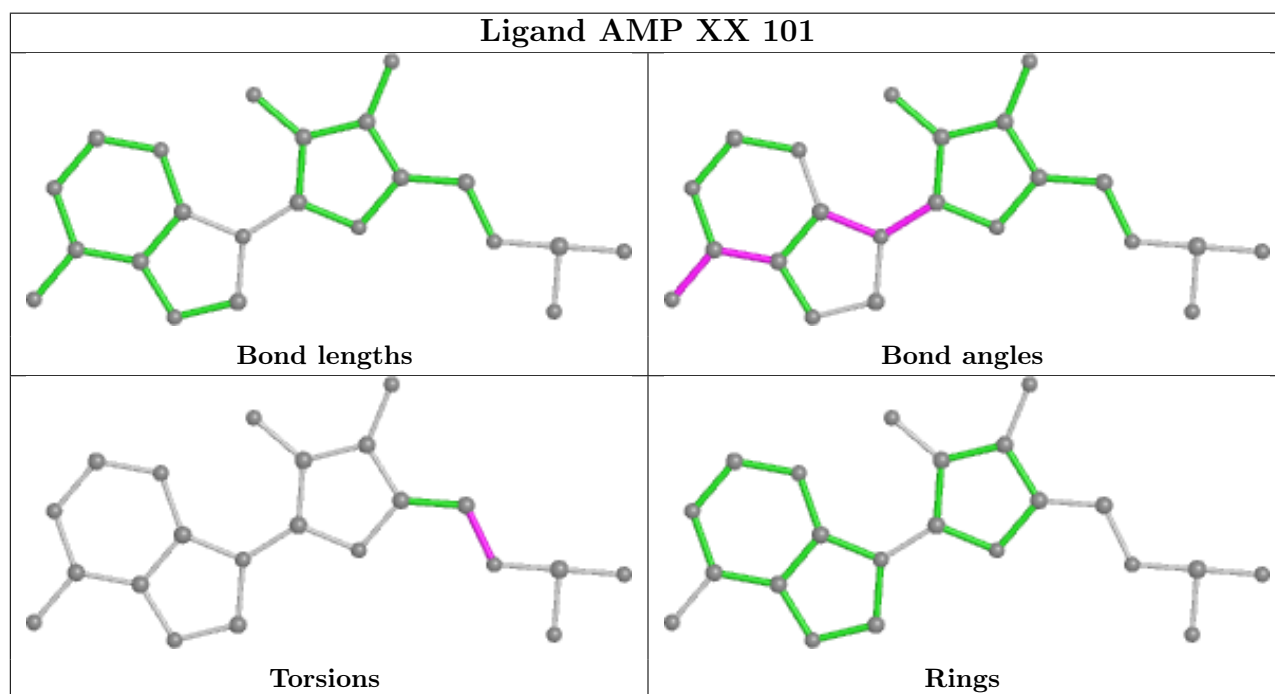
Mol	Chain	Res	Type	Atoms
59	XX	101	AMP	C4'-C5'-O5'-P

There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	XX	101	AMP	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data i

6.1 Protein, DNA and RNA chains i

In the following table, the column labelled '#RSRZ > 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q < 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	QA	1500/1522 (98%)	0.06	50 (3%) 46 37	3, 59, 153, 236	0
1	XA	1500/1522 (98%)	0.01	41 (2%) 54 44	1, 53, 148, 240	0
2	QB	237/256 (92%)	0.31	18 (7%) 13 11	41, 113, 151, 177	0
2	XB	237/256 (92%)	0.11	9 (3%) 40 32	21, 96, 142, 157	0
3	QC	205/239 (85%)	0.36	20 (9%) 7 7	22, 104, 139, 161	0
3	XC	205/239 (85%)	-0.13	4 (1%) 65 56	22, 79, 122, 161	0
4	QD	208/209 (99%)	-0.14	2 (0%) 82 75	8, 69, 116, 153	0
4	XD	208/209 (99%)	0.01	4 (1%) 66 58	16, 74, 114, 158	0
5	QE	151/162 (93%)	0.35	6 (3%) 38 31	32, 95, 133, 161	0
5	XE	151/162 (93%)	-0.21	0 100 100	20, 63, 108, 140	0
6	QF	101/101 (100%)	-0.10	3 (2%) 50 39	15, 68, 105, 139	0
6	XF	101/101 (100%)	0.17	6 (5%) 22 18	4, 66, 107, 134	0
7	QG	155/156 (99%)	0.16	9 (5%) 23 19	26, 89, 133, 154	0
7	XG	155/156 (99%)	0.10	9 (5%) 23 19	28, 83, 124, 148	0
8	QH	138/138 (100%)	-0.10	1 (0%) 87 82	21, 79, 122, 132	0
8	XH	138/138 (100%)	-0.18	2 (1%) 75 66	14, 68, 108, 133	0
9	QI	127/128 (99%)	0.48	12 (9%) 8 8	49, 102, 138, 161	0
9	XI	127/128 (99%)	0.10	4 (3%) 49 38	13, 91, 134, 162	0
10	QJ	99/105 (94%)	0.87	19 (19%) 1 1	57, 108, 148, 192	0
10	XJ	99/105 (94%)	0.52	10 (10%) 7 7	40, 94, 140, 165	0
11	QK	119/129 (92%)	0.31	8 (6%) 17 14	25, 72, 127, 150	0
11	XK	119/129 (92%)	-0.02	4 (3%) 45 36	4, 59, 109, 129	0
12	QL	125/132 (94%)	0.14	8 (6%) 19 15	15, 64, 124, 159	0
12	XL	125/132 (94%)	-0.10	1 (0%) 86 80	6, 48, 102, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	0.18	6 (4%) 28 25	48, 101, 151, 159	0
13	XM	121/126 (96%)	-0.04	1 (0%) 86 80	38, 85, 119, 158	0
14	QN	60/61 (98%)	0.67	7 (11%) 4 5	52, 108, 148, 159	0
14	XN	60/61 (98%)	-0.09	0 100 100	33, 72, 116, 130	0
15	QO	88/89 (98%)	-0.10	3 (3%) 45 36	17, 71, 119, 151	0
15	XO	88/89 (98%)	0.03	4 (4%) 33 28	7, 59, 102, 127	0
16	QP	84/88 (95%)	-0.13	1 (1%) 79 70	14, 59, 114, 134	0
16	XP	84/88 (95%)	-0.13	2 (2%) 59 49	28, 68, 122, 176	0
17	QQ	100/105 (95%)	0.06	3 (3%) 50 39	30, 70, 116, 148	0
17	XQ	100/105 (95%)	0.03	3 (3%) 50 39	19, 71, 106, 144	0
18	QR	70/88 (79%)	0.03	1 (1%) 75 66	22, 70, 125, 150	0
18	XR	70/88 (79%)	-0.07	1 (1%) 75 66	9, 65, 106, 140	0
19	QS	84/93 (90%)	1.05	23 (27%) 0 0	69, 116, 148, 161	0
19	XS	84/93 (90%)	0.09	1 (1%) 79 70	48, 87, 132, 145	0
20	QT	99/106 (93%)	0.13	2 (2%) 65 56	16, 73, 113, 135	0
20	XT	99/106 (93%)	0.24	5 (5%) 28 24	23, 77, 124, 157	0
21	QU	25/27 (92%)	1.63	10 (40%) 0 0	31, 92, 141, 158	0
21	XU	25/27 (92%)	0.90	2 (8%) 12 11	32, 83, 121, 143	0
22	QV	77/77 (100%)	0.29	2 (2%) 56 46	21, 85, 147, 180	0
22	XV	77/77 (100%)	0.27	3 (3%) 39 31	6, 64, 119, 169	0
23	QX	8/25 (32%)	0.72	1 (12%) 3 5	50, 74, 138, 138	0
23	XX	7/25 (28%)	0.86	0 100 100	18, 51, 81, 90	0
24	QY	13/18 (72%)	1.86	4 (30%) 0 0	106, 175, 223, 238	0
24	XY	13/18 (72%)	2.22	4 (30%) 0 0	55, 149, 189, 217	0
25	RA	2882/2916 (98%)	0.03	137 (4%) 30 26	0, 30, 174, 252	0
25	YA	2883/2916 (98%)	-0.07	108 (3%) 41 33	0, 20, 159, 242	0
26	RB	120/122 (98%)	0.24	3 (2%) 57 48	39, 82, 133, 170	0
26	YB	120/122 (98%)	0.10	3 (2%) 57 48	16, 68, 104, 146	0
27	RD	272/276 (98%)	-0.25	2 (0%) 87 82	0, 34, 82, 147	0
27	YD	272/276 (98%)	-0.37	0 100 100	0, 18, 64, 125	0
28	RE	205/206 (99%)	-0.19	2 (0%) 82 75	1, 49, 112, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	YE	205/206 (99%)	-0.18	4 (1%) 65 56	0, 47, 104, 155	0
29	RF	202/210 (96%)	-0.29	1 (0%) 91 85	0, 55, 108, 143	0
29	YF	202/210 (96%)	-0.33	1 (0%) 91 85	0, 32, 96, 124	0
30	RG	181/182 (99%)	0.82	24 (13%) 3 3	39, 113, 160, 177	0
30	YG	181/182 (99%)	0.24	10 (5%) 25 22	18, 92, 131, 177	0
31	RH	170/180 (94%)	0.89	24 (14%) 2 3	45, 112, 156, 177	0
31	YH	170/180 (94%)	-0.09	3 (1%) 68 60	11, 66, 116, 131	0
32	RI	146/148 (98%)	-0.12	4 (2%) 54 44	3, 77, 124, 177	0
32	YI	146/148 (98%)	-0.21	3 (2%) 63 54	3, 64, 125, 140	0
33	RN	138/140 (98%)	-0.04	0 100 100	6, 61, 118, 144	0
33	YN	138/140 (98%)	-0.33	0 100 100	4, 45, 98, 131	0
34	RO	122/122 (100%)	-0.28	0 100 100	2, 42, 80, 107	0
34	YO	122/122 (100%)	-0.28	0 100 100	2, 41, 82, 126	0
35	RP	150/150 (100%)	-0.02	6 (4%) 38 31	1, 58, 130, 158	0
35	YP	150/150 (100%)	-0.16	3 (2%) 65 56	1, 46, 101, 160	0
36	RQ	141/141 (100%)	-0.08	3 (2%) 63 54	3, 58, 103, 133	0
36	YQ	141/141 (100%)	-0.27	1 (0%) 87 82	0, 47, 97, 115	0
37	RR	118/118 (100%)	-0.38	0 100 100	1, 34, 87, 136	0
37	YR	118/118 (100%)	-0.32	1 (0%) 86 80	2, 38, 98, 136	0
38	RS	111/112 (99%)	-0.03	2 (1%) 68 60	23, 83, 117, 138	0
38	YS	111/112 (99%)	0.04	1 (0%) 84 77	13, 73, 115, 168	0
39	RT	137/146 (93%)	-0.02	4 (2%) 51 41	8, 58, 130, 152	0
39	YT	137/146 (93%)	-0.13	5 (3%) 42 34	9, 56, 122, 170	0
40	RU	117/118 (99%)	-0.14	2 (1%) 70 61	1, 49, 113, 166	0
40	YU	117/118 (99%)	-0.42	2 (1%) 70 61	1, 31, 97, 145	0
41	RV	101/101 (100%)	-0.10	3 (2%) 50 39	1, 68, 120, 193	0
41	YV	101/101 (100%)	-0.19	1 (0%) 82 75	1, 45, 97, 171	0
42	RW	113/113 (100%)	-0.06	5 (4%) 34 29	2, 34, 95, 131	0
42	YW	113/113 (100%)	-0.16	3 (2%) 54 44	1, 24, 84, 155	0
43	RX	92/96 (95%)	-0.19	1 (1%) 80 73	4, 44, 91, 131	0
43	YX	92/96 (95%)	-0.09	0 100 100	1, 25, 64, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	RY	102/110 (92%)	0.40	9 (8%) 10 9	10, 84, 138, 174	0
44	YY	102/110 (92%)	-0.31	2 (1%) 65 56	2, 50, 106, 160	0
45	RZ	183/206 (88%)	0.02	3 (1%) 72 62	20, 88, 136, 160	0
45	YZ	183/206 (88%)	-0.08	6 (3%) 46 37	20, 78, 137, 167	0
46	R0	82/85 (96%)	-0.39	1 (1%) 79 70	6, 44, 83, 137	0
46	Y0	82/85 (96%)	-0.39	0 100 100	2, 32, 70, 88	0
47	R1	97/98 (98%)	0.27	6 (6%) 20 17	2, 47, 126, 202	0
47	Y1	97/98 (98%)	0.13	9 (9%) 8 8	0, 32, 114, 142	0
48	R2	69/72 (95%)	-0.17	1 (1%) 75 66	8, 72, 116, 128	0
48	Y2	69/72 (95%)	-0.31	0 100 100	0, 39, 97, 137	0
49	R3	59/60 (98%)	-0.11	2 (3%) 45 36	7, 60, 126, 152	0
49	Y3	59/60 (98%)	-0.41	0 100 100	3, 40, 87, 128	0
50	R4	71/71 (100%)	1.03	14 (19%) 1 1	78, 145, 193, 235	0
50	Y4	71/71 (100%)	0.52	11 (15%) 2 2	69, 122, 166, 194	0
51	R5	59/60 (98%)	0.16	6 (10%) 6 7	4, 39, 139, 166	0
51	Y5	59/60 (98%)	0.06	2 (3%) 45 36	1, 40, 132, 156	0
52	R6	49/54 (90%)	1.93	20 (40%) 0 0	48, 122, 152, 191	0
52	Y6	49/54 (90%)	0.99	8 (16%) 1 2	47, 108, 148, 175	0
53	R7	49/49 (100%)	-0.20	1 (2%) 65 56	1, 27, 75, 161	0
53	Y7	49/49 (100%)	-0.13	1 (2%) 65 56	1, 15, 84, 140	0
54	R8	64/65 (98%)	0.00	3 (4%) 31 26	4, 41, 94, 153	0
54	Y8	64/65 (98%)	-0.09	0 100 100	2, 34, 85, 138	0
55	R9	37/37 (100%)	3.10	27 (72%) 0 0	53, 103, 154, 162	0
55	Y9	37/37 (100%)	2.81	26 (70%) 0 0	60, 98, 136, 154	0
56	Z6	2/3 (66%)	0.66	0 100 100	17, 17, 17, 30	0
56	Z8	2/3 (66%)	0.70	0 100 100	19, 19, 19, 22	0
All	All	20870/21494 (97%)	0.03	869 (4%) 36 30	0, 55, 139, 252	0

