



# Full wwPDB X-ray Structure Validation Report ⓘ

Sep 11, 2023 – 06:52 PM EDT

PDB ID : 4L71  
Title : Crystal Structure of Frameshift Suppressor tRNA SufA6 Bound to Codon CCC-A on the Ribosome  
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.  
Deposited on : 2013-06-13  
Resolution : 3.90 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](mailto: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>.

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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 : 2.35.1  
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) : 2.35.1

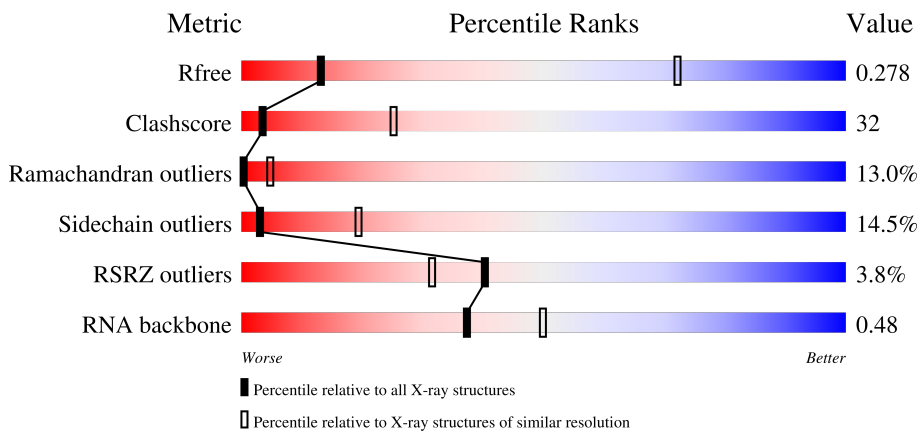
# 1 Overall quality at a glance i

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.90 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	1002 (4.14-3.66)
Clashscore	141614	1004 (4.12-3.68)
Ramachandran outliers	138981	1021 (4.14-3.66)
Sidechain outliers	138945	1014 (4.14-3.66)
RSRZ outliers	127900	1275 (4.20-3.60)
RNA backbone	3102	1040 (4.76-3.00)

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  $\geq 3$ , 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	 2% 45% 42% 11% ..
1	XA	1522	 % 43% 42% 12% ..
2	QB	256	 6% 17% 59% 16% • 7%
2	XB	256	 4% 17% 59% 16% • 7%

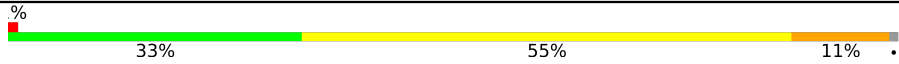
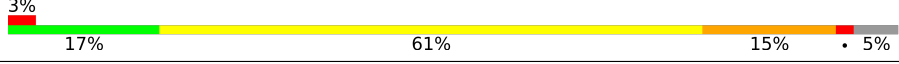
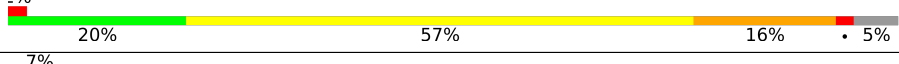
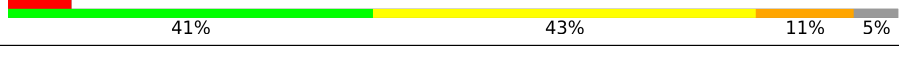
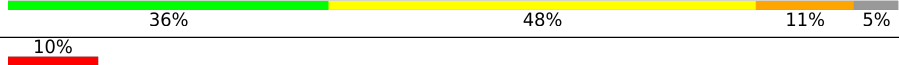
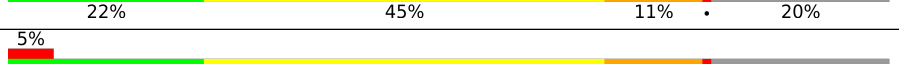
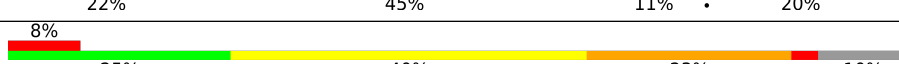
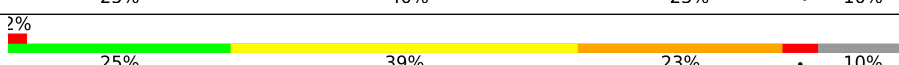
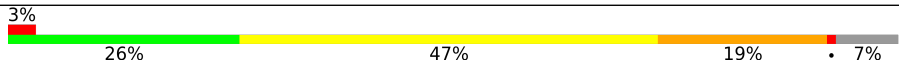
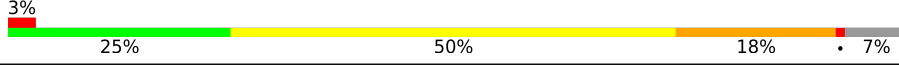
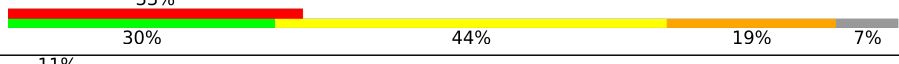
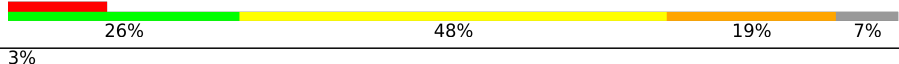
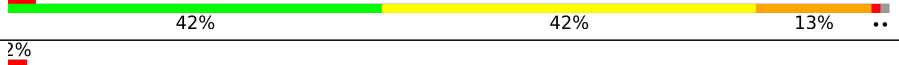

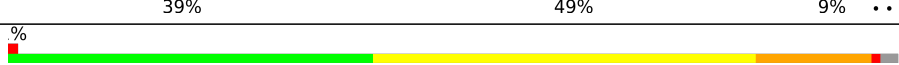
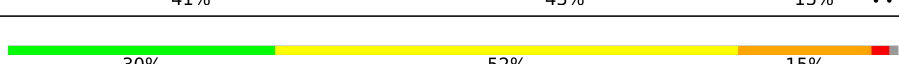
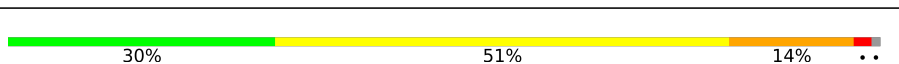
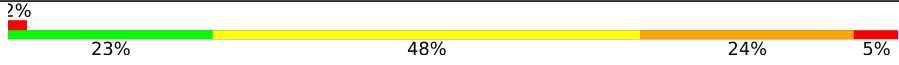
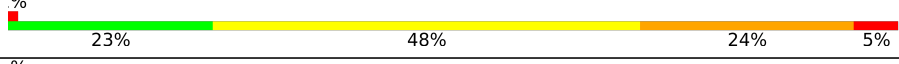


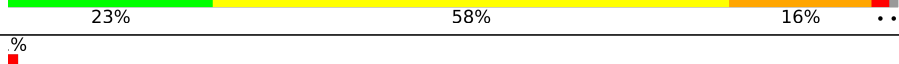
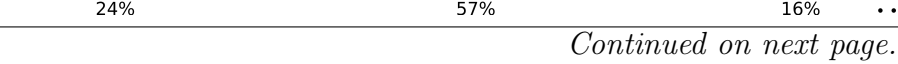


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Mol	Chain	Length	Quality of chain
3	QC	239	2% 23% 52% 10% 14%
3	XC	239	2% 23% 53% 9% 14%
4	QD	209	2% 26% 59% 13%
4	XD	209	2% 26% 60% 12%
5	QE	162	4% 28% 53% 12% 7%
5	XE	162	2% 31% 49% 13% 7%
6	QF	101	2% 25% 59% 15%
6	XF	101	2% 25% 58% 16%
7	QG	156	11% 28% 62% 10%
7	XG	156	4% 29% 60% 10%
8	QH	138	2% 28% 59% 12%
8	XH	138	2% 27% 60% 12%
9	QI	128	10% 22% 64% 12%
9	XI	128	2% 20% 64% 15%
10	QJ	105	18% 18% 63% 12% 6%
10	XJ	105	10% 16% 65% 12% 6%
11	QK	129	11% 32% 50% 9% 8%
11	XK	129	4% 32% 49% 11% 8%
12	QL	132	6% 30% 49% 12% 5%
12	XL	132	2% 29% 48% 14% 5%
13	QM	126	10% 20% 53% 21%
13	XM	126	2% 20% 52% 23%
14	QN	61	8% 16% 57% 16% 8%
14	XN	61	13% 62% 18% 5%
15	QO	89	7% 33% 55% 11%

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Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	RA	2916	
22	YA	2916	
23	RB	122	
23	YB	122	
24	RD	276	
24	YD	276	
25	RE	206	
25	YE	206	
26	RF	210	
26	YF	210	
27	RG	182	
27	YG	182	



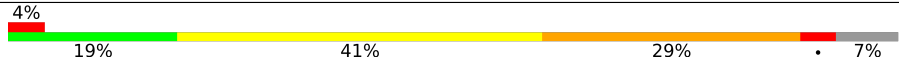
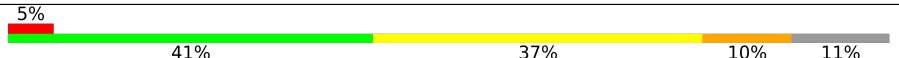
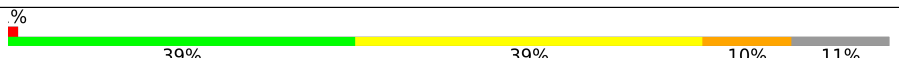

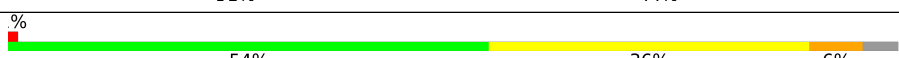
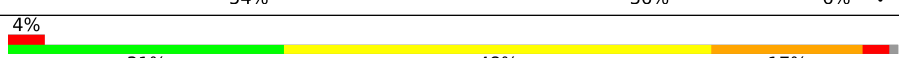
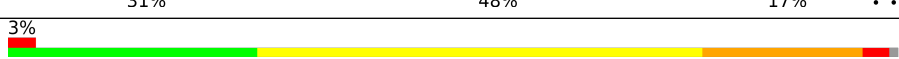
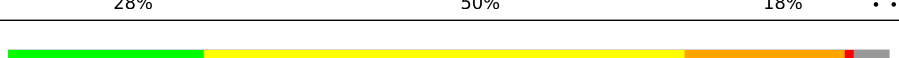
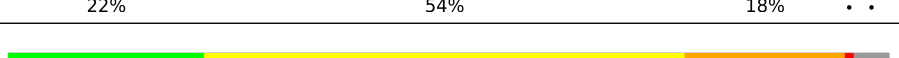
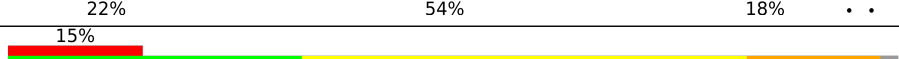




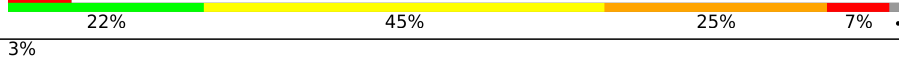
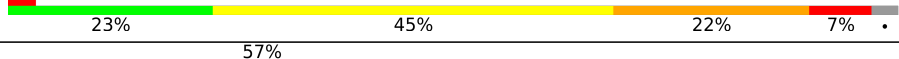



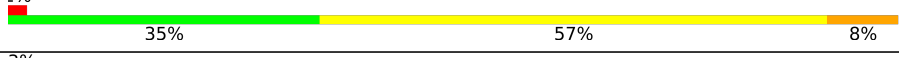
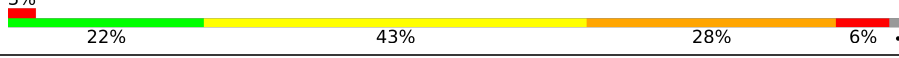


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Mol	Chain	Length	Quality of chain
28	RH	180	
28	YH	180	
29	RI	148	
29	YI	148	
30	RN	140	
30	YN	140	
31	RO	122	
31	YO	122	
32	RP	150	
32	YP	150	
33	RQ	141	
33	YQ	141	
34	RR	118	
34	YR	118	
35	RS	112	
35	YS	112	
36	RT	146	
36	YT	146	
37	RU	118	
37	YU	118	
38	RV	101	
38	YV	101	
39	RW	113	
39	YW	113	
40	RX	96	

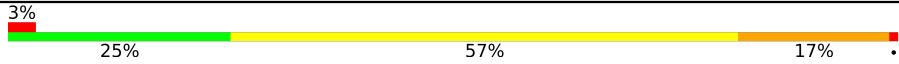



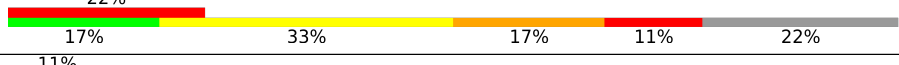
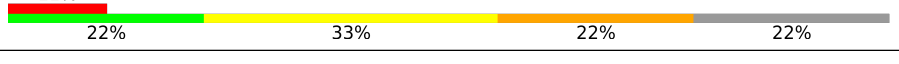


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Mol	Chain	Length	Quality of chain
40	YX	96	
41	RY	110	
41	YY	110	
42	RZ	206	
42	YZ	206	
43	R0	85	
43	Y0	85	
44	R1	98	
44	Y1	98	
45	R2	72	
45	Y2	72	
46	R3	60	
46	Y3	60	
47	R4	71	
47	Y4	71	
48	R5	60	
48	Y5	60	
49	R6	54	
49	Y6	54	
50	R7	49	
50	Y7	49	
51	R8	65	
51	Y8	65	
52	R9	37	
52	Y9	37	

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Mol	Chain	Length	Quality of chain
53	QV	77	
53	XV	77	
54	QX	25	
54	XX	25	
55	QY	18	
55	XY	18	
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	1602	-	-	-	X
57	MG	QA	1628	-	-	-	X
57	MG	QA	1665	-	-	-	X
57	MG	RA	3004	-	-	-	X
57	MG	RA	3034	-	-	-	X
57	MG	RA	3064	-	-	-	X
57	MG	RA	3065	-	-	-	X
57	MG	RA	3071	-	-	-	X
57	MG	RA	3123	-	-	-	X
57	MG	RA	3127	-	-	-	X
57	MG	RA	3164	-	-	-	X
57	MG	RA	3186	-	-	-	X
57	MG	RA	3205	-	-	-	X
57	MG	RA	3217	-	-	-	X
57	MG	RA	3219	-	-	-	X
57	MG	RA	3230	-	-	-	X
57	MG	XA	1601	-	-	-	X
57	MG	XA	1605	-	-	-	X
57	MG	XA	1635	-	-	-	X
57	MG	XA	1662	-	-	-	X
57	MG	YA	3012	-	-	-	X
57	MG	YA	3043	-	-	-	X
57	MG	YA	3053	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	YA	3079	-	-	-	X
57	MG	YA	3117	-	-	-	X
57	MG	YA	3150	-	-	-	X
57	MG	YA	3151	-	-	-	X
57	MG	YA	3223	-	-	-	X
57	MG	YA	3235	-	-	-	X
57	MG	YA	3245	-	-	-	X
57	MG	YA	3247	-	-	-	X
57	MG	YA	3250	-	-	-	X
57	MG	YA	3259	-	-	-	X
57	MG	YA	3261	-	-	-	X
59	ZN	R9	101	-	-	-	X
59	ZN	Y9	101	-	-	-	X



## 2 Entry composition

There are 59 unique types of molecules in this entry. The entry contains 291950 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 Ribosomal RNA.

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 type Z.

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 Thx.

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 23S Ribosomal RNA.

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

- Molecule 23 is a RNA chain called 5S Ribosomal RNA.

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

- Molecule 24 is a protein called 50S ribosomal protein L2.

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

- Molecule 25 is a protein called 50S ribosomal protein L3.

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

- Molecule 26 is a protein called 50S ribosomal protein L4.

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

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

- Molecule 27 is a protein called 50S ribosomal protein L5.

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

- Molecule 28 is a protein called 50S ribosomal protein L6.

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

- Molecule 29 is a protein called 50S ribosomal protein L9.

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

- Molecule 30 is a protein called 50S ribosomal protein L13.

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

- Molecule 31 is a protein called 50S ribosomal protein L14.

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

- Molecule 32 is a protein called 50S ribosomal protein L15.

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

- Molecule 33 is a protein called 50S ribosomal protein L16.

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

- Molecule 34 is a protein called 50S ribosomal protein L17.

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

- Molecule 35 is a protein called 50S ribosomal protein L18.

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

- Molecule 36 is a protein called 50S ribosomal protein L19.

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

- Molecule 37 is a protein called 50S ribosomal protein L20.

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

- Molecule 38 is a protein called 50S ribosomal protein L21.

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

- Molecule 39 is a protein called 50S ribosomal protein L22.

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

- Molecule 40 is a protein called 50S ribosomal protein L23.

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

- Molecule 41 is a protein called 50S ribosomal protein L24.

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

- Molecule 42 is a protein called 50S ribosomal protein L25.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L27.

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

- Molecule 44 is a protein called 50S ribosomal protein L28.

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

- Molecule 45 is a protein called 50S ribosomal protein L29.

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

- Molecule 46 is a protein called 50S ribosomal protein L30.

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

- Molecule 47 is a protein called 50S ribosomal protein L31.

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

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
48	R5	59	Total	C	N	O	S	0	0	0
			459	288	90	76	5			
48	Y5	58	Total	C	N	O	S	0	0	0
			451	283	89	74	5			

- Molecule 49 is a protein called 50S ribosomal protein L33.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L35.

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

- Molecule 52 is a protein called 50S ribosomal protein L36.

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

- Molecule 53 is a RNA chain called P-site tRNA fMet.

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

- Molecule 54 is a RNA chain called A-site ASL SufA6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	QX	8	Total	C	N	O	P	0	0	0
			169	76	31	54	8			
54	XX	8	Total	C	N	O	P	0	0	0
			169	76	31	54	8			

- Molecule 55 is a RNA chain called messenger RNA.

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

- 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	65	Total	Mg	0	0
			65	65		
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	RA	244	Total	Mg	0	0
			244	244		

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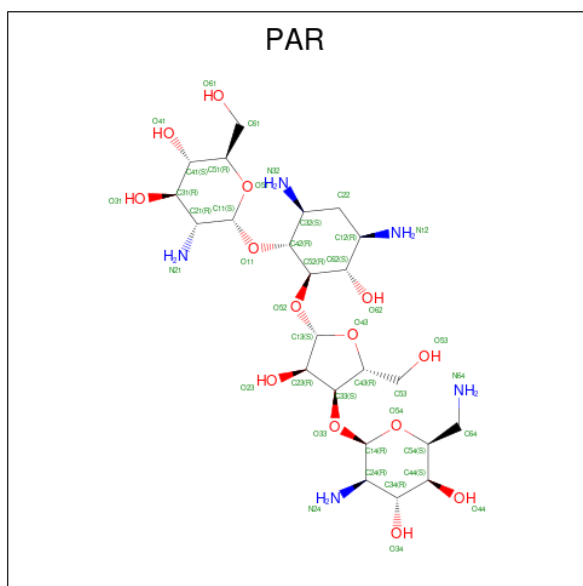
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	RB	2	Total 2	Mg 2	0	0
57	RD	1	Total 1	Mg 1	0	0
57	RE	2	Total 2	Mg 2	0	0
57	RF	1	Total 1	Mg 1	0	0
57	RP	2	Total 2	Mg 2	0	0
57	RR	1	Total 1	Mg 1	0	0
57	RU	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	R8	1	Total 1	Mg 1	0	0
57	XA	72	Total 72	Mg 72	0	0
57	XM	1	Total 1	Mg 1	0	0
57	YA	265	Total 265	Mg 265	0	0
57	YB	3	Total 3	Mg 3	0	0
57	YE	1	Total 1	Mg 1	0	0
57	YP	2	Total 2	Mg 2	0	0
57	YQ	1	Total 1	Mg 1	0	0
57	YX	1	Total 1	Mg 1	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	Y7	1	Total 1	Mg 1	0	0
57	QX	1	Total 1	Mg 1	0	0
57	XV	2	Total 2	Mg 2	0	0

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	XX	1	Total	Mg	0	0
			1	1		

- Molecule 58 is PAROMOMYCIN (three-letter code: PAR) (formula: C<sub>23</sub>H<sub>45</sub>N<sub>5</sub>O<sub>14</sub>).



Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
58	QA	1	Total	C	N	O	0	0
			42	23	5	14		
58	XA	1	Total	C	N	O	0	0
			42	23	5	14		

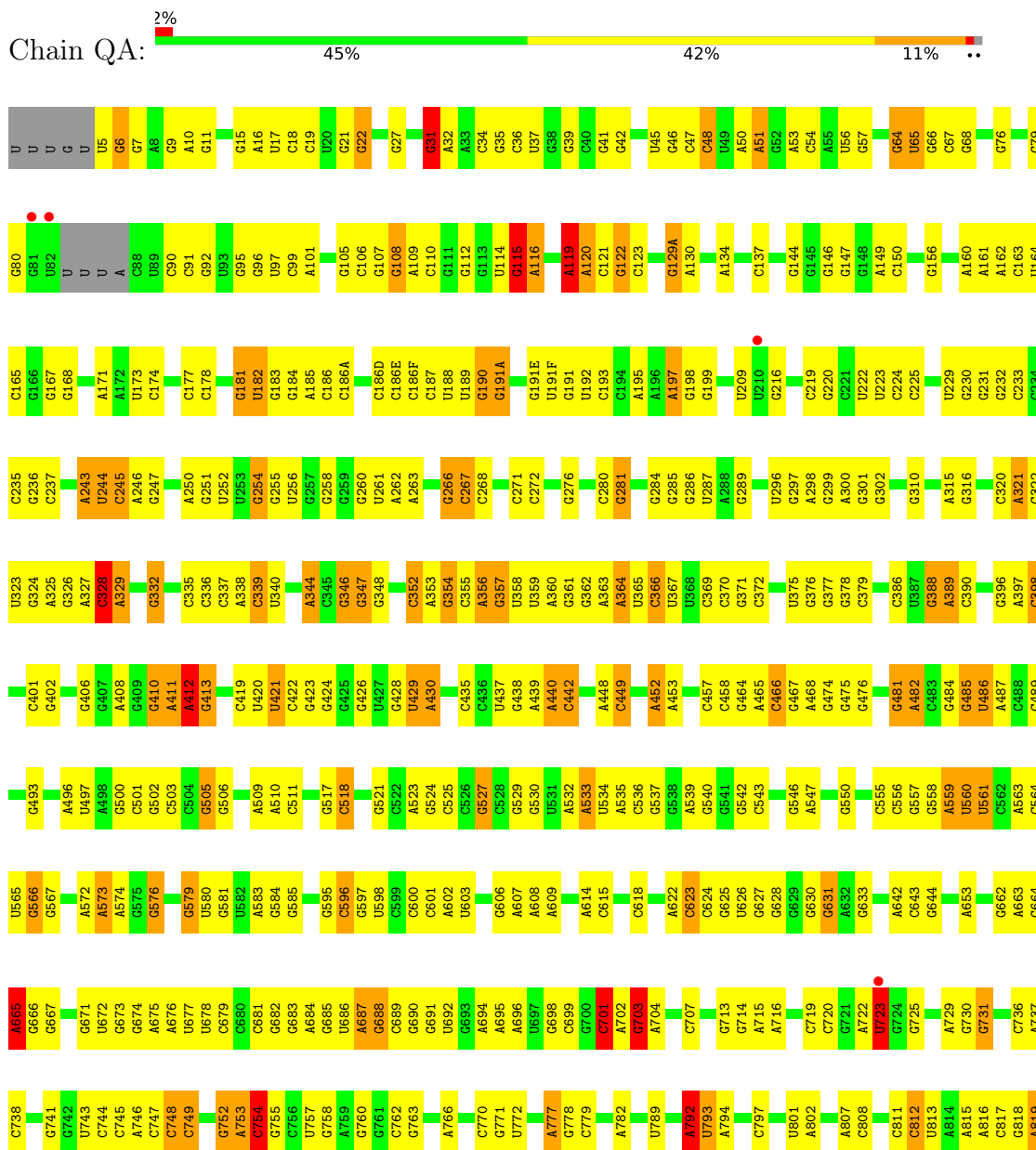
- Molecule 59 is ZINC ION (three-letter code: ZN) (formula: Zn).

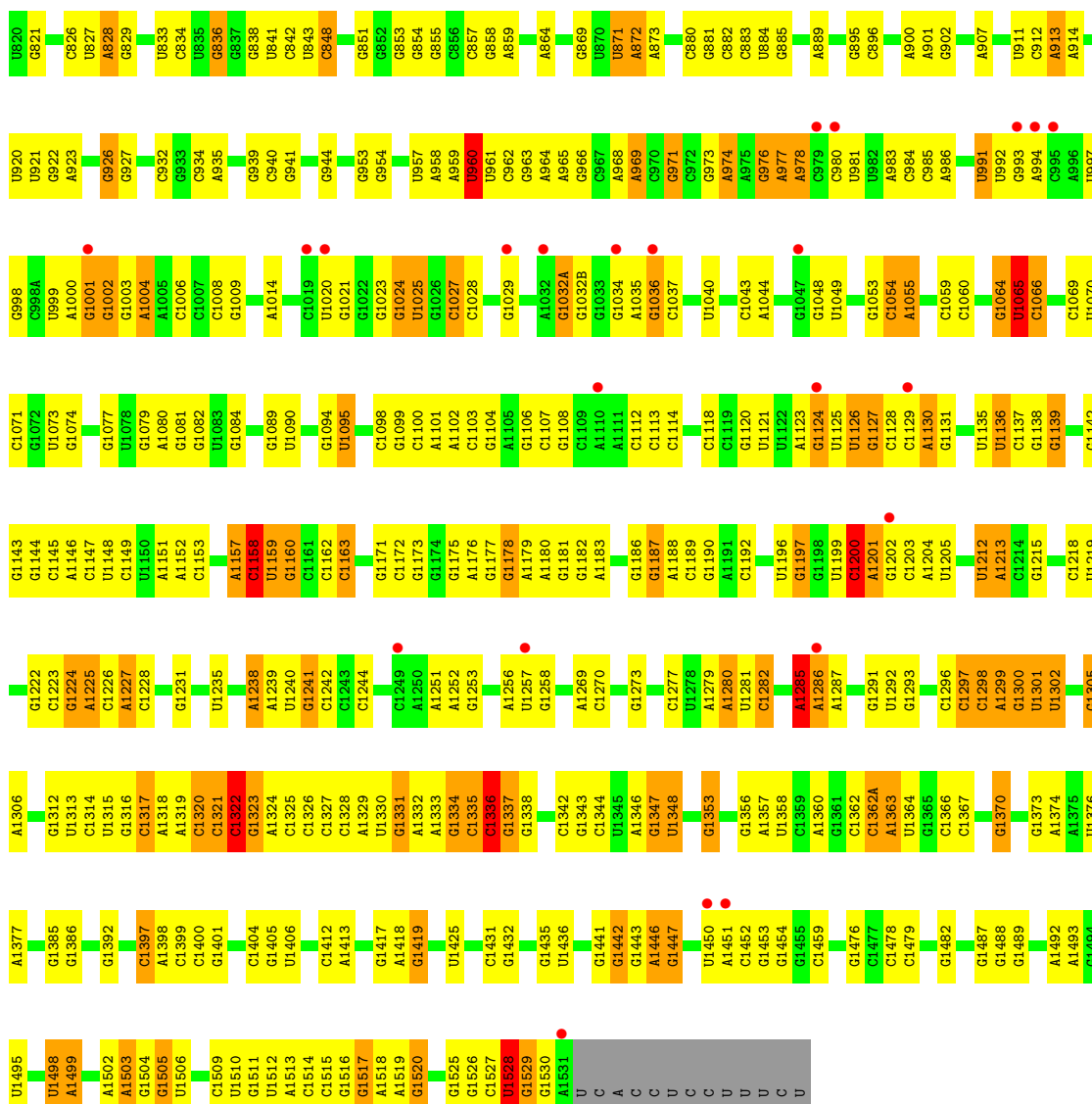
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
59	QD	1	Total	Zn	0	0
			1	1		
59	QN	1	Total	Zn	0	0
			1	1		
59	R9	1	Total	Zn	0	0
			1	1		
59	XD	1	Total	Zn	0	0
			1	1		
59	XN	1	Total	Zn	0	0
			1	1		
59	Y9	1	Total	Zn	0	0
			1	1		

### 3 Residue-property plots i

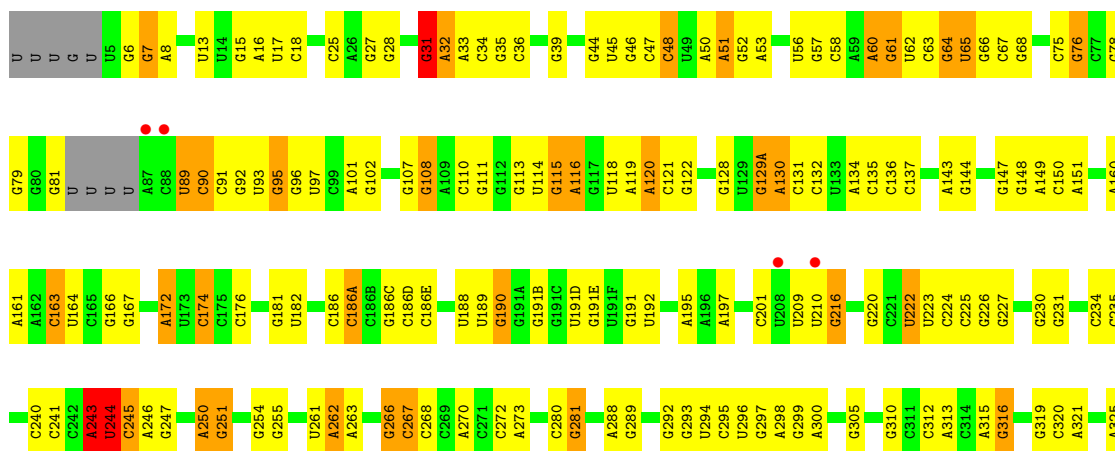
These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ( $RSRZ > 2$ ). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

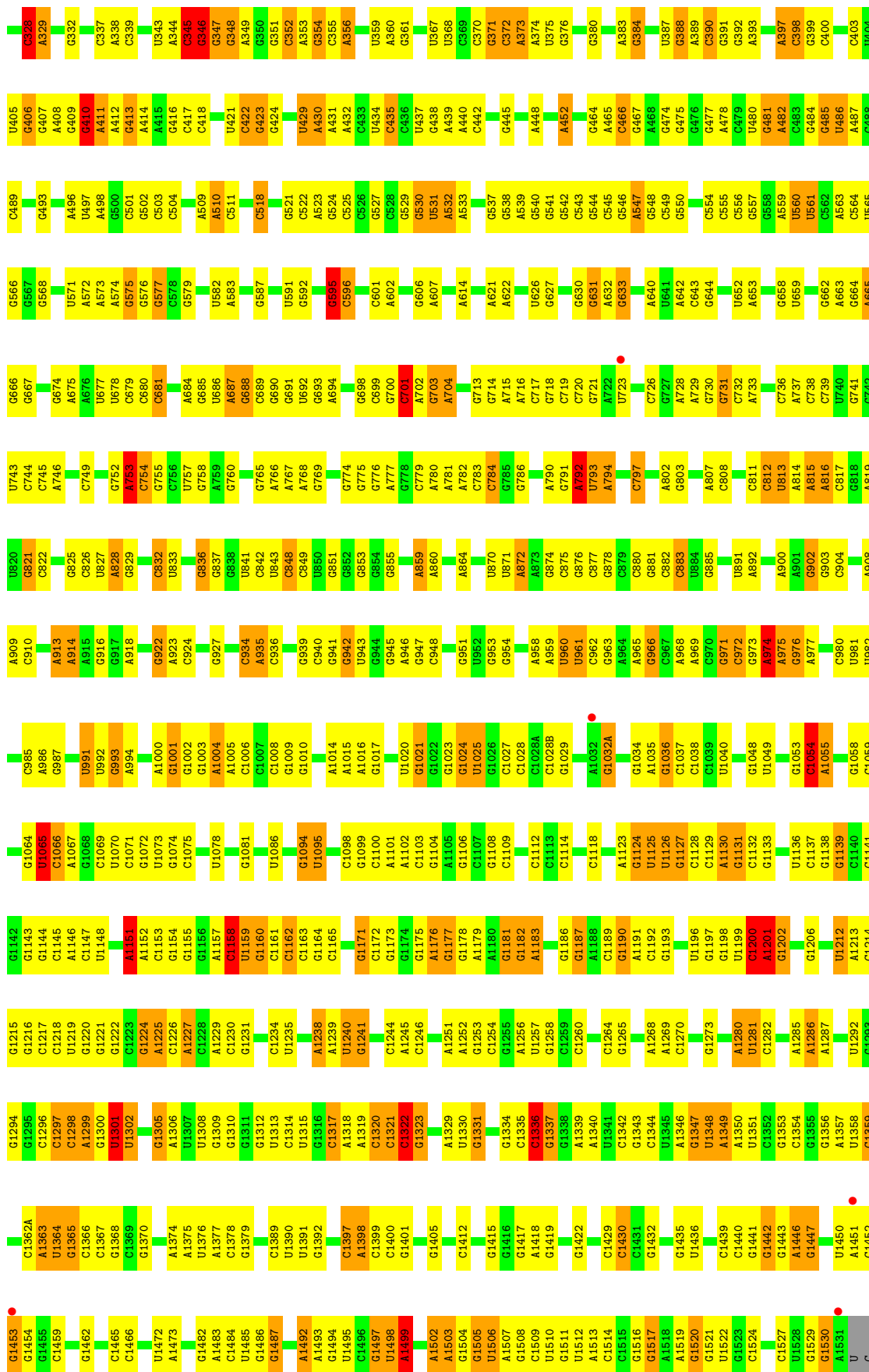
- Molecule 1: 16S Ribosomal RNA





● Molecule 1: 16S Ribosomal RNA

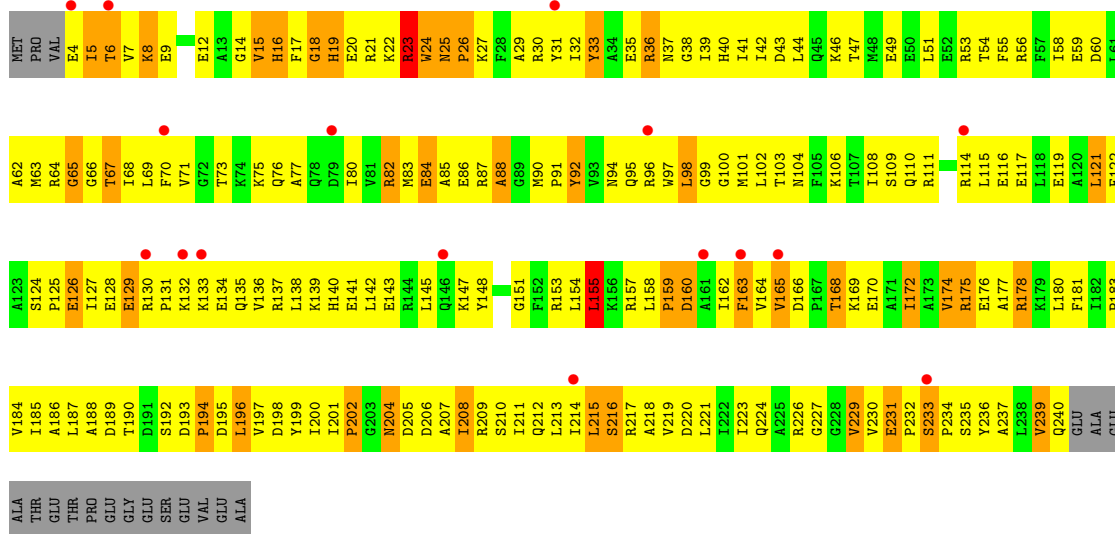




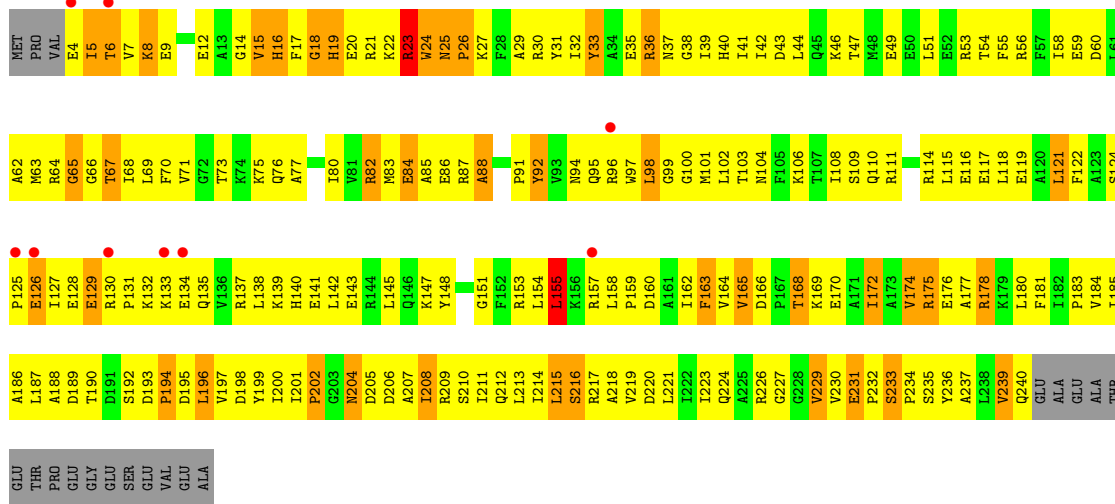


A  
C  
U  
C  
C  
C  
C  
D  
U  
U  
U  
C  
D

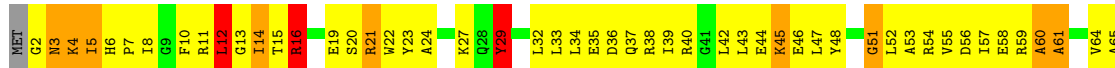
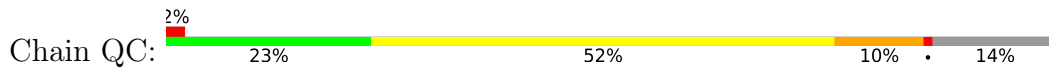
• Molecule 2: 30S ribosomal protein S2



• Molecule 2: 30S ribosomal protein S2

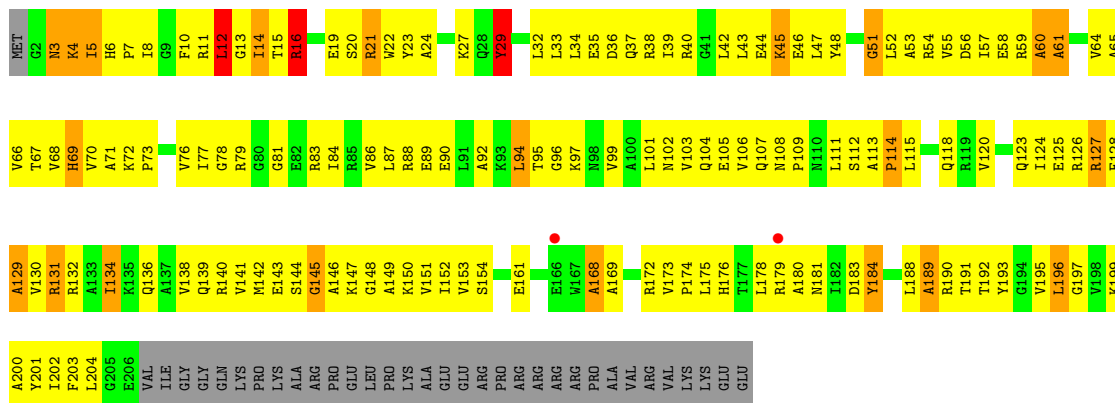


• Molecule 3: 30S ribosomal protein S3

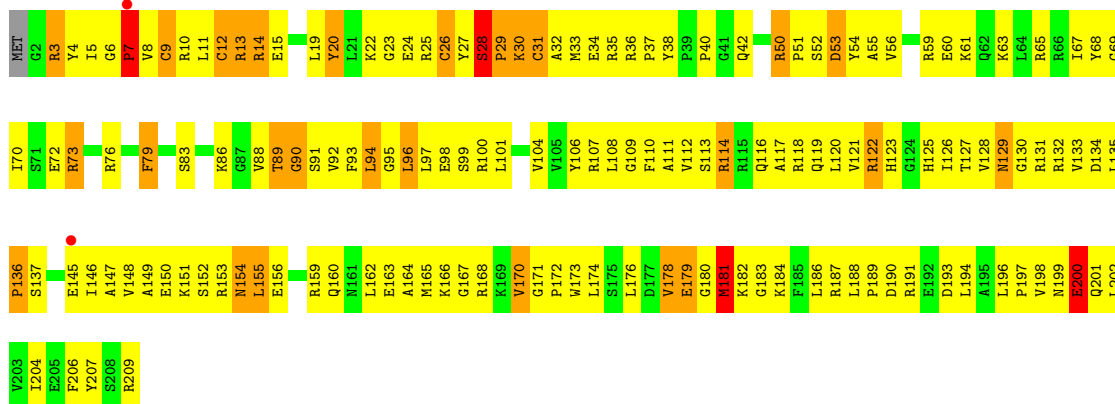




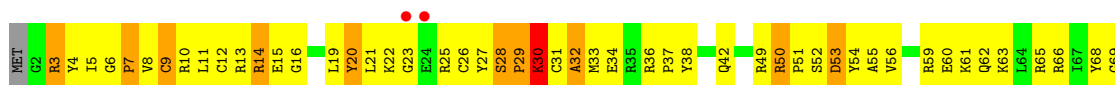
• Molecule 3: 30S ribosomal protein S3



• Molecule 4: 30S ribosomal protein S4

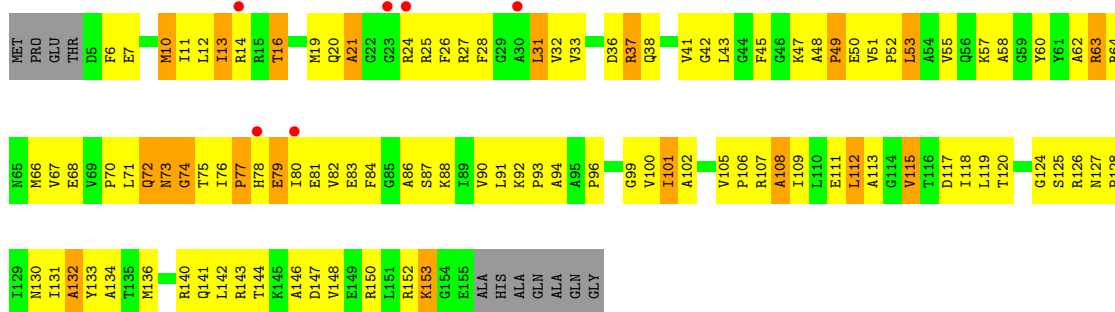
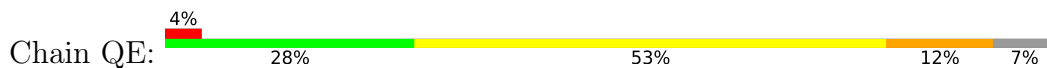


• Molecule 4: 30S ribosomal protein S4

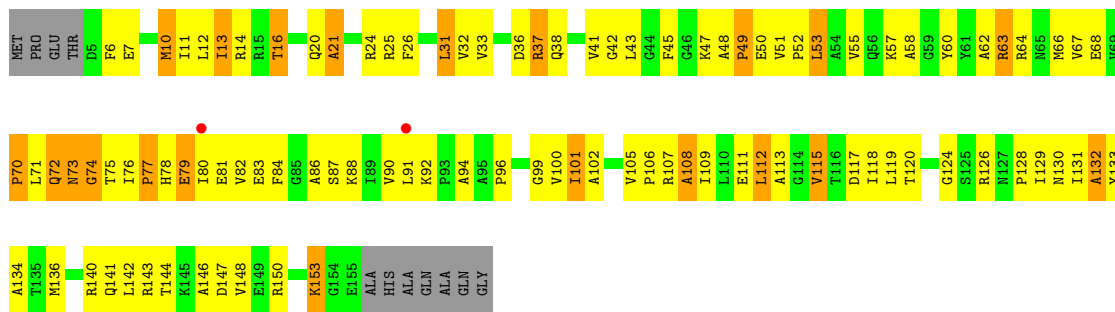




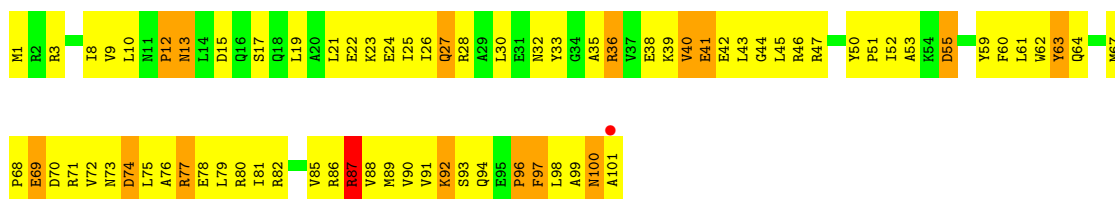
- Molecule 5: 30S ribosomal protein S5



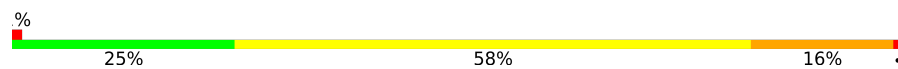
- Molecule 5: 30S ribosomal protein S5

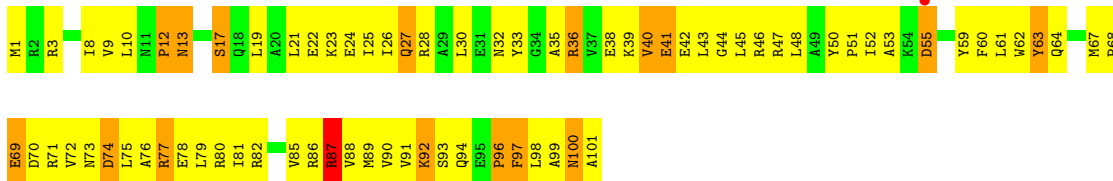


- Molecule 6: 30S ribosomal protein S6



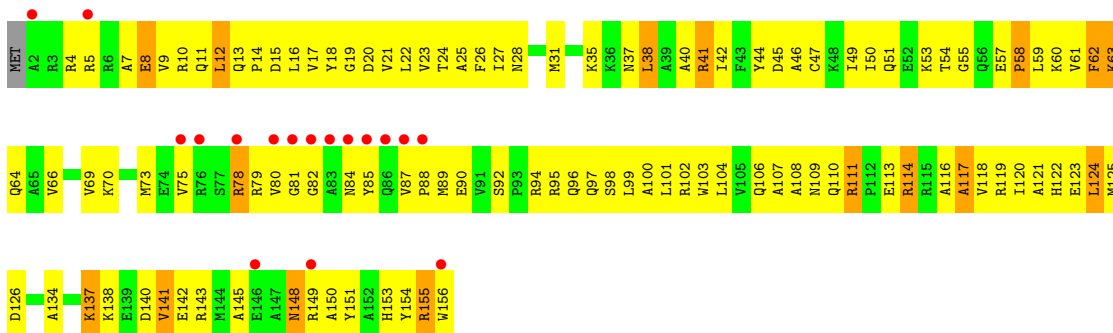
- Molecule 6: 30S ribosomal protein S6

Chain XF: 



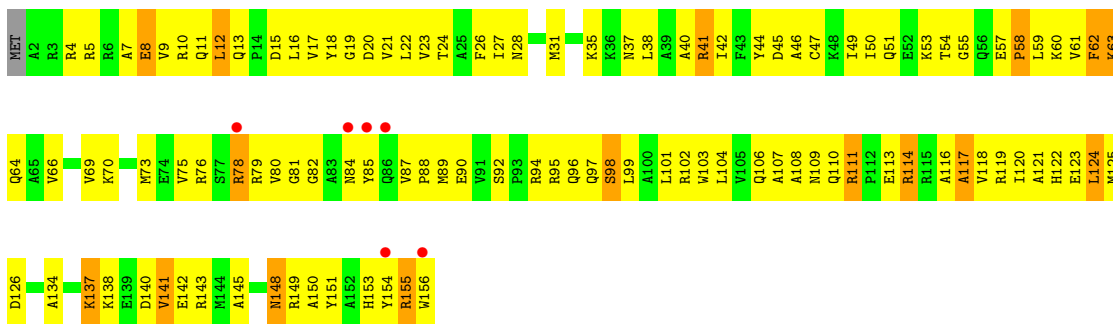
• Molecule 7: 30S ribosomal protein S7

Chain QG: 



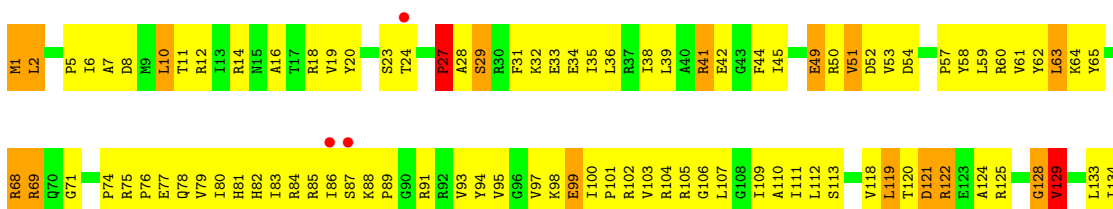
• Molecule 7: 30S ribosomal protein S7

Chain XG: 



• Molecule 8: 30S ribosomal protein S8

Chain QH: 



C135  
E136  
V137  
W138

• Molecule 8: 30S ribosomal protein S8

Chain XH: 27% 60% 12%

MET L2 L3 L4 L5 L6 L7 L8 L9 L10 L11 L12 L13 L14 L15 L16 L17 L18 L19 L20 S23 T24 P27 A28 A29 S29 R30 R31 R32 R33 R34 R35 R36 R37 R38 R39 A40 R41 R42 R43 R44 R45 E49 R50 R51 D52 V53 D54 P57 Y58 L59 R60 R61 R62 R63 R64 R65 Y65

R68 R69 Q70 G71 P74 R75 P76 P77 Q78 T79 V79 L80 H81 H82 H83 R84 R85 R86 R87 R88 R89 G90 G91 R92 R93 R94 R95 G96 G97 R98 R99 E99 I100 P101 R102 R103 R104 R105 R106 G107 G108 G109 A110 A111 L112 L113 S114 S115 V118 L119 T120 D121 R122 A123 A124 R125 G128 V129

L133  
I134  
C135  
E136  
V137  
W138

• Molecule 9: 30S ribosomal protein S9

Chain QI: 10% 22% 64% 12%

MET E2 Q3 Y4 Y5 G6 T7 G8 R9 R10 K11 K12 E13 A14 V14 A15 R16 L17 V17 R18 I19 R20 R21 G22 N23 G24 K25 V26 T27 V28 N29 G30 G31 Q31 R32 R33 F33 N34 G35 Y36 G39 L40 V41 R42 R43 A44 A45 V46 A47 A48 A49 R50 E51 A52 V53 L56 G57 H58 F59 D60 A61 Y62 I63

T64 V65 G66 G67 G68 G69 K70 S71 G72 R73 I74 I75 A76 A77 I78 K78 L79 G80 R81 I82 R83 R84 A85 L86 V86 G87 Y88 N89 Y92 R93 R94 K95 R96 K97 R98 G99 G100 F101 L102 L103 T104 R105 D106 A107 R108 V109 V110 R111 K112 E113 K114 Y114 G115 K116 H117 K118 A119 R120 R121 R122 Q124 Y125 S126

K127  
R128

• Molecule 9: 30S ribosomal protein S9

Chain XI: 2% 20% 64% 15%

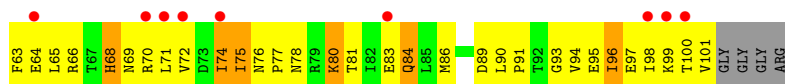
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R66 G67 G68 G69 K70 S71 G72 R73 I74 I75 A76 A77 I78 K78 L79 G80 R81 I82 R83 R84 A85 L86 V86 G87 Y88 N89 Y92 R93 R94 K95 R96 K97 R98 G99 G100 F101 L102 L103 T104 R105 D106 A107 R108 V109 V110 R111 K112 E113 K114 Y114 G115 K116 H117 K118 A119 R120 R121 R122 Q124 Y125 S126 K127 R128

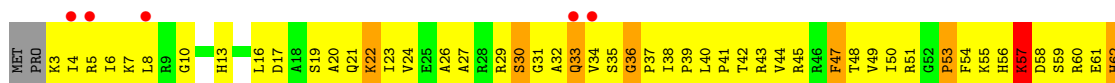
• Molecule 10: 30S ribosomal protein S10

Chain QJ: 18% 18% 63% 12% 6%

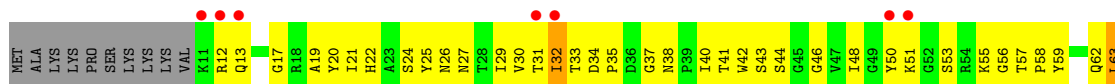
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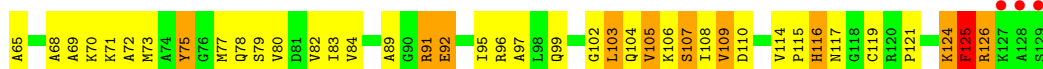
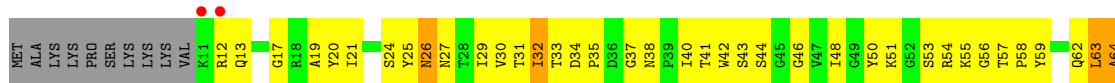
- Molecule 10: 30S ribosomal protein S10



- Molecule 11: 30S ribosomal protein S11



- Molecule 11: 30S ribosomal protein S11

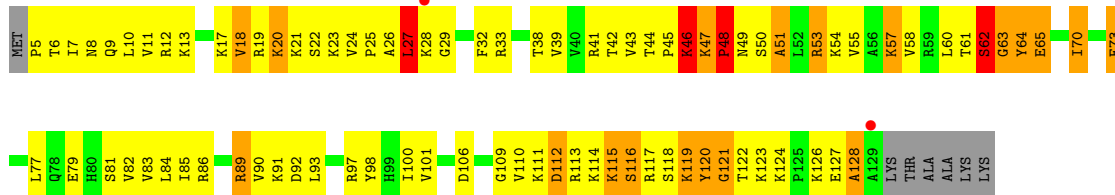


- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12

Chain XL: 2% 29% 48% 14% 5%



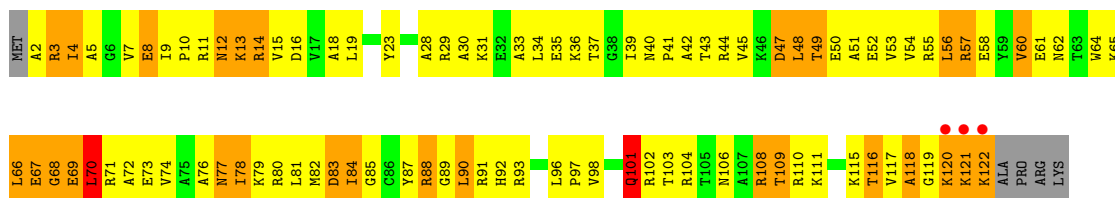
• Molecule 13: 30S ribosomal protein S13

Chain QM: 10% 20% 53% 21% 2%



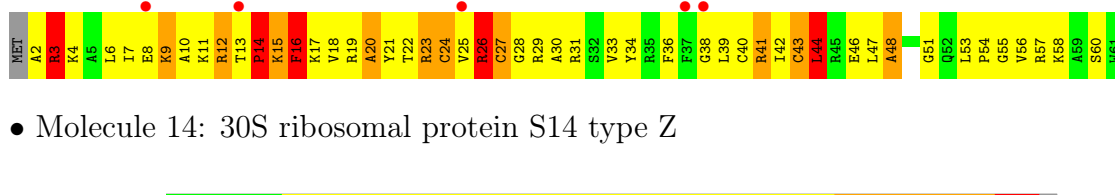
• Molecule 13: 30S ribosomal protein S13

Chain XM: 2% 20% 52% 23% 2%



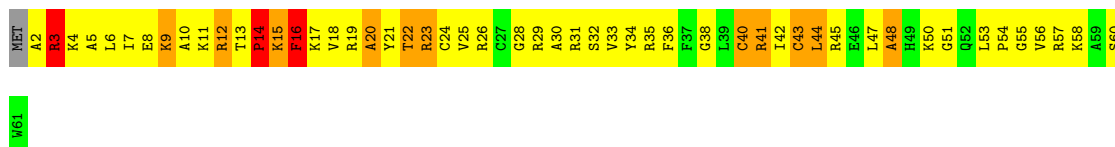
• Molecule 14: 30S ribosomal protein S14 type Z

Chain QN: 8% 16% 57% 16% 8%

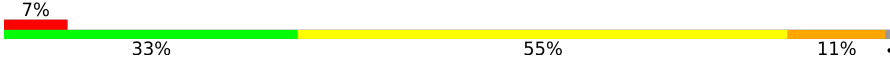


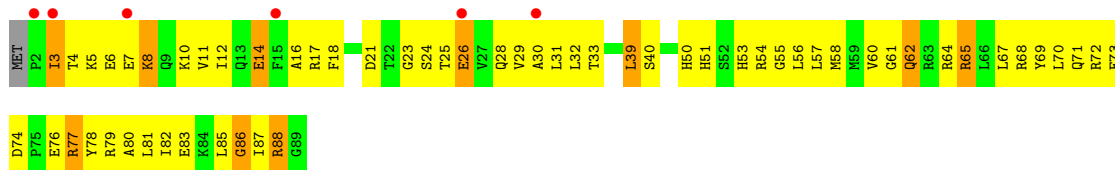
• Molecule 14: 30S ribosomal protein S14 type Z

Chain XN: 13% 62% 18% 5%



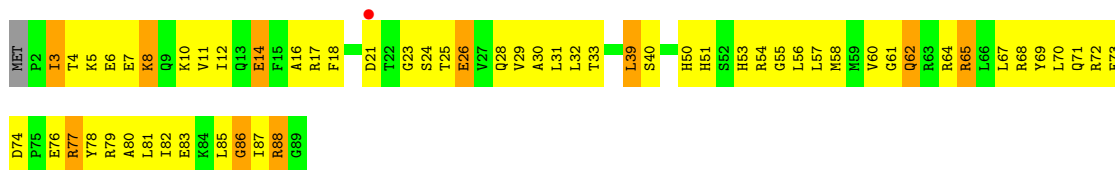
- Molecule 15: 30S ribosomal protein S15

Chain QO: 



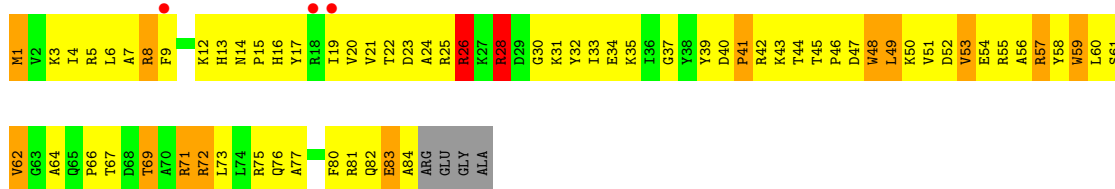
- Molecule 15: 30S ribosomal protein S15

Chain XO: 



- Molecule 16: 30S ribosomal protein S16

Chain QP: 




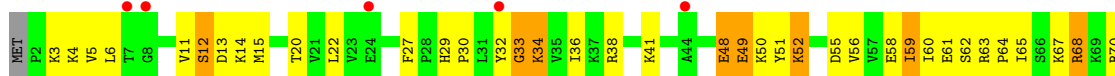
- Molecule 16: 30S ribosomal protein S16

Chain XP: 

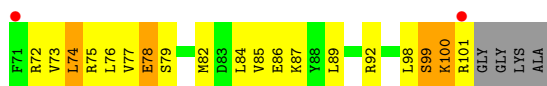


- Molecule 17: 30S ribosomal protein S17

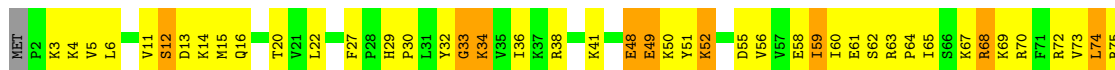
Chain QQ: 



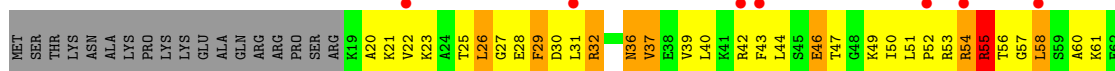




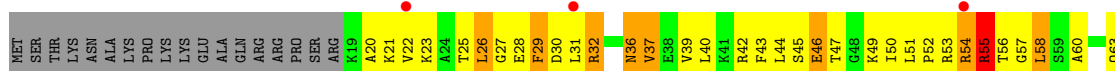
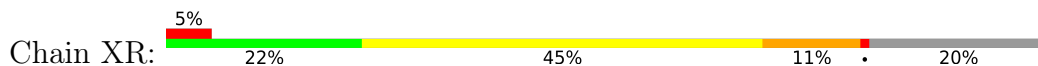
• Molecule 17: 30S ribosomal protein S17



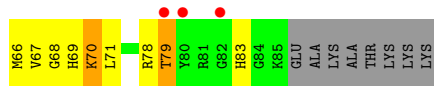
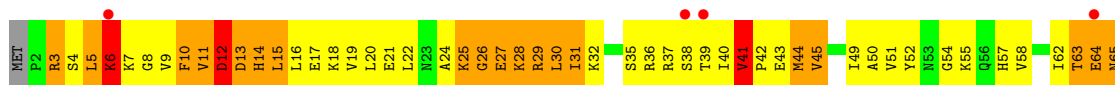
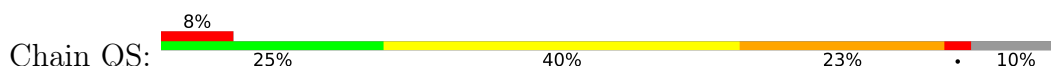
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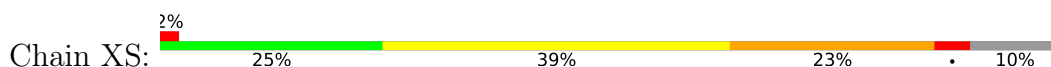
• Molecule 18: 30S ribosomal protein S18

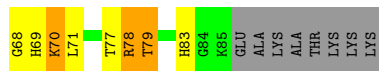
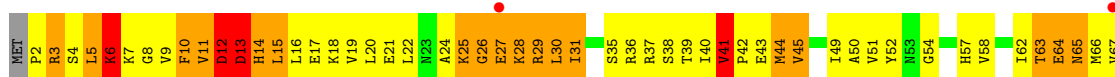


• Molecule 19: 30S ribosomal protein S19

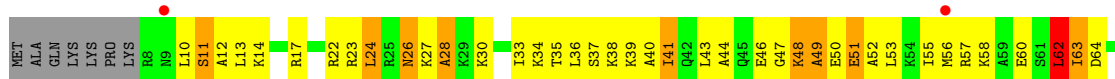
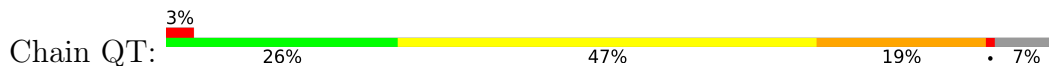


• Molecule 19: 30S ribosomal protein S19

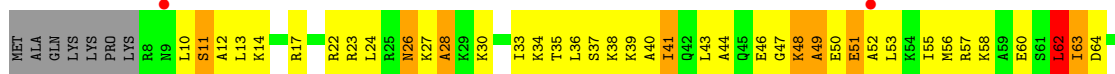




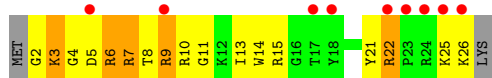
• Molecule 20: 30S ribosomal protein S20



• Molecule 20: 30S ribosomal protein S20



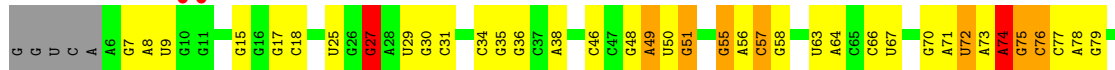
• Molecule 21: 30S ribosomal protein Thx

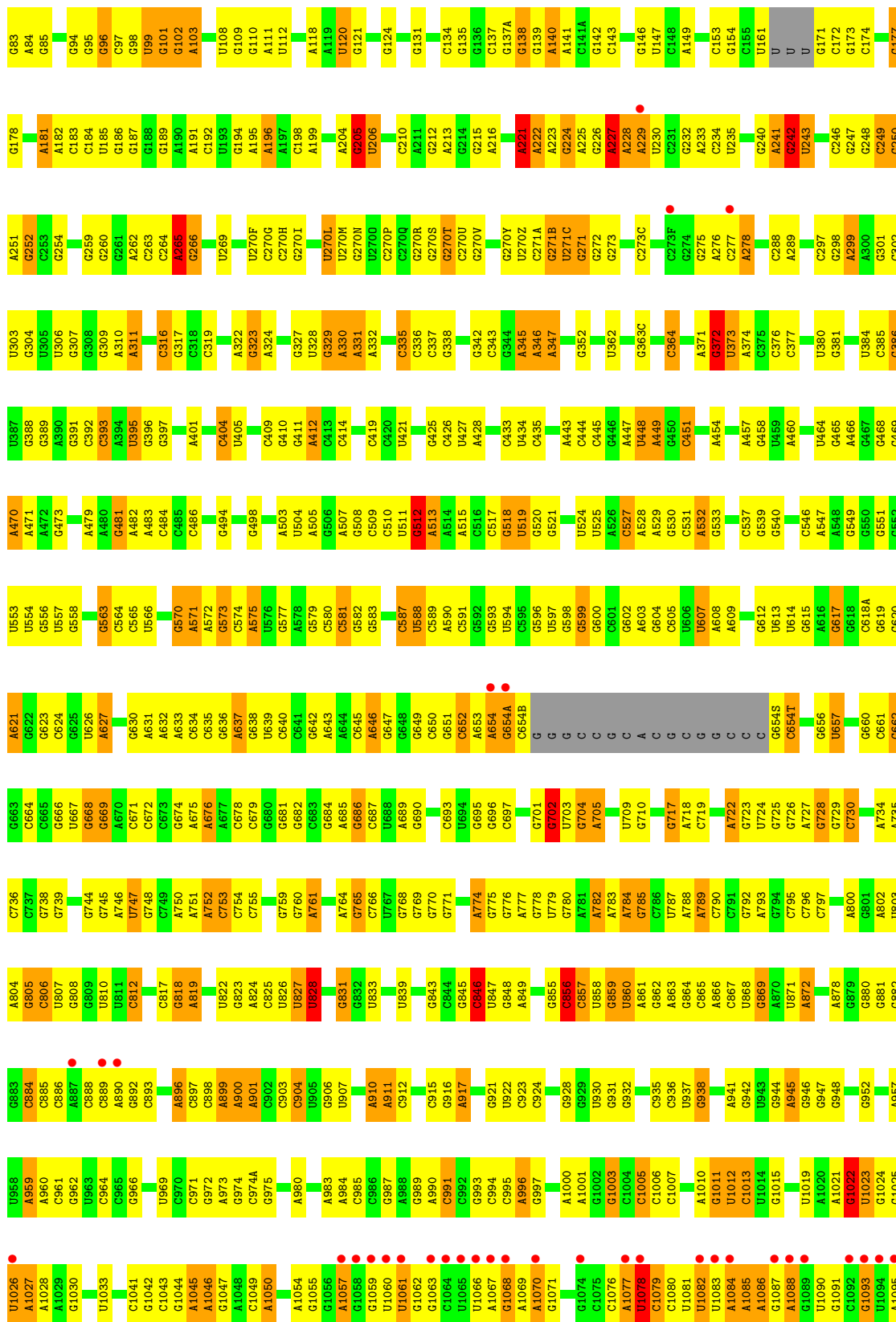


• Molecule 21: 30S ribosomal protein Thx

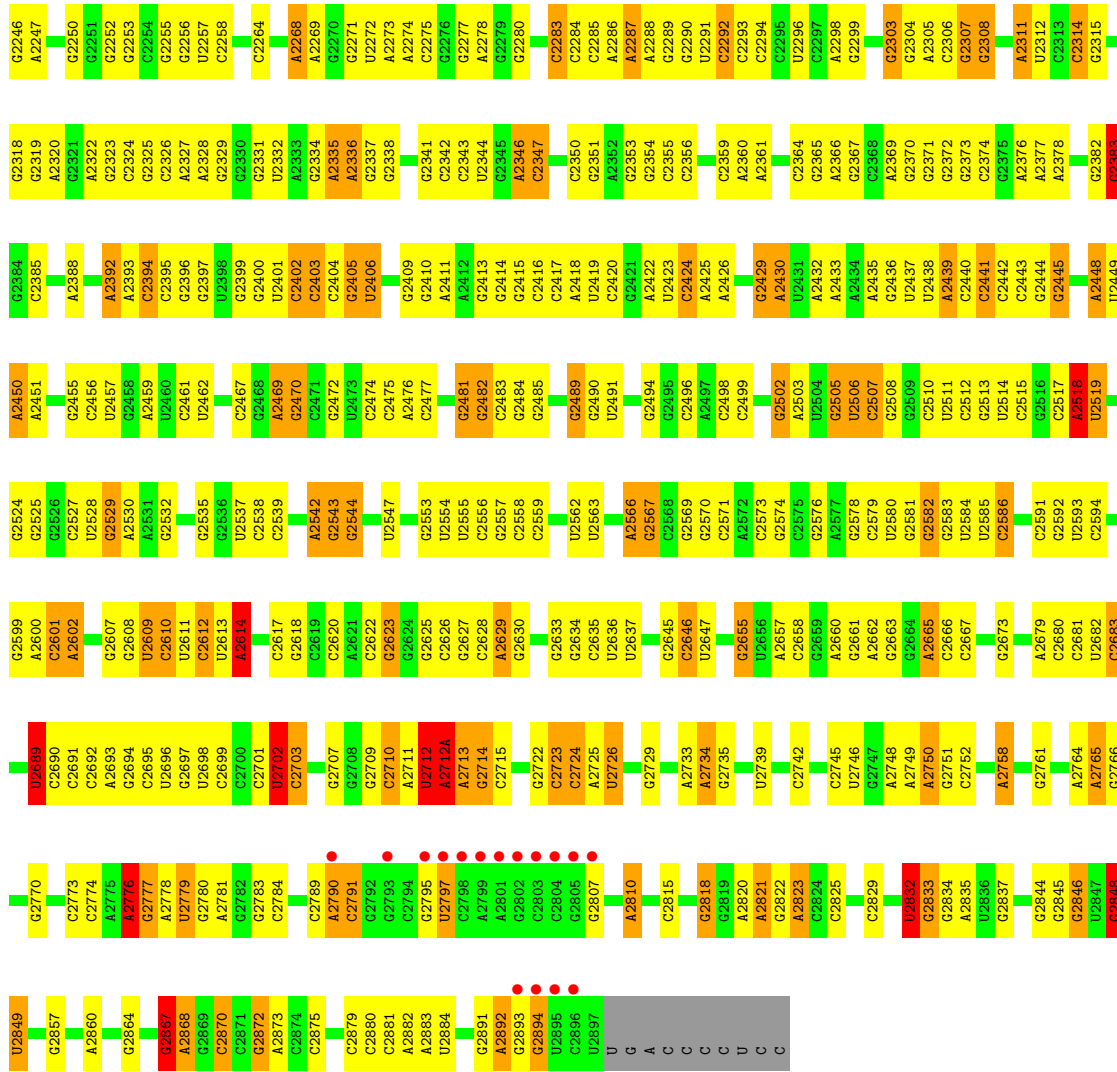


• Molecule 22: 23S Ribosomal RNA

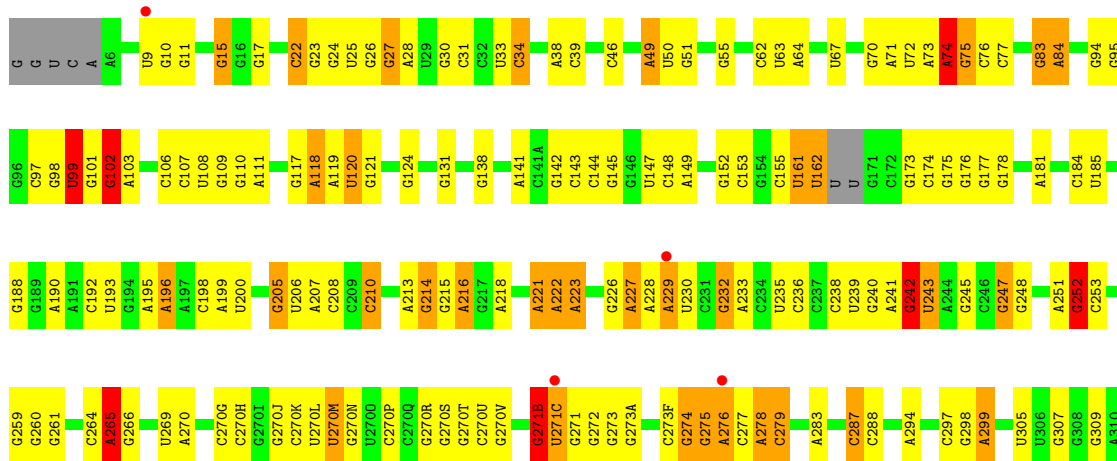




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G2093	U2096	U2099	U2106	C2107	C2108	U2109	U2110	C2111	U2113	A2114	G2115	G2116	A2117	U2118	A2119	G2120	C2121	U2122	G2123	G2124	G2125	A2126	A2127	C2128	C2129	U2130	C2131	U2132	G2133	A2134	A2060	G2061	A2062	C2065	U2068	G2069	U2144	C2145	C2146	C2147	G2148	A2077	C2149	U2150	G2151	G2152	C2153	G2154	G2155	C2156	G2157	A2158	G2159	C2160																																					
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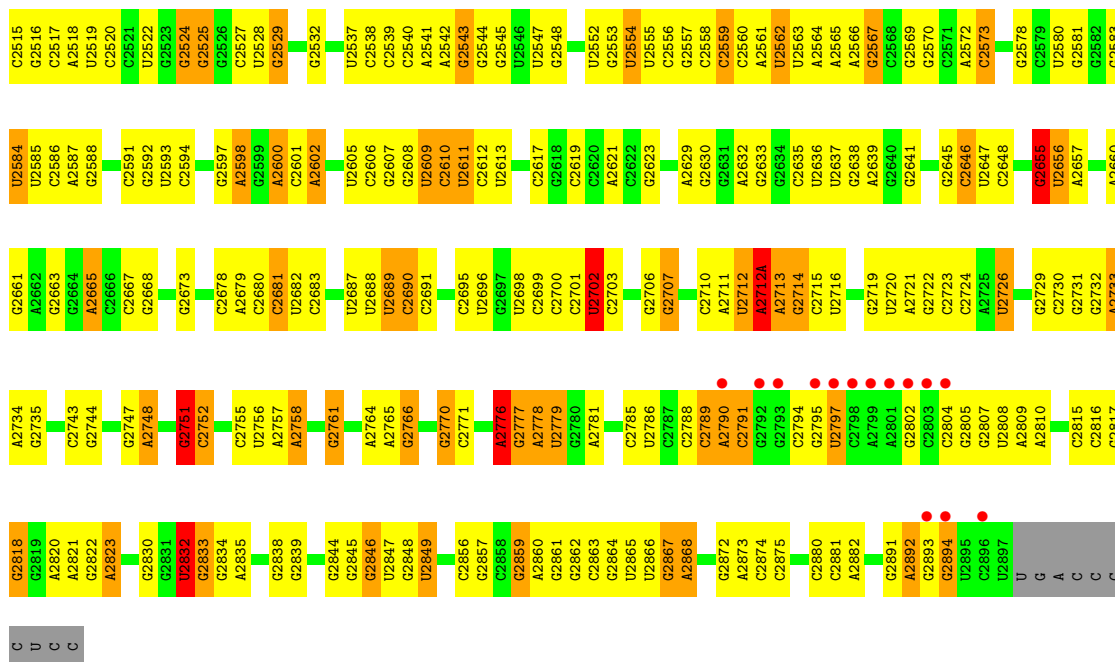


• Molecule 22: 23S Ribosomal RNA

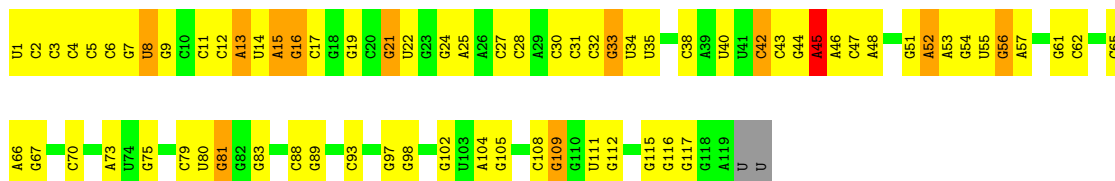




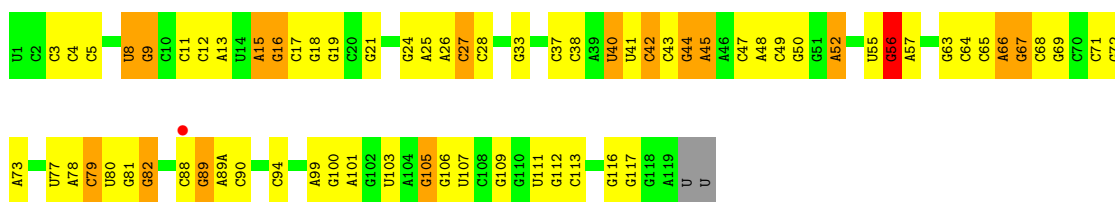
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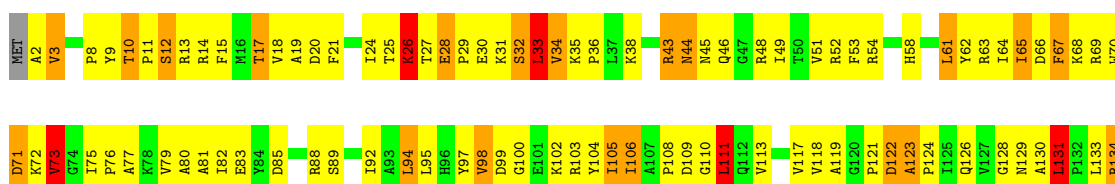
• Molecule 23: 5S Ribosomal RNA



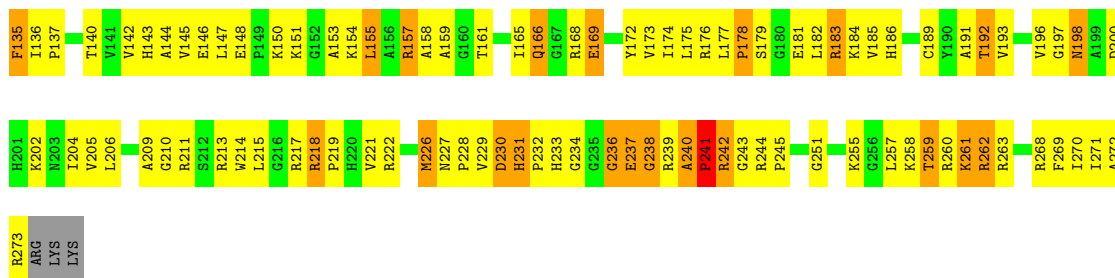
• Molecule 23: 5S Ribosomal RNA



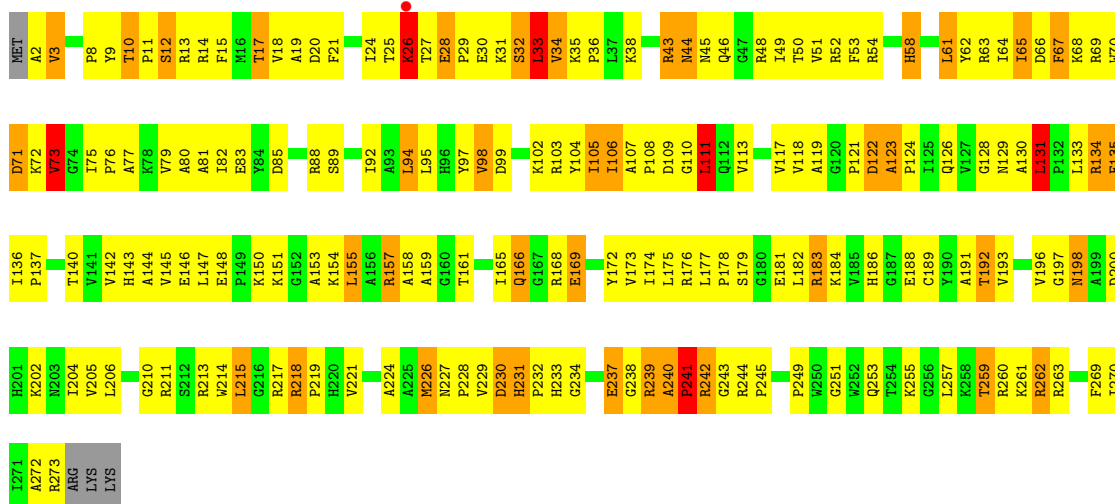
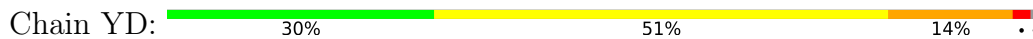
• Molecule 24: 50S ribosomal protein L2



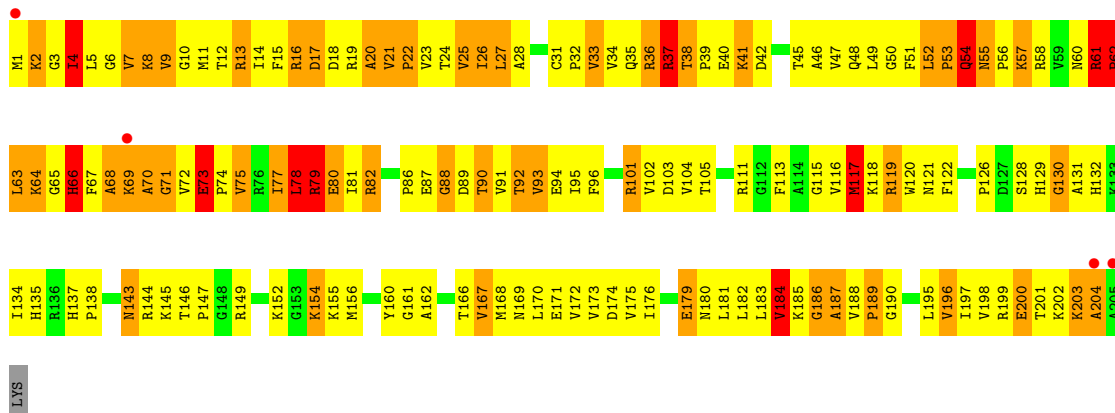




• Molecule 24: 50S ribosomal protein L2

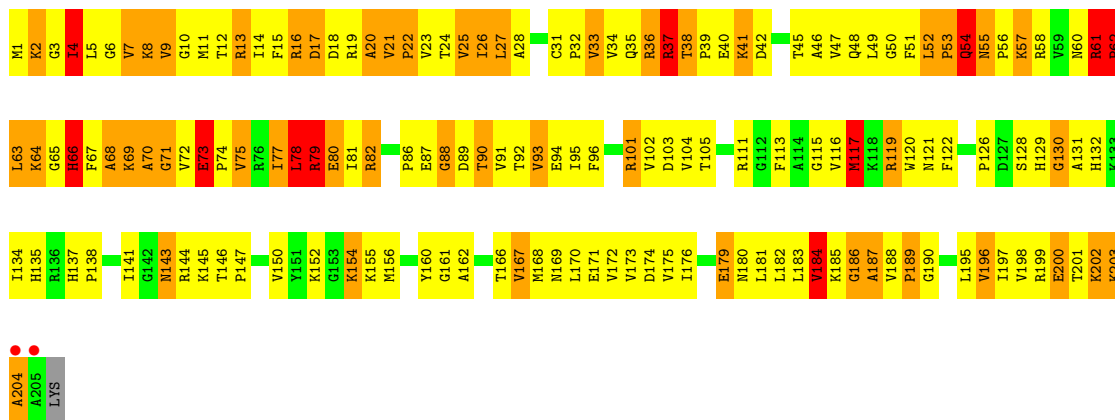


• Molecule 25: 50S ribosomal protein L3

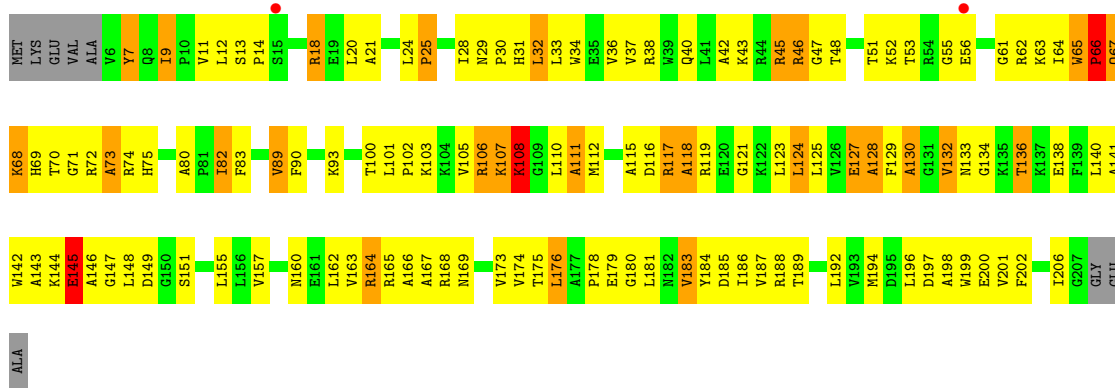


• Molecule 25: 50S ribosomal protein L3

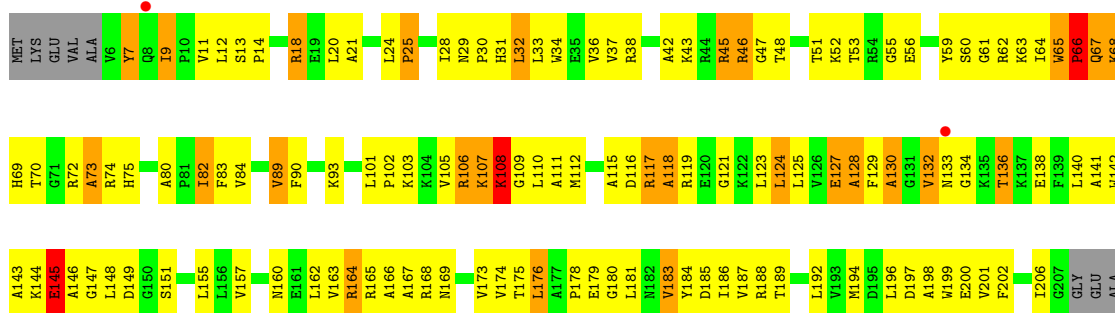




• Molecule 26: 50S ribosomal protein L4

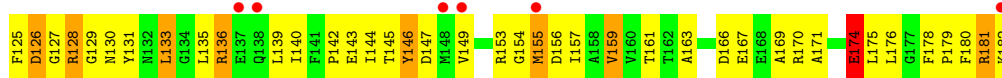


• Molecule 26: 50S ribosomal protein L4

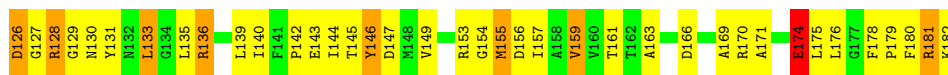
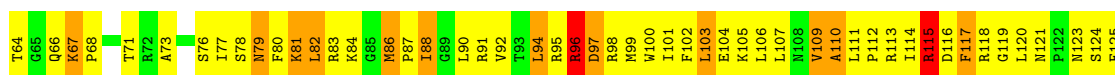
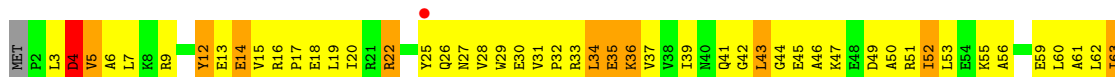