All (869) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	RA	2173	A	14.2
25	RA	1084	A	12.3

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Mol	Chain	Res	Type	RSRZ
25	RA	1094	U	11.8
25	RA	1058	G	11.5
40	RU	118	GLY	11.0
28	YE	205	ALA	10.5
25	RA	2801	A	10.4
25	RA	1059	G	10.2
25	RA	1057	A	9.9
25	YA	1536	A	9.9
25	RA	1083	U	9.8
25	YA	2799	A	9.8
25	RA	1096	A	9.8
25	RA	1095	A	9.7
25	RA	2799	A	9.4
24	XY	32	U	8.8
25	RA	1093	G	8.6
3	QC	155	GLY	8.5
7	QG	81	GLY	8.2
25	YA	2801	A	8.2
25	YA	1096	A	8.1
55	R9	14	CYS	8.1
25	RA	2174	C	8.0
7	XG	84	ASN	8.0
7	QG	82	GLY	7.9
25	RA	2125	G	7.7
25	YA	1075	C	7.5
28	RE	205	ALA	7.5
25	RA	1067	A	7.4
25	RA	2798	C	7.4
7	QG	83	ALA	7.2
25	RA	1064	C	7.2
25	RA	1082	U	7.2
24	QY	32	U	7.0
25	RA	1098	A	7.0
25	RA	1536	A	7.0
25	RA	1085	A	6.9
25	RA	1068	G	6.9
55	Y9	34	GLN	6.8
25	YA	1060	U	6.8
25	YA	2125	G	6.8
25	YA	1061	U	6.8
1	XA	87	A	6.7
28	RE	204	ALA	6.7

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Mol	Chain	Res	Type	RSRZ
52	R6	43	CYS	6.7
25	RA	1087	G	6.6
25	RA	2797	U	6.6
10	QJ	83	GLU	6.5
44	RY	103	GLY	6.5
47	R1	97	LEU	6.5
55	R9	34	GLN	6.5
25	RA	2894	G	6.5
7	XG	85	TYR	6.4
25	YA	2795	G	6.4
11	QK	129	SER	6.3
55	R9	25	VAL	6.3
25	RA	654	A	6.2
25	RA	2124	G	6.2
50	R4	70	GLY	6.2
31	RH	18	GLU	6.2
25	YA	1064	C	6.1
25	RA	1063	G	6.1
55	R9	1	MET	6.1
25	RA	2116	G	6.1
40	RU	117	GLN	6.1
11	QK	128	ALA	6.1
55	R9	11	CYS	6.1
1	QA	1026	G	6.1
25	YA	2126	A	6.0
25	RA	889	C	5.9
25	RA	2121	G	5.9
11	XK	11	LYS	5.9
12	QL	129	ALA	5.9
50	R4	67	TYR	5.9
11	XK	129	SER	5.8
7	XG	86	GLN	5.8
52	R6	41	PRO	5.8
52	R6	46	HIS	5.8
7	XG	78	ARG	5.8
25	RA	2126	A	5.8
1	QA	1020	U	5.8
11	QK	11	LYS	5.8
1	QA	1033	G	5.8
25	RA	11	G	5.7
1	XA	88	C	5.7
7	XG	77	SER	5.7

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Mol	Chain	Res	Type	RSRZ
25	RA	890	A	5.7
25	RA	1061	U	5.6
25	RA	1065	U	5.6
50	R4	71	ARG	5.6
55	R9	12	ASP	5.6
25	YA	654	A	5.6
10	XJ	33	GLN	5.5
25	YA	1058	G	5.5
25	YA	2798	C	5.5
25	RA	1066	U	5.5
1	XA	1026	G	5.5
11	QK	12	ARG	5.5
55	Y9	28	GLU	5.5
52	R6	50	ARG	5.5
25	RA	1097	U	5.4
25	RA	2802	G	5.4
55	Y9	1	MET	5.4
25	RA	2138	C	5.3
55	Y9	29	ASN	5.3
13	QM	121	LYS	5.3
3	QC	154	SER	5.3
25	RA	1080	C	5.3
25	RA	1060	U	5.3
25	YA	2116	G	5.2
30	RG	58	GLN	5.2
25	RA	2175	C	5.2
31	RH	43	VAL	5.2
25	RA	1086	A	5.2
1	QA	1029	G	5.1
9	XI	8	GLY	5.1
50	R4	66	SER	5.0
1	XA	81	G	5.0
25	RA	1070	A	5.0
1	QA	1035	A	4.9
25	YA	1534	G	4.8
51	R5	54	GLY	4.8
55	R9	15	LYS	4.8
25	YA	2167	U	4.8
1	QA	1032	A	4.8
47	R1	98	LEU	4.8
2	QB	240	GLN	4.8
2	QB	231	GLU	4.7

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Mol	Chain	Res	Type	RSRZ
25	YA	1076	C	4.7
20	XT	9	ASN	4.7
2	QB	233	SER	4.7
25	YA	2121	G	4.7
31	RH	25	LYS	4.7
19	QS	85	LYS	4.6
52	R6	40	CYS	4.6
3	QC	160	ALA	4.6
52	R6	22	ALA	4.6
1	QA	1027	C	4.6
25	RA	2168	G	4.6
25	YA	2135	A	4.6
25	YA	2141	G	4.6
25	YA	654(A)	G	4.6
25	YA	2136	C	4.6
18	XR	88	LYS	4.5
1	QA	1032(B)	G	4.5
2	QB	4	GLU	4.5
25	RA	1099	G	4.5
25	RA	1088	A	4.5
25	YA	2169	A	4.5
55	Y9	10	ILE	4.5
55	R9	24	TYR	4.5
25	RA	2167	U	4.5
1	QA	1002	G	4.5
51	R5	60	VAL	4.4
25	YA	887	A	4.4
25	YA	1069	A	4.4
25	YA	889	C	4.4
10	QJ	33	GLN	4.4
1	XA	80	G	4.4
25	YA	1070	A	4.4
25	RA	2119	A	4.3
25	YA	2132	U	4.3
30	RG	182	LYS	4.3
10	QJ	4	ILE	4.3
55	Y9	32	HIS	4.3
1	XA	89	U	4.3
25	RA	1092	C	4.3
42	YW	113	LYS	4.3
25	RA	1108	U	4.3
25	RA	1075	C	4.3

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Mol	Chain	Res	Type	RSRZ
22	QV	47	U	4.3
21	XU	26	LYS	4.3
28	YE	204	ALA	4.2
25	YA	2151	G	4.2
25	RA	1074	G	4.2
25	YA	1508	A	4.2
7	QG	84	ASN	4.2
18	QR	88	LYS	4.2
52	R6	47	THR	4.2
55	R9	17	ILE	4.2
52	Y6	49	HIS	4.2
24	QY	31	G	4.1
25	YA	1097	U	4.1
55	Y9	12	ASP	4.1
25	RA	1054	A	4.1
19	QS	79	THR	4.1
20	XT	8	ARG	4.1
47	R1	96	LYS	4.1
10	QJ	6	ILE	4.1
1	XA	1138	G	4.1
9	QI	95	LYS	4.1
21	QU	25	LYS	4.1
1	XA	210	U	4.1
48	R2	43	GLN	4.1
19	QS	6	LYS	4.1
52	R6	45	LYS	4.0
25	YA	2797	U	4.0
20	XT	106	ALA	4.0
25	RA	2795	G	4.0
7	QG	78	ARG	4.0
2	XB	96	ARG	4.0
55	Y9	25	VAL	4.0
55	R9	13	LYS	4.0
13	QM	75	ALA	4.0
31	RH	42	ARG	4.0
24	XY	33	U	3.9
1	QA	1451	A	3.9
1	QA	1450	U	3.9
14	QN	60	SER	3.9
49	R3	60	GLU	3.9
19	QS	39	THR	3.9
25	RA	2147	G	3.9

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Mol	Chain	Res	Type	RSRZ
32	RI	59	ALA	3.9
25	RA	1081	U	3.9
25	YA	1065	U	3.9
1	QA	1001	G	3.9
55	R9	26	ILE	3.9
4	QD	35	ARG	3.9
25	YA	1057	A	3.9
25	RA	2170	A	3.9
7	QG	80	VAL	3.9
31	RH	141	VAL	3.9
44	RY	55	TYR	3.9
2	QB	6	THR	3.8
52	Y6	29	ASN	3.8
31	RH	24	VAL	3.8
25	RA	2127	G	3.8
52	R6	49	HIS	3.8
1	QA	81	G	3.8
51	R5	2	ALA	3.8
25	RA	1079	C	3.8
25	YA	2892	A	3.8
10	QJ	100	THR	3.8
25	YA	2122	U	3.8
10	QJ	101	VAL	3.8
55	Y9	13	LYS	3.8
31	RH	30	LYS	3.8
3	QC	194	GLY	3.8
50	R4	45	GLY	3.8
25	RA	1109	C	3.7
3	QC	103	VAL	3.7
25	YA	2123	G	3.7
10	QJ	5	ARG	3.7
35	RP	150	ALA	3.7
50	Y4	1	MET	3.7
50	R4	40	HIS	3.7
9	QI	127	LYS	3.7
10	XJ	5	ARG	3.7
12	QL	127	GLU	3.7
2	XB	4	GLU	3.7
45	YZ	167	PRO	3.7
1	QA	1032(A)	G	3.7
1	XA	78	G	3.7
25	RA	1044	G	3.7

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Mol	Chain	Res	Type	RSRZ
40	YU	117	GLN	3.7
3	QC	193	TYR	3.7
55	R9	9	ARG	3.7
31	RH	170	ARG	3.6
40	YU	118	GLY	3.6
9	QI	35	GLU	3.6
55	R9	36	GLN	3.6
1	XA	1027	C	3.6
25	YA	2178	C	3.6
30	RG	108	ASN	3.6
25	YA	2804	C	3.6
2	QB	31	TYR	3.6
25	RA	2141	G	3.6
39	YT	137	LYS	3.6
25	RA	546	C	3.5
25	RA	2811	G	3.5
50	Y4	32	TYR	3.5
50	R4	68	ARG	3.5
25	RA	2154	G	3.5
25	YA	1059	G	3.5
10	XJ	4	ILE	3.5
1	QA	1031	G	3.5
21	QU	18	TYR	3.5
25	RA	1103	A	3.5
25	RA	2176	A	3.5
19	QS	84	GLY	3.5
13	QM	120	LYS	3.5
2	QB	30	ARG	3.5
22	XV	8	U	3.5
12	QL	128	ALA	3.5
25	YA	878	A	3.5
1	QA	1531	A	3.4
25	YA	2107	C	3.4
25	RA	2152	G	3.4
25	YA	2140	C	3.4
47	Y1	96	LYS	3.4
52	R6	18	ARG	3.4
55	R9	10	ILE	3.4
25	YA	1537	C	3.4
22	XV	17(A)	U	3.4
30	YG	25	TYR	3.4
50	R4	44	THR	3.4

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Mol	Chain	Res	Type	RSRZ
3	QC	197	GLY	3.4
31	RH	41	MET	3.4
1	XA	1032(A)	G	3.4
25	YA	2893	G	3.4
25	RA	1104	C	3.4
11	QK	127	LYS	3.4
35	RP	88	LEU	3.4
39	RT	106	SER	3.4
25	YA	2894	G	3.3
1	QA	1236	A	3.3
25	RA	2136	C	3.3
44	RY	58	GLY	3.3
25	YA	2168	G	3.3
55	Y9	4	ARG	3.3
12	QL	5	PRO	3.3
24	QY	40	G	3.3
25	YA	1545(A)	A	3.3
31	RH	21	PRO	3.3
41	YV	45	THR	3.3
1	QA	1129	C	3.3
25	YA	1550	C	3.3
55	Y9	24	TYR	3.3
5	QE	130	ASN	3.3
11	XK	12	ARG	3.3
45	RZ	145	GLU	3.3
1	QA	994	A	3.3
25	YA	1063	G	3.3
19	QS	4	SER	3.2
3	QC	196	LEU	3.2
55	Y9	36	GLN	3.2
25	RA	2153	G	3.2
25	RA	2137	C	3.2
11	QK	119	CYS	3.2
30	YG	87	PRO	3.2
30	RG	29	TRP	3.2
25	YA	2117	A	3.2
19	QS	40	ILE	3.2
52	Y6	43	CYS	3.2
20	QT	104	LEU	3.2
55	Y9	9	ARG	3.2
25	YA	338	G	3.2
25	YA	1099	G	3.2

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Mol	Chain	Res	Type	RSRZ
25	YA	2119	A	3.2
30	RG	116	ASP	3.2
10	XJ	72	VAL	3.2
25	RA	2128	C	3.2
9	QI	110	GLU	3.2
25	RA	1089	G	3.2
25	YA	2802	G	3.2
26	YB	88	C	3.2
52	R6	6	ARG	3.1
10	QJ	72	VAL	3.1
47	Y1	98	LEU	3.1
9	QI	27	THR	3.1
25	YA	1074	G	3.1
25	YA	1078	U	3.1
25	RA	2891	G	3.1
22	XV	47	U	3.1
44	YY	63	LYS	3.1
55	Y9	21	GLY	3.1
55	R9	32	HIS	3.1
25	YA	1026	U	3.1
52	R6	13	CYS	3.1
25	YA	362	U	3.1
8	QH	116	LYS	3.1
1	QA	1000	A	3.1
45	YZ	166	SER	3.1
29	YF	133	ASN	3.1
51	Y5	54	GLY	3.1
28	YE	56	PRO	3.1
30	RG	85	GLY	3.0
19	QS	82	GLY	3.0
35	YP	118	GLY	3.0
44	RY	52	SER	3.0
25	YA	1077	A	3.0
9	XI	102	LEU	3.0
25	YA	1735	C	3.0
16	XP	83	GLU	3.0
55	R9	4	ARG	3.0
25	RA	2893	G	3.0
30	RG	87	PRO	3.0
25	YA	1098	A	3.0
30	YG	52	ILE	3.0
32	RI	62	LYS	3.0

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Mol	Chain	Res	Type	RSRZ
55	R9	19	ARG	3.0
3	QC	153	VAL	3.0
30	RG	26	GLN	2.9
25	RA	12	U	2.9
27	RD	26	LYS	2.9
37	YR	1	MET	2.9
3	XC	193	TYR	2.9
41	RV	36	PRO	2.9
55	Y9	11	CYS	2.9
3	QC	156	ARG	2.9
35	RP	149	GLU	2.9
25	YA	2803	C	2.9
25	YA	654(T)	C	2.9
42	RW	113	LYS	2.9
44	RY	102	CYS	2.9
10	XJ	6	ILE	2.9
25	RA	1043	C	2.9
25	YA	654(U)	A	2.9
1	QA	693	G	2.9
1	XA	79	G	2.9
1	XA	77	C	2.9
1	XA	612	C	2.9
50	R4	39	CYS	2.9
31	YH	3	ARG	2.9
25	YA	654(S)	G	2.9
1	QA	1270	C	2.9
25	RA	1100	C	2.9
25	YA	2139	C	2.9
2	QB	232	PRO	2.9
25	RA	2142	C	2.9
25	RA	2803	C	2.9
3	QC	159	GLY	2.8
1	XA	134	A	2.8
19	QS	64	GLU	2.8
50	Y4	30	GLU	2.8
25	YA	1066	U	2.8
6	XF	38	GLU	2.8
1	XA	380	G	2.8
2	XB	95	GLN	2.8
16	QP	84	ALA	2.8
30	YG	89	GLY	2.8
45	YZ	148	ASP	2.8

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Mol	Chain	Res	Type	RSRZ
7	QG	79	ARG	2.8
30	RG	13	GLU	2.8
7	QG	85	TYR	2.8
1	QA	1321	C	2.8
1	QA	1322	C	2.8
54	R8	65	GLU	2.8
21	QU	5	ASP	2.8
52	Y6	13	CYS	2.8
1	XA	313	A	2.8
2	QB	39	ILE	2.8
25	RA	2162	G	2.8
30	RG	84	LYS	2.8
25	RA	271(C)	U	2.8
35	RP	135	LEU	2.8
2	XB	240	GLN	2.8
25	YA	1535	U	2.8
49	R3	2	PRO	2.8
25	YA	2805	G	2.8
12	QL	14	GLY	2.8
25	RA	2139	C	2.8
47	Y1	22	GLY	2.8
2	QB	43	ASP	2.8
3	QC	105	GLU	2.8
4	XD	24	GLU	2.8
30	YG	182	LYS	2.8
25	RA	2790	A	2.8
1	XA	1032(B)	G	2.8
31	RH	82	GLY	2.8
17	XQ	36	ILE	2.8
21	QU	21	TYR	2.7
1	QA	1036	G	2.7
55	R9	6	SER	2.7
25	RA	10	G	2.7
25	YA	1734	C	2.7
45	YZ	144	LEU	2.7
9	QI	31	GLN	2.7
25	RA	1105	U	2.7
25	RA	888	C	2.7
45	RZ	146	ILE	2.7
2	QB	19	HIS	2.7
39	YT	135	ALA	2.7
25	YA	1092	C	2.7

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Mol	Chain	Res	Type	RSRZ
36	RQ	91	GLU	2.7
21	QU	26	LYS	2.7
1	XA	1043	C	2.7
1	QA	1003	G	2.7
1	QA	1050	G	2.7
1	QA	915	A	2.7
25	RA	2169	A	2.7
25	YA	2173	A	2.7
14	QN	61	TRP	2.7
55	Y9	16	VAL	2.7
25	YA	2137	C	2.7
10	QJ	64	GLU	2.7
25	YA	1082	U	2.7
39	YT	84	GLN	2.7
9	QI	36	TYR	2.7
51	R5	55	ARG	2.7
25	RA	1026	U	2.7
25	YA	1048	A	2.7
25	YA	2124	G	2.7
44	RY	86	ARG	2.7
55	Y9	14	CYS	2.7
1	XA	1137	C	2.7
25	RA	2545	G	2.7
30	RG	72	ARG	2.6
3	QC	166	GLU	2.6
55	R9	18	ARG	2.6
1	XA	1033	G	2.6
35	YP	13	ASN	2.6
25	YA	277	C	2.6
1	XA	1032	A	2.6
25	YA	2170	A	2.6
50	Y4	29	PRO	2.6
2	XB	79	ASP	2.6
25	YA	2138	C	2.6
25	YA	2794	C	2.6
10	QJ	98	ILE	2.6
32	YI	12	LEU	2.6
25	RA	2123	G	2.6
52	R6	37	ARG	2.6
39	YT	130	ALA	2.6
1	QA	1006	C	2.6
2	XB	233	SER	2.6

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Mol	Chain	Res	Type	RSRZ
1	QA	873	A	2.6
2	QB	40	HIS	2.6
1	XA	843	U	2.6
1	XA	1006	C	2.6
50	Y4	12	ALA	2.6
25	RA	878	A	2.6
25	YA	890	A	2.6
19	QS	3	ARG	2.6
41	RV	45	THR	2.6
2	QB	146	GLN	2.6
21	QU	22	ARG	2.6
25	RA	654(A)	G	2.6
19	QS	29	ARG	2.6
31	RH	101	ARG	2.6
14	QN	38	GLY	2.6
19	QS	41	VAL	2.6
47	R1	23	LYS	2.6
39	RT	130	ALA	2.6
3	QC	104	GLN	2.6
10	XJ	98	ILE	2.6
32	RI	58	LEU	2.6
45	RZ	138	GLU	2.6
51	Y5	59	GLU	2.6
1	XA	1007	C	2.6
30	YG	88	ILE	2.6
10	QJ	34	VAL	2.5
14	QN	59	ALA	2.5
25	YA	1095	A	2.5
25	RA	2166	G	2.5
13	XM	121	LYS	2.5
9	QI	53	VAL	2.5
3	XC	192	THR	2.5
1	QA	1007	C	2.5
19	QS	44	MET	2.5
25	RA	277	C	2.5
25	RA	1045	A	2.5
25	YA	2176	A	2.5
2	QB	132	LYS	2.5
30	YG	46	ALA	2.5
1	QA	914	A	2.5
50	R4	11	PRO	2.5
19	XS	17	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
42	RW	64	MET	2.5
5	QE	124	GLY	2.5
13	QM	100	GLY	2.5
11	QK	13	GLN	2.5
25	RA	2145	C	2.5
25	YA	276	A	2.5
7	XG	87	VAL	2.5
3	QC	165	THR	2.5
31	RH	3	ARG	2.5
25	RA	1062	G	2.5
14	QN	8	GLU	2.5
3	QC	191	THR	2.5
13	QM	122	LYS	2.5
24	XY	40	G	2.5
25	RA	2118	U	2.5
19	QS	83	HIS	2.5
30	YG	54	GLU	2.5
6	XF	36	ARG	2.5
2	QB	193	ASP	2.5
29	RF	196	LEU	2.5
43	RX	92	LEU	2.5
14	QN	17	LYS	2.5
25	RA	1535	U	2.5
47	Y1	23	LYS	2.5
1	XA	1005	A	2.5
35	YP	132	LYS	2.5
1	XA	1450	U	2.5
17	QQ	7	THR	2.5
17	QQ	32	TYR	2.5
31	RH	110	SER	2.5
38	YS	111	GLU	2.5
52	R6	5	VAL	2.5
25	RA	2155	G	2.4
6	XF	66	GLU	2.4
10	XJ	73	ASP	2.4
47	R1	27	GLU	2.4
3	XC	179	ARG	2.4
31	RH	35	VAL	2.4
36	RQ	141	GLN	2.4
1	XA	162	A	2.4
25	RA	1534	G	2.4
25	RA	2140	C	2.4

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Mol	Chain	Res	Type	RSRZ
25	YA	1088	A	2.4
26	YB	110	G	2.4
30	RG	154	GLY	2.4
52	R6	29	ASN	2.4
4	QD	36	ARG	2.4
30	RG	82	LEU	2.4
1	QA	1034	G	2.4
25	RA	2810	A	2.4
30	YG	40	ASN	2.4
38	RS	60	GLY	2.4
42	YW	63	ASP	2.4
46	R0	2	ALA	2.4
55	R9	5	ALA	2.4
42	RW	92	ARG	2.4
25	RA	2117	A	2.4
26	YB	109	G	2.4
30	RG	76	SER	2.4
44	YY	64	GLU	2.4
55	R9	16	VAL	2.4
2	QB	21	ARG	2.4
10	XJ	80	LYS	2.4
1	QA	1019	C	2.4
1	XA	314	C	2.4
10	XJ	10	GLY	2.4
15	XO	20	GLY	2.4
1	XA	993	G	2.4
19	QS	8	GLY	2.4
31	RH	38	SER	2.4
4	XD	37	PRO	2.4
1	QA	1115	C	2.4
20	QT	103	GLY	2.4
21	QU	20	LYS	2.4
42	RW	112	GLY	2.4
53	Y7	48	LYS	2.4
52	R6	7	ILE	2.4
3	XC	194	GLY	2.4
47	Y1	97	LEU	2.4
1	QA	1044	A	2.4
30	RG	118	ARG	2.4
25	RA	2132	U	2.4
30	RG	138	GLN	2.4
10	QJ	87	THR	2.4

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Mol	Chain	Res	Type	RSRZ
25	YA	2175	C	2.4
44	RY	56	PRO	2.3
11	XK	117	ASN	2.3
25	YA	271(C)	U	2.3
30	RG	27	ASN	2.3
31	RH	83	TYR	2.3
25	RA	2171	A	2.3
31	RH	52	VAL	2.3
31	RH	88	LEU	2.3
55	Y9	23	VAL	2.3
38	RS	109	GLY	2.3
21	QU	24	ARG	2.3
31	RH	34	GLU	2.3
1	QA	171	A	2.3
1	XA	117	G	2.3
25	RA	892	G	2.3
25	YA	2793	G	2.3
15	XO	24	SER	2.3
26	RB	69	G	2.3
50	Y4	67	TYR	2.3
21	XU	25	LYS	2.3
32	YI	11	ASN	2.3
39	RT	131	ALA	2.3
31	RH	39	PRO	2.3
10	QJ	88	LEU	2.3
52	R6	23	THR	2.3
25	RA	1077	A	2.3
25	RA	2114	A	2.3
15	QO	30	ALA	2.3
25	YA	1068	G	2.3
50	Y4	47	GLN	2.3
50	Y4	66	SER	2.3
52	R6	39	TYR	2.3
6	XF	2	ARG	2.3
44	RY	50	ARG	2.3
2	QB	96	ARG	2.3
24	XY	31	G	2.3
25	RA	2833	G	2.3
25	YA	2131	G	2.3
9	QI	98	PRO	2.3
39	YT	133	GLU	2.3
1	QA	1005	A	2.3