• Molecule 27: 50S ribosomal protein L5

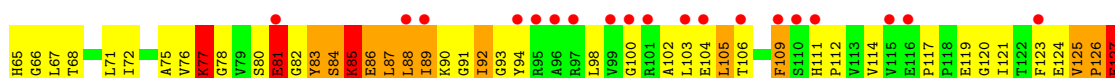
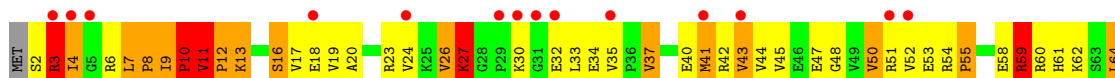
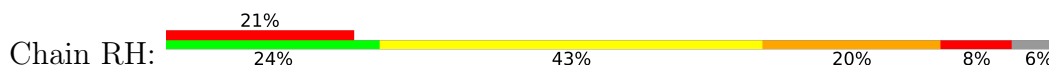




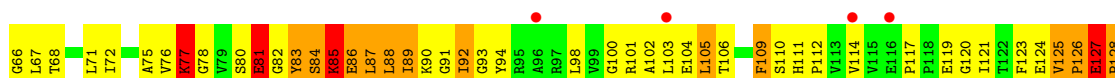
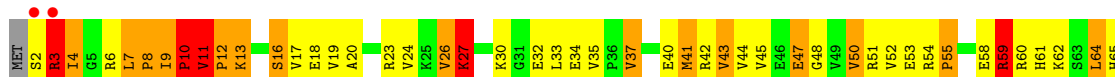
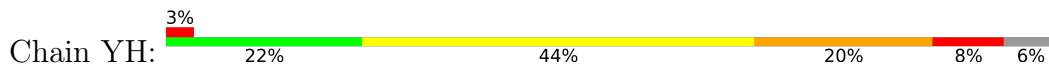
• Molecule 27: 50S ribosomal protein L5



• Molecule 28: 50S ribosomal protein L6

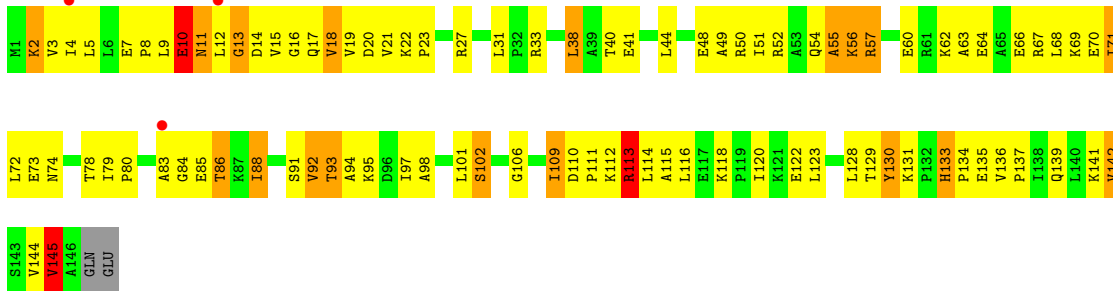


• Molecule 28: 50S ribosomal protein L6



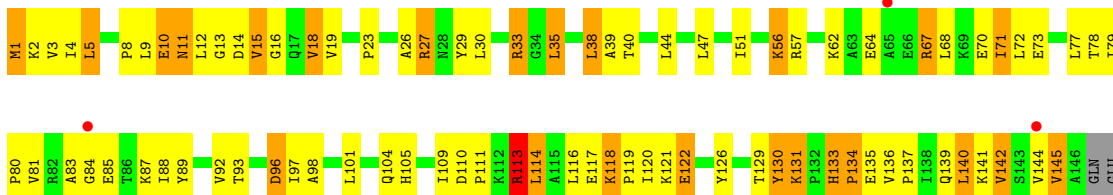
• Molecule 29: 50S ribosomal protein L9

Chain RI: 2% 35% 49% 12%



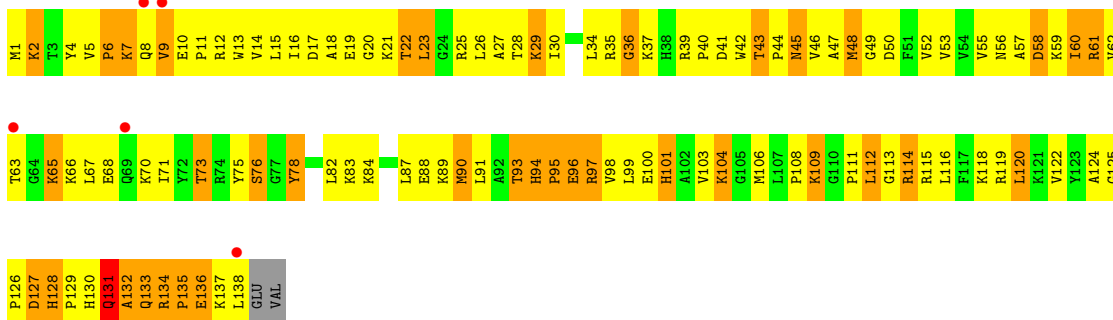
• Molecule 29: 50S ribosomal protein L9

Chain YI: 2% 41% 41% 16%



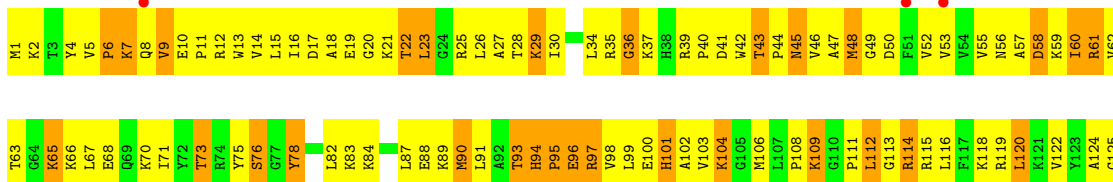
• Molecule 30: 50S ribosomal protein L13

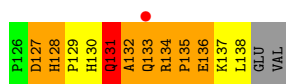
Chain RN: 4% 19% 53% 26%



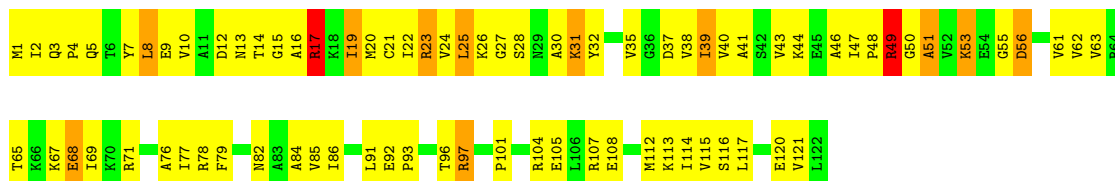
• Molecule 30: 50S ribosomal protein L13

Chain YN: 3% 19% 54% 26%

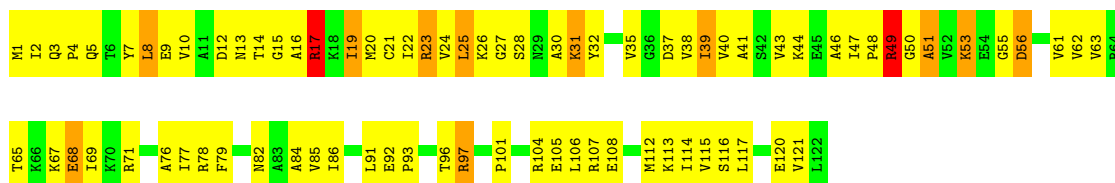




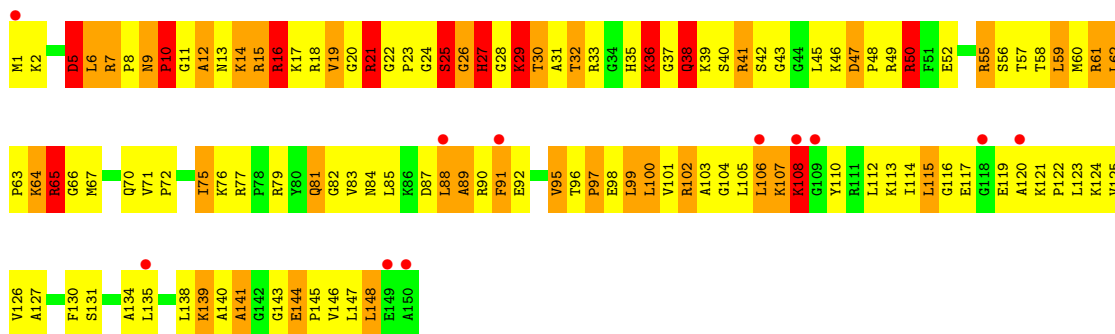
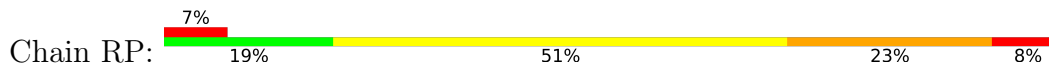
- Molecule 31: 50S ribosomal protein L14



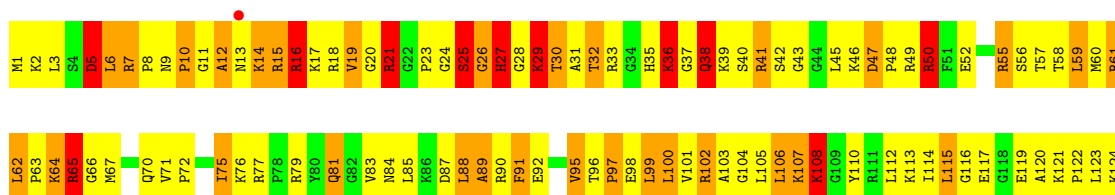
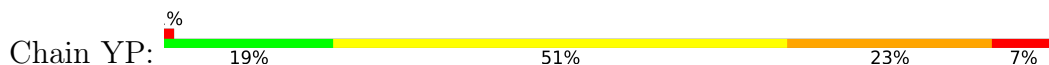
- Molecule 31: 50S ribosomal protein L14

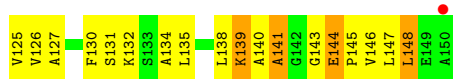


- Molecule 32: 50S ribosomal protein L15



- Molecule 32: 50S ribosomal protein L15

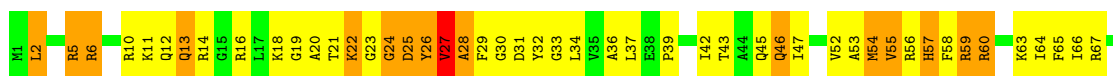




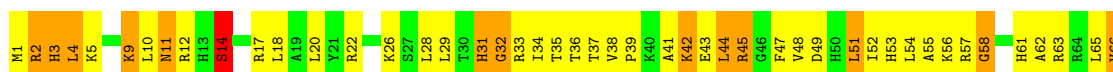
• Molecule 33: 50S ribosomal protein L16



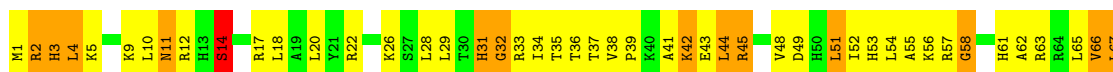
• Molecule 33: 50S ribosomal protein L16



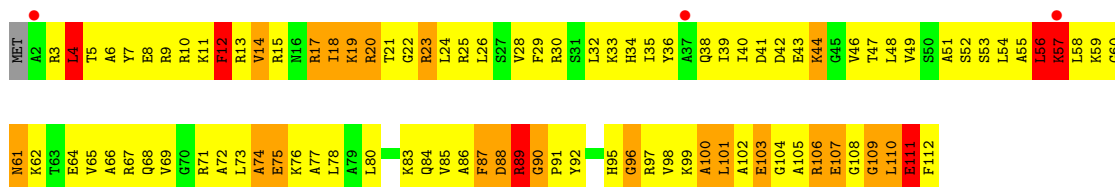
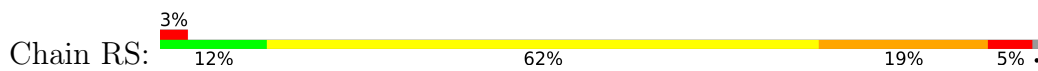
• Molecule 34: 50S ribosomal protein L17



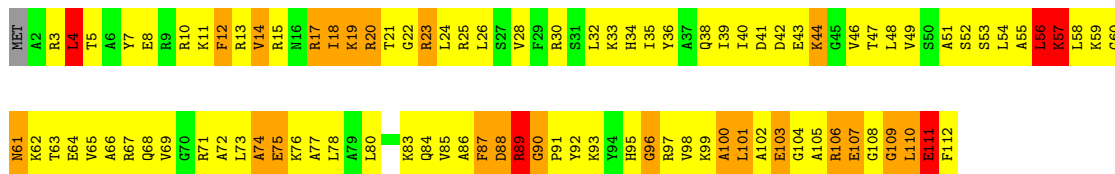
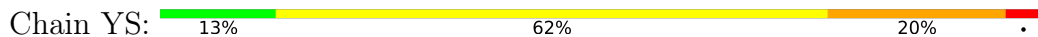
• Molecule 34: 50S ribosomal protein L17



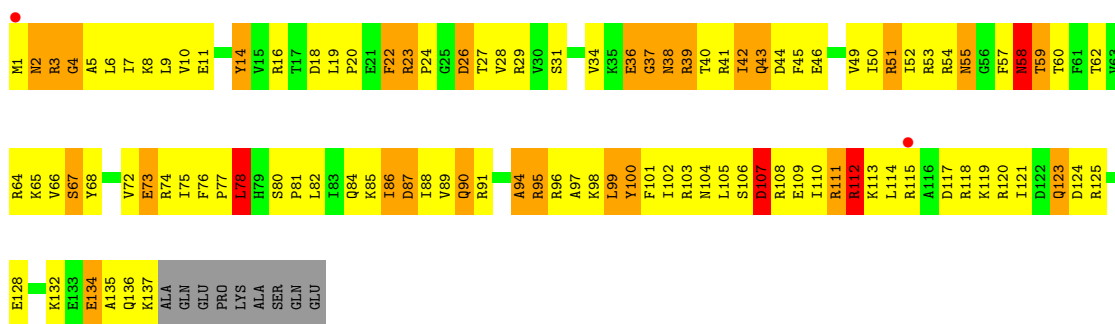
• Molecule 35: 50S ribosomal protein L18



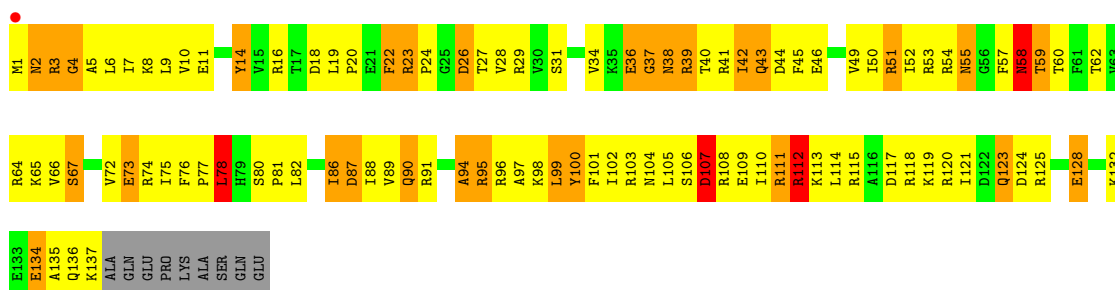
• Molecule 35: 50S ribosomal protein L18



• Molecule 36: 50S ribosomal protein L19



• Molecule 36: 50S ribosomal protein L19

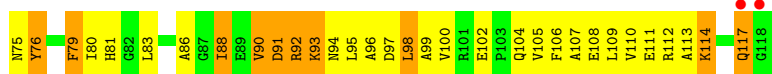


• Molecule 37: 50S ribosomal protein L20

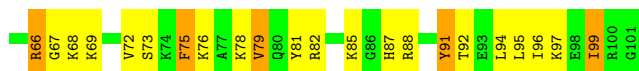
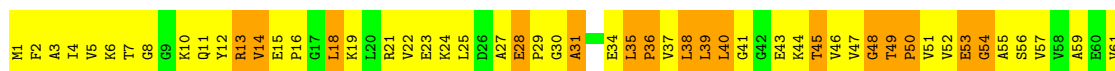




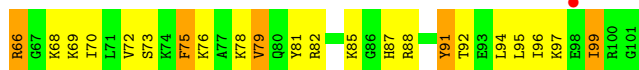
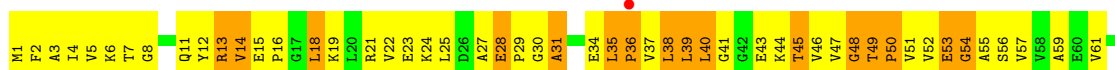
- Molecule 37: 50S ribosomal protein L20



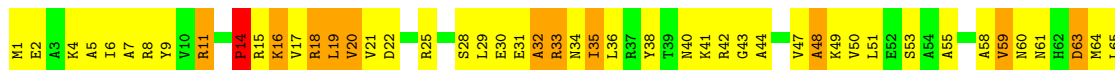
- Molecule 38: 50S ribosomal protein L21



- Molecule 38: 50S ribosomal protein L21

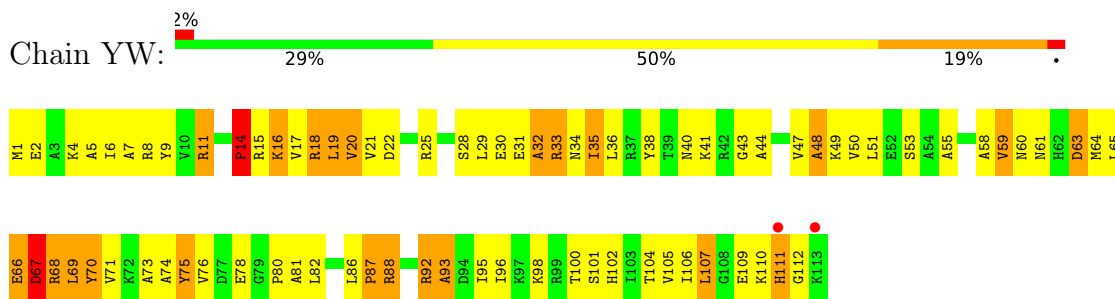


- Molecule 39: 50S ribosomal protein L22

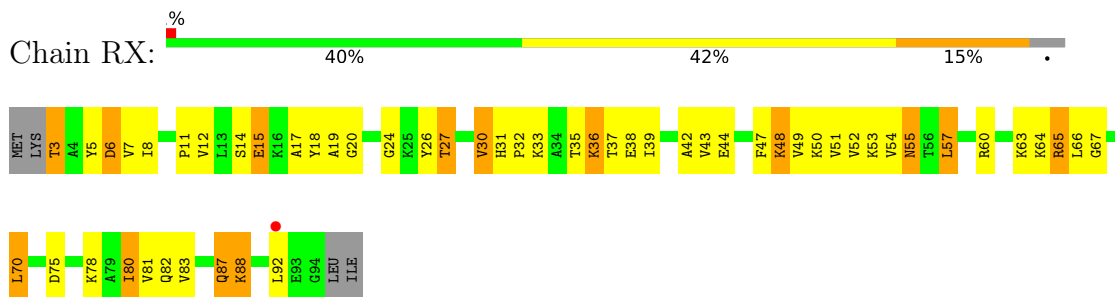


- Molecule 39: 50S ribosomal protein L22

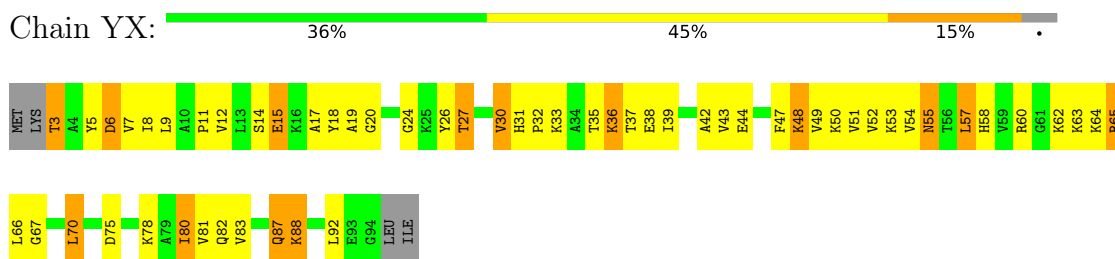




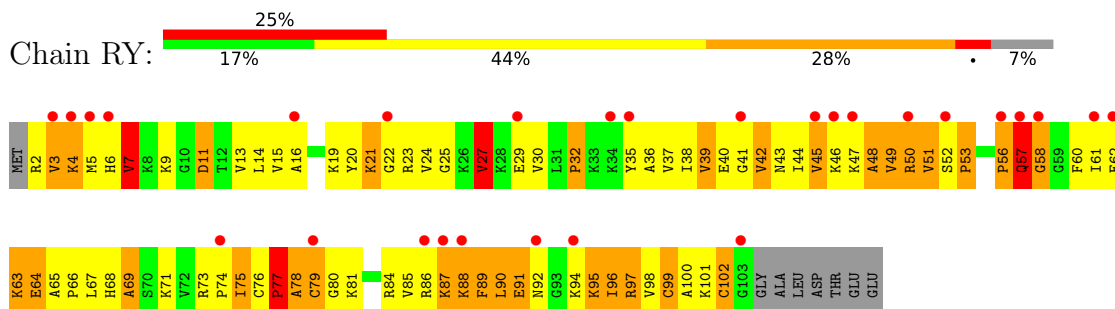
- Molecule 40: 50S ribosomal protein L23



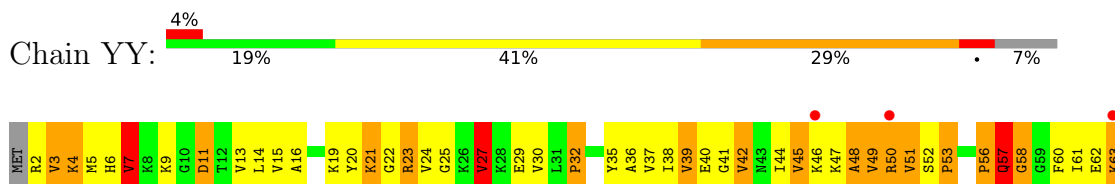
- Molecule 40: 50S ribosomal protein L23

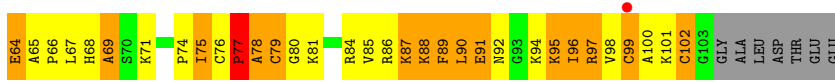


- Molecule 41: 50S ribosomal protein L24

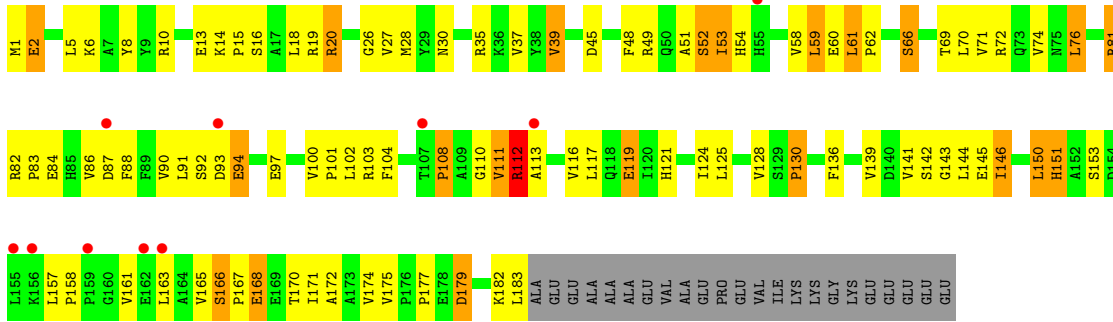


- Molecule 41: 50S ribosomal protein L24

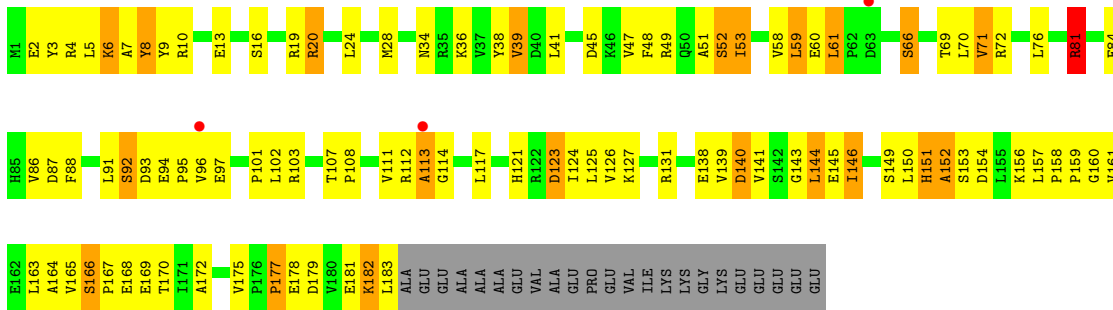




• Molecule 42: 50S ribosomal protein L25



• Molecule 42: 50S ribosomal protein L25



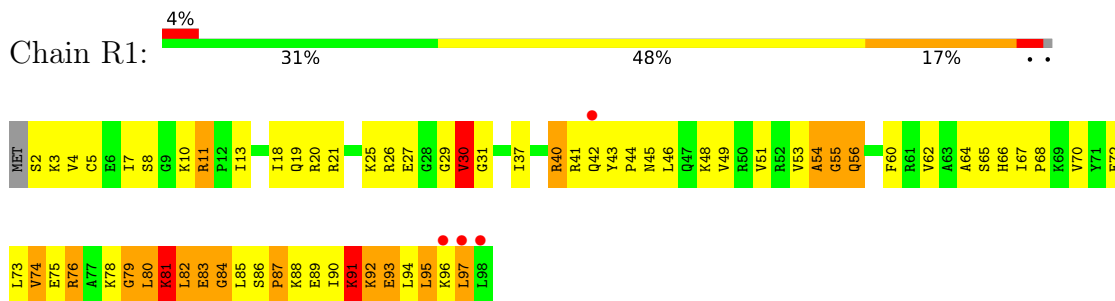
• Molecule 43: 50S ribosomal protein L27



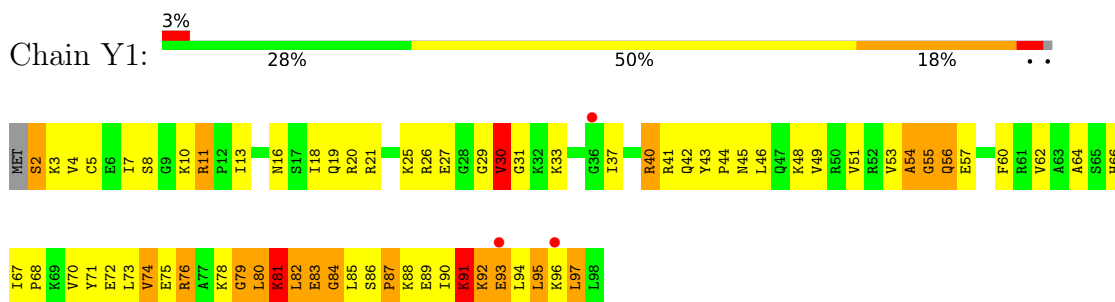
• Molecule 43: 50S ribosomal protein L27



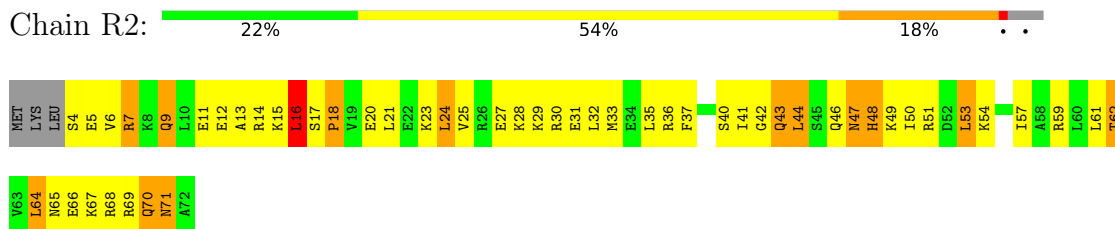
- Molecule 44: 50S ribosomal protein L28



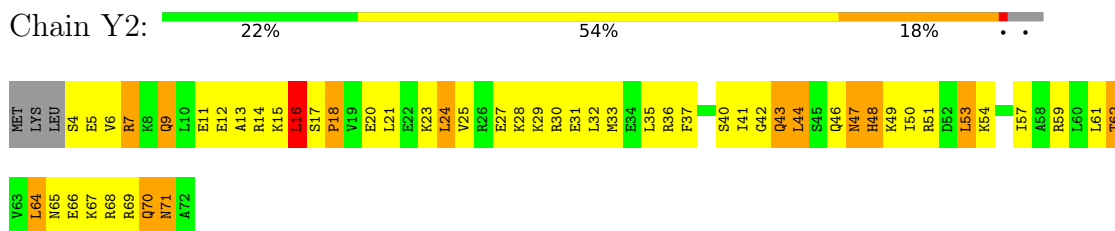
- Molecule 44: 50S ribosomal protein L28



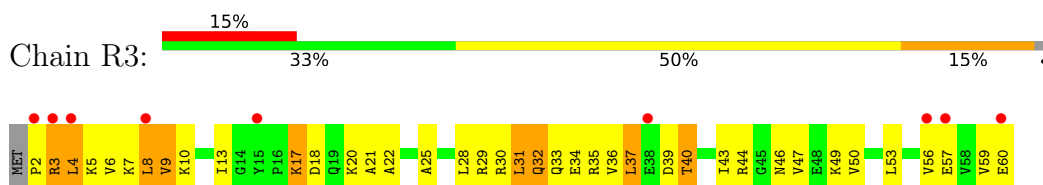
- Molecule 45: 50S ribosomal protein L29



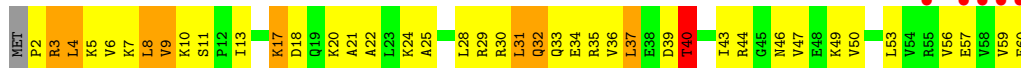
- Molecule 45: 50S ribosomal protein L29



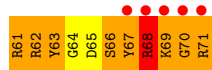
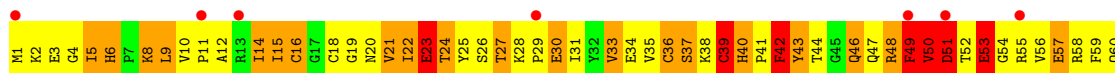
- Molecule 46: 50S ribosomal protein L30



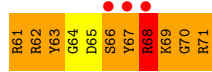
- Molecule 46: 50S ribosomal protein L30



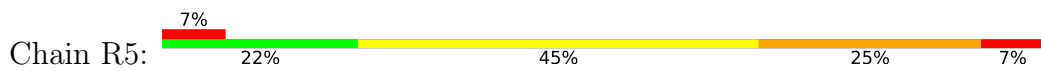
• Molecule 47: 50S ribosomal protein L31



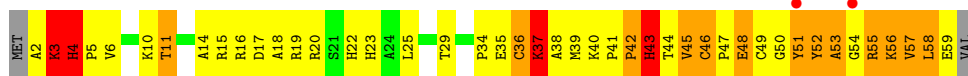
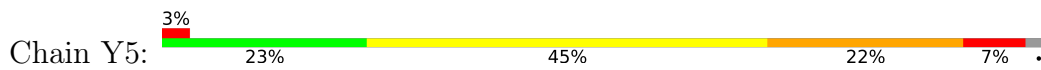
• Molecule 47: 50S ribosomal protein L31



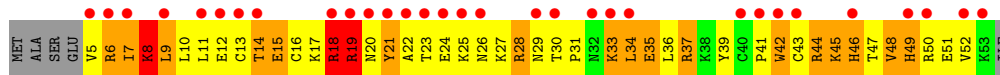
• Molecule 48: 50S ribosomal protein L32



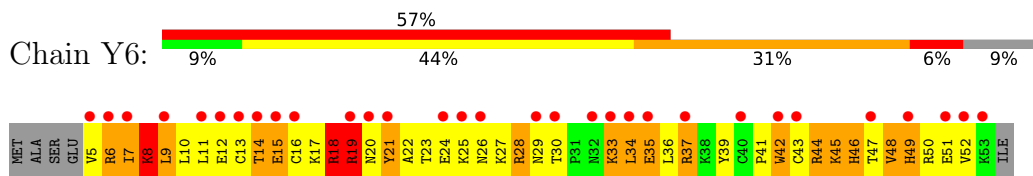
• Molecule 48: 50S ribosomal protein L32



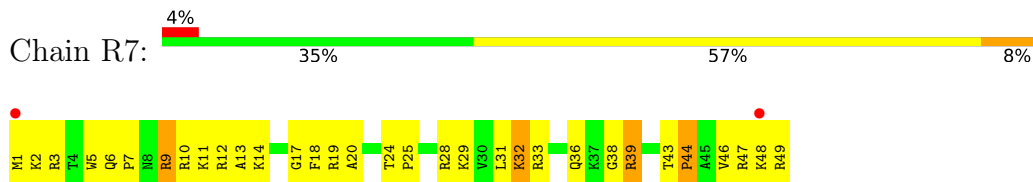
• Molecule 49: 50S ribosomal protein L33



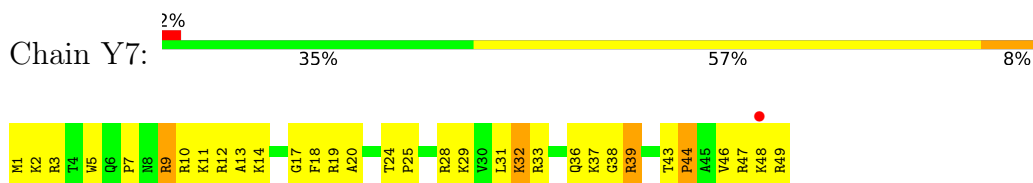
• Molecule 49: 50S ribosomal protein L33



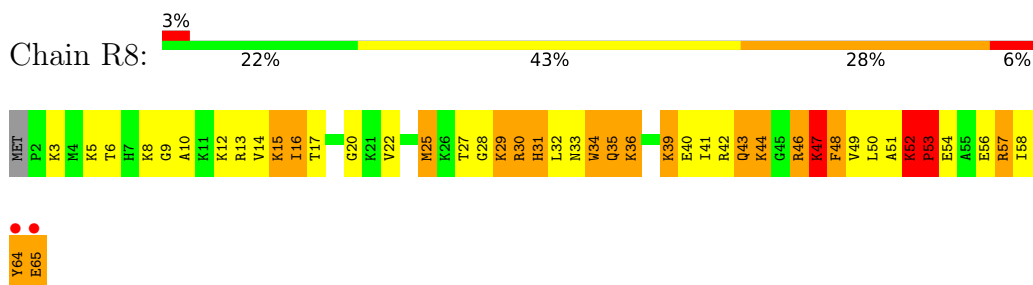
• Molecule 50: 50S ribosomal protein L34



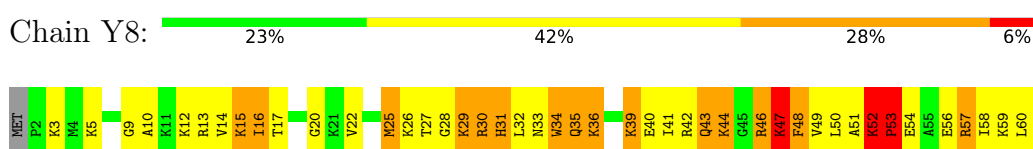
• Molecule 50: 50S ribosomal protein L34



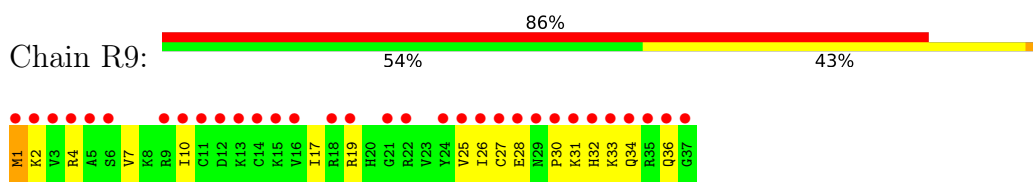
• Molecule 51: 50S ribosomal protein L35



• Molecule 51: 50S ribosomal protein L35

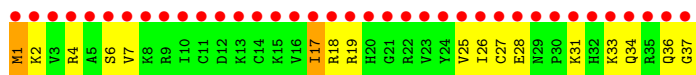


• Molecule 52: 50S ribosomal protein L36

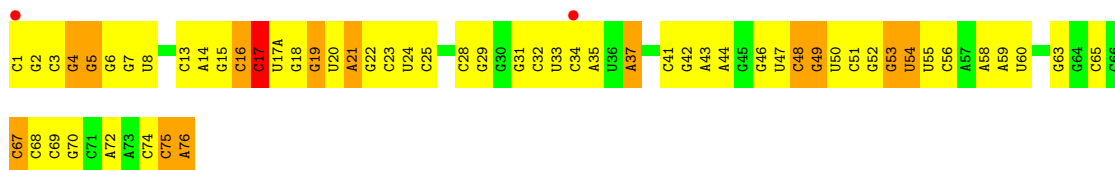


• Molecule 52: 50S ribosomal protein L36

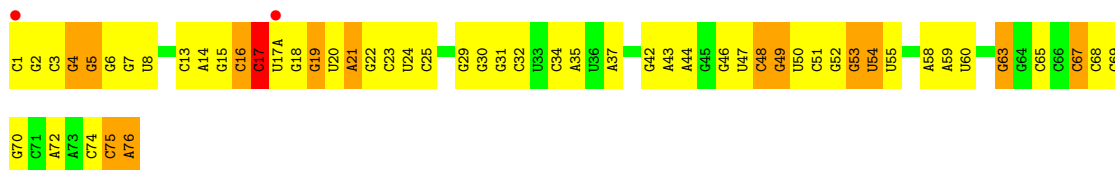




- Molecule 53: P-site tRNA fMet



- Molecule 53: P-site tRNA fMet



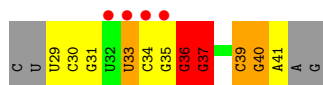
- Molecule 54: A-site ASL SufA6



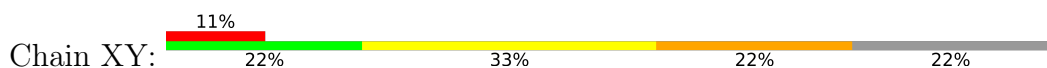
- Molecule 54: A-site ASL SufA6

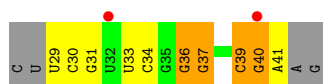


- Molecule 55: messenger RNA



- Molecule 55: messenger RNA





- 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, $\alpha$ , $\beta$ , $\gamma$	210.24Å 446.10Å 623.32Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.68 – 3.90 49.68 – 3.70	Depositor EDS
% Data completeness (in resolution range)	99.0 (49.68-3.90) 99.1 (49.68-3.70)	Depositor EDS
$R_{merge}$	0.31	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.66 (at 3.67Å)	Xtrriage
Refinement program	PHENIX	Depositor
R, $R_{free}$	0.235 , 0.278 0.235 , 0.278	Depositor DCC
$R_{free}$ test set	27641 reflections (4.51%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	88.0	Xtrriage
Anisotropy	0.281	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.24 , 47.0	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.38$ , $\langle L^2 \rangle = 0.21$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.89	EDS
Total number of atoms	291950	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	64.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.50% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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: 1MG, PAR, ZN, PPU, 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	0.43	0/36098	0.95	64/56341 (0.1%)
1	XA	0.48	0/36101	1.01	70/56346 (0.1%)
2	QB	0.35	0/1959	0.65	0/2642
2	XB	0.35	0/1959	0.65	0/2642
3	QC	0.36	0/1629	0.60	0/2195
3	XC	0.37	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	0.36	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	0.48	1/991 (0.1%)	0.79	2/1327 (0.2%)
12	XL	0.48	1/991 (0.1%)	0.79	2/1327 (0.2%)
13	QM	0.34	0/974	0.66	0/1303
13	XM	0.34	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	0.39	0/745	0.66	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	0.69	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	RA	0.53	2/69521 (0.0%)	1.06	133/108529 (0.1%)
22	YA	0.59	2/69543 (0.0%)	1.12	219/108563 (0.2%)
23	RB	0.41	0/2878	0.95	4/4490 (0.1%)
23	YB	0.49	0/2878	1.04	4/4490 (0.1%)
24	RD	0.59	2/2165 (0.1%)	0.90	4/2919 (0.1%)
24	YD	0.56	1/2165 (0.0%)	0.90	4/2919 (0.1%)
25	RE	0.52	0/1601	0.91	2/2160 (0.1%)
25	YE	0.52	0/1601	0.91	2/2160 (0.1%)
26	RF	0.50	0/1620	0.76	0/2194
26	YF	0.50	0/1620	0.76	0/2194
27	RG	0.40	0/1499	0.66	0/2016
27	YG	0.40	0/1499	0.66	0/2016
28	RH	0.45	0/1332	0.85	3/1802 (0.2%)
28	YH	0.45	0/1332	0.85	4/1802 (0.2%)
29	RI	0.54	2/1151 (0.2%)	0.68	1/1558 (0.1%)
29	YI	0.34	0/1151	0.61	0/1558
30	RN	0.46	0/1131	0.78	1/1525 (0.1%)
30	YN	0.46	0/1131	0.78	1/1525 (0.1%)
31	RO	0.54	0/943	0.71	0/1269
31	YO	0.53	0/943	0.71	0/1269
32	RP	0.50	0/1162	0.94	3/1544 (0.2%)
32	YP	0.50	0/1162	0.95	3/1544 (0.2%)
33	RQ	0.54	0/1143	0.91	3/1527 (0.2%)
33	YQ	0.54	0/1143	0.89	3/1527 (0.2%)
34	RR	0.45	0/982	0.80	1/1312 (0.1%)
34	YR	0.45	0/982	0.80	1/1312 (0.1%)
35	RS	0.46	0/892	0.82	1/1187 (0.1%)
35	YS	0.45	0/892	0.83	1/1187 (0.1%)
36	RT	0.47	0/1155	0.73	2/1542 (0.1%)
36	YT	0.46	0/1155	0.73	2/1542 (0.1%)
37	RU	0.48	0/982	0.78	0/1306
37	YU	0.48	0/982	0.78	0/1306
38	RV	0.47	0/790	0.82	0/1057

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z  >5	RMSZ	# Z  >5
38	YV	0.47	0/790	0.82	0/1057
39	RW	0.45	0/911	0.75	0/1220
39	YW	0.45	0/911	0.75	0/1220
40	RX	0.56	0/739	0.77	0/993
40	YX	0.56	0/739	0.77	0/993
41	RY	0.52	0/798	0.80	0/1064
41	YY	0.52	0/798	0.80	0/1064
42	RZ	0.36	0/1493	0.58	0/2026
42	YZ	0.36	0/1493	0.62	0/2026
43	R0	0.42	0/657	0.63	0/874
43	Y0	0.42	0/657	0.65	0/874
44	R1	0.49	0/770	0.85	1/1022 (0.1%)
44	Y1	0.49	0/770	0.85	1/1022 (0.1%)
45	R2	0.50	0/583	0.84	1/771 (0.1%)
45	Y2	0.51	0/583	0.84	1/771 (0.1%)
46	R3	0.47	0/474	0.72	0/635
46	Y3	0.43	0/474	0.71	0/635
47	R4	0.38	0/594	0.78	1/795 (0.1%)
47	Y4	0.38	0/594	0.78	1/795 (0.1%)
48	R5	0.51	0/473	0.74	0/639
48	Y5	0.50	0/465	0.74	0/629
49	R6	0.42	0/431	0.76	0/575
49	Y6	0.43	0/431	0.76	0/575
50	R7	0.56	0/438	0.76	0/575
50	Y7	0.56	0/438	0.76	0/575
51	R8	0.62	0/525	0.93	1/691 (0.1%)
51	Y8	0.62	0/525	0.93	1/691 (0.1%)
52	R9	0.35	0/310	0.60	0/407
52	Y9	0.37	0/310	0.61	0/407
53	QV	0.51	0/1836	0.99	6/2859 (0.2%)
53	XV	0.51	0/1836	0.99	6/2859 (0.2%)
54	QX	0.74	0/188	0.84	0/290
54	XX	0.48	0/188	0.74	0/290
55	QY	0.78	1/311 (0.3%)	0.88	0/483
55	XY	0.51	0/311	0.88	0/483
56	Z6	0.79	0/40	1.79	1/60 (1.7%)
56	Z8	0.79	0/40	1.83	1/60 (1.7%)
All	All	0.50	12/316321 (0.0%)	0.98	568/472911 (0.1%)

All (12) bond length outliers are listed below:

*Continued on next page...*

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
24	RD	236	GLY	C-N	8.53	1.53	1.34
29	RI	54	GLN	C-O	-7.01	1.10	1.23
55	QY	36	G	C2-N2	-6.93	1.27	1.34
22	YA	1142(A)	A	N9-C4	-6.45	1.33	1.37
29	RI	55	ALA	C-O	6.04	1.34	1.23
22	RA	654(T)	C	C1'-N1	5.89	1.57	1.48
22	RA	2518	A	N9-C4	-5.59	1.34	1.37
12	QL	48	PRO	N-CD	5.37	1.55	1.47
12	XL	48	PRO	N-CD	5.16	1.55	1.47
22	YA	1378	A	N9-C4	-5.14	1.34	1.37
24	RD	241	PRO	N-CD	5.09	1.54	1.47
24	YD	241	PRO	N-CD	5.05	1.54	1.47

All (568) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
53	XV	17	C	C2-N1-C1'	11.79	131.77	118.80
53	QV	17	C	C2-N1-C1'	11.74	131.72	118.80
22	YA	761	A	N1-C6-N6	11.29	125.37	118.60
1	XA	328	C	C6-N1-C2	-10.26	116.19	120.30
25	YE	21	VAL	C-N-CD	-10.09	98.39	120.60
25	RE	21	VAL	C-N-CD	-10.04	98.51	120.60
1	QA	372	C	C2-N1-C1'	9.36	129.09	118.80
22	YA	196	A	N1-C6-N6	9.24	124.14	118.60
53	QV	17	C	C6-N1-C1'	-8.77	110.28	120.80
53	XV	17	C	C6-N1-C1'	-8.76	110.29	120.80
33	YQ	81	VAL	CB-CA-C	-8.71	94.84	111.40
1	XA	328	C	C2-N1-C1'	8.67	128.33	118.80
33	RQ	81	VAL	CB-CA-C	-8.62	95.01	111.40
22	RA	2506	U	N3-C2-O2	-8.60	116.18	122.20
22	YA	2506	U	N3-C2-O2	-8.58	116.20	122.20
22	RA	2506	U	C2-N1-C1'	8.47	127.87	117.70
22	YA	1378	A	C8-N9-C4	8.39	109.16	105.80
1	QA	372	C	N1-C2-O2	8.38	123.93	118.90
1	QA	1158	C	N1-C2-O2	8.22	123.83	118.90
1	QA	1301	U	N1-C2-O2	8.15	128.51	122.80
22	YA	2294	C	C6-N1-C2	-8.13	117.05	120.30
22	YA	761	A	C5-C6-N6	-8.10	117.22	123.70
23	YB	94	C	C6-N1-C2	-8.05	117.08	120.30
1	XA	1336	C	C6-N1-C2	-8.01	117.10	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1301	U	C2-N1-C1'	7.98	127.28	117.70
22	YA	2506	U	N1-C2-O2	7.88	128.31	122.80
44	R1	79	GLY	N-CA-C	-7.83	93.53	113.10
44	Y1	79	GLY	N-CA-C	-7.83	93.53	113.10
1	XA	1301	U	C2-N1-C1'	7.80	127.06	117.70
22	YA	761	A	C6-C5-N7	-7.80	126.84	132.30
1	QA	372	C	C6-N1-C1'	-7.70	111.57	120.80
1	QA	1158	C	C2-N1-C1'	7.70	127.27	118.80
1	XA	792	A	P-O3'-C3'	7.65	128.88	119.70
22	RA	2829	C	C6-N1-C2	7.61	123.34	120.30
1	QA	1322	C	C2-N1-C1'	7.60	127.16	118.80
22	YA	761	A	C4-C5-N7	7.59	114.49	110.70
22	YA	2248	C	C6-N1-C2	-7.58	117.27	120.30
22	YA	1908	C	C6-N1-C2	-7.56	117.28	120.30
22	YA	783	A	C5-N7-C8	-7.56	100.12	103.90
1	QA	754	C	C2-N1-C1'	7.55	127.10	118.80
53	QV	17	C	N1-C2-O2	7.42	123.35	118.90
1	XA	1301	U	N1-C2-O2	7.41	127.99	122.80
22	YA	2856	C	C6-N1-C2	-7.41	117.34	120.30
1	XA	328	C	N1-C2-O2	7.39	123.33	118.90
1	XA	328	C	C5-C6-N1	7.38	124.69	121.00
22	YA	2506	U	C2-N1-C1'	7.37	126.54	117.70
53	XV	17	C	N1-C2-O2	7.34	123.31	118.90
1	QA	1301	U	N3-C2-O2	-7.33	117.07	122.20
22	YA	2420	C	O5'-P-OP1	-7.33	99.11	105.70
22	RA	1313	U	C2-N1-C1'	7.32	126.49	117.70
22	RA	1980	G	P-O3'-C3'	7.32	128.48	119.70
22	RA	2702	U	C5-C6-N1	7.29	126.34	122.70
32	YP	59	LEU	N-CA-C	-7.27	91.38	111.00
22	YA	1221	C	C6-N1-C2	-7.27	117.39	120.30
32	RP	59	LEU	N-CA-C	-7.26	91.39	111.00
22	YA	1950	G	C4-N9-C1'	7.25	135.92	126.50
22	RA	1795	C	C6-N1-C2	-7.23	117.41	120.30
22	RA	828	U	N3-C2-O2	-7.20	117.16	122.20
22	YA	1950	G	O4'-C1'-N9	7.15	113.92	108.20
22	RA	1396	U	N1-C2-O2	7.14	127.80	122.80
22	YA	1974	C	C6-N1-C2	-7.13	117.45	120.30
22	YA	761	A	N9-C4-C5	-7.12	102.95	105.80
1	QA	449	C	C6-N1-C2	-7.12	117.45	120.30
33	YQ	81	VAL	N-CA-C	7.08	130.10	111.00
33	RQ	81	VAL	N-CA-C	7.05	130.04	111.00
22	RA	2506	U	N1-C2-O2	7.04	127.73	122.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
23	YB	56	G	C8-N9-C4	-7.04	103.58	106.40
22	RA	2335	A	O4'-C1'-N9	7.01	113.81	108.20
22	RA	752	A	C8-N9-C4	-7.01	103.00	105.80
22	YA	1799	G	P-O3'-C3'	6.98	128.07	119.70
22	YA	1695	G	C4-N9-C1'	6.97	135.56	126.50
1	XA	328	C	N3-C2-O2	-6.97	117.02	121.90
22	YA	196	A	C5-C6-N6	-6.94	118.15	123.70
22	YA	796	C	C6-N1-C2	6.92	123.07	120.30
22	YA	530	G	N3-C2-N2	6.91	124.74	119.90
22	YA	2318	G	O4'-C1'-N9	6.90	113.72	108.20
22	RA	1929	G	C5-C6-O6	-6.90	124.46	128.60
22	RA	687	C	C5-C6-N1	6.89	124.44	121.00
22	RA	2702	U	C2-N1-C1'	6.86	125.93	117.70
1	QA	1322	C	N1-C2-O2	6.83	123.00	118.90
56	Z8	74	C	N1-C2-O2	6.82	122.99	118.90
22	YA	1396	U	N1-C2-O2	6.82	127.57	122.80
22	YA	2681	C	P-O3'-C3'	6.81	127.87	119.70
1	XA	345	C	P-O3'-C3'	6.78	127.84	119.70
22	RA	1786	A	C4-C5-N7	6.78	114.09	110.70
22	YA	2712(A)	A	N7-C8-N9	6.75	117.18	113.80
1	XA	1200	C	P-O3'-C3'	6.74	127.79	119.70
1	XA	1301	U	N3-C2-O2	-6.74	117.48	122.20
56	Z6	74	C	N1-C2-O2	6.70	122.92	118.90
1	XA	1054	C	C6-N1-C2	-6.69	117.62	120.30
1	QA	754	C	N1-C2-O2	6.68	122.91	118.90
22	YA	1654	A	N1-C6-N6	-6.68	114.59	118.60
1	XA	974	A	O4'-C1'-N9	6.67	113.54	108.20
22	YA	196	A	C6-C5-N7	-6.66	127.64	132.30
22	YA	2559	C	C2-N1-C1'	6.66	126.13	118.80
1	XA	1322	C	N1-C2-O2	6.65	122.89	118.90
22	YA	1979	C	C6-N1-C2	-6.63	117.65	120.30
22	YA	1950	G	N3-C2-N2	6.63	124.54	119.90
22	RA	2870	C	C6-N1-C2	-6.62	117.65	120.30
22	YA	2335	A	O4'-C1'-N9	6.60	113.48	108.20
1	XA	960	U	C2-N1-C1'	6.58	125.60	117.70
22	RA	2078	C	C6-N1-C2	-6.58	117.67	120.30
22	RA	205	G	P-O3'-C3'	6.58	127.59	119.70
22	YA	783	A	C4-C5-N7	6.57	113.98	110.70
24	RD	131	LEU	CA-CB-CG	6.54	130.35	115.30
22	YA	2609	U	C2-N1-C1'	-6.54	109.85	117.70
22	YA	2468	G	C8-N9-C4	-6.52	103.79	106.40
22	YA	205	G	P-O3'-C3'	6.51	127.52	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	1396	U	C2-N1-C1'	6.51	125.51	117.70
24	YD	131	LEU	CA-CB-CG	6.50	130.26	115.30
22	YA	1359	A	N9-C4-C5	-6.50	103.20	105.80
22	YA	761	A	C5-N7-C8	-6.50	100.65	103.90
22	YA	2318	G	C8-N9-C4	-6.49	103.81	106.40
1	QA	364	A	C8-N9-C4	6.48	108.39	105.80
22	YA	783	A	C6-C5-N7	-6.46	127.78	132.30
22	YA	1992	G	P-O3'-C3'	6.46	127.45	119.70
22	RA	242	G	P-O3'-C3'	6.45	127.44	119.70
22	RA	2614	A	C6-N1-C2	-6.45	114.73	118.60
22	RA	2489	G	N1-C6-O6	-6.44	116.04	119.90
22	YA	2702	U	C2-N1-C1'	6.43	125.42	117.70
22	YA	530	G	N1-C2-N2	-6.42	110.42	116.20
22	YA	523	C	C6-N1-C2	-6.42	117.73	120.30
22	YA	1835	G	C4-N9-C1'	6.40	134.81	126.50
22	RA	1694	C	P-O3'-C3'	6.38	127.36	119.70
22	YA	1191	G	C8-N9-C4	6.36	108.94	106.40
1	XA	1065	U	P-O3'-C3'	6.36	127.33	119.70
22	YA	62	C	C6-N1-C2	6.34	122.84	120.30
22	YA	1130	U	P-O3'-C3'	6.34	127.31	119.70
22	YA	1653	G	N3-C4-C5	-6.34	125.43	128.60
22	RA	2683	C	C6-N1-C2	-6.33	117.77	120.30
22	YA	265	A	O4'-C1'-N9	6.32	113.26	108.20
22	YA	1835	G	N3-C4-C5	-6.32	125.44	128.60
22	RA	662	G	N1-C6-O6	6.32	123.69	119.90
1	XA	797	C	C6-N1-C2	-6.31	117.78	120.30
22	RA	1786	A	N9-C4-C5	-6.29	103.28	105.80
22	YA	830	G	N3-C4-C5	-6.28	125.46	128.60
4	QD	28	SER	C-N-CD	6.28	141.58	128.40
22	RA	1396	U	N3-C2-O2	-6.27	117.81	122.20
1	XA	1158	C	C2-N1-C1'	6.26	125.68	118.80
22	YA	783	A	N7-C8-N9	6.26	116.93	113.80
1	XA	1201	A	P-O3'-C3'	6.25	127.20	119.70
22	YA	1626	G	C8-N9-C4	-6.25	103.90	106.40
1	XA	1065	U	OP2-P-O3'	6.23	118.91	105.20
1	QA	960	U	N3-C2-O2	-6.22	117.85	122.20
22	YA	1658	C	C6-N1-C2	-6.22	117.81	120.30
22	RA	856	C	C6-N1-C2	-6.22	117.81	120.30
1	QA	1158	C	N3-C2-O2	-6.19	117.57	121.90
22	YA	1141	U	O5'-P-OP2	6.18	118.11	110.70
22	YA	2584	U	N3-C2-O2	-6.18	117.88	122.20
22	RA	36	G	C8-N9-C4	-6.17	103.93	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	789	A	N1-C6-N6	-6.17	114.90	118.60
22	RA	783	A	C5-N7-C8	-6.16	100.82	103.90
22	RA	1899	G	N3-C2-N2	6.15	124.21	119.90
22	YA	1965	C	C6-N1-C2	6.15	122.76	120.30
22	YA	565	C	N3-C4-C5	6.15	124.36	121.90
22	RA	2723	C	C6-N1-C2	-6.14	117.84	120.30
22	YA	697	C	C6-N1-C2	-6.14	117.84	120.30
22	YA	2240	C	C6-N1-C2	6.13	122.75	120.30
22	RA	460	A	N9-C4-C5	-6.13	103.35	105.80
22	YA	196	A	C4-C5-N7	6.12	113.76	110.70
22	RA	2610	C	P-O3'-C3'	6.12	127.04	119.70
22	YA	1941	C	C6-N1-C2	-6.12	117.85	120.30
22	YA	517	C	C6-N1-C2	-6.09	117.86	120.30
22	YA	982	C	C6-N1-C2	-6.08	117.87	120.30
22	YA	2318	G	N7-C8-N9	6.07	116.14	113.10
1	QA	960	U	C2-N1-C1'	6.06	124.97	117.70
34	RR	9	LYS	N-CA-C	-6.05	94.65	111.00
22	YA	828	U	C2-N1-C1'	6.05	124.96	117.70
22	RA	687	C	C6-N1-C2	-6.05	117.88	120.30
1	XA	687	A	P-O3'-C3'	6.04	126.95	119.70
1	QA	723	U	C2-N1-C1'	6.04	124.94	117.70
1	QA	792	A	P-O3'-C3'	6.04	126.95	119.70
22	RA	1895	C	C6-N1-C2	-6.03	117.89	120.30
22	YA	1022	G	P-O3'-C3'	6.03	126.94	119.70
1	XA	1058	G	N9-C4-C5	-6.03	102.99	105.40
1	XA	1322	C	C2-N1-C1'	6.03	125.43	118.80
22	YA	1694	C	P-O3'-C3'	6.03	126.93	119.70
1	QA	944	G	N3-C4-C5	-6.03	125.59	128.60
22	RA	460	A	C8-N9-C4	6.02	108.21	105.80
1	XA	753	A	P-O3'-C3'	6.01	126.92	119.70
22	YA	2681	C	C6-N1-C2	-6.01	117.90	120.30
22	RA	1929	G	N1-C6-O6	6.01	123.50	119.90
22	YA	333	G	C4-N9-C1'	6.01	134.31	126.50
24	YD	240	ALA	C-N-CD	5.99	140.99	128.40
34	YR	9	LYS	N-CA-C	-5.99	94.83	111.00
1	XA	186(A)	C	C6-N1-C2	-5.99	117.91	120.30
23	RB	45	A	N1-C6-N6	5.98	122.19	118.60
1	QA	754	C	C6-N1-C1'	-5.98	113.63	120.80
22	RA	2712	U	N3-C2-O2	-5.98	118.02	122.20
22	YA	783	A	N1-C6-N6	5.98	122.19	118.60
22	RA	1929	G	C4-C5-N7	5.97	113.19	110.80
22	YA	1929	G	C6-C5-N7	-5.96	126.82	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1094	G	OP2-P-O3'	5.96	118.32	105.20
22	RA	2506	U	C6-N1-C2	-5.96	117.43	121.00
24	RD	240	ALA	C-N-CD	5.94	140.88	128.40
22	YA	198	C	C6-N1-C2	5.94	122.68	120.30
22	RA	1929	G	OP1-P-O3'	5.93	118.26	105.20
22	RA	76	C	C6-N1-C2	-5.93	117.93	120.30
1	XA	1397	C	C6-N1-C2	-5.93	117.93	120.30
22	YA	404	C	P-O3'-C3'	5.93	126.81	119.70
22	RA	2679	A	C8-N9-C4	5.92	108.17	105.80
22	YA	1695	G	C8-N9-C1'	-5.92	119.31	127.00
22	RA	912	C	C6-N1-C2	-5.92	117.93	120.30
22	RA	1502	C	C2-N1-C1'	5.91	125.31	118.80
22	YA	2751	G	N7-C8-N9	5.91	116.06	113.10
1	QA	1528	U	P-O3'-C3'	5.91	126.79	119.70
22	RA	1788	C	C6-N1-C2	-5.90	117.94	120.30
53	XV	17	C	C6-N1-C2	-5.89	117.94	120.30
22	RA	1786	A	C5-N7-C8	-5.89	100.95	103.90
22	YA	828	U	N3-C2-O2	-5.89	118.08	122.20
28	RH	125	VAL	C-N-CD	-5.88	107.66	120.60
22	RA	404	C	P-O3'-C3'	5.88	126.75	119.70
28	YH	125	VAL	C-N-CD	-5.88	107.67	120.60
22	YA	1935	G	N1-C6-O6	5.88	123.42	119.90
23	YB	79	C	C6-N1-C2	-5.87	117.95	120.30
22	RA	57	C	C6-N1-C2	-5.87	117.95	120.30
22	YA	1950	G	C8-N9-C1'	-5.86	119.38	127.00
12	QL	119	LYS	N-CA-C	-5.86	95.19	111.00
1	XA	1151	A	O4'-C1'-N9	5.86	112.88	108.20
22	YA	22	C	C6-N1-C2	-5.85	117.96	120.30
25	RE	58	ARG	N-CA-C	-5.85	95.21	111.00
12	XL	119	LYS	N-CA-C	-5.85	95.21	111.00
22	RA	1931	U	C5-C4-O4	5.85	129.41	125.90
22	YA	828	U	N1-C2-O2	5.84	126.89	122.80
22	YA	1359	A	C5-C6-N6	-5.84	119.03	123.70
1	QA	315	A	O4'-C1'-N9	5.84	112.87	108.20
22	RA	74	A	N1-C6-N6	5.83	122.10	118.60
25	YE	58	ARG	N-CA-C	-5.83	95.25	111.00
22	RA	1193	G	N1-C6-O6	5.83	123.40	119.90
1	XA	1418	A	C8-N9-C4	5.83	108.13	105.80
22	RA	2712(A)	A	C8-N9-C4	-5.83	103.47	105.80
22	RA	140	A	N7-C8-N9	5.82	116.71	113.80
22	YA	1396	U	C2-N1-C1'	5.82	124.68	117.70
1	XA	115	G	P-O3'-C3'	5.81	126.68	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	YP	26	GLY	N-CA-C	-5.81	98.57	113.10
22	RA	1725	G	C4-N9-C1'	5.80	134.04	126.50
22	YA	1314	C	C2-N1-C1'	5.80	125.18	118.80
22	YA	102	G	P-O3'-C3'	5.80	126.66	119.70
22	RA	1882	C	C2-N1-C1'	5.79	125.17	118.80
1	XA	913	A	P-O3'-C3'	5.79	126.65	119.70
22	RA	2689	U	P-O3'-C3'	5.79	126.65	119.70
22	RA	2609	U	C2-N1-C1'	-5.78	110.77	117.70
22	YA	1396	U	N3-C2-O2	-5.78	118.16	122.20
22	YA	1929	G	N1-C6-O6	5.78	123.36	119.90
32	RP	26	GLY	N-CA-C	-5.77	98.68	113.10
45	Y2	16	LEU	N-CA-C	-5.76	95.45	111.00
22	YA	2751	G	P-O3'-C3'	5.75	126.60	119.70
1	XA	812	C	P-O3'-C3'	5.75	126.60	119.70
22	YA	1950	G	N7-C8-N9	5.75	115.97	113.10
1	QA	328	C	P-O3'-C3'	5.74	126.59	119.70
1	QA	1301	U	C6-N1-C1'	-5.74	113.16	121.20
22	YA	503	A	P-O3'-C3'	5.74	126.59	119.70
53	QV	17	C	C6-N1-C2	-5.74	118.00	120.30
22	YA	1695	G	C6-C5-N7	-5.74	126.96	130.40
22	YA	591	C	C6-N1-C2	-5.73	118.01	120.30
22	RA	1929	G	N9-C4-C5	-5.72	103.11	105.40
1	XA	1336	C	C2-N1-C1'	5.72	125.09	118.80
45	R2	16	LEU	N-CA-C	-5.72	95.55	111.00
22	YA	2446	G	C8-N9-C4	-5.72	104.11	106.40
22	YA	637	A	C8-N9-C4	-5.72	103.51	105.80
22	YA	2439	A	O4'-C1'-N9	-5.71	103.63	108.20
1	XA	971	G	O4'-C1'-N9	5.71	112.77	108.20
19	XS	6	LYS	N-CA-C	-5.69	95.63	111.00
22	YA	2271	G	N3-C4-N9	5.69	129.41	126.00
1	QA	137	C	C6-N1-C2	5.69	122.57	120.30
22	YA	494	G	C4-N9-C1'	5.68	133.88	126.50
1	QA	960	U	N1-C2-O2	5.66	126.76	122.80
19	QS	6	LYS	N-CA-C	-5.66	95.71	111.00
12	XL	47	LYS	C-N-CD	5.66	140.29	128.40
22	YA	1974	C	N3-C2-O2	-5.66	117.94	121.90
22	RA	676	A	O4'-C1'-N9	5.66	112.72	108.20
1	XA	883	C	C6-N1-C2	-5.65	118.04	120.30
22	RA	1022	G	P-O3'-C3'	5.65	126.48	119.70
1	QA	357	G	C8-N9-C4	-5.65	104.14	106.40
1	QA	913	A	P-O3'-C3'	5.63	126.46	119.70
22	RA	1543	A	O4'-C1'-N9	5.63	112.70	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2020	A	N1-C2-N3	5.63	132.11	129.30
1	XA	681	C	C6-N1-C2	-5.63	118.05	120.30
22	RA	2586	C	C6-N1-C2	-5.62	118.05	120.30
22	YA	2468	G	O4'-C1'-N9	5.62	112.69	108.20
1	XA	792	A	N1-C6-N6	5.62	121.97	118.60
22	RA	1980	G	OP1-P-O3'	5.61	117.55	105.20
22	RA	1899	G	N1-C2-N2	-5.61	111.15	116.20
22	YA	1658	C	C5-C6-N1	5.61	123.80	121.00
1	XA	960	U	P-O3'-C3'	5.60	126.42	119.70
22	YA	450	G	C6-C5-N7	-5.60	127.04	130.40
22	YA	2032	G	C4-C5-N7	5.59	113.04	110.80
22	YA	1598	C	C6-N1-C2	-5.59	118.07	120.30
22	RA	2710	C	C6-N1-C2	-5.58	118.07	120.30
30	RN	114	ARG	N-CA-C	-5.58	95.94	111.00
4	XD	14	ARG	C-N-CA	-5.58	107.75	121.70
22	YA	1786	A	N1-C6-N6	5.58	121.95	118.60
47	R4	39	CYS	N-CA-C	-5.57	95.96	111.00
1	QA	703	G	P-O3'-C3'	5.57	126.38	119.70
22	YA	445	C	C2-N1-C1'	5.57	124.92	118.80
22	YA	2444	G	O5'-P-OP2	-5.57	100.69	105.70
22	YA	2032	G	N3-C4-C5	5.56	131.38	128.60
1	XA	1200	C	OP2-P-O3'	5.55	117.42	105.20
1	XA	1412	C	C6-N1-C2	5.55	122.52	120.30
22	RA	2426	A	C8-N9-C4	-5.55	103.58	105.80
22	YA	517	C	C5-C6-N1	5.55	123.78	121.00
22	RA	2060	A	P-O3'-C3'	5.55	126.36	119.70
22	RA	205	G	OP2-P-O3'	5.54	117.40	105.20
22	YA	806	C	C2-N1-C1'	5.54	124.89	118.80
47	Y4	39	CYS	N-CA-C	-5.54	96.06	111.00
12	QL	47	LYS	C-N-CD	5.53	140.02	128.40
22	RA	1799	G	P-O3'-C3'	5.53	126.34	119.70
22	YA	15	G	N1-C6-O6	5.53	123.22	119.90
1	QA	812	C	P-O3'-C3'	5.53	126.33	119.70
22	RA	2489	G	C5-C6-O6	5.53	131.91	128.60
1	XA	1058	G	C8-N9-C4	5.53	108.61	106.40
1	XA	1336	C	N3-C2-O2	-5.52	118.03	121.90
22	RA	783	A	N7-C8-N9	5.52	116.56	113.80
22	RA	1786	A	N1-C6-N6	5.52	121.91	118.60
1	XA	960	U	C5-C6-N1	5.52	125.46	122.70
30	YN	114	ARG	N-CA-C	-5.52	96.10	111.00
22	RA	512	G	C4-N9-C1'	-5.51	119.33	126.50
1	QA	533	A	P-O3'-C3'	5.51	126.31	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	1937	A	C8-N9-C4	5.51	108.00	105.80
22	YA	1822	G	N3-C4-N9	-5.51	122.69	126.00
22	YA	2006	C	C6-N1-C2	5.51	122.50	120.30
22	YA	2439	A	P-O3'-C3'	5.51	126.31	119.70
1	QA	186(A)	C	C6-N1-C2	-5.51	118.10	120.30
22	YA	2318	G	C4-N9-C1'	5.50	133.65	126.50
1	XA	701	C	OP2-P-O3'	5.50	117.30	105.20
53	XV	17	C	C5-C6-N1	5.50	123.75	121.00
1	QA	31	G	P-O3'-C3'	5.50	126.29	119.70
1	XA	410	G	OP1-P-O3'	5.49	117.29	105.20
22	YA	2776	A	P-O3'-C3'	5.49	126.29	119.70
22	RA	1776	G	C4-N9-C1'	5.49	133.64	126.50
22	YA	210	C	C6-N1-C2	5.49	122.49	120.30
22	YA	2051	A	C2-N3-C4	-5.48	107.86	110.60
1	QA	119	A	P-O3'-C3'	5.48	126.28	119.70
22	RA	570	G	N3-C4-C5	-5.48	125.86	128.60
53	QV	17	C	C5-C6-N1	5.47	123.74	121.00
22	YA	2053	G	C5-C6-O6	-5.47	125.32	128.60
24	RD	251	GLY	N-CA-C	5.47	126.77	113.10
28	YH	127	GLU	N-CA-C	-5.46	96.25	111.00
28	RH	127	GLU	N-CA-C	-5.46	96.26	111.00
22	YA	1012	U	OP2-P-O3'	5.46	117.22	105.20
1	XA	1336	C	N1-C2-O2	5.46	122.17	118.90
22	RA	1241	A	O4'-C1'-N9	5.45	112.56	108.20
22	YA	1378	A	N7-C8-N9	-5.45	111.07	113.80
22	RA	2712(A)	A	N7-C8-N9	5.45	116.53	113.80
22	YA	333	G	C8-N9-C4	-5.45	104.22	106.40
22	RA	2499	C	C6-N1-C2	-5.44	118.12	120.30
1	XA	243	A	P-O3'-C3'	5.44	126.23	119.70
24	YD	251	GLY	N-CA-C	5.44	126.70	113.10
1	QA	339	C	C6-N1-C2	-5.44	118.12	120.30
22	RA	1774	C	C5-C6-N1	5.44	123.72	121.00
22	YA	830	G	C8-N9-C4	-5.44	104.22	106.40
22	YA	2468	G	N7-C8-N9	5.43	115.82	113.10
22	YA	733	G	C8-N9-C4	-5.43	104.23	106.40
32	RP	25	SER	N-CA-C	-5.42	96.35	111.00
22	YA	856	C	C6-N1-C2	-5.42	118.13	120.30
22	RA	2702	U	C6-N1-C1'	-5.42	113.62	121.20
1	QA	324	G	N3-C4-C5	5.41	131.31	128.60
22	YA	1955	U	P-O3'-C3'	5.41	126.19	119.70
32	YP	25	SER	N-CA-C	-5.41	96.39	111.00
1	XA	1200	C	C2-N1-C1'	5.41	124.75	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	530	G	N1-C6-O6	-5.41	116.66	119.90
22	RA	761	A	C4-C5-C6	-5.40	114.30	117.00
22	YA	242	G	P-O3'-C3'	5.40	126.18	119.70
22	RA	227	A	P-O3'-C3'	5.40	126.18	119.70
1	QA	1336	C	N1-C2-O2	5.40	122.14	118.90
22	YA	2600	A	C4-C5-C6	5.40	119.70	117.00
22	YA	1438	U	C5-C6-N1	5.39	125.40	122.70
22	YA	2481	G	P-O3'-C3'	5.39	126.17	119.70
1	XA	701	C	P-O3'-C3'	5.39	126.17	119.70
24	YD	111	LEU	CA-CB-CG	5.39	127.69	115.30
22	YA	2584	U	C6-N1-C2	-5.38	117.77	121.00
22	YA	2712(A)	A	C5-N7-C8	-5.38	101.21	103.90
22	YA	74	A	O4'-C1'-N9	-5.38	103.89	108.20
23	RB	45	A	N9-C4-C5	-5.38	103.65	105.80
22	RA	265	A	O4'-C1'-N9	5.37	112.50	108.20
22	YA	2832	U	P-O3'-C3'	5.37	126.15	119.70
22	YA	2253	G	C5-C6-O6	-5.37	125.38	128.60
22	RA	1332	G	N7-C8-N9	5.36	115.78	113.10
1	QA	186(A)	C	N3-C2-O2	-5.36	118.15	121.90
22	RA	1992	G	P-O3'-C3'	5.36	126.13	119.70
1	XA	345	C	OP2-P-O3'	5.36	116.99	105.20
22	YA	1899	G	N1-C2-N2	-5.36	111.38	116.20
28	YH	100	GLY	N-CA-C	-5.36	99.70	113.10
22	YA	1795	C	C6-N1-C2	-5.36	118.16	120.30
22	RA	74	A	C5-N7-C8	-5.36	101.22	103.90
22	YA	1026	U	OP1-P-O3'	5.36	116.98	105.20
22	YA	2504	U	C5-C6-N1	5.36	125.38	122.70
22	YA	2495	G	N1-C6-O6	5.35	123.11	119.90
22	YA	2655	G	P-O3'-C3'	5.35	126.12	119.70
22	RA	1776	G	C6-C5-N7	-5.34	127.19	130.40
22	YA	271(B)	G	P-O3'-C3'	5.34	126.11	119.70
24	RD	111	LEU	CA-CB-CG	5.34	127.58	115.30
22	YA	1964	G	C4-C5-N7	5.34	112.94	110.80
22	RA	57	C	C5-C6-N1	5.34	123.67	121.00
1	QA	254	G	O5'-P-OP1	-5.33	100.90	105.70
1	QA	1322	C	C6-N1-C1'	-5.33	114.40	120.80
23	RB	30	C	C6-N1-C2	-5.33	118.17	120.30
22	YA	2559	C	C5-C6-N1	5.33	123.67	121.00
1	XA	1495	U	C2-N1-C1'	5.33	124.09	117.70
22	YA	669	G	C4-N9-C1'	5.33	133.42	126.50
22	YA	2430	A	N1-C2-N3	5.33	131.96	129.30
28	RH	100	GLY	N-CA-C	-5.32	99.79	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1065	U	OP2-P-O3'	5.32	116.91	105.20
22	YA	2496	C	C6-N1-C2	5.32	122.43	120.30
22	RA	2383	G	N1-C6-O6	5.32	123.09	119.90
22	YA	522	G	C8-N9-C4	5.32	108.53	106.40
22	RA	600	G	C8-N9-C4	5.32	108.53	106.40
22	YA	99	U	P-O3'-C3'	5.31	126.07	119.70
22	YA	1426	G	N3-C4-C5	-5.31	125.94	128.60
1	QA	1158	C	C6-N1-C1'	-5.31	114.43	120.80
22	YA	196	A	C5-N7-C8	-5.31	101.25	103.90
1	QA	701	C	P-O3'-C3'	5.31	126.07	119.70
1	QA	1065	U	P-O3'-C3'	5.31	126.07	119.70
22	YA	247	G	N7-C8-N9	-5.31	110.45	113.10
1	XA	244	U	C2-N1-C1'	5.30	124.06	117.70
22	YA	2468	G	C4-N9-C1'	5.30	133.38	126.50
51	Y8	36	LYS	N-CA-C	-5.29	96.72	111.00
22	RA	1130	U	P-O3'-C3'	5.28	126.04	119.70
22	YA	252	G	N1-C6-O6	-5.28	116.73	119.90
22	YA	1695	G	N3-C4-N9	5.28	129.17	126.00
1	XA	328	C	P-O3'-C3'	5.28	126.03	119.70
22	YA	2481	G	OP2-P-O3'	5.28	116.81	105.20
23	YB	56	G	N7-C8-N9	5.28	115.74	113.10
1	XA	31	G	P-O3'-C3'	5.27	126.03	119.70
1	XA	792	A	C6-C5-N7	-5.27	128.61	132.30
22	YA	1024	G	N3-C4-N9	5.27	129.16	126.00
22	RA	1314	C	C2-N1-C1'	5.27	124.60	118.80
51	R8	36	LYS	N-CA-C	-5.27	96.78	111.00
22	RA	1613	G	N3-C4-N9	5.26	129.16	126.00
22	RA	828	U	C5-C4-O4	5.26	129.06	125.90
22	RA	74	A	N7-C8-N9	5.26	116.43	113.80
22	YA	450	G	C4-N9-C1'	5.26	133.34	126.50
22	RA	1187	G	C8-N9-C4	-5.25	104.30	106.40
22	YA	1024	G	C6-C5-N7	-5.25	127.25	130.40
22	YA	2126	A	P-O3'-C3'	5.25	126.00	119.70
1	QA	1322	C	C6-N1-C2	-5.25	118.20	120.30
22	YA	1476	C	C6-N1-C2	-5.24	118.20	120.30
22	YA	752	A	P-O3'-C3'	5.24	125.99	119.70
22	RA	915	C	C6-N1-C2	-5.24	118.20	120.30
22	YA	759	G	N1-C6-O6	5.24	123.04	119.90
22	YA	1822	G	N3-C4-C5	5.23	131.22	128.60
22	RA	372	G	OP2-P-O3'	5.23	116.71	105.20
22	YA	1955	U	C6-N1-C2	-5.23	117.86	121.00
22	RA	1899	G	N3-C4-N9	5.23	129.14	126.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2490	G	C4-N9-C1'	5.23	133.29	126.50
1	XA	346	G	C8-N9-C1'	-5.22	120.21	127.00
1	XA	832	C	C6-N1-C2	-5.22	118.21	120.30
33	YQ	5	ARG	N-CA-C	-5.21	96.93	111.00
22	YA	2015	A	C2-N3-C4	5.21	113.21	110.60
35	RS	110	LEU	CA-CB-CG	5.21	127.28	115.30
1	QA	328	C	C6-N1-C2	-5.21	118.22	120.30
22	YA	512	G	O4'-C1'-N9	5.21	112.37	108.20
22	YA	560	C	C6-N1-C2	5.21	122.38	120.30
22	RA	74	A	C6-C5-N7	-5.21	128.66	132.30
29	RI	54	GLN	CA-C-O	5.21	131.03	120.10
53	QV	17	C	N3-C2-O2	-5.21	118.26	121.90
1	XA	1499	A	O5'-P-OP1	-5.20	101.02	105.70
1	QA	1336	C	C2-N1-C1'	5.20	124.52	118.80
22	RA	2211	G	N7-C8-N9	5.20	115.70	113.10
1	XA	346	G	C4-N9-C1'	5.20	133.26	126.50
22	YA	1903	G	O5'-P-OP2	-5.20	101.02	105.70
1	QA	320	C	C6-N1-C2	5.19	122.38	120.30
22	RA	581	C	C6-N1-C2	-5.19	118.22	120.30
1	QA	789	U	N3-C2-O2	-5.19	118.57	122.20
22	YA	789	A	C4-C5-N7	-5.19	108.11	110.70
33	RQ	5	ARG	N-CA-C	-5.19	97.00	111.00
22	RA	783	A	C4-C5-N7	5.18	113.29	110.70
19	XS	79	THR	N-CA-C	-5.18	97.02	111.00
22	YA	522	G	N9-C4-C5	-5.18	103.33	105.40
22	YA	1929	G	C4-C5-N7	5.18	112.87	110.80
1	XA	410	G	P-O3'-C3'	5.18	125.91	119.70
35	YS	110	LEU	CA-CB-CG	5.18	127.21	115.30
22	RA	2490	G	N3-C2-N2	5.18	123.52	119.90
22	YA	517	C	C2-N1-C1'	5.18	124.49	118.80
22	YA	2250	G	C8-N9-C4	-5.17	104.33	106.40
22	YA	1672	C	C6-N1-C2	5.17	122.37	120.30
1	QA	1322	C	N3-C2-O2	-5.17	118.28	121.90
53	XV	17	C	N3-C2-O2	-5.17	118.28	121.90
1	XA	1158	C	N1-C2-O2	5.17	122.00	118.90
1	XA	1260	C	C6-N1-C2	-5.16	118.24	120.30
22	YA	758	C	C6-N1-C2	-5.16	118.24	120.30
22	YA	1359	A	N1-C6-N6	5.16	121.69	118.60
22	RA	2832	U	P-O3'-C3'	5.16	125.89	119.70
22	RA	2544	G	N1-C6-O6	5.15	122.99	119.90
19	QS	79	THR	N-CA-C	-5.15	97.09	111.00
22	RA	1658	C	C6-N1-C2	-5.15	118.24	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	YA	1238	G	C8-N9-C4	5.15	108.46	106.40
1	QA	1200	C	P-O3'-C3'	5.14	125.87	119.70
22	RA	221	A	C8-N9-C4	-5.14	103.74	105.80
1	XA	1503	A	P-O3'-C3'	5.14	125.87	119.70
22	YA	2598	A	N1-C6-N6	5.14	121.68	118.60
1	XA	1301	U	C6-N1-C1'	-5.14	114.01	121.20
22	YA	2031	A	O4'-C1'-N9	5.14	112.31	108.20
1	XA	960	U	C6-N1-C2	-5.14	117.92	121.00
1	QA	665	A	C8-N9-C4	5.13	107.85	105.80
22	RA	74	A	P-O3'-C3'	5.13	125.85	119.70
22	RA	512	G	C8-N9-C1'	5.13	133.67	127.00
1	XA	782	A	C8-N9-C4	5.13	107.85	105.80
22	YA	193	U	OP2-P-O3'	5.13	116.48	105.20
22	YA	1935	G	C5-C6-O6	-5.13	125.52	128.60
22	YA	494	G	C8-N9-C4	-5.12	104.35	106.40
1	QA	1027	C	OP1-P-O3'	5.12	116.47	105.20
22	RA	2292	C	C6-N1-C2	5.12	122.35	120.30
22	YA	2032	G	C5-N7-C8	-5.12	101.74	104.30
22	YA	2506	U	C6-N1-C2	-5.12	117.93	121.00
22	RA	1332	G	C8-N9-C4	-5.12	104.35	106.40
23	RB	45	A	C5-C6-N6	-5.12	119.61	123.70
22	YA	2358	G	N9-C4-C5	5.12	107.45	105.40
1	QA	1285	A	P-O3'-C3'	5.11	125.83	119.70
22	YA	1935	G	N9-C4-C5	-5.11	103.36	105.40
1	QA	372	C	N3-C2-O2	-5.11	118.33	121.90
1	QA	1336	C	C6-N1-C2	-5.11	118.26	120.30
22	RA	2776	A	P-O3'-C3'	5.11	125.83	119.70
22	YA	1654	A	N9-C4-C5	5.10	107.84	105.80
22	YA	2066	C	C6-N1-C2	-5.10	118.26	120.30
1	QA	366	C	C6-N1-C2	5.10	122.34	120.30
22	YA	2358	G	C8-N9-C4	-5.10	104.36	106.40
22	RA	687	C	C2-N1-C1'	5.09	124.40	118.80
22	YA	776	G	N3-C4-C5	5.09	131.15	128.60
22	YA	283	A	C8-N9-C4	5.08	107.83	105.80
22	YA	2779	U	C6-N1-C2	-5.08	117.95	121.00
36	RT	123	GLN	N-CA-C	-5.08	97.29	111.00
22	RA	1558	A	P-O3'-C3'	5.08	125.79	119.70
22	YA	912	C	C6-N1-C2	-5.08	118.27	120.30
1	XA	1430	C	C6-N1-C2	-5.07	118.27	120.30
36	YT	59	THR	N-CA-C	-5.07	97.31	111.00
36	YT	123	GLN	N-CA-C	-5.07	97.31	111.00
1	QA	932	C	C2-N1-C1'	5.07	124.37	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	RA	2324	C	C6-N1-C2	5.07	122.33	120.30
22	YA	226	G	O4'-C1'-N9	5.07	112.25	108.20
1	QA	115	G	P-O3'-C3'	5.06	125.78	119.70
22	YA	445	C	C6-N1-C2	-5.06	118.27	120.30
22	YA	356	G	N3-C4-C5	-5.06	126.07	128.60
22	YA	1313	U	C5-C6-N1	5.06	125.23	122.70
22	YA	1776	G	C8-N9-C1'	-5.06	120.42	127.00
22	YA	587	C	C6-N1-C2	-5.06	118.28	120.30
22	YA	1950	G	N1-C2-N2	-5.06	111.65	116.20
22	RA	577	G	OP2-P-O3'	5.06	116.32	105.20
22	YA	1964	G	C5-C6-O6	-5.05	125.57	128.60
22	RA	2867	G	C8-N9-C4	5.05	108.42	106.40
1	XA	595	G	P-O3'-C3'	5.05	125.76	119.70
1	QA	412	A	P-O3'-C3'	5.05	125.76	119.70
1	QA	687	A	P-O3'-C3'	5.05	125.76	119.70
22	YA	1965	C	N3-C4-C5	5.05	123.92	121.90
28	YH	127	GLU	C-N-CD	-5.05	109.50	120.60
22	RA	2126	A	P-O3'-C3'	5.04	125.75	119.70
36	RT	59	THR	N-CA-C	-5.04	97.38	111.00
22	YA	1304	C	C6-N1-C2	5.04	122.32	120.30
22	RA	1078	U	P-O3'-C3'	5.04	125.75	119.70
1	QA	1158	C	C6-N1-C2	-5.04	118.28	120.30
22	YA	1496	A	N7-C8-N9	5.03	116.32	113.80
22	RA	1613	G	C4-N9-C1'	5.03	133.04	126.50
22	YA	1786	A	N9-C4-C5	-5.02	103.79	105.80
22	RA	702	G	C4-N9-C1'	5.02	133.02	126.50
22	YA	2250	G	C5-C6-O6	5.02	131.61	128.60
22	YA	356	G	N3-C4-N9	5.02	129.01	126.00
1	XA	1359	C	C6-N1-C2	5.01	122.31	120.30
22	YA	2702	U	C5-C6-N1	5.01	125.21	122.70
22	RA	27	G	N3-C4-N9	-5.01	122.99	126.00
22	YA	1964	G	N1-C6-O6	5.01	122.91	119.90
22	RA	856	C	C5-C6-N1	5.01	123.50	121.00
22	YA	1695	G	N3-C4-C5	-5.01	126.10	128.60
1	QA	944	G	N3-C4-N9	5.01	129.00	126.00
22	RA	846	C	P-O3'-C3'	5.00	125.71	119.70
22	RA	1273	U	C5-C6-N1	-5.00	120.20	122.70
22	RA	2848	G	P-O3'-C3'	5.00	125.70	119.70
22	YA	974	G	N7-C8-N9	5.00	115.60	113.10
22	YA	1314	C	N1-C2-O2	5.00	121.90	118.90

There are no chirality outliers.