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Mol	Chain	Res	Type	RSRZ
25	YA	1545	A	2.3
55	R9	2	LYS	2.3
1	QA	1028	C	2.3
25	RA	2164	C	2.3
15	QO	26	GLU	2.3
13	QM	6	GLY	2.3
16	XP	1	MET	2.3
10	QJ	74	ILE	2.3
2	XB	15	VAL	2.3
50	Y4	34	GLU	2.3
19	QS	80	TYR	2.3
1	QA	1021	G	2.2
17	QQ	101	ARG	2.2
25	YA	10	G	2.2
45	YZ	162	GLU	2.2
25	RA	1069	A	2.2
25	RA	2646	C	2.2
55	R9	37	GLY	2.2
55	Y9	7	VAL	2.2
47	Y1	21	ARG	2.2
10	QJ	48	THR	2.2
5	QE	125	SER	2.2
19	QS	30	LEU	2.2
50	R4	1	MET	2.2
15	XO	26	GLU	2.2
19	QS	27	GLU	2.2
50	R4	22	ILE	2.2
52	R6	11	LEU	2.2
50	Y4	40	HIS	2.2
17	XQ	37	LYS	2.2
19	QS	7	LYS	2.2
25	RA	1049	C	2.2
26	RB	17	C	2.2
35	RP	91	PHE	2.2
6	XF	31	GLU	2.2
5	QE	20	GLN	2.2
28	YE	61	ARG	2.2
25	YA	11	G	2.2
30	RG	12	TYR	2.2
53	R7	48	LYS	2.2
10	QJ	97	GLU	2.2
8	XH	71	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
25	RA	2892	A	2.2
25	RA	2647	U	2.2
25	YA	1083	U	2.2
25	RA	2791	C	2.2
25	YA	1546	C	2.2
30	RG	9	ARG	2.2
55	Y9	35	ARG	2.2
2	XB	5	ILE	2.2
7	XG	79	ARG	2.2
52	Y6	53	LYS	2.2
25	YA	1044	G	2.2
1	QA	210	U	2.2
1	XA	1531	A	2.2
25	RA	614	U	2.2
25	RA	2895	U	2.2
12	QL	15	ARG	2.2
25	RA	1644	C	2.2
4	XD	125	HIS	2.2
5	QE	155	GLU	2.2
10	QJ	73	ASP	2.2
32	YI	113	ARG	2.2
3	QC	189	ALA	2.2
36	RQ	1	MET	2.2
1	XA	1338	G	2.2
22	QV	9	G	2.2
25	YA	1079	C	2.2
31	RH	89	ILE	2.2
1	XA	841	U	2.2
6	XF	37	VAL	2.2
10	XJ	71	LEU	2.2
25	RA	1112	G	2.2
25	YA	2112	G	2.2
1	QA	88	C	2.2
44	RY	57	GLN	2.2
50	Y4	11	PRO	2.2
55	Y9	30	PRO	2.2
50	R4	47	GLN	2.2
52	R6	44	ARG	2.2
47	Y1	36	GLY	2.2
1	XA	1042	G	2.2
25	RA	2110	G	2.2
25	YA	1100	C	2.2

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Mol	Chain	Res	Type	RSRZ
6	QF	101	ALA	2.1
25	RA	896	A	2.1
31	RH	19	VAL	2.1
25	RA	1076	C	2.1
1	XA	611	A	2.1
12	QL	31	PRO	2.1
25	YA	1528	A	2.1
3	QC	91	LEU	2.1
12	XL	19	ARG	2.1
55	R9	35	ARG	2.1
1	QA	995	C	2.1
6	QF	64	GLN	2.1
25	YA	1042	G	2.1
30	RG	41	GLN	2.1
55	R9	3	VAL	2.1
1	QA	1261	A	2.1
55	Y9	27	CYS	2.1
27	RD	34	VAL	2.1
7	XG	154	TYR	2.1
1	QA	1117	G	2.1
1	XA	630	G	2.1
26	RB	117	G	2.1
25	RA	229	A	2.1
45	YZ	159	PRO	2.1
1	QA	1234	C	2.1
1	XA	1257	U	2.1
15	QO	89	GLY	2.1
47	Y1	27	GLU	2.1
41	RV	64	HIS	2.1
51	R5	53	ALA	2.1
35	RP	13	ASN	2.1
3	QC	157	ILE	2.1
20	XT	51	GLU	2.1
1	QA	1194	U	2.1
1	QA	979	C	2.1
50	R4	69	LYS	2.1
55	Y9	33	LYS	2.1
14	QN	35	ARG	2.1
1	XA	610	G	2.1
2	XB	231	GLU	2.1
51	R5	37	LYS	2.1
21	QU	9	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
21	QU	19	GLY	2.1
30	RG	69	ALA	2.1
7	QG	86	GLN	2.1
25	YA	361	G	2.1
39	RT	33	LYS	2.1
54	R8	64	TYR	2.1
24	QY	33	U	2.1
25	RA	899	A	2.1
52	Y6	5	VAL	2.1
42	YW	111	HIS	2.1
9	XI	103	THR	2.1
1	XA	181	G	2.1
25	RA	654(V)	A	2.1
25	RA	1508	A	2.1
25	RA	2172	U	2.1
25	YA	1726	G	2.1
55	Y9	31	LYS	2.1
9	QI	128	ARG	2.1
55	Y9	18	ARG	2.1
30	YG	23	PHE	2.1
55	R9	27	CYS	2.1
6	QF	38	GLU	2.1
9	QI	85	LEU	2.1
47	R1	93	GLU	2.1
19	QS	28	LYS	2.0
1	QA	220	G	2.0
11	QK	50	TYR	2.0
3	QC	102	ASN	2.0
17	XQ	94	ASN	2.0
25	RA	1102	C	2.0
9	XI	6	GLY	2.0
1	QA	1257	U	2.0
36	YQ	135	ASP	2.0
25	YA	1510	A	2.0
25	YA	2629	A	2.0
4	XD	158	ILE	2.0
31	YH	2	SER	2.0
19	QS	67	VAL	2.0
5	QE	44	GLY	2.0
47	Y1	93	GLU	2.0
30	RG	77	ILE	2.0
32	RI	83	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
12	QL	13	LYS	2.0
20	XT	104	LEU	2.0
55	R9	33	LYS	2.0
1	XA	220	G	2.0
25	RA	1869	G	2.0
30	RG	143	GLU	2.0
52	Y6	22	ALA	2.0
9	QI	102	LEU	2.0
10	QJ	35	SER	2.0
30	RG	75	LYS	2.0
52	Y6	46	HIS	2.0
54	R8	3	LYS	2.0
15	XO	21	ASP	2.0
19	QS	26	GLY	2.0
2	QB	111	ARG	2.0
25	RA	887	A	2.0
10	QJ	85	LEU	2.0
31	RH	36	PRO	2.0
55	Y9	2	LYS	2.0
25	RA	2115	G	2.0
25	YA	2896	C	2.0
8	XH	70	GLN	2.0
42	RW	94	ASP	2.0
7	XG	82	GLY	2.0
19	QS	38	SER	2.0
23	QX	8	A	2.0
31	YH	58	GLU	2.0

6.2 Non-standard residues in protein, DNA, RNA chains [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
24	1MG	QY	37	24/25	0.88	0.23	130,130,130,130	0
24	1MG	XY	37	24/25	0.90	0.26	56,56,56,56	0
56	PPU	Z8	76	37/38	0.91	0.39	10,10,10,10	0
56	PPU	Z6	76	37/38	0.95	0.32	14,14,14,14	0