There are no planarity outliers.

## 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	672	0
1	XA	32249	0	16278	742	1
2	QB	1924	0	1975	283	0
2	XB	1924	0	1975	290	0
3	QC	1605	0	1668	210	0
3	XC	1605	0	1668	210	0
4	QD	1703	0	1764	247	0
4	XD	1703	0	1765	215	1
5	QE	1155	0	1213	159	0
5	XE	1155	0	1213	133	0
6	QF	843	0	857	92	1
6	XF	843	0	857	96	0
7	QG	1257	0	1296	146	0
7	XG	1257	0	1294	147	0
8	QH	1116	0	1175	151	0
8	XH	1116	0	1177	149	0
9	QI	1010	0	1037	140	0
9	XI	1010	0	1037	153	0
10	QJ	801	0	849	149	0
10	XJ	801	0	849	135	0
11	QK	885	0	904	103	0
11	XK	885	0	904	110	0
12	QL	975	0	1062	111	0
12	XL	975	0	1062	116	0
13	QM	964	0	1034	152	0
13	XM	964	0	1034	216	0
14	QN	492	0	529	103	0
14	XN	492	0	529	95	0
15	QO	734	0	771	78	0
15	XO	734	0	771	72	0
16	QP	705	0	725	115	0
16	XP	705	0	725	105	0
17	QQ	834	0	904	77	0
17	XQ	834	0	904	71	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
18	QR	574	0	644	69	0
18	XR	574	0	644	68	0
19	QS	674	0	699	117	0
19	XS	674	0	699	150	0
20	QT	763	0	860	109	0
20	XT	763	0	861	102	0
21	QU	217	0	234	25	0
21	XU	217	0	234	26	0
22	RA	62071	0	31286	1243	0
22	YA	62091	0	31295	1282	0
23	RB	2573	0	1306	68	0
23	YB	2573	0	1306	57	0
24	RD	2115	0	2195	320	0
24	YD	2115	0	2195	323	0
25	RE	1568	0	1634	268	0
25	YE	1568	0	1634	272	0
26	RF	1585	0	1632	178	0
26	YF	1585	0	1632	179	0
27	RG	1474	0	1535	202	0
27	YG	1474	0	1535	204	0
28	RH	1307	0	1382	220	0
28	YH	1307	0	1382	227	3
29	RI	1136	0	1223	61	1
29	YI	1136	0	1223	57	0
30	RN	1104	0	1180	190	0
30	YN	1104	0	1180	186	0
31	RO	933	0	996	124	0
31	YO	933	0	996	131	0
32	RP	1145	0	1227	247	0
32	YP	1145	0	1228	239	0
33	RQ	1122	0	1179	150	0
33	YQ	1122	0	1178	149	0
34	RR	968	0	1033	110	0
34	YR	968	0	1033	114	0
35	RS	882	0	943	156	0
35	YS	882	0	943	159	0
36	RT	1141	0	1202	156	0
36	YT	1141	0	1202	152	0
37	RU	964	0	1022	128	0
37	YU	964	0	1022	134	0
38	RV	779	0	852	130	0
38	YV	779	0	852	128	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
39	RW	900	0	964	101	0
39	YW	900	0	964	102	0
40	RX	725	0	778	67	0
40	YX	725	0	778	67	0
41	RY	785	0	878	166	0
41	YY	785	0	878	154	3
42	RZ	1461	0	1493	63	0
42	YZ	1461	0	1493	70	0
43	R0	648	0	672	28	0
43	Y0	648	0	672	44	0
44	R1	763	0	848	143	0
44	Y1	763	0	848	140	0
45	R2	581	0	629	80	0
45	Y2	581	0	629	79	0
46	R3	469	0	518	41	0
46	Y3	469	0	518	44	0
47	R4	581	0	574	156	0
47	Y4	581	0	574	225	0
48	R5	459	0	480	74	0
48	Y5	451	0	471	68	0
49	R6	424	0	450	93	0
49	Y6	424	0	450	90	0
50	R7	430	0	480	42	0
50	Y7	430	0	480	44	0
51	R8	517	0	582	102	0
51	Y8	517	0	582	102	0
52	R9	307	0	335	16	0
52	Y9	307	0	336	20	0
53	QV	1644	0	836	63	0
53	XV	1644	0	836	56	0
54	QX	169	0	88	55	0
54	XX	169	0	88	17	0
55	QY	303	0	152	22	0
55	XY	303	0	154	30	0
56	Z6	74	0	51	24	0
56	Z8	74	0	51	14	0
57	QA	65	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	QX	1	0	0	0	0
57	R5	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	R8	1	0	0	0	0
57	RA	244	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	2	0	0	0	0
57	RR	1	0	0	0	0
57	RU	1	0	0	0	0
57	XA	72	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	265	0	0	0	0
57	YB	3	0	0	0	0
57	YE	1	0	0	0	0
57	YP	2	0	0	0	0
57	YQ	1	0	0	0	0
57	YX	1	0	0	0	0
58	QA	42	0	45	4	0
58	XA	42	0	45	2	0
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	R9	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
59	Y9	1	0	0	0	0
All	All	291950	0	198321	15633	5

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 32.