6.3 Carbohydrates [i](#)

There are no monosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	RA	3219	1/1	0.43	0.72	40,40,40,40	0
57	MG	QF	201	1/1	0.45	1.08	36,36,36,36	0
57	MG	RA	3166	1/1	0.49	0.29	34,34,34,34	0
57	MG	RA	3213	1/1	0.50	0.50	8,8,8,8	0
57	MG	RA	3062	1/1	0.51	1.84	50,50,50,50	0
57	MG	RA	3138	1/1	0.53	0.76	29,29,29,29	0
57	MG	RA	3226	1/1	0.55	0.37	9,9,9,9	0
57	MG	YA	3207	1/1	0.55	0.97	7,7,7,7	0
57	MG	RA	3227	1/1	0.59	0.56	22,22,22,22	0
57	MG	QA	1620	1/1	0.60	0.32	6,6,6,6	0
57	MG	YA	3196	1/1	0.61	0.51	1,1,1,1	0
57	MG	QA	1661	1/1	0.61	0.33	64,64,64,64	0
57	MG	YA	3236	1/1	0.61	0.28	5,5,5,5	0
57	MG	QA	1629	1/1	0.64	0.85	0,0,0,0	0
57	MG	RA	3239	1/1	0.65	0.49	14,14,14,14	0
57	MG	YA	3183	1/1	0.66	0.55	16,16,16,16	0
57	MG	YA	3131	1/1	0.66	0.41	3,3,3,3	0
57	MG	YA	3254	1/1	0.67	0.63	2,2,2,2	0
57	MG	QA	1631	1/1	0.69	0.42	26,26,26,26	0
57	MG	YA	3076	1/1	0.69	1.29	50,50,50,50	0
57	MG	YA	3176	1/1	0.70	0.51	6,6,6,6	0
57	MG	RA	3153	1/1	0.70	0.34	15,15,15,15	0
57	MG	RA	3225	1/1	0.71	0.25	10,10,10,10	0
57	MG	YA	3100	1/1	0.72	0.91	6,6,6,6	0
57	MG	YA	3219	1/1	0.72	0.17	7,7,7,7	0
57	MG	R8	101	1/1	0.73	0.37	0,0,0,0	0
57	MG	RA	3003	1/1	0.74	0.93	5,5,5,5	0
57	MG	XA	1667	1/1	0.75	0.27	17,17,17,17	0
57	MG	RA	3206	1/1	0.76	0.37	3,3,3,3	0
57	MG	RA	3049	1/1	0.76	1.01	13,13,13,13	0
57	MG	YA	3184	1/1	0.76	0.32	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3242	1/1	0.76	0.79	4,4,4,4	0
57	MG	YA	3250	1/1	0.76	1.17	11,11,11,11	0
57	MG	RA	3203	1/1	0.76	0.38	24,24,24,24	0
57	MG	RA	3191	1/1	0.77	0.31	67,67,67,67	0
57	MG	RA	3199	1/1	0.77	0.73	6,6,6,6	0
57	MG	RA	3157	1/1	0.77	0.55	0,0,0,0	0
57	MG	YA	3152	1/1	0.77	0.66	5,5,5,5	0
57	MG	YA	3166	1/1	0.77	0.30	4,4,4,4	0
57	MG	YA	3172	1/1	0.77	1.39	1,1,1,1	0
57	MG	XA	1642	1/1	0.77	0.72	5,5,5,5	0
57	MG	RA	3007	1/1	0.77	0.41	16,16,16,16	0
59	AMP	XX	101	22/23	0.77	0.30	91,91,91,91	0
57	MG	YA	3030	1/1	0.78	0.95	5,5,5,5	0
57	MG	RP	201	1/1	0.78	1.36	21,21,21,21	0
57	MG	RA	3173	1/1	0.78	0.50	48,48,48,48	0
57	MG	YA	3121	1/1	0.79	0.42	62,62,62,62	0
57	MG	RA	3224	1/1	0.79	0.39	5,5,5,5	0
57	MG	YA	3063	1/1	0.80	0.29	11,11,11,11	0
57	MG	RA	3046	1/1	0.80	0.87	50,50,50,50	0
57	MG	YA	3080	1/1	0.80	1.46	50,50,50,50	0
57	MG	QA	1632	1/1	0.80	0.14	42,42,42,42	0
57	MG	YA	3210	1/1	0.80	0.51	3,3,3,3	0
57	MG	QX	101	1/1	0.80	0.41	4,4,4,4	0
57	MG	RA	3179	1/1	0.80	0.38	4,4,4,4	0
57	MG	QA	1650	1/1	0.80	0.61	11,11,11,11	0
57	MG	XA	1656	1/1	0.80	1.10	10,10,10,10	0
57	MG	RA	3197	1/1	0.80	0.65	3,3,3,3	0
57	MG	QA	1623	1/1	0.80	0.42	14,14,14,14	0
57	MG	RA	3172	1/1	0.81	0.48	4,4,4,4	0
57	MG	XA	1627	1/1	0.81	0.27	14,14,14,14	0
57	MG	YA	3167	1/1	0.81	0.52	2,2,2,2	0
57	MG	RA	3063	1/1	0.81	0.81	3,3,3,3	0
57	MG	XA	1655	1/1	0.81	0.29	9,9,9,9	0
57	MG	RD	301	1/1	0.81	0.47	1,1,1,1	0
57	MG	XA	1663	1/1	0.81	0.54	15,15,15,15	0
57	MG	YB	201	1/1	0.81	0.31	7,7,7,7	0
57	MG	RA	3221	1/1	0.81	0.33	22,22,22,22	0
57	MG	YA	3145	1/1	0.82	0.33	9,9,9,9	0
57	MG	XA	1646	1/1	0.82	0.28	7,7,7,7	0
57	MG	RA	3130	1/1	0.82	0.61	2,2,2,2	0
57	MG	YA	3114	1/1	0.82	0.33	13,13,13,13	0
57	MG	RA	3207	1/1	0.82	0.27	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3009	1/1	0.82	0.36	10,10,10,10	0
57	MG	XB	301	1/1	0.83	0.33	2,2,2,2	0
57	MG	YA	3012	1/1	0.83	1.55	50,50,50,50	0
57	MG	XA	1629	1/1	0.83	0.17	8,8,8,8	0
57	MG	YA	3159	1/1	0.83	0.20	6,6,6,6	0
57	MG	QA	1601	1/1	0.83	0.35	9,9,9,9	0
57	MG	RA	3137	1/1	0.83	0.44	10,10,10,10	0
57	MG	RA	3022	1/1	0.83	0.36	4,4,4,4	0
57	MG	R0	101	1/1	0.83	0.30	0,0,0,0	0
57	MG	QA	1638	1/1	0.83	0.64	34,34,34,34	0
57	MG	YP	201	1/1	0.83	0.15	94,94,94,94	0
57	MG	RA	3202	1/1	0.83	0.15	16,16,16,16	0
57	MG	XA	1650	1/1	0.84	0.28	18,18,18,18	0
57	MG	YA	3039	1/1	0.84	0.28	6,6,6,6	0
57	MG	RA	3069	1/1	0.84	0.82	4,4,4,4	0
57	MG	RA	3070	1/1	0.84	0.90	0,0,0,0	0
57	MG	QA	1637	1/1	0.84	0.31	0,0,0,0	0
57	MG	YA	3246	1/1	0.84	0.35	7,7,7,7	0
57	MG	QA	1618	1/1	0.84	0.51	3,3,3,3	0
57	MG	YA	3252	1/1	0.84	0.75	8,8,8,8	0
57	MG	QA	1649	1/1	0.84	0.41	6,6,6,6	0
57	MG	YA	3260	1/1	0.84	0.97	50,50,50,50	0
57	MG	RA	3176	1/1	0.84	0.31	3,3,3,3	0
57	MG	YA	3014	1/1	0.84	1.25	50,50,50,50	0
57	MG	YA	3140	1/1	0.84	0.25	12,12,12,12	0
57	MG	YA	3238	1/1	0.85	0.29	11,11,11,11	0
57	MG	YA	3117	1/1	0.85	0.99	6,6,6,6	0
57	MG	RA	3169	1/1	0.85	0.24	16,16,16,16	0
57	MG	YA	3248	1/1	0.85	0.44	0,0,0,0	0
57	MG	XA	1662	1/1	0.85	0.88	11,11,11,11	0
57	MG	YA	3049	1/1	0.85	0.89	50,50,50,50	0
57	MG	XA	1638	1/1	0.85	0.33	20,20,20,20	0
57	MG	QA	1624	1/1	0.85	0.65	0,0,0,0	0
57	MG	QA	1662	1/1	0.85	0.27	37,37,37,37	0
57	MG	QA	1664	1/1	0.85	0.41	54,54,54,54	0
57	MG	RA	3168	1/1	0.85	0.47	1,1,1,1	0
57	MG	XA	1607	1/1	0.86	0.38	16,16,16,16	0
57	MG	RA	3071	1/1	0.86	0.23	1,1,1,1	0
57	MG	YA	3175	1/1	0.86	0.24	9,9,9,9	0
57	MG	YA	3045	1/1	0.86	0.53	13,13,13,13	0
57	MG	RA	3076	1/1	0.86	0.53	7,7,7,7	0
57	MG	RA	3220	1/1	0.86	0.28	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	YA	3193	1/1	0.86	0.19	3,3,3,3	0
57	MG	RA	3039	1/1	0.86	0.36	10,10,10,10	0
57	MG	RA	3222	1/1	0.86	0.34	14,14,14,14	0
57	MG	YA	3085	1/1	0.86	0.61	13,13,13,13	0
57	MG	YA	3212	1/1	0.86	0.25	8,8,8,8	0
57	MG	RA	3006	1/1	0.86	0.97	50,50,50,50	0
57	MG	YA	3230	1/1	0.86	0.16	8,8,8,8	0
57	MG	RA	3048	1/1	0.86	0.21	3,3,3,3	0
57	MG	YA	3237	1/1	0.86	0.32	7,7,7,7	0
57	MG	QA	1646	1/1	0.86	0.53	10,10,10,10	0
57	MG	QA	1626	1/1	0.86	0.40	57,57,57,57	0
57	MG	YA	3122	1/1	0.86	0.40	3,3,3,3	0
57	MG	YA	3247	1/1	0.86	0.39	14,14,14,14	0
57	MG	YA	3128	1/1	0.86	0.57	12,12,12,12	0
57	MG	RA	3159	1/1	0.86	0.26	6,6,6,6	0
57	MG	QA	1615	1/1	0.86	0.78	4,4,4,4	0
57	MG	RA	3025	1/1	0.86	0.14	3,3,3,3	0
57	MG	YA	3001	1/1	0.86	1.21	50,50,50,50	0
57	MG	RA	3032	1/1	0.86	1.18	50,50,50,50	0
57	MG	YB	202	1/1	0.86	0.67	24,24,24,24	0
57	MG	YA	3165	1/1	0.86	0.23	11,11,11,11	0
57	MG	RA	3208	1/1	0.86	0.65	15,15,15,15	0
57	MG	RA	3141	1/1	0.87	0.24	2,2,2,2	0
57	MG	RA	3192	1/1	0.87	0.27	21,21,21,21	0
57	MG	XA	1665	1/1	0.87	0.49	7,7,7,7	0
57	MG	RA	3142	1/1	0.87	0.49	36,36,36,36	0
57	MG	YA	3243	1/1	0.87	0.42	32,32,32,32	0
57	MG	RA	3229	1/1	0.87	1.51	50,50,50,50	0
57	MG	RA	3121	1/1	0.87	0.77	5,5,5,5	0
58	ZN	QN	101	1/1	0.87	0.13	104,104,104,104	0
57	MG	RA	3132	1/1	0.87	0.16	3,3,3,3	0
57	MG	QA	1655	1/1	0.88	0.67	20,20,20,20	0
57	MG	YA	3119	1/1	0.88	0.78	8,8,8,8	0
57	MG	RA	3234	1/1	0.88	0.34	9,9,9,9	0
57	MG	RA	3085	1/1	0.88	0.81	5,5,5,5	0
57	MG	YA	3245	1/1	0.88	0.30	2,2,2,2	0
57	MG	RA	3209	1/1	0.88	0.33	17,17,17,17	0
57	MG	XA	1664	1/1	0.88	0.29	8,8,8,8	0
57	MG	YA	3188	1/1	0.88	0.51	1,1,1,1	0
57	MG	QA	1603	1/1	0.88	0.93	14,14,14,14	0
57	MG	RA	3193	1/1	0.88	0.33	22,22,22,22	0
57	MG	YA	3151	1/1	0.88	0.17	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	XA	1671	1/1	0.88	0.22	3,3,3,3	0
57	MG	YA	3155	1/1	0.88	0.33	7,7,7,7	0
57	MG	YA	3218	1/1	0.88	0.36	5,5,5,5	0
57	MG	XA	1647	1/1	0.88	0.37	1,1,1,1	0
57	MG	Y7	101	1/1	0.88	0.73	15,15,15,15	0
57	MG	XA	1648	1/1	0.88	0.57	3,3,3,3	0
57	MG	RA	3195	1/1	0.88	0.26	24,24,24,24	0
57	MG	RA	3233	1/1	0.89	0.64	2,2,2,2	0
57	MG	RA	3083	1/1	0.89	0.39	6,6,6,6	0
57	MG	QA	1636	1/1	0.89	0.12	16,16,16,16	0
57	MG	YA	3224	1/1	0.89	0.38	0,0,0,0	0
57	MG	YA	3146	1/1	0.89	0.44	0,0,0,0	0
57	MG	RA	3088	1/1	0.89	0.61	15,15,15,15	0
57	MG	RA	3114	1/1	0.89	0.33	1,1,1,1	0
57	MG	RA	3033	1/1	0.89	0.58	50,50,50,50	0
57	MG	YA	3066	1/1	0.89	0.59	7,7,7,7	0
57	MG	YA	3074	1/1	0.89	0.18	11,11,11,11	0
57	MG	YA	3075	1/1	0.89	0.26	0,0,0,0	0
57	MG	XA	1657	1/1	0.89	0.42	8,8,8,8	0
57	MG	R5	101	1/1	0.89	0.52	5,5,5,5	0
57	MG	YA	3084	1/1	0.89	0.27	17,17,17,17	0
57	MG	RA	3125	1/1	0.89	0.52	1,1,1,1	0
57	MG	XA	1603	1/1	0.89	0.62	8,8,8,8	0
57	MG	RA	3155	1/1	0.89	0.39	10,10,10,10	0
57	MG	RA	3177	1/1	0.89	0.79	7,7,7,7	0
57	MG	YA	3263	1/1	0.89	0.76	4,4,4,4	0
57	MG	YA	3269	1/1	0.89	0.78	1,1,1,1	0
57	MG	RA	3052	1/1	0.89	0.87	50,50,50,50	0
57	MG	XA	1630	1/1	0.89	0.64	10,10,10,10	0
57	MG	YA	3200	1/1	0.89	0.92	4,4,4,4	0
57	MG	RA	3182	1/1	0.89	0.21	4,4,4,4	0
57	MG	YA	3209	1/1	0.89	0.28	15,15,15,15	0
57	MG	RA	3185	1/1	0.89	0.18	9,9,9,9	0
57	MG	RE	302	1/1	0.90	0.25	1,1,1,1	0
57	MG	QH	201	1/1	0.90	0.21	47,47,47,47	0
57	MG	RR	202	1/1	0.90	0.34	0,0,0,0	0
57	MG	XA	1652	1/1	0.90	0.33	66,66,66,66	0
57	MG	RA	3175	1/1	0.90	0.12	1,1,1,1	0
57	MG	YA	3071	1/1	0.90	0.19	28,28,28,28	0
57	MG	RA	3162	1/1	0.90	0.23	2,2,2,2	0
57	MG	YA	3160	1/1	0.90	0.49	1,1,1,1	0
57	MG	YA	3239	1/1	0.90	0.20	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3117	1/1	0.90	0.15	25,25,25,25	0
57	MG	RA	3178	1/1	0.90	0.25	1,1,1,1	0
57	MG	XA	1605	1/1	0.90	0.57	3,3,3,3	0
57	MG	RA	3026	1/1	0.90	0.63	50,50,50,50	0
57	MG	YA	3173	1/1	0.90	0.30	35,35,35,35	0