All (15633) 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)
1:XA:1400:C:N4	53:XV:34:C:C6	1.71	1.55
14:XN:32:SER:CB	14:XN:41:ARG:HB3	1.23	1.55
14:XN:32:SER:HB3	14:XN:41:ARG:CB	1.27	1.54
28:RH:127:GLU:CG	28:RH:128:PRO:HD3	1.35	1.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:127:GLU:CG	28:YH:128:PRO:HD3	1.35	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
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
1:XA:1400:C:N4	53:XV:34:C:N1	1.65	1.39
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.35
44:R1:81:LYS:HA	44:R1:81:LYS:NZ	1.43	1.34
44:Y1:81:LYS:HA	44:Y1:81:LYS:NZ	1.42	1.34
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
19:XS:5:LEU:HD11	47:Y4:66:SER:CB	1.59	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	1.63	1.27
44:R1:81:LYS:HE2	44:R1:81:LYS:N	1.50	1.26
44:Y1:81:LYS:HE2	44:Y1:81:LYS:N	1.50	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
14:YN:40:CYS:SG	14:YN:43:CYS:N	2.11	1.23
19:XS:5:LEU:CD1	47:Y4:66:SER:HB2	1.67	1.22
33:RQ:59:ARG:O	33:RQ:60:ARG:HD2	1.38	1.22
1:XA:1400:C:C4	53:XV:34:C:C2	2.09	1.22
28:YH:127:GLU:HG2	28:YH:128:PRO:CD	1.69	1.21
28:YH:127:GLU:CB	28:YH:128:PRO:HD3	1.69	1.21
28:RH:127:GLU:HG2	28:RH:128:PRO:CD	1.69	1.20
1:QA:926:G:N2	54:QX:1:A:OP1	1.73	1.20
1:QA:1054:C:N4	55:QY:34:C:H1'	1.58	1.19
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	1.77	1.19
28:RH:127:GLU:CB	28:RH:128:PRO:HD3	1.69	1.19
41:RY:95:LYS:HB3	41:RY:100:ALA:HA	1.20	1.17
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.17
53:QV:35:A:C4	54:QX:3:G:N2	2.13	1.17
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.17
44:Y1:82:LEU:HD12	44:Y1:82:LEU:C	1.66	1.16
28:RH:132:ARG:HB2	28:RH:132:ARG:HH11	1.10	1.16
41:YY:76:CYS:HB3	41:YY:96:ILE:HD13	1.17	1.16
41:YY:95:LYS:HB3	41:YY:100:ALA:HA	1.20	1.16
14:YN:42:ILE:O	14:YN:43:CYS:O	1.65	1.15
32:RP:50:ARG:HH21	32:RP:50:ARG:HB3	1.13	1.14
22:YA:518:G:H4'	39:YW:18:ARG:HH12	1.07	1.14
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
13:XM:8:GLU:OE1	27:YG:115:ARG:CZ	1.96	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2555:U:O2	56:Z6:74:C:C5	2.01	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
44:R1:82:LEU:C	44:R1:82:LEU:HD12	1.66	1.13
13:XM:8:GLU:OE2	27:YG:115:ARG:NH1	1.81	1.13
43:Y0:7:LEU:O	53:XV:2:G:H4'	1.48	1.13
22:RA:2555:U:O2	56:Z6:74:C:C6	2.01	1.13
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.13
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.13
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.29	1.12
13:XM:121:LYS:NZ	55:XY:39:C:O2'	1.81	1.12
14:YN:32:SER:CB	14:YN:41:ARG:CB	1.97	1.12
44:Y1:82:LEU:CD1	44:Y1:83:GLU:O	1.97	1.12
44:R1:82:LEU:CD1	44:R1:83:GLU:O	1.97	1.12
26:RF:101:LEU:HD12	26:RF:102:PRO:HD2	1.21	1.11
37:RU:8:VAL:HG23	37:RU:11:ARG:HH21	1.14	1.11
32:YP:50:ARG:HH21	32:YP:50:ARG:HB3	1.13	1.11
25:YE:179:GLU:HB3	25:YE:181:LEU:HD23	1.31	1.11
24:YD:44:ASN:HB2	24:YD:48:ARG:O	1.51	1.11
37:YU:8:VAL:HG23	37:YU:11:ARG:HH21	1.14	1.11
28:YH:132:ARG:HB2	28:YH:132:ARG:HH11	1.10	1.11
53:QV:35:A:C2	54:QX:3:G:N3	2.18	1.11
24:RD:44:ASN:HB2	24:RD:48:ARG:O	1.50	1.11
25:RE:179:GLU:HB3	25:RE:181:LEU:HD23	1.32	1.11
26:YF:101:LEU:HD12	26:YF:102:PRO:HD2	1.21	1.11
44:Y1:82:LEU:HD12	44:Y1:83:GLU:N	1.66	1.11
44:R1:82:LEU:HD12	44:R1:83:GLU:N	1.66	1.10
22:RA:2553:G:N2	56:Z6:76:PPU:H2	1.67	1.10
28:RH:86:GLU:HG3	28:RH:165:ALA:H	1.05	1.10
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
41:RY:76:CYS:HB3	41:RY:96:ILE:HD13	1.17	1.10
25:YE:50:GLY:HA2	25:YE:77:ILE:HA	1.31	1.10
53:QV:35:A:C6	54:QX:3:G:C2	2.40	1.10
1:QA:1054:C:H41	55:QY:34:C:H1'	0.95	1.09
22:YA:483:A:H4'	41:YY:49:VAL:HA	1.32	1.09
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.09
30:YN:134:ARG:H	30:YN:135:PRO:HD3	1.11	1.09
32:RP:19:VAL:HG22	32:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	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
28:YH:152:ARG:HG3	28:YH:153:LYS:HE2	1.34	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.19	1.08
24:YD:131:LEU:HB2	24:YD:136:ILE:HD11	1.35	1.08
28:YH:86:GLU:HG3	28:YH:165:ALA:H	1.06	1.08
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.69	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
24:RD:131:LEU:HB2	24:RD:136:ILE:HD11	1.35	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
28:RH:152:ARG:HG3	28:RH:153:LYS:HE2	1.33	1.07
32:RP:126:VAL:HG12	32:RP:147:LEU:HD21	1.30	1.07
32:YP:126:VAL:HG12	32:YP:147:LEU:HD21	1.30	1.07
44:Y1:81:LYS:HZ3	44:Y1:81:LYS:CA	1.65	1.07
47:R4:71:ARG:HH11	47:R4:71:ARG:HG3	1.13	1.07
19:QS:69:HIS:CE1	47:R4:69:LYS:HE2	1.89	1.07
22:RA:2602:A:N6	53:QV:76:A:H2'	1.69	1.07
1:XA:372:C:O2'	1:XA:373:A:OP2	1.72	1.07
25:RE:50:GLY:HA2	25:RE:77:ILE:HA	1.31	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.06
44:Y1:82:LEU:CD1	44:Y1:83:GLU:N	2.18	1.06
32:RP:59:LEU:HA	32:RP:61:ARG:NH2	1.69	1.06
32:YP:59:LEU:HA	32:YP:61:ARG:NH2	1.69	1.06
47:Y4:71:ARG:HG3	47:Y4:71:ARG:HH11	1.13	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
28:YH:153:LYS:HB3	28:YH:154:PRO:HD2	1.07	1.06
51:Y8:52:LYS:H	51:Y8:53:PRO:CD	1.69	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
25:RE:21:VAL:HB	25:RE:22:PRO:HB3	1.37	1.06
44:R1:82:LEU:CD1	44:R1:83:GLU:N	2.18	1.06
25:RE:63:LEU:HD12	25:RE:64:LYS:H	1.18	1.06
26:RF:46:ARG:HH11	26:RF:46:ARG:HG2	1.20	1.06
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.06
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
25:YE:21:VAL:HB	25:YE:22:PRO:HB3	1.37	1.05
25:YE:63:LEU:HD12	25:YE:64:LYS:H	1.18	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	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
32:YP:19:VAL:HG22	32:YP:20:GLY:H	1.15	1.05
44:R1:81:LYS:HZ3	44:R1:81:LYS:CA	1.70	1.05
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1054:C:H41	55:QY:34:C:C1'	1.70	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
30:RN:134:ARG:H	30:RN:135:PRO:HD3	1.11	1.05
37:RU:90:VAL:HG12	37:RU:91:ASP:H	1.18	1.05
33:RQ:59:ARG:O	33:RQ:60:ARG:CD	2.05	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
19:QS:68:GLY:CA	47:R4:68:ARG:HG2	1.88	1.04
22:RA:2555:U:C2	56:Z6:74:C:C5	2.46	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
38:YV:49:THR:HB	38:YV:50:PRO:HD2	1.39	1.04
34:RR:67:LEU:HD13	34:RR:76:VAL:HG21	1.39	1.04
35:RS:106:ARG:HA	35:RS:110:LEU:HD11	1.39	1.04
28:YH:127:GLU:CG	28:YH:128:PRO:CD	2.30	1.04
37:YU:90:VAL:HG12	37:YU:91:ASP:H	1.18	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.04
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.93	1.04
35:RS:83:LYS:O	35:RS:109:GLY:HA3	1.56	1.04
33:RQ:81:VAL:O	33:RQ:82:ARG:CD	2.06	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
14:YN:22:THR:O	14:YN:23:ARG:HB2	1.56	1.03
35:YS:83:LYS:O	35:YS:109:GLY:HA3	1.57	1.03
35:YS:106:ARG:HA	35:YS:110:LEU:HD11	1.39	1.03
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	1.87	1.03
10:QJ:49:VAL:CG1	14:QN:41:ARG:HB2	1.88	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
24:RD:35:LYS:HG2	24:RD:64:ILE:N	1.72	1.03
28:YH:127:GLU:CB	28:YH:128:PRO:CD	2.35	1.03
51:R8:52:LYS:H	51:R8:53:PRO:CD	1.69	1.03
13:XM:65:LYS:NZ	47:Y4:52:THR:HG21	1.72	1.03
31:YO:53:LYS:HD2	31:YO:53:LYS:H	1.23	1.03
1:XA:372:C:C4	1:XA:387:U:C4	2.47	1.02
24:YD:35:LYS:HG2	24:YD:64:ILE:N	1.72	1.02
22:RA:2555:U:O2	56:Z6:74:C:C4	2.12	1.02
26:RF:67:GLN:O	26:RF:67:GLN:HG3	1.58	1.02
33:RQ:80:GLU:O	33:RQ:81:VAL:HG13	1.60	1.02
13:XM:77:ASN:HA	47:Y4:71:ARG:NH2	1.75	1.02
26:YF:67:GLN:O	26:YF:68:LYS:HB2	1.56	1.02
19:QS:68:GLY:HA3	47:R4:68:ARG:HG2	1.38	1.02
22:RA:2701:C:H3'	22:RA:2702:U:H5''	1.41	1.02
26:RF:67:GLN:O	26:RF:68:LYS:HB2	1.56	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:12:GLN:HG2	33:YQ:73:PRO:HD2	1.42	1.02
33:YQ:65:PHE:O	33:YQ:66:ILE:HG12	1.59	1.02
33:YQ:81:VAL:O	33:YQ:82:ARG:CD	2.06	1.02
28:RH:153:LYS:HB3	28:RH:154:PRO:HD2	1.06	1.02
33:RQ:12:GLN:HG2	33:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
19:QS:69:HIS:ND1	47:R4:69:LYS:HE2	1.75	1.02
31:RO:53:LYS:HD2	31:RO:53:LYS:H	1.23	1.02
19:XS:5:LEU:HD21	47:Y4:66:SER:CB	1.90	1.02
26:YF:46:ARG:HH11	26:YF:46:ARG:HG2	1.20	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.01
27:YG:13:GLU:O	27:YG:14:GLU:HB2	1.60	1.01
41:YY:97:ARG:HH21	41:YY:98:VAL:HB	1.26	1.01
53:QV:35:A:N1	54:QX:3:G:C2	2.28	1.01
54:QX:4:C:C2'	54:QX:5:C:H5'	1.88	1.01
26:RF:185:ASP:HA	26:RF:188:ARG:HD3	1.40	1.01
35:RS:26:LEU:HD12	35:RS:39:ILE:HD11	1.40	1.01
19:XS:5:LEU:HD11	47:Y4:66:SER:HB2	1.04	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
34:YR:67:LEU:HD13	34:YR:76:VAL:HG21	1.39	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.43	1.01
26:YF:67:GLN:O	26:YF:67:GLN:HG3	1.58	1.01
53:QV:35:A:C2	54:QX:3:G:C2	2.48	1.01
19:XS:5:LEU:CD1	47:Y4:66:SER:CB	2.30	1.00
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
24:RD:227:ASN:HB3	24:RD:228:PRO:HD2	1.44	1.00
47:R4:56:VAL:HA	47:R4:60:GLN:HB2	1.43	1.00
22:RA:270(R):G:N3	44:R1:78:LYS:NZ	2.10	1.00
33:RQ:81:VAL:O	33:RQ:82:ARG:NE	1.94	1.00
38:RV:49:THR:HB	38:RV:50:PRO:HD2	1.39	1.00
41:RY:97:ARG:HH21	41:RY:98:VAL:HB	1.25	1.00
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.26	1.00
30:YN:96:GLU:HG2	30:YN:97:ARG:H	1.26	1.00
33:YQ:80:GLU:O	33:YQ:81:VAL:HG13	1.59	1.00
34:YR:54:LEU:HD23	34:YR:66:VAL:HG23	1.44	1.00
49:Y6:7:ILE:HG13	49:Y6:8:LYS:H	1.25	1.00
33:RQ:65:PHE:O	33:RQ:66:ILE:HG12	1.59	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:68:GLY:CA	27:YG:116:ASP:OD2	2.10	1.00
45:R2:50:ILE:HD12	45:R2:51:ARG:N	1.76	1.00
35:YS:26:LEU:HD12	35:YS:39:ILE:HD11	1.40	1.00
28:RH:153:LYS:HB3	28:RH:154:PRO:CD	1.92	0.99
26:YF:185:ASP:HA	26:YF:188:ARG:HD3	1.41	0.99
25:RE:201:THR:HG22	25:RE:203:LYS:H	1.26	0.99
28:RH:77:LYS:HZ3	28:RH:77:LYS:HB3	1.22	0.99
35:RS:83:LYS:NZ	35:RS:109:GLY:HA2	1.78	0.99
25:YE:201:THR:HG22	25:YE:203:LYS:H	1.26	0.99
28:YH:153:LYS:HB3	28:YH:154:PRO:CD	1.92	0.99
45:Y2:50:ILE:HD12	45:Y2:51:ARG:N	1.76	0.99
22:YA:2701:C:H3'	22:YA:2702:U:H5''	1.40	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
28:RH:127:GLU:CG	28:RH:128:PRO:CD	2.31	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
32:YP:105:LEU:O	32:YP:106:LEU:HB2	1.60	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.99
4:QD:166:LYS:HG2	24:YD:134:ARG:NH1	1.77	0.98
32:RP:50:ARG:HH21	32:RP:50:ARG:CB	1.76	0.98
33:YQ:81:VAL:O	33:YQ:82:ARG:NE	1.94	0.98
39:RW:86:LEU:HD12	39:RW:87:PRO:HD2	1.45	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
32:YP:50:ARG:HH21	32:YP:50:ARG:CB	1.76	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
32:RP:105:LEU:O	32:RP:106:LEU:HB2	1.61	0.98
33:RQ:79:LEU:O	33:RQ:79:LEU:HD22	1.64	0.98
27:RG:13:GLU:O	27:RG:14:GLU:HB2	1.60	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
53:QV:35:A:C5	54:QX:3:G:N2	2.31	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
13:XM:121:LYS:NZ	55:XY:40:G:OP1	1.96	0.98
3:QC:79:ARG:HE	11:XK:99:GLN:NE2	1.60	0.98
24:RD:44:ASN:HB3	24:RD:49:ILE:HA	1.46	0.98
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
28:YH:86:GLU:HG3	28:YH:165:ALA:N	1.79	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:20:ALA:O	25:RE:21:VAL:HG22	1.64	0.97
28:RH:127:GLU:CB	28:RH:128:PRO:CD	2.35	0.97
33:YQ:79:LEU:HD13	33:YQ:79:LEU:O	1.63	0.97
36:YT:62:THR:HG22	36:YT:75:ILE:HG12	1.46	0.97
24:YD:44:ASN:HB3	24:YD:49:ILE:HA	1.45	0.97
49:Y6:41:PRO:HG2	49:Y6:45:LYS:H	1.30	0.97
35:YS:83:LYS:NZ	35:YS:109:GLY:HA2	1.77	0.97
33:YQ:79:LEU:O	33:YQ:79:LEU:HD22	1.64	0.97
45:Y2:50:ILE:HD12	45:Y2:51:ARG:H	1.24	0.97
33:RQ:79:LEU:O	33:RQ:79:LEU:HD13	1.63	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
39:YW:86:LEU:HD12	39:YW:87:PRO:HD2	1.45	0.97
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.97
30:RN:96:GLU:HG2	30:RN:97:ARG:H	1.26	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
22:YA:83:G:HO2'	22:YA:84:A:H8	0.98	0.97
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.28	0.96
22:RA:1496:A:H8	22:RA:1577:C:HO2'	1.09	0.96
45:R2:50:ILE:HD12	45:R2:51:ARG:H	1.24	0.96
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.96
13:XM:68:GLY:HA2	27:YG:116:ASP:OD2	1.65	0.96
22:YA:265:A:N6	22:YA:427:U:O2'	1.97	0.96
22:YA:620:G:H4'	22:YA:621:A:H5''	1.46	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
27:RG:112:PRO:HB3	47:R4:37:SER:HB2	1.47	0.96
49:R6:7:ILE:HG13	49:R6:8:LYS:H	1.25	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
19:XS:5:LEU:CG	47:Y4:66:SER:CB	2.43	0.96
22:YA:2015:A:H1'	48:Y5:2:ALA:HA	1.47	0.96
19:QS:68:GLY:HA3	47:R4:68:ARG:CG	1.94	0.96
49:R6:47:THR:HG22	49:R6:48:VAL:HG12	1.46	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.96
41:YY:84:ARG:HH12	41:YY:97:ARG:HB2	1.28	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
1:XA:370:C:C2'	1:XA:371:G:H5'	1.96	0.96
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.46	0.96
27:YG:112:PRO:HB3	47:Y4:37:SER:HB2	1.47	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.96
22:RA:242:G:H5'	51:R8:62:LEU:HD22	1.47	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.96
25:YE:20:ALA:O	25:YE:21:VAL:HG22	1.65	0.96
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.95
26:YF:101:LEU:HD12	26:YF:102:PRO:CD	1.96	0.95
47:Y4:56:VAL:HA	47:Y4:60:GLN:HB2	1.43	0.95
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.14	0.95
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.95
48:Y5:56:LYS:H	48:Y5:56:LYS:HD2	1.30	0.95
34:RR:54:LEU:HD23	34:RR:66:VAL:HG23	1.44	0.95
41:RY:84:ARG:HH12	41:RY:97:ARG:HB2	1.28	0.95
1:XA:1054:C:N4	55:XY:34:C:N1	2.13	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
24:YD:227:ASN:HB3	24:YD:228:PRO:HD2	1.44	0.95
13:XM:7:VAL:HG21	27:YG:113:ARG:O	1.64	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
22:YA:1359:A:N6	22:YA:1372:U:O4	2.00	0.95
22:YA:2252:G:N2	53:XV:74:C:O2	1.98	0.95
12:QL:47:LYS:NZ	54:QX:6:C:H5''	1.81	0.95
22:YA:674:G:H1'	26:YF:74:ARG:HD3	1.47	0.95
26:YF:103:LYS:HA	26:YF:106:ARG:HG3	1.48	0.95
32:YP:62:LEU:N	32:YP:62:LEU:HD22	1.82	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.54	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.95
22:RA:2392:A:H8	32:RP:60:MET:HG3	1.29	0.95
26:RF:101:LEU:HD12	26:RF:102:PRO:CD	1.96	0.95
28:RH:86:GLU:HG3	28:RH:165:ALA:N	1.79	0.95
44:Y1:81:LYS:N	44:Y1:81:LYS:CE	2.30	0.95
4:XD:94:LEU:H	4:XD:94:LEU:HD12	1.28	0.95
38:YV:99:ILE:HD13	38:YV:99:ILE:H	1.32	0.95
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
25:YE:78:LEU:HG	25:YE:79:ARG:HE	1.30	0.94
41:RY:51:VAL:HG13	41:RY:52:SER:H	1.31	0.94
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.94
28:YH:153:LYS:CB	28:YH:154:PRO:HD2	1.98	0.94
45:Y2:13:ALA:HA	45:Y2:16:LEU:HD23	1.48	0.94
45:R2:13:ALA:HA	45:R2:16:LEU:HD23	1.48	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:370:C:O2'	1:XA:371:G:H5'	1.66	0.94
44:Y1:81:LYS:CA	44:Y1:81:LYS:CE	2.45	0.94
32:RP:62:LEU:N	32:RP:62:LEU:HD22	1.81	0.94
38:YV:35:LEU:HD21	38:YV:57:VAL:HG22	1.47	0.94
41:YY:51:VAL:HG13	41:YY:52:SER:H	1.31	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
44:R1:81:LYS:CA	44:R1:81:LYS:CE	2.45	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.30	0.94
31:RO:2:ILE:HD11	31:RO:82:ASN:HD22	1.33	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
24:RD:28:GLU:HB2	24:RD:29:PRO:CD	1.98	0.94
24:RD:108:PRO:HB3	24:RD:143:HIS:HE1	1.32	0.94
44:R1:81:LYS:N	44:R1:81:LYS:CE	2.30	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
24:YD:28:GLU:HB2	24:YD:29:PRO:CD	1.98	0.94
36:RT:11:GLU:CD	36:RT:11:GLU:H	1.71	0.94
36:RT:62:THR:HG22	36:RT:75:ILE:HG12	1.46	0.94
49:Y6:47:THR:HG22	49:Y6:48:VAL:HG12	1.45	0.94
25:RE:78:LEU:HG	25:RE:79:ARG:HE	1.31	0.94
49:R6:41:PRO:HG2	49:R6:45:LYS:H	1.30	0.94
2:XB:8:LYS:HD3	2:XB:8:LYS:H	1.31	0.94
40:RX:57:LEU:CD1	40:RX:78:LYS:HB2	1.98	0.93
48:R5:56:LYS:H	48:R5:56:LYS:HD2	1.30	0.93
28:YH:77:LYS:HB3	28:YH:77:LYS:NZ	1.82	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
53:QV:35:A:C6	54:QX:3:G:N1	2.36	0.93
35:RS:59:LYS:HG2	35:RS:60:GLY:H	1.31	0.93
36:YT:11:GLU:CD	36:YT:11:GLU:H	1.71	0.93
30:RN:134:ARG:H	30:RN:135:PRO:CD	1.81	0.93
38:RV:35:LEU:HD21	38:RV:57:VAL:HG22	1.47	0.93
28:YH:127:GLU:HB3	28:YH:128:PRO:CD	1.99	0.93
32:RP:1:MET:HE2	32:RP:5:ASP:HB3	1.51	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
30:YN:134:ARG:H	30:YN:135:PRO:CD	1.81	0.93
12:QL:47:LYS:HZ1	54:QX:6:C:H5''	1.30	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
33:RQ:59:ARG:O	33:RQ:60:ARG:CG	2.17	0.93
1:XA:1054:C:OP2	1:XA:1197:G:OP2	1.87	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:77:LYS:HB3	28:YH:77:LYS:HZ3	1.31	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
14:YN:43:CYS:O	14:YN:45:ARG:N	2.01	0.93
28:RH:127:GLU:HB3	28:RH:128:PRO:CD	1.99	0.93
33:RQ:34:LEU:HD11	33:RQ:129:THR:HB	1.50	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.93
24:YD:108:PRO:HB3	24:YD:143:HIS:CE1	2.05	0.93
34:YR:33:ARG:NH2	48:Y5:55:ARG:HG2	1.84	0.93
40:YX:57:LEU:CD1	40:YX:78:LYS:HB2	1.98	0.93
48:R5:58:LEU:HD13	48:R5:60:VAL:HG12	1.48	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
24:YD:108:PRO:HB3	24:YD:143:HIS:HE1	1.32	0.92
24:RD:147:LEU:HD13	24:RD:155:LEU:HD11	1.51	0.92
32:YP:65:ARG:HG3	32:YP:65:ARG:HH11	1.35	0.92
38:RV:99:ILE:HD13	38:RV:99:ILE:H	1.32	0.92
13:XM:3:ARG:HG2	47:Y4:34:GLU:OE1	1.68	0.92
25:YE:14:ILE:HG12	25:YE:15:PHE:H	1.33	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.31	0.92
26:RF:103:LYS:HA	26:RF:106:ARG:HG3	1.49	0.92
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
24:RD:183:ARG:HH11	24:RD:183:ARG:HG2	1.34	0.92
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	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
28:RH:153:LYS:CB	28:RH:154:PRO:HD2	1.97	0.92
35:YS:59:LYS:HG2	35:YS:60:GLY:H	1.31	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
27:RG:37:VAL:HG22	27:RG:159:VAL:HA	1.52	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.32	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
14:YN:32:SER:OG	14:YN:41:ARG:HB2	1.70	0.92
1:QA:1405:G:OP1	58:QA:1666:PAR:O34	1.87	0.92
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.92
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
24:RD:108:PRO:HB3	24:RD:143:HIS:CE1	2.05	0.91
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RV:24:LYS:HA	38:RV:92:THR:HG23	1.52	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
22:YA:1021:A:OP2	30:YN:65:LYS:NZ	2.01	0.91
33:YQ:34:LEU:HD11	33:YQ:129:THR:HB	1.50	0.91
44:Y1:81:LYS:HA	44:Y1:81:LYS:CE	2.00	0.91
22:RA:2553:G:H22	56:Z6:76:PPU:C2	1.83	0.91
27:RG:78:SER:HB2	53:QV:56:C:O2'	1.71	0.91
44:R1:81:LYS:HA	44:R1:81:LYS:CE	2.01	0.91
19:XS:5:LEU:CG	47:Y4:66:SER:HB3	2.00	0.91
19:XS:5:LEU:HG	47:Y4:66:SER:HB3	1.50	0.91
35:YS:67:ARG:NH1	35:YS:67:ARG:HB2	1.85	0.91
34:RR:33:ARG:NH2	48:R5:55:ARG:HG2	1.84	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
41:YY:30:VAL:HG22	41:YY:37:VAL:HG12	1.53	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
27:YG:37:VAL:HG22	27:YG:159:VAL:HA	1.52	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.91
27:RG:101:ILE:HG13	27:RG:102:PHE:N	1.86	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.91
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
28:RH:77:LYS:HB3	28:RH:77:LYS:NZ	1.82	0.91
37:YU:92:ARG:HG2	37:YU:92:ARG:O	1.70	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
24:YD:10:THR:HG23	24:YD:13:ARG:HB3	1.51	0.91
32:YP:1:MET:HE2	32:YP:5:ASP:HB3	1.50	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
19:QS:68:GLY:HA3	47:R4:68:ARG:CB	2.01	0.91
26:RF:7:TYR:HB3	26:RF:21:ALA:HB1	1.53	0.91
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.91
44:Y1:80:LEU:O	44:Y1:81:LYS:HB2	1.71	0.91
35:RS:67:ARG:NH1	35:RS:67:ARG:HB2	1.85	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.48	0.90
22:RA:83:G:N2	22:RA:103:A:OP2	2.04	0.90
24:RD:10:THR:HG23	24:RD:13:ARG:HB3	1.51	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
31:YO:2:ILE:HD11	31:YO:82:ASN:HD22	1.33	0.90
25:RE:14:ILE:HG12	25:RE:15:PHE:H	1.33	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
22:RA:1826:G:H4'	24:RD:242:ARG:HH21	1.36	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
41:YY:38:ILE:HG22	41:YY:66:PRO:HA	1.54	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
38:YV:24:LYS:HA	38:YV:92:THR:HG23	1.52	0.90
13:QM:119:GLY:HA3	53:QV:29:G:OP1	1.70	0.90
28:RH:4:ILE:HG13	28:RH:6:ARG:CZ	2.01	0.90
32:YP:106:LEU:O	32:YP:107:LYS:HB2	1.71	0.90
24:YD:147:LEU:HD13	24:YD:155:LEU:HD11	1.51	0.90
28:YH:4:ILE:HG13	28:YH:6:ARG:CZ	2.01	0.90
38:YV:44:LYS:O	38:YV:46:VAL:HG12	1.72	0.90
45:Y2:65:ASN:HB3	45:Y2:69:ARG:HH12	1.34	0.90
32:RP:58:THR:O	32:RP:61:ARG:NE	2.05	0.90
33:RQ:59:ARG:O	33:RQ:60:ARG:HG3	1.72	0.90
14:YN:22:THR:O	14:YN:23:ARG:CB	2.16	0.90
28:YH:26:VAL:HG13	28:YH:27:LYS:H	1.35	0.90
48:Y5:3:LYS:HA	48:Y5:3:LYS:HE3	1.54	0.90
1:XA:1054:C:N4	55:XY:34:C:C1'	2.34	0.90
28:RH:10:PRO:HD2	28:RH:50:VAL:O	1.72	0.89
45:R2:65:ASN:HB3	45:R2:69:ARG:HH12	1.34	0.89
24:YD:44:ASN:HD22	24:YD:44:ASN:H	1.19	0.89
24:YD:69:ARG:HH21	24:YD:130:ALA:HB2	1.37	0.89
44:R1:81:LYS:NZ	44:R1:81:LYS:CA	2.31	0.89
24:YD:183:ARG:HH11	24:YD:183:ARG:HG2	1.34	0.89
39:YW:65:LEU:HD12	39:YW:68:ARG:HH11	1.36	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
28:RH:26:VAL:HG13	28:RH:27:LYS:H	1.36	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
48:Y5:40:LYS:HZ1	48:Y5:48:GLU:HB2	1.36	0.89
24:RD:69:ARG:HH21	24:RD:130:ALA:HB2	1.37	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
13:XM:65:LYS:HZ2	47:Y4:52:THR:HG21	1.34	0.89
19:XS:65:ASN:HA	47:Y4:55:ARG:HH11	1.32	0.89
32:YP:88:LEU:HD12	32:YP:95:VAL:HG11	1.52	0.89
51:Y8:52:LYS:H	51:Y8:53:PRO:HD3	1.35	0.89
51:Y8:59:LYS:HB2	51:Y8:59:LYS:NZ	1.87	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2553:G:H22	56:Z6:76:PPU:H2	1.34	0.89
37:RU:92:ARG:HG2	37:RU:92:ARG:O	1.69	0.89
41:RY:76:CYS:SG	41:RY:77:PRO:HD2	2.13	0.89
48:R5:3:LYS:HA	48:R5:3:LYS:HE3	1.54	0.89
27:YG:116:ASP:O	27:YG:117:PHE:HB3	1.72	0.89
38:RV:44:LYS:O	38:RV:46:VAL:HG12	1.72	0.89
25:YE:63:LEU:HD12	25:YE:64:LYS:N	1.87	0.89
1:QA:1139:G:N2	1:QA:1143:G:O6	2.06	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
32:RP:88:LEU:HD12	32:RP:95:VAL:HG11	1.52	0.89
51:R8:52:LYS:H	51:R8:53:PRO:HD3	1.35	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
32:YP:58:THR:O	32:YP:61:ARG:NE	2.05	0.89
32:RP:65:ARG:HG3	32:RP:65:ARG:HH11	1.35	0.89
22:YA:1496:A:H8	22:YA:1577:C:HO2'	1.19	0.89
28:YH:10:PRO:HD2	28:YH:50:VAL:O	1.72	0.89
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
22:RA:587:C:OP2	32:RP:21:ARG:NH2	2.07	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
27:YG:88:ILE:O	27:YG:88:ILE:HD13	1.72	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
44:R1:80:LEU:O	44:R1:81:LYS:HB2	1.71	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
24:RD:27:THR:HG23	24:RD:28:GLU:H	1.38	0.88
27:RG:88:ILE:HD13	27:RG:88:ILE:O	1.72	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
32:YP:64:LYS:O	32:YP:66:GLY:N	2.07	0.88
32:RP:106:LEU:O	32:RP:107:LYS:HB2	1.71	0.88
41:RY:30:VAL:HG22	41:RY:37:VAL:HG12	1.53	0.88
35:YS:106:ARG:NH1	35:YS:106:ARG:HB2	1.88	0.88
41:YY:76:CYS:SG	41:YY:77:PRO:HD2	2.13	0.88
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.54	0.88
13:XM:62:ASN:HA	47:Y4:49:PHE:CD2	2.08	0.88
30:YN:22:THR:HG22	30:YN:23:LEU:N	1.88	0.88
25:RE:63:LEU:HD12	25:RE:64:LYS:N	1.88	0.88
30:RN:22:THR:HG22	30:RN:23:LEU:N	1.88	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
22:RA:338:G:OP1	41:RY:4:LYS:NZ	2.06	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:994:C:H3'	37:YU:54:LYS:HE3	1.54	0.88
51:R8:59:LYS:HB2	51:R8:59:LYS:NZ	1.88	0.88
1:XA:1400:C:N4	53:XV:34:C:C2	2.29	0.88
32:YP:49:ARG:HD2	51:Y8:58:ILE:HG22	1.54	0.88
25:RE:77:ILE:HD12	25:RE:78:LEU:N	1.89	0.88
41:RY:38:ILE:HG22	41:RY:66:PRO:HA	1.54	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
22:YA:498:G:N3	41:YY:47:LYS:NZ	2.22	0.88
22:YA:2068:U:H3	22:YA:2430:A:H2	1.18	0.88
25:YE:77:ILE:HD12	25:YE:78:LEU:N	1.89	0.88
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
35:RS:106:ARG:NH1	35:RS:106:ARG:HB2	1.88	0.87
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.87
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
22:YA:518:G:H4'	39:YW:18:ARG:NH1	1.89	0.87
24:YD:44:ASN:CB	24:YD:49:ILE:HA	2.04	0.87
42:YZ:151:HIS:HB3	42:YZ:170:THR:HA	1.53	0.87
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.87
39:RW:65:LEU:HD12	39:RW:68:ARG:HH11	1.36	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.39	0.87
44:Y1:82:LEU:HD13	44:Y1:83:GLU:O	1.74	0.87
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.74	0.87
22:RA:676:A:H8	22:RA:2069:G:H21	1.17	0.87
22:RA:2015:A:H1'	48:R5:2:ALA:HA	1.56	0.87
24:RD:181:GLU:HA	24:RD:272:ALA:HB3	1.57	0.87
38:RV:19:LYS:HD2	38:RV:95:LEU:HD23	1.55	0.87
48:R5:40:LYS:HZ1	48:R5:48:GLU:HB2	1.39	0.87
19:XS:5:LEU:CG	47:Y4:66:SER:HB2	2.04	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.87	0.87
24:RD:44:ASN:HD22	24:RD:44:ASN:H	1.19	0.87
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.08	0.87
19:XS:67:VAL:HG21	47:Y4:60:GLN:HE22	1.38	0.87
22:YA:819:A:OP2	22:YA:1187:G:N2	2.07	0.87
24:YD:27:THR:HG23	24:YD:28:GLU:H	1.38	0.87
33:YQ:64:ILE:HA	33:YQ:106:VAL:HG12	1.54	0.87
24:RD:28:GLU:HB2	24:RD:29:PRO:HD2	1.56	0.87
32:RP:49:ARG:HD2	51:R8:58:ILE:HG22	1.54	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:181:GLU:HA	24:YD:272:ALA:HB3	1.57	0.87
44:Y1:82:LEU:HD11	44:Y1:83:GLU:O	1.75	0.87
32:RP:64:LYS:O	32:RP:66:GLY:N	2.07	0.87
19:XS:2:PRO:HB2	47:Y4:68:ARG:HH22	1.36	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
35:RS:106:ARG:HB2	35:RS:106:ARG:HH11	1.39	0.87
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.38	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
26:YF:7:TYR:HB3	26:YF:21:ALA:HB1	1.53	0.87
26:YF:29:ASN:H	26:YF:112:MET:HE3	1.40	0.87
33:RQ:64:ILE:HA	33:RQ:106:VAL:HG12	1.54	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
27:YG:145:THR:HG23	47:Y4:28:LYS:HZ1	1.38	0.86
22:RA:819:A:OP2	22:RA:1187:G:N2	2.07	0.86
32:RP:75:ILE:HD13	32:RP:75:ILE:H	1.39	0.86
27:YG:101:ILE:HG13	27:YG:102:PHE:N	1.86	0.86
32:YP:18:ARG:O	32:YP:19:VAL:HB	1.75	0.86
54:QX:2:U:O2'	54:QX:3:G:H5'	1.74	0.86
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.41	0.86
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
26:RF:82:ILE:O	26:RF:82:ILE:HG13	1.73	0.86
27:RG:116:ASP:O	27:RG:117:PHE:HB3	1.72	0.86
44:R1:92:LYS:HG3	44:R1:96:LYS:HB2	1.57	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
27:YG:161:THR:HG22	27:YG:163:ALA:H	1.39	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
24:YD:35:LYS:HG2	24:YD:64:ILE:H	1.40	0.86
37:YU:92:ARG:HD2	38:YV:11:GLN:NE2	1.91	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
22:RA:1689:A:H62	22:RA:1698:A:H2	1.22	0.86
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.09	0.86
26:RF:29:ASN:H	26:RF:112:MET:HE3	1.40	0.86
19:XS:5:LEU:CD2	47:Y4:66:SER:CB	2.53	0.86
38:YV:19:LYS:HD2	38:YV:95:LEU:HD23	1.55	0.86
42:YZ:145:GLU:HG3	42:YZ:146:ILE:HG12	1.56	0.86
54:XX:2:U:O2'	54:XX:3:G:H5'	1.75	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:44:ASN:CB	24:RD:49:ILE:HA	2.05	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
28:YH:127:GLU:HG2	28:YH:128:PRO:HD3	0.86	0.86
35:YS:106:ARG:HB2	35:YS:106:ARG:HH11	1.39	0.86
27:RG:161:THR:HG22	27:RG:163:ALA:H	1.39	0.86
41:RY:51:VAL:O	41:RY:56:PRO:HA	1.76	0.86
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.09	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.86
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
22:RA:2056:G:N2	48:R5:4:HIS:O	2.08	0.85
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.57	0.85
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.85
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.85
22:RA:2602:A:H61	53:QV:76:A:H2'	1.39	0.85
25:RE:61:ARG:O	25:RE:63:LEU:HG	1.77	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
22:RA:2502:G:H5''	22:RA:2503:A:H5''	1.58	0.85
37:RU:92:ARG:HD2	38:RV:11:GLN:NE2	1.90	0.85
44:R1:82:LEU:HD13	44:R1:83:GLU:O	1.74	0.85
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.57	0.85
53:QV:37:A:N1	54:QX:1:A:C6	2.44	0.85
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.09	0.85
22:YA:443:A:N7	26:YF:45:ARG:HD2	1.89	0.85
33:YQ:75:THR:HA	33:YQ:88:GLY:O	1.76	0.85
1:XA:372:C:N4	1:XA:387:U:N3	2.23	0.85
25:RE:81:ILE:O	25:RE:82:ARG:HB2	1.75	0.85
33:RQ:75:THR:HA	33:RQ:88:GLY:O	1.76	0.85
36:YT:111:ARG:O	36:YT:112:ARG:HG3	1.76	0.85
55:QY:29:U:H2'	55:QY:30:C:C6	2.11	0.85
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.85
25:RE:95:ILE:H	25:RE:95:ILE:HD12	1.41	0.85
26:RF:32:LEU:HD13	26:RF:105:VAL:HG13	1.59	0.85
48:R5:39:MET:O	48:R5:40:LYS:HG3	1.77	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
22:YA:1607:C:N4	22:YA:1622:G:OP2	2.09	0.85
27:YG:67:LYS:HE2	47:Y4:6:HIS:NE2	1.91	0.85
32:YP:101:VAL:HG23	32:YP:107:LYS:H	1.41	0.85
41:YY:51:VAL:O	41:YY:56:PRO:HA	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:67:LYS:HE2	47:R4:6:HIS:NE2	1.91	0.85
37:RU:64:ARG:HG2	37:RU:64:ARG:HH21	1.42	0.85
24:YD:28:GLU:HB2	24:YD:29:PRO:HD2	1.56	0.85
32:YP:75:ILE:H	32:YP:75:ILE:HD13	1.39	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
28:RH:127:GLU:HG2	28:RH:128:PRO:HD3	0.86	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
28:YH:89:ILE:HD11	28:YH:129:THR:HB	1.59	0.85
24:RD:17:THR:HG22	24:RD:205:VAL:H	1.41	0.85
32:RP:18:ARG:O	32:RP:19:VAL:HB	1.75	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
22:YA:888:C:H3'	22:YA:889:C:H4'	1.59	0.85
55:XY:29:U:H2'	55:XY:30:C:C6	2.11	0.85
22:RA:2553:G:N2	56:Z6:76:PPU:C2	2.38	0.84
51:R8:59:LYS:NZ	51:R8:59:LYS:CB	2.40	0.84
26:YF:82:ILE:O	26:YF:82:ILE:HG13	1.73	0.84
1:QA:448:A:OP2	1:QA:485:G:N2	2.09	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
22:RA:768:G:O2'	22:RA:1379:A:N6	2.10	0.84
28:RH:89:ILE:HD11	28:RH:129:THR:HB	1.58	0.84
13:XM:3:ARG:HH12	27:YG:113:ARG:NH2	1.75	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
22:YA:958:U:OP2	33:YQ:14:ARG:NH1	2.10	0.84
35:YS:83:LYS:HG2	35:YS:109:GLY:CA	2.07	0.84
4:QD:166:LYS:HD3	24:YD:188:GLU:OE2	1.77	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:RE:24:THR:HG21	25:RE:188:VAL:HG11	1.59	0.84
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.41	0.84
22:YA:2056:G:N2	48:Y5:4:HIS:O	2.10	0.84
24:YD:17:THR:HG22	24:YD:205:VAL:H	1.41	0.84
27:YG:98:ARG:HA	27:YG:101:ILE:HG12	1.59	0.84
35:YS:106:ARG:HA	35:YS:110:LEU:CD1	2.07	0.84
38:YV:49:THR:HB	38:YV:50:PRO:CD	2.07	0.84
1:QA:559:A:H4'	1:QA:560:U:H3'	1.56	0.84
13:XM:65:LYS:CE	47:Y4:50:VAL:HG11	2.08	0.84
25:YE:81:ILE:O	25:YE:82:ARG:HB2	1.75	0.84
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.41	0.84
35:RS:89:ARG:HD2	35:RS:92:TYR:O	1.78	0.84
22:YA:2419:U:H5'	49:Y6:23:THR:HG22	1.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YO:26:LYS:HB2	31:YO:30:ALA:HB2	1.59	0.84
48:Y5:40:LYS:HD3	48:Y5:46:CYS:HB3	1.60	0.84
32:RP:62:LEU:CD2	51:R8:25:MET:HB2	2.08	0.84
25:YE:61:ARG:O	25:YE:63:LEU:HG	1.77	0.84
25:YE:95:ILE:HD12	25:YE:95:ILE:H	1.42	0.84
28:YH:54:ARG:NH1	28:YH:62:LYS:HG2	1.92	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
9:QI:128:ARG:HD3	53:QV:32:C:OP2	1.76	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RH:54:ARG:NH1	28:RH:62:LYS:HG2	1.92	0.84
31:RO:26:LYS:HB2	31:RO:30:ALA:HB2	1.59	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
26:YF:53:THR:HG23	26:YF:56:GLU:OE1	1.77	0.84
32:YP:62:LEU:CD2	51:Y8:25:MET:HB2	2.08	0.84
33:YQ:30:GLY:HA2	33:YQ:107:ALA:HB2	1.60	0.84
41:YY:57:GLN:NE2	41:YY:58:GLY:H	1.76	0.84
53:QV:37:A:C2	54:QX:1:A:C2	2.66	0.84
36:RT:111:ARG:O	36:RT:112:ARG:HG3	1.76	0.84
38:RV:49:THR:HB	38:RV:50:PRO:CD	2.07	0.84
44:R1:82:LEU:HD11	44:R1:83:GLU:O	1.75	0.84
14:XN:32:SER:OG	14:XN:41:ARG:CB	2.24	0.84
19:XS:5:LEU:CD2	47:Y4:66:SER:HB2	2.07	0.84
35:YS:89:ARG:HD2	35:YS:92:TYR:O	1.78	0.84
27:RG:98:ARG:HA	27:RG:101:ILE:HG12	1.59	0.84
35:RS:83:LYS:HG2	35:RS:109:GLY:CA	2.07	0.84
34:YR:117:VAL:HG22	34:YR:118:GLU:H	1.43	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
24:RD:35:LYS:HG2	24:RD:64:ILE:H	1.40	0.84
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.84
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.84
22:YA:443:A:C5	26:YF:45:ARG:HD2	2.13	0.84
26:YF:32:LEU:HD13	26:YF:105:VAL:HG13	1.59	0.84
36:YT:3:ARG:HG3	36:YT:7:ILE:HG12	1.60	0.84
54:XX:4:C:N4	55:XY:37:1MG:HM13	1.93	0.84
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.13	0.83
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
22:RA:299:A:H5'	41:RY:84:ARG:HH21	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:993:G:OP1	37:RU:50:ARG:NH2	2.11	0.83
34:RR:117:VAL:HG22	34:RR:118:GLU:H	1.43	0.83
41:RY:81:LYS:HD3	41:RY:97:ARG:HE	1.43	0.83
19:XS:5:LEU:HD21	47:Y4:66:SER:HB2	1.59	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.60	0.83
36:RT:24:PRO:HA	36:RT:49:VAL:HG13	1.59	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
28:YH:13:LYS:HE2	28:YH:13:LYS:HA	1.60	0.83
44:Y1:92:LYS:HG3	44:Y1:96:LYS:HB2	1.58	0.83
19:QS:69:HIS:CE1	47:R4:69:LYS:CE	2.60	0.83
28:RH:105:LEU:HD13	28:RH:105:LEU:H	1.42	0.83
48:R5:40:LYS:HD3	48:R5:46:CYS:HB3	1.60	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
48:Y5:39:MET:O	48:Y5:40:LYS:HG3	1.77	0.83
49:Y6:27:LYS:HB2	49:Y6:27:LYS:NZ	1.94	0.83
14:YN:8:GLU:OE2	14:YN:11:LYS:HD2	1.78	0.83
25:YE:7:VAL:HG23	25:YE:8:LYS:H	1.43	0.83
32:YP:126:VAL:HG22	32:YP:145:PRO:HG2	1.61	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.59	0.83
25:RE:35:GLN:HG2	25:RE:37:ARG:HE	1.44	0.83
35:RS:88:ASP:O	35:RS:89:ARG:HB3	1.78	0.83
1:XA:1078:U:O2'	5:XE:130:ASN:OD1	1.96	0.83
14:YN:12:ARG:C	14:YN:14:PRO:HD2	1.98	0.83
30:YN:131:GLN:NE2	30:YN:132:ALA:H	1.75	0.83
32:YP:59:LEU:HA	32:YP:61:ARG:HH21	1.44	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
30:RN:133:GLN:HB2	30:RN:135:PRO:HD3	1.59	0.83
32:RP:101:VAL:HG23	32:RP:107:LYS:H	1.41	0.83
36:RT:3:ARG:HG3	36:RT:7:ILE:HG12	1.60	0.83
41:RY:57:GLN:NE2	41:RY:58:GLY:H	1.76	0.83
36:YT:24:PRO:HA	36:YT:49:VAL:HG13	1.59	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
29:RI:52:ARG:HB2	29:RI:56:LYS:HB3	1.59	0.83
36:RT:53:ARG:O	36:RT:59:THR:HG23	1.78	0.83
38:RV:66:ARG:NH1	38:RV:88:ARG:HD3	1.94	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
30:RN:131:GLN:NE2	30:RN:132:ALA:H	1.75	0.83
32:RP:65:ARG:HG3	32:RP:65:ARG:NH1	1.90	0.83
35:RS:106:ARG:HA	35:RS:110:LEU:CD1	2.07	0.83
47:R4:36:CYS:O	47:R4:39:CYS:HB2	1.79	0.83
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.83
36:YT:53:ARG:O	36:YT:59:THR:HG23	1.78	0.83
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.61	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.82
22:YA:2555:U:N3	56:Z8:74:C:C5	2.40	0.82
30:YN:133:GLN:HB2	30:YN:135:PRO:HD3	1.59	0.82
41:YY:81:LYS:HD3	41:YY:97:ARG:HE	1.43	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.60	0.82
33:RQ:30:GLY:HA2	33:RQ:107:ALA:HB2	1.60	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
14:YN:44:LEU:HD12	14:YN:53:LEU:CD1	2.08	0.82
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.82
25:RE:15:PHE:CE1	25:RE:20:ALA:HB2	2.14	0.82
26:RF:53:THR:HG23	26:RF:56:GLU:OE1	1.77	0.82
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
37:YU:88:ILE:HD13	37:YU:88:ILE:H	1.44	0.82
22:RA:2392:A:C8	32:RP:60:MET:HG3	2.14	0.82
37:RU:88:ILE:HD13	37:RU:88:ILE:H	1.44	0.82
49:R6:27:LYS:HB2	49:R6:27:LYS:NZ	1.93	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
24:YD:25:THR:CG2	24:YD:82:ILE:H	1.93	0.82
25:YE:15:PHE:CE1	25:YE:20:ALA:HB2	2.14	0.82
28:YH:105:LEU:HD13	28:YH:105:LEU:H	1.42	0.82
28:YH:153:LYS:HG2	28:YH:162:ILE:HG13	1.61	0.82
37:YU:64:ARG:HG2	37:YU:64:ARG:HH21	1.42	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	0.82
24:RD:35:LYS:NZ	24:RD:104:TYR:HB2	1.93	0.82
47:R4:33:VAL:HG12	47:R4:34:GLU:H	1.44	0.82
24:YD:35:LYS:NZ	24:YD:104:TYR:HB2	1.93	0.82
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
45:Y2:16:LEU:O	45:Y2:16:LEU:HG	1.78	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:7:VAL:HG23	25:RE:8:LYS:H	1.44	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
30:YN:22:THR:HG22	30:YN:23:LEU:H	1.45	0.82
53:QV:37:A:C2	54:QX:1:A:N1	2.47	0.82
22:RA:1019:U:H3	22:RA:1142(A):A:H62	1.28	0.82
27:RG:179:PRO:HG3	47:R4:38:LYS:NZ	1.95	0.82
30:RN:22:THR:HG22	30:RN:23:LEU:H	1.44	0.82
36:YT:102:ILE:HA	36:YT:105:LEU:HD21	1.62	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.82
31:YO:14:THR:HG21	31:YO:86:ILE:HB	1.62	0.82
32:YP:39:LYS:HA	32:YP:45:LEU:CD1	2.10	0.82
35:YS:19:LYS:O	35:YS:20:ARG:HB3	1.80	0.82
22:RA:259:G:O2'	22:RA:621:A:O2'	1.97	0.82
1:XA:1054:C:N4	55:XY:34:C:H1'	1.95	0.82
19:XS:5:LEU:HD11	47:Y4:66:SER:CA	2.09	0.82
47:Y4:36:CYS:O	47:Y4:39:CYS:HB2	1.80	0.82
47:Y4:71:ARG:HG3	47:Y4:71:ARG:NH1	1.90	0.82
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.43	0.81
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.81
26:RF:155:LEU:HD13	26:RF:174:VAL:HG13	1.62	0.81
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.09	0.81
22:YA:637:A:H2'	32:YP:117:GLU:OE2	1.79	0.81
27:YG:179:PRO:HG3	47:Y4:38:LYS:NZ	1.95	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
45:R2:16:LEU:O	45:R2:16:LEU:HG	1.78	0.81
19:XS:67:VAL:HG21	47:Y4:60:GLN:NE2	1.93	0.81
55:QY:35:G:H2'	55:QY:36:G:H5''	1.62	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.09	0.81
28:RH:8:PRO:C	28:RH:9:ILE:HG12	2.00	0.81
28:RH:132:ARG:HB2	28:RH:132:ARG:NH1	1.94	0.81
28:RH:153:LYS:HG2	28:RH:162:ILE:HG13	1.61	0.81
31:RO:53:LYS:HD2	31:RO:53:LYS:N	1.96	0.81
51:R8:52:LYS:N	51:R8:53:PRO:CD	2.43	0.81
1:XA:1313:U:OP2	47:Y4:67:TYR:OH	1.97	0.81
25:YE:24:THR:HG21	25:YE:188:VAL:HG11	1.59	0.81
27:YG:67:LYS:HE2	47:Y4:6:HIS:CE1	2.14	0.81
28:YH:10:PRO:O	28:YH:11:VAL:HG13	1.80	0.81
33:YQ:90:VAL:HG13	33:YQ:91:GLU:N	1.95	0.81
35:YS:88:ASP:O	35:YS:89:ARG:HB3	1.78	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YV:66:ARG:NH1	38:YV:88:ARG:HD3	1.94	0.81
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.60	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
33:RQ:90:VAL:HG13	33:RQ:91:GLU:N	1.95	0.81
36:RT:102:ILE:HA	36:RT:105:LEU:HD21	1.62	0.81
27:YG:47:LYS:HD3	27:YG:81:LYS:HB2	1.63	0.81
50:Y7:48:LYS:HG2	50:Y7:49:ARG:H	1.46	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
22:RA:674:G:H1'	26:RF:74:ARG:HD3	1.61	0.81
45:R2:43:GLN:O	45:R2:44:LEU:HG	1.81	0.81
1:XA:1492:A:OP1	12:XL:47:LYS:HG3	1.81	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
10:XJ:6:ILE:O	10:XJ:6:ILE:HD12	1.81	0.81
22:RA:631:A:OP2	51:R8:46:ARG:NH2	2.14	0.81
25:RE:3:GLY:O	25:RE:4:ILE:HB	1.81	0.81
27:RG:67:LYS:HE2	47:R4:6:HIS:CE1	2.14	0.81
28:RH:26:VAL:HG13	28:RH:27:LYS:N	1.96	0.81
32:RP:39:LYS:HA	32:RP:45:LEU:CD1	2.10	0.81
32:RP:126:VAL:HG22	32:RP:145:PRO:HG2	1.61	0.81
50:R7:48:LYS:HG2	50:R7:49:ARG:H	1.46	0.81
22:YA:1728:G:N1	22:YA:1730:U:OP2	2.13	0.81
54:QX:4:C:H2'	54:QX:5:C:H5'	1.62	0.81
1:QA:411:A:H62	1:QA:413:G:H21	1.26	0.81
24:RD:27:THR:HG23	24:RD:28:GLU:N	1.96	0.81
28:RH:152:ARG:O	28:RH:153:LYS:HB2	1.80	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
10:XJ:63:PHE:HD1	14:YN:58:LYS:HA	1.43	0.81
45:Y2:43:GLN:O	45:Y2:44:LEU:HG	1.81	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
22:RA:242:G:H5''	51:R8:3:LYS:HE3	1.63	0.81
30:RN:35:ARG:HG3	30:RN:37:LYS:HG3	1.63	0.81
35:RS:36:TYR:HD2	35:RS:52:SER:HB3	1.46	0.81
36:RT:62:THR:CG2	36:RT:75:ILE:HG12	2.11	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
30:YN:35:ARG:HG3	30:YN:37:LYS:HG3	1.63	0.81
51:Y8:59:LYS:NZ	51:Y8:59:LYS:CB	2.39	0.81
27:RG:47:LYS:HD3	27:RG:81:LYS:HB2	1.63	0.81
35:RS:106:ARG:CA	35:RS:110:LEU:HD21	2.11	0.81
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:50:GLY:CA	25:YE:77:ILE:HA	2.10	0.81
25:YE:116:VAL:HG21	25:YE:122:PHE:CD2	2.16	0.81
29:YI:92:VAL:HG13	29:YI:120:ILE:HG23	1.63	0.81
30:YN:43:THR:HB	30:YN:46:VAL:HG12	1.63	0.81
36:YT:39:ARG:HG2	36:YT:40:THR:H	1.46	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
25:RE:116:VAL:HG21	25:RE:122:PHE:CD2	2.16	0.81
41:RY:76:CYS:HB3	41:RY:96:ILE:CD1	2.06	0.81
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.14	0.81
19:XS:2:PRO:CB	47:Y4:68:ARG:HH12	1.93	0.81
22:YA:1264:G:H3'	22:YA:1265:A:H5''	1.61	0.81
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.80
28:RH:13:LYS:HE2	28:RH:13:LYS:HA	1.61	0.80
36:RT:39:ARG:HG2	36:RT:40:THR:H	1.46	0.80
41:RY:6:HIS:O	41:RY:7:VAL:HG13	1.81	0.80
1:XA:1400:C:N4	53:XV:34:C:C1'	2.43	0.80
22:YA:1021:A:N6	22:YA:1141:U:O2	2.14	0.80
26:YF:155:LEU:HD13	26:YF:174:VAL:HG13	1.62	0.80
35:YS:36:TYR:HD2	35:YS:52:SER:HB3	1.46	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
35:RS:19:LYS:O	35:RS:20:ARG:HB3	1.80	0.80
48:R5:4:HIS:HB3	48:R5:5:PRO:CD	2.11	0.80
28:YH:8:PRO:C	28:YH:9:ILE:HG12	2.00	0.80
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.64	0.80
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.80
1:XA:1224:G:O2'	1:XA:1225:A:OP1	1.98	0.80
22:YA:242:G:H5'	51:Y8:62:LEU:HD22	1.63	0.80
22:YA:1899:G:H21	22:YA:1902:C:N4	1.79	0.80
22:YA:2361:A:O5'	51:Y8:27:THR:OG1	1.98	0.80
25:RE:52:LEU:HB2	25:RE:75:VAL:HG23	1.62	0.80
1:XA:1139:G:N2	1:XA:1143:G:O6	2.14	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
13:XM:3:ARG:NH1	27:YG:113:ARG:HH21	1.80	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
22:YA:1454:U:H5'	34:YR:63:ARG:HE	1.44	0.80
24:YD:27:THR:HG23	24:YD:28:GLU:N	1.96	0.80
41:YY:6:HIS:O	41:YY:7:VAL:HG13	1.81	0.80
22:RA:270(L):U:H2'	29:RI:50:ARG:HD2	1.63	0.80
22:RA:483:A:H4'	41:RY:49:VAL:HA	1.64	0.80
25:RE:50:GLY:CA	25:RE:77:ILE:HA	2.10	0.80
25:RE:201:THR:CG2	25:RE:203:LYS:HB3	2.12	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
33:YQ:80:GLU:O	33:YQ:81:VAL:CG1	2.30	0.80
41:YY:76:CYS:HB3	41:YY:96:ILE:CD1	2.07	0.80
32:RP:47:ASP:OD2	32:RP:49:ARG:HG2	1.82	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
25:YE:52:LEU:HB2	25:YE:75:VAL:HG23	1.61	0.80
51:Y8:52:LYS:N	51:Y8:53:PRO:CD	2.43	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
1:XA:1400:C:N4	53:XV:34:C:C5	2.36	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	2.02	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
25:YE:3:GLY:O	25:YE:4:ILE:HB	1.81	0.80
25:YE:35:GLN:HG2	25:YE:37:ARG:HE	1.44	0.80
26:YF:198:ALA:HA	26:YF:201:VAL:HG12	1.62	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.96	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.45	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.80
22:RA:1153:C:OP1	37:RU:76:TYR:OH	1.99	0.80
24:RD:25:THR:HG22	24:RD:82:ILE:H	1.46	0.80
24:RD:27:THR:HG21	24:RD:83:GLU:HB3	1.64	0.80
26:RF:198:ALA:HA	26:RF:201:VAL:HG12	1.62	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.45	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
25:YE:201:THR:CG2	25:YE:203:LYS:HB3	2.12	0.80
28:YH:152:ARG:O	28:YH:153:LYS:HB2	1.80	0.80
31:YO:31:LYS:HG3	31:YO:32:TYR:CE2	2.17	0.80
35:YS:106:ARG:CA	35:YS:110:LEU:HD21	2.10	0.80
47:Y4:33:VAL:HG12	47:Y4:34:GLU:H	1.44	0.80
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.80
38:RV:99:ILE:HD13	38:RV:99:ILE:N	1.95	0.80
13:XM:8:GLU:OE1	27:YG:115:ARG:NH2	2.14	0.80
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
22:YA:593:G:O3'	51:Y8:61:LEU:HD22	1.81	0.80
22:YA:2306:C:H2'	22:YA:2307:G:H21	1.45	0.80
27:YG:61:ALA:HB2	27:YG:68:PRO:CD	2.12	0.80
48:Y5:4:HIS:HB3	48:Y5:5:PRO:CD	2.11	0.80
1:QA:346:G:OP1	36:RT:41:ARG:NH2	2.15	0.80
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:68:LYS:HB2	24:YD:70:TRP:CH2	2.17	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
23:RB:56:G:OP1	27:RG:27:ASN:ND2	2.15	0.79
24:RD:25:THR:CG2	24:RD:82:ILE:H	1.93	0.79
24:RD:121:PRO:HB3	24:RD:135:PHE:HE1	1.46	0.79
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.79
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.79
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.79
22:YA:222:A:H3'	22:YA:421:U:H5'	1.63	0.79
24:YD:121:PRO:HB3	24:YD:135:PHE:HE1	1.47	0.79
38:YV:99:ILE:HD13	38:YV:99:ILE:N	1.95	0.79
22:RA:1359:A:N6	22:RA:1372:U:O4	2.15	0.79
26:RF:145:GLU:HG3	26:RF:145:GLU:O	1.81	0.79
31:RO:14:THR:HG21	31:RO:86:ILE:HB	1.62	0.79
13:XM:65:LYS:HE2	47:Y4:50:VAL:HG11	1.65	0.79
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.79
24:YD:34:VAL:O	24:YD:34:VAL:HG13	1.81	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
24:RD:34:VAL:O	24:RD:34:VAL:HG13	1.80	0.79
27:RG:77:ILE:HD13	27:RG:82:LEU:HD12	1.64	0.79
32:RP:14:LYS:O	32:RP:16:ARG:HG2	1.83	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79
33:YQ:79:LEU:HD12	43:Y0:5:LYS:HD3	1.65	0.79
36:YT:62:THR:CG2	36:YT:75:ILE:HG12	2.11	0.79
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.14	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.03	0.79
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.79
22:RA:265:A:N6	22:RA:427:U:O2'	2.15	0.79
22:RA:1403:C:H5''	22:RA:1471:A:H1'	1.64	0.79
26:RF:11:VAL:HB	26:RF:18:ARG:HG3	1.64	0.79
27:RG:61:ALA:HB2	27:RG:68:PRO:CD	2.12	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.17	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	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
37:YU:105:VAL:HG22	38:YV:44:LYS:HD2	1.65	0.79
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.62	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:RE:111:ARG:HE	25:RE:160:TYR:HE1	1.31	0.79
25:RE:137:HIS:HB3	25:RE:138:PRO:HD2	1.65	0.79
32:RP:59:LEU:HA	32:RP:61:ARG:HH21	1.44	0.79
33:RQ:81:VAL:O	33:RQ:82:ARG:CG	2.31	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
19:XS:5:LEU:HD21	47:Y4:66:SER:OG	1.82	0.79
22:YA:2593:U:H2'	22:YA:2594:C:H6	1.48	0.79
27:YG:77:ILE:HD13	27:YG:82:LEU:HD12	1.64	0.79
28:YH:126:PRO:CG	28:YH:127:GLU:H	1.95	0.79
28:YH:169:VAL:HG22	28:YH:170:ARG:H	1.48	0.79
24:RD:54:ARG:NH1	24:RD:54:ARG:HG3	1.98	0.79
28:RH:86:GLU:CG	28:RH:165:ALA:H	1.94	0.79
36:RT:102:ILE:HA	36:RT:105:LEU:CD2	2.13	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
32:YP:14:LYS:O	32:YP:16:ARG:HG2	1.83	0.79
33:YQ:81:VAL:O	33:YQ:82:ARG:CG	2.31	0.79
1:QA:971:G:N2	1:QA:1363:A:OP2	2.15	0.79
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.62	0.79
28:RH:10:PRO:O	28:RH:11:VAL:HG13	1.80	0.79
28:RH:126:PRO:CG	28:RH:127:GLU:H	1.96	0.79
32:RP:97:PRO:O	32:RP:98:GLU:HB3	1.83	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
14:XN:40:CYS:SG	14:XN:43:CYS:HB2	2.21	0.79
25:YE:24:THR:HG21	25:YE:188:VAL:CG1	2.13	0.79
28:YH:26:VAL:HG13	28:YH:27:LYS:N	1.96	0.79
32:YP:65:ARG:HG3	32:YP:65:ARG:NH1	1.90	0.79
46:Y3:56:VAL:HG12	46:Y3:57:GLU:H	1.48	0.79
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.63	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
24:RD:68:LYS:HB2	24:RD:70:TRP:CH2	2.17	0.79
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.18	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.79
24:YD:17:THR:CG2	24:YD:205:VAL:H	1.96	0.79
36:YT:102:ILE:HA	36:YT:105:LEU:CD2	2.13	0.79
31:RO:31:LYS:HG3	31:RO:32:TYR:CE2	2.17	0.79
22:YA:2114:A:N6	22:YA:2119:A:N7	2.31	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:153:LYS:CG	28:YH:162:ILE:H	1.96	0.79
44:Y1:11:ARG:HB3	44:Y1:11:ARG:NH1	1.98	0.79
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
30:RN:71:ILE:HG21	30:RN:84:LYS:HB3	1.65	0.79
13:XM:3:ARG:HB3	47:Y4:34:GLU:HB3	1.64	0.79
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.12	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
22:YA:2245:U:H5'	22:YA:2246:G:H5'	1.64	0.79
22:YA:2298:A:H62	22:YA:2318:G:H8	1.27	0.79
41:YY:86:ARG:HB2	41:YY:95:LYS:HD2	1.64	0.79
30:RN:43:THR:HB	30:RN:46:VAL:HG12	1.63	0.78
37:RU:105:VAL:HG22	38:RV:44:LYS:HD2	1.65	0.78
13:XM:3:ARG:CG	47:Y4:34:GLU:OE1	2.30	0.78
31:YO:53:LYS:HD2	31:YO:53:LYS:N	1.96	0.78
32:YP:47:ASP:OD2	32:YP:49:ARG:HG2	1.82	0.78
47:Y4:58:ARG:O	47:Y4:63:TYR:HB2	1.84	0.78
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.78
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.82	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
30:RN:62:VAL:HG12	30:RN:66:LYS:HD2	1.65	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
24:YD:27:THR:HG21	24:YD:83:GLU:HB3	1.64	0.78
28:YH:150:ALA:O	28:YH:152:ARG:N	2.14	0.78
37:YU:90:VAL:HG12	37:YU:91:ASP:N	1.98	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
33:RQ:80:GLU:O	33:RQ:81:VAL:CG1	2.30	0.78
44:R1:11:ARG:NH1	44:R1:11:ARG:HB3	1.98	0.78
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.48	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.65	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.65	0.78
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.65	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
13:XM:65:LYS:N	47:Y4:50:VAL:HG21	1.98	0.78
22:YA:247:G:O6	51:Y8:12:LYS:NZ	2.14	0.78
33:YQ:59:ARG:HD3	33:YQ:59:ARG:H	1.48	0.78
1:QA:1223:C:H5''	1:QA:1224:G:H5''	1.65	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
22:RA:859:G:O2'	22:RA:860:U:O2	2.01	0.78
27:RG:61:ALA:HB2	27:RG:68:PRO:HD3	1.65	0.78
32:RP:138:LEU:C	32:RP:140:ALA:H	1.85	0.78
33:RQ:119:ARG:HH11	33:RQ:119:ARG:HG2	1.48	0.78
40:RX:70:LEU:HD23	40:RX:70:LEU:N	1.99	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
22:YA:1279:G:H4'	34:YR:31:HIS:HD2	1.48	0.78
24:YD:54:ARG:HG3	24:YD:54:ARG:NH1	1.98	0.78
25:YE:137:HIS:HB3	25:YE:138:PRO:HD2	1.64	0.78
31:YO:97:ARG:H	31:YO:117:LEU:HD22	1.48	0.78
40:YX:70:LEU:HD23	40:YX:70:LEU:N	1.99	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.66	0.78
22:RA:2555:U:O2	56:Z6:74:C:C2	2.36	0.78
24:RD:54:ARG:HG3	24:RD:54:ARG:HH11	1.49	0.78
26:RF:20:LEU:HD12	26:RF:21:ALA:H	1.49	0.78
28:RH:153:LYS:CG	28:RH:162:ILE:H	1.96	0.78
33:RQ:20:ALA:HB1	33:RQ:99:PRO:HB2	1.65	0.78
37:RU:90:VAL:HG12	37:RU:91:ASP:N	1.97	0.78
22:YA:2131:G:H4'	22:YA:2132:U:H4'	1.63	0.78
22:YA:2810:A:O3'	25:YE:61:ARG:HG3	1.84	0.78
27:YG:128:ARG:HH21	27:YG:128:ARG:HG3	1.48	0.78
29:YI:27:ARG:HD3	44:Y1:71:TYR:HE1	1.46	0.78
38:YV:47:VAL:HG13	38:YV:48:GLY:H	1.49	0.78
31:RO:47:ILE:HD12	31:RO:48:PRO:HD2	1.66	0.78
46:R3:56:VAL:HG12	46:R3:57:GLU:H	1.48	0.78
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
19:XS:65:ASN:HA	47:Y4:55:ARG:NH1	1.99	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
24:RD:94:LEU:HD22	24:RD:95:LEU:N	1.98	0.78
22:YA:994:C:O2'	22:YA:996:A:OP1	2.01	0.78
24:YD:34:VAL:HG21	24:YD:103:ARG:HA	1.66	0.78
27:YG:97:ASP:H	27:YG:100:TRP:HD1	1.31	0.78
32:YP:19:VAL:HG22	32:YP:20:GLY:N	1.97	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
22:RA:270(T):G:OP1	44:R1:97:LEU:HD13	1.83	0.78
24:RD:142:VAL:HG23	24:RD:193:VAL:HA	1.66	0.78
27:RG:145:THR:HG23	47:R4:28:LYS:HZ1	1.49	0.78
32:RP:19:VAL:HG22	32:RP:20:GLY:N	1.97	0.78
41:RY:86:ARG:HB2	41:RY:95:LYS:HD2	1.64	0.78
13:XM:57:ARG:HE	47:Y4:35:VAL:HG23	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:145:GLU:O	26:YF:145:GLU:HG3	1.81	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.78
24:RD:35:LYS:HZ1	24:RD:104:TYR:HB2	1.48	0.78
25:RE:24:THR:HG21	25:RE:188:VAL:CG1	2.13	0.78
32:RP:75:ILE:HD13	32:RP:75:ILE:N	1.99	0.78
37:RU:66:ASN:O	37:RU:70:ARG:HB2	1.84	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
24:YD:94:LEU:HD22	24:YD:95:LEU:N	1.98	0.78
25:YE:4:ILE:HD12	25:YE:28:ALA:HB1	1.66	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.77
35:RS:106:ARG:HA	35:RS:110:LEU:HD21	1.64	0.77
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.83	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	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
22:YA:1190:G:OP1	32:YP:30:THR:OG1	2.01	0.77
31:YO:47:ILE:HD12	31:YO:48:PRO:HD2	1.66	0.77
43:Y0:10:THR:HG22	43:Y0:12:ASN:H	1.49	0.77
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
24:RD:25:THR:O	24:RD:27:THR:N	2.18	0.77
26:RF:29:ASN:H	26:RF:112:MET:CE	1.97	0.77
27:RG:128:ARG:HH21	27:RG:128:ARG:HG3	1.48	0.77
32:RP:62:LEU:N	32:RP:62:LEU:CD2	2.46	0.77
49:R6:15:GLU:CD	49:R6:41:PRO:HB3	2.04	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
22:YA:451:C:H4'	26:YF:52:LYS:NZ	2.00	0.77
28:YH:132:ARG:HB2	28:YH:132:ARG:NH1	1.95	0.77
32:YP:84:ASN:ND2	32:YP:116:GLY:HA3	1.99	0.77
37:YU:66:ASN:O	37:YU:70:ARG:HB2	1.84	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
22:RA:1012:U:H3	30:RN:25:ARG:HH11	1.30	0.77
27:RG:127:GLY:HA2	27:RG:166:ASP:CG	2.05	0.77
22:YA:392:C:H5''	22:YA:409:C:H5''	1.65	0.77
26:YF:11:VAL:HB	26:YF:18:ARG:HG3	1.64	0.77
26:YF:20:LEU:HD12	26:YF:21:ALA:H	1.49	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.85	0.77
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.63	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.49	0.77
24:RD:17:THR:CG2	24:RD:205:VAL:H	1.96	0.77
25:RE:4:ILE:HD12	25:RE:28:ALA:HB1	1.67	0.77
28:RH:150:ALA:O	28:RH:152:ARG:N	2.14	0.77
36:RT:43:GLN:HG2	36:RT:44:ASP:N	1.99	0.77
39:RW:65:LEU:CD1	39:RW:68:ARG:HH11	1.97	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
24:YD:25:THR:HG22	24:YD:82:ILE:H	1.46	0.77
27:YG:127:GLY:HA2	27:YG:166:ASP:CG	2.05	0.77
28:YH:152:ARG:HG3	28:YH:153:LYS:CE	2.14	0.77
30:YN:71:ILE:HG21	30:YN:84:LYS:HB3	1.65	0.77
34:YR:74:LYS:O	34:YR:75:LEU:HB3	1.84	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
32:RP:84:ASN:ND2	32:RP:116:GLY:HA3	1.99	0.77
32:RP:114:ILE:HD11	32:RP:130:PHE:CE1	2.19	0.77
41:RY:97:ARG:HH21	41:RY:98:VAL:CB	1.98	0.77
47:R4:22:ILE:O	47:R4:24:THR:HG23	1.84	0.77
41:YY:79:CYS:SG	41:YY:80:GLY:N	2.57	0.77
49:Y6:15:GLU:CD	49:Y6:41:PRO:HB3	2.04	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
24:RD:146:GLU:HB2	24:RD:189:CYS:HB3	1.67	0.77
44:Y1:13:ILE:HD11	44:Y1:42:GLN:OE1	1.84	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
22:RA:2602:A:H62	53:QV:76:A:H8	1.32	0.77
47:R4:58:ARG:O	47:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
24:YD:44:ASN:HD22	24:YD:44:ASN:N	1.79	0.77
39:YW:65:LEU:CD1	39:YW:68:ARG:HH11	1.97	0.77
22:RA:518:G:H4'	39:RW:18:ARG:HH12	1.49	0.77
22:RA:2701:C:H3'	22:RA:2702:U:C5'	2.14	0.77
33:RQ:66:ILE:HG13	33:RQ:67:ARG:N	1.99	0.77
35:RS:60:GLY:O	35:RS:61:ASN:HB3	1.84	0.77
41:RY:79:CYS:SG	41:RY:80:GLY:N	2.57	0.77
44:R1:13:ILE:HD11	44:R1:42:GLN:OE1	1.84	0.77
44:R1:86:SER:N	44:R1:87:PRO:CD	2.48	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77
26:YF:183:VAL:O	26:YF:187:VAL:HG23	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:20:ALA:CB	33:YQ:99:PRO:HD2	2.14	0.77
35:YS:106:ARG:HA	35:YS:110:LEU:HD21	1.64	0.77
47:Y4:22:ILE:O	47:Y4:24:THR:HG23	1.84	0.77
51:Y8:59:LYS:CB	51:Y8:59:LYS:HZ3	1.96	0.77
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.96	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
31:RO:97:ARG:H	31:RO:117:LEU:HD22	1.48	0.77
41:RY:44:ILE:HG13	41:RY:45:VAL:N	2.00	0.77
47:R4:1:MET:HB2	47:R4:6:HIS:NE2	2.00	0.77
51:R8:59:LYS:CB	51:R8:59:LYS:HZ3	1.96	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
24:YD:25:THR:O	24:YD:27:THR:N	2.17	0.77
46:Y3:35:ARG:HB3	46:Y3:37:LEU:HD21	1.66	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
39:YW:18:ARG:HG3	39:YW:76:VAL:CG1	2.16	0.77
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
22:RA:1818:U:H2'	24:RD:157:ARG:HG3	1.67	0.76
22:RA:2555:U:O2	56:Z6:74:C:N1	2.18	0.76
26:RF:183:VAL:O	26:RF:187:VAL:HG23	1.85	0.76
28:RH:153:LYS:HA	28:RH:153:LYS:NZ	1.99	0.76
33:RQ:20:ALA:CB	33:RQ:99:PRO:HD2	2.14	0.76
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.76
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.85	0.76
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.76
22:YA:531:C:OP1	22:YA:561:G:N1	2.18	0.76
24:YD:153:ALA:O	24:YD:154:LYS:HG3	1.85	0.76
32:YP:114:ILE:HD11	32:YP:130:PHE:CE1	2.19	0.76
33:YQ:59:ARG:H	33:YQ:59:ARG:CD	1.99	0.76
45:Y2:47:ASN:H	45:Y2:47:ASN:HD22	1.33	0.76
53:QV:35:A:N1	54:QX:3:G:N3	2.31	0.76
53:QV:35:A:C5	54:QX:3:G:C2	2.71	0.76
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
33:RQ:90:VAL:HG13	33:RQ:91:GLU:H	1.49	0.76
34:RR:33:ARG:HH22	48:R5:55:ARG:HG2	1.51	0.76
41:RY:97:ARG:NH2	41:RY:98:VAL:HB	2.01	0.76
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.76
14:XN:25:VAL:HG22	14:XN:38:GLY:O	1.84	0.76
33:YQ:20:ALA:HB1	33:YQ:99:PRO:HB2	1.65	0.76
33:YQ:66:ILE:HG13	33:YQ:67:ARG:N	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:119:ARG:HH11	33:YQ:119:ARG:HG2	1.48	0.76
35:YS:60:GLY:O	35:YS:61:ASN:HB3	1.84	0.76
48:Y5:40:LYS:CD	48:Y5:46:CYS:HB3	2.15	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
24:RD:44:ASN:HD22	24:RD:44:ASN:N	1.79	0.76
27:RG:127:GLY:O	27:RG:128:ARG:HG2	1.85	0.76
1:XA:973:G:O3'	14:YN:41:ARG:NH1	2.18	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
19:XS:3:ARG:HB3	47:Y4:67:TYR:CD2	2.21	0.76
27:YG:61:ALA:HB2	27:YG:68:PRO:HD3	1.65	0.76
27:YG:142:PRO:HB2	47:Y4:31:ILE:HD13	1.68	0.76
28:YH:153:LYS:HA	28:YH:153:LYS:NZ	2.00	0.76
31:YO:104:ARG:HH11	31:YO:104:ARG:HG2	1.50	0.76
47:Y4:1:MET:HB2	47:Y4:6:HIS:NE2	2.00	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
37:RU:88:ILE:HG22	37:RU:90:VAL:HG23	1.67	0.76
51:R8:59:LYS:HB2	51:R8:59:LYS:HZ2	1.49	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
25:YE:111:ARG:HE	25:YE:160:TYR:HE1	1.31	0.76
27:YG:127:GLY:O	27:YG:128:ARG:HG2	1.85	0.76
32:YP:138:LEU:C	32:YP:140:ALA:H	1.85	0.76
33:YQ:90:VAL:HG13	33:YQ:91:GLU:H	1.49	0.76
41:YY:94:LYS:O	41:YY:101:LYS:HB3	1.85	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
24:RD:34:VAL:HG21	24:RD:103:ARG:HA	1.66	0.76
24:RD:153:ALA:O	24:RD:154:LYS:HG3	1.85	0.76
49:R6:34:LEU:HD13	49:R6:34:LEU:H	1.50	0.76
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
26:YF:29:ASN:H	26:YF:112:MET:CE	1.97	0.76
30:YN:62:VAL:HG12	30:YN:66:LYS:HD2	1.65	0.76
41:YY:81:LYS:HD3	41:YY:97:ARG:NE	2.00	0.76
41:YY:95:LYS:HB3	41:YY:100:ALA:CA	2.10	0.76
12:QL:47:LYS:O	12:QL:49:ASN:N	2.18	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
22:YA:1490:A:O2'	24:YD:99:ASP:OD2	2.04	0.76
22:YA:1918:A:O2'	22:YA:1920:C:N4	2.18	0.76
39:YW:73:ALA:HB3	39:YW:106:ILE:HG12	1.68	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
22:RA:288:C:H2'	22:RA:289:A:H8	1.49	0.76
27:RG:101:ILE:HG13	27:RG:102:PHE:H	1.49	0.76
41:RY:81:LYS:HD3	41:RY:97:ARG:NE	2.01	0.76
46:R3:35:ARG:HB3	46:R3:37:LEU:HD21	1.66	0.76
52:R9:1:MET:HB3	52:R9:4:ARG:NH1	2.01	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
26:YF:101:LEU:CD1	26:YF:102:PRO:HD2	2.11	0.76
1:QA:346:G:H1'	1:QA:347:G:H5'	1.66	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
28:RH:169:VAL:HG22	28:RH:170:ARG:H	1.48	0.76
22:YA:2680:C:H5'	25:YE:189:PRO:HA	1.68	0.76
27:YG:76:SER:OG	27:YG:83:ARG:HA	1.85	0.76
1:QA:339:C:OP2	31:RO:97:ARG:NH1	2.19	0.76
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
31:RO:104:ARG:HH11	31:RO:104:ARG:HG2	1.50	0.76
34:RR:74:LYS:O	34:RR:75:LEU:HB3	1.84	0.76
44:R1:56:GLN:NE2	44:R1:56:GLN:N	2.34	0.76
47:R4:34:GLU:HG3	47:R4:35:VAL:H	1.51	0.76
48:R5:47:PRO:O	48:R5:48:GLU:HG3	1.86	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
24:YD:69:ARG:HH21	24:YD:130:ALA:CB	1.99	0.76
26:YF:29:ASN:HB3	26:YF:112:MET:HE1	1.68	0.76
5:QE:53:LEU:H	5:QE:53:LEU:CD1	1.99	0.76
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.20	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
23:RB:55:U:H4'	27:RG:28:VAL:HG21	1.67	0.76
24:RD:69:ARG:HH21	24:RD:130:ALA:CB	1.99	0.76
28:RH:152:ARG:HG3	28:RH:153:LYS:CE	2.14	0.76
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.50	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
28:YH:125:VAL:HA	28:YH:126:PRO:HB3	1.68	0.76
32:YP:97:PRO:O	32:YP:98:GLU:HB3	1.83	0.76
36:YT:111:ARG:O	36:YT:113:LYS:N	2.17	0.76
49:Y6:34:LEU:H	49:Y6:34:LEU:HD13	1.50	0.76
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:76:SER:OG	27:RG:83:ARG:HA	1.85	0.75
42:RZ:94:GLU:HB2	42:RZ:130:PRO:HD2	1.66	0.75
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.51	0.75
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.75
25:YE:23:VAL:HG21	25:YE:183:LEU:HD23	1.68	0.75
25:YE:36:ARG:HH21	25:YE:88:GLY:HA2	1.51	0.75
25:YE:63:LEU:CD1	25:YE:65:GLY:H	1.99	0.75
27:YG:101:ILE:HG13	27:YG:102:PHE:H	1.49	0.75
32:YP:62:LEU:N	32:YP:62:LEU:CD2	2.46	0.75
36:YT:50:ILE:HD12	36:YT:102:ILE:HD11	1.68	0.75
47:Y4:34:GLU:HG3	47:Y4:35:VAL:H	1.51	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.16	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.86	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
26:RF:129:PHE:HA	26:RF:142:TRP:NE1	2.02	0.75
48:R5:40:LYS:CD	48:R5:46:CYS:HB3	2.15	0.75
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.75
12:XL:46:LYS:HG3	12:XL:47:LYS:H	1.51	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
22:YA:2789:C:H1'	22:YA:2892:A:H2	1.50	0.75
44:Y1:86:SER:N	44:Y1:87:PRO:CD	2.48	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
22:RA:242:G:H5'	51:R8:62:LEU:CD2	2.15	0.75
27:RG:3:LEU:HD12	27:RG:4:ASP:H	1.51	0.75
29:RI:78:THR:HG22	29:RI:141:LYS:HD2	1.68	0.75
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.01	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.66	0.75
22:YA:270(T):G:H5''	44:Y1:97:LEU:HD22	1.67	0.75
27:YG:3:LEU:HD12	27:YG:4:ASP:H	1.52	0.75
31:YO:47:ILE:CD1	31:YO:48:PRO:HD2	2.16	0.75
32:YP:62:LEU:HD21	51:Y8:25:MET:HB2	1.69	0.75
37:YU:88:ILE:HG22	37:YU:90:VAL:HG23	1.68	0.75
54:QX:6:C:O2'	54:QX:7:A:OP1	2.03	0.75
53:XV:35:A:C2	54:XX:3:G:C2	2.75	0.75
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.52	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
27:RG:142:PRO:HB2	47:R4:31:ILE:HD13	1.68	0.75
32:RP:62:LEU:HD21	51:R8:25:MET:HB2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.86	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
37:YU:92:ARG:HH11	37:YU:95:LEU:CD1	2.00	0.75
41:YY:44:ILE:HG13	41:YY:45:VAL:N	2.00	0.75
41:YY:97:ARG:HH21	41:YY:98:VAL:CB	1.98	0.75
51:Y8:59:LYS:HB2	51:Y8:59:LYS:HZ2	1.49	0.75
52:Y9:1:MET:HB3	52:Y9:4:ARG:NH1	2.01	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.68	0.75
22:RA:630:G:N2	22:RA:633:A:OP2	2.19	0.75
28:RH:150:ALA:C	28:RH:152:ARG:H	1.88	0.75
28:RH:153:LYS:HG2	28:RH:162:ILE:H	1.52	0.75
37:RU:52:ARG:HH11	37:RU:52:ARG:HG2	1.51	0.75
38:RV:15:GLU:O	38:RV:18:LEU:HB2	1.86	0.75
38:RV:47:VAL:HG13	38:RV:48:GLY:H	1.49	0.75
7:XG:148:ASN:HD22	7:XG:148:ASN:N	1.82	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
22:YA:2712:U:HO2'	22:YA:2712(A):A:H8	1.32	0.75
24:YD:142:VAL:HG23	24:YD:193:VAL:HA	1.67	0.75
38:YV:52:VAL:HG21	38:YV:55:ALA:HB3	1.68	0.75
53:QV:34:C:N4	54:QX:3:G:H1	1.85	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
24:YD:146:GLU:HB2	24:YD:189:CYS:HB3	1.67	0.75
36:YT:43:GLN:HG2	36:YT:44:ASP:N	1.99	0.75
40:YX:57:LEU:HD11	40:YX:78:LYS:HB2	1.68	0.75
41:YY:90:LEU:HD22	41:YY:90:LEU:N	2.01	0.75
44:Y1:56:GLN:NE2	44:Y1:56:GLN:N	2.34	0.75
1:QA:1055:A:N7	1:QA:1200:C:N4	2.35	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
41:RY:90:LEU:N	41:RY:90:LEU:HD22	2.02	0.75
41:RY:94:LYS:O	41:RY:101:LYS:HB3	1.85	0.75
38:YV:35:LEU:H	38:YV:35:LEU:HD22	1.51	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
33:RQ:83:MET:HB2	43:R0:7:LEU:HD12	1.67	0.75
34:RR:73:VAL:O	34:RR:76:VAL:HG12	1.87	0.75
44:R1:3:LYS:HD3	44:R1:43:TYR:HD2	1.52	0.75
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.34	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
22:YA:1019:U:H3	22:YA:1142(A):A:H62	1.34	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:7:TYR:HB3	26:YF:21:ALA:CB	2.16	0.75
32:YP:75:ILE:HD13	32:YP:75:ILE:N	2.00	0.75
38:YV:51:VAL:HG12	38:YV:52:VAL:H	1.52	0.75
44:Y1:80:LEU:O	44:Y1:81:LYS:CB	2.35	0.75
44:Y1:81:LYS:NZ	44:Y1:81:LYS:CA	2.30	0.75
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
25:RE:63:LEU:CD1	25:RE:65:GLY:H	1.99	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.01	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.75
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.75
28:YH:150:ALA:C	28:YH:152:ARG:H	1.88	0.75
34:YR:73:VAL:O	34:YR:76:VAL:HG12	1.87	0.75
39:YW:40:ASN:O	39:YW:41:LYS:HG2	1.86	0.75
41:YY:97:ARG:NH2	41:YY:98:VAL:HB	2.01	0.75
48:Y5:47:PRO:O	48:Y5:48:GLU:HG3	1.86	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.74
19:QS:42:PRO:CD	47:R4:63:TYR:HE2	2.00	0.74
19:QS:68:GLY:HA3	47:R4:68:ARG:HB2	1.69	0.74
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.74
27:RG:97:ASP:H	27:RG:100:TRP:HD1	1.31	0.74
35:RS:62:LYS:HB3	35:RS:97:ARG:HD3	1.68	0.74
37:RU:92:ARG:HH11	37:RU:95:LEU:CD1	1.99	0.74
38:RV:52:VAL:HG21	38:RV:55:ALA:HB3	1.68	0.74
39:RW:18:ARG:HG3	39:RW:76:VAL:CG1	2.15	0.74
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.74
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.52	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
22:YA:571:A:O2'	38:YV:78:LYS:NZ	2.19	0.74
25:YE:61:ARG:HB2	25:YE:62:PRO:HD3	1.69	0.74
29:YI:1:MET:HG3	29:YI:23:PRO:HB3	1.69	0.74
34:YR:33:ARG:HH22	48:Y5:55:ARG:HG2	1.51	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RE:36:ARG:HH21	25:RE:88:GLY:HA2	1.51	0.74
30:RN:96:GLU:CG	30:RN:97:ARG:H	2.00	0.74
1:XA:486:U:H2'	1:XA:487:A:H8	1.52	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
22:YA:2393:A:H4'	32:YP:61:ARG:O	1.87	0.74
26:RF:7:TYR:HB3	26:RF:21:ALA:CB	2.16	0.74
36:RT:111:ARG:O	36:RT:113:LYS:N	2.17	0.74
39:RW:40:ASN:O	39:RW:41:LYS:HG2	1.87	0.74
24:YD:30:GLU:HG3	24:YD:63:ARG:CZ	2.17	0.74
33:YQ:81:VAL:HG23	43:Y0:7:LEU:HD21	1.69	0.74
37:YU:52:ARG:HH11	37:YU:52:ARG:HG2	1.51	0.74
26:RF:136:THR:HG22	26:RF:166:ALA:O	1.87	0.74
31:RO:26:LYS:HB2	31:RO:30:ALA:CB	2.18	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
22:YA:24:G:O2'	39:YW:78:GLU:O	2.04	0.74
22:YA:1859:A:N6	22:YA:1883:G:O2'	2.20	0.74
24:YD:54:ARG:HG3	24:YD:54:ARG:HH11	1.49	0.74
36:YT:26:ASP:HB3	36:YT:91:ARG:HA	1.69	0.74
36:YT:78:LEU:HD13	36:YT:78:LEU:O	1.87	0.74
41:YY:51:VAL:HG13	41:YY:52:SER:N	2.03	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
44:R1:26:ARG:O	44:R1:26:ARG:HD2	1.86	0.74
45:R2:47:ASN:HD22	45:R2:47:ASN:H	1.33	0.74
47:R4:71:ARG:HG3	47:R4:71:ARG:NH1	1.90	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
33:YQ:79:LEU:O	33:YQ:79:LEU:CD2	2.36	0.74
46:Y3:7:LYS:HB2	46:Y3:34:GLU:HG2	1.69	0.74
1:QA:439:A:OP2	1:QA:493:G:N1	2.21	0.74
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.52	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.52	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74
40:RX:57:LEU:HD11	40:RX:78:LYS:HB2	1.68	0.74
1:XA:411:A:H62	1:XA:413:G:H21	1.33	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.52	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
26:YF:136:THR:HG22	26:YF:166:ALA:O	1.87	0.74
37:YU:64:ARG:HH21	37:YU:64:ARG:CG	2.00	0.74
54:QX:2:U:C2'	54:QX:3:G:H5'	2.17	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
22:RA:1264:G:H3'	22:RA:1265:A:H5''	1.70	0.74
22:RA:2114:A:N6	22:RA:2119:A:N7	2.36	0.74
22:RA:2393:A:H4'	32:RP:61:ARG:O	1.86	0.74
35:RS:83:LYS:HZ2	35:RS:109:GLY:HA2	1.49	0.74
36:RT:50:ILE:HD12	36:RT:102:ILE:HD11	1.68	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.87	0.74
26:YF:129:PHE:HA	26:YF:142:TRP:NE1	2.02	0.74
28:YH:153:LYS:HG2	28:YH:162:ILE:H	1.52	0.74
30:YN:96:GLU:HG2	30:YN:97:ARG:N	2.01	0.74
35:YS:36:TYR:CD2	35:YS:52:SER:HB3	2.23	0.74
36:YT:54:ARG:HG2	36:YT:54:ARG:HH11	1.52	0.74
44:Y1:26:ARG:O	44:Y1:26:ARG:HD2	1.86	0.74
22:RA:297:C:H5''	41:RY:85:VAL:HG21	1.70	0.74
22:RA:385:C:O2'	22:RA:388:G:N2	2.21	0.74
25:RE:201:THR:HG22	25:RE:203:LYS:HB3	1.70	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.88	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
22:YA:1814:G:H4'	24:YD:51:VAL:HG21	1.68	0.74
42:YZ:19:ARG:NH1	42:YZ:84:GLU:O	2.21	0.74
46:Y3:29:ARG:HB2	46:Y3:29:ARG:HH11	1.53	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
22:RA:2355:C:H1'	43:R0:39:ARG:HH21	1.53	0.74
24:RD:77:ALA:CB	24:RD:97:TYR:HA	2.18	0.74
31:RO:47:ILE:CD1	31:RO:48:PRO:HD2	2.16	0.74
32:RP:50:ARG:HB3	32:RP:50:ARG:NH2	1.97	0.74
38:RV:35:LEU:H	38:RV:35:LEU:HD22	1.51	0.74
39:RW:73:ALA:HB3	39:RW:106:ILE:HG12	1.68	0.74
46:R3:29:ARG:HH11	46:R3:29:ARG:HB2	1.52	0.74
13:XM:65:LYS:NZ	47:Y4:52:THR:CG2	2.50	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
25:YE:78:LEU:HG	25:YE:79:ARG:NE	2.03	0.74
38:YV:15:GLU:O	38:YV:18:LEU:HB2	1.86	0.74
54:QX:4:C:O2'	54:QX:5:C:H5'	1.86	0.74
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.74
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.74