57	MG	YA	3174	1/1	0.90	0.22	40,40,40,40	0
57	MG	RA	3005	1/1	0.90	0.62	12,12,12,12	0
57	MG	RA	3170	1/1	0.90	1.02	5,5,5,5	0
57	MG	YA	3101	1/1	0.90	0.59	2,2,2,2	0
57	MG	YA	3256	1/1	0.90	0.39	7,7,7,7	0
57	MG	YA	3103	1/1	0.90	0.14	5,5,5,5	0
57	MG	YA	3185	1/1	0.90	0.14	2,2,2,2	0
57	MG	RA	3187	1/1	0.90	0.48	3,3,3,3	0
57	MG	XA	1631	1/1	0.90	0.20	31,31,31,31	0
57	MG	XV	102	1/1	0.90	0.66	9,9,9,9	0
57	MG	XA	1636	1/1	0.90	0.38	3,3,3,3	0
57	MG	RA	3188	1/1	0.90	0.34	5,5,5,5	0
57	MG	RA	3171	1/1	0.90	0.19	12,12,12,12	0
57	MG	RA	3140	1/1	0.90	0.73	9,9,9,9	0
57	MG	RA	3223	1/1	0.91	0.30	47,47,47,47	0
57	MG	XA	1609	1/1	0.91	0.52	10,10,10,10	0
57	MG	RA	3044	1/1	0.91	0.85	10,10,10,10	0
57	MG	RA	3198	1/1	0.91	0.18	12,12,12,12	0
57	MG	XA	1653	1/1	0.91	0.35	8,8,8,8	0
57	MG	YA	3099	1/1	0.91	0.76	10,10,10,10	0
57	MG	YA	3192	1/1	0.91	0.52	11,11,11,11	0
57	MG	YA	3153	1/1	0.91	0.41	20,20,20,20	0
57	MG	QA	1657	1/1	0.91	0.14	7,7,7,7	0
57	MG	YA	3156	1/1	0.91	0.58	2,2,2,2	0
57	MG	YA	3201	1/1	0.91	0.56	9,9,9,9	0
57	MG	YA	3202	1/1	0.91	0.25	1,1,1,1	0
57	MG	YA	3203	1/1	0.91	0.15	53,53,53,53	0
57	MG	RA	3214	1/1	0.91	0.34	5,5,5,5	0
57	MG	XA	1635	1/1	0.91	0.57	4,4,4,4	0
57	MG	YA	3265	1/1	0.91	1.06	4,4,4,4	0
57	MG	YA	3268	1/1	0.91	0.53	6,6,6,6	0
57	MG	RA	3018	1/1	0.91	0.73	6,6,6,6	0
57	MG	RA	3001	1/1	0.91	0.59	3,3,3,3	0
57	MG	XA	1641	1/1	0.91	1.19	21,21,21,21	0
57	MG	YA	3169	1/1	0.91	0.16	6,6,6,6	0
57	MG	RA	3194	1/1	0.91	0.28	6,6,6,6	0
58	ZN	QD	301	1/1	0.91	0.35	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	XA	1666	1/1	0.91	0.32	50,50,50,50	0
58	ZN	Y9	101	1/1	0.91	0.47	138,138,138,138	0
57	MG	QA	1628	1/1	0.91	0.21	8,8,8,8	0
57	MG	RA	3174	1/1	0.92	0.52	4,4,4,4	0
57	MG	XA	1621	1/1	0.92	0.33	3,3,3,3	0
57	MG	YA	3194	1/1	0.92	0.17	0,0,0,0	0
57	MG	XA	1624	1/1	0.92	0.59	3,3,3,3	0
57	MG	YA	3198	1/1	0.92	0.25	51,51,51,51	0
57	MG	QA	1643	1/1	0.92	0.29	33,33,33,33	0
57	MG	RA	3028	1/1	0.92	0.46	14,14,14,14	0
57	MG	XM	201	1/1	0.92	0.11	85,85,85,85	0
57	MG	YA	3127	1/1	0.92	0.29	2,2,2,2	0
57	MG	RA	3101	1/1	0.92	0.45	11,11,11,11	0
57	MG	RA	3230	1/1	0.92	0.74	5,5,5,5	0
57	MG	YA	3133	1/1	0.92	0.13	1,1,1,1	0
57	MG	YA	3135	1/1	0.92	0.25	6,6,6,6	0
57	MG	YA	3002	1/1	0.92	1.06	50,50,50,50	0
57	MG	YA	3141	1/1	0.92	0.53	0,0,0,0	0
57	MG	YA	3222	1/1	0.92	0.19	8,8,8,8	0
57	MG	YA	3006	1/1	0.92	0.56	3,3,3,3	0
57	MG	YA	3225	1/1	0.92	0.24	10,10,10,10	0
57	MG	RA	3110	1/1	0.92	0.48	3,3,3,3	0
57	MG	YA	3234	1/1	0.92	0.53	17,17,17,17	0
57	MG	YA	3149	1/1	0.92	0.20	15,15,15,15	0
57	MG	RA	3055	1/1	0.92	0.93	5,5,5,5	0
57	MG	YA	3016	1/1	0.92	0.22	6,6,6,6	0
57	MG	YA	3024	1/1	0.92	0.54	50,50,50,50	0
57	MG	YA	3154	1/1	0.92	0.23	1,1,1,1	0
57	MG	RA	3235	1/1	0.92	0.62	1,1,1,1	0
57	MG	RA	3116	1/1	0.92	0.46	9,9,9,9	0
57	MG	YA	3157	1/1	0.92	0.63	0,0,0,0	0
57	MG	QA	1612	1/1	0.92	0.46	7,7,7,7	0
57	MG	RE	301	1/1	0.92	0.27	12,12,12,12	0
57	MG	YA	3050	1/1	0.92	0.45	50,50,50,50	0
57	MG	QA	1613	1/1	0.92	0.68	15,15,15,15	0
57	MG	RA	3036	1/1	0.92	0.78	6,6,6,6	0
57	MG	XA	1649	1/1	0.92	0.20	0,0,0,0	0
57	MG	YA	3171	1/1	0.92	0.40	13,13,13,13	0
57	MG	YA	3261	1/1	0.92	0.30	4,4,4,4	0
57	MG	RA	3216	1/1	0.92	0.52	7,7,7,7	0
57	MG	RA	3129	1/1	0.92	0.21	31,31,31,31	0
57	MG	QA	1614	1/1	0.92	0.51	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3131	1/1	0.92	0.68	9,9,9,9	0
57	MG	QA	1609	1/1	0.92	0.72	4,4,4,4	0
57	MG	YA	3179	1/1	0.92	0.24	0,0,0,0	0
57	MG	YB	203	1/1	0.92	0.23	37,37,37,37	0
57	MG	YA	3181	1/1	0.92	0.34	3,3,3,3	0
57	MG	QA	1640	1/1	0.92	0.35	9,9,9,9	0
57	MG	XA	1606	1/1	0.92	0.56	10,10,10,10	0
57	MG	QA	1642	1/1	0.92	0.49	16,16,16,16	0
58	ZN	R9	101	1/1	0.92	0.40	145,145,145,145	0
57	MG	YA	3186	1/1	0.92	0.62	11,11,11,11	0
57	MG	XA	1608	1/1	0.92	0.13	37,37,37,37	0
57	MG	RA	3041	1/1	0.93	0.44	4,4,4,4	0
57	MG	XA	1654	1/1	0.93	0.29	26,26,26,26	0
57	MG	YA	3028	1/1	0.93	0.37	6,6,6,6	0
57	MG	RA	3238	1/1	0.93	0.49	16,16,16,16	0
57	MG	QA	1619	1/1	0.93	0.45	4,4,4,4	0
57	MG	XA	1625	1/1	0.93	0.17	5,5,5,5	0
57	MG	XA	1661	1/1	0.93	0.16	2,2,2,2	0
57	MG	YA	3132	1/1	0.93	0.10	5,5,5,5	0
57	MG	RB	201	1/1	0.93	0.13	8,8,8,8	0
57	MG	YA	3053	1/1	0.93	0.53	4,4,4,4	0
57	MG	YA	3054	1/1	0.93	0.31	1,1,1,1	0
57	MG	RA	3089	1/1	0.93	0.57	11,11,11,11	0
57	MG	YA	3189	1/1	0.93	0.55	6,6,6,6	0
57	MG	YA	3142	1/1	0.93	0.66	19,19,19,19	0
57	MG	RA	3045	1/1	0.93	0.12	1,1,1,1	0
57	MG	YA	3069	1/1	0.93	0.51	2,2,2,2	0
57	MG	YA	3259	1/1	0.93	0.72	8,8,8,8	0
57	MG	RA	3067	1/1	0.93	0.25	2,2,2,2	0
57	MG	QA	1602	1/1	0.93	0.81	12,12,12,12	0
57	MG	QA	1656	1/1	0.93	0.14	30,30,30,30	0
57	MG	QA	1622	1/1	0.93	0.33	14,14,14,14	0
57	MG	YA	3267	1/1	0.93	0.41	4,4,4,4	0
57	MG	RA	3152	1/1	0.93	0.14	4,4,4,4	0
57	MG	RA	3050	1/1	0.93	0.56	11,11,11,11	0
57	MG	XA	1601	1/1	0.93	0.95	1,1,1,1	0
57	MG	YA	3088	1/1	0.93	0.58	50,50,50,50	0
57	MG	YA	3094	1/1	0.93	0.91	11,11,11,11	0
57	MG	RA	3079	1/1	0.93	0.68	5,5,5,5	0
57	MG	RA	3231	1/1	0.93	0.30	14,14,14,14	0
57	MG	RA	3232	1/1	0.93	0.39	13,13,13,13	0
57	MG	QA	1627	1/1	0.93	0.21	10,10,10,10	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	RA	3218	1/1	0.93	0.32	23,23,23,23	0
57	MG	YA	3115	1/1	0.93	0.32	4,4,4,4	0
57	MG	YA	3229	1/1	0.93	0.24	3,3,3,3	0
57	MG	YA	3150	1/1	0.94	0.41	4,4,4,4	0
57	MG	RB	202	1/1	0.94	0.08	4,4,4,4	0
57	MG	YA	3211	1/1	0.94	0.60	7,7,7,7	0
57	MG	QA	1651	1/1	0.94	0.22	9,9,9,9	0
57	MG	QA	1644	1/1	0.94	0.26	4,4,4,4	0
57	MG	XA	1634	1/1	0.94	0.55	0,0,0,0	0
57	MG	YA	3221	1/1	0.94	0.50	18,18,18,18	0
57	MG	RA	3112	1/1	0.94	0.17	6,6,6,6	0
57	MG	XA	1668	1/1	0.94	0.23	18,18,18,18	0
57	MG	XA	1670	1/1	0.94	0.17	43,43,43,43	0
57	MG	RA	3164	1/1	0.94	0.16	4,4,4,4	0
57	MG	XA	1637	1/1	0.94	0.43	25,25,25,25	0
57	MG	YA	3164	1/1	0.94	0.46	8,8,8,8	0
57	MG	YA	3086	1/1	0.94	0.78	6,6,6,6	0
57	MG	QA	1633	1/1	0.94	0.58	4,4,4,4	0
57	MG	XV	101	1/1	0.94	0.45	14,14,14,14	0
57	MG	YA	3168	1/1	0.94	0.29	41,41,41,41	0
57	MG	YA	3240	1/1	0.94	0.17	72,72,72,72	0
57	MG	RA	3183	1/1	0.94	0.33	57,57,57,57	0
57	MG	QA	1648	1/1	0.94	0.32	12,12,12,12	0
57	MG	RA	3186	1/1	0.94	0.23	8,8,8,8	0
57	MG	YA	3004	1/1	0.94	0.40	12,12,12,12	0
57	MG	YA	3106	1/1	0.94	0.34	8,8,8,8	0
57	MG	RA	3010	1/1	0.94	0.51	14,14,14,14	0
57	MG	YA	3011	1/1	0.94	0.32	0,0,0,0	0
57	MG	YA	3251	1/1	0.94	0.17	9,9,9,9	0
57	MG	RA	3211	1/1	0.94	0.24	2,2,2,2	0
57	MG	YA	3253	1/1	0.94	0.59	6,6,6,6	0
57	MG	YA	3180	1/1	0.94	0.41	38,38,38,38	0
57	MG	RA	3013	1/1	0.94	0.53	4,4,4,4	0
57	MG	YA	3258	1/1	0.94	0.52	1,1,1,1	0
57	MG	YA	3015	1/1	0.94	1.11	50,50,50,50	0
57	MG	RA	3143	1/1	0.94	0.30	7,7,7,7	0
57	MG	YA	3124	1/1	0.94	0.21	9,9,9,9	0
57	MG	XA	1651	1/1	0.94	0.27	25,25,25,25	0
57	MG	RA	3215	1/1	0.94	0.17	27,27,27,27	0
57	MG	YA	3266	1/1	0.94	0.27	2,2,2,2	0
57	MG	RA	3145	1/1	0.94	0.47	3,3,3,3	0
57	MG	YA	3032	1/1	0.94	0.28	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	RA	3236	1/1	0.94	0.44	0,0,0,0	0
57	MG	YA	3043	1/1	0.94	1.15	2,2,2,2	0
57	MG	XA	1620	1/1	0.94	0.16	2,2,2,2	0
57	MG	RA	3237	1/1	0.94	1.23	1,1,1,1	0
57	MG	YE	301	1/1	0.94	0.18	0,0,0,0	0
57	MG	QA	1607	1/1	0.94	0.11	13,13,13,13	0
57	MG	YA	3144	1/1	0.94	0.13	4,4,4,4	0
57	MG	XA	1658	1/1	0.94	0.43	9,9,9,9	0
57	MG	QA	1639	1/1	0.94	0.19	3,3,3,3	0
57	MG	YA	3205	1/1	0.94	0.14	10,10,10,10	0
57	MG	RA	3004	1/1	0.94	0.96	10,10,10,10	0
57	MG	YA	3208	1/1	0.94	0.21	15,15,15,15	0
57	MG	YA	3215	1/1	0.95	0.18	14,14,14,14	0
57	MG	RA	3014	1/1	0.95	0.28	13,13,13,13	0
57	MG	YA	3078	1/1	0.95	0.36	2,2,2,2	0
57	MG	RA	3190	1/1	0.95	0.20	16,16,16,16	0
57	MG	RA	3120	1/1	0.95	0.22	1,1,1,1	0
57	MG	RA	3047	1/1	0.95	0.62	5,5,5,5	0
57	MG	RA	3029	1/1	0.95	0.37	1,1,1,1	0
57	MG	YA	3227	1/1	0.95	0.28	0,0,0,0	0
57	MG	RA	3015	1/1	0.95	0.69	5,5,5,5	0
57	MG	YA	3161	1/1	0.95	0.20	1,1,1,1	0
57	MG	YA	3163	1/1	0.95	0.21	4,4,4,4	0
57	MG	RA	3016	1/1	0.95	0.39	8,8,8,8	0
57	MG	YA	3096	1/1	0.95	0.52	3,3,3,3	0
57	MG	YA	3007	1/1	0.95	0.17	7,7,7,7	0
57	MG	QA	1625	1/1	0.95	0.30	0,0,0,0	0
57	MG	RA	3020	1/1	0.95	0.73	50,50,50,50	0
57	MG	RA	3134	1/1	0.95	0.13	25,25,25,25	0
57	MG	RA	3135	1/1	0.95	0.17	7,7,7,7	0
57	MG	YA	3111	1/1	0.95	0.21	15,15,15,15	0
57	MG	RA	3058	1/1	0.95	0.74	3,3,3,3	0
57	MG	YA	3019	1/1	0.95	0.47	5,5,5,5	0
57	MG	XA	1611	1/1	0.95	0.31	7,7,7,7	0
57	MG	YA	3118	1/1	0.95	0.28	14,14,14,14	0
57	MG	YA	3026	1/1	0.95	1.12	1,1,1,1	0
57	MG	YA	3120	1/1	0.95	0.60	8,8,8,8	0
57	MG	RA	3204	1/1	0.95	0.27	18,18,18,18	0
57	MG	RA	3092	1/1	0.95	0.53	7,7,7,7	0
57	MG	YA	3255	1/1	0.95	1.32	0,0,0,0	0
57	MG	YA	3123	1/1	0.95	0.19	18,18,18,18	0
57	MG	XA	1622	1/1	0.95	0.13	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3125	1/1	0.95	0.41	12,12,12,12	0