33:RQ:79:LEU:O	33:RQ:79:LEU:CD1	2.35	0.74
41:RY:52:SER:OG	41:RY:53:PRO:HD3	1.88	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:539:A:H2'	1:XA:540:G:H8	1.52	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74
13:XM:77:ASN:ND2	47:Y4:71:ARG:NH1	2.36	0.74
24:YD:131:LEU:HB2	24:YD:136:ILE:CD1	2.17	0.74
3:QC:79:ARG:NE	11:XK:99:GLN:NE2	2.36	0.73
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
22:RA:571:A:O2'	38:RV:78:LYS:NZ	2.21	0.73
22:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.22	0.73
25:RE:77:ILE:HD12	25:RE:78:LEU:H	1.52	0.73
32:RP:62:LEU:HD22	32:RP:62:LEU:H	1.53	0.73
38:RV:51:VAL:HG12	38:RV:52:VAL:H	1.52	0.73
39:RW:70:TYR:HD2	39:RW:70:TYR:H	1.36	0.73
41:RY:95:LYS:HB3	41:RY:100:ALA:CA	2.10	0.73
44:R1:80:LEU:O	44:R1:81:LYS:CB	2.35	0.73
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.73
12:XL:49:ASN:HD22	12:XL:92:ASP:CG	1.90	0.73
30:YN:1:MET:HE1	37:YU:95:LEU:HD21	1.70	0.73
47:Y4:41:PRO:O	47:Y4:42:PHE:HB3	1.87	0.73
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.34	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
26:RF:29:ASN:HB3	26:RF:112:MET:HE1	1.68	0.73
30:RN:58:ASP:H	30:RN:60:ILE:HD11	1.53	0.73
35:RS:36:TYR:CD2	35:RS:52:SER:HB3	2.23	0.73
44:R1:76:ARG:HH11	44:R1:76:ARG:HG2	1.53	0.73
48:R5:2:ALA:O	48:R5:3:LYS:HB2	1.88	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
1:QA:618:C:N3	1:QA:622:A:N6	2.36	0.73
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.54	0.73
13:XM:8:GLU:CD	27:YG:115:ARG:CZ	2.55	0.73
28:YH:153:LYS:HG3	28:YH:161:GLY:CA	2.18	0.73
1:QA:45:U:H2'	1:QA:46:G:H8	1.51	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.50	0.73
22:RA:900:A:H3'	22:RA:901:A:H8	1.53	0.73
25:RE:61:ARG:HB2	25:RE:62:PRO:HD3	1.69	0.73
36:RT:23:ARG:HB2	36:RT:24:PRO:HD2	1.70	0.73
37:RU:64:ARG:HH21	37:RU:64:ARG:CG	2.00	0.73
1:XA:961:U:O2	1:XA:1201:A:N6	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.02	0.73
14:YN:44:LEU:CD1	14:YN:53:LEU:CD1	2.66	0.73
31:YO:26:LYS:HB2	31:YO:30:ALA:CB	2.18	0.73
36:YT:102:ILE:HB	36:YT:110:ILE:CD1	2.19	0.73
26:RF:9:ILE:HD11	26:RF:125:LEU:HG	1.70	0.73
28:RH:84:SER:O	28:RH:85:LYS:HB2	1.89	0.73
46:R3:7:LYS:HB2	46:R3:34:GLU:HG2	1.69	0.73
1:XA:372:C:N4	1:XA:387:U:C4	2.55	0.73
14:YN:32:SER:O	14:YN:41:ARG:N	2.22	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
22:YA:210:C:OP2	50:Y7:29:LYS:NZ	2.21	0.73
4:QD:166:LYS:CG	24:YD:134:ARG:NH1	2.51	0.73
19:QS:42:PRO:CG	47:R4:63:TYR:HE2	2.02	0.73
25:RE:23:VAL:HG21	25:RE:183:LEU:HD23	1.68	0.73
25:RE:203:LYS:O	25:RE:203:LYS:HD2	1.88	0.73
28:RH:153:LYS:HG3	28:RH:161:GLY:CA	2.18	0.73
47:R4:41:PRO:O	47:R4:42:PHE:HB3	1.87	0.73
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.71	0.73
35:YS:62:LYS:HB3	35:YS:97:ARG:HD3	1.68	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
22:RA:380:U:H2'	22:RA:381:G:H8	1.52	0.73
24:RD:30:GLU:HG3	24:RD:63:ARG:CZ	2.18	0.73
28:RH:125:VAL:HA	28:RH:126:PRO:HB3	1.68	0.73
30:RN:96:GLU:HG2	30:RN:97:ARG:N	2.01	0.73
1:XA:714:G:H2'	1:XA:715:A:C8	2.23	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
13:XM:77:ASN:CA	47:Y4:71:ARG:NH2	2.51	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
25:YE:77:ILE:HD12	25:YE:78:LEU:H	1.51	0.73
27:YG:7:LEU:HD21	27:YG:176:LEU:HD22	1.70	0.73
47:Y4:29:PRO:O	47:Y4:30:GLU:HB2	1.89	0.73
1:QA:352:C:O2'	1:QA:354:G:OP1	2.05	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
12:QL:47:LYS:HB3	12:QL:48:PRO:HD3	1.71	0.73
22:RA:2115:G:N2	22:RA:2165:G:N7	2.31	0.73
22:RA:2298:A:H62	22:RA:2318:G:H8	1.35	0.73
33:RQ:90:VAL:CG1	33:RQ:91:GLU:H	2.02	0.73
36:RT:26:ASP:HB3	36:RT:91:ARG:HA	1.69	0.73
1:XA:878:G:H5'	8:XH:89:PRO:HG2	1.70	0.73
1:XA:1002:G:H1	1:XA:1038:C:H42	1.37	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
22:YA:607:U:H3	22:YA:621:A:H2	1.35	0.73
22:YA:1803:A:H4'	24:YD:259:THR:CG2	2.19	0.73
45:Y2:29:LYS:HD3	45:Y2:57:ILE:HD13	1.71	0.73
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.73
12:QL:50:SER:O	12:QL:51:ALA:HB2	1.89	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.73
24:RD:131:LEU:HB2	24:RD:136:ILE:CD1	2.17	0.73
25:RE:55:ASN:C	25:RE:57:LYS:H	1.91	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.73
25:YE:55:ASN:C	25:YE:57:LYS:H	1.91	0.73
25:YE:203:LYS:O	25:YE:203:LYS:HD2	1.88	0.73
48:Y5:40:LYS:CE	48:Y5:46:CYS:HB3	2.19	0.73
51:Y8:16:ILE:HD11	51:Y8:57:ARG:HG2	1.69	0.73
28:RH:54:ARG:HH12	28:RH:62:LYS:HG2	1.54	0.73
37:RU:34:LYS:HE2	37:RU:34:LYS:HA	1.70	0.73
45:R2:27:GLU:OE1	45:R2:27:GLU:N	2.19	0.73
1:XA:372:C:C4	1:XA:387:U:O4	2.41	0.73
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.53	0.73
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.73
13:XM:62:ASN:HA	47:Y4:49:PHE:HD2	1.50	0.73
33:YQ:79:LEU:O	33:YQ:79:LEU:CD1	2.35	0.73
49:Y6:13:CYS:HA	49:Y6:50:ARG:O	1.89	0.73
51:Y8:61:LEU:O	51:Y8:62:LEU:HB2	1.88	0.73
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.72
22:RA:1341:U:OP2	22:RA:1394:U:O2'	2.04	0.72
26:RF:101:LEU:CD1	26:RF:102:PRO:HD2	2.11	0.72
26:RF:157:VAL:HB	26:RF:194:MET:HB3	1.70	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
22:YA:666:G:H4'	32:YP:49:ARG:NH1	2.04	0.72
24:YD:77:ALA:CB	24:YD:97:TYR:HA	2.18	0.72
29:YI:5:LEU:H	29:YI:5:LEU:HD12	1.52	0.72
30:YN:58:ASP:H	30:YN:60:ILE:HD11	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:79:LEU:HD22	33:YQ:79:LEU:C	2.07	0.72
34:YR:3:HIS:O	34:YR:5:LYS:N	2.22	0.72
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.70	0.72
22:RA:84:A:N1	22:RA:98:G:O2'	2.21	0.72
22:RA:704:G:H2'	22:RA:726:G:H22	1.54	0.72
22:RA:1190:G:OP1	32:RP:30:THR:OG1	2.04	0.72
25:RE:56:PRO:O	25:RE:57:LYS:HB2	1.89	0.72
28:RH:80:SER:O	28:RH:81:GLU:HB2	1.89	0.72
30:RN:1:MET:HE1	37:RU:95:LEU:HD21	1.71	0.72
1:XA:1054:C:N4	55:XY:34:C:C2	2.57	0.72
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.54	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
24:YD:35:LYS:HZ1	24:YD:65:ILE:HA	1.52	0.72
28:YH:125:VAL:HG12	28:YH:126:PRO:HG3	1.71	0.72
28:YH:152:ARG:O	28:YH:153:LYS:HD2	1.90	0.72
32:YP:88:LEU:C	32:YP:90:ARG:H	1.92	0.72
35:YS:83:LYS:HG2	35:YS:109:GLY:N	2.04	0.72
51:Y8:29:LYS:HD3	51:Y8:44:LYS:HB2	1.71	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
27:RG:146:TYR:O	27:RG:149:VAL:HG22	1.88	0.72
44:R1:80:LEU:HB2	44:R1:81:LYS:HE2	1.71	0.72
27:YG:146:TYR:O	27:YG:149:VAL:HG22	1.89	0.72
30:YN:89:LYS:O	30:YN:93:THR:HG22	1.90	0.72
32:YP:126:VAL:CG1	32:YP:147:LEU:HD21	2.17	0.72
34:YR:117:VAL:HG22	34:YR:118:GLU:N	2.05	0.72
37:YU:98:LEU:HD23	37:YU:99:ALA:N	2.04	0.72
46:Y3:56:VAL:HG12	46:Y3:57:GLU:N	2.04	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.72
12:QL:47:LYS:HG2	12:QL:48:PRO:HD3	1.70	0.72
25:RE:13:ARG:HA	25:RE:22:PRO:HA	1.71	0.72
31:RO:113:LYS:HG2	31:RO:117:LEU:HD11	1.71	0.72
32:RP:88:LEU:C	32:RP:90:ARG:H	1.92	0.72
36:RT:117:ASP:O	36:RT:121:ILE:HG13	1.89	0.72
48:R5:40:LYS:CE	48:R5:46:CYS:HB3	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:2:PRO:HB2	47:Y4:68:ARG:NH2	2.03	0.72
22:YA:2713:A:OP1	34:YR:14:SER:OG	2.07	0.72
23:YB:15:A:H5'	23:YB:16:G:C8	2.24	0.72
33:YQ:90:VAL:CG1	33:YQ:91:GLU:H	2.02	0.72
35:YS:83:LYS:C	35:YS:109:GLY:HA3	2.10	0.72
35:YS:83:LYS:HZ2	35:YS:109:GLY:HA2	1.53	0.72
38:YV:39:LEU:O	38:YV:40:LEU:HD23	1.90	0.72
41:YY:52:SER:OG	41:YY:53:PRO:HD3	1.88	0.72
44:Y1:3:LYS:HD3	44:Y1:43:TYR:HD2	1.52	0.72
1:QA:1330:U:OP1	13:QM:25:ILE:O	2.08	0.72
28:RH:30:LYS:HD2	28:RH:81:GLU:H	1.54	0.72
32:RP:127:ALA:C	32:RP:147:LEU:HD23	2.10	0.72
36:RT:78:LEU:HD13	36:RT:78:LEU:O	1.87	0.72
1:XA:67:C:H2'	1:XA:68:G:C8	2.25	0.72
1:XA:439:A:OP2	1:XA:493:G:N1	2.22	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
25:YE:14:ILE:HD11	36:YT:14:TYR:OH	1.90	0.72
34:YR:85:PRO:O	34:YR:87:TYR:N	2.22	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
25:RE:78:LEU:HG	25:RE:79:ARG:NE	2.03	0.72
35:RS:42:ASP:O	35:RS:43:GLU:HB2	1.90	0.72
1:XA:1494:G:OP1	58:XA:1673:PAR:N32	2.23	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
22:YA:1210:A:H5'	22:YA:1210:A:H8	1.53	0.72
25:YE:21:VAL:HB	25:YE:22:PRO:CB	2.18	0.72
26:YF:124:LEU:HD12	26:YF:125:LEU:N	2.04	0.72
28:YH:54:ARG:HH12	28:YH:62:LYS:HG2	1.54	0.72
35:YS:26:LEU:O	35:YS:26:LEU:HD23	1.90	0.72
25:RE:28:ALA:HB3	25:RE:93:VAL:HG22	1.72	0.72
26:RF:124:LEU:HD12	26:RF:125:LEU:N	2.04	0.72
28:RH:26:VAL:CG1	28:RH:27:LYS:H	2.02	0.72
32:RP:29:LYS:HD2	32:RP:30:THR:HG22	1.72	0.72
32:RP:114:ILE:HD13	32:RP:125:VAL:HG21	1.72	0.72
35:RS:103:GLU:O	35:RS:106:ARG:HG3	1.90	0.72
48:R5:58:LEU:CD1	48:R5:60:VAL:HG12	2.19	0.72
1:XA:1071:C:H5''	5:XE:49:PRO:HG2	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
13:XM:65:LYS:HZ1	47:Y4:52:THR:HG21	1.54	0.72
26:YF:157:VAL:HB	26:YF:194:MET:HB3	1.70	0.72
28:YH:132:ARG:HH11	28:YH:132:ARG:CB	1.97	0.72
37:YU:34:LYS:HE2	37:YU:34:LYS:HA	1.69	0.72
44:Y1:80:LEU:HB2	44:Y1:81:LYS:HE2	1.71	0.72
50:Y7:10:ARG:O	50:Y7:14:LYS:HB2	1.89	0.72
1:QA:673:G:H2'	1:QA:674:G:C8	2.23	0.72
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.70	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
22:RA:1266:G:O5'	39:RW:15:ARG:NH2	2.23	0.72
26:RF:32:LEU:O	26:RF:32:LEU:HD12	1.90	0.72
33:RQ:79:LEU:HD22	33:RQ:79:LEU:C	2.07	0.72
36:RT:57:PHE:C	36:RT:58:ASN:HD22	1.93	0.72
37:RU:98:LEU:HD23	37:RU:99:ALA:N	2.04	0.72
46:R3:56:VAL:HG12	46:R3:57:GLU:N	2.04	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
22:YA:26:G:H1'	22:YA:515:A:H61	1.53	0.72
25:YE:201:THR:HG22	25:YE:203:LYS:HB3	1.69	0.72
26:YF:32:LEU:O	26:YF:32:LEU:HD12	1.90	0.72
28:YH:128:PRO:HD2	28:YH:129:THR:H	1.55	0.72
45:Y2:27:GLU:OE1	45:Y2:27:GLU:N	2.19	0.72
1:QA:606:G:H22	1:QA:631:G:H5'	1.54	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
25:RE:93:VAL:H	25:RE:95:ILE:HD12	1.54	0.72
27:RG:7:LEU:HD21	27:RG:176:LEU:HD22	1.70	0.72
28:RH:89:ILE:CD1	28:RH:129:THR:HB	2.19	0.72
34:RR:117:VAL:HG22	34:RR:118:GLU:N	2.05	0.72
36:RT:54:ARG:HH11	36:RT:54:ARG:HG2	1.52	0.72
37:RU:69:CYS:HB3	37:RU:106:PHE:HZ	1.55	0.72
50:R7:5:TRP:NE1	50:R7:7:PRO:HG3	2.04	0.72
51:R8:16:ILE:HD11	51:R8:57:ARG:HG2	1.70	0.72
51:R8:61:LEU:O	51:R8:62:LEU:HB2	1.88	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
25:YE:13:ARG:HA	25:YE:22:PRO:HA	1.71	0.72
25:YE:56:PRO:O	25:YE:57:LYS:HB2	1.89	0.72
26:YF:9:ILE:HD11	26:YF:125:LEU:HG	1.70	0.72
41:YY:57:GLN:HE21	41:YY:58:GLY:H	1.38	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YZ:60:GLU:HA	42:YZ:66:SER:HA	1.72	0.72
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.90	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.72
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.72
26:RF:32:LEU:HD12	26:RF:32:LEU:C	2.10	0.72
33:RQ:79:LEU:O	33:RQ:79:LEU:CD2	2.36	0.72
34:RR:85:PRO:O	34:RR:87:TYR:N	2.22	0.72
36:RT:102:ILE:HB	36:RT:110:ILE:CD1	2.19	0.72
37:RU:66:ASN:HB2	37:RU:76:TYR:HB2	1.72	0.72
41:RY:51:VAL:HG13	41:RY:52:SER:N	2.03	0.72
50:R7:10:ARG:O	50:R7:14:LYS:HB2	1.90	0.72
51:R8:60:LEU:O	51:R8:63:PRO:HD2	1.90	0.72
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.05	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.72
25:YE:197:ILE:HD11	25:YE:199:ARG:HH12	1.55	0.72
26:YF:32:LEU:HD12	26:YF:32:LEU:C	2.10	0.72
28:YH:26:VAL:CG1	28:YH:27:LYS:H	2.02	0.72
32:YP:127:ALA:C	32:YP:147:LEU:HD23	2.10	0.72
39:YW:70:TYR:H	39:YW:70:TYR:HD2	1.37	0.72
44:Y1:76:ARG:HH11	44:Y1:76:ARG:HG2	1.53	0.72
51:Y8:60:LEU:C	51:Y8:63:PRO:HD2	2.11	0.72
1:QA:191:G:C4	20:QT:105:SER:HB3	2.25	0.71
1:QA:1316:G:H22	1:QA:1319:A:H5 <sup>7</sup>	1.55	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
35:RS:26:LEU:O	35:RS:26:LEU:HD23	1.90	0.71
35:RS:83:LYS:HG2	35:RS:109:GLY:N	2.04	0.71
49:R6:13:CYS:HA	49:R6:50:ARG:O	1.89	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
36:YT:117:ASP:O	36:YT:121:ILE:HG13	1.89	0.71
28:RH:152:ARG:O	28:RH:153:LYS:HD2	1.90	0.71
37:RU:8:VAL:HG23	37:RU:11:ARG:NH2	1.99	0.71
45:R2:29:LYS:HD3	45:R2:57:ILE:HD13	1.71	0.71
1:XA:448:A:OP2	1:XA:485:G:N2	2.22	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.54	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
22:YA:2451:A:O2'	53:XV:76:A:O2'	2.06	0.71
28:YH:30:LYS:HD2	28:YH:81:GLU:H	1.54	0.71
37:YU:69:CYS:HB3	37:YU:106:PHE:HZ	1.55	0.71
44:Y1:80:LEU:C	44:Y1:81:LYS:HE2	2.10	0.71
1:QA:1124:G:H5''	1:QA:1145:C:H41	1.55	0.71
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.55	0.71
22:RA:1454:U:OP1	34:RR:77:ARG:NH1	2.23	0.71
24:RD:244:ARG:HB2	24:RD:245:PRO:HD2	1.71	0.71
25:RE:197:ILE:HD11	25:RE:199:ARG:HH12	1.55	0.71
32:RP:85:LEU:HA	32:RP:88:LEU:HD22	1.71	0.71
34:RR:3:HIS:O	34:RR:5:LYS:N	2.22	0.71
39:RW:1:MET:HE2	39:RW:2:GLU:H	1.55	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
28:YH:84:SER:O	28:YH:85:LYS:HB2	1.89	0.71
31:YO:3:GLN:HB2	31:YO:4:PRO:HD2	1.72	0.71
35:YS:103:GLU:O	35:YS:106:ARG:HG3	1.90	0.71
42:YZ:144:LEU:HD11	42:YZ:149:SER:HA	1.70	0.71
45:Y2:41:ILE:C	45:Y2:41:ILE:HD12	2.10	0.71
48:Y5:2:ALA:O	48:Y5:3:LYS:HB2	1.88	0.71
50:Y7:5:TRP:NE1	50:Y7:7:PRO:HG3	2.04	0.71
51:Y8:58:ILE:HD13	51:Y8:61:LEU:HD11	1.72	0.71
51:Y8:60:LEU:O	51:Y8:63:PRO:HD2	1.90	0.71
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.06	0.71
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.56	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
25:RE:21:VAL:HB	25:RE:22:PRO:CB	2.18	0.71
31:RO:3:GLN:HB2	31:RO:4:PRO:HD2	1.72	0.71
38:RV:39:LEU:O	38:RV:40:LEU:HD23	1.90	0.71
1:XA:601:C:H2'	1:XA:602:A:H8	1.56	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
13:XM:65:LYS:HZ2	47:Y4:52:THR:CG2	2.02	0.71
26:YF:185:ASP:OD1	26:YF:188:ARG:NH1	2.23	0.71
32:YP:85:LEU:HA	32:YP:88:LEU:HD22	1.71	0.71
35:YS:67:ARG:O	35:YS:71:ARG:HG3	1.90	0.71
49:Y6:28:ARG:HB3	49:Y6:30:THR:H	1.56	0.71
1:QA:954:G:H21	1:QA:1227:A:H62	1.38	0.71
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.24	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.71
22:RA:2404:C:H1'	32:RP:67:MET:CE	2.21	0.71
28:RH:125:VAL:HG12	28:RH:126:PRO:HG3	1.70	0.71
35:RS:67:ARG:O	35:RS:71:ARG:HG3	1.90	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.71
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.71
22:YA:674:G:C1'	26:YF:74:ARG:HD3	2.21	0.71
22:YA:2111:C:N3	22:YA:2118:U:O2'	2.23	0.71
22:YA:2287:A:H62	22:YA:2344:U:H3	1.38	0.71
26:YF:185:ASP:HA	26:YF:188:ARG:CD	2.20	0.71
30:YN:1:MET:CE	37:YU:95:LEU:HD21	2.21	0.71
32:YP:58:THR:O	32:YP:61:ARG:CZ	2.38	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	1.89	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
22:RA:336:C:O2'	41:RY:35:TYR:OH	2.06	0.71
25:RE:14:ILE:HD11	36:RT:14:TYR:OH	1.90	0.71
32:RP:49:ARG:HD2	51:R8:58:ILE:CG2	2.20	0.71
40:RX:12:VAL:HG12	40:RX:27:THR:O	1.91	0.71
22:YA:2450:A:O2'	53:XV:76:A:N1	2.20	0.71
23:YB:52:A:H62	35:YS:33:LYS:HG3	1.55	0.71
35:YS:83:LYS:HZ1	35:YS:109:GLY:HA2	1.52	0.71
40:YX:12:VAL:HG12	40:YX:27:THR:O	1.90	0.71
49:Y6:36:LEU:HD13	49:Y6:50:ARG:NH1	2.05	0.71
1:QA:45:U:H2'	1:QA:46:G:C8	2.26	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.71
13:QM:77:ASN:HA	47:R4:71:ARG:NH2	2.05	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.03	0.71
30:RN:1:MET:CE	37:RU:95:LEU:HD21	2.21	0.71
49:R6:25:LYS:HD2	51:R8:34:TRP:HZ2	1.56	0.71
51:R8:58:ILE:HD13	51:R8:61:LEU:HD11	1.72	0.71
51:R8:60:LEU:C	51:R8:63:PRO:HD2	2.10	0.71
1:XA:1400:C:H42	53:XV:34:C:C1'	2.04	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
22:YA:2033:A:O2'	22:YA:2035:G:OP2	2.08	0.71
22:YA:2610:C:H4'	22:YA:2611:U:OP2	1.90	0.71
24:YD:263:ARG:HB2	24:YD:263:ARG:NH1	2.06	0.71
25:YE:93:VAL:H	25:YE:95:ILE:HD12	1.54	0.71
36:YT:23:ARG:HB2	36:YT:24:PRO:HD2	1.70	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71
22:RA:573:G:N1	22:RA:2031:A:OP2	2.23	0.71
22:RA:1791:A:N6	22:RA:1828:G:O2'	2.23	0.71
22:RA:2404:C:H1'	32:RP:67:MET:HE1	1.72	0.71
24:RD:263:ARG:HB2	24:RD:263:ARG:NH1	2.05	0.71
32:RP:83:VAL:CG1	32:RP:112:LEU:HD21	2.21	0.71
35:RS:83:LYS:C	35:RS:109:GLY:HA3	2.10	0.71
35:RS:106:ARG:CA	35:RS:110:LEU:HD11	2.19	0.71
47:R4:29:PRO:O	47:R4:30:GLU:HB2	1.89	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
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
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
26:RF:178:PRO:HB2	26:RF:201:VAL:HG11	1.73	0.71
26:RF:185:ASP:OD1	26:RF:188:ARG:NH1	2.24	0.71
29:RI:3:VAL:HG12	29:RI:38:LEU:HA	1.73	0.71
49:R6:36:LEU:HD13	49:R6:50:ARG:NH1	2.05	0.71
1:XA:1226:C:O2'	13:XM:103:THR:O	2.05	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
22:YA:2788:C:O2'	22:YA:2809:A:N3	2.23	0.71
28:YH:80:SER:O	28:YH:81:GLU:HB2	1.89	0.71
32:YP:49:ARG:HD2	51:Y8:58:ILE:CG2	2.20	0.71
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HD23	1.72	0.71
45:Y2:7:ARG:HG3	45:Y2:7:ARG:HH11	1.55	0.71
49:Y6:29:ASN:OD1	49:Y6:30:THR:HG22	1.91	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
29:RI:92:VAL:HG13	29:RI:120:ILE:HG23	1.72	0.71
45:R2:41:ILE:C	45:R2:41:ILE:HD12	2.10	0.71
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.03	0.71
39:YW:6:ILE:HG12	39:YW:104:THR:HG23	1.73	0.71
48:Y5:40:LYS:HE2	48:Y5:47:PRO:HD2	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.71	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
22:RA:1080:C:N4	22:RA:1088:A:OP2	2.22	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	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
13:XM:57:ARG:HH21	47:Y4:34:GLU:C	1.94	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.70
22:YA:2311:A:C8	27:YG:82:LEU:HD11	2.25	0.70
28:YH:59:ARG:HH11	28:YH:59:ARG:HG3	1.56	0.70
31:YO:113:LYS:HG2	31:YO:117:LEU:HD11	1.71	0.70
44:Y1:80:LEU:C	44:Y1:81:LYS:HD2	2.12	0.70
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.23	0.70
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.70
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.54	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
26:RF:66:PRO:O	26:RF:67:GLN:HB3	1.89	0.70
26:RF:101:LEU:O	26:RF:106:ARG:NH1	2.23	0.70
28:RH:132:ARG:HH11	28:RH:132:ARG:CB	1.97	0.70
51:R8:29:LYS:HD3	51:R8:44:LYS:HB2	1.71	0.70
1:XA:372:C:N3	1:XA:387:U:O4	2.24	0.70
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
24:YD:244:ARG:HB2	24:YD:245:PRO:HD2	1.72	0.70
26:YF:66:PRO:O	26:YF:67:GLN:HB3	1.90	0.70
29:YI:144:VAL:HG13	29:YI:145:VAL:HG13	1.72	0.70
1:QA:939:G:H1	1:QA:1344:C:H42	1.39	0.70
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.56	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
26:RF:164:ARG:HG3	26:RF:175:THR:OG1	1.92	0.70
32:RP:58:THR:O	32:RP:61:ARG:CZ	2.38	0.70
38:RV:51:VAL:HG12	38:RV:52:VAL:N	2.06	0.70
42:RZ:5:LEU:HD11	42:RZ:39:VAL:HB	1.73	0.70
44:R1:80:LEU:C	44:R1:81:LYS:HE2	2.10	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
25:YE:14:ILE:HG12	25:YE:15:PHE:N	2.06	0.70
28:YH:89:ILE:CD1	28:YH:129:THR:HB	2.20	0.70
32:YP:20:GLY:HA2	32:YP:27:HIS:O	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:43:ARG:HB3	24:RD:54:ARG:HB2	1.73	0.70
33:RQ:32:TYR:CD1	33:RQ:133:ARG:HA	2.27	0.70
41:RY:48:ALA:O	41:RY:49:VAL:C	2.30	0.70
1:XA:372:C:O2'	1:XA:373:A:P	2.49	0.70
1:XA:1348:U:H3	1:XA:1374:A:H2	1.37	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	0.70
25:YE:28:ALA:HB3	25:YE:93:VAL:HG22	1.72	0.70
28:YH:103:LEU:HD12	28:YH:131:VAL:HG21	1.73	0.70
35:YS:42:ASP:O	35:YS:43:GLU:HB2	1.90	0.70
44:Y1:81:LYS:HE2	44:Y1:81:LYS:CA	2.13	0.70
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
26:RF:65:TRP:HZ3	26:RF:73:ALA:O	1.74	0.70
49:R6:29:ASN:OD1	49:R6:30:THR:HG22	1.91	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
13:XM:68:GLY:HA3	27:YG:116:ASP:OD2	1.90	0.70
22:YA:1169:G:H1	22:YA:1180:C:H42	1.38	0.70
26:YF:178:PRO:HG2	26:YF:179:GLU:OE2	1.90	0.70
28:YH:152:ARG:O	28:YH:153:LYS:CB	2.39	0.70
37:YU:65:ILE:HG12	37:YU:96:ALA:HB1	1.73	0.70
38:YV:22:VAL:HG12	38:YV:23:GLU:N	2.06	0.70
44:Y1:7:ILE:CD1	44:Y1:70:VAL:HG22	2.21	0.70
1:QA:842:C:O2'	1:QA:848:C:N4	2.24	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
22:RA:1803:A:H4'	24:RD:259:THR:CG2	2.20	0.70
26:RF:178:PRO:HG2	26:RF:179:GLU:OE2	1.90	0.70
28:RH:154:PRO:O	28:RH:155:SER:HB2	1.91	0.70
35:RS:83:LYS:HZ1	35:RS:109:GLY:HA2	1.56	0.70
41:RY:45:VAL:HG12	41:RY:60:PHE:CD1	2.27	0.70
45:R2:7:ARG:HH11	45:R2:7:ARG:HG3	1.55	0.70
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
22:YA:1833:U:O2'	22:YA:1969:A:N1	2.18	0.70
22:YA:2446:G:N2	22:YA:2449:U:O2	2.24	0.70
22:YA:2747:G:OP1	28:YH:138:LYS:NZ	2.24	0.70
26:YF:101:LEU:O	26:YF:106:ARG:NH1	2.23	0.70
33:YQ:32:TYR:CD1	33:YQ:133:ARG:HA	2.27	0.70
36:YT:41:ARG:NH2	36:YT:43:GLN:HB2	2.06	0.70
37:YU:66:ASN:HB2	37:YU:76:TYR:HB2	1.72	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
24:RD:65:ILE:HD13	24:RD:65:ILE:O	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:154:PRO:HG2	28:RH:162:ILE:O	1.92	0.70
30:RN:89:LYS:O	30:RN:93:THR:HG22	1.90	0.70
35:RS:54:LEU:HD13	35:RS:54:LEU:O	1.91	0.70
41:RY:57:GLN:HE21	41:RY:58:GLY:H	1.37	0.70
44:R1:82:LEU:HD13	44:R1:83:GLU:N	2.05	0.70
1:XA:372:C:HO2'	1:XA:373:A:P	2.12	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
22:YA:2306:C:H3'	22:YA:2307:G:H5''	1.74	0.70
22:YA:2636:U:OP1	25:YE:79:ARG:HA	1.91	0.70
24:YD:43:ARG:HB3	24:YD:54:ARG:HB2	1.73	0.70
26:YF:164:ARG:HG3	26:YF:175:THR:OG1	1.91	0.70
26:YF:178:PRO:HB2	26:YF:201:VAL:HG11	1.73	0.70
28:YH:154:PRO:HG2	28:YH:162:ILE:O	1.92	0.70
36:YT:57:PHE:C	36:YT:58:ASN:HD22	1.93	0.70
39:YW:29:LEU:HD21	39:YW:33:ARG:CZ	2.22	0.70
49:Y6:25:LYS:HD2	51:Y8:34:TRP:HZ2	1.56	0.70
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.74	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
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
22:RA:71:A:H4'	22:RA:72:U:H5''	1.73	0.70
22:RA:2815:C:H5'	48:R5:29:THR:HG21	1.72	0.70
28:RH:128:PRO:HD2	28:RH:129:THR:H	1.55	0.70
39:RW:29:LEU:HD21	39:RW:33:ARG:CZ	2.22	0.70
1:XA:827:U:O2	1:XA:874:G:N2	2.25	0.70
22:YA:1509:C:H3'	22:YA:1510:A:H5''	1.73	0.70
28:YH:86:GLU:CG	28:YH:165:ALA:H	1.94	0.70
31:YO:63:VAL:HG13	31:YO:84:ALA:HA	1.72	0.70
33:YQ:43:THR:OG1	33:YQ:46:GLN:HB2	1.91	0.70
39:YW:1:MET:HA	39:YW:1:MET:HE3	1.72	0.70
48:Y5:40:LYS:HE2	48:Y5:47:PRO:CD	2.21	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
22:RA:1509:C:H3'	22:RA:1510:A:H5''	1.74	0.70
28:RH:152:ARG:O	28:RH:153:LYS:CB	2.40	0.70
44:R1:7:ILE:CD1	44:R1:70:VAL:HG22	2.21	0.70
48:R5:40:LYS:HE2	48:R5:47:PRO:HD2	1.73	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:103:ASP:OD1	25:YE:201:THR:HA	1.92	0.70
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
27:RG:131:TYR:O	27:RG:159:VAL:HG13	1.92	0.70
32:RP:64:LYS:C	32:RP:66:GLY:H	1.94	0.70
35:RS:106:ARG:N	35:RS:110:LEU:HD21	2.07	0.70
37:RU:65:ILE:HG12	37:RU:96:ALA:HB1	1.73	0.70
40:RX:57:LEU:HD11	40:RX:78:LYS:HD2	1.73	0.70
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.70
24:YD:65:ILE:HD13	24:YD:65:ILE:O	1.91	0.70
27:YG:131:TYR:O	27:YG:159:VAL:HG13	1.92	0.70
32:YP:114:ILE:HD13	32:YP:125:VAL:HG21	1.72	0.70
38:YV:51:VAL:HG12	38:YV:52:VAL:N	2.06	0.70
40:YX:57:LEU:HD11	40:YX:78:LYS:HD2	1.73	0.70
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.69
19:QS:69:HIS:HD1	47:R4:69:LYS:HE2	1.56	0.69
22:RA:2111:C:N3	22:RA:2118:U:O2'	2.24	0.69
24:RD:65:ILE:HD11	24:RD:67:PHE:CD1	2.27	0.69
28:RH:59:ARG:HH11	28:RH:59:ARG:HG3	1.56	0.69
45:R2:47:ASN:O	45:R2:49:LYS:N	2.25	0.69
32:YP:83:VAL:CG1	32:YP:112:LEU:HD21	2.21	0.69
44:Y1:82:LEU:HD12	44:Y1:83:GLU:CA	2.21	0.69
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.12	0.69
9:QI:113:LYS:HD2	9:QI:113:LYS:N	2.07	0.69
29:RI:62:LYS:HE3	29:RI:134:PRO:HG2	1.74	0.69
41:RY:2:ARG:HH11	41:RY:2:ARG:HG2	1.57	0.69
44:R1:7:ILE:HD12	44:R1:70:VAL:HG22	1.73	0.69
1:XA:767:A:O2'	1:XA:1524:C:O2	2.09	0.69
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.74	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.57	0.69
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.74	0.69
35:YS:54:LEU:HD13	35:YS:54:LEU:O	1.91	0.69
38:YV:41:GLY:HA3	38:YV:46:VAL:HG11	1.74	0.69
44:Y1:7:ILE:HD12	44:Y1:70:VAL:HG22	1.73	0.69
1:QA:501:C:H2'	1:QA:502:G:H8	1.55	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:56:ALA:HB2	27:RG:153:ARG:HE	1.57	0.69
43:R0:11:ARG:O	43:R0:14:ARG:NH2	2.26	0.69
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.25	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
14:YN:6:LEU:O	14:YN:6:LEU:HD23	1.92	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
31:YO:8:LEU:HD22	31:YO:8:LEU:N	2.07	0.69
32:YP:64:LYS:C	32:YP:66:GLY:H	1.94	0.69
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.74	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.74	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.91	0.69
24:RD:76:PRO:O	24:RD:98:VAL:HG23	1.91	0.69
25:RE:103:ASP:OD1	25:RE:201:THR:HA	1.92	0.69
28:RH:103:LEU:HD12	28:RH:131:VAL:HG21	1.73	0.69
30:RN:46:VAL:O	30:RN:47:ALA:HB3	1.92	0.69
32:RP:126:VAL:CG1	32:RP:147:LEU:HD21	2.16	0.69
44:R1:74:VAL:HG12	44:R1:74:VAL:O	1.93	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
19:XS:9:VAL:HG12	47:Y4:66:SER:O	1.92	0.69
22:YA:83:G:O2'	22:YA:84:A:O5'	2.10	0.69
22:YA:1006:C:H1'	30:YN:106:MET:HE3	1.74	0.69
22:YA:2086:U:H2'	22:YA:2087:G:C8	2.27	0.69
24:YD:65:ILE:HD11	24:YD:67:PHE:CD1	2.27	0.69
32:YP:61:ARG:H	32:YP:61:ARG:HD2	1.58	0.69
32:YP:64:LYS:HB2	51:Y8:25:MET:CG	2.22	0.69
38:YV:66:ARG:HH12	38:YV:88:ARG:NH1	1.90	0.69
39:YW:86:LEU:HD12	39:YW:87:PRO:CD	2.23	0.69
44:Y1:53:VAL:HG22	44:Y1:74:VAL:HG13	1.74	0.69
1:QA:664:G:H22	1:QA:741:G:H1	1.38	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
28:RH:4:ILE:HG13	28:RH:6:ARG:NE	2.08	0.69
30:RN:120:LEU:HD11	30:RN:122:VAL:HG23	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:20:GLY:HA2	32:RP:27:HIS:O	1.92	0.69
44:R1:4:VAL:HG23	44:R1:10:LYS:O	1.93	0.69
44:R1:82:LEU:HD12	44:R1:83:GLU:CA	2.22	0.69
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
22:YA:1006:C:H1'	30:YN:106:MET:CE	2.22	0.69
24:YD:89:SER:HB2	24:YD:159:ALA:HB2	1.75	0.69
30:YN:120:LEU:HD11	30:YN:122:VAL:HG23	1.74	0.69
44:Y1:82:LEU:HD13	44:Y1:83:GLU:N	2.05	0.69
45:Y2:47:ASN:O	45:Y2:49:LYS:N	2.25	0.69
1:QA:581:G:N2	1:QA:760:G:N7	2.41	0.69
1:QA:953:G:H5'	1:QA:965:A:H61	1.58	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
22:RA:1454:U:H5'	34:RR:63:ARG:HE	1.56	0.69
22:RA:1799:G:H5'	22:RA:1819:A:H61	1.57	0.69
25:RE:7:VAL:HG23	25:RE:8:LYS:N	2.07	0.69
26:RF:103:LYS:HA	26:RF:106:ARG:CG	2.21	0.69
32:RP:39:LYS:CA	32:RP:45:LEU:HD11	2.23	0.69
33:RQ:43:THR:OG1	33:RQ:46:GLN:HB2	1.91	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
22:YA:551:G:H5'	22:YA:1220:A:H1'	1.73	0.69
22:YA:601:C:O2'	22:YA:605:C:OP1	2.10	0.69
25:YE:7:VAL:HG23	25:YE:8:LYS:N	2.06	0.69
26:YF:65:TRP:HZ3	26:YF:73:ALA:O	1.74	0.69
30:YN:68:GLU:HG2	30:YN:88:GLU:OE1	1.92	0.69
32:YP:62:LEU:HD22	32:YP:62:LEU:H	1.53	0.69
44:Y1:64:ALA:HA	44:Y1:67:ILE:HG13	1.75	0.69
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
22:RA:2555:U:C2	56:Z6:74:C:C4	2.74	0.69
24:RD:89:SER:HB2	24:RD:159:ALA:HB2	1.75	0.69
25:RE:65:GLY:HA2	25:RE:70:ALA:CB	2.23	0.69
31:RO:63:VAL:HG13	31:RO:84:ALA:HA	1.72	0.69
32:RP:64:LYS:HB2	51:R8:25:MET:CG	2.22	0.69
36:RT:41:ARG:NH2	36:RT:43:GLN:HB2	2.06	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.73	0.69
28:YH:150:ALA:C	28:YH:152:ARG:N	2.44	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:56:ASN:HD22	30:YN:125:GLY:C	1.96	0.69
41:YY:45:VAL:HG12	41:YY:60:PHE:CD1	2.27	0.69
48:Y5:40:LYS:HG2	48:Y5:47:PRO:HD2	1.75	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	0.69
8:QH:6:ILE:HD12	8:QH:6:ILE:N	2.08	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
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.69
22:RA:77:C:O3'	45:R2:14:ARG:NH2	2.26	0.69
22:RA:385:C:HO2'	22:RA:388:G:N2	1.91	0.69
22:RA:654:A:O2'	22:RA:654(A):G:N7	2.25	0.69
22:RA:660:G:O3'	26:RF:38:ARG:NH2	2.26	0.69
22:RA:2555:U:C2	56:Z6:74:C:C6	2.78	0.69
24:RD:35:LYS:HB3	24:RD:63:ARG:HA	1.75	0.69
30:RN:7:LYS:HD3	30:RN:9:VAL:HA	1.75	0.69
30:RN:68:GLU:HG2	30:RN:88:GLU:OE1	1.92	0.69
38:RV:41:GLY:HA3	38:RV:46:VAL:HG11	1.74	0.69
38:RV:66:ARG:HH12	38:RV:88:ARG:NH1	1.90	0.69
48:R5:4:HIS:HB3	48:R5:5:PRO:HD3	1.75	0.69
48:R5:40:LYS:HE2	48:R5:47:PRO:CD	2.21	0.69
48:R5:40:LYS:HG2	48:R5:47:PRO:HD2	1.75	0.69
49:R6:28:ARG:HB3	49:R6:30:THR:H	1.56	0.69
1:XA:64:G:N2	1:XA:68:G:O6	2.21	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
14:XN:23:ARG:CZ	14:XN:30:ALA:HB2	2.22	0.69
22:YA:2701:C:H3'	22:YA:2702:U:C5'	2.21	0.69
22:YA:2864:G:OP1	36:YT:119:LYS:HD2	1.92	0.69
24:YD:17:THR:HG22	24:YD:205:VAL:N	2.08	0.69
24:YD:76:PRO:O	24:YD:98:VAL:HG23	1.92	0.69
27:YG:16:ARG:HH21	27:YG:31:VAL:CG1	2.05	0.69
27:YG:28:VAL:HG23	27:YG:29:TRP:CD1	2.28	0.69
28:YH:89:ILE:HG12	28:YH:89:ILE:O	1.93	0.69
28:YH:154:PRO:O	28:YH:155:SER:HB2	1.91	0.69
32:YP:29:LYS:HD2	32:YP:30:THR:HG22	1.72	0.69
32:YP:50:ARG:HB3	32:YP:50:ARG:NH2	1.98	0.69
34:YR:29:LEU:HD23	34:YR:79:LEU:HD12	1.75	0.69
35:YS:106:ARG:CA	35:YS:110:LEU:HD11	2.19	0.69
35:YS:106:ARG:N	35:YS:110:LEU:HD21	2.07	0.69
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HA	1.73	0.69
49:Y6:14:THR:HG21	49:Y6:19:ARG:HH21	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.07	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
19:QS:42:PRO:HD3	47:R4:63:TYR:CE2	2.28	0.69
27:RG:28:VAL:HG23	27:RG:29:TRP:CD1	2.28	0.69
33:RQ:80:GLU:HG3	33:RQ:81:VAL:H	1.58	0.69
35:RS:52:SER:O	35:RS:56:LEU:HD22	1.93	0.69
37:RU:90:VAL:O	37:RU:92:ARG:N	2.26	0.69
41:RY:29:GLU:HB3	41:RY:38:ILE:HG12	1.75	0.69
44:R1:81:LYS:HE2	44:R1:81:LYS:CA	2.13	0.69
1:XA:1516:G:N2	1:XA:1519:A:OP2	2.24	0.69
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.69
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
14:YN:44:LEU:CD1	14:YN:53:LEU:HD13	2.23	0.69
22:YA:922:U:H2'	22:YA:923:C:C6	2.27	0.69
24:YD:17:THR:CG2	24:YD:204:ILE:HA	2.23	0.69
24:YD:35:LYS:HB3	24:YD:63:ARG:HA	1.75	0.69
27:YG:56:ALA:HB2	27:YG:153:ARG:HE	1.57	0.69
32:YP:62:LEU:HD23	51:Y8:25:MET:HB2	1.74	0.69
37:YU:65:ILE:HD11	37:YU:93:LYS:HA	1.74	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.69
27:RG:171:ALA:O	27:RG:175:LEU:HG	1.93	0.69
38:RV:22:VAL:HG12	38:RV:23:GLU:N	2.06	0.69
44:R1:53:VAL:HG22	44:R1:74:VAL:HG13	1.74	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.69
22:YA:2848:G:O2'	22:YA:2867:G:N2	2.26	0.69
30:YN:7:LYS:HD3	30:YN:9:VAL:HA	1.75	0.69
37:YU:8:VAL:HG23	37:YU:11:ARG:NH2	1.99	0.69
40:YX:12:VAL:HG11	40:YX:27:THR:OG1	1.93	0.69
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68
22:RA:565:C:OP1	38:RV:82:ARG:NH2	2.26	0.68
22:RA:2419:U:H5'	49:R6:23:THR:HG22	1.75	0.68
29:RI:5:LEU:HD11	29:RI:19:VAL:HG12	1.75	0.68
32:RP:61:ARG:HD2	32:RP:61:ARG:H	1.58	0.68
37:RU:65:ILE:HD11	37:RU:93:LYS:HA	1.74	0.68
39:RW:6:ILE:HG12	39:RW:104:THR:HG23	1.73	0.68
45:R2:23:LYS:O	45:R2:27:GLU:OE1	2.12	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.68
13:XM:65:LYS:HE3	47:Y4:50:VAL:HG11	1.74	0.68
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.68
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.68
25:YE:65:GLY:HA2	25:YE:70:ALA:CB	2.23	0.68
1:QA:1071:C:H5''	5:QE:49:PRO:HG2	1.74	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.23	0.68
24:RD:17:THR:HG22	24:RD:205:VAL:N	2.08	0.68
26:RF:185:ASP:HA	26:RF:188:ARG:CD	2.20	0.68
27:RG:16:ARG:HH21	27:RG:31:VAL:CG1	2.06	0.68
49:R6:14:THR:HG21	49:R6:19:ARG:HH21	1.58	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.06	0.68
41:YY:48:ALA:O	41:YY:49:VAL:C	2.30	0.68
54:XX:2:U:C2'	54:XX:3:G:H5'	2.22	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
27:RG:112:PRO:CB	47:R4:37:SER:HB2	2.22	0.68
32:RP:26:GLY:O	32:RP:28:GLY:N	2.26	0.68
32:RP:62:LEU:HD23	51:R8:25:MET:HB2	1.74	0.68
43:R0:40:GLN:OE1	43:R0:45:PHE:N	2.27	0.68
44:R1:80:LEU:C	44:R1:81:LYS:HD2	2.13	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
35:YS:57:LYS:HD3	35:YS:57:LYS:H	1.58	0.68
41:YY:2:ARG:HH11	41:YY:2:ARG:HG2	1.57	0.68
41:YY:61:ILE:CG2	41:YY:62:GLU:N	2.56	0.68
43:Y0:6:GLY:O	53:XV:1:C:O2'	2.11	0.68
49:Y6:41:PRO:CG	49:Y6:45:LYS:H	2.05	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
22:RA:2037:G:H2'	22:RA:2038:G:C8	2.29	0.68
22:RA:2233:U:H2'	22:RA:2234:G:C8	2.28	0.68
22:RA:2844:G:H3'	22:RA:2845:G:H8	1.58	0.68
23:RB:45:A:O4'	27:RG:95:ARG:NH1	2.26	0.68
31:RO:8:LEU:HD22	31:RO:8:LEU:N	2.08	0.68
32:RP:15:ARG:O	32:RP:16:ARG:C	2.32	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:15:ILE:N	47:R4:15:ILE:HD13	2.09	0.68
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
36:YT:109:GLU:O	36:YT:113:LYS:HB2	1.94	0.68
41:YY:29:GLU:HB3	41:YY:38:ILE:HG12	1.74	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.74	0.68
22:RA:2680:C:H5'	25:RE:189:PRO:HA	1.76	0.68
24:RD:17:THR:CG2	24:RD:204:ILE:HA	2.23	0.68
30:RN:134:ARG:N	30:RN:135:PRO:HD3	1.97	0.68
44:R1:83:GLU:HG2	44:R1:84:GLY:N	2.09	0.68
49:R6:41:PRO:CG	49:R6:45:LYS:H	2.05	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	0.68
13:XM:65:LYS:HE3	47:Y4:50:VAL:CG1	2.23	0.68
22:YA:275:G:H21	22:YA:276:A:H62	1.41	0.68
22:YA:2392:A:C8	32:YP:60:MET:HG3	2.28	0.68
28:YH:4:ILE:HG13	28:YH:6:ARG:NE	2.08	0.68
35:YS:100:ALA:HA	35:YS:103:GLU:HG2	1.75	0.68
38:YV:18:LEU:O	38:YV:95:LEU:HA	1.94	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
22:RA:861:A:N3	23:RB:79:C:O2'	2.27	0.68
28:RH:126:PRO:HB2	28:RH:130:ARG:O	1.93	0.68
36:RT:50:ILE:HG22	36:RT:62:THR:OG1	1.94	0.68
41:RY:40:GLU:HA	41:RY:64:GLU:OE1	1.94	0.68
1:XA:36:C:O2'	1:XA:501:C:OP1	2.08	0.68
1:XA:328:C:H4'	1:XA:329:A:H5'	1.75	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	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
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
22:YA:458:G:N2	22:YA:470:A:OP2	2.27	0.68
25:YE:16:ARG:O	25:YE:16:ARG:HG3	1.92	0.68
28:YH:126:PRO:HB2	28:YH:130:ARG:O	1.93	0.68
30:YN:46:VAL:O	30:YN:47:ALA:HB3	1.92	0.68
33:YQ:80:GLU:HG3	33:YQ:81:VAL:H	1.58	0.68
44:Y1:4:VAL:HG23	44:Y1:10:LYS:O	1.93	0.68
48:Y5:20:ARG:HA	48:Y5:23:HIS:ND1	2.08	0.68
1:QA:190:G:O2'	1:QA:191(A):G:OP2	2.11	0.68
1:QA:192:U:H4'	20:QT:102:GLY:O	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
22:RA:102:G:OP2	45:R2:7:ARG:NH2	2.27	0.68
22:RA:1224:G:OP2	38:RV:66:ARG:NH2	2.27	0.68
22:RA:2810:A:O3'	25:RE:61:ARG:HG3	1.91	0.68
31:RO:25:LEU:HB2	31:RO:38:VAL:HG13	1.74	0.68
34:RR:29:LEU:HD23	34:RR:79:LEU:HD12	1.75	0.68
35:RS:100:ALA:HA	35:RS:103:GLU:HG2	1.75	0.68
36:RT:108:ARG:HA	36:RT:111:ARG:CZ	2.23	0.68
36:RT:109:GLU:O	36:RT:113:LYS:HB2	1.94	0.68
38:RV:18:LEU:O	38:RV:95:LEU:HA	1.94	0.68
44:R1:64:ALA:HA	44:R1:67:ILE:HG13	1.75	0.68
48:R5:20:ARG:HA	48:R5:23:HIS:ND1	2.08	0.68
1:XA:539:A:H2'	1:XA:540:G:C8	2.26	0.68
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.76	0.68
1:XA:1400:C:N3	53:XV:34:C:C2	2.62	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	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
17:XQ:59:ILE:HD13	17:XQ:59:ILE:N	2.08	0.68
27:YG:112:PRO:CB	47:Y4:37:SER:HB2	2.22	0.68
28:YH:126:PRO:CD	28:YH:127:GLU:H	2.07	0.68
36:YT:50:ILE:HG22	36:YT:62:THR:OG1	1.94	0.68
39:YW:29:LEU:HD21	39:YW:33:ARG:NE	2.09	0.68
41:YY:40:GLU:HA	41:YY:64:GLU:OE1	1.94	0.68
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.19	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	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
17:QQ:59:ILE:HD13	17:QQ:59:ILE:N	2.08	0.68
22:RA:2623:G:HO2'	22:RA:2825:C:HO2'	1.42	0.68
28:RH:126:PRO:HG2	28:RH:127:GLU:H	1.59	0.68
33:RQ:12:GLN:CG	33:RQ:73:PRO:HD2	2.21	0.68
33:RQ:104:PHE:HE1	33:RQ:125:LEU:HD11	1.58	0.68
35:RS:57:LYS:HD3	35:RS:57:LYS:H	1.58	0.68
40:RX:12:VAL:HG11	40:RX:27:THR:OG1	1.93	0.68
1:XA:272:C:H2'	1:XA:273:A:H8	1.56	0.68
1:XA:765:G:N2	1:XA:813:U:OP2	2.27	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
22:YA:993:G:OP1	37:YU:50:ARG:NH2	2.26	0.68
24:YD:35:LYS:HZ1	24:YD:104:TYR:HB2	1.57	0.68
25:YE:9:VAL:HB	25:YE:25:VAL:HG23	1.76	0.68
28:YH:4:ILE:HG13	28:YH:6:ARG:NH1	2.09	0.68
28:YH:126:PRO:HG2	28:YH:127:GLU:H	1.59	0.68
45:Y2:23:LYS:O	45:Y2:27:GLU:OE1	2.11	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
22:RA:298:G:O2'	22:RA:322:A:N1	2.26	0.68
22:RA:2112:G:O6	22:RA:2169:A:N6	2.27	0.68
26:RF:67:GLN:O	26:RF:67:GLN:CG	2.32	0.68
28:RH:88:LEU:H	28:RH:88:LEU:HD22	1.58	0.68
41:RY:49:VAL:O	41:RY:51:VAL:N	2.27	0.68
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.27	0.68
1:XA:370:C:H2'	1:XA:371:G:H5'	1.76	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
13:XM:57:ARG:HH21	47:Y4:34:GLU:CA	2.07	0.68
24:YD:241:PRO:O	24:YD:243:GLY:N	2.27	0.68
27:YG:171:ALA:O	27:YG:175:LEU:HG	1.93	0.68
32:YP:15:ARG:O	32:YP:16:ARG:C	2.32	0.68
32:YP:39:LYS:CA	32:YP:45:LEU:HD11	2.23	0.68
33:YQ:90:VAL:CG1	33:YQ:91:GLU:N	2.57	0.68
33:YQ:133:ARG:O	33:YQ:134:ARG:HB2	1.94	0.68
44:Y1:74:VAL:HG12	44:Y1:74:VAL:O	1.93	0.68
47:Y4:15:ILE:N	47:Y4:15:ILE:HD13	2.09	0.68
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.10	0.68
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.56	0.68
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.27	0.68
7:QG:8:GLU:CD	7:QG:8:GLU:H	1.96	0.68
22:RA:608:A:OP1	26:RF:100:THR:OG1	2.10	0.68
25:RE:116:VAL:O	25:RE:117:MET:HB3	1.94	0.68
33:RQ:90:VAL:CG1	33:RQ:91:GLU:N	2.57	0.68
44:R1:20:ARG:HH11	44:R1:20:ARG:HG2	1.58	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
22:YA:1820:U:C2	24:YD:202:LYS:HB3	2.28	0.68
44:Y1:20:ARG:HH11	44:Y1:20:ARG:HG2	1.58	0.68
45:Y2:64:LEU:HD22	45:Y2:68:ARG:HD2	1.77	0.68
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:96:ILE:HD13	10:QJ:96:ILE:N	2.09	0.67
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.67
22:RA:1184:G:OP1	46:R3:29:ARG:NH1	2.27	0.67
22:RA:1630:G:N2	22:RA:1636:C:O2	2.26	0.67
1:XA:737:A:H2'	1:XA:738:C:H6	1.59	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
22:YA:1980:G:O2'	22:YA:1982:C:OP2	2.12	0.67
28:YH:77:LYS:HG2	28:YH:77:LYS:O	1.94	0.67
33:YQ:66:ILE:HG13	33:YQ:67:ARG:H	1.58	0.67
35:YS:35:ILE:HD13	35:YS:101:LEU:HD23	1.76	0.67
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.76	0.67
1:QA:1498:U:O2'	54:QX:2:U:OP1	2.11	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.08	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.09	0.67
13:QM:118:ALA:O	53:QV:28:C:O3'	2.12	0.67
19:QS:42:PRO:HD3	47:R4:63:TYR:HE2	1.57	0.67
26:RF:184:TYR:O	26:RF:188:ARG:HG3	1.94	0.67
30:RN:56:ASN:HD22	30:RN:125:GLY:C	1.96	0.67
33:RQ:104:PHE:CE1	33:RQ:125:LEU:HD11	2.29	0.67
35:RS:35:ILE:HD13	35:RS:101:LEU:HD23	1.76	0.67
49:R6:48:VAL:HG13	49:R6:49:HIS:H	1.59	0.67
1:XA:486:U:H2'	1:XA:487:A:C8	2.29	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.67
30:YN:96:GLU:CG	30:YN:97:ARG:H	2.00	0.67
31:YO:14:THR:O	31:YO:51:ALA:HB3	1.95	0.67
33:YQ:33:GLY:HA2	33:YQ:105:GLU:HA	1.76	0.67
33:YQ:104:PHE:CE1	33:YQ:125:LEU:HD11	2.29	0.67
41:YY:21:LYS:HG3	41:YY:22:GLY:N	2.09	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
25:RE:13:ARG:HH11	25:RE:13:ARG:CB	2.07	0.67
33:RQ:133:ARG:O	33:RQ:134:ARG:HB2	1.94	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.24	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
22:YA:469:G:O6	50:Y7:37:LYS:HE2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2364:C:OP1	43:Y0:55:ARG:NH1	2.26	0.67
32:YP:65:ARG:HH11	32:YP:65:ARG:CG	2.06	0.67
36:YT:50:ILE:CD1	36:YT:102:ILE:HD11	2.25	0.67
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.29	0.67
22:RA:910:A:N3	22:RA:2264:C:O2'	2.27	0.67
28:RH:89:ILE:HG12	28:RH:89:ILE:O	1.93	0.67
31:RO:13:ASN:ND2	31:RO:96:THR:O	2.28	0.67
33:RQ:20:ALA:HB1	33:RQ:99:PRO:HD2	1.76	0.67
1:XA:971:G:H5''	1:XA:972:C:H5''	1.77	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
22:YA:900:A:H5'	22:YA:901:A:OP2	1.94	0.67
22:YA:2502:G:H5''	22:YA:2503:A:H5''	1.76	0.67
24:YD:44:ASN:N	24:YD:44:ASN:ND2	2.42	0.67
32:YP:26:GLY:O	32:YP:28:GLY:N	2.26	0.67
33:YQ:12:GLN:CG	33:YQ:73:PRO:HD2	2.21	0.67
33:YQ:90:VAL:O	33:YQ:92:GLY:N	2.25	0.67
35:YS:67:ARG:HB2	35:YS:67:ARG:CZ	2.24	0.67
41:YY:14:LEU:HD23	41:YY:15:VAL:N	2.10	0.67
47:Y4:33:VAL:HG12	47:Y4:34:GLU:N	2.10	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
22:RA:1187:G:H5''	38:RV:81:TYR:CE2	2.29	0.67
24:RD:135:PHE:CD2	24:RD:135:PHE:N	2.62	0.67
25:RE:10:GLY:H	25:RE:25:VAL:HG23	1.59	0.67
37:RU:92:ARG:O	37:RU:94:ASN:N	2.25	0.67
38:RV:25:LEU:H	38:RV:92:THR:HG21	1.60	0.67
39:RW:29:LEU:HD21	39:RW:33:ARG:NE	2.08	0.67
49:R6:43:CYS:SG	49:R6:44:ARG:HD3	2.35	0.67
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	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	1.75	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
22:YA:1057:A:H62	22:YA:1086:A:H2'	1.58	0.67
22:YA:1271:G:N2	22:YA:1617:C:O4'	2.26	0.67
25:YE:116:VAL:O	25:YE:117:MET:HB3	1.94	0.67
31:YO:25:LEU:HB2	31:YO:38:VAL:HG13	1.74	0.67
41:YY:49:VAL:O	41:YY:51:VAL:N	2.27	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:51:VAL:HG11	44:Y1:74:VAL:HG21	1.76	0.67
54:XX:4:C:C4	55:XY:37:1MG:HM13	2.30	0.67
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.12	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
28:RH:126:PRO:CD	28:RH:127:GLU:H	2.07	0.67
32:RP:90:ARG:NE	32:RP:91:PHE:HD1	1.93	0.67
47:R4:33:VAL:HG12	47:R4:34:GLU:N	2.10	0.67
1:XA:560:U:O2'	1:XA:561:U:OP2	2.13	0.67
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.24	0.67
22:YA:102:G:OP2	45:Y2:7:ARG:NH2	2.27	0.67
22:YA:1416:G:H2'	22:YA:1417:C:C6	2.29	0.67
25:YE:13:ARG:HH11	25:YE:13:ARG:CB	2.07	0.67
35:YS:52:SER:O	35:YS:56:LEU:HD22	1.93	0.67
38:YV:25:LEU:H	38:YV:92:THR:HG21	1.60	0.67
42:YZ:70:LEU:HB2	42:YZ:91:LEU:HD21	1.77	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
22:RA:2712:U:HO2'	22:RA:2712(A):A:H8	1.41	0.67
25:RE:14:ILE:HG12	25:RE:15:PHE:N	2.06	0.67
28:RH:4:ILE:HG13	28:RH:6:ARG:NH1	2.09	0.67
33:RQ:32:TYR:HD1	33:RQ:133:ARG:HA	1.60	0.67
33:RQ:81:VAL:C	33:RQ:82:ARG:HG2	2.14	0.67
34:RR:26:LYS:HE2	34:RR:70:LEU:O	1.95	0.67
49:R6:7:ILE:C	49:R6:9:LEU:H	1.98	0.67
1:XA:1054:C:C4	55:XY:34:C:C1'	2.78	0.67
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.77	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
13:XM:50:GLU:OE1	47:Y4:32:TYR:CE2	2.47	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.75	0.67
22:YA:780:G:H21	22:YA:783:A:H62	1.39	0.67
25:YE:26:ILE:HD13	25:YE:27:LEU:N	2.10	0.67
33:YQ:81:VAL:C	33:YQ:82:ARG:HG2	2.15	0.67
33:YQ:104:PHE:HE1	33:YQ:125:LEU:HD11	1.58	0.67
36:YT:108:ARG:HA	36:YT:111:ARG:CZ	2.24	0.67
37:YU:90:VAL:O	37:YU:92:ARG:N	2.26	0.67
48:Y5:4:HIS:HB3	48:Y5:5:PRO:HD3	1.75	0.67
49:Y6:48:VAL:HG13	49:Y6:49:HIS:H	1.60	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
22:RA:530:G:O2'	22:RA:532:A:N7	2.27	0.67
22:RA:896:A:C2	42:RZ:146:ILE:HD11	2.30	0.67
25:RE:16:ARG:O	25:RE:16:ARG:HG3	1.93	0.67
28:RH:125:VAL:CG1	28:RH:126:PRO:HG3	2.25	0.67
33:RQ:66:ILE:HG13	33:RQ:67:ARG:H	1.57	0.67
45:R2:47:ASN:H	45:R2:47:ASN:ND2	1.92	0.67
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.09	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
25:YE:62:PRO:O	25:YE:64:LYS:N	2.28	0.67
26:YF:34:TRP:HA	32:YP:6:LEU:HD12	1.77	0.67
26:YF:184:TYR:O	26:YF:188:ARG:HG3	1.94	0.67
31:YO:13:ASN:ND2	31:YO:96:THR:O	2.28	0.67
38:YV:44:LYS:O	38:YV:46:VAL:N	2.28	0.67
46:Y3:29:ARG:HB2	46:Y3:29:ARG:NH1	2.10	0.67
47:Y4:16:CYS:SG	47:Y4:33:VAL:HB	2.35	0.67
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
22:RA:2818:G:OP2	34:RR:42:LYS:NZ	2.27	0.67
29:RI:73:GLU:HG3	29:RI:136:VAL:HG23	1.77	0.67
41:RY:61:ILE:CG2	41:RY:62:GLU:N	2.56	0.67
1:XA:411:A:N6	1:XA:413:G:H21	1.93	0.67
1:XA:1128:C:H42	1:XA:1144:G:H1	1.43	0.67
24:YD:35:LYS:CA	24:YD:64:ILE:HG22	2.25	0.67
26:YF:46:ARG:HH11	26:YF:46:ARG:CG	2.04	0.67
28:YH:88:LEU:H	28:YH:88:LEU:HD22	1.59	0.67
44:Y1:86:SER:N	44:Y1:87:PRO:HD2	2.10	0.67
1:QA:923:A:OP1	5:QE:21:ALA:HB2	1.94	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	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
22:RA:479:A:N3	22:RA:481:G:H5''	2.10	0.67
22:RA:1252:G:N3	37:RU:33:ARG:HD2	2.10	0.67
22:RA:2030:A:H4'	22:RA:2031:A:C8	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2355:C:O3'	43:R0:24:LYS:NZ	2.24	0.67
22:RA:2821:A:OP2	22:RA:2822:G:OP2	2.13	0.67
24:RD:35:LYS:CG	24:RD:64:ILE:N	2.56	0.67
28:RH:124:GLU:HB3	28:RH:132:ARG:HD2	1.77	0.67
41:RY:21:LYS:HG3	41:RY:22:GLY:N	2.09	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
13:XM:8:GLU:CD	27:YG:115:ARG:NH1	2.48	0.67
19:XS:5:LEU:CD1	47:Y4:66:SER:HB3	2.24	0.67
22:YA:1068:G:O2'	22:YA:1096:A:N3	2.28	0.67
26:YF:103:LYS:HA	26:YF:106:ARG:CG	2.21	0.67
32:YP:61:ARG:H	32:YP:61:ARG:CD	2.08	0.67
33:YQ:88:GLY:C	33:YQ:90:VAL:N	2.47	0.67
41:YY:60:PHE:O	41:YY:61:ILE:HD12	1.95	0.67
49:Y6:43:CYS:SG	49:Y6:44:ARG:HD3	2.35	0.67
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.07	0.66
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.30	0.66
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.59	0.66
24:RD:241:PRO:O	24:RD:243:GLY:N	2.28	0.66
32:RP:122:PRO:HA	32:RP:141:ALA:O	1.95	0.66
33:RQ:90:VAL:O	33:RQ:92:GLY:N	2.25	0.66
35:RS:107:GLU:H	35:RS:110:LEU:HD11	1.60	0.66
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.66
32:YP:122:PRO:HA	32:YP:141:ALA:O	1.95	0.66
42:YZ:45:ASP:OD1	42:YZ:49:ARG:NE	2.24	0.66
1:QA:745:C:OP1	1:QA:851:G:O2'	2.12	0.66
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.66
22:RA:2734:A:N6	22:RA:2770:G:O2'	2.28	0.66
24:RD:80:ALA:HB3	24:RD:94:LEU:CD1	2.25	0.66
32:RP:66:GLY:O	32:RP:67:MET:HB3	1.94	0.66
35:RS:67:ARG:HB2	35:RS:67:ARG:CZ	2.25	0.66
40:RX:57:LEU:HD12	40:RX:78:LYS:HB2	1.77	0.66
41:RY:42:VAL:CG1	41:RY:65:ALA:HB3	2.25	0.66
46:R3:29:ARG:HB2	46:R3:29:ARG:NH1	2.10	0.66
27:YG:179:PRO:HG3	47:Y4:38:LYS:HZ2	1.59	0.66
39:YW:18:ARG:HG3	39:YW:76:VAL:HG13	1.77	0.66
41:YY:75:ILE:HG12	41:YY:76:CYS:N	2.10	0.66
41:YY:89:PHE:C	41:YY:90:LEU:HD13	2.15	0.66
44:Y1:83:GLU:HG2	44:Y1:84:GLY:N	2.09	0.66
48:Y5:56:LYS:H	48:Y5:56:LYS:CD	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.78	0.66
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.07	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
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.42	0.66
22:RA:878:A:N6	22:RA:899:A:O2'	2.28	0.66
24:RD:145:VAL:HG12	24:RD:146:GLU:O	1.95	0.66
25:RE:9:VAL:HB	25:RE:25:VAL:HG23	1.75	0.66
25:RE:36:ARG:HH11	25:RE:36:ARG:HB3	1.60	0.66
28:RH:77:LYS:HG2	28:RH:77:LYS:O	1.94	0.66
31:RO:86:ILE:H	31:RO:86:ILE:HD12	1.60	0.66
41:RY:89:PHE:C	41:RY:90:LEU:HD13	2.15	0.66
44:R1:80:LEU:HD23	44:R1:80:LEU:N	2.10	0.66
1:XA:1492:A:OP1	12:XL:47:LYS:CG	2.43	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	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
23:YB:5:C:O2'	23:YB:27:C:O2	2.13	0.66
30:YN:57:ALA:HA	30:YN:60:ILE:HD11	1.78	0.66
44:Y1:56:GLN:N	44:Y1:56:GLN:HE21	1.93	0.66
45:Y2:65:ASN:HB3	45:Y2:69:ARG:NH1	2.10	0.66
1:QA:35:G:O2'	12:QL:118:SER:O	2.09	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
22:RA:2287:A:N6	22:RA:2344:U:H3	1.92	0.66
32:RP:1:MET:CE	32:RP:5:ASP:HB3	2.24	0.66
36:RT:11:GLU:CD	36:RT:11:GLU:N	2.47	0.66
37:RU:88:ILE:HD13	37:RU:88:ILE:N	2.10	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
25:YE:28:ALA:O	25:YE:93:VAL:HG23	1.96	0.66
30:YN:58:ASP:H	30:YN:60:ILE:CD1	2.09	0.66
33:YQ:32:TYR:HD1	33:YQ:133:ARG:HA	1.61	0.66
37:YU:88:ILE:HD13	37:YU:88:ILE:N	2.10	0.66
38:YV:53:GLU:HG2	38:YV:53:GLU:O	1.94	0.66
1:QA:27:G:H4'	4:QD:209:ARG:HG3	1.77	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
24:RD:68:LYS:HB2	24:RD:70:TRP:CZ3	2.31	0.66
26:RF:34:TRP:HA	32:RP:6:LEU:HD12	1.77	0.66
31:RO:14:THR:O	31:RO:51:ALA:HB3	1.95	0.66
36:RT:50:ILE:CD1	36:RT:102:ILE:HD11	2.25	0.66
47:R4:37:SER:C	47:R4:39:CYS:H	1.98	0.66
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.30	0.66
4:XD:14:ARG:O	4:XD:14:ARG:HD3	1.95	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
24:YD:68:LYS:HB2	24:YD:70:TRP:CZ3	2.31	0.66
25:YE:37:ARG:NE	25:YE:37:ARG:HA	2.11	0.66
27:YG:136:ARG:O	27:YG:154:GLY:HA3	1.95	0.66
32:YP:81:GLN:NE2	32:YP:106:LEU:O	2.29	0.66
40:YX:11:PRO:HB3	40:YX:92:LEU:HD21	1.78	0.66
48:Y5:40:LYS:NZ	48:Y5:48:GLU:HB2	2.10	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.28	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.95	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
19:QS:69:HIS:ND1	47:R4:69:LYS:CE	2.56	0.66
25:RE:101:ARG:CZ	25:RE:171:GLU:HB2	2.25	0.66
26:RF:175:THR:O	26:RF:176:LEU:HB2	1.95	0.66
28:RH:168:PRO:O	28:RH:169:VAL:HG12	1.96	0.66
32:RP:81:GLN:NE2	32:RP:106:LEU:O	2.29	0.66
38:RV:44:LYS:O	38:RV:46:VAL:N	2.28	0.66
41:RY:94:LYS:HE3	41:RY:101:LYS:NZ	2.11	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
22:YA:1286:A:H1'	22:YA:1288:U:OP2	1.96	0.66
24:YD:172:TYR:HB3	24:YD:184:LYS:HG2	1.77	0.66
25:YE:174:ASP:CG	25:YE:175:VAL:H	1.98	0.66
32:YP:66:GLY:O	32:YP:67:MET:HB3	1.94	0.66
35:YS:106:ARG:HA	35:YS:110:LEU:CD2	2.25	0.66
35:YS:107:GLU:H	35:YS:110:LEU:HD11	1.60	0.66
51:Y8:30:ARG:O	51:Y8:31:HIS:HB2	1.96	0.66
54:QX:5:C:H2'	54:QX:6:C:C6	2.31	0.66
1:QA:762:C:H2'	1:QA:763:G:H8	1.61	0.66
1:QA:1077:G:O6	5:QE:47:LYS:NZ	2.29	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
22:RA:1542:G:O6	22:RA:1543:A:N6	2.27	0.66
22:RA:2287:A:H62	22:RA:2344:U:H3	1.43	0.66
25:RE:174:ASP:CG	25:RE:175:VAL:H	1.98	0.66
27:RG:136:ARG:O	27:RG:154:GLY:HA3	1.95	0.66
29:RI:5:LEU:HD12	29:RI:5:LEU:H	1.59	0.66
33:RQ:88:GLY:C	33:RQ:90:VAL:N	2.47	0.66
41:RY:75:ILE:HG12	41:RY:76:CYS:N	2.10	0.66
44:R1:51:VAL:HG11	44:R1:74:VAL:HG21	1.76	0.66
44:R1:86:SER:N	44:R1:87:PRO:HD2	2.10	0.66
1:XA:941:G:H1	1:XA:1342:C:H42	1.42	0.66
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.77	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.66
22:YA:2593:U:H2'	22:YA:2594:C:C6	2.31	0.66
24:YD:135:PHE:CD2	24:YD:135:PHE:N	2.62	0.66
32:YP:61:ARG:NH2	51:Y8:13:ARG:HD2	2.10	0.66
45:Y2:47:ASN:H	45:Y2:47:ASN:ND2	1.92	0.66
53:QV:35:A:N1	54:QX:3:G:C4	2.64	0.66
24:RD:35:LYS:HZ1	24:RD:65:ILE:HA	1.59	0.66
24:RD:35:LYS:CA	24:RD:64:ILE:HG22	2.26	0.66
24:RD:44:ASN:HB3	24:RD:49:ILE:HG22	1.78	0.66
25:RE:26:ILE:HD13	25:RE:27:LEU:N	2.10	0.66
25:RE:62:PRO:O	25:RE:64:LYS:N	2.28	0.66
30:RN:58:ASP:H	30:RN:60:ILE:CD1	2.08	0.66
33:RQ:33:GLY:HA2	33:RQ:105:GLU:HA	1.76	0.66
35:RS:88:ASP:OD2	35:RS:90:GLY:N	2.28	0.66
41:RY:14:LEU:HD23	41:RY:15:VAL:N	2.10	0.66
41:RY:47:LYS:HG2	41:RY:60:PHE:CE1	2.31	0.66
47:R4:16:CYS:SG	47:R4:33:VAL:HB	2.35	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	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
22:YA:1794:U:H2'	22:YA:1795:C:H6	1.61	0.66
37:YU:65:ILE:HG12	37:YU:96:ALA:CB	2.26	0.66
53:QV:37:A:C2	54:QX:1:A:C6	2.83	0.66
22:RA:2068:U:H3	22:RA:2430:A:H2	1.41	0.66
35:RS:106:ARG:HA	35:RS:110:LEU:CD2	2.26	0.66
1:XA:372:C:N4	1:XA:389:A:N6	2.44	0.66
1:XA:1086:U:H3	1:XA:1099:G:H22	1.43	0.66
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
22:YA:1077:A:H5'	22:YA:1078:U:H5''	1.78	0.66
27:YG:145:THR:HG23	47:Y4:28:LYS:NZ	2.11	0.66
28:YH:125:VAL:CG1	28:YH:126:PRO:HG3	2.25	0.66
41:YY:94:LYS:HE3	41:YY:101:LYS:NZ	2.11	0.66
44:Y1:11:ARG:HB3	44:Y1:11:ARG:HH11	1.61	0.66
44:Y1:80:LEU:HD23	44:Y1:80:LEU:N	2.10	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
24:RD:121:PRO:HB3	24:RD:135:PHE:CE1	2.30	0.66
24:RD:237:GLU:N	24:RD:237:GLU:OE1	2.29	0.66
36:RT:22:PHE:CD2	36:RT:22:PHE:N	2.63	0.66
51:R8:30:ARG:O	51:R8:31:HIS:HB2	1.96	0.66
24:YD:183:ARG:HH11	24:YD:183:ARG:CG	2.07	0.66
25:YE:13:ARG:NH1	25:YE:21:VAL:HG12	2.11	0.66
30:YN:134:ARG:N	30:YN:135:PRO:HD3	1.97	0.66
33:YQ:20:ALA:HB1	33:YQ:99:PRO:HD2	1.77	0.66
41:YY:47:LYS:HG2	41:YY:60:PHE:CE1	2.31	0.66
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.65
19:QS:42:PRO:CG	47:R4:63:TYR:CE2	2.79	0.65
22:RA:1142(A):A:H4'	30:RN:25:ARG:HH22	1.61	0.65
22:RA:2224:G:OP1	24:RD:268:ARG:HD3	1.96	0.65
32:RP:61:ARG:NH2	51:R8:13:ARG:HD2	2.10	0.65
40:RX:65:ARG:HD3	40:RX:65:ARG:N	2.12	0.65
41:RY:99:CYS:SG	41:RY:100:ALA:N	2.69	0.65
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.77	0.65
1:XA:1049:U:HO2'	14:YN:2:ALA:N	1.95	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.65
22:YA:2729:G:H1'	25:YE:187:ALA:HB2	1.78	0.65
23:YB:12:C:O2'	43:Y0:74:ARG:HG3	1.95	0.65
24:YD:121:PRO:HB3	24:YD:135:PHE:CE1	2.30	0.65
31:YO:71:ARG:NH1	36:YT:74:ARG:HH21	1.94	0.65
31:YO:86:ILE:H	31:YO:86:ILE:HD12	1.61	0.65
35:YS:88:ASP:OD2	35:YS:90:GLY:N	2.28	0.65
42:YZ:103:ARG:HB2	42:YZ:138:GLU:HG2	1.77	0.65
1:QA:991:U:O4	1:QA:1212:U:O2'	2.08	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.65
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
22:RA:2627:G:O2'	22:RA:2781:A:N1	2.26	0.65
41:RY:60:PHE:O	41:RY:61:ILE:HD12	1.95	0.65
45:R2:64:LEU:HD22	45:R2:68:ARG:HD2	1.76	0.65
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.13	0.65
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.60	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
25:YE:36:ARG:HH11	25:YE:36:ARG:HB3	1.60	0.65
25:YE:101:ARG:CZ	25:YE:171:GLU:HB2	2.25	0.65
28:YH:124:GLU:HB3	28:YH:132:ARG:HD2	1.77	0.65
31:YO:113:LYS:O	31:YO:117:LEU:HD12	1.96	0.65
34:YR:26:LYS:HE2	34:YR:70:LEU:O	1.95	0.65
39:YW:65:LEU:HD12	39:YW:68:ARG:NH1	2.10	0.65
40:YX:65:ARG:HD3	40:YX:65:ARG:N	2.12	0.65
41:YY:35:TYR:CE1	41:YY:69:ALA:HB3	2.31	0.65
42:YZ:102:LEU:HG	42:YZ:123:ASP:HA	1.78	0.65
49:Y6:7:ILE:C	49:Y6:9:LEU:H	1.98	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.97	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
22:RA:996:A:H4'	37:RU:92:ARG:HE	1.61	0.65
24:RD:183:ARG:HH11	24:RD:183:ARG:CG	2.07	0.65
31:RO:113:LYS:O	31:RO:117:LEU:HD12	1.96	0.65
32:RP:138:LEU:HD11	32:RP:144:GLU:HG3	1.78	0.65
38:RV:76:LYS:HB2	38:RV:81:TYR:HB3	1.79	0.65
39:RW:25:ARG:NH1	39:RW:25:ARG:HB2	2.11	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
22:YA:2308:G:H22	22:YA:2311:A:H2	1.43	0.65
24:YD:80:ALA:HB3	24:YD:94:LEU:CD1	2.25	0.65
24:YD:145:VAL:HG12	24:YD:146:GLU:O	1.96	0.65
41:YY:42:VAL:CG1	41:YY:65:ALA:HB3	2.26	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
22:RA:2250:G:C6	33:RQ:82:ARG:HD2	2.32	0.65
22:RA:2489:G:N2	22:RA:2491:U:O4	2.28	0.65
33:RQ:59:ARG:C	33:RQ:60:ARG:HG3	2.16	0.65
38:RV:53:GLU:HG2	38:RV:53:GLU:O	1.94	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
13:XM:121:LYS:NZ	55:XY:39:C:HO2'	1.95	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
22:YA:1434:A:H61	22:YA:1558:A:N6	1.94	0.65
24:YD:27:THR:CG2	24:YD:28:GLU:H	2.08	0.65
28:YH:168:PRO:O	28:YH:169:VAL:HG12	1.96	0.65
32:YP:39:LYS:HA	32:YP:45:LEU:HD13	1.79	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
22:RA:1292:U:H2'	22:RA:1293:C:C6	2.31	0.65
22:RA:1660:C:H2'	22:RA:1661:G:H8	1.62	0.65
24:RD:27:THR:CG2	24:RD:28:GLU:H	2.09	0.65
24:RD:176:ARG:HH11	24:RD:176:ARG:HG2	1.60	0.65
28:RH:128:PRO:CD	28:RH:129:THR:H	2.09	0.65
39:RW:18:ARG:HG3	39:RW:76:VAL:HG13	1.77	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
13:XM:3:ARG:NH1	27:YG:113:ARG:NH2	2.41	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.65	0.65
22:YA:583:G:OP2	37:YU:10:ARG:NH1	2.30	0.65
22:YA:2030:A:H4'	22:YA:2031:A:H8	1.61	0.65
23:YB:18:G:H1	23:YB:65:C:H42	1.44	0.65
32:YP:90:ARG:NE	32:YP:91:PHE:HD1	1.93	0.65
45:Y2:42:GLY:O	45:Y2:44:LEU:N	2.30	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
22:RA:186:G:H2'	22:RA:187:G:H8	1.62	0.65
22:RA:635:C:O2'	22:RA:639:U:OP1	2.14	0.65
22:RA:987:G:O2'	22:RA:1000:A:N3	2.29	0.65
22:RA:2208:U:H1'	24:RD:151:LYS:HE2	1.79	0.65
25:RE:28:ALA:O	25:RE:93:VAL:HG23	1.95	0.65
31:RO:71:ARG:NH1	36:RT:74:ARG:HH21	1.94	0.65
32:RP:39:LYS:HA	32:RP:45:LEU:HD13	1.79	0.65
44:R1:11:ARG:HB3	44:R1:11:ARG:HH11	1.61	0.65
47:R4:49:PHE:O	47:R4:50:VAL:HG23	1.97	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.27	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
22:YA:84:A:N1	22:YA:98:G:O2'	2.25	0.65
22:YA:1251:C:OP1	37:YU:10:ARG:HG3	1.96	0.65
25:YE:201:THR:HG22	25:YE:203:LYS:N	2.07	0.65
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.65
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
22:RA:498:G:N3	41:RY:47:LYS:NZ	2.42	0.65
26:RF:155:LEU:HD13	26:RF:174:VAL:CG1	2.27	0.65
28:RH:150:ALA:C	28:RH:152:ARG:N	2.44	0.65
31:RO:12:ASP:OD1	31:RO:14:THR:HG23	1.97	0.65
37:RU:90:VAL:CG1	37:RU:91:ASP:H	2.00	0.65
38:RV:43:GLU:OE2	38:RV:43:GLU:HA	1.95	0.65
44:R1:29:GLY:O	44:R1:30:VAL:HG23	1.97	0.65
48:R5:40:LYS:NZ	48:R5:48:GLU:HB2	2.11	0.65
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.59	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.62	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.96	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
19:XS:67:VAL:CG2	47:Y4:60:GLN:HE22	2.10	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
22:YA:1316:U:H2'	22:YA:1317:A:H8	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2250:G:C6	33:YQ:82:ARG:HD2	2.31	0.65
25:YE:10:GLY:H	25:YE:25:VAL:HG23	1.60	0.65
36:YT:11:GLU:N	36:YT:11:GLU:OE1	2.27	0.65
41:YY:99:CYS:SG	41:YY:100:ALA:N	2.69	0.65
51:Y8:52:LYS:O	51:Y8:52:LYS:HG3	1.97	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.27	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
22:RA:189:G:H2'	22:RA:205:G:N2	2.11	0.65
22:RA:1754:C:OP1	36:RT:96:ARG:NH1	2.26	0.65
23:RB:38:C:H42	23:RB:44:G:H1	1.44	0.65
24:RD:122:ASP:CG	24:RD:123:ALA:H	2.00	0.65
24:RD:172:TYR:HB3	24:RD:184:LYS:HG2	1.77	0.65
25:RE:13:ARG:NH1	25:RE:21:VAL:HG12	2.11	0.65
25:RE:37:ARG:HA	25:RE:37:ARG:NE	2.11	0.65
31:RO:7:TYR:CE1	31:RO:20:MET:HB2	2.32	0.65
47:R4:36:CYS:O	47:R4:37:SER:O	2.14	0.65
1:XA:703:G:O2'	1:XA:704:A:OP2	2.15	0.65
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.79	0.65
22:YA:704:G:H2'	22:YA:726:G:N2	2.10	0.65
22:YA:1535:U:H5''	22:YA:1537:C:C4	2.31	0.65
28:YH:128:PRO:CD	28:YH:129:THR:H	2.09	0.65
29:YI:79:ILE:HB	29:YI:142:VAL:HA	1.77	0.65
30:YN:43:THR:HB	30:YN:46:VAL:CG1	2.27	0.65
32:YP:113:LYS:HG2	32:YP:115:LEU:HD23	1.79	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:45:ARG:CG	26:RF:45:ARG:HH11	2.09	0.65
27:RG:145:THR:HG23	47:R4:28:LYS:NZ	2.11	0.65
32:RP:6:LEU:O	32:RP:7:ARG:HG2	1.97	0.65
44:R1:56:GLN:N	44:R1:56:GLN:HE21	1.93	0.65
44:R1:82:LEU:CD1	44:R1:83:GLU:C	2.64	0.65
45:R2:69:ARG:HB2	45:R2:69:ARG:NH1	2.11	0.65
48:R5:56:LYS:H	48:R5:56:LYS:CD	2.07	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.65
14:XN:40:CYS:SG	14:XN:43:CYS:CB	2.83	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
22:YA:984:A:H5''	22:YA:985:C:H5	1.60	0.65
22:YA:1341:U:OP2	22:YA:1394:U:O2'	2.12	0.65
22:YA:1903:G:OP2	24:YD:241:PRO:HB2	1.96	0.65
24:YD:44:ASN:HB3	24:YD:49:ILE:HG22	1.78	0.65
32:YP:6:LEU:O	32:YP:7:ARG:HG2	1.97	0.65
32:YP:138:LEU:HD11	32:YP:144:GLU:HG3	1.78	0.65
45:Y2:69:ARG:NH1	45:Y2:69:ARG:HB2	2.11	0.65
51:Y8:56:GLU:N	51:Y8:56:GLU:OE1	2.30	0.65
54:XX:4:C:C4	55:XY:37:1MG:CM1	2.80	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.61	0.65
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.60	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.65
28:RH:51:ARG:HH11	28:RH:51:ARG:HG3	1.61	0.65
29:RI:133:HIS:HB2	29:RI:134:PRO:HD2	1.79	0.65
37:RU:74:LEU:HD23	37:RU:114:LYS:HD3	1.78	0.65
41:RY:35:TYR:CE1	41:RY:69:ALA:HB3	2.31	0.65
42:RZ:166:SER:HB2	42:RZ:168:GLU:N	2.12	0.65
49:R6:7:ILE:HG13	49:R6:8:LYS:N	2.06	0.65
1:XA:1308:U:H2'	1:XA:1309:G:H8	1.61	0.65
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
2:XB:178:ARG:HD2	8:XH:71:GLY:HA2	1.79	0.65
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.65
13:XM:93:ARG:NH1	22:YA:887:A:OP1	2.30	0.65
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.65
22:YA:812:C:HO2'	22:YA:1227:A:HO2'	1.45	0.65
22:YA:1265:A:C8	22:YA:1267:U:C2	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:97:PRO:HD3	32:YP:126:VAL:O	1.97	0.65
33:YQ:23:GLY:HA3	33:YQ:101:ARG:NH1	2.12	0.65
34:YR:28:LEU:HD21	34:YR:114:VAL:HG12	1.79	0.65
37:YU:74:LEU:HD23	37:YU:114:LYS:HD3	1.78	0.65
39:YW:25:ARG:HB2	39:YW:25:ARG:NH1	2.11	0.65
39:YW:59:VAL:HG12	39:YW:60:ASN:N	2.11	0.65
1:QA:973:G:O6	1:QA:974:A:N6	2.30	0.64
9:QI:128:ARG:CD	53:QV:32:C:OP2	2.45	0.64
32:RP:97:PRO:HD3	32:RP:126:VAL:O	1.97	0.64
44:R1:80:LEU:HD12	44:R1:81:LYS:HE3	1.78	0.64
48:R5:40:LYS:HD3	48:R5:46:CYS:CB	2.26	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.31	0.64
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	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
22:YA:583:G:H5''	37:YU:10:ARG:HH12	1.62	0.64
22:YA:1113:U:OP1	28:YH:2:SER:N	2.31	0.64
22:YA:1530:G:O6	22:YA:1542:G:N2	2.30	0.64
22:YA:2882:A:OP1	34:YR:96:ARG:NH1	2.29	0.64
24:YD:77:ALA:HB2	24:YD:97:TYR:HA	1.77	0.64
24:YD:176:ARG:HH11	24:YD:176:ARG:HG2	1.61	0.64
36:YT:22:PHE:N	36:YT:22:PHE:CD2	2.63	0.64
48:Y5:40:LYS:HD3	48:Y5:46:CYS:CB	2.26	0.64
53:QV:6:G:H1	53:QV:67:C:H42	1.45	0.64
54:QX:5:C:H2'	54:QX:6:C:H6	1.62	0.64
4:QD:79:PHE:C	4:QD:79:PHE:HD2	1.99	0.64
22:RA:774:A:H2	22:RA:787:U:HO2'	1.44	0.64
22:RA:827:U:H2'	22:RA:2068:U:O2	1.96	0.64
25:RE:50:GLY:HA3	25:RE:74:PRO:HG3	1.79	0.64
28:RH:105:LEU:H	28:RH:105:LEU:CD1	2.09	0.64
28:RH:148:ILE:O	28:RH:151:ILE:HG12	1.98	0.64
33:RQ:81:VAL:O	33:RQ:82:ARG:HG2	1.97	0.64
37:RU:65:ILE:HG12	37:RU:96:ALA:CB	2.26	0.64
47:R4:71:ARG:HH11	47:R4:71:ARG:CG	1.98	0.64
1:XA:601:C:H2'	1:XA:602:A:C8	2.31	0.64
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.30	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
29:YI:8:PRO:HG3	29:YI:14:ASP:HB2	1.78	0.64
45:Y2:40:SER:C	45:Y2:42:GLY:H	2.01	0.64
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
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
22:RA:637:A:H2'	32:RP:117:GLU:OE2	1.97	0.64
25:RE:35:GLN:CG	25:RE:37:ARG:HE	2.11	0.64
25:RE:104:VAL:HG11	25:RE:188:VAL:CG2	2.27	0.64
27:RG:83:ARG:HG3	27:RG:86:MET:HE1	1.78	0.64
36:RT:11:GLU:N	36:RT:11:GLU:OE1	2.27	0.64
37:RU:102:GLU:HG3	38:RV:2:PHE:HE2	1.61	0.64
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.33	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
28:YH:117:PRO:HB3	28:YH:123:PHE:CE1	2.33	0.64
32:YP:98:GLU:O	32:YP:101:VAL:HG12	1.98	0.64
37:YU:102:GLU:HG3	38:YV:2:PHE:HE2	1.62	0.64
38:YV:43:GLU:HA	38:YV:43:GLU:OE2	1.95	0.64
38:YV:76:LYS:HB2	38:YV:81:TYR:HB3	1.79	0.64
47:Y4:36:CYS:O	47:Y4:37:SER:O	2.14	0.64
1:QA:243:A:H4'	1:QA:244:U:H3'	1.78	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64
27:RG:81:LYS:O	27:RG:82:LEU:HB2	1.96	0.64
27:RG:82:LEU:HA	27:RG:86:MET:SD	2.37	0.64
30:RN:15:LEU:HD12	30:RN:136:GLU:HB2	1.79	0.64
30:RN:57:ALA:HA	30:RN:60:ILE:HD11	1.78	0.64
33:RQ:10:ARG:O	33:RQ:11:LYS:HB2	1.98	0.64
51:R8:52:LYS:O	51:R8:52:LYS:HG3	1.97	0.64
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.33	0.64
1:XA:1054:C:C4	55:XY:34:C:H1'	2.32	0.64
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.12	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.64
22:YA:2022:U:O2'	22:YA:2617:C:H5'	1.97	0.64
27:YG:114:ILE:CG2	27:YG:117:PHE:HB2	2.27	0.64
28:YH:105:LEU:H	28:YH:105:LEU:CD1	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:81:VAL:O	33:YQ:82:ARG:HG2	1.97	0.64
35:YS:78:LEU:HD11	35:YS:107:GLU:O	1.98	0.64
44:Y1:29:GLY:O	44:Y1:30:VAL:HG23	1.97	0.64
44:Y1:82:LEU:CD1	44:Y1:83:GLU:C	2.64	0.64
47:Y4:37:SER:C	47:Y4:39:CYS:H	1.99	0.64
53:QV:37:A:N1	54:QX:1:A:N1	2.44	0.64
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.78	0.64
1:QA:662:G:O2'	1:QA:836:G:OP1	2.16	0.64
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.62	0.64
1:QA:1397:C:H1'	54:QX:8:A:C6	2.32	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
24:RD:77:ALA:HB2	24:RD:97:TYR:HA	1.77	0.64
34:RR:2:ARG:HG2	34:RR:5:LYS:NZ	2.13	0.64
39:RW:59:VAL:HG12	39:RW:60:ASN:N	2.11	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	1.77	0.64
13:XM:121:LYS:NZ	55:XY:40:G:P	2.71	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
22:YA:910:A:N3	22:YA:2264:C:O2'	2.29	0.64
22:YA:942:G:O2'	22:YA:1189:A:N3	2.26	0.64
25:YE:104:VAL:HG11	25:YE:188:VAL:CG2	2.27	0.64
26:YF:155:LEU:HD13	26:YF:174:VAL:CG1	2.27	0.64
26:YF:175:THR:O	26:YF:176:LEU:HB2	1.95	0.64
27:YG:82:LEU:HA	27:YG:86:MET:SD	2.38	0.64
36:YT:11:GLU:CD	36:YT:11:GLU:N	2.47	0.64
41:YY:56:PRO:HG2	41:YY:57:GLN:OE1	1.98	0.64
47:Y4:35:VAL:O	47:Y4:37:SER:N	2.26	0.64
1:QA:690:G:H2'	1:QA:691:G:O4'	1.98	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
22:RA:270(S):G:H1'	44:R1:78:LYS:HD2	1.79	0.64
39:RW:86:LEU:HD12	39:RW:87:PRO:CD	2.23	0.64
41:RY:56:PRO:HG2	41:RY:57:GLN:OE1	1.98	0.64
51:R8:56:GLU:N	51:R8:56:GLU:OE1	2.30	0.64
51:R8:59:LYS:HZ3	51:R8:59:LYS:HB3	1.62	0.64
1:XA:544:G:H2'	1:XA:545:C:C6	2.32	0.64
1:XA:1305:G:OP1	21:XU:2:GLY:HA2	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.27	0.64
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.64
22:YA:1022:G:H22	22:YA:1142(A):A:H2	1.44	0.64
26:YF:11:VAL:HG12	26:YF:12:LEU:N	2.13	0.64
27:YG:81:LYS:O	27:YG:82:LEU:HB2	1.96	0.64
28:YH:51:ARG:HG3	28:YH:51:ARG:HH11	1.61	0.64
30:YN:15:LEU:HD12	30:YN:136:GLU:HB2	1.79	0.64
31:YO:12:ASP:OD1	31:YO:14:THR:HG23	1.97	0.64
33:YQ:81:VAL:O	33:YQ:82:ARG:HD3	1.98	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
6:QF:92:LYS:HB2	6:QF:92:LYS:HZ2	1.62	0.64
11:QK:103:LEU:H	11:QK:103:LEU:HD22	1.62	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
22:RA:49:A:H4'	22:RA:50:U:H5''	1.79	0.64
22:RA:769:G:H2'	22:RA:770:G:H8	1.62	0.64
24:RD:182:LEU:H	24:RD:272:ALA:HB3	1.63	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
22:YA:259:G:H21	22:YA:621:A:H8	1.43	0.64
24:YD:122:ASP:CG	24:YD:123:ALA:H	2.00	0.64
25:YE:69:LYS:O	25:YE:71:GLY:N	2.27	0.64
26:YF:45:ARG:CG	26:YF:45:ARG:HH11	2.09	0.64
28:YH:92:ILE:HD12	28:YH:92:ILE:H	1.63	0.64
41:YY:86:ARG:O	41:YY:92:ASN:HB2	1.97	0.64
1:QA:377:G:H1	1:QA:386:C:H42	1.46	0.64
1:QA:529:G:O6	12:QL:49:ASN:HA	1.98	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
33:RQ:23:GLY:HA3	33:RQ:101:ARG:NH1	2.12	0.64
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.13	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
22:YA:1681:G:H8	22:YA:1681:G:OP2	1.80	0.64
22:YA:2392:A:H8	32:YP:60:MET:HG3	1.61	0.64
22:YA:2583:G:O2'	56:Z8:76:PPU:H103	1.97	0.64
28:YH:148:ILE:O	28:YH:151:ILE:HG12	1.97	0.64
31:YO:7:TYR:CE1	31:YO:20:MET:HB2	2.32	0.64
35:YS:26:LEU:HD22	35:YS:87:PHE:HD1	1.63	0.64
44:Y1:80:LEU:HD12	44:Y1:81:LYS:HE3	1.78	0.64
1:QA:701:C:H1'	1:QA:703:G:C6	2.33	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.10	0.64
22:RA:336:C:HO2'	41:RY:35:TYR:HH	1.43	0.64
22:RA:1678:G:H22	22:RA:1989:G:H22	1.43	0.64
22:RA:2394:C:OP1	32:RP:63:PRO:HD2	1.98	0.64
22:RA:2576:G:O2'	22:RA:2579:C:OP2	2.10	0.64
32:RP:98:GLU:O	32:RP:101:VAL:HG12	1.98	0.64
32:RP:105:LEU:O	32:RP:106:LEU:CB	2.42	0.64
40:RX:11:PRO:HB3	40:RX:92:LEU:HD21	1.78	0.64
44:R1:91:LYS:HG3	44:R1:92:LYS:H	1.63	0.64
1:XA:720:C:H5''	18:XR:52:PRO:HA	1.79	0.64
2:XB:8:LYS:H	2:XB:8:LYS:CD	2.09	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.97	0.64
24:YD:135:PHE:N	24:YD:135:PHE:HD2	1.96	0.64
34:YR:2:ARG:HG2	34:YR:5:LYS:NZ	2.13	0.64
38:YV:36:PRO:HA	38:YV:56:SER:OG	1.98	0.64
53:QV:35:A:N3	54:QX:3:G:N2	2.46	0.64
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.64
25:RE:201:THR:HG21	25:RE:203:LYS:HB3	1.80	0.64
27:RG:114:ILE:CG2	27:RG:117:PHE:HB2	2.28	0.64
28:RH:92:ILE:H	28:RH:92:ILE:HD12	1.63	0.64
32:RP:113:LYS:HG2	32:RP:115:LEU:HD23	1.79	0.64
33:RQ:30:GLY:HA3	33:RQ:106:VAL:O	1.98	0.64
1:XA:296:U:H2'	1:XA:297:G:C8	2.33	0.64
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.64
4:XD:165:MET:HA	4:XD:165:MET:HE3	1.80	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
13:XM:62:ASN:HD21	47:Y4:47:GLN:HE22	1.46	0.64
14:YN:18:VAL:HG23	14:YN:19:ARG:H	1.63	0.64
22:YA:918:A:N3	23:YB:80:U:O2'	2.30	0.64
22:YA:2758:A:C4	28:YH:67:LEU:HD21	2.33	0.64
24:YD:18:VAL:HG12	24:YD:19:ALA:O	1.98	0.64
26:YF:46:ARG:HG2	26:YF:46:ARG:NH1	2.00	0.64
28:YH:3:ARG:HA	28:YH:3:ARG:NE	2.12	0.64
30:YN:39:ARG:HB3	30:YN:41:ASP:OD1	1.98	0.64
44:Y1:82:LEU:CD1	44:Y1:83:GLU:CA	2.76	0.64
47:Y4:49:PHE:O	47:Y4:50:VAL:HG23	1.97	0.64
51:Y8:48:PHE:N	51:Y8:48:PHE:CD1	2.66	0.64
53:QV:35:A:C4	54:QX:3:G:C2	2.86	0.64
1:QA:573:A:N3	1:QA:883:C:O2'	2.30	0.63
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.63	0.63
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	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
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.63
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.63
22:RA:1296:G:OP1	22:RA:2709:G:O2'	2.15	0.63
30:RN:131:GLN:CD	30:RN:132:ALA:H	2.01	0.63
31:RO:86:ILE:HD12	31:RO:86:ILE:N	2.13	0.63
33:RQ:104:PHE:O	33:RQ:105:GLU:HB3	1.98	0.63
34:RR:28:LEU:HD21	34:RR:114:VAL:HG12	1.79	0.63
39:RW:74:ALA:O	39:RW:75:TYR:HB3	1.98	0.63
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.18	0.63
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.63
22:YA:852:G:H1	22:YA:925:C:H42	1.45	0.63
22:YA:1336:A:H2'	22:YA:1337:G:H8	1.63	0.63
25:YE:14:ILE:CG1	25:YE:15:PHE:H	2.08	0.63
31:YO:104:ARG:HG2	31:YO:104:ARG:NH1	2.14	0.63
33:YQ:104:PHE:O	33:YQ:105:GLU:HB3	1.98	0.63
37:YU:92:ARG:O	37:YU:94:ASN:N	2.25	0.63
40:YX:57:LEU:HD12	40:YX:78:LYS:HB2	1.77	0.63
1:QA:855:G:OP2	1:QA:871:U:N3	2.28	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:43:THR:HB	30:RN:46:VAL:CG1	2.27	0.63
38:RV:52:VAL:CG2	38:RV:55:ALA:HB3	2.28	0.63
40:RX:63:LYS:O	40:RX:64:LYS:HD2	1.98	0.63
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.33	0.63
1:XA:1118:C:H42	1:XA:1155:G:H1	1.46	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
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
22:YA:566:U:OP1	32:YP:29:LYS:HE2	1.98	0.63
30:YN:131:GLN:CD	30:YN:132:ALA:H	2.01	0.63
34:YR:117:VAL:O	34:YR:118:GLU:HB3	1.99	0.63
44:Y1:91:LYS:HG3	44:Y1:92:LYS:H	1.62	0.63
1:QA:688:G:H2'	1:QA:689:C:H6	1.62	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.80	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
22:RA:2723:C:H5''	34:RR:1:MET:HG2	1.79	0.63
24:RD:147:LEU:CD1	24:RD:155:LEU:HD11	2.26	0.63
26:RF:132:VAL:HG23	26:RF:133:ASN:N	2.14	0.63
28:RH:3:ARG:HA	28:RH:3:ARG:NE	2.12	0.63
28:RH:117:PRO:HB3	28:RH:123:PHE:CE1	2.33	0.63
36:RT:49:VAL:HG13	36:RT:49:VAL:O	1.98	0.63
45:R2:40:SER:C	45:R2:42:GLY:H	2.00	0.63
1:XA:1179:A:O3'	9:XI:103:THR:HG23	1.99	0.63
1:XA:1312:G:P	47:Y4:58:ARG:HH12	2.22	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.64	0.63
22:YA:184:C:H2'	22:YA:185:U:C6	2.32	0.63
22:YA:483:A:H4'	41:YY:49:VAL:CA	2.21	0.63
25:YE:50:GLY:HA3	25:YE:74:PRO:HG3	1.79	0.63
25:YE:201:THR:HG21	25:YE:203:LYS:HB3	1.80	0.63
36:YT:111:ARG:C	36:YT:113:LYS:H	2.01	0.63
39:YW:110:LYS:HG3	39:YW:111:HIS:ND1	2.13	0.63
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.32	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	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
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.81	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
22:RA:224:G:O6	22:RA:419:C:O2'	2.16	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1259:G:H2'	22:RA:1260:G:C8	2.33	0.63
24:RD:18:VAL:HG12	24:RD:19:ALA:O	1.98	0.63
24:RD:135:PHE:N	24:RD:135:PHE:HD2	1.96	0.63
26:RF:11:VAL:HG12	26:RF:12:LEU:N	2.13	0.63
30:RN:39:ARG:HB3	30:RN:41:ASP:OD1	1.98	0.63
30:RN:61:ARG:HA	30:RN:61:ARG:HE	1.63	0.63
32:RP:112:LEU:HD11	32:RP:114:ILE:HG23	1.80	0.63
49:R6:27:LYS:HB2	49:R6:27:LYS:HZ3	1.62	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.46	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.63	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
32:YP:106:LEU:O	32:YP:107:LYS:CB	2.46	0.63
40:YX:18:TYR:C	40:YX:20:GLY:H	2.02	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	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
24:RD:230:ASP:O	24:RD:231:HIS:HB2	1.98	0.63
30:RN:22:THR:CG2	30:RN:23:LEU:N	2.61	0.63
35:RS:78:LEU:HD11	35:RS:107:GLU:O	1.98	0.63
37:RU:102:GLU:HG3	38:RV:2:PHE:CE2	2.34	0.63
40:RX:18:TYR:C	40:RX:20:GLY:H	2.02	0.63
45:R2:42:GLY:O	45:R2:44:LEU:N	2.30	0.63
1:XA:606:G:H1	1:XA:631:G:H5''	1.63	0.63
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.33	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
22:YA:1853:A:N3	22:YA:2233:U:O2'	2.30	0.63
22:YA:2723:C:H5''	34:YR:1:MET:HG2	1.79	0.63
24:YD:230:ASP:O	24:YD:231:HIS:HB2	1.98	0.63
45:Y2:40:SER:C	45:Y2:42:GLY:N	2.51	0.63
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.30	0.63
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.12	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
22:RA:1289:C:H2'	22:RA:1290:C:H6	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1678:G:N2	22:RA:1989:G:H22	1.97	0.63
24:RD:44:ASN:N	24:RD:44:ASN:ND2	2.42	0.63
29:RI:52:ARG:HA	29:RI:55:ALA:HB3	1.80	0.63
33:RQ:81:VAL:O	33:RQ:82:ARG:HD3	1.98	0.63
40:RX:49:VAL:HG13	40:RX:83:VAL:HG13	1.80	0.63
41:RY:95:LYS:CB	41:RY:100:ALA:HA	2.13	0.63
1:XA:321:A:H62	1:XA:328:C:H1'	1.64	0.63
1:XA:939:G:H5''	7:XG:102:ARG:NH2	2.13	0.63
12:XL:46:LYS:CG	12:XL:47:LYS:H	2.11	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
22:YA:2751:G:H8	22:YA:2751:G:O5'	1.81	0.63
24:YD:72:LYS:HG2	24:YD:103:ARG:NH2	2.13	0.63
27:YG:68:PRO:HB2	27:YG:90:LEU:HD12	1.80	0.63
31:YO:86:ILE:HD12	31:YO:86:ILE:N	2.13	0.63
36:YT:16:ARG:HE	36:YT:19:LEU:HD21	1.62	0.63
9:QI:128:ARG:NH1	53:QV:33:U:OP2	2.32	0.63
22:RA:336:C:H5''	41:RY:6:HIS:CD2	2.34	0.63
25:RE:131:ALA:HB1	25:RE:135:HIS:CE1	2.34	0.63
26:RF:28:ILE:HG22	26:RF:112:MET:HB3	1.81	0.63
28:RH:153:LYS:HG3	28:RH:161:GLY:HA3	1.81	0.63
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CB	2.29	0.63
33:RQ:66:ILE:CG1	33:RQ:67:ARG:H	2.12	0.63
42:RZ:16:SER:O	42:RZ:20:ARG:HB2	1.97	0.63
44:R1:82:LEU:CD1	44:R1:83:GLU:CA	2.76	0.63
45:R2:46:GLN:HA	45:R2:46:GLN:OE1	1.98	0.63
1:XA:642:A:N3	8:XH:113:SER:OG	2.25	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.12	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
13:XM:77:ASN:HA	47:Y4:71:ARG:HH21	1.64	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
26:YF:67:GLN:O	26:YF:67:GLN:CG	2.32	0.63
28:YH:86:GLU:O	28:YH:87:LEU:HB2	1.99	0.63
35:YS:22:GLY:O	35:YS:23:ARG:O	2.17	0.63
36:YT:60:THR:HG22	36:YT:77:PRO:HA	1.80	0.63
45:Y2:46:GLN:OE1	45:Y2:46:GLN:HA	1.97	0.63
47:Y4:71:ARG:HH11	47:Y4:71:ARG:CG	1.98	0.63
53:XV:6:G:H1	53:XV:67:C:H42	1.45	0.63
1:QA:811:C:O2'	1:QA:901:A:N1	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.63
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.63
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.63
24:RD:133:LEU:HD21	24:RD:191:ALA:CB	2.29	0.63
32:RP:108:LYS:HD2	32:RP:108:LYS:H	1.64	0.63
37:RU:34:LYS:HA	37:RU:34:LYS:CE	2.29	0.63
39:RW:110:LYS:HG3	39:RW:111:HIS:ND1	2.13	0.63
41:RY:86:ARG:O	41:RY:92:ASN:HB2	1.97	0.63
42:RZ:52:SER:OG	42:RZ:52:SER:O	2.13	0.63
44:R1:87:PRO:O	44:R1:88:LYS:C	2.37	0.63
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.14	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.63
22:YA:451:C:H4'	26:YF:52:LYS:HZ1	1.63	0.63
25:YE:13:ARG:HH12	25:YE:21:VAL:HG12	1.64	0.63
25:YE:35:GLN:CG	25:YE:37:ARG:NE	2.62	0.63
27:YG:61:ALA:HB2	27:YG:68:PRO:HD2	1.81	0.63
30:YN:7:LYS:H	30:YN:7:LYS:HD2	1.64	0.63
30:YN:61:ARG:HA	30:YN:61:ARG:HE	1.63	0.63
30:YN:87:LEU:O	30:YN:87:LEU:HD23	1.99	0.63
32:YP:64:LYS:HB2	51:Y8:25:MET:HG3	1.80	0.63
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CB	2.28	0.63
33:YQ:30:GLY:HA3	33:YQ:106:VAL:O	1.98	0.63
39:YW:74:ALA:O	39:YW:75:TYR:HB3	1.98	0.63
51:Y8:59:LYS:HZ3	51:Y8:59:LYS:HB3	1.62	0.63
1:QA:266:G:H5''	1:QA:267:C:C5	2.33	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.96	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	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
22:RA:1428:C:N4	22:RA:1570:A:OP2	2.27	0.63
22:RA:1500:G:O2'	24:RD:100:GLY:O	2.16	0.63
26:RF:119:ARG:HH11	26:RF:119:ARG:HG2	1.64	0.63
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CD	2.29	0.63
42:RZ:58:VAL:O	42:RZ:60:GLU:N	2.31	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R6:13:CYS:HB2	49:R6:22:ALA:HB3	1.80	0.63
1:XA:737:A:H2'	1:XA:738:C:C6	2.34	0.63
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
22:YA:2233:U:H2'	22:YA:2234:G:C8	2.33	0.63
28:YH:153:LYS:HG3	28:YH:161:GLY:HA3	1.81	0.63
32:YP:83:VAL:HG12	32:YP:112:LEU:HD21	1.81	0.63
32:YP:114:ILE:HD11	32:YP:130:PHE:CD1	2.34	0.63
41:YY:87:LYS:O	41:YY:88:LYS:NZ	2.32	0.63
44:Y1:18:ILE:HG12	44:Y1:37:ILE:HG12	1.81	0.63
54:QX:8:A:H8	54:QX:8:A:O5'	1.82	0.63
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.31	0.62
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	1.99	0.62
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.11	0.62
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.62
22:RA:2015:A:N3	48:R5:2:ALA:N	2.47	0.62
24:RD:44:ASN:HB3	24:RD:49:ILE:CA	2.27	0.62
26:RF:107:LYS:O	26:RF:108:LYS:C	2.37	0.62
34:RR:63:ARG:NH1	34:RR:80:PHE:CD1	2.67	0.62
34:RR:117:VAL:O	34:RR:118:GLU:HB3	1.99	0.62
36:RT:16:ARG:HE	36:RT:19:LEU:HD21	1.63	0.62
36:RT:60:THR:HG22	36:RT:77:PRO:HA	1.80	0.62
36:RT:111:ARG:C	36:RT:113:LYS:H	2.01	0.62
44:R1:76:ARG:HD2	44:R1:76:ARG:H	1.64	0.62
45:R2:65:ASN:HB3	45:R2:69:ARG:NH1	2.10	0.62
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.62
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.80	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.62
12:XL:49:ASN:ND2	12:XL:92:ASP:OD2	2.21	0.62
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.20	0.62
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.62
22:YA:1062:G:H2'	22:YA:1063:G:C8	2.34	0.62
22:YA:1266:G:C5	39:YW:15:ARG:NH1	2.67	0.62
25:YE:4:ILE:CD1	25:YE:28:ALA:HB1	2.29	0.62
33:YQ:10:ARG:O	33:YQ:11:LYS:HB2	1.98	0.62
36:YT:49:VAL:HG13	36:YT:49:VAL:O	1.99	0.62
37:YU:34:LYS:HA	37:YU:34:LYS:CE	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:49:VAL:HG13	40:YX:83:VAL:HG13	1.80	0.62
1:QA:1397:C:H1'	54:QX:8:A:N6	2.14	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
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
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
22:RA:1803:A:H4'	24:RD:259:THR:HG21	1.80	0.62
22:RA:2404:C:O3'	32:RP:77:ARG:NH2	2.32	0.62
26:RF:28:ILE:HD13	26:RF:30:PRO:HD3	1.80	0.62
36:RT:96:ARG:NH1	36:RT:96:ARG:HB2	2.14	0.62
8:XH:112:LEU:O	8:XH:112:LEU:HD12	1.98	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
22:YA:1270:C:H5''	22:YA:1271:G:H5'	1.81	0.62
26:YF:129:PHE:O	26:YF:130:ALA:HB3	1.99	0.62
36:YT:22:PHE:N	36:YT:22:PHE:HD2	1.97	0.62
40:YX:31:HIS:CE1	40:YX:33:LYS:HB2	2.34	0.62
42:YZ:126:VAL:HG12	42:YZ:163:LEU:HA	1.80	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	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
22:RA:709:U:H3	22:RA:722:A:H61	1.46	0.62
22:RA:855:G:H1	22:RA:922:U:H3	1.45	0.62
28:RH:136:ILE:H	28:RH:136:ILE:HD12	1.64	0.62
31:RO:8:LEU:HB2	31:RO:19:ILE:HD11	1.81	0.62
35:RS:48:LEU:N	35:RS:48:LEU:HD12	2.14	0.62
1:XA:971:G:N2	1:XA:1363:A:OP2	2.24	0.62
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.12	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.29	0.62
13:XM:62:ASN:O	47:Y4:49:PHE:HB2	1.99	0.62
13:XM:121:LYS:HZ1	55:XY:39:C:HO2'	1.45	0.62
26:YF:132:VAL:HG23	26:YF:133:ASN:N	2.14	0.62
27:YG:94:LEU:H	27:YG:94:LEU:HD23	1.64	0.62
32:YP:1:MET:CE	32:YP:5:ASP:HB3	2.25	0.62
36:YT:96:ARG:HB2	36:YT:96:ARG:NH1	2.14	0.62
40:YX:63:LYS:O	40:YX:64:LYS:HD2	1.98	0.62
42:YZ:125:LEU:HG	42:YZ:164:ALA:HB3	1.81	0.62
54:QX:5:C:O2'	54:QX:6:C:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:QY:29:U:H2'	55:QY:30:C:H6	1.61	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.62
22:RA:141:A:H8	22:RA:1595:G:H21	1.48	0.62
22:RA:2131:G:H4'	22:RA:2132:U:H4'	1.81	0.62
22:RA:2438:U:O3'	22:RA:2439:A:H3'	1.99	0.62
22:RA:2580:U:H4'	25:RE:130:GLY:HA3	1.82	0.62
27:RG:94:LEU:HD23	27:RG:94:LEU:N	2.14	0.62
32:RP:65:ARG:HH11	32:RP:65:ARG:CG	2.06	0.62
32:RP:83:VAL:HG12	32:RP:112:LEU:HD21	1.81	0.62
35:RS:26:LEU:HD22	35:RS:87:PHE:HD1	1.63	0.62
36:RT:24:PRO:O	36:RT:94:ALA:HB2	2.00	0.62
1:XA:452:A:H62	1:XA:480:U:H3	1.47	0.62
1:XA:690:G:H22	11:XK:55:LYS:NZ	1.96	0.62
1:XA:1364:U:O2'	1:XA:1365:G:OP1	2.17	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
22:YA:1336:A:H2'	22:YA:1337:G:C8	2.34	0.62
22:YA:1430:C:H2'	22:YA:1431:U:C6	2.34	0.62
22:YA:2451:A:C2'	53:XV:76:A:HO2'	2.13	0.62
24:YD:35:LYS:HA	24:YD:64:ILE:HG22	1.81	0.62
28:YH:136:ILE:HD12	28:YH:136:ILE:H	1.64	0.62
30:YN:26:LEU:O	30:YN:30:ILE:HG13	1.99	0.62
32:YP:65:ARG:HE	51:Y8:15:LYS:HB2	1.64	0.62
34:YR:63:ARG:NH1	34:YR:80:PHE:CD1	2.67	0.62
35:YS:48:LEU:HD12	35:YS:48:LEU:N	2.14	0.62
43:Y0:11:ARG:O	43:Y0:14:ARG:NH2	2.32	0.62
49:Y6:44:ARG:O	49:Y6:45:LYS:HB2	2.00	0.62
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.33	0.62
12:QL:47:LYS:CB	12:QL:48:PRO:HD3	2.29	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
24:RD:72:LYS:HG2	24:RD:103:ARG:NH2	2.13	0.62
24:RD:134:ARG:HD3	24:RD:135:PHE:CE2	2.34	0.62
25:RE:13:ARG:HH12	25:RE:21:VAL:HG12	1.64	0.62
25:RE:35:GLN:CG	25:RE:37:ARG:NE	2.62	0.62
26:RF:129:PHE:O	26:RF:130:ALA:HB3	1.99	0.62
27:RG:77:ILE:HD13	27:RG:82:LEU:CD1	2.29	0.62
28:RH:137:ASP:HB3	28:RH:140:LYS:HB2	1.81	0.62
32:RP:61:ARG:H	32:RP:61:ARG:CD	2.09	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RX:31:HIS:CE1	40:RX:33:LYS:HB2	2.34	0.62
45:R2:40:SER:C	45:R2:42:GLY:N	2.50	0.62
1:XA:118:U:H3'	1:XA:288:A:H61	1.64	0.62
1:XA:266:G:H5'	1:XA:268:C:H41	1.63	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
22:YA:503:A:H4'	22:YA:504:U:H5'	1.82	0.62
22:YA:1372:U:H2'	22:YA:1373:A:H5'	1.81	0.62
26:YF:107:LYS:O	26:YF:108:LYS:C	2.36	0.62
30:YN:133:GLN:O	30:YN:134:ARG:HB3	1.99	0.62
35:YS:100:ALA:HA	35:YS:103:GLU:CG	2.30	0.62
38:YV:52:VAL:CG2	38:YV:55:ALA:HB3	2.28	0.62
45:Y2:41:ILE:HG12	45:Y2:44:LEU:HD12	1.82	0.62
1:QA:920:U:H2'	1:QA:921:U:C6	2.34	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
22:RA:301:G:H1	22:RA:316:C:H42	1.48	0.62
22:RA:380:U:H2'	22:RA:381:G:C8	2.33	0.62
22:RA:2232:U:OP1	44:R1:40:ARG:NH1	2.32	0.62
26:RF:32:LEU:CD1	26:RF:105:VAL:HG13	2.29	0.62
30:RN:96:GLU:O	30:RN:98:VAL:N	2.33	0.62
35:RS:22:GLY:O	35:RS:23:ARG:O	2.17	0.62
36:RT:108:ARG:O	36:RT:111:ARG:HG3	2.00	0.62
38:RV:36:PRO:HA	38:RV:56:SER:OG	1.98	0.62
39:RW:60:ASN:C	39:RW:61:ASN:HD22	2.03	0.62
49:R6:18:ARG:O	49:R6:18:ARG:HD2	2.00	0.62
49:R6:41:PRO:HG2	49:R6:45:LYS:N	2.10	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
10:XJ:29:ARG:HG2	10:XJ:29:ARG:O	2.00	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.11	0.62
22:YA:2529:G:O6	52:Y9:31:LYS:NZ	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2580:U:H4'	25:YE:130:GLY:HA3	1.79	0.62
31:YO:104:ARG:CZ	36:YT:34:VAL:HG11	2.29	0.62
32:YP:105:LEU:O	32:YP:106:LEU:CB	2.42	0.62
44:Y1:91:LYS:HA	44:Y1:91:LYS:HE3	1.82	0.62
45:Y2:69:ARG:HB2	45:Y2:69:ARG:CZ	2.29	0.62
45:Y2:70:GLN:O	45:Y2:71:ASN:HB2	2.00	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.33	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
22:RA:2395:C:O2'	44:R1:30:VAL:HG12	1.99	0.62
24:RD:27:THR:O	24:RD:29:PRO:HD2	1.99	0.62
30:RN:7:LYS:HD2	30:RN:7:LYS:H	1.64	0.62
44:R1:18:ILE:HG12	44:R1:37:ILE:HG12	1.81	0.62
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.80	0.62
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	0.62
4:XD:96:LEU:H	4:XD:96:LEU:CD2	2.11	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
13:XM:65:LYS:H	47:Y4:50:VAL:HG21	1.63	0.62
19:XS:64:GLU:C	47:Y4:55:ARG:HH12	2.03	0.62
22:YA:10:G:N2	22:YA:2802:G:OP1	2.31	0.62
22:YA:699:A:H2'	22:YA:700:G:O4'	2.00	0.62
22:YA:878:A:N6	22:YA:899:A:O2'	2.33	0.62
22:YA:1600:C:OP1	40:YX:58:HIS:NE2	2.27	0.62
25:YE:131:ALA:HB1	25:YE:135:HIS:CE1	2.34	0.62
26:YF:28:ILE:HD13	26:YF:30:PRO:HD3	1.80	0.62
27:YG:94:LEU:HD23	27:YG:94:LEU:N	2.14	0.62
27:YG:112:PRO:HB3	47:Y4:37:SER:CB	2.25	0.62
27:YG:170:ARG:O	27:YG:174:GLU:HB2	2.00	0.62
32:YP:112:LEU:HD11	32:YP:114:ILE:HG23	1.80	0.62
36:YT:108:ARG:O	36:YT:111:ARG:HG3	2.00	0.62
41:YY:48:ALA:HB2	41:YY:61:ILE:HD13	1.82	0.62
49:Y6:13:CYS:HB2	49:Y6:22:ALA:HB3	1.81	0.62
49:Y6:27:LYS:HB2	49:Y6:27:LYS:HZ3	1.65	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
22:RA:1636:C:O2'	22:RA:1760:A:N3	2.27	0.62
22:RA:2439:A:C8	22:RA:2439:A:H5'	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:70:TRP:CH2	24:RD:150:LYS:HA	2.35	0.62
24:RD:137:PRO:HB2	24:RD:140:THR:HG23	1.81	0.62
27:RG:68:PRO:HB2	27:RG:90:LEU:HD12	1.80	0.62
30:RN:26:LEU:O	30:RN:30:ILE:HG13	1.99	0.62
30:RN:87:LEU:O	30:RN:87:LEU:HD23	1.99	0.62
32:RP:64:LYS:HB2	51:R8:25:MET:HG3	1.80	0.62
41:RY:87:LYS:O	41:RY:88:LYS:NZ	2.31	0.62
44:R1:91:LYS:HA	44:R1:91:LYS:HE3	1.82	0.62
45:R2:69:ARG:HB2	45:R2:69:ARG:CZ	2.30	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
24:YD:133:LEU:HD21	24:YD:191:ALA:CB	2.29	0.62
29:YI:93:THR:N	29:YI:96:ASP:OD1	2.26	0.62
31:YO:7:TYR:HE1	31:YO:20:MET:HE3	1.65	0.62
47:Y4:61:ARG:O	47:Y4:63:TYR:N	2.33	0.62
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.31	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
22:RA:288:C:H2'	22:RA:289:A:C8	2.31	0.62
22:RA:1006:C:H1'	30:RN:106:MET:CE	2.30	0.62
22:RA:1543:A:O2'	22:RA:1544:C:H3'	2.00	0.62
22:RA:2065:C:H1'	22:RA:2449:U:H3	1.64	0.62
25:RE:35:GLN:HG2	25:RE:37:ARG:NE	2.14	0.62
31:RO:78:ARG:HH21	36:RT:103:ARG:NH2	1.98	0.62
33:RQ:86:GLY:C	33:RQ:88:GLY:H	2.03	0.62
35:RS:100:ALA:HA	35:RS:103:GLU:CG	2.30	0.62
36:RT:31:SER:HA	36:RT:44:ASP:OD2	2.00	0.62
36:RT:57:PHE:CD2	36:RT:58:ASN:N	2.66	0.62
1:XA:370:C:O2'	1:XA:371:G:C5'	2.45	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
13:XM:62:ASN:ND2	47:Y4:47:GLN:NE2	2.48	0.62
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.62
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
22:YA:1140:C:H5''	30:YN:66:LYS:HZ1	1.65	0.62
22:YA:1697:G:O2'	22:YA:1978:A:OP1	2.16	0.62
22:YA:1803:A:H4'	24:YD:259:THR:HG21	1.82	0.62
22:YA:2040:C:H2'	22:YA:2041:U:C6	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:182:LEU:H	24:YD:272:ALA:HB3	1.63	0.62
25:YE:104:VAL:HG11	25:YE:188:VAL:HG23	1.82	0.62
26:YF:28:ILE:HG22	26:YF:112:MET:HB3	1.80	0.62
39:YW:60:ASN:C	39:YW:61:ASN:HD22	2.03	0.62
55:XY:29:U:H2'	55:XY:30:C:H6	1.60	0.62
1:QA:973:G:H3'	1:QA:974:A:H5''	1.80	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.62
22:RA:1667:G:O2'	22:RA:1669:A:N6	2.33	0.62
22:RA:2083:G:C6	22:RA:2084:C:C4	2.88	0.62
22:RA:2416:C:H5''	32:RP:64:LYS:HE3	1.81	0.62
27:RG:6:ALA:HB2	47:R4:23:GLU:OE2	2.00	0.62
27:RG:9:ARG:HG2	27:RG:13:GLU:OE1	2.00	0.62
35:RS:17:ARG:HG3	35:RS:18:ILE:N	2.14	0.62
35:RS:26:LEU:HD12	35:RS:39:ILE:CD1	2.23	0.62
43:R0:48:GLY:HA3	43:R0:80:HIS:CE1	2.35	0.62
44:R1:3:LYS:HD3	44:R1:43:TYR:CD2	2.35	0.62
45:R2:17:SER:HB2	45:R2:18:PRO:CA	2.30	0.62
47:R4:61:ARG:O	47:R4:63:TYR:N	2.33	0.62
47:R4:71:ARG:NH1	47:R4:71:ARG:CG	2.60	0.62
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.34	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.62
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.30	0.62
22:YA:507:A:H5''	22:YA:508:G:H5'	1.82	0.62
22:YA:558:G:P	30:YN:111:PRO:HD2	2.39	0.62
22:YA:1537:C:H2'	22:YA:1538:G:C8	2.35	0.62
22:YA:2607:G:H2'	22:YA:2608:G:O4'	1.99	0.62
24:YD:134:ARG:HD3	24:YD:135:PHE:CE2	2.35	0.62
27:YG:142:PRO:HB2	47:Y4:31:ILE:CD1	2.30	0.62
45:Y2:17:SER:HB2	45:Y2:18:PRO:CA	2.30	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
22:RA:642:G:H21	22:RA:646:A:H2	1.47	0.61
22:RA:1796:U:H2'	22:RA:1797:C:C6	2.35	0.61
27:RG:111:LEU:HB2	27:RG:112:PRO:HD3	1.82	0.61
27:RG:170:ARG:O	27:RG:174:GLU:HB2	2.00	0.61
28:RH:153:LYS:CB	28:RH:154:PRO:CD	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:50:ARG:CB	32:RP:50:ARG:NH2	2.57	0.61
36:RT:22:PHE:N	36:RT:22:PHE:HD2	1.97	0.61
37:RU:92:ARG:HD3	37:RU:94:ASN:HB3	1.82	0.61
47:R4:23:GLU:O	47:R4:25:TYR:N	2.33	0.61
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.82	0.61
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.00	0.61
14:YN:32:SER:O	14:YN:40:CYS:C	2.37	0.61
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.61
22:YA:1178:C:H2'	22:YA:1179:C:C6	2.35	0.61
23:YB:40:U:H3	23:YB:43:C:H5''	1.65	0.61
25:YE:51:PHE:O	25:YE:52:LEU:C	2.38	0.61
33:YQ:54:MET:O	33:YQ:57:HIS:HB3	2.00	0.61
33:YQ:88:GLY:C	33:YQ:90:VAL:H	2.02	0.61
37:YU:102:GLU:HG3	38:YV:2:PHE:CE2	2.34	0.61
44:Y1:87:PRO:O	44:Y1:88:LYS:C	2.37	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.61
22:RA:307:G:H21	22:RA:330:A:H62	1.48	0.61
22:RA:517:C:O2'	39:RW:18:ARG:NH2	2.33	0.61
22:RA:995:C:N4	30:RN:2:LYS:HG3	2.15	0.61
24:RD:133:LEU:HD21	24:RD:191:ALA:HB2	1.82	0.61
25:RE:201:THR:HG22	25:RE:203:LYS:N	2.07	0.61
41:RY:101:LYS:HE3	41:RY:102:CYS:SG	2.40	0.61
49:R6:44:ARG:O	49:R6:45:LYS:HB2	2.00	0.61
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.15	0.61
1:XA:1310:G:H5''	47:Y4:71:ARG:OXT	2.00	0.61
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
22:YA:746:A:C6	22:YA:2611:U:H5''	2.35	0.61
22:YA:2014:A:O2'	48:Y5:2:ALA:HB2	2.00	0.61
26:YF:32:LEU:CD1	26:YF:105:VAL:HG13	2.29	0.61
32:YP:50:ARG:CB	32:YP:50:ARG:NH2	2.58	0.61
33:YQ:86:GLY:C	33:YQ:88:GLY:N	2.52	0.61
44:Y1:76:ARG:HD2	44:Y1:76:ARG:H	1.64	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
24:RD:72:LYS:HE3	24:RD:75:ILE:HD12	1.82	0.61
32:RP:114:ILE:HD11	32:RP:130:PHE:CD1	2.34	0.61
47:R4:35:VAL:O	47:R4:37:SER:N	2.26	0.61
9:XI:128:ARG:HD3	53:XV:32:C:OP2	2.00	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
29:YI:104:GLN:O	29:YI:105:HIS:ND1	2.29	0.61
36:YT:31:SER:HA	36:YT:44:ASP:OD2	2.00	0.61
44:Y1:73:LEU:C	44:Y1:75:GLU:H	2.03	0.61
49:Y6:18:ARG:O	49:Y6:18:ARG:HD2	2.00	0.61
1:QA:939:G:OP1	7:QG:102:ARG:NH1	2.34	0.61
1:QA:1397:C:HO2'	54:QX:8:A:N6	1.98	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
12:QL:47:LYS:CG	12:QL:48:PRO:HD3	2.29	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
22:RA:38:A:N3	26:RF:48:THR:OG1	2.33	0.61
22:RA:1924:C:H4'	53:QV:13:C:O2'	2.00	0.61
24:RD:237:GLU:OE1	24:RD:237:GLU:CA	2.48	0.61
28:RH:86:GLU:O	28:RH:87:LEU:HB2	1.99	0.61
28:RH:152:ARG:O	28:RH:153:LYS:CD	2.48	0.61
31:RO:97:ARG:N	31:RO:117:LEU:HD22	2.15	0.61
34:RR:38:VAL:HB	34:RR:39:PRO:HD3	1.81	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.61
6:XF:77:ARG:HB2	6:XF:77:ARG:NH1	2.15	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
19:XS:5:LEU:HD22	47:Y4:67:TYR:CZ	2.35	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
24:YD:27:THR:O	24:YD:29:PRO:HD2	1.99	0.61
24:YD:227:ASN:CB	24:YD:228:PRO:HD2	2.24	0.61
27:YG:6:ALA:HB2	47:Y4:23:GLU:OE2	1.99	0.61
28:YH:6:ARG:HG3	28:YH:7:LEU:N	2.15	0.61
31:YO:8:LEU:HB2	31:YO:19:ILE:HD11	1.81	0.61
31:YO:78:ARG:HH21	36:YT:103:ARG:NH2	1.97	0.61
32:YP:108:LYS:HD2	32:YP:108:LYS:H	1.64	0.61
33:YQ:66:ILE:CG1	33:YQ:67:ARG:H	2.12	0.61
35:YS:17:ARG:HG3	35:YS:18:ILE:N	2.14	0.61
39:YW:5:ALA:O	39:YW:50:VAL:HG13	2.00	0.61
43:Y0:7:LEU:C	53:XV:2:G:H4'	2.20	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1502:A:H2	1:QA:1505:G:H1	1.49	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.20	0.61
23:RB:88:C:H2'	23:RB:89:G:O4'	2.00	0.61
27:RG:142:PRO:HB2	47:R4:31:ILE:CD1	2.30	0.61
29:RI:130:TYR:HB3	29:RI:136:VAL:HG13	1.83	0.61
30:RN:62:VAL:CG1	30:RN:66:LYS:HD2	2.30	0.61
31:RO:104:ARG:CZ	36:RT:34:VAL:HG11	2.29	0.61
32:RP:65:ARG:HE	51:R8:15:LYS:HB2	1.64	0.61
35:RS:88:ASP:O	35:RS:89:ARG:CB	2.49	0.61
41:RY:48:ALA:HB2	41:RY:61:ILE:HD13	1.82	0.61
46:R3:29:ARG:HH11	46:R3:29:ARG:CB	2.13	0.61
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.17	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
22:YA:277:C:H3'	22:YA:278:A:C5'	2.31	0.61
22:YA:862:G:H2'	22:YA:863:A:O4'	2.01	0.61
22:YA:890:A:HO2'	22:YA:892:G:H8	1.48	0.61
23:YB:44:G:H1'	23:YB:47:C:N4	2.15	0.61
24:YD:137:PRO:HB2	24:YD:140:THR:HG23	1.81	0.61
25:YE:35:GLN:HG2	25:YE:37:ARG:NE	2.14	0.61
28:YH:152:ARG:O	28:YH:153:LYS:CD	2.48	0.61
30:YN:62:VAL:CG1	30:YN:66:LYS:HD2	2.30	0.61
30:YN:96:GLU:O	30:YN:98:VAL:N	2.33	0.61
33:YQ:2:LEU:HD23	33:YQ:2:LEU:H	1.65	0.61
38:YV:46:VAL:O	38:YV:46:VAL:HG13	2.01	0.61
40:YX:15:GLU:N	40:YX:15:GLU:OE1	2.34	0.61
47:Y4:23:GLU:O	47:Y4:25:TYR:N	2.33	0.61
51:Y8:22:VAL:HG21	51:Y8:53:PRO:HB2	1.83	0.61
51:Y8:29:LYS:HD3	51:Y8:44:LYS:CB	2.30	0.61
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.16	0.61
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.16	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	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	2.16	0.61
23:RB:55:U:H4'	27:RG:28:VAL:CG2	2.30	0.61
29:RI:74:ASN:OD1	29:RI:74:ASN:N	2.34	0.61
39:RW:82:LEU:HB2	39:RW:98:LYS:HB2	1.82	0.61
49:R6:25:LYS:HD2	51:R8:34:TRP:CZ2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.01	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	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
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	2.00	0.61
22:YA:675:A:C8	22:YA:804:A:C6	2.89	0.61
24:YD:35:LYS:HE3	24:YD:64:ILE:C	2.21	0.61
24:YD:70:TRP:CH2	24:YD:150:LYS:HA	2.35	0.61
27:YG:77:ILE:HD13	27:YG:82:LEU:CD1	2.29	0.61
36:YT:24:PRO:O	36:YT:94:ALA:HB2	2.00	0.61
41:YY:44:ILE:HG13	41:YY:45:VAL:H	1.64	0.61
45:Y2:41:ILE:HD11	45:Y2:44:LEU:HG	1.82	0.61
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.34	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
22:RA:1285:G:N2	22:RA:1329:U:OP1	2.23	0.61
22:RA:2030:A:H4'	22:RA:2031:A:H8	1.66	0.61
24:RD:21:PHE:HB3	24:RD:24:ILE:HG13	1.83	0.61
24:RD:35:LYS:HA	24:RD:64:ILE:HG22	1.82	0.61
24:RD:174:ILE:N	24:RD:174:ILE:HD12	2.16	0.61
39:RW:5:ALA:O	39:RW:50:VAL:HG13	2.00	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.61
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.61
13:XM:62:ASN:ND2	47:Y4:47:GLN:HE22	1.98	0.61
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
22:YA:628:G:H2'	22:YA:629:G:H8	1.65	0.61
22:YA:1264:G:H5'	48:Y5:11:THR:HG21	1.83	0.61
22:YA:1484:G:H1	22:YA:1505:C:H42	1.46	0.61
24:YD:25:THR:HG21	24:YD:81:ALA:CA	2.31	0.61
25:YE:52:LEU:HB3	25:YE:54:GLN:OE1	2.00	0.61
28:YH:137:ASP:HB3	28:YH:140:LYS:HB2	1.81	0.61
29:YI:113:ARG:HB3	29:YI:131:LYS:HD3	1.82	0.61
34:YR:38:VAL:HB	34:YR:39:PRO:HD3	1.81	0.61
35:YS:49:VAL:HG22	35:YS:80:LEU:HD12	1.83	0.61
39:YW:28:SER:O	39:YW:31:GLU:N	2.34	0.61
41:YY:19:LYS:O	41:YY:19:LYS:HG3	2.01	0.61
1:QA:1495:U:O4	58:QA:1666:PAR:H222	1.99	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
22:RA:1441:G:H2'	22:RA:1442:G:H8	1.66	0.61
22:RA:2555:U:O2	56:Z6:74:C:N3	2.32	0.61
22:RA:2773:C:H2'	22:RA:2774:C:H6	1.65	0.61
28:RH:6:ARG:HG3	28:RH:7:LEU:N	2.15	0.61
30:RN:7:LYS:CD	30:RN:9:VAL:H	2.14	0.61
30:RN:23:LEU:HD12	30:RN:99:LEU:HD23	1.82	0.61
38:RV:46:VAL:O	38:RV:46:VAL:HG13	2.01	0.61
40:RX:66:LEU:O	40:RX:66:LEU:HD23	2.01	0.61
44:R1:80:LEU:O	44:R1:81:LYS:HD2	2.01	0.61
48:R5:52:TYR:O	48:R5:53:ALA:HB3	2.01	0.61
51:R8:29:LYS:HD3	51:R8:44:LYS:CB	2.30	0.61
51:R8:48:PHE:N	51:R8:48:PHE:CD1	2.66	0.61
1:XA:688:G:H2'	1:XA:689:C:H6	1.66	0.61
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.16	0.61
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.83	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
22:YA:1310:G:OP2	50:Y7:9:ARG:NH1	2.34	0.61
24:YD:2:ALA:HB3	24:YD:20:ASP:HB3	1.83	0.61
25:YE:95:ILE:HD12	25:YE:95:ILE:N	2.15	0.61
26:YF:164:ARG:HH11	26:YF:164:ARG:HG2	1.66	0.61
31:YO:91:LEU:N	31:YO:91:LEU:HD22	2.16	0.61
32:YP:96:THR:HG22	32:YP:126:VAL:HB	1.82	0.61
37:YU:88:ILE:H	37:YU:88:ILE:CD1	2.05	0.61
1:QA:119:A:H4'	1:QA:120:A:O5'	2.00	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.61
5:QE:78:HIS:HB3	8:QH:104:ARG:O	2.01	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
22:RA:2857:G:N2	22:RA:2860:A:OP2	2.32	0.61
33:RQ:2:LEU:HD23	33:RQ:2:LEU:H	1.65	0.61
37:RU:69:CYS:HB3	37:RU:106:PHE:CZ	2.36	0.61
38:RV:35:LEU:O	38:RV:35:LEU:HD23	2.01	0.61
46:R3:5:LYS:HB2	46:R3:36:VAL:HG12	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R6:41:PRO:HD2	49:R6:46:HIS:N	2.16	0.61
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.32	0.61
1:XA:757:U:OP1	1:XA:822:C:O2'	2.19	0.61
3:XC:13:GLY:HA3	14:YN:57:ARG:CZ	2.31	0.61
4:XD:196:LEU:HD12	4:XD:196:LEU:N	2.15	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
22:YA:2655:G:N2	22:YA:2665:A:OP2	2.33	0.61
24:YD:133:LEU:HD21	24:YD:191:ALA:HB2	1.82	0.61
25:YE:35:GLN:CG	25:YE:37:ARG:HE	2.11	0.61
26:YF:119:ARG:HH11	26:YF:119:ARG:HG2	1.64	0.61
30:YN:7:LYS:CD	30:YN:9:VAL:H	2.14	0.61
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CD	2.30	0.61
34:YR:44:LEU:HD22	34:YR:48:VAL:HG23	1.83	0.61
40:YX:14:SER:O	40:YX:17:ALA:N	2.34	0.61
40:YX:66:LEU:O	40:YX:66:LEU:HD23	2.01	0.61
46:Y3:5:LYS:HB2	46:Y3:36:VAL:HG12	1.82	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.21	0.61
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.28	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.61
22:RA:656:G:H2'	22:RA:657:U:O4'	2.00	0.61
22:RA:2401:U:H2'	22:RA:2402:C:H5''	1.83	0.61
23:RB:7:G:N2	35:RS:38:GLN:OE1	2.26	0.61
24:RD:35:LYS:HG2	24:RD:64:ILE:CG2	2.31	0.61
26:RF:63:LYS:HE2	26:RF:67:GLN:HB3	1.83	0.61
26:RF:175:THR:O	26:RF:176:LEU:CB	2.48	0.61
30:RN:58:ASP:N	30:RN:60:ILE:HD11	2.16	0.61
32:RP:96:THR:HG22	32:RP:126:VAL:HB	1.83	0.61
35:RS:49:VAL:HG22	35:RS:80:LEU:HD12	1.82	0.61
38:RV:15:GLU:HG3	38:RV:16:PRO:HD2	1.83	0.61
39:RW:65:LEU:HD12	39:RW:68:ARG:NH1	2.10	0.61
40:RX:14:SER:O	40:RX:17:ALA:N	2.34	0.61
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.65	0.61
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	2.00	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.61
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.61
22:YA:363(B):G:H2'	22:YA:363(C):G:H8	1.65	0.61
22:YA:1637:A:H4'	22:YA:2711:A:O2'	2.01	0.61
24:YD:147:LEU:CD1	24:YD:155:LEU:HD11	2.26	0.61
25:YE:131:ALA:HB1	25:YE:135:HIS:HE1	1.65	0.61
27:YG:44:GLY:HA2	27:YG:88:ILE:CG1	2.31	0.61
32:YP:27:HIS:ND1	32:YP:27:HIS:N	2.49	0.61
35:YS:89:ARG:O	35:YS:90:GLY:O	2.19	0.61
42:YZ:91:LEU:HD12	42:YZ:96:VAL:HG11	1.82	0.61
46:Y3:59:VAL:HG12	46:Y3:60:GLU:N	2.16	0.61
49:Y6:7:ILE:HG13	49:Y6:8:LYS:N	2.06	0.61
1:QA:1095:U:P	1:QA:1108:G:H1	2.25	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.01	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
22:RA:140:A:H8	22:RA:1408:C:HO2'	1.48	0.60
27:RG:28:VAL:O	27:RG:31:VAL:HG12	2.01	0.60
30:RN:6:PRO:HG3	30:RN:41:ASP:HB2	1.83	0.60
39:RW:28:SER:O	39:RW:31:GLU:N	2.34	0.60
45:R2:41:ILE:HD11	45:R2:44:LEU:HG	1.83	0.60
46:R3:59:VAL:HG12	46:R3:60:GLU:N	2.16	0.60
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.15	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.60
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.83	0.60
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
22:YA:1287:A:N7	34:YR:107:ASP:HB2	2.16	0.60
22:YA:2306:C:H2'	22:YA:2307:G:N2	2.14	0.60
24:YD:35:LYS:NZ	24:YD:65:ILE:HA	2.15	0.60
24:YD:54:ARG:HH11	24:YD:54:ARG:CG	2.14	0.60
30:YN:17:ASP:O	30:YN:18:ALA:HB3	2.01	0.60
30:YN:99:LEU:O	30:YN:103:VAL:HG23	2.01	0.60
38:YV:41:GLY:H	38:YV:46:VAL:HG13	1.66	0.60
39:YW:82:LEU:HB2	39:YW:98:LYS:HB2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y6:41:PRO:HD2	49:Y6:46:HIS:N	2.16	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
19:QS:68:GLY:CA	47:R4:68:ARG:CG	2.65	0.60
22:RA:527:C:N4	22:RA:2779:U:OP2	2.34	0.60
22:RA:1169:G:H1	22:RA:1180:C:H42	1.49	0.60
22:RA:2562:U:O2'	31:RO:23:ARG:NH1	2.33	0.60
25:RE:52:LEU:HB3	25:RE:54:GLN:OE1	2.00	0.60
25:RE:104:VAL:HG11	25:RE:188:VAL:HG23	1.82	0.60
31:RO:91:LEU:HD22	31:RO:91:LEU:N	2.16	0.60
33:RQ:66:ILE:CG1	33:RQ:67:ARG:N	2.64	0.60
34:RR:52:ILE:O	34:RR:55:ALA:HB3	2.01	0.60
1:XA:690:G:H2'	1:XA:691:G:O4'	2.02	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.60
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	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	2.21	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
13:XM:57:ARG:NH2	47:Y4:34:GLU:O	2.34	0.60
22:YA:270(R):G:N3	44:Y1:78:LYS:NZ	2.48	0.60
22:YA:787:U:H5''	22:YA:788:A:H5'	1.83	0.60
33:YQ:66:ILE:CG1	33:YQ:67:ARG:N	2.64	0.60
41:YY:101:LYS:HE3	41:YY:102:CYS:SG	2.40	0.60
1:QA:1493:A:OP1	58:QA:1666:PAR:O41	2.09	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
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.82	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	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	2.35	0.60
22:RA:507:A:H5''	22:RA:508:G:H5'	1.83	0.60
22:RA:2335:A:O2'	22:RA:2336:A:O5'	2.19	0.60
22:RA:2848:G:O2'	22:RA:2849:U:OP2	2.17	0.60
24:RD:35:LYS:NZ	24:RD:65:ILE:HA	2.15	0.60
27:RG:61:ALA:HB2	27:RG:68:PRO:HD2	1.80	0.60
28:RH:126:PRO:CD	28:RH:127:GLU:N	2.65	0.60
33:RQ:86:GLY:C	33:RQ:88:GLY:N	2.52	0.60
33:RQ:88:GLY:C	33:RQ:90:VAL:H	2.02	0.60
38:RV:66:ARG:HH12	38:RV:88:ARG:HH11	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RX:43:VAL:CG1	40:RX:51:VAL:HG21	2.31	0.60
45:R2:70:GLN:O	45:R2:71:ASN:HB2	2.00	0.60
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.67	0.60
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.15	0.60
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.01	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.01	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
22:YA:1103:A:H5'	22:YA:1104:C:H5	1.67	0.60
22:YA:2757:A:OP1	52:Y9:19:ARG:HA	2.02	0.60
24:YD:263:ARG:HH11	24:YD:263:ARG:CB	2.15	0.60
25:YE:37:ARG:NE	25:YE:37:ARG:CA	2.64	0.60
36:YT:34:VAL:HG12	36:YT:36:GLU:HG2	1.84	0.60
37:YU:69:CYS:HB3	37:YU:106:PHE:CZ	2.36	0.60
44:Y1:3:LYS:HD3	44:Y1:43:TYR:CD2	2.35	0.60
1:QA:584:G:H2'	1:QA:585:G:H8	1.64	0.60
1:QA:1312:G:H5''	47:R4:67:TYR:OH	2.00	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.99	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:1:MET:HA	6:QF:67:MET:O	2.02	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	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
16:QP:8:ARG:HH11	16:QP:8:ARG:HG2	1.64	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60
24:RD:263:ARG:HH11	24:RD:263:ARG:CB	2.14	0.60
27:RG:94:LEU:HD23	27:RG:94:LEU:H	1.64	0.60
31:RO:104:ARG:HG2	31:RO:104:ARG:NH1	2.14	0.60
45:R2:41:ILE:HG12	45:R2:44:LEU:HD12	1.81	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	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
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
25:YE:53:PRO:HG2	25:YE:54:GLN:NE2	2.17	0.60
26:YF:34:TRP:CZ3	32:YP:8:PRO:HB3	2.36	0.60
32:YP:13:ASN:O	32:YP:15:ARG:N	2.34	0.60
35:YS:99:LYS:O	35:YS:102:ALA:N	2.34	0.60
49:Y6:13:CYS:O	49:Y6:21:TYR:HA	2.02	0.60
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	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
22:RA:848:G:H2'	22:RA:849:A:C8	2.35	0.60
22:RA:1263:U:H2'	22:RA:1264:G:C8	2.36	0.60
22:RA:1434:A:H61	22:RA:1558:A:H62	1.50	0.60
22:RA:2277:G:H5'	33:RQ:85:LYS:HG3	1.82	0.60
23:RB:52:A:H62	35:RS:33:LYS:HG3	1.66	0.60
25:RE:4:ILE:C	25:RE:5:LEU:HD23	2.22	0.60
27:RG:50:ALA:O	27:RG:53:LEU:HB3	2.01	0.60
28:RH:44:VAL:HG22	28:RH:44:VAL:O	2.01	0.60
37:RU:96:ALA:C	37:RU:98:LEU:H	2.04	0.60
41:RY:19:LYS:O	41:RY:19:LYS:HG3	2.01	0.60
44:R1:80:LEU:C	44:R1:81:LYS:CD	2.69	0.60
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.20	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	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
4:XD:146:ILE:HD12	4:XD:146:ILE:H	1.66	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
22:YA:558:G:OP1	30:YN:111:PRO:HD2	2.02	0.60
24:YD:25:THR:HG21	24:YD:81:ALA:HA	1.83	0.60
24:YD:35:LYS:NZ	24:YD:64:ILE:O	2.32	0.60
24:YD:166:GLN:HE21	24:YD:166:GLN:CA	2.14	0.60
25:YE:63:LEU:CD1	25:YE:64:LYS:H	2.04	0.60
27:YG:28:VAL:O	27:YG:31:VAL:HG12	2.01	0.60
28:YH:44:VAL:HG22	28:YH:44:VAL:O	2.01	0.60
30:YN:16:ILE:O	30:YN:55:VAL:HG22	2.01	0.60
34:YR:52:ILE:O	34:YR:55:ALA:HB3	2.01	0.60
35:YS:11:LYS:HB2	35:YS:91:PRO:HD3	1.84	0.60
39:YW:36:LEU:HD11	39:YW:47:VAL:HG12	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:80:LEU:O	44:Y1:81:LYS:HD2	2.00	0.60
48:Y5:52:TYR:O	48:Y5:53:ALA:HB3	2.02	0.60
54:XX:8:A:H8	54:XX:8:A:O5'	1.83	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.01	0.60
22:RA:443:A:C5	26:RF:45:ARG:HD2	2.37	0.60
22:RA:1289:C:H2'	22:RA:1290:C:C6	2.36	0.60
22:RA:1826:G:H4'	24:RD:242:ARG:NH2	2.14	0.60
22:RA:2328:A:H2'	22:RA:2329:G:C8	2.36	0.60
25:RE:51:PHE:O	25:RE:52:LEU:C	2.38	0.60
27:RG:64:THR:HG23	27:RG:66:GLN:H	1.67	0.60
27:RG:179:PRO:HG3	47:R4:38:LYS:HZ2	1.66	0.60
30:RN:133:GLN:O	30:RN:134:ARG:HB3	1.99	0.60
32:RP:55:ARG:HD2	32:RP:56:SER:O	2.01	0.60
33:RQ:54:MET:O	33:RQ:57:HIS:HB3	2.00	0.60
33:RQ:80:GLU:C	33:RQ:81:VAL:HG13	2.22	0.60
1:XA:1178:G:N2	1:XA:1181:G:N7	2.49	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
14:XN:44:LEU:HD12	14:XN:48:ALA:HB2	1.84	0.60
22:YA:2287:A:N6	22:YA:2344:U:H3	1.99	0.60
24:YD:35:LYS:HG2	24:YD:64:ILE:CG2	2.31	0.60
31:YO:97:ARG:N	31:YO:117:LEU:HD22	2.15	0.60
37:YU:90:VAL:CG1	37:YU:91:ASP:H	2.00	0.60
38:YV:35:LEU:HD23	38:YV:35:LEU:O	2.01	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.32	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
22:RA:896:A:H2	42:RZ:146:ILE:HD11	1.67	0.60
22:RA:1259:G:H2'	22:RA:1260:G:H8	1.66	0.60
26:RF:34:TRP:CZ3	32:RP:8:PRO:HB3	2.36	0.60
26:RF:164:ARG:HH11	26:RF:164:ARG:HG2	1.66	0.60
27:RG:112:PRO:HB3	47:R4:37:SER:CB	2.25	0.60
30:RN:17:ASP:O	30:RN:18:ALA:HB3	2.01	0.60
30:RN:99:LEU:O	30:RN:103:VAL:HG23	2.02	0.60
34:RR:92:GLY:H	34:RR:94:TYR:HE2	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:44:ILE:HG13	41:RY:45:VAL:H	1.65	0.60
1:XA:791:G:N2	1:XA:1497:G:O3'	2.35	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
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
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:HA	13:XM:9:ILE:CG2	2.21	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
24:YD:35:LYS:HD3	24:YD:63:ARG:CB	2.32	0.60
24:YD:147:LEU:HD13	24:YD:155:LEU:CD1	2.29	0.60
25:YE:93:VAL:N	25:YE:95:ILE:HD12	2.17	0.60
30:YN:23:LEU:HD12	30:YN:99:LEU:HD23	1.82	0.60
37:YU:92:ARG:NH1	37:YU:95:LEU:CD1	2.65	0.60
38:YV:99:ILE:N	38:YV:99:ILE:CD1	2.65	0.60
40:YX:43:VAL:CG1	40:YX:51:VAL:HG21	2.31	0.60
1:QA:161:A:H2'	1:QA:162:A:C8	2.37	0.60
1:QA:323:U:H5'	20:QT:23:ARG:HB2	1.84	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.83	0.60
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.65	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
22:RA:25:U:H5''	39:RW:80:PRO:HD3	1.84	0.60
22:RA:1081:U:H3'	22:RA:1082:U:H4'	1.84	0.60
23:RB:11:C:H3'	23:RB:12:C:H6	1.67	0.60
24:RD:2:ALA:HB3	24:RD:20:ASP:HB3	1.83	0.60
24:RD:25:THR:HG21	24:RD:81:ALA:CA	2.31	0.60
25:RE:4:ILE:CD1	25:RE:28:ALA:HB1	2.30	0.60
25:RE:37:ARG:NE	25:RE:37:ARG:CA	2.64	0.60
25:RE:95:ILE:HD12	25:RE:95:ILE:N	2.15	0.60
27:RG:44:GLY:HA2	27:RG:88:ILE:CG1	2.30	0.60
32:RP:13:ASN:O	32:RP:15:ARG:N	2.34	0.60
32:RP:138:LEU:C	32:RP:140:ALA:N	2.55	0.60
37:RU:76:TYR:CZ	37:RU:80:ILE:HG13	2.37	0.60
43:R0:68:GLU:OE1	43:R0:82:ARG:NH1	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:73:LEU:C	44:R1:75:GLU:H	2.03	0.60
45:R2:32:LEU:HD11	45:R2:54:LYS:HG3	1.84	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
22:YA:1543:A:O2'	22:YA:1544:C:O5'	2.18	0.60
22:YA:2414:G:H21	32:YP:67:MET:HE1	1.66	0.60
24:YD:21:PHE:HB3	24:YD:24:ILE:HG13	1.83	0.60
24:YD:72:LYS:HE3	24:YD:75:ILE:HD12	1.82	0.60
26:YF:175:THR:O	26:YF:176:LEU:CB	2.49	0.60
32:YP:79:ARG:HD3	32:YP:110:TYR:HE1	1.67	0.60
44:Y1:80:LEU:C	44:Y1:81:LYS:CD	2.69	0.60
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.36	0.60
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.83	0.60
1:QA:1128:C:H42	1:QA:1144:G:H1	1.49	0.60
1:QA:1397:C:C2'	54:QX:8:A:N6	2.65	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	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
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.32	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
22:RA:2635:C:OP1	25:RE:78:LEU:HD12	2.02	0.60
24:RD:35:LYS:HD3	24:RD:63:ARG:CB	2.32	0.60
25:RE:53:PRO:HG2	25:RE:54:GLN:NE2	2.16	0.60
26:RF:46:ARG:HH11	26:RF:46:ARG:CG	2.04	0.60
27:RG:128:ARG:HG3	27:RG:128:ARG:NH2	2.17	0.60
28:RH:30:LYS:CD	28:RH:81:GLU:H	2.15	0.60
28:RH:89:ILE:O	28:RH:91:GLY:N	2.35	0.60
28:RH:117:PRO:HB3	28:RH:123:PHE:CD1	2.37	0.60
34:RR:44:LEU:O	34:RR:48:VAL:HG23	2.02	0.60
38:RV:18:LEU:HB3	38:RV:96:ILE:HG12	1.83	0.60
40:RX:15:GLU:N	40:RX:15:GLU:OE1	2.34	0.60
1:XA:321:A:N6	1:XA:329:A:OP2	2.33	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
14:XN:19:ARG:O	14:XN:20:ALA:C	2.40	0.60
22:YA:2086:U:H2'	22:YA:2087:G:H8	1.66	0.60
22:YA:2543:G:H2'	22:YA:2544:G:C8	2.35	0.60
24:YD:35:LYS:CG	24:YD:64:ILE:N	2.56	0.60
25:YE:93:VAL:N	25:YE:95:ILE:CD1	2.65	0.60
26:YF:63:LYS:HE2	26:YF:67:GLN:HB3	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:9:ARG:HG2	27:YG:13:GLU:OE1	2.01	0.60
32:YP:121:LYS:HG3	32:YP:122:PRO:HD2	1.84	0.60
32:YP:138:LEU:C	32:YP:140:ALA:N	2.55	0.60
33:YQ:63:LYS:HE2	33:YQ:65:PHE:CE1	2.37	0.60
34:YR:75:LEU:HD13	34:YR:75:LEU:C	2.22	0.60
36:YT:107:ASP:O	36:YT:110:ILE:HG22	2.02	0.60
38:YV:66:ARG:HH12	38:YV:88:ARG:HH11	1.49	0.60
51:Y8:53:PRO:CD	51:Y8:54:GLU:H	2.15	0.60
1:QA:962:C:H2'	1:QA:963:G:H8	1.67	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
25:RE:63:LEU:CD1	25:RE:64:LYS:H	2.04	0.60
25:RE:116:VAL:O	25:RE:117:MET:CB	2.49	0.60
32:RP:27:HIS:N	32:RP:27:HIS:ND1	2.49	0.60
34:RR:44:LEU:HD22	34:RR:48:VAL:HG23	1.82	0.60
36:RT:34:VAL:HG12	36:RT:36:GLU:HG2	1.83	0.60
41:RY:4:LYS:O	41:RY:5:MET:HB2	2.01	0.60
42:RZ:70:LEU:HB2	42:RZ:91:LEU:HD21	1.84	0.60
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.37	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.60
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.60
25:YE:68:ALA:O	25:YE:69:LYS:HG3	2.02	0.60
27:YG:50:ALA:O	27:YG:53:LEU:HB3	2.01	0.60
44:Y1:81:LYS:HA	44:Y1:81:LYS:HZ3	0.70	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.59
22:RA:242:G:C8	51:R8:5:LYS:HG2	2.36	0.59
22:RA:384:U:H2'	22:RA:385:C:H6	1.67	0.59
22:RA:1043:C:N3	22:RA:1112:G:N2	2.43	0.59
22:RA:1795:C:O2	24:RD:255:LYS:HE2	2.02	0.59
24:RD:165:ILE:HA	24:RD:175:LEU:HD23	1.83	0.59
26:RF:155:LEU:CD1	26:RF:174:VAL:HG13	2.32	0.59
27:RG:126:ASP:OD1	27:RG:130:ASN:HB2	2.02	0.59
29:RI:129:THR:HA	29:RI:137:PRO:HA	1.83	0.59
33:RQ:81:VAL:HG23	33:RQ:82:ARG:H	1.67	0.59
34:RR:75:LEU:HD13	34:RR:75:LEU:C	2.22	0.59
36:RT:107:ASP:O	36:RT:110:ILE:HG22	2.02	0.59
38:RV:35:LEU:HB2	38:RV:37:VAL:HG23	1.85	0.59
1:XA:296:U:H2'	1:XA:297:G:H8	1.67	0.59
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.49	0.59
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.59
22:YA:2562:U:O2'	31:YO:23:ARG:NH1	2.33	0.59
22:YA:2698:U:H2'	22:YA:2699:C:C6	2.36	0.59
27:YG:111:LEU:HB2	27:YG:112:PRO:HD3	1.82	0.59
37:YU:92:ARG:HD3	37:YU:94:ASN:HB3	1.82	0.59
38:YV:35:LEU:HB2	38:YV:37:VAL:HG23	1.84	0.59
1:QA:411:A:N6	1:QA:413:G:H21	1.99	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
5:QE:152:ARG:O	8:QH:64:LYS:NZ	2.35	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.59
22:RA:565:C:H4'	22:RA:1253:A:C6	2.37	0.59
22:RA:812:C:HO2'	22:RA:1227:A:HO2'	1.50	0.59
25:RE:131:ALA:HB1	25:RE:135:HIS:HE1	1.65	0.59
28:RH:4:ILE:N	28:RH:4:ILE:HD13	2.18	0.59
30:RN:41:ASP:O	30:RN:48:MET:HE3	2.01	0.59
32:RP:79:ARG:HD3	32:RP:110:TYR:HE1	1.67	0.59
35:RS:99:LYS:O	35:RS:102:ALA:N	2.34	0.59
44:R1:91:LYS:CG	44:R1:92:LYS:H	2.15	0.59
1:XA:356:A:N3	1:XA:368:U:O2'	2.30	0.59
1:XA:891:U:H2'	1:XA:892:A:H8	1.66	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
22:YA:1542:G:O6	22:YA:1543:A:N6	2.35	0.59
28:YH:30:LYS:CD	28:YH:81:GLU:H	2.15	0.59
33:YQ:80:GLU:C	33:YQ:81:VAL:HG13	2.22	0.59
36:YT:57:PHE:CD2	36:YT:58:ASN:N	2.66	0.59
37:YU:96:ALA:C	37:YU:98:LEU:H	2.04	0.59
38:YV:1:MET:CE	38:YV:43:GLU:HG2	2.32	0.59
49:Y6:25:LYS:HD2	51:Y8:34:TRP:CZ2	2.36	0.59
49:Y6:41:PRO:HG2	49:Y6:45:LYS:N	2.10	0.59
51:Y8:22:VAL:CG2	51:Y8:53:PRO:HB2	2.32	0.59
51:Y8:56:GLU:O	51:Y8:59:LYS:N	2.35	0.59
1:QA:18:C:H5''	5:QE:127:ASN:HD21	1.67	0.59
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.36	0.59
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.83	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.83	0.59
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.67	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
22:RA:515:A:H1'	22:RA:581:C:H1'	1.85	0.59
22:RA:1980:G:O2'	22:RA:1982:C:OP2	2.20	0.59
24:RD:25:THR:HG21	24:RD:81:ALA:HA	1.84	0.59
24:RD:166:GLN:CA	24:RD:166:GLN:HE21	2.14	0.59
24:RD:236:GLY:C	24:RD:237:GLU:OE1	2.39	0.59
25:RE:61:ARG:HB2	25:RE:62:PRO:CD	2.32	0.59
25:RE:68:ALA:O	25:RE:69:LYS:HG3	2.02	0.59
29:RI:52:ARG:O	29:RI:56:LYS:N	2.34	0.59
30:RN:16:ILE:O	30:RN:55:VAL:HG22	2.01	0.59
32:RP:95:VAL:HG13	32:RP:100:LEU:HD21	1.84	0.59
35:RS:11:LYS:HB2	35:RS:91:PRO:HD3	1.84	0.59
36:RT:102:ILE:HB	36:RT:110:ILE:HD13	1.84	0.59
37:RU:58:ARG:HA	37:RU:61:TRP:CE3	2.37	0.59
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.83	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
24:YD:172:TYR:CD1	24:YD:186:HIS:HA	2.37	0.59
26:YF:123:LEU:HD12	26:YF:124:LEU:N	2.17	0.59
28:YH:55:PRO:HG2	28:YH:61:HIS:CE1	2.37	0.59
30:YN:18:ALA:HB3	30:YN:55:VAL:O	2.03	0.59
30:YN:42:TRP:O	37:YU:64:ARG:NH2	2.35	0.59
36:YT:102:ILE:HB	36:YT:110:ILE:HD13	1.84	0.59
41:YY:96:ILE:CD1	41:YY:98:VAL:HG12	2.32	0.59
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.37	0.59
4:QD:167:GLY:HA2	24:YD:135:PHE:CZ	2.38	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
24:RD:172:TYR:CD1	24:RD:186:HIS:HA	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:36:ARG:H	25:RE:37:ARG:HH21	1.49	0.59
25:RE:69:LYS:O	25:RE:71:GLY:N	2.27	0.59
27:RG:13:GLU:O	27:RG:14:GLU:CB	2.44	0.59
29:RI:14:ASP:O	29:RI:16:GLY:N	2.35	0.59
32:RP:37:GLY:HA2	32:RP:41:ARG:HE	1.68	0.59
33:RQ:63:LYS:HE2	33:RQ:65:PHE:CE1	2.37	0.59
33:RQ:80:GLU:OE1	43:R0:7:LEU:HB3	2.02	0.59
51:R8:22:VAL:CG2	51:R8:53:PRO:HB2	2.32	0.59
51:R8:22:VAL:HG21	51:R8:53:PRO:HB2	1.83	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	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
13:XM:121:LYS:HZ1	55:XY:40:G:P	2.23	0.59
22:YA:2023:G:H5'	22:YA:2617:C:H4'	1.83	0.59
25:YE:51:PHE:HD1	25:YE:52:LEU:HG	1.68	0.59
25:YE:116:VAL:O	25:YE:117:MET:CB	2.49	0.59
26:YF:11:VAL:HG11	26:YF:18:ARG:HE	1.67	0.59
28:YH:86:GLU:O	28:YH:131:VAL:O	2.20	0.59
28:YH:159:GLU:O	28:YH:160:LYS:HG2	2.03	0.59
32:YP:55:ARG:HD2	32:YP:56:SER:O	2.01	0.59
32:YP:127:ALA:O	32:YP:147:LEU:HD23	2.02	0.59
33:YQ:86:GLY:C	33:YQ:88:GLY:H	2.03	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
22:RA:580:C:H2'	22:RA:581:C:C6	2.38	0.59
23:RB:15:A:H5'	23:RB:16:G:C8	2.38	0.59
24:RD:35:LYS:HE3	24:RD:64:ILE:C	2.21	0.59
30:RN:78:TYR:N	30:RN:78:TYR:CD1	2.70	0.59
39:RW:66:GLU:O	39:RW:68:ARG:N	2.33	0.59
44:R1:87:PRO:O	44:R1:91:LYS:N	2.32	0.59
49:R6:13:CYS:O	49:R6:21:TYR:HA	2.02	0.59
1:XA:192:U:H4'	20:XT:102:GLY:O	2.03	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
22:YA:528:A:C2	22:YA:2042:A:H2'	2.37	0.59
22:YA:1129:A:N6	22:YA:2491:U:OP1	2.35	0.59
22:YA:2466:C:OP1	52:Y9:4:ARG:HB2	2.03	0.59
24:YD:12:SER:C	24:YD:14:ARG:H	2.06	0.59
24:YD:174:ILE:HD12	24:YD:174:ILE:N	2.16	0.59
30:YN:78:TYR:N	30:YN:78:TYR:CD1	2.70	0.59
32:YP:95:VAL:HG13	32:YP:100:LEU:HD21	1.84	0.59
34:YR:92:GLY:H	34:YR:94:TYR:HE2	1.49	0.59
37:YU:58:ARG:HA	37:YU:61:TRP:CE3	2.37	0.59
37:YU:76:TYR:CZ	37:YU:80:ILE:HG13	2.37	0.59
37:YU:92:ARG:C	37:YU:94:ASN:H	2.05	0.59
41:YY:4:LYS:O	41:YY:5:MET:HB2	2.01	0.59
41:YY:95:LYS:HD3	41:YY:95:LYS:H	1.67	0.59
46:Y3:29:ARG:HH11	46:Y3:29:ARG:CB	2.13	0.59
55:QY:36:G:H2'	55:QY:37:1MG:C8	2.38	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
22:RA:769:G:H5'	22:RA:1379:A:H61	1.66	0.59
22:RA:1904:G:H2'	22:RA:1905:C:O4'	2.02	0.59
22:RA:2280:G:O2'	22:RA:2388:A:N1	2.32	0.59
22:RA:2593:U:H2'	22:RA:2594:C:C6	2.37	0.59
25:RE:116:VAL:CG2	25:RE:122:PHE:CD2	2.86	0.59
26:RF:123:LEU:HD12	26:RF:124:LEU:N	2.17	0.59
32:RP:71:VAL:HG13	32:RP:72:PRO:HD3	1.84	0.59
32:RP:106:LEU:O	32:RP:107:LYS:CB	2.46	0.59
47:R4:63:TYR:C	47:R4:65:ASP:H	2.05	0.59
48:R5:40:LYS:NZ	48:R5:46:CYS:HB3	2.18	0.59
1:XA:7:G:H5'	1:XA:298:A:O4'	2.03	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	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
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
22:YA:451:C:H4'	26:YF:52:LYS:HZ2	1.67	0.59
22:YA:459:U:H2'	22:YA:460:A:C8	2.37	0.59
27:YG:16:ARG:NH2	27:YG:31:VAL:HG11	2.17	0.59
28:YH:4:ILE:N	28:YH:4:ILE:HD13	2.18	0.59
30:YN:6:PRO:HG3	30:YN:41:ASP:HB2	1.83	0.59
30:YN:58:ASP:N	30:YN:60:ILE:HD11	2.16	0.59
37:YU:92:ARG:HH11	37:YU:95:LEU:HD12	1.67	0.59
1:QA:527:G:O2'	1:QA:535:A:N1	2.31	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
22:RA:1327:C:O3'	34:RR:105:ARG:NH2	2.36	0.59
22:RA:2591:C:N4	22:RA:2592:G:O6	2.35	0.59
22:RA:2746:U:H5''	28:RH:138:LYS:HE2	1.85	0.59
24:RD:54:ARG:HH11	24:RD:54:ARG:CG	2.14	0.59
24:RD:137:PRO:HB2	24:RD:140:THR:CG2	2.33	0.59
28:RH:82:GLY:O	28:RH:135:GLY:O	2.20	0.59
35:RS:89:ARG:O	35:RS:90:GLY:O	2.19	0.59
39:RW:36:LEU:HD11	39:RW:47:VAL:HG12	1.83	0.59
41:RY:51:VAL:CG1	41:RY:52:SER:H	2.11	0.59
42:RZ:69:THR:HB	42:RZ:88:PHE:HB3	1.84	0.59
1:XA:881:G:H2'	1:XA:882:C:O4'	2.01	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
14:XN:15:LYS:HD2	14:XN:16:PHE:CZ	2.37	0.59
22:YA:2562:U:H1'	31:YO:23:ARG:NH1	2.17	0.59
29:YI:3:VAL:HG12	29:YI:38:LEU:HA	1.84	0.59
32:YP:39:LYS:CA	32:YP:45:LEU:CD1	2.80	0.59
33:YQ:81:VAL:HG23	33:YQ:82:ARG:H	1.67	0.59
34:YR:72:ASP:O	34:YR:76:VAL:HB	2.03	0.59
38:YV:15:GLU:HG3	38:YV:16:PRO:HD2	1.83	0.59
47:Y4:48:ARG:NH1	47:Y4:52:THR:H	2.01	0.59
53:QV:53:G:H4'	53:QV:54:U:OP1	2.02	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.83	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
22:RA:1820:U:C2	24:RD:202:LYS:HB3	2.38	0.59
22:RA:2011:U:OP2	39:RW:16:LYS:NZ	2.35	0.59
22:RA:2315:G:OP1	27:RG:36:LYS:NZ	2.35	0.59
22:RA:2510:C:H2'	22:RA:2511:U:C6	2.38	0.59
23:RB:40:U:H1'	23:RB:45:A:H61	1.68	0.59
23:RB:116:G:H4'	35:RS:54:LEU:HD13	1.83	0.59
25:RE:93:VAL:N	25:RE:95:ILE:CD1	2.65	0.59
30:RN:9:VAL:HG21	30:RN:48:MET:HB3	1.85	0.59
34:RR:79:LEU:HD23	34:RR:79:LEU:C	2.23	0.59
1:XA:902:G:H2'	1:XA:903:G:H8	1.68	0.59
1:XA:1095:U:P	1:XA:1108:G:H1	2.26	0.59
17:XQ:41:LYS:HZ3	17:XQ:92:ARG:HH22	1.49	0.59
22:YA:2573:C:N4	56:Z8:75:C:O2'	2.35	0.59
24:YD:27:THR:CG2	24:YD:83:GLU:HB3	2.33	0.59
24:YD:177:LEU:HD11	24:YD:183:ARG:HB2	1.85	0.59
25:YE:36:ARG:H	25:YE:37:ARG:HH21	1.49	0.59
28:YH:82:GLY:O	28:YH:135:GLY:O	2.20	0.59
28:YH:124:GLU:HB3	28:YH:132:ARG:HG3	1.85	0.59
35:YS:88:ASP:O	35:YS:89:ARG:CB	2.49	0.59
42:YZ:95:PRO:HG2	42:YZ:127:LYS:HD3	1.85	0.59
47:Y4:15:ILE:HG22	47:Y4:19:GLY:O	2.03	0.59
47:Y4:22:ILE:HG22	47:Y4:23:GLU:N	2.18	0.59
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.01	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
24:RD:12:SER:C	24:RD:14:ARG:H	2.06	0.59
28:RH:55:PRO:HG2	28:RH:61:HIS:CE1	2.37	0.59
28:RH:127:GLU:HG2	28:RH:128:PRO:CG	2.33	0.59
35:RS:42:ASP:C	35:RS:44:LYS:H	2.06	0.59
36:RT:66:VAL:HG12	36:RT:67:SER:H	1.66	0.59
37:RU:52:ARG:HG2	37:RU:52:ARG:NH1	2.18	0.59
38:RV:1:MET:CE	38:RV:43:GLU:HG2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.36	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
22:YA:2867:G:HO2'	22:YA:2868:A:H8	1.50	0.59
24:YD:137:PRO:HB2	24:YD:140:THR:CG2	2.33	0.59
25:YE:4:ILE:C	25:YE:5:LEU:HD23	2.23	0.59
25:YE:61:ARG:HB2	25:YE:62:PRO:CD	2.33	0.59
28:YH:126:PRO:CD	28:YH:127:GLU:N	2.64	0.59
32:YP:138:LEU:O	32:YP:140:ALA:N	2.33	0.59
34:YR:63:ARG:HH11	34:YR:63:ARG:HG3	1.68	0.59
36:YT:102:ILE:HB	36:YT:110:ILE:HD11	1.84	0.59
40:YX:49:VAL:CG1	40:YX:83:VAL:HG13	2.33	0.59
45:Y2:64:LEU:CD2	45:Y2:68:ARG:HD2	2.33	0.59
47:Y4:3:GLU:HG3	47:Y4:4:GLY:N	2.18	0.59
1:QA:370:C:H2'	1:QA:371:G:C8	2.38	0.59
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.18	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	2.49	0.59
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.59
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.59
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.59
22:RA:468:G:N7	50:R7:39:ARG:NH2	2.51	0.59
22:RA:2199:A:H3'	22:RA:2205:C:C6	2.37	0.59
24:RD:71:ASP:HB3	24:RD:103:ARG:HH22	1.68	0.59
26:RF:89:VAL:HG12	26:RF:90:PHE:N	2.18	0.59
30:RN:18:ALA:HB3	30:RN:55:VAL:O	2.03	0.59
30:RN:114:ARG:O	30:RN:115:ARG:HB3	2.03	0.59
32:RP:127:ALA:O	32:RP:147:LEU:HD23	2.01	0.59
32:RP:138:LEU:O	32:RP:140:ALA:N	2.33	0.59
40:RX:49:VAL:CG1	40:RX:83:VAL:HG13	2.33	0.59
1:XA:679:C:H2'	1:XA:680:C:C6	2.37	0.59
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.59
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.59
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.59
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:174:VAL:HG13	26:YF:174:VAL:O	2.03	0.59
27:YG:126:ASP:OD1	27:YG:130:ASN:HB2	2.02	0.59
29:YI:120:ILE:HD11	29:YI:126:TYR:CZ	2.38	0.59
38:YV:18:LEU:HB3	38:YV:96:ILE:HG12	1.84	0.59
1:QA:67:C:H2'	1:QA:68:G:C8	2.38	0.58
1:QA:974:A:H1'	14:QN:31:ARG:HE	1.67	0.58
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.85	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	0.58
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.58
22:RA:1814:G:H4'	24:RD:51:VAL:HG21	1.84	0.58
22:RA:2215:G:H2'	22:RA:2216:G:H8	1.67	0.58
25:RE:72:VAL:O	25:RE:73:GLU:O	2.21	0.58
28:RH:92:ILE:HG22	28:RH:93:GLY:N	2.18	0.58
30:RN:13:TRP:O	30:RN:135:PRO:HD2	2.03	0.58
32:RP:121:LYS:HG3	32:RP:122:PRO:HD2	1.84	0.58
34:RR:72:ASP:O	34:RR:76:VAL:HB	2.03	0.58
36:RT:102:ILE:HB	36:RT:110:ILE:HD11	1.84	0.58
1:XA:666:G:H5'	1:XA:726:C:H1'	1.85	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.58
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	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
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.58
22:YA:2291:U:H2'	22:YA:2292:C:C6	2.38	0.58
24:YD:27:THR:CG2	24:YD:28:GLU:N	2.66	0.58
26:YF:63:LYS:HE2	26:YF:67:GLN:CB	2.32	0.58
28:YH:4:ILE:HG13	28:YH:6:ARG:CD	2.33	0.58
28:YH:89:ILE:O	28:YH:91:GLY:N	2.35	0.58
28:YH:92:ILE:HG22	28:YH:93:GLY:N	2.18	0.58
32:YP:37:GLY:HA2	32:YP:41:ARG:HE	1.67	0.58
36:YT:66:VAL:HG12	36:YT:67:SER:H	1.67	0.58
39:YW:80:PRO:O	39:YW:100:THR:HG22	2.03	0.58
45:Y2:32:LEU:HD11	45:Y2:54:LYS:HG3	1.84	0.58
47:Y4:39:CYS:O	47:Y4:40:HIS:HB2	2.03	0.58
48:Y5:40:LYS:NZ	48:Y5:46:CYS:HB3	2.18	0.58
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.18	0.58
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.36	0.58
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.58
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.58
17:QQ:92:ARG:HG3	17:QQ:92:ARG:HH11	1.68	0.58
25:RE:93:VAL:N	25:RE:95:ILE:HD12	2.17	0.58
35:RS:88:ASP:CG	35:RS:90:GLY:H	2.06	0.58
36:RT:36:GLU:HG3	36:RT:41:ARG:HD3	1.85	0.58
45:R2:64:LEU:CD2	45:R2:68:ARG:HD2	2.33	0.58
47:R4:65:ASP:O	47:R4:66:SER:CB	2.51	0.58
1:XA:966:G:C2	53:XV:34:C:H5'	2.38	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
13:XM:3:ARG:CZ	27:YG:113:ARG:HH21	2.16	0.58
23:YB:28:C:OP1	35:YS:36:TYR:OH	2.15	0.58
27:YG:16:ARG:HB3	27:YG:17:PRO:CD	2.33	0.58
32:YP:71:VAL:HG13	32:YP:72:PRO:HD3	1.84	0.58
33:YQ:66:ILE:HA	33:YQ:104:PHE:HA	1.85	0.58
34:YR:44:LEU:O	34:YR:48:VAL:HG23	2.02	0.58
36:YT:36:GLU:HG3	36:YT:41:ARG:HD3	1.85	0.58
47:Y4:63:TYR:C	47:Y4:65:ASP:H	2.05	0.58
48:Y5:50:GLY:O	48:Y5:51:TYR:HB2	2.02	0.58
53:XV:35:A:C4	54:XX:3:G:N2	2.71	0.58
1:QA:762:C:H2'	1:QA:763:G:C8	2.38	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.85	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
22:RA:607:U:OP1	26:RF:102:PRO:HA	2.03	0.58
22:RA:1228:G:OP2	37:RU:16:LYS:NZ	2.24	0.58
22:RA:1262:A:N3	48:R5:10:LYS:HE3	2.17	0.58
24:RD:34:VAL:O	24:RD:34:VAL:CG1	2.50	0.58
24:RD:92:ILE:HD12	24:RD:104:TYR:CD2	2.38	0.58
26:RF:63:LYS:HE2	26:RF:67:GLN:CB	2.33	0.58
28:RH:86:GLU:O	28:RH:131:VAL:O	2.21	0.58
31:RO:20:MET:O	31:RO:41:ALA:HB1	2.04	0.58
38:RV:41:GLY:H	38:RV:46:VAL:HG13	1.67	0.58
45:R2:16:LEU:O	45:R2:16:LEU:CG	2.49	0.58
45:R2:16:LEU:O	45:R2:17:SER:HB3	2.04	0.58
45:R2:17:SER:CB	45:R2:18:PRO:HA	2.33	0.58
47:R4:42:PHE:CG	47:R4:43:TYR:N	2.72	0.58
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:3:ARG:CB	47:Y4:34:GLU:HB3	2.31	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
22:YA:630:G:N2	22:YA:633:A:OP2	2.20	0.58
22:YA:839:U:H2'	22:YA:840:C:C6	2.38	0.58
22:YA:2277:G:H5'	33:YQ:85:LYS:HG3	1.85	0.58
24:YD:44:ASN:HB3	24:YD:49:ILE:CA	2.27	0.58
38:YV:49:THR:CB	38:YV:50:PRO:HD2	2.25	0.58
55:QY:39:C:O2'	55:QY:40:G:OP1	2.21	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	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
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
22:RA:1883:G:HO2'	22:RA:1884:A:H8	1.51	0.58
22:RA:2306:C:H2'	22:RA:2307:G:H21	1.68	0.58
22:RA:2443:C:H2'	22:RA:2444:G:H8	1.67	0.58
23:RB:16:G:H2'	23:RB:17:C:C6	2.38	0.58
24:RD:35:LYS:CG	24:RD:64:ILE:H	2.14	0.58
25:RE:6:GLY:HA3	25:RE:26:ILE:HD11	1.85	0.58
27:RG:16:ARG:NH2	27:RG:31:VAL:HG11	2.17	0.58
30:RN:14:VAL:HG12	30:RN:15:LEU:N	2.19	0.58
31:RO:71:ARG:HH11	31:RO:71:ARG:HG3	1.69	0.58
37:RU:92:ARG:NH1	37:RU:95:LEU:CD1	2.65	0.58
41:RY:81:LYS:HD3	41:RY:97:ARG:CD	2.34	0.58
45:R2:69:ARG:NH1	45:R2:69:ARG:CB	2.67	0.58
47:R4:12:ALA:CB	47:R4:29:PRO:HA	2.33	0.58
47:R4:48:ARG:NH1	47:R4:52:THR:H	2.01	0.58
1:XA:595:G:H1'	1:XA:596:C:H5	1.69	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
22:YA:704:G:H2'	22:YA:726:G:H22	1.67	0.58
22:YA:1316:U:H2'	22:YA:1317:A:C8	2.38	0.58
22:YA:2414:G:H21	32:YP:67:MET:CE	2.17	0.58
27:YG:64:THR:HG23	27:YG:66:GLN:H	1.67	0.58
30:YN:9:VAL:HG21	30:YN:48:MET:HB3	1.85	0.58
32:YP:65:ARG:HH21	51:Y8:15:LYS:CB	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:51:ARG:HA	45:Y2:54:LYS:HB2	1.86	0.58
49:Y6:27:LYS:HB2	49:Y6:27:LYS:HZ2	1.66	0.58
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.39	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
8:QH:10:LEU:H	8:QH:10:LEU:CD2	2.15	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.02	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
22:RA:189:G:H2'	22:RA:205:G:H22	1.67	0.58
22:RA:678:C:H2'	22:RA:679:C:H6	1.67	0.58
26:RF:160:ASN:OD1	26:RF:162:LEU:HB2	2.04	0.58
28:RH:4:ILE:HG13	28:RH:6:ARG:CD	2.33	0.58
28:RH:159:GLU:O	28:RH:160:LYS:HG2	2.02	0.58
37:RU:92:ARG:HH11	37:RU:95:LEU:HD12	1.67	0.58
41:RY:96:ILE:CD1	41:RY:98:VAL:HG12	2.33	0.58
48:R5:60:VAL:HG13	48:R5:60:VAL:OXT	2.03	0.58
51:R8:46:ARG:O	51:R8:47:LYS:HB3	2.03	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	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
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.17	0.58
22:YA:2761:G:H1'	28:YH:143:GLN:OE1	2.03	0.58
24:YD:165:ILE:HA	24:YD:175:LEU:HD23	1.83	0.58
26:YF:89:VAL:HG12	26:YF:90:PHE:N	2.18	0.58
28:YH:85:LYS:HA	28:YH:86:GLU:OE1	2.03	0.58
28:YH:117:PRO:HB3	28:YH:123:PHE:CD1	2.37	0.58
31:YO:40:VAL:HG12	31:YO:41:ALA:N	2.19	0.58
33:YQ:55:VAL:HG22	33:YQ:56:ARG:N	2.18	0.58
39:YW:66:GLU:O	39:YW:68:ARG:N	2.33	0.58
40:YX:36:LYS:HE3	40:YX:54:VAL:O	2.04	0.58
47:Y4:65:ASP:O	47:Y4:66:SER:CB	2.51	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	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
22:RA:271(A):C:O2	22:RA:272:G:H1'	2.03	0.58
22:RA:812:C:O2'	22:RA:1227:A:O2'	2.19	0.58
22:RA:2469:A:H2	22:RA:2481:G:H21	1.51	0.58
24:RD:242:ARG:HD2	24:RD:242:ARG:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:11:VAL:HG11	26:RF:18:ARG:HE	1.67	0.58
34:RR:117:VAL:CG2	34:RR:118:GLU:H	2.15	0.58
35:RS:67:ARG:HB2	35:RS:67:ARG:HH11	1.65	0.58
39:RW:95:ILE:HD12	39:RW:95:ILE:O	2.04	0.58
1:XA:93:U:H2'	1:XA:95:G:O4'	2.04	0.58
1:XA:373:A:O2'	1:XA:374:A:H5'	2.03	0.58
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.38	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.85	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
30:YN:41:ASP:O	30:YN:48:MET:HE3	2.03	0.58
33:YQ:90:VAL:C	33:YQ:92:GLY:H	2.07	0.58
34:YR:2:ARG:HG2	34:YR:5:LYS:HZ1	1.68	0.58
35:YS:88:ASP:CG	35:YS:90:GLY:H	2.06	0.58
41:YY:81:LYS:HD3	41:YY:97:ARG:CD	2.33	0.58
45:Y2:17:SER:CB	45:Y2:18:PRO:HA	2.33	0.58
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.33	0.58
1:QA:1296:C:HO2'	1:QA:1302:U:H5	1.49	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
22:RA:270(T):G:O5'	44:R1:97:LEU:HD22	2.04	0.58
22:RA:1026:U:H4'	22:RA:1027:A:OP1	2.04	0.58
22:RA:2392:A:OP2	22:RA:2422:A:N6	2.37	0.58
31:RO:7:TYR:HE1	31:RO:20:MET:HE3	1.68	0.58
41:RY:95:LYS:HD3	41:RY:95:LYS:H	1.67	0.58
47:R4:3:GLU:HG3	47:R4:4:GLY:N	2.18	0.58
47:R4:15:ILE:HG22	47:R4:19:GLY:O	2.03	0.58
1:XA:137:C:H42	1:XA:226:G:H1	1.50	0.58
1:XA:445:G:H1	1:XA:489:C:H42	1.51	0.58
1:XA:1472:U:O4	1:XA:1473:A:N6	2.36	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	2.03	0.58
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
22:YA:278:A:H2'	22:YA:279:C:C6	2.39	0.58
23:YB:80:U:H2'	23:YB:81:G:H21	1.68	0.58
25:YE:51:PHE:CD1	25:YE:52:LEU:HG	2.38	0.58
28:YH:41:MET:HE1	28:YH:64:LEU:HB3	1.86	0.58
29:YI:4:ILE:HG12	29:YI:18:VAL:HG22	1.84	0.58
32:YP:71:VAL:CG1	32:YP:72:PRO:HD3	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YV:38:LEU:HD23	38:YV:39:LEU:N	2.19	0.58
39:YW:95:ILE:HD12	39:YW:95:ILE:O	2.04	0.58
41:YY:51:VAL:CG1	41:YY:52:SER:H	2.11	0.58
42:YZ:48:PHE:HE2	42:YZ:71:VAL:HG11	1.69	0.58
46:Y3:22:ALA:O	46:Y3:25:ALA:HB3	2.04	0.58
47:Y4:12:ALA:CB	47:Y4:29:PRO:HA	2.33	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.51	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
22:RA:78:A:H2'	22:RA:79:G:H8	1.68	0.58
22:RA:590:A:H2'	22:RA:591:C:C6	2.38	0.58
22:RA:2745:C:O2	28:RH:139:GLN:NE2	2.36	0.58
25:RE:51:PHE:CD1	25:RE:52:LEU:HG	2.39	0.58
26:RF:174:VAL:HG13	26:RF:174:VAL:O	2.03	0.58
29:RI:102:SER:O	29:RI:106:GLY:N	2.36	0.58
32:RP:71:VAL:CG1	32:RP:72:PRO:HD3	2.33	0.58
40:RX:7:VAL:O	40:RX:30:VAL:HG12	2.03	0.58
40:RX:27:THR:HB	40:RX:80:ILE:HB	1.84	0.58
47:R4:27:THR:O	47:R4:28:LYS:HB3	2.03	0.58
48:R5:50:GLY:O	48:R5:51:TYR:HB2	2.03	0.58
1:XA:565:U:H5''	1:XA:566:G:H2'	1.86	0.58
1:XA:797:C:OP1	11:XK:124:LYS:HE2	2.04	0.58
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.39	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
22:YA:2450:A:O2'	53:XV:76:A:C2	2.53	0.58
22:YA:2683:C:O2'	25:YE:13:ARG:NH2	2.37	0.58
25:YE:63:LEU:HD13	25:YE:65:GLY:H	1.68	0.58
25:YE:72:VAL:O	25:YE:73:GLU:O	2.21	0.58
25:YE:78:LEU:HD23	25:YE:79:ARG:HD2	1.86	0.58
26:YF:138:GLU:O	26:YF:141:ALA:HB3	2.03	0.58
30:YN:13:TRP:O	30:YN:135:PRO:HD2	2.03	0.58
40:YX:7:VAL:O	40:YX:30:VAL:HG12	2.04	0.58
42:YZ:52:SER:O	42:YZ:52:SER:OG	2.21	0.58
45:Y2:15:LYS:H	45:Y2:67:LYS:CE	2.17	0.58
45:Y2:69:ARG:NH1	45:Y2:69:ARG:CB	2.67	0.58
55:XY:39:C:O2'	55:XY:40:G:OP1	2.21	0.58
1:QA:715:A:H2'	1:QA:716:A:C8	2.39	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.58
22:RA:2695:C:H2'	22:RA:2696:U:C6	2.38	0.58
30:RN:101:HIS:ND1	30:RN:101:HIS:C	2.56	0.58
39:RW:80:PRO:O	39:RW:100:THR:HG22	2.03	0.58
51:R8:56:GLU:O	51:R8:59:LYS:N	2.35	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.19	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
12:XL:54:LYS:N	12:XL:54:LYS:HD2	2.18	0.58
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.52	0.58
22:YA:1972:A:H2'	22:YA:1973:G:H8	1.69	0.58
22:YA:2252:G:N1	53:XV:74:C:N3	2.44	0.58
24:YD:242:ARG:HD2	24:YD:242:ARG:N	2.18	0.58
32:YP:13:ASN:C	32:YP:15:ARG:N	2.54	0.58
33:YQ:47:ILE:CD1	33:YQ:70:PRO:HD3	2.34	0.58
34:YR:117:VAL:CG2	34:YR:118:GLU:H	2.15	0.58
35:YS:42:ASP:C	35:YS:44:LYS:H	2.06	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
22:RA:984:A:H5''	22:RA:985:C:H5	1.69	0.58
22:RA:1161:C:O2'	38:RV:8:GLY:HA2	2.04	0.58
22:RA:1412:A:H2'	22:RA:1413:G:O4'	2.04	0.58
22:RA:2245:U:H5'	22:RA:2246:G:H5'	1.85	0.58
25:RE:111:ARG:NE	25:RE:160:TYR:HE1	2.01	0.58
28:RH:125:VAL:HG12	28:RH:126:PRO:CG	2.34	0.58
33:RQ:47:ILE:CD1	33:RQ:70:PRO:HD3	2.34	0.58
33:RQ:90:VAL:C	33:RQ:92:GLY:H	2.07	0.58
37:RU:24:TYR:HE1	37:RU:39:LEU:HD23	1.69	0.58
47:R4:15:ILE:HG22	47:R4:20:ASN:HA	1.86	0.58
47:R4:38:LYS:C	47:R4:40:HIS:N	2.52	0.58
47:R4:39:CYS:O	47:R4:40:HIS:HB2	2.03	0.58
1:XA:266:G:O2'	1:XA:267:C:OP2	2.18	0.58
1:XA:272:C:H2'	1:XA:273:A:C8	2.39	0.58
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.58
2:XB:111:ARG:HA	2:XB:111:ARG:NE	2.18	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.58
16:XP:76:GLN:O	16:XP:76:GLN:HG2	2.04	0.58
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.58
22:YA:2862:G:H2'	22:YA:2863:C:H6	1.69	0.58
25:YE:111:ARG:NE	25:YE:160:TYR:HE1	2.01	0.58
27:YG:39:ILE:HG23	27:YG:155:MET:HG3	1.86	0.58
28:YH:127:GLU:HG2	28:YH:128:PRO:CG	2.32	0.58
30:YN:35:ARG:O	30:YN:37:LYS:N	2.37	0.58
30:YN:114:ARG:O	30:YN:115:ARG:HB3	2.03	0.58
35:YS:26:LEU:CD2	35:YS:87:PHE:HD1	2.17	0.58
36:YT:82:LEU:HD12	36:YT:82:LEU:N	2.19	0.58
53:XV:53:G:H4'	53:XV:54:U:OP1	2.02	0.58
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.57
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
22:RA:249:C:O2	51:R8:12:LYS:HE3	2.03	0.57
22:RA:263:C:H2'	22:RA:264:C:O4'	2.04	0.57
22:RA:1021:A:OP2	30:RN:65:LYS:NZ	2.37	0.57
22:RA:1266:G:C5	39:RW:15:ARG:NH1	2.72	0.57
22:RA:1354:A:OP1	24:RD:38:LYS:HE2	2.04	0.57
24:RD:25:THR:HG21	24:RD:81:ALA:HB1	1.85	0.57
24:RD:27:THR:CG2	24:RD:83:GLU:HB3	2.33	0.57
24:RD:147:LEU:HD13	24:RD:155:LEU:CD1	2.29	0.57
26:RF:138:GLU:O	26:RF:141:ALA:HB3	2.04	0.57
28:RH:85:LYS:HA	28:RH:86:GLU:OE1	2.04	0.57
33:RQ:55:VAL:HG22	33:RQ:56:ARG:N	2.18	0.57
35:RS:26:LEU:CD2	35:RS:87:PHE:HD1	2.17	0.57
35:RS:67:ARG:HH11	35:RS:67:ARG:CB	2.17	0.57
45:R2:15:LYS:H	45:R2:67:LYS:NZ	2.02	0.57
47:R4:22:ILE:HG22	47:R4:23:GLU:N	2.18	0.57
1:XA:243:A:H4'	1:XA:244:U:O5'	2.02	0.57
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.57
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
22:YA:2506:U:H6	56:Z8:76:PPU:HN'3	1.51	0.57
23:YB:101:A:H8	23:YB:101:A:OP2	1.86	0.57
26:YF:160:ASN:OD1	26:YF:162:LEU:HB2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:4:ILE:HD13	28:YH:4:ILE:H	1.68	0.57
35:YS:95:HIS:CG	35:YS:96:GLY:H	2.21	0.57
45:Y2:21:LEU:O	45:Y2:25:VAL:HG23	2.04	0.57
47:Y4:37:SER:HB3	47:Y4:42:PHE:CE1	2.38	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.85	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	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
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.57
22:RA:49:A:H61	22:RA:177:G:H2'	1.69	0.57
22:RA:674:G:C1'	26:RF:74:ARG:HD3	2.30	0.57
24:RD:263:ARG:HB2	24:RD:263:ARG:HH11	1.67	0.57
27:RG:53:LEU:C	27:RG:53:LEU:HD23	2.25	0.57
28:RH:4:ILE:HD13	28:RH:4:ILE:H	1.68	0.57
28:RH:84:SER:O	28:RH:133:VAL:O	2.22	0.57
28:RH:153:LYS:HA	28:RH:153:LYS:HZ3	1.68	0.57
32:RP:59:LEU:HA	32:RP:61:ARG:CZ	2.34	0.57
35:RS:95:HIS:CG	35:RS:96:GLY:H	2.21	0.57
36:RT:82:LEU:HD12	36:RT:82:LEU:N	2.19	0.57
45:R2:21:LEU:O	45:R2:25:VAL:HG23	2.04	0.57
1:XA:210:U:O2'	1:XA:216:G:N7	2.35	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	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
22:YA:141:A:C8	22:YA:1408:C:H1'	2.39	0.57
24:YD:71:ASP:HB3	24:YD:103:ARG:HH22	1.68	0.57
25:YE:6:GLY:HA3	25:YE:26:ILE:HD11	1.85	0.57
25:YE:203:LYS:HE3	25:YE:204:ALA:HB2	1.86	0.57
29:YI:26:ALA:HA	29:YI:30:LEU:HB2	1.86	0.57
33:YQ:79:LEU:CD1	43:Y0:5:LYS:HD3	2.33	0.57
35:YS:67:ARG:NH1	35:YS:67:ARG:CB	2.64	0.57
40:YX:27:THR:HB	40:YX:80:ILE:HB	1.85	0.57
1:QA:895:G:H2'	1:QA:896:C:C6	2.39	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
22:RA:1935:G:H1'	22:RA:1964:G:N2	2.19	0.57
22:RA:2050:C:N4	22:RA:2051:A:N1	2.52	0.57
22:RA:2445:G:OP1	26:RF:74:ARG:NH2	2.37	0.57
24:RD:35:LYS:HG2	24:RD:64:ILE:CA	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:125:VAL:HA	28:RH:126:PRO:CB	2.29	0.57
29:RI:4:ILE:HG12	29:RI:18:VAL:HG22	1.85	0.57
29:RI:88:ILE:HG12	29:RI:122:GLU:H	1.70	0.57
38:RV:35:LEU:HD21	38:RV:57:VAL:CG2	2.31	0.57
38:RV:78:LYS:O	38:RV:79:VAL:HB	2.04	0.57
39:RW:1:MET:HA	39:RW:1:MET:HE3	1.86	0.57
44:R1:81:LYS:HE2	44:R1:81:LYS:H	1.62	0.57
47:R4:37:SER:HB3	47:R4:42:PHE:CE1	2.38	0.57
48:R5:55:ARG:NH1	48:R5:58:LEU:HD11	2.19	0.57
1:XA:842:C:O2'	1:XA:848:C:N4	2.37	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
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.20	0.57
13:XM:57:ARG:NH2	47:Y4:34:GLU:HA	2.19	0.57
22:YA:1257:C:H5'	26:YF:75:HIS:CE1	2.40	0.57
25:YE:41:LYS:HE2	25:YE:41:LYS:HA	1.86	0.57
25:YE:63:LEU:HD12	25:YE:65:GLY:H	1.69	0.57
25:YE:116:VAL:CG2	25:YE:122:PHE:CD2	2.86	0.57
26:YF:192:LEU:HD21	26:YF:194:MET:CE	2.35	0.57
34:YR:32:GLY:O	34:YR:115:GLU:HA	2.04	0.57
38:YV:78:LYS:O	38:YV:79:VAL:HB	2.04	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
12:QL:47:LYS:HG2	12:QL:48:PRO:CD	2.33	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
22:RA:566:U:OP1	32:RP:29:LYS:HE2	2.05	0.57
22:RA:1139:G:O2'	22:RA:1143:A:N1	2.32	0.57
22:RA:2556:C:H2'	22:RA:2557:G:O4'	2.04	0.57
25:RE:74:PRO:HG2	25:RE:77:ILE:HG23	1.86	0.57
27:RG:16:ARG:HB3	27:RG:17:PRO:CD	2.33	0.57