57	MG	YA	3033	1/1	0.95	0.45	4,4,4,4	0
57	MG	XA	1660	1/1	0.95	0.14	24,24,24,24	0
57	MG	YA	3190	1/1	0.95	0.24	21,21,21,21	0
57	MG	YA	3264	1/1	0.95	0.17	9,9,9,9	0
57	MG	RA	3093	1/1	0.95	0.59	10,10,10,10	0
57	MG	RA	3094	1/1	0.95	0.47	0,0,0,0	0
57	MG	QA	1641	1/1	0.95	0.23	7,7,7,7	0
57	MG	YA	3134	1/1	0.95	0.78	11,11,11,11	0
57	MG	XA	1628	1/1	0.95	0.54	10,10,10,10	0
57	MG	YA	3136	1/1	0.95	0.12	21,21,21,21	0
57	MG	YA	3052	1/1	0.95	0.70	14,14,14,14	0
57	MG	RA	3102	1/1	0.95	0.27	4,4,4,4	0
57	MG	RA	3181	1/1	0.95	0.20	3,3,3,3	0
57	MG	RA	3043	1/1	0.95	0.21	10,10,10,10	0
57	MG	RA	3111	1/1	0.95	0.46	11,11,11,11	0
57	MG	QA	1605	1/1	0.95	1.07	7,7,7,7	0
57	MG	RA	3068	1/1	0.95	0.12	6,6,6,6	0
57	MG	YA	3072	1/1	0.95	0.21	2,2,2,2	0
57	MG	XA	1672	1/1	0.95	0.41	0,0,0,0	0
57	MG	QA	1611	1/1	0.95	0.31	6,6,6,6	0
57	MG	RA	3189	1/1	0.96	0.27	4,4,4,4	0
57	MG	XA	1643	1/1	0.96	0.37	5,5,5,5	0
57	MG	RA	3149	1/1	0.96	0.15	20,20,20,20	0
57	MG	YA	3204	1/1	0.96	0.10	11,11,11,11	0
57	MG	RA	3150	1/1	0.96	0.32	37,37,37,37	0
57	MG	RA	3151	1/1	0.96	0.41	9,9,9,9	0
57	MG	YA	3034	1/1	0.96	0.54	2,2,2,2	0
57	MG	YA	3035	1/1	0.96	0.33	9,9,9,9	0
57	MG	RA	3031	1/1	0.96	0.74	5,5,5,5	0
57	MG	YA	3041	1/1	0.96	0.73	0,0,0,0	0
57	MG	YA	3139	1/1	0.96	0.40	7,7,7,7	0
57	MG	QA	1604	1/1	0.96	0.27	0,0,0,0	0
57	MG	RA	3154	1/1	0.96	0.18	11,11,11,11	0
57	MG	RA	3019	1/1	0.96	0.38	8,8,8,8	0
57	MG	YA	3143	1/1	0.96	0.15	8,8,8,8	0
57	MG	RA	3074	1/1	0.96	0.12	8,8,8,8	0
57	MG	RA	3035	1/1	0.96	0.41	11,11,11,11	0
57	MG	RA	3201	1/1	0.96	0.77	10,10,10,10	0
57	MG	RF	301	1/1	0.96	0.39	2,2,2,2	0
57	MG	RA	3160	1/1	0.96	0.33	4,4,4,4	0
57	MG	RA	3161	1/1	0.96	0.13	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3232	1/1	0.96	0.41	2,2,2,2	0
57	MG	YA	3068	1/1	0.96	0.51	2,2,2,2	0
57	MG	XA	1659	1/1	0.96	0.32	0,0,0,0	0
57	MG	YA	3070	1/1	0.96	0.40	15,15,15,15	0
57	MG	RA	3119	1/1	0.96	0.39	3,3,3,3	0
57	MG	RA	3205	1/1	0.96	0.31	12,12,12,12	0
57	MG	RA	3077	1/1	0.96	0.55	0,0,0,0	0
57	MG	YA	3158	1/1	0.96	0.27	6,6,6,6	0
57	MG	RA	3051	1/1	0.96	0.47	7,7,7,7	0
57	MG	RA	3167	1/1	0.96	0.23	3,3,3,3	0
57	MG	RA	3122	1/1	0.96	0.56	5,5,5,5	0
57	MG	QA	1645	1/1	0.96	0.13	38,38,38,38	0
57	MG	YA	3082	1/1	0.96	0.23	3,3,3,3	0
57	MG	RA	3126	1/1	0.96	0.44	2,2,2,2	0
57	MG	RA	3084	1/1	0.96	0.16	4,4,4,4	0
57	MG	RA	3053	1/1	0.96	0.16	2,2,2,2	0
57	MG	QA	1621	1/1	0.96	0.11	5,5,5,5	0
57	MG	YA	3089	1/1	0.96	0.43	5,5,5,5	0
57	MG	XA	1618	1/1	0.96	0.50	3,3,3,3	0
57	MG	YA	3095	1/1	0.96	0.48	2,2,2,2	0
57	MG	RA	3217	1/1	0.96	0.21	74,74,74,74	0
57	MG	YA	3097	1/1	0.96	0.65	5,5,5,5	0
57	MG	RA	3024	1/1	0.96	0.23	16,16,16,16	0
57	MG	RA	3090	1/1	0.96	0.15	75,75,75,75	0
57	MG	YA	3178	1/1	0.96	0.13	2,2,2,2	0
57	MG	RA	3091	1/1	0.96	0.44	9,9,9,9	0
57	MG	XX	102	1/1	0.96	0.09	50,50,50,50	0
57	MG	YA	3104	1/1	0.96	0.59	10,10,10,10	0
57	MG	RA	3136	1/1	0.96	0.37	0,0,0,0	0
57	MG	RA	3061	1/1	0.96	0.16	53,53,53,53	0
57	MG	QA	1616	1/1	0.96	0.09	29,29,29,29	0
57	MG	RA	3180	1/1	0.96	0.11	6,6,6,6	0
57	MG	YA	3116	1/1	0.96	0.42	3,3,3,3	0
57	MG	RA	3139	1/1	0.96	0.24	2,2,2,2	0
57	MG	QA	1663	1/1	0.96	0.10	47,47,47,47	0
57	MG	RA	3095	1/1	0.96	0.80	1,1,1,1	0
57	MG	YQ	201	1/1	0.96	0.21	99,99,99,99	0
57	MG	RA	3184	1/1	0.96	0.26	8,8,8,8	0
57	MG	RA	3064	1/1	0.96	0.18	5,5,5,5	0
57	MG	YA	3195	1/1	0.96	0.39	9,9,9,9	0
57	MG	RA	3008	1/1	0.96	0.46	0,0,0,0	0
57	MG	RA	3017	1/1	0.96	0.39	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	RA	3147	1/1	0.96	0.23	9,9,9,9	0
57	MG	YA	3199	1/1	0.97	0.11	55,55,55,55	0
57	MG	YA	3129	1/1	0.97	0.70	15,15,15,15	0
57	MG	YA	3130	1/1	0.97	0.21	20,20,20,20	0
57	MG	YA	3058	1/1	0.97	0.52	15,15,15,15	0
57	MG	YA	3059	1/1	0.97	0.32	5,5,5,5	0
57	MG	YA	3061	1/1	0.97	0.12	17,17,17,17	0
57	MG	QA	1654	1/1	0.97	0.13	17,17,17,17	0
57	MG	YA	3064	1/1	0.97	0.35	8,8,8,8	0
57	MG	RA	3002	1/1	0.97	0.89	6,6,6,6	0
57	MG	YA	3137	1/1	0.97	0.21	10,10,10,10	0
57	MG	YA	3138	1/1	0.97	0.12	0,0,0,0	0
57	MG	QA	1617	1/1	0.97	0.20	4,4,4,4	0
57	MG	RA	3115	1/1	0.97	0.44	6,6,6,6	0
57	MG	XA	1644	1/1	0.97	0.14	5,5,5,5	0
57	MG	YA	3217	1/1	0.97	0.17	35,35,35,35	0
57	MG	XA	1645	1/1	0.97	0.23	1,1,1,1	0
57	MG	RA	3086	1/1	0.97	0.24	0,0,0,0	0
57	MG	YA	3003	1/1	0.97	0.17	2,2,2,2	0
57	MG	RA	3012	1/1	0.97	0.50	4,4,4,4	0
57	MG	YA	3223	1/1	0.97	0.42	34,34,34,34	0
57	MG	YA	3005	1/1	0.97	0.25	3,3,3,3	0
57	MG	YA	3077	1/1	0.97	0.30	2,2,2,2	0
57	MG	RA	3144	1/1	0.97	0.26	0,0,0,0	0
57	MG	YA	3228	1/1	0.97	0.50	17,17,17,17	0
57	MG	RA	3200	1/1	0.97	0.14	1,1,1,1	0
57	MG	YA	3081	1/1	0.97	0.50	9,9,9,9	0
57	MG	YA	3010	1/1	0.97	0.40	5,5,5,5	0
57	MG	YA	3233	1/1	0.97	0.22	7,7,7,7	0
57	MG	YA	3083	1/1	0.97	0.50	9,9,9,9	0
57	MG	RA	3118	1/1	0.97	0.22	2,2,2,2	0
57	MG	RA	3146	1/1	0.97	0.13	5,5,5,5	0
57	MG	XA	1610	1/1	0.97	0.23	3,3,3,3	0
57	MG	YA	3087	1/1	0.97	0.68	11,11,11,11	0
57	MG	RA	3065	1/1	0.97	0.37	7,7,7,7	0
57	MG	XA	1614	1/1	0.97	0.15	26,26,26,26	0
57	MG	YA	3093	1/1	0.97	0.36	7,7,7,7	0
57	MG	YA	3162	1/1	0.97	0.18	0,0,0,0	0
57	MG	RA	3021	1/1	0.97	0.22	2,2,2,2	0
57	MG	YA	3021	1/1	0.97	0.43	12,12,12,12	0
57	MG	RA	3034	1/1	0.97	0.86	9,9,9,9	0
57	MG	QA	1647	1/1	0.97	0.26	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3098	1/1	0.97	0.29	1,1,1,1	0
57	MG	RA	3124	1/1	0.97	0.34	10,10,10,10	0
57	MG	QA	1635	1/1	0.97	0.41	13,13,13,13	0
57	MG	YA	3170	1/1	0.97	0.20	8,8,8,8	0
57	MG	QA	1659	1/1	0.97	0.23	4,4,4,4	0
57	MG	YA	3102	1/1	0.97	0.48	14,14,14,14	0
57	MG	XA	1626	1/1	0.97	0.16	6,6,6,6	0
57	MG	RA	3040	1/1	0.97	0.37	14,14,14,14	0
57	MG	RA	3097	1/1	0.97	0.47	2,2,2,2	0
57	MG	RA	3054	1/1	0.97	0.28	3,3,3,3	0
57	MG	YA	3262	1/1	0.97	0.55	8,8,8,8	0
57	MG	YA	3112	1/1	0.97	0.13	21,21,21,21	0
57	MG	YA	3113	1/1	0.97	0.20	1,1,1,1	0
57	MG	YA	3040	1/1	0.97	0.55	10,10,10,10	0
57	MG	QA	1652	1/1	0.97	0.16	12,12,12,12	0
57	MG	RA	3103	1/1	0.97	0.48	9,9,9,9	0
57	MG	XA	1632	1/1	0.97	0.81	14,14,14,14	0
57	MG	YA	3046	1/1	0.97	0.40	3,3,3,3	0
57	MG	YA	3047	1/1	0.97	0.60	3,3,3,3	0
57	MG	YA	3048	1/1	0.97	0.22	4,4,4,4	0
57	MG	RA	3106	1/1	0.97	0.36	13,13,13,13	0
57	MG	XA	1669	1/1	0.97	0.19	38,38,38,38	0
57	MG	YA	3191	1/1	0.97	0.05	7,7,7,7	0
57	MG	RA	3163	1/1	0.97	1.01	12,12,12,12	0
57	MG	RA	3108	1/1	0.97	0.09	0,0,0,0	0
57	MG	RA	3027	1/1	0.97	0.49	13,13,13,13	0
57	MG	YA	3126	1/1	0.97	0.35	7,7,7,7	0
57	MG	YA	3055	1/1	0.97	0.26	0,0,0,0	0
57	MG	YA	3197	1/1	0.97	0.15	1,1,1,1	0
57	MG	YA	3056	1/1	0.97	0.18	5,5,5,5	0
57	MG	YA	3060	1/1	0.98	0.59	10,10,10,10	0
57	MG	RA	3075	1/1	0.98	0.19	3,3,3,3	0
57	MG	RA	3123	1/1	0.98	0.12	7,7,7,7	0
57	MG	RA	3096	1/1	0.98	0.58	4,4,4,4	0
57	MG	RR	201	1/1	0.98	0.24	13,13,13,13	0
57	MG	YA	3206	1/1	0.98	0.34	26,26,26,26	0
57	MG	XA	1640	1/1	0.98	0.12	75,75,75,75	0
57	MG	RA	3059	1/1	0.98	0.44	11,11,11,11	0
57	MG	RA	3156	1/1	0.98	0.13	9,9,9,9	0
57	MG	RA	3098	1/1	0.98	0.63	14,14,14,14	0
57	MG	YA	3008	1/1	0.98	0.32	10,10,10,10	0
57	MG	YA	3073	1/1	0.98	0.25	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3213	1/1	0.98	0.13	19,19,19,19	0
57	MG	YA	3009	1/1	0.98	0.73	8,8,8,8	0
57	MG	YA	3216	1/1	0.98	0.16	19,19,19,19	0
57	MG	RA	3099	1/1	0.98	0.24	10,10,10,10	0
57	MG	RA	3100	1/1	0.98	0.14	2,2,2,2	0
57	MG	RA	3060	1/1	0.98	0.30	6,6,6,6	0
57	MG	YA	3220	1/1	0.98	0.66	33,33,33,33	0
57	MG	YA	3013	1/1	0.98	0.54	5,5,5,5	0
57	MG	YA	3079	1/1	0.98	0.23	4,4,4,4	0
57	MG	YA	3147	1/1	0.98	0.57	4,4,4,4	0
57	MG	YA	3148	1/1	0.98	0.14	7,7,7,7	0
57	MG	XA	1604	1/1	0.98	0.96	10,10,10,10	0
57	MG	YA	3226	1/1	0.98	0.38	1,1,1,1	0
57	MG	QV	101	1/1	0.98	0.26	1,1,1,1	0
57	MG	RA	3133	1/1	0.98	0.16	0,0,0,0	0
57	MG	YA	3017	1/1	0.98	0.17	1,1,1,1	0
57	MG	YA	3018	1/1	0.98	0.69	3,3,3,3	0
57	MG	YA	3231	1/1	0.98	0.11	45,45,45,45	0
57	MG	RA	3080	1/1	0.98	0.34	21,21,21,21	0
57	MG	RA	3105	1/1	0.98	0.47	11,11,11,11	0
57	MG	RA	3081	1/1	0.98	0.71	1,1,1,1	0
57	MG	YA	3235	1/1	0.98	0.37	3,3,3,3	0
57	MG	YA	3025	1/1	0.98	0.19	4,4,4,4	0
57	MG	RA	3196	1/1	0.98	0.18	0,0,0,0	0
57	MG	YA	3090	1/1	0.98	0.43	1,1,1,1	0
57	MG	YA	3091	1/1	0.98	0.39	13,13,13,13	0
57	MG	YA	3092	1/1	0.98	0.25	12,12,12,12	0
57	MG	YA	3241	1/1	0.98	0.18	5,5,5,5	0
57	MG	YA	3027	1/1	0.98	0.10	1,1,1,1	0
57	MG	RA	3228	1/1	0.98	0.51	11,11,11,11	0
57	MG	YA	3029	1/1	0.98	0.81	10,10,10,10	0
57	MG	XA	1612	1/1	0.98	0.17	19,19,19,19	0
57	MG	YA	3031	1/1	0.98	0.60	0,0,0,0	0
57	MG	RA	3037	1/1	0.98	0.51	5,5,5,5	0
57	MG	YA	3249	1/1	0.98	0.31	10,10,10,10	0
57	MG	XA	1615	1/1	0.98	0.28	6,6,6,6	0
57	MG	XA	1616	1/1	0.98	0.31	1,1,1,1	0
57	MG	XA	1617	1/1	0.98	0.22	15,15,15,15	0
57	MG	YA	3036	1/1	0.98	0.32	2,2,2,2	0
57	MG	YA	3038	1/1	0.98	0.16	7,7,7,7	0
57	MG	RA	3109	1/1	0.98	0.23	8,8,8,8	0
57	MG	YA	3105	1/1	0.98	0.18	4,4,4,4	0