27:RG:39:ILE:HG23	27:RG:155:MET:HG3	1.86	0.57
27:RG:63:ILE:HD11	27:RG:102:PHE:HE2	1.69	0.57
31:RO:20:MET:HG2	31:RO:21:CYS:N	2.20	0.57
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.37	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.17	0.57
19:XS:65:ASN:CA	47:Y4:55:ARG:NH1	2.67	0.57
22:YA:1454:U:H5'	34:YR:63:ARG:NE	2.16	0.57
22:YA:2346:A:H5''	22:YA:2383:G:H1'	1.86	0.57
24:YD:35:LYS:HG2	24:YD:64:ILE:CA	2.34	0.57
27:YG:53:LEU:C	27:YG:53:LEU:HD23	2.25	0.57
30:YN:14:VAL:HG12	30:YN:15:LEU:N	2.18	0.57
31:YO:20:MET:O	31:YO:41:ALA:HB1	2.04	0.57
31:YO:71:ARG:HG3	31:YO:71:ARG:HH11	1.69	0.57
37:YU:24:TYR:HE1	37:YU:39:LEU:HD23	1.70	0.57
45:Y2:16:LEU:O	45:Y2:17:SER:HB3	2.04	0.57
46:Y3:4:LEU:O	46:Y3:36:VAL:HA	2.04	0.57
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.39	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
22:RA:1340:U:OP2	40:RX:78:LYS:NZ	2.37	0.57
24:RD:177:LEU:HD11	24:RD:183:ARG:HB2	1.85	0.57
25:RE:63:LEU:HD13	25:RE:65:GLY:H	1.68	0.57
27:RG:39:ILE:CG2	27:RG:155:MET:HG3	2.35	0.57
30:RN:35:ARG:O	30:RN:37:LYS:N	2.37	0.57
30:RN:42:TRP:O	37:RU:64:ARG:NH2	2.35	0.57
34:RR:63:ARG:HH11	34:RR:63:ARG:HG3	1.68	0.57
35:RS:106:ARG:O	35:RS:107:GLU:HB2	2.04	0.57
37:RU:92:ARG:C	37:RU:94:ASN:H	2.05	0.57
45:R2:17:SER:HB2	45:R2:18:PRO:HA	1.86	0.57
46:R3:22:ALA:O	46:R3:25:ALA:HB3	2.04	0.57
49:R6:6:ARG:O	49:R6:8:LYS:HD2	2.05	0.57
51:R8:53:PRO:CD	51:R8:54:GLU:H	2.15	0.57
52:R9:25:VAL:HB	52:R9:34:GLN:HB2	1.86	0.57
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
22:YA:570:G:H2'	22:YA:2030:A:C5	2.39	0.57
22:YA:594:U:H5'	51:Y8:61:LEU:HD21	1.85	0.57
22:YA:1024:G:OP2	22:YA:1025:G:H3'	2.03	0.57
22:YA:1799:G:N1	22:YA:1819:A:OP2	2.37	0.57
22:YA:1932:A:H3'	22:YA:1933:G:H8	1.70	0.57
22:YA:2298:A:H2'	22:YA:2299:G:O4'	2.04	0.57
25:YE:7:VAL:HG11	36:YT:1:MET:HE3	1.85	0.57
27:YG:63:ILE:HD11	27:YG:102:PHE:HE2	1.69	0.57
27:YG:107:LEU:HD11	27:YG:178:PHE:CE1	2.40	0.57
30:YN:14:VAL:HG12	30:YN:15:LEU:H	1.69	0.57
31:YO:107:ARG:O	31:YO:112:MET:HE3	2.05	0.57
34:YR:79:LEU:HD23	34:YR:79:LEU:C	2.23	0.57
35:YS:26:LEU:HD12	35:YS:39:ILE:CD1	2.23	0.57
35:YS:106:ARG:O	35:YS:107:GLU:HB2	2.04	0.57
51:Y8:46:ARG:O	51:Y8:47:LYS:HB3	2.03	0.57
55:QY:33:U:N3	55:QY:36:G:OP2	2.27	0.57
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.37	0.57
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.04	0.57
1:QA:1054:C:H5	55:QY:34:C:O4'	1.87	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
22:RA:1790:C:H5''	22:RA:1791:A:OP1	2.05	0.57
30:RN:40:PRO:HB3	37:RU:68:ALA:HB2	1.86	0.57
30:RN:133:GLN:O	30:RN:134:ARG:CB	2.53	0.57
31:RO:40:VAL:HG12	31:RO:41:ALA:N	2.19	0.57
33:RQ:66:ILE:HA	33:RQ:104:PHE:HA	1.85	0.57
34:RR:32:GLY:O	34:RR:115:GLU:HA	2.04	0.57
40:RX:36:LYS:HE3	40:RX:54:VAL:O	2.04	0.57
1:XA:665:A:N3	1:XA:732:C:H2'	2.18	0.57
1:XA:1399:C:H4'	1:XA:1400:C:H5''	1.86	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
12:XL:47:LYS:O	12:XL:49:ASN:N	2.37	0.57
22:YA:2723:C:OP1	34:YR:3:HIS:HD2	1.88	0.57
25:YE:152:LYS:HG2	30:YN:78:TYR:CE1	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:63:THR:HG22	30:YN:66:LYS:NZ	2.20	0.57
30:YN:133:GLN:O	30:YN:134:ARG:CB	2.53	0.57
35:YS:5:THR:HG23	35:YS:8:GLU:OE2	2.05	0.57
37:YU:52:ARG:HG2	37:YU:52:ARG:NH1	2.17	0.57
41:YY:97:ARG:HG2	41:YY:97:ARG:O	2.05	0.57
46:Y3:31:LEU:O	46:Y3:32:GLN:HB2	2.04	0.57
47:Y4:42:PHE:CG	47:Y4:43:TYR:N	2.72	0.57
48:Y5:55:ARG:NH1	48:Y5:58:LEU:HD11	2.19	0.57
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.57
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.57
27:RG:107:LEU:HD11	27:RG:178:PHE:CE1	2.39	0.57
28:RH:41:MET:HE1	28:RH:64:LEU:HB3	1.86	0.57
30:RN:14:VAL:HG12	30:RN:15:LEU:H	1.69	0.57
30:RN:131:GLN:CG	30:RN:132:ALA:N	2.68	0.57
35:RS:103:GLU:O	35:RS:106:ARG:CG	2.53	0.57
42:RZ:150:LEU:HD21	42:RZ:172:ALA:HB3	1.85	0.57
44:R1:70:VAL:O	44:R1:74:VAL:HG23	2.05	0.57
44:R1:81:LYS:HA	44:R1:81:LYS:HZ3	0.73	0.57
44:R1:86:SER:H	44:R1:87:PRO:CD	2.16	0.57
51:R8:33:ASN:O	51:R8:34:TRP:C	2.42	0.57
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.39	0.57
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.04	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.33	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
22:YA:271(B):G:H5''	22:YA:271(B):G:H8	1.70	0.57
22:YA:1441:G:H2'	22:YA:1442:G:H8	1.70	0.57
22:YA:2563:U:H4'	31:YO:28:SER:HA	1.87	0.57
22:YA:2777:G:OP2	22:YA:2781:A:O2'	2.20	0.57
24:YD:34:VAL:O	24:YD:34:VAL:CG1	2.51	0.57
26:YF:32:LEU:HD13	26:YF:105:VAL:CG1	2.33	0.57
28:YH:3:ARG:HA	28:YH:3:ARG:HE	1.69	0.57
44:Y1:86:SER:H	44:Y1:87:PRO:CD	2.16	0.57
1:QA:501:C:H2'	1:QA:502:G:C8	2.37	0.57
1:QA:565:U:H5''	1:QA:566:G:H2'	1.87	0.57
1:QA:1081:G:P	5:QE:16:THR:OG1	2.63	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.04	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
22:RA:71:A:N3	22:RA:73:A:N6	2.53	0.57
22:RA:392:C:H5''	22:RA:409:C:H5''	1.87	0.57
22:RA:660:G:C6	22:RA:661:C:C4	2.93	0.57
22:RA:1291:C:H2'	22:RA:1292:U:C6	2.40	0.57
22:RA:2844:G:H3'	22:RA:2845:G:C8	2.40	0.57
24:RD:239:ARG:O	24:RD:240:ALA:HB2	2.05	0.57
25:RE:51:PHE:HD1	25:RE:52:LEU:HG	1.68	0.57
30:RN:7:LYS:HG2	30:RN:8:GLN:N	2.20	0.57
31:RO:96:THR:O	31:RO:97:ARG:HB3	2.04	0.57
37:RU:96:ALA:O	37:RU:100:VAL:HG23	2.05	0.57
45:R2:15:LYS:H	45:R2:67:LYS:CE	2.17	0.57
46:R3:31:LEU:O	46:R3:32:GLN:HB2	2.04	0.57
49:R6:48:VAL:HG13	49:R6:49:HIS:N	2.20	0.57
1:XA:686:U:O4	1:XA:703:G:O2'	2.12	0.57
1:XA:833:U:H3	1:XA:853:G:H1	1.51	0.57
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.40	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.37	0.57
24:YD:36:PRO:HB2	24:YD:61:LEU:HG	1.87	0.57
24:YD:69:ARG:C	24:YD:71:ASP:H	2.08	0.57
25:YE:102:VAL:HG13	25:YE:172:VAL:CG2	2.34	0.57
30:YN:7:LYS:HG2	30:YN:8:GLN:N	2.20	0.57
35:YS:72:ALA:O	35:YS:76:LYS:HG3	2.04	0.57
55:QY:36:G:H2'	55:QY:37:1MG:H8	1.68	0.57
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.05	0.57
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.86	0.57
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.35	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.57
22:RA:826:U:H2'	22:RA:828:U:O4'	2.05	0.57
22:RA:1007:C:O3'	30:RN:108:PRO:HB3	2.05	0.57
22:RA:2323:G:H1	22:RA:2332:U:H3	1.51	0.57
25:RE:41:LYS:HA	25:RE:41:LYS:HE2	1.87	0.57
25:RE:63:LEU:HD12	25:RE:65:GLY:H	1.69	0.57
28:RH:124:GLU:HB3	28:RH:132:ARG:HG3	1.85	0.57
28:RH:126:PRO:CG	28:RH:127:GLU:N	2.65	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:89:PHE:O	41:RY:90:LEU:HD13	2.05	0.57
44:R1:89:GLU:O	44:R1:93:GLU:HB2	2.05	0.57
45:R2:31:GLU:O	45:R2:35:LEU:HG	2.05	0.57
49:R6:11:LEU:HD23	49:R6:26:ASN:HB3	1.87	0.57
1:XA:337:C:H2'	1:XA:338:A:C8	2.40	0.57
1:XA:407:G:H2'	1:XA:408:A:H8	1.69	0.57
1:XA:1128:C:N3	1:XA:1144:G:N2	2.50	0.57
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.73	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	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
22:YA:1045:A:N3	22:YA:1047:G:N2	2.53	0.57
22:YA:1693:U:H1'	24:YD:14:ARG:NH2	2.20	0.57
31:YO:96:THR:O	31:YO:97:ARG:HB3	2.04	0.57
32:YP:64:LYS:C	32:YP:66:GLY:N	2.57	0.57
35:YS:67:ARG:CB	35:YS:67:ARG:HH11	2.18	0.57
37:YU:79:PHE:CD2	37:YU:79:PHE:C	2.78	0.57
37:YU:83:LEU:HD12	37:YU:113:ALA:HB2	1.86	0.57
41:YY:21:LYS:HG3	41:YY:22:GLY:H	1.69	0.57
44:Y1:70:VAL:O	44:Y1:74:VAL:HG23	2.04	0.57
50:Y7:31:LEU:O	50:Y7:32:LYS:C	2.43	0.57
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.03	0.57
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
12:QL:50:SER:O	12:QL:51:ALA:CB	2.52	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
22:RA:1282:U:H2'	22:RA:1283:G:O4'	2.05	0.57
22:RA:2286:A:H4'	22:RA:2287:A:O4'	2.04	0.57
24:RD:35:LYS:CE	24:RD:104:TYR:HB2	2.35	0.57
25:RE:102:VAL:HG13	25:RE:172:VAL:CG2	2.34	0.57
30:RN:63:THR:HG22	30:RN:66:LYS:NZ	2.20	0.57
30:RN:112:LEU:O	30:RN:114:ARG:O	2.23	0.57
35:RS:32:LEU:O	35:RS:62:LYS:HE2	2.05	0.57
37:RU:68:ALA:O	37:RU:71:GLN:HB2	2.04	0.57
1:XA:57:G:H1	1:XA:355:C:H42	1.51	0.57
1:XA:347:G:O2'	1:XA:348:G:H5''	2.05	0.57
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1213:A:N6	1:XA:1215:G:N3	2.53	0.57
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
14:XN:13:THR:N	14:XN:14:PRO:CD	2.68	0.57
14:XN:29:ARG:HH11	14:XN:29:ARG:HG3	1.70	0.57
22:YA:330:A:HO2'	22:YA:331:A:H8	1.52	0.57
22:YA:2477:C:H2'	52:Y9:1:MET:HG3	1.86	0.57
22:YA:2560:C:H2'	22:YA:2561:A:C8	2.40	0.57
24:YD:25:THR:HG21	24:YD:81:ALA:HB1	1.86	0.57
24:YD:25:THR:HG21	24:YD:82:ILE:H	1.70	0.57
32:YP:59:LEU:HA	32:YP:61:ARG:CZ	2.34	0.57
53:QV:35:A:N6	54:QX:3:G:N1	2.53	0.57
1:QA:838:G:C5	1:QA:842:C:H1'	2.39	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.56
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.56
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.56
22:RA:1386:C:H2'	22:RA:1387:C:H6	1.69	0.56
22:RA:2424:C:O2	22:RA:2429:G:O2'	2.19	0.56
22:RA:2729:G:H1'	25:RE:187:ALA:HB2	1.85	0.56
28:RH:3:ARG:HA	28:RH:3:ARG:HE	1.69	0.56
30:RN:82:LEU:HD12	30:RN:83:LYS:H	1.70	0.56
35:RS:72:ALA:O	35:RS:76:LYS:HG3	2.04	0.56
37:RU:79:PHE:CD2	37:RU:79:PHE:C	2.78	0.56
49:R6:42:TRP:N	49:R6:42:TRP:CD1	2.73	0.56
52:R9:1:MET:HB3	52:R9:4:ARG:CZ	2.35	0.56
1:XA:250:A:H4'	1:XA:251:G:O5'	2.05	0.56
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
22:YA:1022:G:O2'	22:YA:1023:U:OP2	2.17	0.56
22:YA:1952:A:C5	31:YO:22:ILE:HD12	2.40	0.56
22:YA:2015:A:N3	48:Y5:2:ALA:N	2.53	0.56
24:YD:69:ARG:HD3	24:YD:105:ILE:HD11	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:92:ILE:HD12	24:YD:104:TYR:CD2	2.39	0.56
26:YF:118:ALA:O	26:YF:121:GLY:N	2.33	0.56
27:YG:60:LEU:O	27:YG:64:THR:HG22	2.05	0.56
28:YH:84:SER:O	28:YH:133:VAL:O	2.22	0.56
29:YI:40:THR:O	29:YI:44:LEU:HB2	2.04	0.56
34:YR:45:ARG:HA	34:YR:95:THR:HG21	1.87	0.56
36:YT:105:LEU:C	36:YT:107:ASP:H	2.08	0.56
40:YX:35:THR:HG22	40:YX:38:GLU:OE1	2.04	0.56
47:Y4:27:THR:O	47:Y4:28:LYS:HB3	2.04	0.56
49:Y6:14:THR:O	49:Y6:49:HIS:HA	2.06	0.56
50:Y7:48:LYS:HG2	50:Y7:49:ARG:N	2.19	0.56
1:QA:361:G:H2'	1:QA:362:G:O4'	2.05	0.56
1:QA:429:U:H4'	1:QA:430:A:OP1	2.05	0.56
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.20	0.56
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.39	0.56
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.40	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
22:RA:227:A:OP1	32:RP:76:LYS:HE3	2.06	0.56
22:RA:2197:U:H1'	22:RA:2198:A:C8	2.40	0.56
25:RE:152:LYS:HG2	30:RN:78:TYR:CE1	2.39	0.56
26:RF:24:LEU:HB3	26:RF:115:ALA:HB2	1.87	0.56
26:RF:46:ARG:HG2	26:RF:46:ARG:NH1	2.00	0.56
35:RS:5:THR:HG23	35:RS:8:GLU:OE2	2.05	0.56
42:RZ:163:LEU:H	42:RZ:163:LEU:HD12	1.70	0.56
50:R7:13:ALA:O	50:R7:17:GLY:HA3	2.05	0.56
50:R7:19:ARG:HH11	50:R7:19:ARG:HG2	1.70	0.56
1:XA:1296:C:H3'	1:XA:1297:C:C6	2.40	0.56
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.04	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
22:YA:309:G:N3	22:YA:329:G:O2'	2.38	0.56
23:YB:44:G:OP1	47:Y4:1:MET:N	2.33	0.56
27:YG:39:ILE:CG2	27:YG:155:MET:HG3	2.35	0.56
36:YT:134:GLU:O	36:YT:135:ALA:HB3	2.05	0.56
37:YU:68:ALA:O	37:YU:71:GLN:HB2	2.04	0.56
37:YU:104:GLN:OE1	37:YU:104:GLN:N	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:17:SER:HB2	45:Y2:18:PRO:HA	1.86	0.56
46:Y3:7:LYS:NZ	46:Y3:32:GLN:HE21	2.03	0.56
51:Y8:33:ASN:O	51:Y8:34:TRP:C	2.42	0.56
1:QA:842:C:HO2'	1:QA:848:C:H42	1.54	0.56
1:QA:964:A:N3	1:QA:969:A:O2'	2.36	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.56
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ2	1.70	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.40	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
22:RA:273:G:H1	22:RA:364:C:N4	2.02	0.56
22:RA:662:G:H5''	32:RP:15:ARG:O	2.06	0.56
22:RA:2199:A:H3'	22:RA:2205:C:H6	1.71	0.56
22:RA:2667:C:H1'	28:RH:109:PHE:HD2	1.70	0.56
24:RD:236:GLY:O	24:RD:237:GLU:OE1	2.24	0.56
25:RE:37:ARG:NE	25:RE:37:ARG:N	2.53	0.56
25:RE:78:LEU:HD23	25:RE:79:ARG:HD2	1.86	0.56
25:RE:183:LEU:HD12	25:RE:183:LEU:N	2.20	0.56
26:RF:192:LEU:HD21	26:RF:194:MET:CE	2.35	0.56
27:RG:180:PHE:C	27:RG:182:LYS:H	2.09	0.56
28:RH:77:LYS:HZ3	28:RH:77:LYS:CB	2.03	0.56
30:RN:56:ASN:N	30:RN:125:GLY:O	2.35	0.56
32:RP:31:ALA:O	32:RP:32:THR:HG23	2.05	0.56
32:RP:65:ARG:HH21	51:R8:15:LYS:CB	2.17	0.56
34:RR:70:LEU:HD13	34:RR:75:LEU:HD11	1.88	0.56
38:RV:38:LEU:HD23	38:RV:39:LEU:N	2.19	0.56
45:R2:51:ARG:HA	45:R2:54:LYS:HB2	1.86	0.56
46:R3:4:LEU:O	46:R3:36:VAL:HA	2.04	0.56
49:R6:14:THR:O	49:R6:49:HIS:HA	2.06	0.56
51:R8:52:LYS:H	51:R8:53:PRO:HD2	1.66	0.56
52:R9:2:LYS:HD2	52:R9:33:LYS:O	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:352:C:O2'	1:XA:354:G:OP1	2.19	0.56
1:XA:1502:A:H2	1:XA:1505:G:H22	1.52	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
6:XF:92:LYS:HB2	6:XF:92:LYS:HZ2	1.70	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	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
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
13:XM:57:ARG:HH21	47:Y4:34:GLU:HA	1.69	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.53	0.56
22:YA:27:G:N2	22:YA:513:A:OP2	2.37	0.56
22:YA:185:U:H4'	22:YA:218:A:H4'	1.87	0.56
22:YA:232:G:H8	22:YA:232:G:OP2	1.87	0.56
22:YA:389:G:H1	32:YP:71:VAL:HG12	1.70	0.56
22:YA:589:C:H2'	22:YA:590:A:C8	2.41	0.56
22:YA:1049:C:H2'	22:YA:1050:A:H5''	1.87	0.56
23:YB:8:U:H3	23:YB:112:G:H1	1.52	0.56
24:YD:183:ARG:HD2	24:YD:270:ILE:HG12	1.88	0.56
25:YE:32:PRO:O	25:YE:34:VAL:HG13	2.06	0.56
25:YE:69:LYS:C	25:YE:71:GLY:H	2.08	0.56
30:YN:82:LEU:HD12	30:YN:83:LYS:H	1.70	0.56
33:YQ:37:LEU:HD21	33:YQ:130:LYS:HE3	1.87	0.56
33:YQ:79:LEU:O	33:YQ:79:LEU:CG	2.52	0.56
35:YS:32:LEU:O	35:YS:62:LYS:HE2	2.05	0.56
35:YS:103:GLU:O	35:YS:106:ARG:CG	2.52	0.56
36:YT:26:ASP:CB	36:YT:91:ARG:HA	2.36	0.56
44:Y1:89:GLU:O	44:Y1:93:GLU:HB2	2.04	0.56
47:Y4:15:ILE:HG22	47:Y4:20:ASN:HA	1.86	0.56
52:Y9:2:LYS:HD2	52:Y9:33:LYS:O	2.05	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
24:RD:80:ALA:HB3	24:RD:94:LEU:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:69:LYS:C	25:RE:71:GLY:H	2.09	0.56
25:RE:174:ASP:CG	25:RE:175:VAL:N	2.58	0.56
26:RF:198:ALA:CA	26:RF:201:VAL:HG12	2.35	0.56
27:RG:179:PRO:HG3	47:R4:38:LYS:HZ1	1.67	0.56
33:RQ:59:ARG:C	33:RQ:60:ARG:CG	2.73	0.56
38:RV:1:MET:HE2	38:RV:43:GLU:HG2	1.87	0.56
47:R4:48:ARG:O	47:R4:50:VAL:N	2.38	0.56
47:R4:64:GLY:C	47:R4:66:SER:H	2.08	0.56
48:R5:55:ARG:HD3	48:R5:56:LYS:N	2.21	0.56
1:XA:980:C:H5''	1:XA:981:U:C5	2.40	0.56
1:XA:991:U:O4	1:XA:1212:U:O2'	2.12	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.56
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.88	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
22:YA:888:C:H3'	22:YA:889:C:C4'	2.34	0.56
22:YA:1826:G:O2'	24:YD:242:ARG:NH2	2.38	0.56
28:YH:125:VAL:HG12	28:YH:126:PRO:CG	2.34	0.56
30:YN:56:ASN:N	30:YN:125:GLY:O	2.35	0.56
31:YO:3:GLN:CB	31:YO:4:PRO:HD2	2.35	0.56
38:YV:76:LYS:O	38:YV:79:VAL:HG12	2.05	0.56
44:Y1:76:ARG:HG2	44:Y1:76:ARG:NH1	2.20	0.56
45:Y2:31:GLU:O	45:Y2:35:LEU:HG	2.05	0.56
47:Y4:64:GLY:C	47:Y4:66:SER:H	2.07	0.56
50:Y7:12:ARG:NH2	50:Y7:44:PRO:HB3	2.21	0.56
52:Y9:25:VAL:HB	52:Y9:34:GLN:HB2	1.87	0.56
1:QA:713:G:H2'	1:QA:714:G:C8	2.41	0.56
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.19	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.05	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.71	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:520:G:H2'	22:RA:521:G:H8	1.70	0.56
22:RA:1278:A:O3'	34:RR:34:ILE:HG23	2.06	0.56
23:RB:65:C:H41	23:RB:108:C:H2'	1.70	0.56
27:RG:41:GLN:HB3	27:RG:43:LEU:HD13	1.87	0.56
31:RO:19:ILE:HD13	31:RO:19:ILE:O	2.06	0.56
32:RP:14:LYS:O	32:RP:16:ARG:N	2.39	0.56
36:RT:26:ASP:CB	36:RT:91:ARG:HA	2.36	0.56
39:RW:65:LEU:O	39:RW:66:GLU:C	2.43	0.56
40:RX:65:ARG:HD3	40:RX:65:ARG:H	1.70	0.56
41:RY:97:ARG:O	41:RY:97:ARG:HG2	2.05	0.56
42:RZ:110:GLY:HA2	42:RZ:111:VAL:C	2.26	0.56
44:R1:53:VAL:HG12	44:R1:54:ALA:N	2.21	0.56
51:R8:50:LEU:HD12	51:R8:51:ALA:H	1.70	0.56
1:XA:1484:C:H2'	1:XA:1485:U:H6	1.69	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
22:YA:1311:G:H21	22:YA:1603:A:H62	1.53	0.56
22:YA:2591:C:OP2	24:YD:238:GLY:HA3	2.05	0.56
24:YD:2:ALA:O	24:YD:3:VAL:HB	2.06	0.56
25:YE:74:PRO:HG2	25:YE:77:ILE:HG23	1.87	0.56
28:YH:77:LYS:HZ3	28:YH:77:LYS:CB	2.11	0.56
32:YP:59:LEU:O	32:YP:59:LEU:HD23	2.06	0.56
33:YQ:60:ARG:HH11	42:YZ:113:ALA:HB3	1.69	0.56
51:Y8:50:LEU:HD12	51:Y8:51:ALA:H	1.70	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
22:RA:134:C:H2'	22:RA:135:G:H8	1.70	0.56
22:RA:664:C:OP1	32:RP:18:ARG:NH2	2.27	0.56
24:RD:183:ARG:HD2	24:RD:270:ILE:HG12	1.88	0.56
25:RE:32:PRO:O	25:RE:34:VAL:HG13	2.06	0.56
25:RE:117:MET:O	25:RE:117:MET:HG3	2.06	0.56
33:RQ:79:LEU:O	33:RQ:79:LEU:CG	2.52	0.56
34:RR:84:ALA:HB3	34:RR:85:PRO:HD3	1.87	0.56
36:RT:134:GLU:O	36:RT:135:ALA:HB3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RV:76:LYS:O	38:RV:79:VAL:HG12	2.05	0.56
41:RY:95:LYS:O	41:RY:95:LYS:HE3	2.05	0.56
43:R0:26:TYR:H	43:R0:29:GLN:NE2	2.04	0.56
47:R4:41:PRO:O	47:R4:42:PHE:CB	2.54	0.56
50:R7:12:ARG:NH2	50:R7:44:PRO:HB3	2.21	0.56
1:XA:976:G:H5''	1:XA:1358:U:O2'	2.06	0.56
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.22	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
13:XM:65:LYS:N	47:Y4:50:VAL:CG2	2.69	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.87	0.56
22:YA:31:C:O3'	22:YA:1238:G:H5''	2.06	0.56
22:YA:631:A:OP2	51:Y8:46:ARG:NH2	2.33	0.56
22:YA:636:G:OP1	32:YP:132:LYS:HB2	2.05	0.56
24:YD:239:ARG:O	24:YD:240:ALA:HB2	2.05	0.56
25:YE:37:ARG:NE	25:YE:37:ARG:N	2.54	0.56
30:YN:112:LEU:O	30:YN:114:ARG:O	2.23	0.56
32:YP:115:LEU:HD12	32:YP:116:GLY:N	2.21	0.56
35:YS:14:VAL:HG13	35:YS:15:ARG:N	2.21	0.56
45:Y2:41:ILE:HD11	45:Y2:44:LEU:CG	2.36	0.56
47:Y4:38:LYS:C	47:Y4:40:HIS:N	2.52	0.56
49:Y6:6:ARG:O	49:Y6:8:LYS:HD2	2.05	0.56
49:Y6:11:LEU:HD23	49:Y6:26:ASN:HB3	1.87	0.56
1:QA:184:G:H2'	1:QA:185:A:H8	1.69	0.56
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.70	0.56
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.21	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
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.58	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
22:RA:898:C:H2'	22:RA:899:A:H5'	1.88	0.56
22:RA:957:A:H5'	33:RQ:76:LYS:HD2	1.88	0.56
22:RA:2037:G:H2'	22:RA:2038:G:H8	1.69	0.56
26:RF:32:LEU:HD13	26:RF:105:VAL:CG1	2.33	0.56
27:RG:60:LEU:O	27:RG:64:THR:HG22	2.05	0.56
29:RI:4:ILE:HD11	29:RI:44:LEU:HD12	1.87	0.56
31:RO:107:ARG:O	31:RO:112:MET:HE3	2.05	0.56
33:RQ:12:GLN:OE1	33:RQ:72:LYS:HD2	2.06	0.56
40:RX:35:THR:HG22	40:RX:38:GLU:OE1	2.05	0.56
47:R4:48:ARG:HH12	47:R4:52:THR:HG22	1.71	0.56
1:XA:677:U:H3	1:XA:713:G:H22	1.54	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.56
22:YA:64:A:C4	40:YX:66:LEU:HD13	2.41	0.56
22:YA:323:G:H2'	26:YF:169:ASN:OD1	2.05	0.56
22:YA:1785:A:N1	22:YA:1787:A:H1'	2.21	0.56
25:YE:195:LEU:HD12	25:YE:196:VAL:H	1.71	0.56
26:YF:197:ASP:O	26:YF:199:TRP:N	2.38	0.56
27:YG:128:ARG:HG3	27:YG:128:ARG:NH2	2.17	0.56
30:YN:40:PRO:HB3	37:YU:68:ALA:HB2	1.87	0.56
41:YY:95:LYS:HE3	41:YY:95:LYS:O	2.06	0.56
50:Y7:13:ALA:O	50:Y7:17:GLY:HA3	2.05	0.56
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.14	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
22:RA:153:C:OP2	44:R1:88:LYS:HE2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:221:VAL:HG22	24:RD:226:MET:HE2	1.88	0.56
26:RF:9:ILE:HD11	26:RF:125:LEU:CG	2.36	0.56
27:RG:120:LEU:HB3	27:RG:131:TYR:OH	2.05	0.56
35:RS:5:THR:OG1	35:RS:7:TYR:HB3	2.06	0.56
37:RU:105:VAL:HA	38:RV:44:LYS:HE3	1.88	0.56
38:RV:27:ALA:O	38:RV:28:GLU:O	2.24	0.56
46:R3:59:VAL:CG1	46:R3:60:GLU:N	2.69	0.56
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.06	0.56
9:XI:128:ARG:CD	53:XV:32:C:OP2	2.54	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
22:YA:229:A:OP1	22:YA:229:A:H4'	2.05	0.56
22:YA:971:C:O2'	22:YA:983:A:N3	2.36	0.56
22:YA:1657:C:H2'	22:YA:1658:C:C6	2.40	0.56
22:YA:1799:G:OP1	24:YD:260:ARG:HB2	2.05	0.56
22:YA:2452:C:O2	56:Z8:76:PPU:CE1	2.54	0.56
22:YA:2489:G:N2	22:YA:2491:U:O4	2.38	0.56
24:YD:35:LYS:CE	24:YD:104:TYR:HB2	2.35	0.56
26:YF:155:LEU:CD1	26:YF:174:VAL:HG13	2.32	0.56
28:YH:126:PRO:CG	28:YH:127:GLU:N	2.65	0.56
35:YS:5:THR:OG1	35:YS:7:TYR:HB3	2.06	0.56
42:YZ:10:ARG:HH11	42:YZ:36:LYS:HD3	1.71	0.56
54:QX:4:C:C3'	54:QX:5:C:H5'	2.36	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
20:QT:74:LYS:C	20:QT:76:ALA:H	2.09	0.56
22:RA:1007:C:OP1	30:RN:35:ARG:NH1	2.35	0.56
28:RH:59:ARG:HH11	28:RH:59:ARG:CG	2.19	0.56
29:RI:8:PRO:HG3	29:RI:14:ASP:HB2	1.88	0.56
31:RO:1:MET:HE2	31:RO:67:LYS:HG2	1.88	0.56
31:RO:3:GLN:CB	31:RO:4:PRO:HD2	2.35	0.56
32:RP:13:ASN:C	32:RP:15:ARG:N	2.54	0.56
32:RP:15:ARG:O	32:RP:17:LYS:N	2.39	0.56
36:RT:105:LEU:C	36:RT:107:ASP:H	2.07	0.56
41:RY:62:GLU:O	41:RY:63:LYS:O	2.24	0.56
45:R2:50:ILE:CD1	45:R2:51:ARG:N	2.61	0.56
51:R8:30:ARG:O	51:R8:31:HIS:CB	2.54	0.56
1:XA:643:C:H2'	1:XA:644:G:H8	1.69	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.56
13:XM:119:GLY:HA3	53:XV:29:G:OP1	2.05	0.56
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.70	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
22:YA:1729:A:N6	22:YA:1731:G:C2	2.73	0.56
25:YE:183:LEU:HD12	25:YE:183:LEU:N	2.20	0.56
37:YU:96:ALA:O	37:YU:100:VAL:HG23	2.05	0.56
41:YY:84:ARG:NH1	41:YY:97:ARG:HB2	2.11	0.56
47:Y4:41:PRO:O	47:Y4:42:PHE:CB	2.54	0.56
47:Y4:48:ARG:O	47:Y4:50:VAL:N	2.38	0.56
49:Y6:48:VAL:HG13	49:Y6:49:HIS:N	2.20	0.56
1:QA:546:G:P	4:QD:72:GLU:HB3	2.46	0.56
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.56
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.88	0.56
13:QM:121:LYS:NZ	55:QY:39:C:O2'	2.39	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
22:RA:111:A:O3'	45:R2:69:ARG:NH2	2.39	0.56
22:RA:389:G:H1	32:RP:70:GLN:HB3	1.71	0.56
22:RA:1695:G:H1'	24:RD:8:PRO:O	2.05	0.56
22:RA:1899:G:H21	22:RA:1902:C:N4	2.04	0.56
24:RD:94:LEU:HD22	24:RD:95:LEU:H	1.69	0.56
25:RE:203:LYS:HE3	25:RE:204:ALA:HB2	1.86	0.56
35:RS:14:VAL:HG13	35:RS:15:ARG:N	2.21	0.56
35:RS:18:ILE:C	35:RS:19:LYS:O	2.44	0.56
42:RZ:35:ARG:HH11	42:RZ:35:ARG:HB3	1.71	0.56
46:R3:7:LYS:NZ	46:R3:32:GLN:HE21	2.03	0.56
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.52	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.56
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.56
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.25	0.56
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.05	0.56
19:XS:3:ARG:HB3	47:Y4:67:TYR:HD2	1.68	0.56
22:YA:25:U:H5''	39:YW:80:PRO:HD3	1.88	0.56
22:YA:270(M):U:H1'	22:YA:270(N):G:C6	2.41	0.56
22:YA:2377:A:H2'	22:YA:2378:A:C8	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:15:ARG:O	32:YP:17:LYS:N	2.39	0.56
39:YW:1:MET:C	39:YW:64:MET:HE1	2.26	0.56
45:Y2:15:LYS:H	45:Y2:67:LYS:NZ	2.02	0.56
45:Y2:43:GLN:O	45:Y2:44:LEU:CG	2.54	0.56
46:Y3:4:LEU:HD21	46:Y3:39:ASP:OD1	2.06	0.56
46:Y3:59:VAL:CG1	46:Y3:60:GLU:N	2.69	0.56
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.07	0.55
1:QA:191:G:O2'	20:QT:101:GLY:O	2.24	0.55
1:QA:321:A:N6	1:QA:329:A:OP2	2.39	0.55
1:QA:985:C:H2'	1:QA:986:A:H8	1.71	0.55
1:QA:1118:C:OP1	9:QI:9:ARG:HD3	2.06	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.06	0.55
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.88	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.06	0.55
22:RA:551:G:H5'	22:RA:1220:A:H1'	1.88	0.55
22:RA:1085:A:O2'	22:RA:1086:A:OP1	2.24	0.55
22:RA:2864:G:OP1	36:RT:119:LYS:HD2	2.05	0.55
24:RD:35:LYS:NZ	24:RD:64:ILE:O	2.32	0.55
24:RD:69:ARG:C	24:RD:71:ASP:H	2.08	0.55
26:RF:108:LYS:HZ3	26:RF:108:LYS:HA	1.72	0.55
33:RQ:37:LEU:HD21	33:RQ:130:LYS:HE3	1.87	0.55
37:RU:83:LEU:HD12	37:RU:113:ALA:HB2	1.86	0.55
42:RZ:102:LEU:HD11	42:RZ:124:ILE:HG22	1.88	0.55
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.55
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.55
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.89	0.55
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	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
22:YA:482:A:H4'	41:YY:47:LYS:HD2	1.89	0.55
22:YA:2330:G:H2'	22:YA:2331:G:O4'	2.06	0.55
23:YB:116:G:H4'	35:YS:54:LEU:HD13	1.88	0.55
25:YE:117:MET:O	25:YE:117:MET:HG3	2.06	0.55
26:YF:198:ALA:CA	26:YF:201:VAL:HG12	2.34	0.55
27:YG:135:LEU:HD12	27:YG:135:LEU:N	2.21	0.55
32:YP:14:LYS:O	32:YP:16:ARG:N	2.39	0.55
37:YU:105:VAL:HA	38:YV:44:LYS:HE3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YY:48:ALA:H	41:YY:60:PHE:HA	1.71	0.55
41:YY:62:GLU:O	41:YY:63:LYS:O	2.24	0.55
43:Y0:23:VAL:HA	43:Y0:38:VAL:HG22	1.87	0.55
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.71	0.55
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.41	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.55
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.55
22:RA:27:G:N2	22:RA:512:G:O2'	2.40	0.55
22:RA:1278:A:H2'	22:RA:1279:G:C8	2.41	0.55
22:RA:2123:G:H2'	22:RA:2124:G:H8	1.71	0.55
23:RB:33:G:O5'	27:RG:2:PRO:HG3	2.06	0.55
39:RW:14:PRO:HG2	39:RW:78:GLU:OE2	2.07	0.55
1:XA:371:G:O2'	1:XA:372:C:H4'	2.06	0.55
1:XA:1229:A:O2'	53:XV:30:G:OP1	2.24	0.55
1:XA:1305:G:H22	1:XA:1331:G:H2'	1.70	0.55
1:XA:1320:C:H5'	19:XS:70:LYS:HG3	1.87	0.55
1:XA:1376:U:OP1	7:XG:98:SER:HB3	2.06	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
22:YA:658:C:H2'	22:YA:659:C:C6	2.41	0.55
22:YA:2875:C:H4'	36:YT:5:ALA:HB2	1.86	0.55
25:YE:174:ASP:CG	25:YE:175:VAL:N	2.58	0.55
27:YG:120:LEU:HB3	27:YG:131:TYR:OH	2.05	0.55
29:YI:11:ASN:O	29:YI:12:LEU:HB2	2.07	0.55
32:YP:19:VAL:CG2	32:YP:20:GLY:H	1.99	0.55
32:YP:31:ALA:O	32:YP:32:THR:HG23	2.05	0.55
33:YQ:12:GLN:OE1	33:YQ:72:LYS:HD2	2.06	0.55
37:YU:92:ARG:NH1	38:YV:11:GLN:HB2	2.22	0.55
39:YW:20:VAL:C	39:YW:22:ASP:N	2.60	0.55
41:YY:89:PHE:O	41:YY:90:LEU:HD13	2.05	0.55
46:Y3:8:LEU:HD22	46:Y3:31:LEU:CD2	2.36	0.55
46:Y3:35:ARG:HB3	46:Y3:37:LEU:CD2	2.37	0.55
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.71	0.55
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.38	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1406:U:O2	1:QA:1517:G:N2	2.33	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.05	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
22:RA:1885:A:H5'	22:RA:1886:C:OP2	2.07	0.55
22:RA:2585:U:H5	56:Z6:76:PPU:HO2'	1.53	0.55
24:RD:31:LYS:O	24:RD:35:LYS:O	2.24	0.55
24:RD:155:LEU:HD23	24:RD:177:LEU:CD2	2.36	0.55
26:RF:28:ILE:HD12	26:RF:28:ILE:O	2.06	0.55
32:RP:39:LYS:CA	32:RP:45:LEU:CD1	2.80	0.55
38:RV:49:THR:CB	38:RV:50:PRO:HD2	2.25	0.55
41:RY:95:LYS:HB2	41:RY:95:LYS:NZ	2.21	0.55
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.87	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.22	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.17	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.21	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	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
27:YG:180:PHE:C	27:YG:182:LYS:H	2.09	0.55
30:YN:101:HIS:CD2	30:YN:101:HIS:C	2.79	0.55
33:YQ:25:ASP:N	33:YQ:102:VAL:HG23	2.22	0.55
36:YT:107:ASP:O	36:YT:111:ARG:NH1	2.39	0.55
39:YW:65:LEU:O	39:YW:66:GLU:C	2.43	0.55
44:Y1:91:LYS:CG	44:Y1:92:LYS:H	2.15	0.55
53:QV:35:A:N6	54:QX:3:G:C6	2.74	0.55
1:QA:411:A:C5	1:QA:413:G:H1'	2.41	0.55
1:QA:539:A:H2'	1:QA:540:G:C8	2.42	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	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
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
22:RA:994:C:O2	38:RV:10:LYS:HE2	2.06	0.55
22:RA:1006:C:H1'	30:RN:106:MET:HE3	1.88	0.55
24:RD:36:PRO:HB2	24:RD:61:LEU:HG	1.87	0.55
24:RD:69:ARG:HD3	24:RD:105:ILE:HD11	1.87	0.55
24:RD:118:VAL:HG22	24:RD:119:ALA:H	1.72	0.55
25:RE:4:ILE:HD13	25:RE:5:LEU:H	1.71	0.55
41:RY:21:LYS:HG3	41:RY:22:GLY:H	1.69	0.55
42:RZ:151:HIS:HA	42:RZ:170:THR:HA	1.88	0.55
47:R4:9:LEU:H	47:R4:27:THR:HG22	1.71	0.55
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.89	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
22:YA:330:A:H2	22:YA:1210:A:HO2'	1.53	0.55
22:YA:518:G:C4'	39:YW:18:ARG:HH12	1.99	0.55
22:YA:1291:C:H2'	22:YA:1292:U:C6	2.42	0.55
30:YN:131:GLN:CG	30:YN:132:ALA:N	2.68	0.55
32:YP:39:LYS:N	32:YP:45:LEU:HD11	2.21	0.55
34:YR:84:ALA:HB3	34:YR:85:PRO:HD3	1.88	0.55
39:YW:14:PRO:HG2	39:YW:78:GLU:OE2	2.07	0.55
41:YY:91:GLU:HG3	41:YY:92:ASN:H	1.72	0.55
1:QA:19:C:P	5:QE:127:ASN:HD22	2.30	0.55
1:QA:243:A:H4'	1:QA:244:U:O5'	2.05	0.55
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.22	0.55
1:QA:1070:U:O5'	5:QE:25:ARG:NH1	2.40	0.55
1:QA:1127:G:H21	1:QA:1147:C:H41	1.54	0.55
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.89	0.55
1:QA:1244:C:H42	1:QA:1293:G:H1	1.53	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.06	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
15:QO:65:ARG:HB2	15:QO:65:ARG:NH1	2.20	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
22:RA:270(R):G:H1'	44:R1:78:LYS:HZ1	1.72	0.55
22:RA:2415:G:H4'	32:RP:67:MET:N	2.22	0.55
22:RA:2837:G:H1	22:RA:2881:C:H42	1.53	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:14:ILE:HD11	36:RT:14:TYR:CZ	2.42	0.55
25:RE:67:PHE:O	25:RE:69:LYS:N	2.39	0.55
26:RF:129:PHE:O	26:RF:130:ALA:CB	2.55	0.55
31:RO:68:GLU:HA	31:RO:78:ARG:HB3	1.89	0.55
31:RO:79:PHE:HD2	36:RT:72:VAL:HG22	1.72	0.55
32:RP:88:LEU:C	32:RP:90:ARG:N	2.60	0.55
32:RP:115:LEU:HD12	32:RP:116:GLY:N	2.21	0.55
38:RV:52:VAL:O	38:RV:54:GLY:N	2.39	0.55
39:RW:1:MET:C	39:RW:64:MET:HE1	2.26	0.55
39:RW:88:ARG:HB3	39:RW:92:ARG:HB3	1.88	0.55
42:RZ:76:LEU:HD23	42:RZ:76:LEU:H	1.72	0.55
49:R6:27:LYS:HB2	49:R6:27:LYS:HZ2	1.69	0.55
51:R8:63:PRO:O	51:R8:64:TYR:HB2	2.07	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.21	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
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55
22:YA:873:G:H1	22:YA:904:C:H42	1.53	0.55
22:YA:1204:A:H1'	22:YA:1206:G:C8	2.41	0.55
23:YB:12:C:O2	43:Y0:74:ARG:HD2	2.06	0.55
32:YP:49:ARG:NE	51:Y8:59:LYS:HG2	2.22	0.55
37:YU:6:THR:O	37:YU:9:VAL:HG23	2.07	0.55
37:YU:73:GLY:O	37:YU:74:LEU:HB3	2.07	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
22:RA:856:C:O2'	22:RA:857:C:OP1	2.25	0.55
22:RA:2331:G:H4'	43:R0:43:THR:H	1.70	0.55
24:RD:28:GLU:O	24:RD:29:PRO:C	2.45	0.55
25:RE:26:ILE:HD13	25:RE:26:ILE:C	2.26	0.55
25:RE:195:LEU:HD12	25:RE:196:VAL:H	1.71	0.55
27:RG:114:ILE:HD11	27:RG:140:ILE:HD12	1.89	0.55
33:RQ:25:ASP:N	33:RQ:102:VAL:HG23	2.21	0.55
34:RR:12:ARG:HH11	34:RR:12:ARG:HG3	1.71	0.55
46:R3:4:LEU:HD21	46:R3:39:ASP:OD1	2.06	0.55
1:XA:529:G:O6	12:XL:49:ASN:HB3	2.07	0.55
1:XA:779:C:H4'	11:XK:121:PRO:O	2.07	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
10:XJ:16:LEU:HD13	10:XJ:16:LEU:O	2.07	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.42	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.05	0.55
22:YA:861:A:N3	23:YB:79:C:O2'	2.39	0.55
22:YA:1252:G:N3	37:YU:33:ARG:HD2	2.21	0.55
22:YA:1728:G:H8	22:YA:1732:A:H62	1.53	0.55
22:YA:2867:G:O2'	22:YA:2868:A:H8	1.89	0.55
24:YD:221:VAL:HG22	24:YD:226:MET:HE2	1.88	0.55
25:YE:3:GLY:HA3	25:YE:81:ILE:HD12	1.88	0.55
25:YE:20:ALA:O	25:YE:21:VAL:CG2	2.48	0.55
25:YE:26:ILE:HD13	25:YE:26:ILE:C	2.26	0.55
26:YF:24:LEU:HB3	26:YF:115:ALA:HB2	1.87	0.55
30:YN:44:PRO:HG2	30:YN:45:ASN:H	1.71	0.55
31:YO:19:ILE:O	31:YO:19:ILE:HD13	2.06	0.55
35:YS:18:ILE:C	35:YS:19:LYS:O	2.44	0.55
37:YU:58:ARG:O	37:YU:62:ILE:HG13	2.06	0.55
38:YV:29:PRO:HA	38:YV:61:VAL:CG2	2.37	0.55
39:YW:88:ARG:HB3	39:YW:92:ARG:HB3	1.88	0.55
41:YY:95:LYS:CB	41:YY:100:ALA:HA	2.13	0.55
49:Y6:42:TRP:N	49:Y6:42:TRP:CD1	2.73	0.55
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.89	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
22:RA:221:A:H4'	22:RA:222:A:O5'	2.07	0.55
22:RA:246:C:N4	51:R8:8:LYS:HG3	2.22	0.55
22:RA:247:G:O6	51:R8:12:LYS:NZ	2.28	0.55
22:RA:270(U):C:H2'	22:RA:270(V):G:H8	1.71	0.55
22:RA:298:G:P	41:RY:85:VAL:HG22	2.47	0.55
22:RA:1348:G:H2'	22:RA:1349:A:H5''	1.89	0.55
22:RA:2014:A:O2'	48:R5:2:ALA:HB2	2.07	0.55
22:RA:2068:U:N3	22:RA:2430:A:H2	2.05	0.55
24:RD:2:ALA:O	24:RD:3:VAL:HB	2.06	0.55
27:RG:3:LEU:HD12	27:RG:4:ASP:N	2.19	0.55
32:RP:2:LYS:O	32:RP:5:ASP:HB2	2.06	0.55
35:RS:36:TYR:HD2	35:RS:52:SER:CB	2.19	0.55
37:RU:27:LEU:O	37:RU:29:SER:N	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:104:GLN:OE1	37:RU:104:GLN:N	2.35	0.55
49:R6:20:ASN:CG	49:R6:21:TYR:H	2.09	0.55
1:XA:554:C:H2'	1:XA:555:C:H6	1.71	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	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
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
15:XO:65:ARG:HB2	15:XO:65:ARG:NH1	2.20	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
22:YA:459:U:H2'	22:YA:460:A:H8	1.72	0.55
22:YA:513:A:O2'	22:YA:1217:C:OP1	2.20	0.55
22:YA:685:A:C4'	22:YA:687:C:H41	2.20	0.55
22:YA:1693:U:H1'	24:YD:14:ARG:HH22	1.71	0.55
22:YA:2131:G:N2	22:YA:2158:A:N7	2.54	0.55
22:YA:2635:C:H5'	25:YE:77:ILE:HD13	1.87	0.55
24:YD:43:ARG:CB	24:YD:54:ARG:HB2	2.37	0.55
25:YE:53:PRO:O	25:YE:74:PRO:HA	2.07	0.55
26:YF:28:ILE:HD12	26:YF:28:ILE:O	2.06	0.55
31:YO:20:MET:HG2	31:YO:21:CYS:N	2.20	0.55
35:YS:59:LYS:CG	35:YS:60:GLY:H	2.11	0.55
35:YS:107:GLU:N	35:YS:110:LEU:HD11	2.22	0.55
36:YT:16:ARG:HG2	36:YT:18:ASP:OD1	2.06	0.55
36:YT:123:GLN:O	36:YT:125:ARG:N	2.40	0.55
41:YY:61:ILE:HG23	41:YY:62:GLU:H	1.71	0.55
47:Y4:48:ARG:HH12	47:Y4:52:THR:HG22	1.71	0.55
48:Y5:55:ARG:HD3	48:Y5:56:LYS:N	2.21	0.55
50:Y7:19:ARG:HH11	50:Y7:19:ARG:HG2	1.71	0.55
1:QA:1316:G:N2	1:QA:1319:A:H5''	2.22	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
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
10:QJ:16:LEU:HD13	10:QJ:16:LEU:O	2.07	0.55
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	2.89	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.88	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
22:RA:507:A:C5'	22:RA:508:G:H5'	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:666:G:H4'	32:RP:49:ARG:NH1	2.22	0.55
26:RF:147:GLY:O	26:RF:148:LEU:HD23	2.07	0.55
32:RP:39:LYS:N	32:RP:45:LEU:HD11	2.21	0.55
37:RU:74:LEU:HD13	37:RU:79:PHE:HB2	1.89	0.55
37:RU:92:ARG:NH1	38:RV:11:GLN:HB2	2.22	0.55
38:RV:99:ILE:N	38:RV:99:ILE:CD1	2.65	0.55
45:R2:41:ILE:HD11	45:R2:44:LEU:CG	2.36	0.55
47:R4:65:ASP:O	47:R4:66:SER:HB3	2.07	0.55
1:XA:986:A:N3	19:XS:52:TYR:OH	2.40	0.55
1:XA:1252:A:H2'	1:XA:1253:G:O4'	2.07	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
19:XS:5:LEU:HD22	47:Y4:67:TYR:CE2	2.42	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
22:YA:70:G:H21	22:YA:71:A:N6	2.05	0.55
22:YA:690:G:H2'	22:YA:691:C:C6	2.42	0.55
22:YA:1164:G:H2'	22:YA:1165:U:C6	2.42	0.55
22:YA:2469:A:H5''	22:YA:2470:G:C8	2.41	0.55
25:YE:4:ILE:HD13	25:YE:5:LEU:H	1.71	0.55
25:YE:67:PHE:O	25:YE:69:LYS:N	2.39	0.55
29:YI:130:TYR:HB3	29:YI:136:VAL:HG13	1.88	0.55
30:YN:109:LYS:N	30:YN:109:LYS:HD2	2.22	0.55
31:YO:79:PHE:HD2	36:YT:72:VAL:HG22	1.72	0.55
32:YP:88:LEU:C	32:YP:90:ARG:N	2.60	0.55
35:YS:111:GLU:HA	35:YS:111:GLU:OE1	2.07	0.55
39:YW:20:VAL:C	39:YW:22:ASP:H	2.10	0.55
39:YW:25:ARG:HH11	39:YW:25:ARG:CB	2.20	0.55
44:Y1:83:GLU:OE1	44:Y1:85:LEU:HD23	2.07	0.55
47:Y4:51:ASP:OD1	47:Y4:51:ASP:O	2.25	0.55
53:XV:35:A:C2	54:XX:3:G:N3	2.75	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
22:RA:1903:G:OP2	24:RD:241:PRO:HB2	2.07	0.55
22:RA:1973:G:H2'	22:RA:1974:C:C6	2.42	0.55
25:RE:3:GLY:HA3	25:RE:81:ILE:HD12	1.88	0.55
26:RF:118:ALA:O	26:RF:121:GLY:N	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:135:LEU:HD12	27:RG:135:LEU:N	2.21	0.55
30:RN:109:LYS:N	30:RN:109:LYS:HD2	2.22	0.55
36:RT:6:LEU:O	36:RT:7:ILE:C	2.45	0.55
41:RY:48:ALA:H	41:RY:60:PHE:HA	1.72	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.55
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
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
9:XI:127:LYS:CE	53:XV:34:C:OP2	2.55	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.72	0.55
22:YA:1061:U:H3'	22:YA:1062:G:H5''	1.88	0.55
22:YA:1564:C:O2'	22:YA:1565:C:H5'	2.07	0.55
22:YA:1614:A:H62	39:YW:93:ALA:HB2	1.72	0.55
22:YA:1651:G:H1	22:YA:2006:C:H42	1.53	0.55
22:YA:2059:A:H5'	22:YA:2060:A:OP2	2.07	0.55
22:YA:2182:G:H2'	22:YA:2183:C:C6	2.42	0.55
23:YB:15:A:H5'	23:YB:16:G:H8	1.69	0.55
25:YE:21:VAL:HG23	25:YE:22:PRO:HD3	1.89	0.55
27:YG:114:ILE:HD11	27:YG:140:ILE:HD12	1.89	0.55
31:YO:4:PRO:O	31:YO:5:GLN:HB2	2.06	0.55
33:YQ:21:THR:O	33:YQ:22:LYS:O	2.25	0.55
33:YQ:64:ILE:HA	33:YQ:106:VAL:CG1	2.33	0.55
37:YU:27:LEU:O	37:YU:29:SER:N	2.40	0.55
42:YZ:72:ARG:NH2	42:YZ:97:GLU:O	2.32	0.55
47:Y4:9:LEU:H	47:Y4:27:THR:HG22	1.71	0.55
49:Y6:20:ASN:CG	49:Y6:21:TYR:H	2.09	0.55
1:QA:560:U:H5'	1:QA:566:G:N2	2.22	0.55
1:QA:624:C:H2'	1:QA:625:G:H8	1.71	0.55
1:QA:881:G:H2'	1:QA:882:C:O4'	2.07	0.55
1:QA:1213:A:N6	1:QA:1215:G:N3	2.55	0.55
2:QB:41:ILE:HD12	2:QB:41:ILE:N	2.21	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
22:RA:693:C:O2'	22:RA:1353:A:N3	2.32	0.55
22:RA:2146:C:H4'	22:RA:2147:G:C8	2.42	0.55
22:RA:2439:A:H5'	22:RA:2439:A:H8	1.72	0.55
27:RG:7:LEU:HD12	27:RG:104:GLU:HA	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:74:ALA:HB1	35:RS:107:GLU:HB3	1.89	0.55
37:RU:58:ARG:O	37:RU:62:ILE:HG13	2.06	0.55
37:RU:73:GLY:O	37:RU:74:LEU:HB3	2.07	0.55
45:R2:47:ASN:ND2	45:R2:47:ASN:N	2.54	0.55
4:XD:94:LEU:H	4:XD:94:LEU:CD1	2.08	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:114:TYR:O	9:XI:114:TYR:CD2	2.58	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.55
22:YA:484:C:H2'	22:YA:485:C:C6	2.41	0.55
22:YA:1094:U:O2'	22:YA:1096:A:OP1	2.15	0.55
22:YA:2250:G:C5	33:YQ:82:ARG:HD2	2.42	0.55
24:YD:94:LEU:HD22	24:YD:95:LEU:H	1.70	0.55
26:YF:32:LEU:HD12	26:YF:36:VAL:HG23	1.89	0.55
28:YH:26:VAL:CG1	28:YH:27:LYS:N	2.63	0.55
32:YP:2:LYS:O	32:YP:5:ASP:HB2	2.06	0.55
35:YS:36:TYR:HD2	35:YS:52:SER:CB	2.18	0.55
36:YT:29:ARG:HH11	36:YT:29:ARG:HB2	1.72	0.55
41:YY:95:LYS:HD3	41:YY:95:LYS:N	2.22	0.55
41:YY:95:LYS:HA	41:YY:101:LYS:H	1.72	0.55
41:YY:95:LYS:HB2	41:YY:95:LYS:NZ	2.21	0.55
47:Y4:71:ARG:NH1	47:Y4:71:ARG:CG	2.61	0.55
1:QA:437:U:H2'	1:QA:438:G:O4'	2.08	0.54
1:QA:584:G:H2'	1:QA:585:G:C8	2.42	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.36	0.54
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.37	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	2.07	0.54
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.07	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.54
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.54
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
24:RD:25:THR:HG21	24:RD:81:ALA:CB	2.38	0.54
27:RG:116:ASP:O	27:RG:117:PHE:CB	2.50	0.54
28:RH:8:PRO:O	28:RH:9:ILE:HG23	2.07	0.54
28:RH:128:PRO:CD	28:RH:129:THR:N	2.71	0.54
30:RN:44:PRO:HG2	30:RN:45:ASN:H	1.71	0.54
32:RP:65:ARG:HH21	51:R8:15:LYS:HB2	1.72	0.54
32:RP:84:ASN:ND2	32:RP:115:LEU:HD12	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:13:ARG:O	35:RS:13:ARG:HD2	2.06	0.54
37:RU:6:THR:O	37:RU:9:VAL:HG23	2.07	0.54
38:RV:29:PRO:HA	38:RV:61:VAL:CG2	2.37	0.54
38:RV:49:THR:CB	38:RV:50:PRO:CD	2.83	0.54
39:RW:80:PRO:O	39:RW:100:THR:CG2	2.54	0.54
50:R7:48:LYS:HG2	50:R7:49:ARG:N	2.19	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	2.23	0.54
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.54
13:XM:77:ASN:CG	47:Y4:71:ARG:CZ	2.75	0.54
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.60	0.54
22:YA:639:U:H2'	22:YA:640:C:C6	2.42	0.54
22:YA:1308:A:H2'	22:YA:1309:G:O4'	2.06	0.54
22:YA:2115:G:N2	22:YA:2165:G:N7	2.49	0.54
22:YA:2695:C:H2'	22:YA:2696:U:H6	1.71	0.54
24:YD:31:LYS:O	24:YD:35:LYS:O	2.24	0.54
24:YD:155:LEU:HD23	24:YD:177:LEU:CD2	2.36	0.54
25:YE:54:GLN:NE2	25:YE:54:GLN:N	2.56	0.54
27:YG:41:GLN:HB3	27:YG:43:LEU:HD13	1.87	0.54
45:Y2:31:GLU:HB2	45:Y2:53:LEU:HD11	1.89	0.54
51:Y8:30:ARG:O	51:Y8:31:HIS:CB	2.55	0.54
53:XV:68:C:H2'	53:XV:69:C:C6	2.42	0.54
1:QA:192:U:H2'	1:QA:193:C:C6	2.42	0.54
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.47	0.54
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.72	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
22:RA:102:G:H4'	22:RA:103:A:O5'	2.06	0.54
22:RA:270(H):C:H2'	22:RA:270(I):G:C8	2.43	0.54
22:RA:451:C:H4'	26:RF:52:LYS:NZ	2.22	0.54
22:RA:652:C:N4	22:RA:653:A:N1	2.55	0.54
22:RA:1952:A:OP1	31:RO:44:LYS:NZ	2.27	0.54
22:RA:2061:G:H5''	22:RA:2503:A:C2	2.43	0.54
22:RA:2086:U:H2'	22:RA:2087:G:C8	2.42	0.54
25:RE:21:VAL:HG23	25:RE:22:PRO:HD3	1.89	0.54
26:RF:197:ASP:O	26:RF:198:ALA:HB3	2.06	0.54
28:RH:12:PRO:O	28:RH:13:LYS:HB2	2.07	0.54
28:RH:86:GLU:HG3	28:RH:165:ALA:CB	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:24:GLY:O	32:RP:25:SER:HB3	2.06	0.54
32:RP:49:ARG:NE	51:R8:59:LYS:HG2	2.22	0.54
32:RP:59:LEU:O	32:RP:59:LEU:HD23	2.06	0.54
32:RP:106:LEU:O	32:RP:107:LYS:HD3	2.07	0.54
35:RS:107:GLU:N	35:RS:110:LEU:HD11	2.22	0.54
36:RT:16:ARG:HG2	36:RT:18:ASP:OD1	2.06	0.54
36:RT:29:ARG:HB2	36:RT:29:ARG:HH11	1.72	0.54
36:RT:107:ASP:O	36:RT:111:ARG:NH1	2.40	0.54
44:R1:91:LYS:HA	44:R1:91:LYS:CE	2.38	0.54
46:R3:8:LEU:HD22	46:R3:31:LEU:CD2	2.37	0.54
50:R7:18:PHE:C	50:R7:18:PHE:CD2	2.81	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.54
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
22:YA:619:G:H5'	22:YA:620:G:OP2	2.07	0.54
22:YA:962:G:H2'	22:YA:963:U:H6	1.72	0.54
22:YA:1338:G:N7	40:YX:62:LYS:NZ	2.49	0.54
22:YA:2074:U:H2'	22:YA:2075:U:C6	2.42	0.54
22:YA:2611:U:OP2	22:YA:2611:U:H6	1.90	0.54
25:YE:176:ILE:HG22	25:YE:179:GLU:H	1.72	0.54
36:YT:6:LEU:O	36:YT:7:ILE:C	2.44	0.54
36:YT:98:LYS:HB3	36:YT:100:TYR:CE1	2.43	0.54
37:YU:95:LEU:HD12	38:YV:11:GLN:HE21	1.72	0.54
38:YV:49:THR:CB	38:YV:50:PRO:CD	2.83	0.54
39:YW:9:TYR:H	39:YW:102:HIS:CE1	2.25	0.54
41:YY:2:ARG:HG2	41:YY:2:ARG:NH1	2.22	0.54
42:YZ:5:LEU:HD11	42:YZ:39:VAL:HB	1.88	0.54
1:QA:7:G:H5'	1:QA:298:A:O4'	2.07	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
9:QI:66:ARG:HG2	9:QI:66:ARG:NH1	2.22	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
12:QL:46:LYS:CG	12:QL:47:LYS:H	2.19	0.54
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
22:RA:678:C:H2'	22:RA:679:C:C6	2.42	0.54
22:RA:828:U:H4'	22:RA:831:G:N1	2.22	0.54
22:RA:1022:G:H22	22:RA:1142(A):A:H2	1.55	0.54
24:RD:43:ARG:CB	24:RD:54:ARG:HB2	2.37	0.54
26:RF:62:ARG:HB3	26:RF:62:ARG:NH1	2.22	0.54
31:RO:53:LYS:HD2	31:RO:56:ASP:OD1	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:39:PRO:HB3	33:RQ:99:PRO:HD3	1.89	0.54
36:RT:3:ARG:HG3	36:RT:7:ILE:CG1	2.36	0.54
39:RW:25:ARG:HH11	39:RW:25:ARG:CB	2.20	0.54
39:RW:70:TYR:CD2	39:RW:70:TYR:N	2.75	0.54
44:R1:53:VAL:O	44:R1:54:ALA:C	2.45	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
14:YN:15:LYS:O	14:YN:16:PHE:O	2.24	0.54
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
22:YA:323:G:HO2'	22:YA:1205:U:H3	1.55	0.54
22:YA:1210:A:H5'	22:YA:1210:A:C8	2.39	0.54
22:YA:2537:U:H2'	22:YA:2538:C:C6	2.41	0.54
27:YG:83:ARG:HG3	27:YG:86:MET:HE1	1.89	0.54
28:YH:86:GLU:HG3	28:YH:165:ALA:CB	2.38	0.54
30:YN:42:TRP:CD1	37:YU:63:VAL:HG11	2.42	0.54
34:YR:12:ARG:HH11	34:YR:12:ARG:HG3	1.71	0.54
38:YV:52:VAL:O	38:YV:54:GLY:N	2.39	0.54
40:YX:65:ARG:HD3	40:YX:65:ARG:H	1.70	0.54
41:YY:97:ARG:NH2	41:YY:98:VAL:CB	2.65	0.54
44:Y1:53:VAL:O	44:Y1:54:ALA:C	2.45	0.54
44:Y1:92:LYS:O	44:Y1:94:LEU:N	2.41	0.54
48:Y5:55:ARG:HD3	48:Y5:56:LYS:H	1.73	0.54
51:Y8:32:LEU:O	51:Y8:36:LYS:HE3	2.06	0.54
1:QA:986:A:N3	19:QS:52:TYR:OH	2.40	0.54
1:QA:1024:G:H4'	1:QA:1024:G:OP1	2.07	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.22	0.54
22:RA:1061:U:H3'	22:RA:1062:G:H5''	1.89	0.54
22:RA:1140:C:P	30:RN:66:LYS:HZ3	2.30	0.54
22:RA:2208:U:O2'	24:RD:151:LYS:HG2	2.06	0.54
22:RA:2696:U:H2'	22:RA:2697:G:C8	2.42	0.54
23:RB:21:G:H1	23:RB:62:C:H42	1.55	0.54
25:RE:186:GLY:O	25:RE:188:VAL:N	2.40	0.54
33:RQ:58:PHE:O	33:RQ:59:ARG:C	2.43	0.54
37:RU:58:ARG:NH1	37:RU:93:LYS:HE2	2.22	0.54
38:RV:22:VAL:CG1	38:RV:23:GLU:N	2.71	0.54
39:RW:20:VAL:C	39:RW:22:ASP:H	2.10	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:95:LYS:HD3	41:RY:95:LYS:N	2.23	0.54
42:RZ:19:ARG:NH1	42:RZ:84:GLU:O	2.39	0.54
47:R4:37:SER:HB3	47:R4:42:PHE:CD1	2.43	0.54
50:R7:31:LEU:O	50:R7:32:LYS:C	2.43	0.54
1:XA:110:C:O2'	16:XP:25:ARG:O	2.24	0.54
1:XA:922:G:C6	1:XA:923:A:C6	2.96	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
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
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.06	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
22:YA:287:C:H2'	22:YA:288:C:C6	2.42	0.54
22:YA:1364:G:N7	44:Y1:2:SER:N	2.55	0.54
22:YA:1667:G:H2'	22:YA:1991:U:O4	2.08	0.54
22:YA:1826:G:OP1	24:YD:224:ALA:N	2.38	0.54
26:YF:129:PHE:O	26:YF:130:ALA:CB	2.55	0.54
28:YH:8:PRO:O	28:YH:9:ILE:HG23	2.08	0.54
31:YO:53:LYS:HD2	31:YO:56:ASP:OD1	2.08	0.54
32:YP:65:ARG:HH21	51:Y8:15:LYS:HB2	1.72	0.54
32:YP:106:LEU:O	32:YP:107:LYS:HD3	2.07	0.54
32:YP:114:ILE:HD11	32:YP:130:PHE:HE1	1.70	0.54
32:YP:140:ALA:O	32:YP:141:ALA:HB2	2.08	0.54
37:YU:58:ARG:NH1	37:YU:93:LYS:HE2	2.22	0.54
39:YW:80:PRO:O	39:YW:100:THR:CG2	2.55	0.54
44:Y1:53:VAL:HG12	44:Y1:54:ALA:N	2.21	0.54
47:Y4:47:GLN:O	47:Y4:48:ARG:HB2	2.07	0.54
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.40	0.54
1:QA:181:G:HO2'	1:QA:182:U:P	2.30	0.54
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.42	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.37	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
22:RA:27:G:H1'	22:RA:513:A:H62	1.72	0.54
22:RA:242:G:C5'	51:R8:3:LYS:HE3	2.36	0.54
22:RA:1062:G:H2'	22:RA:1063:G:C8	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1588:C:H2'	22:RA:1589:C:H6	1.73	0.54
22:RA:2749:A:H3'	22:RA:2750:A:H2'	1.89	0.54
24:RD:233:HIS:CD2	24:RD:233:HIS:N	2.75	0.54
25:RE:176:ILE:HG22	25:RE:179:GLU:H	1.71	0.54
26:RF:197:ASP:O	26:RF:199:TRP:N	2.38	0.54
27:RG:139:LEU:HD22	27:RG:146:TYR:HD1	1.73	0.54
33:RQ:21:THR:O	33:RQ:22:LYS:O	2.25	0.54
35:RS:67:ARG:NH1	35:RS:67:ARG:CB	2.64	0.54
36:RT:123:GLN:O	36:RT:125:ARG:N	2.40	0.54
39:RW:9:TYR:H	39:RW:102:HIS:CE1	2.26	0.54
39:RW:38:TYR:OH	48:R5:47:PRO:HG3	2.08	0.54
40:RX:5:TYR:HE2	45:R2:30:ARG:HH11	1.56	0.54
41:RY:47:LYS:O	41:RY:49:VAL:HG23	2.07	0.54
41:RY:91:GLU:HG3	41:RY:92:ASN:H	1.72	0.54
44:R1:83:GLU:CG	44:R1:84:GLY:N	2.71	0.54
46:R3:35:ARG:HB3	46:R3:37:LEU:CD2	2.37	0.54
51:R8:32:LEU:O	51:R8:36:LYS:HE3	2.06	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
13:XM:8:GLU:OE1	27:YG:115:ARG:NE	2.38	0.54
13:XM:57:ARG:NE	47:Y4:35:VAL:HG23	2.19	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
22:YA:67:U:H3	22:YA:74:A:H2	1.56	0.54
22:YA:1053:C:H42	22:YA:1106:G:H1	1.56	0.54
22:YA:1257:C:H4'	26:YF:83:PHE:CE2	2.43	0.54
22:YA:1364:G:C8	44:Y1:2:SER:N	2.76	0.54
24:YD:25:THR:O	24:YD:25:THR:HG23	2.07	0.54
24:YD:211:ARG:HD2	24:YD:214:TRP:CZ3	2.43	0.54
25:YE:14:ILE:HG23	25:YE:15:PHE:N	2.23	0.54
38:YV:27:ALA:O	38:YV:28:GLU:O	2.24	0.54
41:YY:47:LYS:O	41:YY:49:VAL:HG23	2.08	0.54
42:YZ:149:SER:HB2	42:YZ:172:ALA:O	2.08	0.54
48:Y5:44:THR:O	48:Y5:46:CYS:N	2.41	0.54
49:Y6:17:LYS:O	49:Y6:18:ARG:HB2	2.08	0.54
50:Y7:18:PHE:CD2	50:Y7:18:PHE:C	2.81	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.89	0.54
22:RA:784:A:N7	24:RD:229:VAL:HG21	2.22	0.54
22:RA:2420:C:N4	51:R8:30:ARG:HD2	2.22	0.54
23:RB:104:A:H2'	23:RB:105:G:O4'	2.08	0.54
26:RF:67:GLN:O	26:RF:68:LYS:CB	2.39	0.54
27:RG:111:LEU:HB2	47:R4:38:LYS:HZ3	1.72	0.54
28:RH:26:VAL:CG1	28:RH:27:LYS:N	2.64	0.54
32:RP:125:VAL:O	32:RP:145:PRO:HD2	2.08	0.54
34:RR:45:ARG:HA	34:RR:95:THR:HG21	1.87	0.54
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.42	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.37	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
14:YN:6:LEU:CD2	14:YN:23:ARG:NH2	2.70	0.54
22:YA:74:A:H4'	22:YA:75:G:O5'	2.08	0.54
22:YA:1795:C:O2	24:YD:255:LYS:HE2	2.08	0.54
22:YA:2471:C:H3'	22:YA:2472:G:H8	1.73	0.54
24:YD:118:VAL:HG22	24:YD:119:ALA:H	1.72	0.54
24:YD:124:PRO:HB2	24:YD:126:GLN:NE2	2.22	0.54
26:YF:127:GLU:O	26:YF:129:PHE:N	2.39	0.54
28:YH:126:PRO:HD2	28:YH:127:GLU:H	1.72	0.54
28:YH:153:LYS:CE	28:YH:153:LYS:HA	2.38	0.54
46:Y3:2:PRO:O	46:Y3:3:ARG:O	2.25	0.54
47:Y4:65:ASP:O	47:Y4:66:SER:HB3	2.07	0.54
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.88	0.54
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.42	0.54
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.40	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
4:QD:33:MET:HE1	4:QD:37:PRO:HA	1.89	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	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
22:RA:728:G:C2	22:RA:730:C:C2	2.95	0.54
22:RA:2298:A:H2'	22:RA:2299:G:O4'	2.06	0.54
25:RE:101:ARG:HB3	25:RE:201:THR:OG1	2.08	0.54
29:RI:31:LEU:HD21	29:RI:38:LEU:HG	1.90	0.54
38:RV:45:THR:HG22	38:RV:45:THR:O	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:61:ILE:HG23	41:RY:62:GLU:H	1.71	0.54
44:R1:60:PHE:HE2	44:R1:91:LYS:HZ1	1.54	0.54
45:R2:31:GLU:HB2	45:R2:53:LEU:HD11	1.89	0.54
48:R5:55:ARG:HD3	48:R5:56:LYS:H	1.73	0.54
49:R6:12:GLU:HG2	49:R6:52:VAL:O	2.07	0.54
1:XA:1230:C:H2'	1:XA:1231:G:H8	1.73	0.54
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.41	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
13:XM:7:VAL:HG22	47:Y4:34:GLU:OE2	2.08	0.54
22:YA:273(F):C:H2'	22:YA:274:G:H5''	1.90	0.54
22:YA:414:C:O2	22:YA:1864:U:O2'	2.24	0.54
22:YA:1824:G:O3'	24:YD:249:PRO:HD3	2.07	0.54
22:YA:2469:A:H5''	22:YA:2470:G:H8	1.72	0.54
22:YA:2556:C:H2'	22:YA:2557:G:O4'	2.08	0.54
24:YD:206:LEU:O	24:YD:211:ARG:NH1	2.38	0.54
33:YQ:39:PRO:HB3	33:YQ:99:PRO:HD3	1.90	0.54
34:YR:28:LEU:HD13	34:YR:28:LEU:O	2.08	0.54
41:YY:87:LYS:HB2	41:YY:87:LYS:NZ	2.23	0.54
53:QV:4:G:HO2'	53:QV:5:G:H8	1.55	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
13:QM:77:ASN:HA	47:R4:71:ARG:CZ	2.37	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
22:RA:1403:C:H5''	22:RA:1471:A:C1'	2.36	0.54
22:RA:2722:G:H4'	34:RR:4:LEU:HB2	1.88	0.54
22:RA:2758:A:C4	28:RH:67:LEU:HD21	2.42	0.54
23:RB:1:U:H2'	23:RB:2:C:H6	1.73	0.54
24:RD:183:ARG:HG2	24:RD:183:ARG:NH1	2.12	0.54
24:RD:227:ASN:HB3	24:RD:228:PRO:CD	2.30	0.54
30:RN:42:TRP:CD1	37:RU:63:VAL:HG11	2.42	0.54
33:RQ:60:ARG:HH12	33:RQ:113:GLN:HE22	1.55	0.54
34:RR:1:MET:O	34:RR:2:ARG:HG3	2.08	0.54
36:RT:14:TYR:H	36:RT:14:TYR:HD1	1.56	0.54
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.89	0.54
1:XA:188:U:H2'	1:XA:189:U:H5''	1.90	0.54
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.08	0.54
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1399:C:C2	1:XA:1502:A:N6	2.75	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
14:YN:22:THR:HB	14:YN:33:VAL:HG11	1.88	0.54
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
22:YA:353:G:H2'	22:YA:354:G:H8	1.72	0.54
22:YA:519:U:H2'	22:YA:520:G:C8	2.42	0.54
22:YA:841:A:H2'	22:YA:842:G:C8	2.43	0.54
24:YD:28:GLU:O	24:YD:29:PRO:C	2.45	0.54
25:YE:25:VAL:HG11	36:YT:11:GLU:HG2	1.90	0.54
25:YE:51:PHE:O	25:YE:74:PRO:HB3	2.08	0.54
26:YF:53:THR:C	26:YF:55:GLY:H	2.11	0.54
26:YF:62:ARG:HB3	26:YF:62:ARG:NH1	2.23	0.54
27:YG:3:LEU:HD12	27:YG:4:ASP:N	2.19	0.54
27:YG:7:LEU:HD12	27:YG:104:GLU:HA	1.88	0.54
27:YG:81:LYS:O	27:YG:82:LEU:CB	2.56	0.54
28:YH:91:GLY:O	28:YH:94:TYR:HB2	2.08	0.54
31:YO:78:ARG:O	36:YT:73:GLU:HG3	2.08	0.54
32:YP:84:ASN:ND2	32:YP:115:LEU:HD12	2.22	0.54
32:YP:112:LEU:HD13	32:YP:112:LEU:C	2.29	0.54
32:YP:124:LYS:HA	32:YP:143:GLY:O	2.08	0.54
34:YR:38:VAL:HG22	34:YR:112:ALA:HB2	1.90	0.54
36:YT:55:ASN:O	36:YT:57:PHE:O	2.26	0.54
37:YU:24:TYR:O	37:YU:29:SER:HB3	2.08	0.54
37:YU:86:ALA:HB1	37:YU:88:ILE:HD11	1.90	0.54
46:Y3:56:VAL:CG1	46:Y3:57:GLU:H	2.19	0.54
52:Y9:1:MET:HB3	52:Y9:4:ARG:CZ	2.37	0.54
53:QV:68:C:H2'	53:QV:69:C:C6	2.42	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
22:RA:1165:U:H2'	22:RA:1166:C:C6	2.43	0.54
22:RA:2443:C:H2'	22:RA:2444:G:C8	2.42	0.54
24:RD:25:THR:CG2	24:RD:81:ALA:HB1	2.38	0.54
25:RE:54:GLN:NE2	25:RE:54:GLN:N	2.55	0.54
26:RF:179:GLU:CD	26:RF:179:GLU:H	2.11	0.54
28:RH:91:GLY:O	28:RH:94:TYR:HB2	2.08	0.54
31:RO:4:PRO:O	31:RO:5:GLN:HB2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:112:LEU:HD13	32:RP:112:LEU:C	2.29	0.54
32:RP:124:LYS:HA	32:RP:143:GLY:O	2.08	0.54
33:RQ:81:VAL:C	33:RQ:82:ARG:CG	2.76	0.54
34:RR:38:VAL:HG22	34:RR:112:ALA:HB2	1.90	0.54
34:RR:53:HIS:HA	34:RR:56:LYS:HD3	1.90	0.54
35:RS:111:GLU:OE1	35:RS:111:GLU:HA	2.06	0.54
37:RU:95:LEU:HD12	38:RV:11:GLN:HE21	1.72	0.54
47:R4:51:ASP:O	47:R4:51:ASP:OD1	2.25	0.54
1:XA:429:U:H1'	1:XA:430:A:H5''	1.90	0.54
1:XA:881:G:P	12:XL:12:ARG:HH22	2.30	0.54
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.07	0.54
1:XA:1312:G:OP1	47:Y4:58:ARG:NH1	2.39	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
22:YA:771:G:OP1	50:Y7:10:ARG:NH1	2.41	0.54
22:YA:2712:U:O2'	22:YA:2712(A):A:H8	1.89	0.54
23:YB:40:U:O2'	23:YB:45:A:N6	2.37	0.54
24:YD:34:VAL:C	24:YD:35:LYS:HG3	2.28	0.54
25:YE:14:ILE:HD11	36:YT:14:TYR:CZ	2.42	0.54
25:YE:101:ARG:HB3	25:YE:201:THR:OG1	2.08	0.54
25:YE:134:ILE:C	25:YE:134:ILE:HD12	2.28	0.54
29:YI:56:LYS:HE3	29:YI:57:ARG:HG2	1.89	0.54
30:YN:7:LYS:HD3	30:YN:9:VAL:CA	2.38	0.54
31:YO:49:ARG:HB3	31:YO:49:ARG:NH1	2.23	0.54
31:YO:68:GLU:HA	31:YO:78:ARG:HB3	1.89	0.54
32:YP:24:GLY:O	32:YP:25:SER:HB3	2.06	0.54
32:YP:37:GLY:C	32:YP:41:ARG:HD3	2.29	0.54
32:YP:92:GLU:HA	32:YP:123:LEU:CD2	2.38	0.54
34:YR:91:GLN:HG2	34:YR:91:GLN:O	2.08	0.54
45:Y2:47:ASN:ND2	45:Y2:47:ASN:N	2.54	0.54
54:XX:6:C:HO2'	54:XX:7:A:P	2.30	0.54
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.22	0.54
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.54
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.54
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.54
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
22:RA:247:G:H4'	22:RA:386:G:C5	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:669:G:H2'	22:RA:669:G:N3	2.23	0.54
22:RA:996:A:OP2	37:RU:94:ASN:ND2	2.41	0.54
22:RA:1291:C:H5'	22:RA:1536:A:H5'	1.90	0.54
24:RD:158:ALA:HB3	24:RD:161:THR:HG21	1.90	0.54
25:RE:51:PHE:O	25:RE:74:PRO:HB3	2.08	0.54
25:RE:53:PRO:O	25:RE:74:PRO:HA	2.07	0.54
30:RN:70:LYS:C	30:RN:71:ILE:HD13	2.28	0.54
32:RP:64:LYS:HG3	51:R8:25:MET:SD	2.48	0.54
37:RU:47:TYR:C	37:RU:47:TYR:CD2	2.81	0.54
41:RY:87:LYS:NZ	41:RY:87:LYS:HB2	2.23	0.54
44:R1:92:LYS:O	44:R1:94:LEU:N	2.41	0.54
49:R6:17:LYS:O	49:R6:18:ARG:HB2	2.08	0.54
1:XA:971:G:C5	1:XA:1365:G:H5'	2.43	0.54
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.88	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.23	0.54
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.54
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.54
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	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
22:YA:26:G:H1'	22:YA:515:A:N6	2.23	0.54
22:YA:275:G:N2	22:YA:276:A:H62	2.04	0.54
22:YA:395:U:H2'	22:YA:396:G:N7	2.23	0.54
22:YA:1169:G:H1	22:YA:1180:C:N4	2.05	0.54
22:YA:2105:C:H2'	22:YA:2106:G:H8	1.73	0.54
26:YF:147:GLY:O	26:YF:148:LEU:HD23	2.08	0.54
26:YF:197:ASP:O	26:YF:198:ALA:HB3	2.06	0.54
35:YS:13:ARG:O	35:YS:13:ARG:HD2	2.07	0.54
35:YS:74:ALA:HB1	35:YS:107:GLU:HB3	1.89	0.54
38:YV:45:THR:HG22	38:YV:45:THR:O	2.08	0.54
38:YV:66:ARG:HH11	38:YV:66:ARG:CB	2.20	0.54
40:YX:5:TYR:HE2	45:Y2:30:ARG:HH11	1.56	0.54
42:YZ:58:VAL:O	42:YZ:60:GLU:N	2.39	0.54
44:Y1:91:LYS:HA	44:Y1:91:LYS:CE	2.37	0.54
47:Y4:63:TYR:C	47:Y4:65:ASP:N	2.61	0.54
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.43	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.53
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.22	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
22:RA:153:C:P	44:R1:88:LYS:HE2	2.48	0.53
22:RA:2713:A:OP1	34:RR:14:SER:OG	2.25	0.53
24:RD:227:ASN:CB	24:RD:228:PRO:HD2	2.24	0.53
31:RO:113:LYS:HG2	31:RO:117:LEU:CD1	2.38	0.53
32:RP:140:ALA:O	32:RP:141:ALA:HB2	2.08	0.53
37:RU:24:TYR:O	37:RU:29:SER:HB3	2.08	0.53
44:R1:83:GLU:OE1	44:R1:85:LEU:HD23	2.07	0.53
45:R2:43:GLN:O	45:R2:44:LEU:CG	2.54	0.53
1:XA:503:C:OP2	12:XL:116:SER:HB3	2.07	0.53
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.08	0.53
1:XA:1359:C:H3'	14:XN:35:ARG:HH12	1.73	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.90	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	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
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.53
22:YA:76:C:O2'	45:Y2:62:THR:HG21	2.07	0.53
22:YA:83:G:H1	22:YA:102:G:H1'	1.73	0.53
22:YA:2347:C:OP1	49:Y6:39:TYR:HE2	1.92	0.53
22:YA:2467:C:H4'	33:YQ:123:HIS:CD2	2.43	0.53
22:YA:2667:C:H1'	28:YH:109:PHE:HD2	1.72	0.53
24:YD:80:ALA:HB3	24:YD:94:LEU:HD13	1.88	0.53
24:YD:158:ALA:HB3	24:YD:161:THR:HG21	1.90	0.53
24:YD:183:ARG:HG2	24:YD:183:ARG:NH1	2.12	0.53
25:YE:186:GLY:O	25:YE:188:VAL:N	2.41	0.53
31:YO:12:ASP:OD1	31:YO:85:VAL:HG13	2.08	0.53
36:YT:88:ILE:C	36:YT:88:ILE:HD12	2.29	0.53
36:YT:105:LEU:O	36:YT:107:ASP:N	2.41	0.53
37:YU:74:LEU:HD13	37:YU:79:PHE:HB2	1.89	0.53
41:YY:5:MET:HE1	41:YY:32:PRO:HB3	1.91	0.53
45:Y2:41:ILE:HD11	45:Y2:44:LEU:HB2	1.90	0.53
50:Y7:10:ARG:NH1	50:Y7:14:LYS:HE3	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:10:A:H2'	1:QA:11:G:H8	1.73	0.53
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.27	0.53
1:QA:1397:C:O2'	54:QX:8:A:N6	2.41	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.89	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
14:QN:23:ARG:O	14:QN:24:CYS:C	2.46	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
22:RA:242:G:O3'	51:R8:6:THR:HG23	2.08	0.53
22:RA:964:C:O2'	22:RA:2273:A:N3	2.36	0.53
22:RA:1264:G:H5'	48:R5:11:THR:HG21	1.91	0.53
23:RB:15:A:H1'	23:RB:109:G:C4	2.43	0.53
24:RD:85:ASP:OD2	24:RD:88:ARG:HG2	2.07	0.53
24:RD:206:LEU:O	24:RD:211:ARG:NH1	2.38	0.53
24:RD:211:ARG:HD2	24:RD:214:TRP:CZ3	2.43	0.53
26:RF:116:ASP:OD1	26:RF:119:ARG:NH2	2.41	0.53
28:RH:153:LYS:HA	28:RH:153:LYS:CE	2.38	0.53
31:RO:78:ARG:O	36:RT:73:GLU:HG3	2.08	0.53
32:RP:37:GLY:HA2	32:RP:41:ARG:NE	2.24	0.53
32:RP:37:GLY:C	32:RP:41:ARG:HD3	2.29	0.53
36:RT:88:ILE:C	36:RT:88:ILE:HD12	2.29	0.53
40:RX:53:LYS:NZ	40:RX:55:ASN:HD21	2.06	0.53
47:R4:37:SER:C	47:R4:39:CYS:N	2.62	0.53
48:R5:60:VAL:OXT	48:R5:60:VAL:CG1	2.56	0.53
1:XA:690:G:H22	11:XK:55:LYS:HZ2	1.57	0.53
1:XA:1130:A:N6	1:XA:1131:G:O6	2.41	0.53
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.90	0.53
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.72	0.53
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.53
22:YA:297:C:H5''	41:YY:85:VAL:HG21	1.90	0.53
22:YA:1533:C:H42	22:YA:1538:G:H1	1.56	0.53
22:YA:1754:C:H2'	22:YA:1755:A:C8	2.43	0.53
22:YA:2277:G:OP1	33:YQ:85:LYS:HB2	2.08	0.53
22:YA:2605:U:H2'	22:YA:2606:C:C6	2.43	0.53
24:YD:35:LYS:CG	24:YD:64:ILE:H	2.15	0.53
24:YD:85:ASP:OD2	24:YD:88:ARG:HG2	2.07	0.53
27:YG:139:LEU:HD22	27:YG:146:TYR:HD1	1.73	0.53
28:YH:125:VAL:HA	28:YH:126:PRO:CB	2.29	0.53
30:YN:70:LYS:C	30:YN:71:ILE:HD13	2.28	0.53
31:YO:7:TYR:C	31:YO:8:LEU:HD22	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YO:12:ASP:CG	31:YO:14:THR:HG23	2.29	0.53
34:YR:70:LEU:HD13	34:YR:75:LEU:HD11	1.88	0.53
38:YV:35:LEU:HD22	38:YV:35:LEU:N	2.23	0.53
38:YV:81:TYR:C	38:YV:82:ARG:HG3	2.27	0.53
44:Y1:87:PRO:O	44:Y1:91:LYS:N	2.31	0.53
49:Y6:11:LEU:CD1	49:Y6:51:GLU:HG3	2.38	0.53
49:Y6:12:GLU:HG2	49:Y6:52:VAL:O	2.07	0.53
53:QV:35:A:C2	54:QX:3:G:N2	2.75	0.53
1:QA:363:A:OP1	12:QL:34:ARG:N	2.38	0.53
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.89	0.53
1:QA:1297:C:H4'	1:QA:1298:C:H5''	1.91	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.09	0.53
18:QR:58:LEU:HD12	18:QR:58:LEU:H	1.72	0.53
22:RA:2031:A:C6	22:RA:2498:C:H1'	2.44	0.53
22:RA:2645:G:H3'	22:RA:2646:C:H5''	1.90	0.53
24:RD:124:PRO:HB2	24:RD:126:GLN:NE2	2.22	0.53
26:RF:53:THR:C	26:RF:55:GLY:H	2.11	0.53
28:RH:139:GLN:O	28:RH:143:GLN:HB2	2.09	0.53
30:RN:109:LYS:HD2	30:RN:109:LYS:H	1.74	0.53
30:RN:137:LYS:HG3	30:RN:138:LEU:N	2.23	0.53
31:RO:49:ARG:HB3	31:RO:49:ARG:NH1	2.23	0.53
34:RR:28:LEU:HD13	34:RR:28:LEU:O	2.08	0.53
38:RV:7:THR:CG2	38:RV:22:VAL:HG11	2.39	0.53
38:RV:81:TYR:C	38:RV:82:ARG:HG3	2.27	0.53
41:RY:97:ARG:NH2	41:RY:98:VAL:CB	2.65	0.53
46:R3:2:PRO:O	46:R3:3:ARG:O	2.25	0.53
50:R7:10:ARG:NH1	50:R7:14:LYS:HE3	2.23	0.53
51:R8:58:ILE:O	51:R8:61:LEU:HG	2.08	0.53
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.11	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.72	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
28:YH:59:ARG:HH11	28:YH:59:ARG:CG	2.20	0.53
29:YI:88:ILE:HG12	29:YI:122:GLU:H	1.74	0.53
36:YT:110:ILE:HG23	36:YT:111:ARG:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YU:47:TYR:C	37:YU:47:TYR:CD2	2.81	0.53
41:YY:90:LEU:HD22	41:YY:90:LEU:H	1.73	0.53
45:Y2:16:LEU:O	45:Y2:16:LEU:CG	2.49	0.53
48:Y5:16:ARG:NH1	48:Y5:17:ASP:OD1	2.41	0.53
49:Y6:13:CYS:O	49:Y6:14:THR:HB	2.08	0.53
51:Y8:63:PRO:O	51:Y8:64:TYR:HB2	2.07	0.53
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.09	0.53
1:QA:1397:C:C1'	54:QX:8:A:N6	2.72	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:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
12:QL:47:LYS:CG	12:QL:48:PRO:CD	2.87	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
22:RA:299:A:OP2	22:RA:299:A:H8	1.91	0.53
22:RA:2711:A:H5''	22:RA:2712:U:H5'	1.90	0.53
24:RD:25:THR:O	24:RD:25:THR:HG23	2.07	0.53
26:RF:32:LEU:HD12	26:RF:36:VAL:HG23	1.90	0.53
27:RG:81:LYS:O	27:RG:82:LEU:CB	2.56	0.53
37:RU:86:ALA:HB1	37:RU:88:ILE:HD11	1.90	0.53
38:RV:66:ARG:HH11	38:RV:66:ARG:CB	2.20	0.53
41:RY:44:ILE:CG1	41:RY:45:VAL:N	2.70	0.53
42:RZ:28:MET:HE1	42:RZ:61:LEU:HD11	1.89	0.53
47:R4:15:ILE:HD13	47:R4:15:ILE:H	1.74	0.53
48:R5:44:THR:O	48:R5:46:CYS:N	2.41	0.53
51:R8:29:LYS:HB2	51:R8:44:LYS:HG2	1.90	0.53
1:XA:411:A:C6	1:XA:429:U:C4	2.97	0.53
1:XA:1364:U:HO2'	1:XA:1365:G:P	2.31	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
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
22:YA:1790:C:H5''	22:YA:1791:A:OP1	2.08	0.53
22:YA:2335:A:O2'	22:YA:2336:A:O5'	2.27	0.53
22:YA:2881:C:H2'	22:YA:2882:A:H8	1.74	0.53
26:YF:179:GLU:CD	26:YF:179:GLU:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:137:LYS:HG3	30:YN:138:LEU:N	2.23	0.53
39:YW:28:SER:HB3	39:YW:31:GLU:HB2	1.91	0.53
47:Y4:37:SER:C	47:Y4:39:CYS:N	2.62	0.53
1:QA:1322:C:O2'	1:QA:1323:G:H5'	2.09	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
3:QC:173:VAL:HG12	3:QC:173:VAL:O	2.08	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
22:RA:240:G:H3'	22:RA:241:A:H2'	1.90	0.53
22:RA:843:G:N2	22:RA:936:C:C2	2.77	0.53
25:RE:14:ILE:CG1	25:RE:15:PHE:H	2.08	0.53
25:RE:134:ILE:C	25:RE:134:ILE:HD12	2.28	0.53
29:RI:79:ILE:HB	29:RI:142:VAL:HA	1.90	0.53
33:RQ:119:ARG:HG2	33:RQ:119:ARG:NH1	2.20	0.53
34:RR:91:GLN:O	34:RR:91:GLN:HG2	2.08	0.53
35:RS:10:ARG:O	35:RS:14:VAL:HG12	2.09	0.53
35:RS:25:ARG:HH11	35:RS:25:ARG:CB	2.22	0.53
40:RX:36:LYS:HA	40:RX:39:ILE:HD12	1.90	0.53
48:R5:16:ARG:NH1	48:R5:17:ASP:OD1	2.41	0.53
49:R6:11:LEU:CD1	49:R6:51:GLU:HG3	2.39	0.53
1:XA:757:U:H2'	1:XA:758:G:O4'	2.09	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
22:YA:242:G:H5'	51:Y8:62:LEU:CD2	2.37	0.53
22:YA:466:A:N3	22:YA:683:C:H1'	2.24	0.53
22:YA:1344:G:H4'	22:YA:1384:A:C5	2.44	0.53
22:YA:1803:A:N6	22:YA:1814:G:O2'	2.31	0.53
22:YA:2286:A:H4'	22:YA:2287:A:O4'	2.09	0.53
22:YA:2532:G:O2'	22:YA:2657:A:N1	2.38	0.53
24:YD:263:ARG:HB2	24:YD:263:ARG:HH11	1.68	0.53
28:YH:12:PRO:O	28:YH:13:LYS:HB2	2.07	0.53
38:YV:22:VAL:CG1	38:YV:23:GLU:N	2.71	0.53
38:YV:41:GLY:HA3	38:YV:46:VAL:CG1	2.38	0.53
51:Y8:58:ILE:O	51:Y8:61:LEU:HG	2.08	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.44	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
22:RA:189:G:N1	22:RA:206:U:OP2	2.36	0.53
22:RA:945:A:C4	22:RA:2448:A:C2	2.97	0.53
22:RA:2469:A:H5''	22:RA:2470:G:C8	2.43	0.53
23:RB:16:G:H2'	23:RB:17:C:H6	1.73	0.53
26:RF:34:TRP:CH2	32:RP:8:PRO:HB3	2.43	0.53
30:RN:19:GLU:HA	30:RN:59:LYS:HB2	1.91	0.53
31:RO:7:TYR:C	31:RO:8:LEU:HD22	2.29	0.53
31:RO:12:ASP:OD1	31:RO:85:VAL:HG13	2.08	0.53
31:RO:12:ASP:CG	31:RO:14:THR:HG23	2.29	0.53
31:RO:14:THR:HG21	31:RO:86:ILE:HD13	1.91	0.53
36:RT:105:LEU:O	36:RT:107:ASP:N	2.41	0.53
40:RX:60:ARG:NH1	50:R7:47:ARG:HH22	2.07	0.53
42:RZ:5:LEU:HB3	42:RZ:59:LEU:HA	1.90	0.53
49:R6:13:CYS:O	49:R6:14:THR:HB	2.08	0.53
1:XA:35:G:C2	1:XA:550:G:N3	2.77	0.53
1:XA:658:G:H2'	1:XA:659:U:H6	1.73	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
14:YN:40:CYS:SG	14:YN:42:ILE:N	2.81	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
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
24:YD:25:THR:HG21	24:YD:81:ALA:CB	2.38	0.53
28:YH:12:PRO:HG3	28:YH:48:GLY:O	2.09	0.53
28:YH:40:GLU:O	28:YH:41:MET:HB2	2.08	0.53
32:YP:79:ARG:HD3	32:YP:110:TYR:CE1	2.43	0.53
32:YP:88:LEU:HD23	32:YP:89:ALA:N	2.24	0.53
33:YQ:76:LYS:O	33:YQ:88:GLY:HA3	2.09	0.53
42:YZ:28:MET:O	42:YZ:34:ASN:HA	2.09	0.53
47:Y4:37:SER:HB3	47:Y4:42:PHE:CD1	2.43	0.53
1:QA:1397:C:O2	54:QX:8:A:N7	2.42	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.56	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:47:LYS:CB	12:QL:48:PRO:CD	2.87	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
22:RA:195:A:H61	22:RA:198:C:H3'	1.74	0.53
22:RA:1728:G:H3'	22:RA:1729:A:H5''	1.91	0.53
24:RD:25:THR:HG21	24:RD:82:ILE:H	1.70	0.53
24:RD:34:VAL:C	24:RD:35:LYS:HG3	2.28	0.53
25:RE:20:ALA:O	25:RE:21:VAL:CG2	2.48	0.53
30:RN:78:TYR:N	30:RN:78:TYR:HD1	2.07	0.53
30:RN:120:LEU:CD1	30:RN:122:VAL:HG23	2.38	0.53
36:RT:98:LYS:HB3	36:RT:100:TYR:CE1	2.43	0.53
39:RW:43:GLY:O	39:RW:44:ALA:C	2.46	0.53
49:R6:9:LEU:HD13	49:R6:26:ASN:ND2	2.24	0.53
1:XA:96:G:H2'	1:XA:97:U:O4'	2.09	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.91	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
22:YA:524:U:H2'	22:YA:525:U:H6	1.74	0.53
22:YA:676:A:H8	22:YA:2069:G:H21	1.56	0.53
22:YA:1214:A:N6	22:YA:1235:G:O2'	2.40	0.53
22:YA:1728:G:H5''	22:YA:1728:G:N3	2.24	0.53
22:YA:2168:G:N2	22:YA:2170:A:N7	2.56	0.53
22:YA:2319:G:N7	35:YS:3:ARG:HB3	2.23	0.53
25:YE:119:ARG:HD3	25:YE:160:TYR:HB2	1.91	0.53
27:YG:125:PHE:C	27:YG:127:GLY:H	2.12	0.53
28:YH:128:PRO:CD	28:YH:129:THR:N	2.71	0.53
30:YN:19:GLU:HA	30:YN:59:LYS:HB2	1.91	0.53
31:YO:2:ILE:HD12	31:YO:2:ILE:N	2.23	0.53
32:YP:64:LYS:HG3	51:Y8:25:MET:SD	2.48	0.53
32:YP:125:VAL:O	32:YP:145:PRO:HD2	2.08	0.53
47:Y4:49:PHE:N	47:Y4:49:PHE:CD1	2.77	0.53
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.23	0.53
1:QA:959:A:HO2'	1:QA:984:C:HO2'	1.55	0.53
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.44	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.17	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.53
12:QL:47:LYS:HB3	12:QL:48:PRO:CD	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:297:C:H5''	41:RY:85:VAL:CG2	2.37	0.53
22:RA:704:G:H1'	22:RA:727:A:N6	2.24	0.53
22:RA:817:C:O2'	22:RA:839:U:H5''	2.09	0.53
22:RA:1266:G:OP2	48:R5:20:ARG:NE	2.40	0.53
22:RA:2151:G:H2'	22:RA:2152:G:H8	1.74	0.53
22:RA:2723:C:OP1	34:RR:3:HIS:HD2	1.92	0.53
22:RA:2832:U:H4'	22:RA:2833:G:H5''	1.91	0.53
24:RD:36:PRO:HA	24:RD:62:TYR:O	2.09	0.53
25:RE:14:ILE:HG23	25:RE:15:PHE:N	2.23	0.53
25:RE:25:VAL:HG11	36:RT:11:GLU:HG2	1.90	0.53
26:RF:129:PHE:O	26:RF:142:TRP:CD1	2.62	0.53
32:RP:79:ARG:HD3	32:RP:110:TYR:CE1	2.43	0.53
39:RW:8:ARG:HH11	39:RW:8:ARG:HG3	1.73	0.53
41:RY:84:ARG:NH1	41:RY:97:ARG:HB2	2.11	0.53
41:RY:95:LYS:HA	41:RY:101:LYS:H	1.72	0.53
45:R2:41:ILE:HD11	45:R2:44:LEU:HB2	1.90	0.53
47:R4:54:GLY:O	47:R4:71:ARG:HA	2.08	0.53
49:R6:25:LYS:HE2	49:R6:27:LYS:HE3	1.91	0.53
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.44	0.53
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.08	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	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:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
13:XM:7:VAL:HG21	27:YG:113:ARG:C	2.29	0.53
19:XS:64:GLU:C	47:Y4:55:ARG:NH1	2.62	0.53
22:YA:1407:C:H42	22:YA:1595:G:H1	1.56	0.53
24:YD:77:ALA:HB2	24:YD:97:TYR:CG	2.44	0.53
26:YF:116:ASP:OD1	26:YF:119:ARG:NH2	2.41	0.53
30:YN:22:THR:CG2	30:YN:23:LEU:N	2.61	0.53
30:YN:134:ARG:N	30:YN:135:PRO:CD	2.58	0.53