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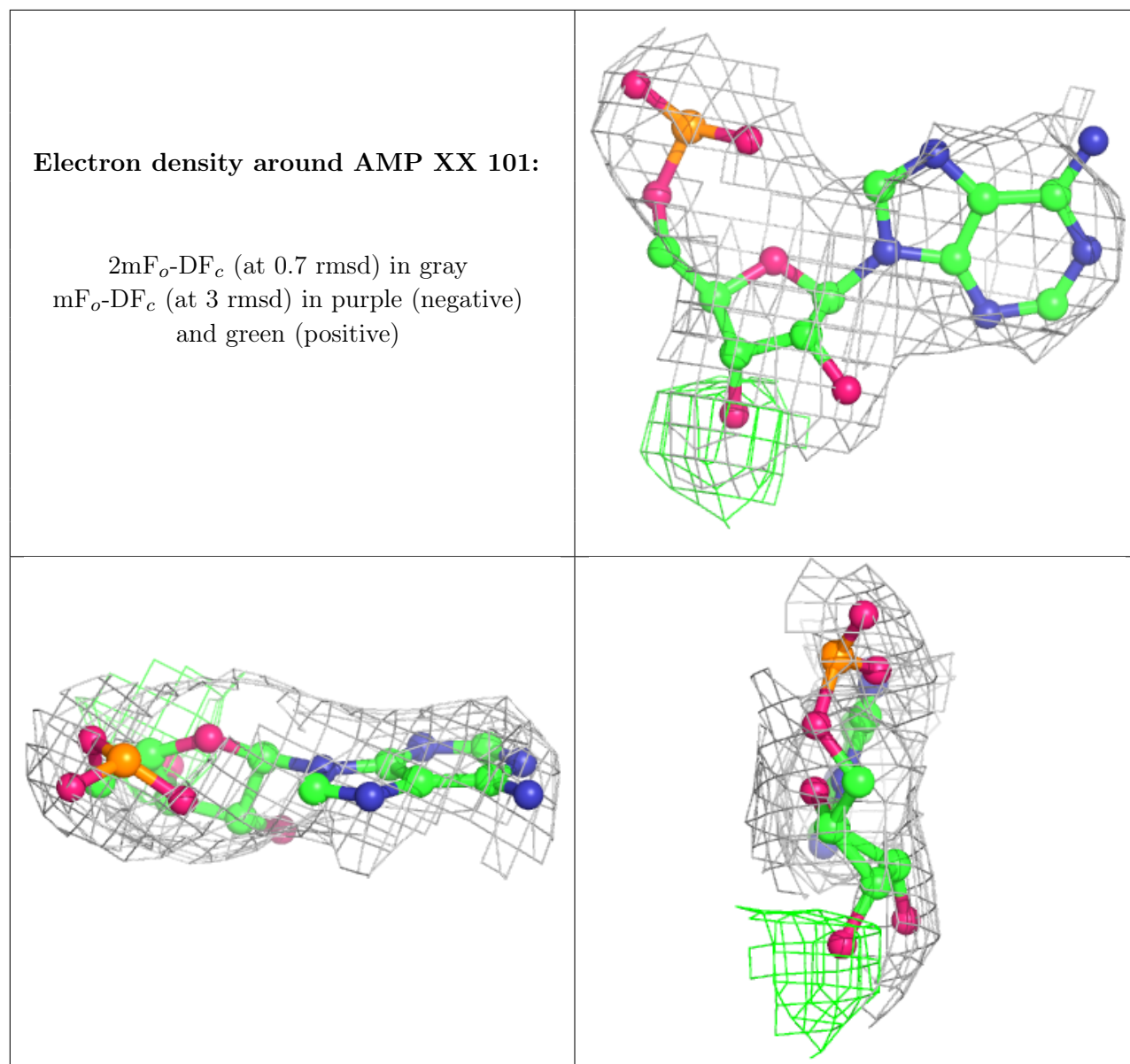
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
57	MG	XA	1619	1/1	0.98	0.28	5,5,5,5	0
57	MG	YA	3107	1/1	0.98	0.46	15,15,15,15	0
57	MG	YA	3108	1/1	0.98	0.49	1,1,1,1	0
57	MG	YA	3109	1/1	0.98	0.31	2,2,2,2	0
57	MG	QA	1608	1/1	0.98	0.09	10,10,10,10	0
57	MG	YA	3042	1/1	0.98	0.57	2,2,2,2	0
57	MG	RA	3030	1/1	0.98	0.36	5,5,5,5	0
57	MG	YA	3044	1/1	0.98	0.31	6,6,6,6	0
57	MG	RA	3023	1/1	0.98	0.32	16,16,16,16	0
57	MG	XA	1623	1/1	0.98	0.16	14,14,14,14	0
57	MG	YA	3187	1/1	0.98	0.13	2,2,2,2	0
57	MG	RA	3113	1/1	0.98	0.11	0,0,0,0	0
57	MG	RA	3087	1/1	0.98	0.93	11,11,11,11	0
57	MG	RA	3042	1/1	0.98	0.18	2,2,2,2	0
57	MG	RA	3011	1/1	0.98	0.18	6,6,6,6	0
57	MG	YA	3051	1/1	0.98	0.44	3,3,3,3	0
57	MG	QA	1630	1/1	0.98	0.15	7,7,7,7	0
57	MG	QA	1634	1/1	0.98	0.18	7,7,7,7	0
57	MG	Y5	101	1/1	0.98	0.36	6,6,6,6	0
57	MG	RA	3056	1/1	0.98	0.36	5,5,5,5	0
57	MG	RA	3072	1/1	0.98	0.41	3,3,3,3	0
57	MG	QA	1606	1/1	0.98	0.13	16,16,16,16	0
57	MG	YA	3057	1/1	0.98	0.88	4,4,4,4	0
58	ZN	XN	101	1/1	0.98	0.20	84,84,84,84	0
57	MG	XA	1633	1/1	0.98	0.21	3,3,3,3	0
57	MG	RA	3212	1/1	0.98	0.51	1,1,1,1	0
57	MG	YA	3062	1/1	0.99	0.39	6,6,6,6	0
57	MG	RA	3127	1/1	0.99	0.22	0,0,0,0	0
57	MG	YA	3037	1/1	0.99	0.25	13,13,13,13	0
57	MG	YA	3065	1/1	0.99	0.15	5,5,5,5	0
57	MG	XA	1602	1/1	0.99	0.20	7,7,7,7	0
57	MG	YA	3067	1/1	0.99	0.34	5,5,5,5	0
57	MG	RA	3128	1/1	0.99	0.44	7,7,7,7	0
57	MG	YA	3257	1/1	0.99	0.23	3,3,3,3	0
57	MG	QA	1653	1/1	0.99	0.07	67,67,67,67	0
57	MG	QA	1658	1/1	0.99	0.24	16,16,16,16	0
57	MG	RA	3038	1/1	0.99	0.32	8,8,8,8	0
57	MG	RA	3104	1/1	0.99	0.21	3,3,3,3	0
57	MG	RA	3165	1/1	0.99	0.48	13,13,13,13	0
57	MG	RA	3148	1/1	0.99	0.34	5,5,5,5	0
57	MG	YA	3020	1/1	0.99	0.86	0,0,0,0	0
57	MG	RA	3082	1/1	0.99	0.30	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(\AA^2)	Q<0.9
57	MG	YA	3022	1/1	0.99	0.28	1,1,1,1	0
57	MG	YA	3023	1/1	0.99	0.32	2,2,2,2	0
57	MG	RA	3057	1/1	0.99	0.30	2,2,2,2	0
57	MG	RA	3107	1/1	0.99	0.19	10,10,10,10	0
57	MG	YA	3110	1/1	0.99	0.12	2,2,2,2	0
57	MG	XA	1613	1/1	0.99	0.08	0,0,0,0	0
57	MG	RA	3073	1/1	0.99	0.35	2,2,2,2	0
57	MG	QM	201	1/1	0.99	0.14	44,44,44,44	0
57	MG	RA	3066	1/1	0.99	0.53	6,6,6,6	0
57	MG	QA	1610	1/1	0.99	0.23	7,7,7,7	0
57	MG	XA	1639	1/1	0.99	0.12	5,5,5,5	0
57	MG	YA	3177	1/1	0.99	0.21	3,3,3,3	0
57	MG	RA	3210	1/1	0.99	0.17	45,45,45,45	0
57	MG	QA	1660	1/1	0.99	0.75	2,2,2,2	0
57	MG	RA	3078	1/1	0.99	0.35	3,3,3,3	0
58	ZN	XD	301	1/1	0.99	0.42	50,50,50,50	0
57	MG	RA	3158	1/1	0.99	0.27	15,15,15,15	0
57	MG	YA	3214	1/1	0.99	0.20	2,2,2,2	0
57	MG	YA	3182	1/1	0.99	0.13	8,8,8,8	0
57	MG	YA	3244	1/1	1.00	0.10	9,9,9,9	0

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



6.5 Other polymers [i](#)

There are no such residues in this entry.