34:YR:1:MET:O	34:YR:2:ARG:HG3	2.08	0.53
34:YR:67:LEU:HD13	34:YR:76:VAL:CG2	2.27	0.53
35:YS:56:LEU:O	35:YS:58:LEU:HD22	2.09	0.53
38:YV:48:GLY:O	38:YV:49:THR:O	2.26	0.53
39:YW:43:GLY:O	39:YW:44:ALA:C	2.46	0.53
40:YX:60:ARG:NH1	50:Y7:47:ARG:HH22	2.07	0.53
44:Y1:20:ARG:HG2	44:Y1:20:ARG:NH1	2.24	0.53
47:Y4:56:VAL:HA	47:Y4:60:GLN:CB	2.28	0.53
49:Y6:7:ILE:CG1	49:Y6:8:LYS:H	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y6:9:LEU:HD13	49:Y6:26:ASN:ND2	2.24	0.53
1:QA:677:U:H3	1:QA:713:G:H1	1.57	0.53
1:QA:911:U:H2'	1:QA:912:C:C6	2.44	0.53
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.43	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
22:RA:935:C:H2'	22:RA:936:C:C6	2.44	0.53
27:RG:125:PHE:C	27:RG:127:GLY:H	2.12	0.53
28:RH:126:PRO:HD2	28:RH:127:GLU:H	1.72	0.53
38:RV:48:GLY:O	38:RV:49:THR:O	2.26	0.53
39:RW:14:PRO:O	39:RW:17:VAL:N	2.42	0.53
47:R4:47:GLN:O	47:R4:48:ARG:HB2	2.07	0.53
48:R5:55:ARG:HG3	48:R5:57:VAL:H	1.74	0.53
51:R8:52:LYS:N	51:R8:53:PRO:HD2	2.22	0.53
1:XA:738:C:H5''	6:XF:69:GLU:HB2	1.90	0.53
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.29	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	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
22:YA:848:G:H2'	22:YA:849:A:C8	2.43	0.53
22:YA:2756:U:OP2	52:Y9:19:ARG:NH2	2.41	0.53
24:YD:25:THR:CG2	24:YD:81:ALA:HB1	2.38	0.53
25:YE:64:LYS:C	25:YE:66:HIS:H	2.11	0.53
28:YH:139:GLN:O	28:YH:143:GLN:HB2	2.09	0.53
35:YS:10:ARG:O	35:YS:14:VAL:HG12	2.09	0.53
36:YT:34:VAL:CG1	36:YT:36:GLU:HG2	2.39	0.53
37:YU:92:ARG:NH2	37:YU:94:ASN:HD22	2.07	0.53
38:YV:38:LEU:HD13	38:YV:55:ALA:HB3	1.91	0.53
45:Y2:50:ILE:CD1	45:Y2:51:ARG:N	2.60	0.53
49:Y6:25:LYS:HE2	49:Y6:27:LYS:HE3	1.91	0.53
1:QA:642:A:N3	8:QH:113:SER:OG	2.37	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	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
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.53
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:582:G:H2'	22:RA:583:G:H8	1.73	0.53
22:RA:2306:C:H3'	22:RA:2307:G:H5''	1.90	0.53
22:RA:2314:C:OP1	27:RG:91:ARG:NH1	2.41	0.53
22:RA:2347:C:OP1	49:R6:39:TYR:HE2	1.92	0.53
24:RD:43:ARG:NH1	24:RD:44:ASN:OD1	2.42	0.53
28:RH:40:GLU:O	28:RH:41:MET:HB2	2.08	0.53
29:RI:69:LYS:HG3	29:RI:136:VAL:HB	1.90	0.53
29:RI:113:ARG:HG3	29:RI:131:LYS:NZ	2.24	0.53
32:RP:125:VAL:O	32:RP:125:VAL:HG13	2.09	0.53
36:RT:55:ASN:O	36:RT:57:PHE:O	2.26	0.53
38:RV:51:VAL:CG1	38:RV:52:VAL:H	2.22	0.53
44:R1:85:LEU:HA	44:R1:87:PRO:HD2	1.91	0.53
1:XA:582:U:H2'	1:XA:583:A:C8	2.44	0.53
1:XA:1147:C:O2	9:XI:16:ARG:NH1	2.41	0.53
1:XA:1297:C:HO2'	1:XA:1298:C:C5'	2.21	0.53
1:XA:1346:A:N6	7:XG:10:ARG:HD2	2.25	0.53
2:XB:9:GLU:OE2	2:XB:9:GLU:N	2.42	0.53
2:XB:178:ARG:CD	8:XH:71:GLY:C	2.78	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.40	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.53
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
11:XK:124:LYS:O	11:XK:126:ARG:N	2.39	0.53
14:YN:7:ILE:CG1	14:YN:8:GLU:N	2.72	0.53
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
22:YA:2432:A:C8	44:Y1:33:LYS:HE2	2.44	0.53
26:YF:9:ILE:HD11	26:YF:125:LEU:CG	2.36	0.53
27:YG:111:LEU:HB2	47:Y4:38:LYS:HZ3	1.72	0.53
30:YN:131:GLN:CG	30:YN:132:ALA:H	2.20	0.53
32:YP:125:VAL:O	32:YP:125:VAL:HG13	2.09	0.53
34:YR:56:LYS:C	34:YR:58:GLY:N	2.61	0.53
36:YT:3:ARG:HG3	36:YT:7:ILE:CG1	2.36	0.53
37:YU:39:LEU:O	37:YU:40:PHE:C	2.48	0.53
38:YV:7:THR:CG2	38:YV:22:VAL:HG11	2.39	0.53
38:YV:35:LEU:HD21	38:YV:57:VAL:CG2	2.30	0.53
39:YW:1:MET:HE2	39:YW:2:GLU:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:53:LYS:NZ	40:YX:55:ASN:HD21	2.06	0.53
42:YZ:121:HIS:ND1	42:YZ:123:ASP:O	2.41	0.53
1:QA:21:G:H2'	1:QA:22:G:C8	2.44	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.52
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.52
22:RA:1484:G:H2'	22:RA:1485:G:H5''	1.91	0.52
22:RA:1818:U:C2'	24:RD:157:ARG:HG3	2.39	0.52
22:RA:2784:C:H5''	25:RE:41:LYS:NZ	2.24	0.52
35:RS:106:ARG:HA	35:RS:110:LEU:CG	2.39	0.52
47:R4:49:PHE:N	47:R4:49:PHE:CD1	2.76	0.52
1:XA:58:C:O2'	1:XA:388:G:N7	2.35	0.52
1:XA:292:G:N7	1:XA:293:G:H1'	2.23	0.52
1:XA:1347:G:HO2'	1:XA:1348:U:H6	1.57	0.52
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.09	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.52
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.23	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.12	0.52
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.52
22:YA:270(U):C:H2'	22:YA:270(V):G:H8	1.74	0.52
22:YA:483:A:C5'	41:YY:49:VAL:HG13	2.39	0.52
22:YA:612:G:O2'	22:YA:616:A:N1	2.32	0.52
22:YA:628:G:H2'	22:YA:629:G:C8	2.44	0.52
22:YA:1026:U:H1'	22:YA:1027:A:O5'	2.09	0.52
22:YA:1824:G:OP1	24:YD:52:ARG:HD3	2.08	0.52
22:YA:2349:G:OP2	51:Y8:42:ARG:HD3	2.10	0.52
22:YA:2553:G:N2	56:Z8:76:PPU:H2	2.24	0.52
25:YE:7:VAL:O	25:YE:196:VAL:HG13	2.09	0.52
26:YF:34:TRP:CH2	32:YP:8:PRO:HB3	2.43	0.52
26:YF:129:PHE:O	26:YF:142:TRP:CD1	2.62	0.52
26:YF:140:LEU:O	26:YF:143:ALA:HB3	2.09	0.52
27:YG:16:ARG:HH11	27:YG:16:ARG:HG2	1.74	0.52
28:YH:2:SER:O	28:YH:3:ARG:C	2.47	0.52
28:YH:76:VAL:C	28:YH:78:GLY:H	2.13	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:147:LEU:O	32:YP:148:LEU:CB	2.57	0.52
33:YQ:29:PHE:HB3	33:YQ:65:PHE:CZ	2.44	0.52
34:YR:70:LEU:O	34:YR:72:ASP:N	2.43	0.52
39:YW:38:TYR:OH	48:Y5:47:PRO:HG3	2.08	0.52
49:Y6:14:THR:OG1	49:Y6:19:ARG:NE	2.41	0.52
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
22:RA:928:G:O2'	46:R3:43:ILE:HD11	2.09	0.52
22:RA:2327:A:H2'	22:RA:2328:A:C8	2.44	0.52
24:RD:155:LEU:CD1	24:RD:155:LEU:N	2.71	0.52
25:RE:61:ARG:O	25:RE:63:LEU:N	2.42	0.52
26:RF:192:LEU:HD21	26:RF:194:MET:HE2	1.90	0.52
28:RH:44:VAL:O	28:RH:44:VAL:CG2	2.57	0.52
30:RN:12:ARG:NH1	30:RN:50:ASP:OD2	2.40	0.52
30:RN:94:HIS:O	30:RN:95:PRO:O	2.27	0.52
33:RQ:76:LYS:O	33:RQ:88:GLY:HA3	2.09	0.52
35:RS:56:LEU:O	35:RS:58:LEU:HD22	2.09	0.52
35:RS:83:LYS:O	35:RS:109:GLY:CA	2.46	0.52
35:RS:89:ARG:HH11	35:RS:89:ARG:HG2	1.74	0.52
36:RT:14:TYR:CD1	36:RT:14:TYR:N	2.77	0.52
36:RT:100:TYR:HB3	36:RT:103:ARG:NH1	2.25	0.52
36:RT:110:ILE:HG23	36:RT:111:ARG:N	2.24	0.52
46:R3:9:VAL:HG12	46:R3:32:GLN:HE22	1.74	0.52
1:XA:360:A:H2'	1:XA:361:G:C8	2.44	0.52
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.42	0.52
1:XA:1067:A:N1	1:XA:1108:G:O2'	2.41	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.21	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
22:YA:685:A:OP1	50:Y7:11:LYS:NZ	2.36	0.52
22:YA:1109:C:O2'	22:YA:1110:G:OP1	2.26	0.52
22:YA:1278:A:OP1	34:YR:36:THR:HG22	2.09	0.52
22:YA:2552:U:H2'	22:YA:2554:U:OP2	2.10	0.52
24:YD:35:LYS:HD3	24:YD:63:ARG:CA	2.39	0.52
25:YE:39:PRO:HG2	25:YE:40:GLU:OE1	2.09	0.52
26:YF:192:LEU:HD21	26:YF:194:MET:HE2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:44:VAL:O	28:YH:44:VAL:CG2	2.58	0.52
28:YH:121:ILE:HG12	28:YH:135:GLY:HA3	1.91	0.52
32:YP:37:GLY:HA2	32:YP:41:ARG:NE	2.23	0.52
36:YT:94:ALA:O	36:YT:95:ARG:HB3	2.09	0.52
39:YW:7:ALA:HB2	39:YW:50:VAL:CG2	2.40	0.52
39:YW:25:ARG:HB2	39:YW:25:ARG:HH11	1.74	0.52
46:Y3:6:VAL:HG12	46:Y3:56:VAL:HG22	1.92	0.52
53:QV:15:G:H22	53:QV:48:C:H42	1.57	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	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
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	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:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	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
22:RA:186:G:H2'	22:RA:187:G:C8	2.44	0.52
22:RA:273:G:H1	22:RA:364:C:H42	1.57	0.52
22:RA:617:G:OP1	26:RF:40:GLN:NE2	2.40	0.52
22:RA:942:G:O2'	22:RA:1189:A:N3	2.40	0.52
22:RA:2232:U:P	44:R1:40:ARG:HH12	2.31	0.52
22:RA:2867:G:O2'	22:RA:2868:A:H8	1.91	0.52
25:RE:7:VAL:O	25:RE:196:VAL:HG13	2.09	0.52
26:RF:125:LEU:HA	26:RF:194:MET:O	2.10	0.52
28:RH:12:PRO:HG3	28:RH:48:GLY:O	2.09	0.52
28:RH:76:VAL:C	28:RH:78:GLY:H	2.13	0.52
32:RP:92:GLU:HA	32:RP:123:LEU:CD2	2.38	0.52
33:RQ:29:PHE:HB3	33:RQ:65:PHE:CZ	2.44	0.52
34:RR:33:ARG:NH2	48:R5:55:ARG:CG	2.66	0.52
47:R4:48:ARG:CZ	47:R4:51:ASP:HA	2.40	0.52
1:XA:1296:C:H3'	1:XA:1297:C:H6	1.75	0.52
1:XA:1493:A:H2'	22:YA:1913:A:N1	2.24	0.52
3:XC:173:VAL:HG12	3:XC:173:VAL:O	2.08	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.52
22:YA:594:U:H5'	51:Y8:61:LEU:CD2	2.39	0.52
22:YA:1026:U:H4'	22:YA:1027:A:OP1	2.09	0.52
22:YA:1796:U:H2'	22:YA:1797:C:C6	2.43	0.52
22:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2857:G:N2	22:YA:2859:G:H3'	2.25	0.52
24:YD:155:LEU:CD1	24:YD:155:LEU:N	2.71	0.52
25:YE:7:VAL:CG2	25:YE:8:LYS:H	2.10	0.52
25:YE:137:HIS:HB3	25:YE:138:PRO:CD	2.37	0.52
26:YF:162:LEU:HD23	26:YF:165:ARG:NH2	2.25	0.52
27:YG:179:PRO:HG3	47:Y4:38:LYS:HZ1	1.74	0.52
28:YH:89:ILE:O	28:YH:89:ILE:CG1	2.57	0.52
30:YN:57:ALA:O	30:YN:58:ASP:HB3	2.09	0.52
30:YN:109:LYS:HD2	30:YN:109:LYS:H	1.74	0.52
39:YW:8:ARG:HG3	39:YW:8:ARG:HH11	1.73	0.52
41:YY:61:ILE:HG23	41:YY:62:GLU:N	2.24	0.52
47:Y4:15:ILE:HD13	47:Y4:15:ILE:H	1.73	0.52
47:Y4:40:HIS:N	47:Y4:41:PRO:CD	2.73	0.52
1:QA:35:G:H2'	1:QA:36:C:C6	2.44	0.52
1:QA:997:U:H2'	1:QA:998:G:C8	2.45	0.52
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.90	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
22:RA:29:U:H2'	22:RA:30:G:C8	2.44	0.52
22:RA:512:G:HO2'	22:RA:513:A:P	2.31	0.52
22:RA:1005:C:O2'	30:RN:28:THR:HG21	2.09	0.52
22:RA:1258:C:H2'	22:RA:1259:G:H8	1.75	0.52
22:RA:1434:A:H61	22:RA:1558:A:N6	2.07	0.52
22:RA:1833:U:O2'	22:RA:1969:A:N1	2.29	0.52
22:RA:2277:G:OP1	33:RQ:85:LYS:HB2	2.09	0.52
22:RA:2537:U:H2'	22:RA:2538:C:C6	2.45	0.52
24:RD:77:ALA:HB2	24:RD:97:TYR:CG	2.44	0.52
26:RF:140:LEU:O	26:RF:143:ALA:HB3	2.09	0.52
27:RG:16:ARG:HH11	27:RG:16:ARG:HG2	1.74	0.52
27:RG:124:SER:HB2	27:RG:131:TYR:CE1	2.44	0.52
30:RN:7:LYS:HD3	30:RN:9:VAL:CA	2.38	0.52
35:RS:86:ALA:O	35:RS:87:PHE:HB3	2.10	0.52
37:RU:88:ILE:H	37:RU:88:ILE:CD1	2.05	0.52
44:R1:20:ARG:HG2	44:R1:20:ARG:NH1	2.24	0.52
46:R3:21:ALA:O	46:R3:25:ALA:N	2.41	0.52
1:XA:1095:U:OP2	1:XA:1108:G:N1	2.37	0.52
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.44	0.52
1:XA:1349:A:OP2	9:XI:118:LYS:NZ	2.41	0.52
1:XA:1405:G:OP2	58:XA:1673:PAR:O34	2.24	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
22:YA:2420:C:N4	51:Y8:30:ARG:HD2	2.24	0.52
24:YD:36:PRO:HA	24:YD:62:TYR:O	2.09	0.52
24:YD:66:ASP:OD2	24:YD:69:ARG:HG2	2.09	0.52
24:YD:233:HIS:N	24:YD:233:HIS:CD2	2.75	0.52
28:YH:24:VAL:HG23	28:YH:24:VAL:O	2.09	0.52
44:Y1:4:VAL:HG22	44:Y1:5:CYS:N	2.25	0.52
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.91	0.52
1:QA:778:G:H2'	1:QA:779:C:O4'	2.09	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
22:RA:631:A:H2'	22:RA:632:A:O4'	2.09	0.52
22:RA:1049:C:H2'	22:RA:1050:A:H5''	1.91	0.52
22:RA:1303:G:H1'	22:RA:1641:A:N1	2.25	0.52
24:RD:210:GLY:O	24:RD:213:ARG:N	2.43	0.52
25:RE:55:ASN:C	25:RE:57:LYS:N	2.62	0.52
36:RT:23:ARG:HG2	36:RT:120:ARG:HH12	1.75	0.52
36:RT:94:ALA:O	36:RT:95:ARG:HB3	2.09	0.52
38:RV:34:GLU:O	38:RV:36:PRO:HD3	2.09	0.52
47:R4:63:TYR:C	47:R4:65:ASP:N	2.61	0.52
1:XA:522:C:H2'	1:XA:523:A:O4'	2.10	0.52
1:XA:790:A:N6	1:XA:791:G:N1	2.57	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	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:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
22:YA:656:G:H2'	22:YA:657:U:O4'	2.10	0.52
22:YA:1543:A:HO2'	22:YA:1544:C:P	2.32	0.52
22:YA:2012:G:H4'	39:YW:96:ILE:HD11	1.91	0.52
22:YA:2159:G:H2'	22:YA:2160:G:C8	2.44	0.52
27:YG:124:SER:HB2	27:YG:131:TYR:CE1	2.44	0.52
30:YN:103:VAL:O	30:YN:106:MET:N	2.42	0.52
30:YN:114:ARG:C	30:YN:116:LEU:H	2.13	0.52
31:YO:79:PHE:CD2	36:YT:72:VAL:HG22	2.45	0.52
34:YR:53:HIS:HA	34:YR:56:LYS:HD3	1.90	0.52
36:YT:100:TYR:HB3	36:YT:103:ARG:NH1	2.25	0.52
38:YV:34:GLU:O	38:YV:36:PRO:HD3	2.10	0.52
41:YY:91:GLU:HG3	41:YY:92:ASN:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:7:ARG:HG3	45:Y2:7:ARG:NH1	2.25	0.52
47:Y4:54:GLY:O	47:Y4:71:ARG:HA	2.08	0.52
51:Y8:61:LEU:O	51:Y8:62:LEU:CB	2.57	0.52
1:QA:665:A:H2'	1:QA:725:G:N2	2.25	0.52
1:QA:1049:U:HO2'	14:QN:2:ALA:N	2.06	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
22:RA:134:C:H2'	22:RA:135:G:C8	2.45	0.52
22:RA:210:C:OP2	50:R7:29:LYS:NZ	2.43	0.52
22:RA:1449:A:O2'	22:RA:1530:G:N2	2.33	0.52
22:RA:1678:G:N2	22:RA:1989:G:N2	2.57	0.52
22:RA:2210:G:H3'	22:RA:2211:G:C8	2.43	0.52
22:RA:2698:U:H2'	22:RA:2699:C:C6	2.44	0.52
24:RD:133:LEU:HG	24:RD:189:CYS:O	2.10	0.52
25:RE:39:PRO:HG2	25:RE:40:GLU:OE1	2.09	0.52
30:RN:57:ALA:O	30:RN:58:ASP:HB3	2.09	0.52
30:RN:103:VAL:O	30:RN:106:MET:N	2.42	0.52
30:RN:112:LEU:C	30:RN:112:LEU:HD23	2.30	0.52
35:RS:95:HIS:CG	35:RS:96:GLY:N	2.77	0.52
37:RU:92:ARG:NH2	37:RU:94:ASN:HD22	2.07	0.52
44:R1:4:VAL:HG22	44:R1:5:CYS:N	2.25	0.52
46:R3:7:LYS:HE2	46:R3:32:GLN:NE2	2.25	0.52
46:R3:56:VAL:CG1	46:R3:57:GLU:H	2.20	0.52
1:XA:437:U:H2'	1:XA:438:G:O4'	2.08	0.52
1:XA:606:G:N2	1:XA:631:G:H8	2.07	0.52
1:XA:1202:G:H1'	14:YN:29:ARG:HD2	1.91	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	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
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
22:YA:1479:G:N7	22:YA:1510:A:N6	2.56	0.52
22:YA:1952:A:OP1	31:YO:44:LYS:NZ	2.26	0.52
22:YA:2748:A:C4	22:YA:2757:A:C6	2.98	0.52
30:YN:112:LEU:HD23	30:YN:112:LEU:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YO:113:LYS:HG2	31:YO:117:LEU:CD1	2.38	0.52
34:YR:52:ILE:CG2	34:YR:94:TYR:HD1	2.22	0.52
35:YS:25:ARG:HH11	35:YS:25:ARG:CB	2.22	0.52
35:YS:62:LYS:HB3	35:YS:97:ARG:CD	2.39	0.52
36:YT:23:ARG:HG2	36:YT:120:ARG:HH12	1.75	0.52
47:Y4:48:ARG:CZ	47:Y4:51:ASP:HA	2.40	0.52
49:Y6:30:THR:O	49:Y6:30:THR:HG23	2.09	0.52
1:QA:1059:C:H2'	1:QA:1060:C:H6	1.74	0.52
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.90	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.09	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
22:RA:608:A:H2'	22:RA:609:A:C8	2.45	0.52
22:RA:1288:U:OP1	22:RA:1289:C:N4	2.34	0.52
22:RA:2106:G:H1	22:RA:2183:C:H42	1.57	0.52
22:RA:2593:U:H2'	22:RA:2594:C:H6	1.74	0.52
24:RD:35:LYS:HG2	24:RD:64:ILE:HG22	1.92	0.52
24:RD:134:ARG:HB2	24:RD:135:PHE:HD2	1.75	0.52
25:RE:116:VAL:HG22	25:RE:122:PHE:HB2	1.91	0.52
28:RH:24:VAL:O	28:RH:24:VAL:HG23	2.10	0.52
28:RH:121:ILE:HG12	28:RH:135:GLY:HA3	1.91	0.52
32:RP:13:ASN:O	32:RP:14:LYS:C	2.48	0.52
34:RR:56:LYS:C	34:RR:58:GLY:N	2.62	0.52
36:RT:16:ARG:HD3	36:RT:19:LEU:HG	1.92	0.52
52:R9:27:CYS:SG	52:R9:28:GLU:N	2.83	0.52
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.24	0.52
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.43	0.52
3:XC:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
22:YA:242:G:H5''	51:Y8:3:LYS:HE3	1.91	0.52
22:YA:279:C:H42	22:YA:361:G:H1	1.58	0.52
22:YA:811:U:O2	22:YA:1250:G:H3'	2.10	0.52
22:YA:1196:C:HO2'	22:YA:1228:G:HO2'	1.48	0.52
22:YA:1268:A:H2'	22:YA:1269:A:O4'	2.10	0.52
22:YA:1438:U:H2'	22:YA:1439:A:C8	2.45	0.52
22:YA:1825:A:H2'	22:YA:1826:G:C8	2.45	0.52
22:YA:2361:A:P	51:Y8:27:THR:HG1	2.32	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:174:ILE:N	24:YD:174:ILE:CD1	2.73	0.52
25:YE:176:ILE:HG22	25:YE:176:ILE:O	2.10	0.52
30:YN:7:LYS:HD3	30:YN:9:VAL:N	2.25	0.52
30:YN:12:ARG:NH1	30:YN:50:ASP:OD1	2.43	0.52
31:YO:2:ILE:CD1	31:YO:82:ASN:HD22	2.14	0.52
36:YT:99:LEU:HB2	36:YT:101:PHE:CE1	2.45	0.52
39:YW:9:TYR:CD2	39:YW:102:HIS:HE1	2.28	0.52
42:YZ:72:ARG:NH2	42:YZ:97:GLU:HB2	2.24	0.52
46:Y3:9:VAL:HG12	46:Y3:32:GLN:HE22	1.74	0.52
50:Y7:38:GLY:O	50:Y7:39:ARG:C	2.48	0.52
1:QA:396:G:O2'	1:QA:398:C:OP1	2.15	0.52
1:QA:539:A:H2'	1:QA:540:G:H8	1.75	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
22:RA:49:A:H5''	22:RA:50:U:H3'	1.92	0.52
22:RA:1250:G:OP2	32:RP:21:ARG:HD3	2.10	0.52
22:RA:1257:C:H5'	26:RF:75:HIS:CE1	2.45	0.52
22:RA:1681:G:O2'	22:RA:1762:A:O2'	2.26	0.52
22:RA:2517:C:N3	22:RA:2542:A:N6	2.57	0.52
24:RD:35:LYS:HD3	24:RD:63:ARG:CA	2.39	0.52
24:RD:66:ASP:OD2	24:RD:69:ARG:HG2	2.09	0.52
25:RE:170:LEU:CD2	25:RE:185:LYS:HB2	2.40	0.52
27:RG:97:ASP:N	27:RG:100:TRP:HD1	2.05	0.52
28:RH:2:SER:O	28:RH:3:ARG:C	2.47	0.52
28:RH:4:ILE:O	28:RH:6:ARG:N	2.43	0.52
30:RN:114:ARG:C	30:RN:116:LEU:H	2.13	0.52
38:RV:41:GLY:HA3	38:RV:46:VAL:CG1	2.38	0.52
44:R1:76:ARG:HG2	44:R1:76:ARG:NH1	2.19	0.52
46:R3:6:VAL:HG12	46:R3:56:VAL:HG22	1.91	0.52
47:R4:50:VAL:O	47:R4:51:ASP:C	2.48	0.52
47:R4:54:GLY:HA2	47:R4:57:GLU:HG2	1.92	0.52
50:R7:38:GLY:O	50:R7:39:ARG:C	2.48	0.52
1:XA:17:U:H2'	1:XA:18:C:C6	2.45	0.52
1:XA:35:G:C2	1:XA:550:G:C2	2.97	0.52
1:XA:89:U:O2'	1:XA:90:C:OP1	2.27	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.07	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
22:YA:71:A:N3	22:YA:73:A:N6	2.58	0.52
22:YA:111:A:O3'	45:Y2:69:ARG:NH2	2.43	0.52
22:YA:1020:A:N1	22:YA:1141:U:H2'	2.24	0.52
22:YA:1055:G:H1	22:YA:1104:C:H42	1.58	0.52
22:YA:1187:G:H5''	38:YV:81:TYR:CE2	2.45	0.52
22:YA:1520:U:H2'	22:YA:1521:G:O4'	2.10	0.52
22:YA:1636:C:H2'	22:YA:1637:A:C8	2.44	0.52
22:YA:2208:U:H1'	24:YD:151:LYS:HE2	1.91	0.52
24:YD:43:ARG:NH1	24:YD:44:ASN:OD1	2.42	0.52
25:YE:55:ASN:C	25:YE:57:LYS:N	2.62	0.52
25:YE:61:ARG:O	25:YE:63:LEU:N	2.43	0.52
25:YE:170:LEU:CD2	25:YE:185:LYS:HB2	2.40	0.52
26:YF:67:GLN:O	26:YF:68:LYS:CB	2.39	0.52
26:YF:108:LYS:O	26:YF:112:MET:HG3	2.10	0.52
35:YS:83:LYS:O	35:YS:109:GLY:CA	2.46	0.52
36:YT:16:ARG:HD3	36:YT:19:LEU:HG	1.92	0.52
36:YT:42:ILE:HD12	36:YT:42:ILE:N	2.25	0.52
41:YY:9:LYS:HG2	41:YY:9:LYS:O	2.10	0.52
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.73	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
22:RA:556:G:O5'	22:RA:556:G:H8	1.92	0.52
22:RA:1543:A:O2'	22:RA:1544:C:O5'	2.27	0.52
22:RA:1826:G:H2'	22:RA:1827:C:C6	2.45	0.52
22:RA:2347:C:OP1	49:R6:39:TYR:CE2	2.62	0.52
22:RA:2361:A:O5'	51:R8:27:THR:OG1	2.26	0.52
22:RA:2870:C:H5''	34:RR:65:LEU:HD21	1.91	0.52
23:RB:42:C:N4	27:RG:91:ARG:HH21	2.08	0.52
25:RE:54:GLN:O	25:RE:55:ASN:HB2	2.09	0.52
25:RE:179:GLU:HA	25:RE:179:GLU:OE1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:4:PRO:O	31:RO:5:GLN:CB	2.58	0.52
32:RP:88:LEU:HD23	32:RP:89:ALA:N	2.24	0.52
37:RU:107:ALA:O	37:RU:111:GLU:OE1	2.28	0.52
38:RV:3:ALA:HB3	38:RV:14:VAL:HG23	1.92	0.52
41:RY:91:GLU:HG3	41:RY:92:ASN:N	2.25	0.52
45:R2:9:GLN:O	45:R2:12:GLU:HB3	2.10	0.52
1:XA:1163:C:H42	1:XA:1173:G:H1	1.56	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
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
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.52
22:YA:389:G:H22	32:YP:72:PRO:CG	2.23	0.52
22:YA:459:U:OP2	22:YA:469:G:N1	2.31	0.52
22:YA:503:A:H4'	22:YA:504:U:C5'	2.40	0.52
24:YD:133:LEU:HG	24:YD:189:CYS:O	2.10	0.52
25:YE:54:GLN:O	25:YE:55:ASN:HB2	2.09	0.52
27:YG:34:LEU:HD13	27:YG:34:LEU:C	2.30	0.52
29:YI:88:ILE:HG12	29:YI:122:GLU:N	2.24	0.52
31:YO:43:VAL:HG23	31:YO:56:ASP:O	2.10	0.52
34:YR:41:ALA:O	34:YR:43:GLU:N	2.43	0.52
38:YV:35:LEU:CD2	38:YV:57:VAL:HG22	2.32	0.52
44:Y1:83:GLU:CG	44:Y1:84:GLY:N	2.71	0.52
48:Y5:55:ARG:HG3	48:Y5:57:VAL:H	1.74	0.52
1:QA:244:U:H4'	1:QA:245:C:O5'	2.10	0.52
1:QA:347:G:O2'	1:QA:348:G:OP2	2.24	0.52
1:QA:410:G:H2'	1:QA:429:U:C4	2.45	0.52
1:QA:737:A:H2'	1:QA:738:C:C6	2.45	0.52
1:QA:793:U:O2	1:QA:1516:G:H4'	2.10	0.52
1:QA:1065:U:H5	1:QA:1190:G:H1'	1.75	0.52
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.09	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.10	0.52
19:QS:68:GLY:CA	47:R4:68:ARG:CB	2.82	0.52
22:RA:395:U:H2'	22:RA:396:G:N7	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:769:G:H5'	22:RA:1379:A:N6	2.25	0.52
22:RA:1011:G:C2	22:RA:1151:G:C2	2.98	0.52
22:RA:2150:U:H2'	22:RA:2151:G:C8	2.45	0.52
22:RA:2562:U:H1'	31:RO:23:ARG:NH1	2.25	0.52
24:RD:174:ILE:N	24:RD:174:ILE:CD1	2.73	0.52
25:RE:54:GLN:NE2	25:RE:54:GLN:H	2.08	0.52
26:RF:108:LYS:O	26:RF:112:MET:HG3	2.10	0.52
31:RO:23:ARG:O	31:RO:39:ILE:HB	2.10	0.52
34:RR:41:ALA:O	34:RR:43:GLU:N	2.43	0.52
37:RU:39:LEU:O	37:RU:40:PHE:C	2.48	0.52
39:RW:28:SER:HB3	39:RW:31:GLU:HB2	1.91	0.52
41:RY:75:ILE:C	41:RY:75:ILE:HD13	2.30	0.52
49:R6:30:THR:O	49:R6:30:THR:HG23	2.09	0.52
1:XA:827:U:H5	1:XA:870:U:C4	2.28	0.52
1:XA:1224:G:O2'	1:XA:1225:A:P	2.68	0.52
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.92	0.52
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.45	0.52
1:XA:1446:A:C2	36:YT:118:ARG:HD2	2.45	0.52
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.52
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.52
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.52
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.10	0.52
22:YA:77:C:O3'	45:Y2:14:ARG:NH2	2.43	0.52
22:YA:484:C:OP1	41:YY:51:VAL:HG11	2.10	0.52
22:YA:695:G:OP1	22:YA:1380:G:O2'	2.20	0.52
22:YA:830:G:H22	22:YA:2446:G:H5'	1.75	0.52
22:YA:855:G:C6	22:YA:856:C:C4	2.97	0.52
22:YA:2028:U:H2'	22:YA:2029:G:C8	2.45	0.52
24:YD:35:LYS:HG2	24:YD:64:ILE:HG22	1.92	0.52
31:YO:16:ALA:HA	31:YO:46:ALA:HB2	1.92	0.52
37:YU:59:ARG:O	37:YU:63:VAL:HG23	2.10	0.52
37:YU:107:ALA:O	37:YU:111:GLU:OE1	2.28	0.52
44:Y1:91:LYS:HE3	44:Y1:91:LYS:CA	2.40	0.52
47:Y4:14:ILE:O	47:Y4:14:ILE:HG23	2.10	0.52
47:Y4:68:ARG:HD3	47:Y4:69:LYS:HG2	1.92	0.52
1:QA:757:U:H2'	1:QA:758:G:O4'	2.11	0.51
1:QA:801:U:H2'	1:QA:802:A:C8	2.46	0.51
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.51
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
22:RA:1248:G:C4	37:RU:3:ARG:HG3	2.45	0.51
22:RA:1826:G:H2'	22:RA:1827:C:H6	1.74	0.51
22:RA:2779:U:O2'	22:RA:2781:A:N7	2.43	0.51
25:RE:105:THR:HB	25:RE:197:ILE:HG12	1.92	0.51
28:RH:55:PRO:HG2	28:RH:61:HIS:ND1	2.26	0.51
30:RN:12:ARG:NH1	30:RN:50:ASP:OD1	2.43	0.51
30:RN:108:PRO:O	30:RN:113:GLY:HA3	2.10	0.51
31:RO:2:ILE:HD12	31:RO:2:ILE:N	2.24	0.51
32:RP:147:LEU:O	32:RP:148:LEU:CB	2.57	0.51
34:RR:52:ILE:CG2	34:RR:94:TYR:HD1	2.22	0.51
37:RU:59:ARG:O	37:RU:63:VAL:HG23	2.10	0.51
40:RX:65:ARG:H	40:RX:65:ARG:CD	2.23	0.51
41:RY:9:LYS:HG2	41:RY:9:LYS:O	2.10	0.51
43:R0:37:LEU:N	43:R0:59:LEU:O	2.39	0.51
47:R4:40:HIS:N	47:R4:41:PRO:CD	2.73	0.51
48:R5:40:LYS:HD3	48:R5:46:CYS:SG	2.50	0.51
1:XA:1301:U:H3'	1:XA:1302:U:H5'	1.92	0.51
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.51
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	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
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
13:XM:121:LYS:CE	55:XY:40:G:OP1	2.57	0.51
22:YA:30:G:H2'	22:YA:31:C:C6	2.44	0.51
22:YA:1434:A:H61	22:YA:1558:A:H62	1.57	0.51
22:YA:2395:C:O2'	44:Y1:30:VAL:HG12	2.10	0.51
22:YA:2401:U:H2'	22:YA:2402:C:H5''	1.92	0.51
22:YA:2794:C:N4	22:YA:2795:G:O6	2.43	0.51
28:YH:153:LYS:HG3	28:YH:161:GLY:HA2	1.91	0.51
35:YS:67:ARG:HB2	35:YS:67:ARG:HH11	1.65	0.51
35:YS:106:ARG:HA	35:YS:110:LEU:CG	2.39	0.51
40:YX:52:VAL:HG12	40:YX:52:VAL:O	2.09	0.51
41:YY:74:PRO:O	41:YY:80:GLY:HA2	2.10	0.51
46:Y3:49:LYS:HG2	46:Y3:49:LYS:O	2.10	0.51
1:QA:958:A:C8	19:QS:55:LYS:HD2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.44	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
22:RA:531:C:H4'	22:RA:532:A:H5''	1.93	0.51
22:RA:1889:A:O2'	22:RA:2087:G:H5'	2.10	0.51
22:RA:2001:A:H5''	22:RA:2689:U:O2'	2.10	0.51
22:RA:2291:U:H2'	22:RA:2292:C:C6	2.45	0.51
27:RG:34:LEU:HD13	27:RG:34:LEU:C	2.30	0.51
27:RG:97:ASP:O	27:RG:101:ILE:HG23	2.10	0.51
28:RH:126:PRO:HD2	28:RH:127:GLU:N	2.25	0.51
30:RN:16:ILE:HG22	30:RN:17:ASP:N	2.26	0.51
31:RO:43:VAL:HG23	31:RO:56:ASP:O	2.10	0.51
36:RT:20:PRO:HD2	36:RT:86:ILE:HG23	1.92	0.51
36:RT:42:ILE:HD12	36:RT:42:ILE:N	2.25	0.51
38:RV:75:PHE:C	38:RV:75:PHE:CD1	2.83	0.51
40:RX:47:PHE:N	40:RX:47:PHE:CD1	2.78	0.51
40:RX:52:VAL:O	40:RX:52:VAL:HG12	2.09	0.51
43:R0:68:GLU:HG2	43:R0:80:HIS:HB2	1.92	0.51
46:R3:17:LYS:HA	46:R3:20:LYS:HD2	1.93	0.51
46:R3:49:LYS:O	46:R3:49:LYS:HG2	2.10	0.51
47:R4:14:ILE:HG23	47:R4:14:ILE:O	2.10	0.51
47:R4:36:CYS:O	47:R4:39:CYS:CB	2.55	0.51
1:XA:815:A:N3	1:XA:1527:C:O2'	2.36	0.51
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.25	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.41	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
22:YA:1161:C:O2'	38:YV:8:GLY:HA2	2.11	0.51
22:YA:1344:G:H4'	22:YA:1384:A:N7	2.25	0.51
22:YA:1657:C:H2'	22:YA:1658:C:H6	1.75	0.51
22:YA:1957:C:H2'	22:YA:1958:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:67:PHE:CE1	24:YD:157:ARG:NH2	2.79	0.51
25:YE:203:LYS:HE3	25:YE:204:ALA:CB	2.40	0.51
26:YF:125:LEU:HA	26:YF:194:MET:O	2.10	0.51
28:YH:6:ARG:C	28:YH:8:PRO:HD2	2.30	0.51
30:YN:94:HIS:O	30:YN:95:PRO:O	2.27	0.51
30:YN:120:LEU:CD1	30:YN:122:VAL:HG23	2.38	0.51
31:YO:23:ARG:O	31:YO:39:ILE:HB	2.09	0.51
33:YQ:119:ARG:HG2	33:YQ:119:ARG:NH1	2.20	0.51
35:YS:89:ARG:HG2	35:YS:89:ARG:HH11	1.75	0.51
45:Y2:15:LYS:H	45:Y2:67:LYS:HE2	1.73	0.51
49:Y6:34:LEU:HD23	49:Y6:36:LEU:HD22	1.93	0.51
51:Y8:52:LYS:N	51:Y8:53:PRO:HD2	2.21	0.51
1:QA:115:G:H4'	1:QA:116:A:O5'	2.10	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.10	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
22:RA:140:A:C6	22:RA:141:A:N6	2.78	0.51
22:RA:307:G:N1	22:RA:310:A:OP2	2.43	0.51
22:RA:2114:A:N6	22:RA:2119:A:H62	2.07	0.51
23:RB:48:A:H4'	35:RS:95:HIS:HD2	1.75	0.51
23:RB:75:G:O3'	42:RZ:10:ARG:NH1	2.41	0.51
25:RE:64:LYS:C	25:RE:66:HIS:H	2.12	0.51
25:RE:105:THR:HG23	25:RE:166:THR:OG1	2.10	0.51
26:RF:127:GLU:OE1	26:RF:127:GLU:HA	2.07	0.51
31:RO:24:VAL:HG21	31:RO:32:TYR:O	2.10	0.51
32:RP:31:ALA:C	32:RP:32:THR:HG23	2.31	0.51
32:RP:112:LEU:HD11	32:RP:114:ILE:CG2	2.40	0.51
32:RP:112:LEU:HD22	32:RP:113:LYS:N	2.25	0.51
35:RS:87:PHE:O	35:RS:88:ASP:O	2.28	0.51
36:RT:99:LEU:HB2	36:RT:101:PHE:CE1	2.45	0.51
38:RV:29:PRO:O	38:RV:61:VAL:O	2.29	0.51
41:RY:61:ILE:HG23	41:RY:62:GLU:N	2.24	0.51
44:R1:8:SER:HB3	44:R1:66:HIS:CE1	2.46	0.51
1:XA:166:G:H2'	1:XA:167:G:H8	1.76	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	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:24:VAL:O	12:XL:24:VAL:CG1	2.58	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
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
22:YA:99:U:H1'	22:YA:102:G:C6	2.44	0.51
22:YA:2504:U:O5'	22:YA:2504:U:H6	1.94	0.51
24:YD:30:GLU:HG3	24:YD:63:ARG:NH2	2.26	0.51
24:YD:35:LYS:HD2	24:YD:104:TYR:CD1	2.45	0.51
24:YD:259:THR:O	24:YD:260:ARG:C	2.49	0.51
27:YG:37:VAL:HG22	27:YG:159:VAL:CA	2.34	0.51
27:YG:97:ASP:O	27:YG:101:ILE:HG23	2.10	0.51
30:YN:134:ARG:O	30:YN:136:GLU:N	2.43	0.51
31:YO:14:THR:HG21	31:YO:86:ILE:HD13	1.91	0.51
32:YP:112:LEU:HD22	32:YP:113:LYS:H	1.75	0.51
36:YT:111:ARG:O	36:YT:112:ARG:CG	2.55	0.51
38:YV:14:VAL:HA	38:YV:18:LEU:HD12	1.93	0.51
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.46	0.51
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.45	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:63:TYR:HD2	6:QF:63:TYR:N	2.09	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
22:RA:817:C:H2'	22:RA:818:G:H8	1.75	0.51
22:RA:1335:U:OP2	40:RX:65:ARG:NH2	2.43	0.51
22:RA:1386:C:H2'	22:RA:1387:C:C6	2.45	0.51
22:RA:2563:U:H4'	31:RO:28:SER:HA	1.91	0.51
26:RF:162:LEU:HD23	26:RF:165:ARG:NH2	2.25	0.51
28:RH:89:ILE:O	28:RH:89:ILE:CG1	2.57	0.51
29:RI:94:ALA:H	29:RI:116:LEU:HD13	1.75	0.51
31:RO:79:PHE:CD2	36:RT:72:VAL:HG22	2.45	0.51
32:RP:112:LEU:HD22	32:RP:113:LYS:H	1.74	0.51
33:RQ:25:ASP:HA	33:RQ:100:GLY:O	2.11	0.51
33:RQ:64:ILE:HA	33:RQ:106:VAL:CG1	2.33	0.51
34:RR:28:LEU:CD2	34:RR:114:VAL:HG12	2.41	0.51
45:R2:15:LYS:H	45:R2:67:LYS:HE2	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
13:XM:65:LYS:CE	47:Y4:50:VAL:CG1	2.82	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
22:YA:2126:A:H4'	22:YA:2127:G:O5'	2.11	0.51
22:YA:2485:G:OP1	33:YQ:46:GLN:NE2	2.31	0.51
22:YA:2822:G:H2'	22:YA:2823:A:H5''	1.91	0.51
25:YE:77:ILE:O	25:YE:78:LEU:C	2.48	0.51
26:YF:65:TRP:HZ2	26:YF:72:ARG:NH2	2.09	0.51
27:YG:44:GLY:CA	27:YG:88:ILE:HD11	2.40	0.51
31:YO:4:PRO:O	31:YO:5:GLN:CB	2.58	0.51
38:YV:75:PHE:C	38:YV:75:PHE:CD1	2.83	0.51
39:YW:14:PRO:O	39:YW:17:VAL:N	2.42	0.51
41:YY:75:ILE:C	41:YY:75:ILE:HD13	2.31	0.51
41:YY:101:LYS:O	41:YY:102:CYS:SG	2.67	0.51
48:Y5:40:LYS:HD3	48:Y5:46:CYS:SG	2.50	0.51
54:XX:6:C:O2'	54:XX:7:A:OP1	2.26	0.51
1:QA:1348:U:C4	1:QA:1374:A:H2	2.28	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	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
22:RA:99:U:H4'	22:RA:101:G:O5'	2.10	0.51
22:RA:1078:U:O2'	22:RA:1079:C:OP2	2.23	0.51
22:RA:1286:A:HO2'	22:RA:1288:U:P	2.33	0.51
22:RA:2054:A:H5''	22:RA:2055:C:O5'	2.11	0.51
22:RA:2311:A:O2'	22:RA:2312:U:O4'	2.24	0.51
22:RA:2335:A:O2'	22:RA:2336:A:H2'	2.11	0.51
22:RA:2795:G:H3'	22:RA:2797:U:C5'	2.41	0.51
23:RB:44:G:C2	23:RB:48:A:C2	2.98	0.51
26:RF:32:LEU:O	26:RF:36:VAL:HG23	2.11	0.51
26:RF:127:GLU:O	26:RF:129:PHE:N	2.40	0.51
26:RF:198:ALA:C	26:RF:200:GLU:N	2.62	0.51
27:RG:114:ILE:CG2	27:RG:115:ARG:N	2.73	0.51
34:RR:117:VAL:CG2	34:RR:118:GLU:N	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RV:38:LEU:HD13	38:RV:55:ALA:HB3	1.91	0.51
39:RW:25:ARG:HB2	39:RW:25:ARG:HH11	1.74	0.51
41:RY:75:ILE:CG1	41:RY:76:CYS:N	2.73	0.51
41:RY:95:LYS:O	41:RY:96:ILE:O	2.28	0.51
1:XA:411:A:C4	1:XA:413:G:H1'	2.46	0.51
1:XA:701:C:H1'	1:XA:703:G:C4	2.46	0.51
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.91	0.51
1:XA:1239:A:H62	1:XA:1299:A:N6	2.09	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
22:YA:443:A:H1'	22:YA:1201:C:O4'	2.10	0.51
22:YA:1291:C:H5'	22:YA:1536:A:H5'	1.91	0.51
22:YA:2308:G:H2'	22:YA:2308:G:N3	2.24	0.51
22:YA:2600:A:N7	24:YD:237:GLU:OE2	2.44	0.51
24:YD:134:ARG:HB2	24:YD:135:PHE:HD2	1.75	0.51
25:YE:51:PHE:CD1	25:YE:52:LEU:N	2.76	0.51
25:YE:95:ILE:H	25:YE:95:ILE:CD1	2.19	0.51
29:YI:47:LEU:O	29:YI:51:ILE:N	2.39	0.51
30:YN:12:ARG:NH1	30:YN:50:ASP:OD2	2.40	0.51
32:YP:101:VAL:HA	32:YP:105:LEU:O	2.10	0.51
32:YP:112:LEU:HD11	32:YP:114:ILE:CG2	2.40	0.51
36:YT:14:TYR:H	36:YT:14:TYR:HD1	1.56	0.51
38:YV:1:MET:HE2	38:YV:43:GLU:HG2	1.92	0.51
41:YY:94:LYS:HE3	41:YY:101:LYS:HZ1	1.75	0.51
53:XV:58:A:O2'	53:XV:60:U:OP2	2.16	0.51
1:QA:731:G:OP1	1:QA:766:A:H1'	2.10	0.51
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.26	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	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
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	0.51
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.51
19:QS:15:LEU:HD23	19:QS:15:LEU:H	1.75	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
22:RA:49:A:N7	22:RA:120:U:H5	2.09	0.51
22:RA:85:G:C5	22:RA:98:G:C2	2.99	0.51
22:RA:704:G:H2'	22:RA:726:G:N2	2.26	0.51
22:RA:760:G:H2'	22:RA:761:A:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:806:C:OP2	32:RP:41:ARG:NE	2.39	0.51
22:RA:922:U:H2'	22:RA:923:C:C6	2.46	0.51
24:RD:259:THR:O	24:RD:260:ARG:C	2.49	0.51
25:RE:77:ILE:O	25:RE:78:LEU:C	2.48	0.51
25:RE:119:ARG:HD3	25:RE:160:TYR:HB2	1.92	0.51
27:RG:44:GLY:CA	27:RG:88:ILE:HD11	2.40	0.51
36:RT:34:VAL:CG1	36:RT:36:GLU:HG2	2.39	0.51
38:RV:5:VAL:HG22	38:RV:14:VAL:HG22	1.93	0.51
39:RW:7:ALA:HB2	39:RW:50:VAL:CG2	2.40	0.51
39:RW:9:TYR:CD2	39:RW:102:HIS:HE1	2.28	0.51
47:R4:12:ALA:HB1	47:R4:30:GLU:H	1.76	0.51
50:R7:36:GLN:HG2	50:R7:36:GLN:O	2.09	0.51
1:XA:392:G:H2'	1:XA:393:A:C8	2.45	0.51
1:XA:1329:A:P	13:XM:28:ALA:HB3	2.51	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.93	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
14:YN:44:LEU:O	14:YN:48:ALA:N	2.41	0.51
19:XS:65:ASN:N	47:Y4:55:ARG:NH1	2.59	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
22:YA:2862:G:H2'	22:YA:2863:C:C6	2.46	0.51
28:YH:55:PRO:HG2	28:YH:61:HIS:ND1	2.26	0.51
36:YT:14:TYR:N	36:YT:14:TYR:CD1	2.77	0.51
40:YX:18:TYR:C	40:YX:20:GLY:N	2.64	0.51
40:YX:36:LYS:HA	40:YX:39:ILE:HD12	1.91	0.51
40:YX:65:ARG:H	40:YX:65:ARG:CD	2.23	0.51
41:YY:77:PRO:O	41:YY:78:ALA:HB2	2.10	0.51
43:Y0:53:MET:HB3	43:Y0:59:LEU:HD23	1.91	0.51
47:Y4:42:PHE:O	47:Y4:44:THR:N	2.44	0.51
48:Y5:20:ARG:C	48:Y5:22:HIS:H	2.14	0.51
51:Y8:29:LYS:HB2	51:Y8:44:LYS:HG2	1.91	0.51
53:QV:34:C:N4	54:QX:3:G:N1	2.50	0.51
1:QA:940:C:H2'	1:QA:941:G:C8	2.46	0.51
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.46	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
2:QB:187:LEU:HD13	2:QB:187:LEU:O	2.11	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
22:RA:443:A:N7	26:RF:45:ARG:HD2	2.26	0.51
22:RA:1462:C:H4'	22:RA:2703:C:H5'	1.93	0.51
22:RA:2529:G:H5''	22:RA:2530:A:H5''	1.93	0.51
22:RA:2892:A:H2'	22:RA:2893:G:O4'	2.11	0.51
23:RB:11:C:H3'	23:RB:12:C:C6	2.46	0.51
24:RD:67:PHE:CE1	24:RD:157:ARG:NH2	2.79	0.51
24:RD:76:PRO:HA	24:RD:118:VAL:HG23	1.93	0.51
30:RN:6:PRO:HG2	30:RN:43:THR:OG1	2.11	0.51
30:RN:26:LEU:HG	30:RN:30:ILE:HD11	1.93	0.51
30:RN:131:GLN:CG	30:RN:132:ALA:H	2.20	0.51
30:RN:134:ARG:O	30:RN:136:GLU:N	2.43	0.51
31:RO:15:GLY:O	31:RO:46:ALA:HB1	2.10	0.51
31:RO:35:VAL:O	31:RO:35:VAL:HG23	2.11	0.51
31:RO:113:LYS:O	31:RO:116:SER:HB3	2.11	0.51
39:RW:20:VAL:C	39:RW:22:ASP:N	2.59	0.51
40:RX:5:TYR:CE2	45:R2:30:ARG:HG3	2.45	0.51
44:R1:87:PRO:O	44:R1:91:LYS:HB2	2.11	0.51
44:R1:94:LEU:O	44:R1:95:LEU:HG	2.11	0.51
49:R6:9:LEU:HB3	49:R6:26:ASN:O	2.11	0.51
1:XA:1118:C:OP1	9:XI:104:ARG:NH1	2.43	0.51
1:XA:1176:A:H2'	1:XA:1177:G:H5'	1.93	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
22:YA:1059:G:H3'	22:YA:1060:U:H5''	1.91	0.51
22:YA:1078:U:HO2'	22:YA:1088:A:H2	1.57	0.51
22:YA:1350:C:N3	22:YA:1382:G:N2	2.58	0.51
22:YA:1443:G:N2	22:YA:1549:C:C2	2.78	0.51
22:YA:1517:G:H2'	22:YA:1518:C:C6	2.46	0.51
22:YA:2751:G:H8	22:YA:2751:G:P	2.33	0.51
24:YD:28:GLU:OE1	24:YD:29:PRO:HD2	2.11	0.51
27:YG:114:ILE:CG2	27:YG:115:ARG:N	2.73	0.51
29:YI:133:HIS:HB2	29:YI:134:PRO:HD2	1.92	0.51
30:YN:108:PRO:O	30:YN:113:GLY:HA3	2.10	0.51
32:YP:95:VAL:HG13	32:YP:100:LEU:CD2	2.41	0.51
39:YW:70:TYR:HD2	39:YW:70:TYR:N	2.06	0.51
44:Y1:92:LYS:C	44:Y1:94:LEU:N	2.62	0.51
47:Y4:50:VAL:O	47:Y4:51:ASP:C	2.48	0.51
53:XV:4:G:HO2'	53:XV:5:G:H8	1.58	0.51
1:QA:983:A:N1	1:QA:1222:G:N2	2.59	0.51
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.46	0.51
1:QA:1080:A:H5''	5:QE:16:THR:CG2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1149:C:OP1	9:QI:9:ARG:NH2	2.44	0.51
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.75	0.51
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.28	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
8:QH:10:LEU:N	8:QH:10:LEU:CD2	2.70	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.45	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.10	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.59	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
22:RA:1312:U:H4'	22:RA:1313:U:O5'	2.10	0.51
22:RA:1936:A:H4'	22:RA:1937:A:O5'	2.10	0.51
22:RA:2122:U:H2'	22:RA:2123:G:H8	1.75	0.51
22:RA:2219:G:OP1	24:RD:172:TYR:OH	2.20	0.51
22:RA:2351:G:H8	22:RA:2351:G:O5'	1.93	0.51
27:RG:51:ARG:HH11	27:RG:51:ARG:HB3	1.76	0.51
31:RO:16:ALA:HA	31:RO:46:ALA:HB2	1.92	0.51
47:R4:61:ARG:C	47:R4:63:TYR:H	2.14	0.51
51:R8:10:ALA:O	51:R8:14:VAL:HG12	2.11	0.51
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.44	0.51
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.29	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.10	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:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
9:XI:128:ARG:HH21	53:XV:35:A:P	2.33	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.76	0.51
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
22:YA:530:G:C5	22:YA:2022:U:H5''	2.46	0.51
22:YA:2562:U:H2'	22:YA:2563:U:O4'	2.10	0.51
24:YD:94:LEU:HD13	24:YD:94:LEU:C	2.31	0.51
24:YD:210:GLY:O	24:YD:213:ARG:N	2.43	0.51
25:YE:37:ARG:HE	25:YE:37:ARG:N	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:51:ARG:HH11	27:YG:51:ARG:HB3	1.76	0.51
27:YG:109:VAL:O	27:YG:113:ARG:HG3	2.10	0.51
28:YH:19:VAL:HG13	28:YH:43:VAL:CG2	2.41	0.51
28:YH:72:ILE:O	28:YH:75:ALA:HB3	2.11	0.51
30:YN:78:TYR:N	30:YN:78:TYR:HD1	2.07	0.51
31:YO:24:VAL:HG21	31:YO:32:TYR:O	2.11	0.51
32:YP:13:ASN:O	32:YP:14:LYS:C	2.49	0.51
32:YP:31:ALA:C	32:YP:32:THR:HG23	2.31	0.51
34:YR:118:GLU:OXT	34:YR:118:GLU:HG3	2.11	0.51
35:YS:87:PHE:O	35:YS:88:ASP:O	2.28	0.51
38:YV:41:GLY:N	38:YV:46:VAL:HG13	2.26	0.51
40:YX:5:TYR:CE2	45:Y2:30:ARG:HG3	2.45	0.51
40:YX:47:PHE:CD1	40:YX:47:PHE:N	2.78	0.51
47:Y4:54:GLY:HA2	47:Y4:57:GLU:HG2	1.92	0.51
49:Y6:20:ASN:O	49:Y6:21:TYR:CB	2.59	0.51
1:QA:181:G:O2'	1:QA:182:U:O5'	2.26	0.51
1:QA:271:C:H2'	1:QA:272:C:H6	1.74	0.51
1:QA:411:A:C4	1:QA:413:G:H1'	2.45	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	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
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
22:RA:227:A:O2'	22:RA:228:A:OP2	2.20	0.51
22:RA:271(C):U:O2'	22:RA:271:G:OP1	2.27	0.51
22:RA:1012:U:O2	30:RN:25:ARG:NH1	2.44	0.51
22:RA:2633:G:C6	22:RA:2634:G:C5	2.99	0.51
22:RA:2867:G:O2'	22:RA:2868:A:C8	2.63	0.51
25:RE:7:VAL:HG11	36:RT:1:MET:HE3	1.93	0.51
26:RF:65:TRP:HZ2	26:RF:72:ARG:NH2	2.08	0.51
30:RN:112:LEU:HD23	30:RN:113:GLY:N	2.26	0.51
31:RO:2:ILE:CD1	31:RO:82:ASN:HD22	2.14	0.51
33:RQ:36:ALA:HB1	33:RQ:127:ILE:HD12	1.93	0.51
35:RS:89:ARG:HD2	35:RS:89:ARG:O	2.11	0.51
44:R1:92:LYS:C	44:R1:94:LEU:N	2.62	0.51
45:R2:36:ARG:O	45:R2:40:SER:HB2	2.10	0.51
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.74	0.51
1:XA:407:G:H2'	1:XA:408:A:C8	2.45	0.51
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.10	0.51
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.11	0.51
1:XA:1347:G:N7	9:XI:11:LYS:NZ	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1484:C:H2'	1:XA:1485:U:C6	2.46	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:52:SER:O	4:XD:53:ASP:C	2.49	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	0.51
13:XM:65:LYS:HZ1	47:Y4:52:THR:CG2	2.22	0.51
13:XM:65:LYS:H	47:Y4:50:VAL:CG2	2.24	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
22:YA:950:G:C6	22:YA:951:C:C4	2.99	0.51
22:YA:1021:A:H8	22:YA:1021:A:H3'	1.76	0.51
22:YA:1952:A:C2	31:YO:22:ILE:HG23	2.45	0.51
25:YE:54:GLN:NE2	25:YE:54:GLN:H	2.08	0.51
30:YN:16:ILE:HG22	30:YN:17:ASP:N	2.25	0.51
31:YO:23:ARG:HH11	31:YO:23:ARG:HG2	1.76	0.51
31:YO:24:VAL:O	31:YO:24:VAL:HG13	2.11	0.51
32:YP:49:ARG:HE	51:Y8:59:LYS:HG2	1.76	0.51
33:YQ:58:PHE:HD1	33:YQ:58:PHE:O	1.94	0.51
33:YQ:83:MET:HB2	43:Y0:7:LEU:HD22	1.93	0.51
47:Y4:12:ALA:HB1	47:Y4:30:GLU:H	1.76	0.51
1:QA:321:A:H2'	1:QA:322:C:H6	1.75	0.51
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.43	0.51
1:QA:939:G:H1	1:QA:1344:C:N4	2.06	0.51
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.51
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
16:QP:20:VAL:HG23	16:QP:34:GLU:O	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
22:RA:55:G:H2'	22:RA:56:A:H8	1.76	0.51
22:RA:78:A:H2'	22:RA:79:G:C8	2.45	0.51
22:RA:580:C:H2'	22:RA:581:C:H6	1.74	0.51
22:RA:583:G:H5''	37:RU:10:ARG:HH12	1.74	0.51
22:RA:1693:U:O4	22:RA:1976:U:O2'	2.23	0.51
22:RA:2655:G:N2	22:RA:2665:A:OP2	2.43	0.51
25:RE:37:ARG:HE	25:RE:37:ARG:N	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:6:ARG:C	28:RH:8:PRO:HD2	2.30	0.51
28:RH:131:VAL:CG1	28:RH:132:ARG:N	2.74	0.51
31:RO:20:MET:HG2	31:RO:21:CYS:O	2.11	0.51
31:RO:23:ARG:HH11	31:RO:23:ARG:HG2	1.76	0.51
36:RT:57:PHE:CG	36:RT:58:ASN:N	2.79	0.51
41:RY:2:ARG:HG2	41:RY:2:ARG:NH1	2.22	0.51
47:R4:42:PHE:O	47:R4:44:THR:N	2.44	0.51
51:R8:61:LEU:O	51:R8:62:LEU:CB	2.57	0.51
1:XA:56:U:H2'	1:XA:57:G:C8	2.45	0.51
1:XA:130:A:N3	1:XA:263:A:O2'	2.37	0.51
1:XA:337:C:H2'	1:XA:338:A:H8	1.76	0.51
1:XA:355:C:H1'	1:XA:388:G:H2'	1.92	0.51
1:XA:909:A:H2'	1:XA:910:C:O4'	2.11	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.51
22:YA:554:U:H2'	22:YA:556:G:C8	2.45	0.51
22:YA:1200:C:H1'	37:YU:2:PRO:HG2	1.91	0.51
22:YA:1221:C:OP1	38:YV:68:LYS:HE2	2.10	0.51
22:YA:1794:U:H2'	22:YA:1795:C:C6	2.44	0.51
22:YA:1871:A:H2'	22:YA:1872:A:C8	2.46	0.51
22:YA:2055:C:H4'	22:YA:2056:G:H5''	1.93	0.51
22:YA:2552:U:C2	22:YA:2554:U:H5''	2.46	0.51
24:YD:10:THR:CG2	24:YD:13:ARG:HB3	2.35	0.51
26:YF:198:ALA:C	26:YF:200:GLU:N	2.62	0.51
29:YI:9:LEU:O	29:YI:10:GLU:HG3	2.11	0.51
30:YN:118:LYS:O	30:YN:120:LEU:N	2.43	0.51
31:YO:113:LYS:O	31:YO:116:SER:HB3	2.11	0.51
33:YQ:25:ASP:HA	33:YQ:100:GLY:O	2.11	0.51
33:YQ:133:ARG:HG2	33:YQ:134:ARG:N	2.26	0.51
36:YT:51:ARG:HG3	36:YT:98:LYS:HG3	1.93	0.51
45:Y2:36:ARG:O	45:Y2:40:SER:HB2	2.10	0.51
46:Y3:56:VAL:CG1	46:Y3:57:GLU:N	2.74	0.51
53:XV:68:C:H2'	53:XV:69:C:H6	1.76	0.51
1:QA:173:U:H5''	1:QA:197:A:O4'	2.11	0.50
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.50
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
22:RA:307:G:H21	22:RA:330:A:N6	2.08	0.50
22:RA:807:U:H2'	22:RA:808:G:H8	1.76	0.50
22:RA:1022:G:O2'	22:RA:1023:U:OP2	2.16	0.50
22:RA:1779:U:OP2	22:RA:1784:A:N6	2.35	0.50
22:RA:2469:A:H5''	22:RA:2470:G:H8	1.75	0.50
22:RA:2507:C:H2'	22:RA:2508:G:O4'	2.11	0.50
24:RD:94:LEU:HD13	24:RD:94:LEU:C	2.31	0.50
28:RH:72:ILE:O	28:RH:75:ALA:HB3	2.11	0.50
30:RN:7:LYS:HD3	30:RN:9:VAL:N	2.25	0.50
32:RP:101:VAL:HA	32:RP:105:LEU:O	2.10	0.50
34:RR:2:ARG:HG2	34:RR:5:LYS:HZ2	1.74	0.50
38:RV:14:VAL:HA	38:RV:18:LEU:HD12	1.92	0.50
38:RV:35:LEU:CD2	38:RV:57:VAL:HG22	2.32	0.50
41:RY:46:LYS:HE3	41:RY:63:LYS:HB3	1.94	0.50
42:RZ:97:GLU:HB3	42:RZ:125:LEU:HD11	1.93	0.50
43:R0:40:GLN:NE2	43:R0:59:LEU:HD21	2.26	0.50
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.11	0.50
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.40	0.50
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
5:XE:126:ARG:HH11	5:XE:126:ARG:CG	2.21	0.50
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.50
22:YA:357:A:H2'	22:YA:358:U:C6	2.46	0.50
22:YA:1062:G:H2'	22:YA:1063:G:H8	1.74	0.50
22:YA:1398:C:OP1	40:YX:53:LYS:NZ	2.45	0.50
22:YA:2478:A:OP1	52:Y9:31:LYS:HD3	2.10	0.50
22:YA:2712:U:C5	22:YA:2713:A:H5''	2.46	0.50
25:YE:116:VAL:HG22	25:YE:122:PHE:HB2	1.91	0.50
26:YF:108:LYS:HA	26:YF:108:LYS:NZ	2.27	0.50
28:YH:4:ILE:O	28:YH:6:ARG:N	2.43	0.50
28:YH:103:LEU:CD1	28:YH:131:VAL:HG21	2.41	0.50
28:YH:126:PRO:HD2	28:YH:127:GLU:N	2.25	0.50
30:YN:26:LEU:HG	30:YN:30:ILE:HD11	1.93	0.50
32:YP:62:LEU:CD2	32:YP:62:LEU:H	2.19	0.50
34:YR:92:GLY:N	34:YR:94:TYR:HE2	2.09	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:26:LEU:CD2	35:YS:87:PHE:CD1	2.94	0.50
35:YS:95:HIS:CG	35:YS:96:GLY:N	2.77	0.50
41:YY:95:LYS:O	41:YY:96:ILE:O	2.28	0.50
44:Y1:83:GLU:CD	44:Y1:85:LEU:H	2.15	0.50
44:Y1:85:LEU:HA	44:Y1:87:PRO:HD2	1.91	0.50
46:Y3:7:LYS:HE2	46:Y3:32:GLN:NE2	2.25	0.50
53:XV:15:G:H22	53:XV:48:C:H42	1.57	0.50
1:QA:224:C:H2'	1:QA:225:C:C6	2.45	0.50
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.50
4:QD:13:ARG:CB	4:QD:33:MET:CE	2.89	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
12:QL:47:LYS:C	12:QL:49:ASN:H	2.15	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50
14:QN:8:GLU:C	14:QN:10:ALA:H	2.14	0.50
22:RA:55:G:H2'	22:RA:56:A:C8	2.47	0.50
22:RA:195:A:OP1	32:RP:46:LYS:HE2	2.10	0.50
22:RA:247:G:N7	22:RA:249:C:C2	2.79	0.50
22:RA:336:C:H5''	41:RY:6:HIS:NE2	2.26	0.50
22:RA:2001:A:H4'	22:RA:2689:U:C2	2.46	0.50
22:RA:2773:C:H2'	22:RA:2774:C:C6	2.45	0.50
24:RD:30:GLU:HG3	24:RD:63:ARG:NH2	2.25	0.50
25:RE:37:ARG:HE	25:RE:37:ARG:H	1.59	0.50
25:RE:137:HIS:HB3	25:RE:138:PRO:CD	2.37	0.50
28:RH:151:ILE:C	28:RH:152:ARG:O	2.49	0.50
28:RH:152:ARG:C	28:RH:153:LYS:HE2	2.32	0.50
28:RH:153:LYS:HG3	28:RH:161:GLY:HA2	1.91	0.50
31:RO:47:ILE:CG1	31:RO:48:PRO:HD2	2.41	0.50
32:RP:104:GLY:C	32:RP:105:LEU:HD12	2.31	0.50
33:RQ:133:ARG:HG2	33:RQ:134:ARG:N	2.26	0.50
34:RR:1:MET:O	34:RR:2:ARG:CB	2.60	0.50
34:RR:70:LEU:O	34:RR:72:ASP:N	2.42	0.50
35:RS:35:ILE:CD1	35:RS:101:LEU:HD23	2.41	0.50
37:RU:112:ARG:HH11	37:RU:112:ARG:HG2	1.76	0.50
39:RW:88:ARG:HB3	39:RW:92:ARG:CB	2.41	0.50
41:RY:74:PRO:O	41:RY:80:GLY:HA2	2.10	0.50
44:R1:4:VAL:HG23	44:R1:10:LYS:C	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:91:LYS:HE3	44:R1:91:LYS:CA	2.40	0.50
1:XA:1347:G:O2'	1:XA:1348:U:H6	1.94	0.50
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.11	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
22:YA:299:A:H1'	22:YA:322:A:N6	2.26	0.50
22:YA:724:U:H2'	22:YA:725:G:O4'	2.11	0.50
22:YA:1339:G:H21	22:YA:1603:A:H1'	1.76	0.50
24:YD:10:THR:HG23	24:YD:13:ARG:CB	2.34	0.50
25:YE:105:THR:HG23	25:YE:166:THR:OG1	2.10	0.50
30:YN:73:THR:HG22	30:YN:82:LEU:HD11	1.93	0.50
32:YP:114:ILE:HD13	32:YP:125:VAL:CG2	2.41	0.50
35:YS:86:ALA:O	35:YS:87:PHE:HB3	2.09	0.50
36:YT:57:PHE:CG	36:YT:58:ASN:N	2.79	0.50
37:YU:112:ARG:HG2	37:YU:112:ARG:HH11	1.76	0.50
38:YV:5:VAL:HG22	38:YV:14:VAL:HG22	1.93	0.50
41:YY:75:ILE:CG1	41:YY:76:CYS:N	2.73	0.50
50:Y7:36:GLN:HG2	50:Y7:36:GLN:O	2.09	0.50
1:QA:1316:G:H22	1:QA:1319:A:C5'	2.22	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
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
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
22:RA:242:G:N2	22:RA:254:G:H2'	2.26	0.50
22:RA:251:A:C5	22:RA:252:G:H1'	2.46	0.50
22:RA:1351:C:H2'	22:RA:1352:U:C6	2.47	0.50
22:RA:1638:C:H4'	22:RA:2710:C:O2	2.11	0.50
22:RA:1660:C:H2'	22:RA:1661:G:C8	2.45	0.50
22:RA:1759:A:H4'	22:RA:2715:C:O4'	2.10	0.50
22:RA:2873:A:N3	34:RR:5:LYS:HA	2.26	0.50
23:RB:15:A:H1'	23:RB:109:G:N9	2.25	0.50
26:RF:45:ARG:CG	26:RF:45:ARG:NH1	2.71	0.50
27:RG:43:LEU:O	27:RG:88:ILE:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:92:VAL:O	27:RG:92:VAL:HG13	2.12	0.50
36:RT:51:ARG:HG3	36:RT:98:LYS:HG3	1.93	0.50
41:RY:44:ILE:CG1	41:RY:45:VAL:H	2.25	0.50
1:XA:224:C:H2'	1:XA:225:C:C6	2.47	0.50
1:XA:577:G:H1'	1:XA:816:A:C4	2.47	0.50
1:XA:662:G:H2'	1:XA:663:A:C8	2.46	0.50
1:XA:859:A:H2'	1:XA:860:A:C8	2.46	0.50
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.44	0.50
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.11	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
22:YA:957:A:N1	22:YA:2458:G:H4'	2.25	0.50
22:YA:1869:G:H5'	22:YA:1870:C:OP2	2.12	0.50
22:YA:2795:G:H3'	22:YA:2797:U:C5'	2.42	0.50
26:YF:32:LEU:O	26:YF:36:VAL:HG23	2.11	0.50
35:YS:83:LYS:HG2	35:YS:109:GLY:HA2	1.90	0.50
36:YT:20:PRO:HD2	36:YT:86:ILE:HG23	1.92	0.50
39:YW:22:ASP:HA	39:YW:25:ARG:HH12	1.75	0.50
42:YZ:101:PRO:HA	42:YZ:123:ASP:HB3	1.94	0.50
44:Y1:4:VAL:HG23	44:Y1:10:LYS:C	2.32	0.50
47:Y4:61:ARG:C	47:Y4:63:TYR:H	2.14	0.50
48:Y5:56:LYS:HD2	48:Y5:56:LYS:N	2.13	0.50
1:QA:481:G:O2'	1:QA:482:A:O5'	2.29	0.50
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.58	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
13:QM:119:GLY:CA	53:QV:29:G:OP1	2.52	0.50
15:QO:8:LYS:HB2	15:QO:8:LYS:HZ2	1.74	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.76	0.50
22:RA:57:C:H2'	22:RA:58:G:O4'	2.11	0.50
22:RA:639:U:H2'	22:RA:640:C:C6	2.47	0.50
22:RA:753:C:O5'	22:RA:753:C:H6	1.94	0.50
22:RA:827:U:O2	22:RA:2246:G:H4'	2.12	0.50
22:RA:884:C:O2	22:RA:892:G:N1	2.43	0.50
22:RA:1204:A:O2'	22:RA:1205:U:O5'	2.29	0.50
22:RA:1754:C:H2'	22:RA:1755:A:C8	2.47	0.50
22:RA:2022:U:O2'	22:RA:2617:C:H5'	2.11	0.50
22:RA:2517:C:C2	22:RA:2542:A:N6	2.79	0.50
23:RB:80:U:O2'	23:RB:81:G:H5''	2.11	0.50
28:RH:169:VAL:HG13	28:RH:170:ARG:N	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:24:VAL:O	31:RO:24:VAL:HG13	2.11	0.50
31:RO:107:ARG:HA	31:RO:112:MET:HE1	1.94	0.50
32:RP:95:VAL:HG13	32:RP:100:LEU:CD2	2.40	0.50
35:RS:26:LEU:CD2	35:RS:87:PHE:CD1	2.94	0.50
36:RT:54:ARG:HG2	36:RT:54:ARG:NH1	2.24	0.50
48:R5:37:LYS:O	48:R5:37:LYS:HD2	2.12	0.50
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.47	0.50
1:XA:1314:C:N4	19:XS:2:PRO:O	2.43	0.50
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.50
14:XN:8:GLU:C	14:XN:10:ALA:H	2.13	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.75	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.41	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
22:YA:144:C:H2'	22:YA:145:G:H8	1.76	0.50
22:YA:1103:A:H5'	22:YA:1104:C:C5	2.45	0.50
28:YH:131:VAL:CG1	28:YH:132:ARG:N	2.74	0.50
28:YH:169:VAL:HG13	28:YH:170:ARG:N	2.26	0.50
30:YN:112:LEU:HD23	30:YN:113:GLY:N	2.26	0.50
41:YY:46:LYS:HE3	41:YY:63:LYS:HB3	1.93	0.50
44:Y1:87:PRO:O	44:Y1:91:LYS:HB2	2.10	0.50
44:Y1:94:LEU:O	44:Y1:95:LEU:HG	2.11	0.50
46:Y3:17:LYS:HA	46:Y3:20:LYS:HD2	1.92	0.50
47:Y4:10:VAL:HG23	47:Y4:11:PRO:HD2	1.94	0.50
53:QV:68:C:H2'	53:QV:69:C:H6	1.76	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.25	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
22:RA:458:G:O2'	50:R7:39:ARG:HD3	2.11	0.50
22:RA:871:U:OP1	33:RQ:5:ARG:HG2	2.10	0.50
22:RA:1090:U:H3	22:RA:1102:C:H1'	1.77	0.50
22:RA:1764:G:C6	22:RA:1989:G:C2	2.99	0.50
22:RA:2286:A:OP1	49:R6:28:ARG:NE	2.43	0.50
22:RA:2695:C:H2'	22:RA:2696:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:35:LYS:HD2	24:RD:104:TYR:CD1	2.45	0.50
25:RE:61:ARG:CB	25:RE:62:PRO:HD3	2.41	0.50
25:RE:176:ILE:HG22	25:RE:176:ILE:O	2.10	0.50
28:RH:16:SER:O	28:RH:17:VAL:HG23	2.12	0.50
28:RH:143:GLN:HE21	28:RH:143:GLN:C	2.15	0.50
32:RP:114:ILE:HD13	32:RP:125:VAL:CG2	2.41	0.50
41:RY:88:LYS:NZ	41:RY:88:LYS:HA	2.27	0.50
44:R1:80:LEU:HB2	44:R1:81:LYS:CE	2.41	0.50
47:R4:1:MET:O	47:R4:1:MET:HG3	2.12	0.50
48:R5:48:GLU:HA	48:R5:59:GLU:HG2	1.94	0.50
49:R6:9:LEU:HD13	49:R6:26:ASN:HD22	1.76	0.50
51:R8:56:GLU:O	51:R8:57:ARG:C	2.50	0.50
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.93	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.93	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
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
22:YA:900:A:H3'	22:YA:901:A:H8	1.75	0.50
22:YA:1354:A:OP1	24:YD:38:LYS:HE2	2.12	0.50
22:YA:2532:G:H1'	22:YA:2663:G:N2	2.25	0.50
22:YA:2712:U:OP1	22:YA:2714:G:H4'	2.10	0.50
27:YG:111:LEU:N	27:YG:112:PRO:CD	2.75	0.50
28:YH:143:GLN:C	28:YH:143:GLN:HE21	2.15	0.50
28:YH:152:ARG:C	28:YH:153:LYS:HE2	2.32	0.50
29:YI:29:TYR:O	29:YI:33:ARG:HB2	2.11	0.50
31:YO:15:GLY:O	31:YO:46:ALA:HB1	2.10	0.50
32:YP:104:GLY:C	32:YP:105:LEU:HD12	2.31	0.50
33:YQ:132:VAL:HG12	33:YQ:133:ARG:N	2.27	0.50
34:YR:117:VAL:CG2	34:YR:118:GLU:N	2.74	0.50
35:YS:26:LEU:HD22	35:YS:87:PHE:CD1	2.46	0.50
44:Y1:80:LEU:HB2	44:Y1:81:LYS:CE	2.41	0.50
45:Y2:41:ILE:HD11	45:Y2:44:LEU:CB	2.42	0.50
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.50
1:QA:260:G:H2'	1:QA:261:U:C6	2.47	0.50
1:QA:1151:A:H2'	1:QA:1152:A:C8	2.46	0.50
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.46	0.50
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.27	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.47	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
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
22:RA:30:G:C6	22:RA:31:C:C4	3.00	0.50
22:RA:389:G:N1	32:RP:70:GLN:HB3	2.27	0.50
22:RA:1286:A:O2'	22:RA:1288:U:OP2	2.28	0.50
22:RA:1988:C:H2'	22:RA:1989:G:O4'	2.11	0.50
22:RA:2250:G:C2	33:RQ:82:ARG:HB3	2.47	0.50
22:RA:2377:A:H2'	22:RA:2378:A:C8	2.47	0.50
22:RA:2867:G:HO2'	22:RA:2868:A:H8	1.53	0.50
25:RE:203:LYS:HE3	25:RE:204:ALA:CB	2.40	0.50
26:RF:108:LYS:HA	26:RF:108:LYS:NZ	2.27	0.50
27:RG:109:VAL:O	27:RG:113:ARG:HG3	2.10	0.50
30:RN:87:LEU:HD23	30:RN:87:LEU:C	2.32	0.50
34:RR:92:GLY:N	34:RR:94:TYR:HE2	2.09	0.50
35:RS:62:LYS:HB3	35:RS:97:ARG:CD	2.39	0.50
37:RU:92:ARG:NH1	37:RU:95:LEU:HD11	2.26	0.50
39:RW:22:ASP:HA	39:RW:25:ARG:HH12	1.75	0.50
41:RY:94:LYS:HE3	41:RY:101:LYS:HZ1	1.76	0.50
1:XA:230:G:C2	1:XA:231:G:H1'	2.46	0.50
1:XA:1268:A:H2'	1:XA:1269:A:C8	2.46	0.50
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.29	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.50
5:XE:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.15	0.50
12:XL:49:ASN:ND2	12:XL:92:ASP:OD1	2.43	0.50
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
22:YA:458:G:O2'	22:YA:469:G:O6	2.24	0.50
22:YA:546:C:OP1	22:YA:547:A:N6	2.45	0.50
24:YD:182:LEU:H	24:YD:272:ALA:CB	2.25	0.50
27:YG:6:ALA:H	47:Y4:23:GLU:CG	2.25	0.50
27:YG:43:LEU:O	27:YG:88:ILE:HG12	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:24:VAL:HG21	28:YH:72:ILE:HG12	1.94	0.50
28:YH:133:VAL:HG12	28:YH:141:VAL:HG13	1.93	0.50
30:YN:87:LEU:HD23	30:YN:87:LEU:C	2.32	0.50
31:YO:35:VAL:O	31:YO:35:VAL:HG23	2.11	0.50
32:YP:138:LEU:HD11	32:YP:144:GLU:CG	2.42	0.50
38:YV:29:PRO:O	38:YV:61:VAL:O	2.29	0.50
38:YV:51:VAL:CG1	38:YV:52:VAL:H	2.22	0.50
38:YV:51:VAL:CG1	38:YV:52:VAL:N	2.75	0.50
39:YW:70:TYR:N	39:YW:70:TYR:CD2	2.75	0.50
42:YZ:8:TYR:HD1	42:YZ:38:TYR:CZ	2.29	0.50
46:Y3:7:LYS:CB	46:Y3:34:GLU:HG2	2.41	0.50
47:Y4:57:GLU:O	47:Y4:61:ARG:O	2.30	0.50
53:QV:75:C:H2'	53:QV:76:A:O4'	2.12	0.50
1:QA:643:C:H2'	1:QA:644:G:H8	1.77	0.50
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.12	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.15	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
22:RA:1417:C:H2'	22:RA:1418:G:O4'	2.11	0.50
22:RA:1660:C:H5'	22:RA:2712(A):A:H61	1.76	0.50
22:RA:1882:C:H5'	22:RA:1883:G:OP2	2.12	0.50
22:RA:2283:C:P	49:R6:5:VAL:HG13	2.52	0.50
22:RA:2308:G:H2'	22:RA:2308:G:N3	2.27	0.50
22:RA:2485:G:OP1	33:RQ:46:GLN:NE2	2.38	0.50
24:RD:28:GLU:OE1	24:RD:29:PRO:HD2	2.11	0.50
24:RD:32:SER:O	24:RD:33:LEU:CB	2.60	0.50
25:RE:2:LYS:HG2	25:RE:95:ILE:CG2	2.42	0.50
29:RI:41:GLU:HA	29:RI:44:LEU:HB2	1.93	0.50
33:RQ:108:GLY:O	33:RQ:109:VAL:HG23	2.12	0.50
35:RS:60:GLY:O	35:RS:61:ASN:CB	2.55	0.50
36:RT:23:ARG:CB	36:RT:24:PRO:HD2	2.40	0.50
36:RT:38:ASN:O	36:RT:39:ARG:O	2.30	0.50
41:RY:48:ALA:HB2	41:RY:61:ILE:CD1	2.41	0.50
41:RY:90:LEU:HD22	41:RY:90:LEU:H	1.73	0.50
43:R0:53:MET:HA	43:R0:58:THR:O	2.11	0.50
45:R2:16:LEU:O	45:R2:17:SER:CB	2.56	0.50
48:R5:50:GLY:O	48:R5:51:TYR:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R6:41:PRO:HD2	49:R6:46:HIS:H	1.77	0.50
1:XA:474:G:H2'	1:XA:475:G:H8	1.76	0.50
1:XA:962:C:H1'	1:XA:1201:A:N6	2.27	0.50
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
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.50
22:YA:2524:G:H5'	22:YA:2525:G:OP2	2.11	0.50
23:YB:24:G:O6	23:YB:56:G:O2'	2.26	0.50
27:YG:49:ASP:OD1	27:YG:51:ARG:HG3	2.12	0.50
28:YH:16:SER:O	28:YH:17:VAL:HG23	2.12	0.50
31:YO:104:ARG:NE	36:YT:34:VAL:HG11	2.26	0.50
33:YQ:36:ALA:HB1	33:YQ:127:ILE:HD12	1.93	0.50
34:YR:28:LEU:CD2	34:YR:114:VAL:HG12	2.41	0.50
35:YS:35:ILE:CD1	35:YS:101:LEU:HD23	2.41	0.50
35:YS:89:ARG:HD2	35:YS:89:ARG:O	2.11	0.50
42:YZ:158:PRO:O	42:YZ:160:GLY:N	2.44	0.50
45:Y2:9:GLN:O	45:Y2:12:GLU:HB3	2.10	0.50
49:Y6:9:LEU:HB3	49:Y6:26:ASN:O	2.12	0.50
50:Y7:9:ARG:HH12	50:Y7:47:ARG:HG3	1.76	0.50
50:Y7:46:VAL:HG12	50:Y7:47:ARG:N	2.27	0.50
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.77	0.50
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.41	0.50
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.47	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
22:RA:782:A:N7	24:RD:221:VAL:HG11	2.26	0.50
22:RA:1398:C:OP1	40:RX:53:LYS:NZ	2.43	0.50
22:RA:1858:G:O2'	22:RA:1884:A:N6	2.45	0.50
24:RD:2:ALA:CB	24:RD:20:ASP:CB	2.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:103:LEU:HD21	27:RG:178:PHE:CZ	2.47	0.50
27:RG:111:LEU:N	27:RG:112:PRO:CD	2.75	0.50
28:RH:133:VAL:HG12	28:RH:141:VAL:HG13	1.93	0.50
28:RH:153:LYS:O	28:RH:154:PRO:O	2.30	0.50
29:RI:129:THR:HG22	29:RI:137:PRO:HB3	1.94	0.50
30:RN:46:VAL:O	30:RN:47:ALA:CB	2.57	0.50
31:RO:104:ARG:NE	36:RT:34:VAL:HG11	2.26	0.50
33:RQ:2:LEU:HD23	33:RQ:2:LEU:N	2.27	0.50
33:RQ:80:GLU:HG3	33:RQ:81:VAL:N	2.27	0.50
34:RR:96:ARG:NH2	34:RR:117:VAL:HG23	2.27	0.50
41:RY:16:ALA:O	41:RY:21:LYS:HD3	2.11	0.50
42:RZ:35:ARG:HB3	42:RZ:35:ARG:NH1	2.26	0.50
43:R0:50:ASN:HB3	43:R0:63:VAL:HG22	1.92	0.50
47:R4:10:VAL:HG23	47:R4:11:PRO:HD2	1.93	0.50
50:R7:46:VAL:HG12	50:R7:47:ARG:N	2.27	0.50
1:XA:339:C:OP2	31:YO:97:ARG:NH1	2.45	0.50
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.76	0.50
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.47	0.50
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.10	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	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
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.75	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
22:YA:1266:G:O5'	39:YW:15:ARG:NH2	2.45	0.50
22:YA:1728:G:H3'	22:YA:1729:A:H5''	1.94	0.50
22:YA:1785:A:C6	22:YA:1787:A:H1'	2.46	0.50
23:YB:55:U:O2'	23:YB:57:A:N7	2.44	0.50
24:YD:218:ARG:HB3	24:YD:219:PRO:HD2	1.94	0.50
24:YD:233:HIS:CD2	24:YD:233:HIS:H	2.29	0.50
25:YE:2:LYS:HG2	25:YE:95:ILE:CG2	2.42	0.50
25:YE:105:THR:HB	25:YE:197:ILE:HG12	1.92	0.50
27:YG:16:ARG:HB3	27:YG:17:PRO:HD3	1.94	0.50
27:YG:35:GLU:CD	27:YG:35:GLU:C	2.71	0.50
31:YO:105:GLU:O	31:YO:108:GLU:HB2	2.12	0.50
33:YQ:108:GLY:O	33:YQ:109:VAL:HG23	2.12	0.50
37:YU:92:ARG:CD	37:YU:94:ASN:HB3	2.42	0.50
41:YY:48:ALA:HB2	41:YY:61:ILE:CD1	2.42	0.50
47:Y4:22:ILE:H	47:Y4:22:ILE:HD12	1.77	0.50
48:Y5:37:LYS:O	48:Y5:37:LYS:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1235:U:O2'	1:QA:1305:G:O5'	2.30	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	0.50
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.39	0.50
1:QA:1296:C:O2'	1:QA:1302:U:H5	1.94	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
22:RA:259:G:H2'	22:RA:260:G:H8	1.77	0.50
22:RA:1062:G:H2'	22:RA:1063:G:H8	1.76	0.50
22:RA:1614:A:H62	39:RW:93:ALA:HB2	1.77	0.50
22:RA:2409:G:H2'	22:RA:2410:G:O4'	2.11	0.50
22:RA:2525:G:N2	22:RA:2539:C:C2	2.80	0.50
22:RA:2602:A:H2	56:Z6:76:PPU:C8	2.24	0.50
24:RD:35:LYS:HE2	24:RD:104:TYR:HB2	1.94	0.50
24:RD:218:ARG:HB3	24:RD:219:PRO:HD2	1.94	0.50
24:RD:237:GLU:OE1	24:RD:237:GLU:HA	2.12	0.50
25:RE:119:ARG:HD3	25:RE:160:TYR:CD2	2.47	0.50
26:RF:11:VAL:CG1	26:RF:12:LEU:N	2.75	0.50
30:RN:137:LYS:HG3	30:RN:138:LEU:H	1.77	0.50
32:RP:6:LEU:N	32:RP:6:LEU:CD2	2.75	0.50
49:R6:20:ASN:O	49:R6:21:TYR:CB	2.59	0.50
49:R6:34:LEU:HD23	49:R6:36:LEU:HD22	1.93	0.50
52:R9:7:VAL:HG12	52:R9:25:VAL:HG21	1.94	0.50
1:XA:779:C:H2'	1:XA:780:A:O4'	2.12	0.50
1:XA:1064:G:N2	1:XA:1190:G:H2'	2.27	0.50
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.45	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.12	0.50
22:YA:1929:G:H3'	22:YA:1929:G:H8	1.77	0.50
22:YA:2688:U:H1'	22:YA:2721:A:N6	2.26	0.50
24:YD:35:LYS:HE2	24:YD:104:TYR:HB2	1.94	0.50
24:YD:65:ILE:HD13	24:YD:65:ILE:C	2.32	0.50
27:YG:114:ILE:HG21	27:YG:117:PHE:HB2	1.93	0.50
32:YP:112:LEU:HD22	32:YP:113:LYS:N	2.26	0.50
32:YP:147:LEU:O	32:YP:148:LEU:HB2	2.11	0.50
41:YY:19:LYS:O	41:YY:19:LYS:CG	2.60	0.50
48:Y5:50:GLY:O	48:Y5:51:TYR:CB	2.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y7:12:ARG:NH1	50:Y7:12:ARG:HG3	2.27	0.50
51:Y8:56:GLU:O	51:Y8:57:ARG:C	2.50	0.50
1:QA:41:G:H2'	1:QA:42:G:H8	1.77	0.49
1:QA:310:G:H4'	16:QP:31:LYS:HD3	1.94	0.49
1:QA:828:A:H2'	1:QA:829:G:O4'	2.12	0.49
1:QA:1353:G:C2	1:QA:1370:G:C2	2.99	0.49
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.49
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.41	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.49
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	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
22:RA:184:C:H2'	22:RA:185:U:C6	2.46	0.49
22:RA:270(S):G:C2'	22:RA:270(T):G:H5'	2.42	0.49
22:RA:1046:A:H3'	22:RA:1046:A:N3	2.27	0.49
22:RA:1340:U:H4'	22:RA:1394:U:O2'	2.12	0.49
22:RA:2077:A:H2'	22:RA:2078:C:H6	1.77	0.49
28:RH:103:LEU:CD1	28:RH:131:VAL:HG21	2.41	0.49
38:RV:41:GLY:N	38:RV:46:VAL:HG13	2.26	0.49
39:RW:29:LEU:HD23	39:RW:29:LEU:O	2.13	0.49
42:RZ:53:ILE:HG22	42:RZ:71:VAL:HG13	1.94	0.49
44:R1:83:GLU:CD	44:R1:85:LEU:H	2.15	0.49
50:R7:12:ARG:NH1	50:R7:12:ARG:HG3	2.27	0.49
2:XB:23:ARG:HG2	2:XB:23:ARG:HH11	1.76	0.49
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.26	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	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:3:ARG:HH21	27:YG:139:LEU:HD13	1.76	0.49
13:XM:65:LYS:HZ3	13:XM:69:GLU:HG2	1.76	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
22:YA:117:G:OP2	22:YA:119:A:O2'	2.28	0.49
22:YA:380:U:H2'	22:YA:381:G:H8	1.76	0.49
22:YA:383:U:H5''	22:YA:384:U:OP2	2.12	0.49
22:YA:443:A:H3'	26:YF:45:ARG:NH1	2.27	0.49
22:YA:507:A:C5'	22:YA:508:G:H5'	2.42	0.49
22:YA:1397:U:OP2	22:YA:1398:C:N4	2.35	0.49
22:YA:1899:G:H21	22:YA:1902:C:H42	1.58	0.49
22:YA:2756:U:H4'	22:YA:2757:A:OP1	2.12	0.49
23:YB:89:G:C6	23:YB:89(A):A:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:11:VAL:CG1	26:YF:12:LEU:N	2.75	0.49
27:YG:83:ARG:HH11	27:YG:83:ARG:HG2	1.76	0.49
27:YG:103:LEU:HD21	27:YG:178:PHE:CZ	2.47	0.49
30:YN:137:LYS:HG3	30:YN:138:LEU:H	1.77	0.49
31:YO:55:GLY:O	31:YO:56:ASP:C	2.50	0.49
32:YP:36:LYS:HB2	32:YP:40:SER:HB3	1.94	0.49
35:YS:52:SER:O	35:YS:56:LEU:CD2	2.60	0.49
41:YY:16:ALA:O	41:YY:21:LYS:HD3	2.11	0.49
44:Y1:81:LYS:O	44:Y1:82:LEU:O	2.30	0.49
49:Y6:44:ARG:O	49:Y6:45:LYS:CB	2.60	0.49
1:QA:999:U:H2'	1:QA:1000:A:C8	2.47	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.93	0.49
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.49
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
22:RA:486:C:H4'	39:RW:60:ASN:OD1	2.13	0.49
22:RA:1328:G:H8	22:RA:1328:G:O5'	1.95	0.49
22:RA:1517:G:H2'	22:RA:1518:C:C6	2.48	0.49
22:RA:1733:G:C5	22:RA:1734:C:C4	3.00	0.49
22:RA:2037:G:C6	22:RA:2038:G:C6	3.00	0.49
22:RA:2271:G:H2'	22:RA:2272:U:C6	2.46	0.49
22:RA:2392:A:H2	22:RA:2424:C:H42	1.60	0.49
24:RD:10:THR:HG23	24:RD:13:ARG:CB	2.34	0.49
24:RD:25:THR:O	24:RD:27:THR:HG22	2.12	0.49
24:RD:72:LYS:O	24:RD:73:VAL:C	2.50	0.49
24:RD:123:ALA:HB3	24:RD:131:LEU:HG	1.94	0.49
28:RH:19:VAL:HG13	28:RH:43:VAL:CG2	2.41	0.49
28:RH:19:VAL:HG13	28:RH:43:VAL:HG23	1.93	0.49
29:RI:11:ASN:O	29:RI:12:LEU:HB2	2.12	0.49
32:RP:61:ARG:HH21	51:R8:13:ARG:HD2	1.77	0.49
35:RS:83:LYS:HG2	35:RS:109:GLY:HA2	1.90	0.49
37:RU:79:PHE:HE2	37:RU:83:LEU:HD22	1.78	0.49
47:R4:9:LEU:H	47:R4:27:THR:CG2	2.25	0.49
47:R4:23:GLU:C	47:R4:24:THR:HG1	2.16	0.49
1:XA:129(A):G:H1'	1:XA:190:G:H5''	1.93	0.49
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.12	0.49
1:XA:975:A:N6	1:XA:1367:C:O4'	2.44	0.49
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.27	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
22:YA:17:G:H21	22:YA:554:U:H5'	1.76	0.49
22:YA:297:C:H2'	22:YA:298:G:O4'	2.12	0.49
22:YA:1125:G:H5'	52:Y9:37:GLY:HA2	1.94	0.49
22:YA:1488:G:C6	22:YA:1489:U:C4	2.99	0.49
22:YA:1567:A:H4'	24:YD:58:HIS:CE1	2.47	0.49
22:YA:1576:U:H2'	22:YA:1577:C:H6	1.77	0.49
22:YA:1742:C:H5'	22:YA:1743:G:OP2	2.12	0.49
22:YA:2179:C:H2'	22:YA:2180:U:C6	2.48	0.49
22:YA:2335:A:O2'	22:YA:2336:A:H2'	2.12	0.49
22:YA:2441:C:OP2	22:YA:2586:C:O2'	2.27	0.49
22:YA:2695:C:H2'	22:YA:2696:U:C6	2.46	0.49
22:YA:2764:A:N7	22:YA:2766:G:C6	2.80	0.49
25:YE:37:ARG:HE	25:YE:37:ARG:H	1.59	0.49
25:YE:46:ALA:HB1	25:YE:80:GLU:HB2	1.94	0.49
30:YN:6:PRO:HG2	30:YN:43:THR:OG1	2.11	0.49
31:YO:47:ILE:CG1	31:YO:48:PRO:HD2	2.42	0.49
31:YO:69:ILE:O	31:YO:76:ALA:HA	2.12	0.49
35:YS:5:THR:HG1	35:YS:7:TYR:HB3	1.75	0.49
35:YS:60:GLY:O	35:YS:61:ASN:CB	2.55	0.49
37:YU:92:ARG:NH1	37:YU:95:LEU:HD11	2.26	0.49
38:YV:3:ALA:HB3	38:YV:14:VAL:HG23	1.92	0.49
44:Y1:93:GLU:O	44:Y1:97:LEU:HD11	2.12	0.49
47:Y4:36:CYS:O	47:Y4:39:CYS:CB	2.55	0.49
1:QA:271:C:H2'	1:QA:272:C:C6	2.46	0.49
1:QA:1238:A:H62	1:QA:1299:A:N6	2.10	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.49
22:RA:270(S):G:O2'	22:RA:270(T):G:H5'	2.12	0.49
22:RA:1839:G:C8	22:RA:1927:A:H1'	2.47	0.49
22:RA:2415:G:H4'	32:RP:66:GLY:C	2.33	0.49
25:RE:61:ARG:O	25:RE:62:PRO:C	2.51	0.49
30:RN:42:TRP:HA	30:RN:48:MET:CE	2.42	0.49
30:RN:73:THR:HG22	30:RN:82:LEU:HD11	1.93	0.49
31:RO:105:GLU:O	31:RO:108:GLU:HB2	2.12	0.49
34:RR:118:GLU:OXT	34:RR:118:GLU:HG3	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RX:18:TYR:C	40:RX:20:GLY:N	2.64	0.49
40:RX:70:LEU:N	40:RX:70:LEU:CD2	2.72	0.49
41:RY:81:LYS:HD3	41:RY:97:ARG:HD3	1.94	0.49
46:R3:7:LYS:CB	46:R3:34:GLU:HG2	2.41	0.49
1:XA:372:C:C5	1:XA:387:U:C4	2.98	0.49
1:XA:768:A:H2'	1:XA:769:G:O4'	2.13	0.49
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.42	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	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	1.93	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.23	0.49
8:XH:91:ARG:HG2	8:XH:91:ARG:NH1	2.25	0.49
22:YA:270(R):G:H2'	22:YA:270(S):G:C8	2.47	0.49
22:YA:931:G:O3'	46:Y3:24:LYS:NZ	2.45	0.49
22:YA:1252:G:O4'	37:YU:33:ARG:HD3	2.13	0.49
22:YA:1567:A:H5'	24:YD:58:HIS:ND1	2.27	0.49
22:YA:1812:A:O2'	24:YD:45:ASN:HB2	2.11	0.49
22:YA:2688:U:H5	22:YA:2720:U:OP2	1.94	0.49
24:YD:2:ALA:CB	24:YD:20:ASP:HB3	2.42	0.49
24:YD:76:PRO:HA	24:YD:118:VAL:HG23	1.93	0.49
24:YD:227:ASN:HB3	24:YD:228:PRO:CD	2.30	0.49
25:YE:61:ARG:CB	25:YE:62:PRO:CD	2.90	0.49
28:YH:103:LEU:H	28:YH:103:LEU:HD23	1.77	0.49
30:YN:46:VAL:O	30:YN:47:ALA:CB	2.57	0.49
30:YN:73:THR:CG2	30:YN:82:LEU:HD11	2.43	0.49
30:YN:82:LEU:HD12	30:YN:83:LYS:N	2.27	0.49
33:YQ:2:LEU:HD23	33:YQ:2:LEU:N	2.27	0.49
33:YQ:29:PHE:N	33:YQ:105:GLU:OE2	2.41	0.49
39:YW:29:LEU:O	39:YW:29:LEU:HD23	2.13	0.49
39:YW:51:LEU:HD23	39:YW:105:VAL:HG11	1.95	0.49
41:YY:81:LYS:CD	41:YY:97:ARG:HE	2.20	0.49
41:YY:88:LYS:NZ	41:YY:88:LYS:HA	2.27	0.49
42:YZ:124:ILE:HG23	42:YZ:165:VAL:HG21	1.95	0.49
44:Y1:8:SER:HB3	44:Y1:66:HIS:CE1	2.46	0.49
44:Y1:40:ARG:NH2	44:Y1:42:GLN:HG2	2.27	0.49
44:Y1:67:ILE:N	44:Y1:68:PRO:CD	2.76	0.49
46:Y3:21:ALA:O	46:Y3:25:ALA:N	2.41	0.49
47:Y4:9:LEU:H	47:Y4:27:THR:CG2	2.26	0.49
51:Y8:10:ALA:O	51:Y8:14:VAL:HG12	2.11	0.49
1:QA:452:A:C6	1:QA:453:A:C6	3.01	0.49
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.22	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	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
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
22:RA:18:C:O2'	22:RA:553:U:OP1	2.29	0.49
22:RA:730:C:OP1	22:RA:1775:U:O2'	2.22	0.49
22:RA:1450:C:N3	22:RA:1451:C:N4	2.61	0.49
22:RA:1993:U:H4'	25:RE:128:SER:OG	2.12	0.49
22:RA:2645:G:C3'	22:RA:2646:C:H5'	2.41	0.49
24:RD:35:LYS:CG	24:RD:64:ILE:HG22	2.42	0.49
25:RE:23:VAL:HG12	25:RE:173:VAL:HG21	1.94	0.49
28:RH:120:GLY:HA3	28:RH:140:LYS:NZ	2.28	0.49
32:RP:49:ARG:HE	51:R8:59:LYS:HG2	1.76	0.49
32:RP:114:ILE:HD11	32:RP:130:PHE:HE1	1.70	0.49
34:RR:18:LEU:HD13	34:RR:18:LEU:C	2.33	0.49
45:R2:33:MET:O	45:R2:37:PHE:HD1	1.95	0.49
47:R4:57:GLU:O	47:R4:61:ARG:O	2.30	0.49
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.44	0.49
1:XA:1312:G:H3'	47:Y4:67:TYR:OH	2.11	0.49
1:XA:1517:G:H1'	22:YA:1919:A:O3'	2.13	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.65	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
13:XM:3:ARG:HB3	47:Y4:34:GLU:CB	2.41	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.33	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.32	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49
22:YA:483:A:H5'	41:YY:49:VAL:HG13	1.95	0.49
22:YA:2335:A:HO2'	22:YA:2336:A:P	2.36	0.49
22:YA:2336:A:H61	43:Y0:43:THR:CG2	2.25	0.49
28:YH:19:VAL:HG13	28:YH:43:VAL:HG23	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:153:LYS:HA	28:YH:153:LYS:HZ3	1.75	0.49
30:YN:68:GLU:HG2	30:YN:88:GLU:CD	2.33	0.49
35:YS:99:LYS:O	35:YS:101:LEU:N	2.45	0.49
36:YT:39:ARG:CG	36:YT:40:THR:H	2.22	0.49
37:YU:81:HIS:CE1	37:YU:117:GLN:HG3	2.48	0.49
38:YV:91:TYR:C	38:YV:91:TYR:HD1	2.16	0.49
41:YY:44:ILE:CG1	41:YY:45:VAL:H	2.24	0.49
42:YZ:182:LYS:CG	42:YZ:183:LEU:HA	2.42	0.49
45:Y2:69:ARG:CB	45:Y2:69:ARG:HH11	2.25	0.49
47:Y4:42:PHE:O	47:Y4:43:TYR:C	2.51	0.49
49:Y6:7:ILE:C	49:Y6:9:LEU:N	2.65	0.49
1:QA:97:U:H2'	1:QA:99:C:C6	2.48	0.49
1:QA:332:G:OP2	20:QT:10:LEU:HD23	2.13	0.49
1:QA:1400:C:C5	53:QV:34:C:C4	3.00	0.49
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.43	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.11	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
22:RA:1670:C:C5	22:RA:1671:U:C4	3.00	0.49
22:RA:2405:G:HO2'	22:RA:2406:U:P	2.34	0.49
25:RE:55:ASN:O	25:RE:57:LYS:N	2.45	0.49
25:RE:179:GLU:O	25:RE:180:ASN:HB2	2.12	0.49
27:RG:49:ASP:OD1	27:RG:51:ARG:HG3	2.12	0.49
27:RG:78:SER:HB2	53:QV:56:C:HO2'	1.75	0.49
27:RG:83:ARG:HG2	27:RG:83:ARG:HH11	1.76	0.49
28:RH:23:ARG:HD2	28:RH:34:GLU:OE2	2.12	0.49
31:RO:69:ILE:O	31:RO:76:ALA:HA	2.12	0.49
32:RP:64:LYS:C	32:RP:66:GLY:N	2.56	0.49
34:RR:67:LEU:HD13	34:RR:76:VAL:CG2	2.27	0.49
37:RU:92:ARG:CD	37:RU:94:ASN:HB3	2.42	0.49
38:RV:91:TYR:C	38:RV:91:TYR:HD1	2.16	0.49
41:RY:35:TYR:CD1	41:RY:69:ALA:HB3	2.48	0.49
45:R2:41:ILE:HD11	45:R2:44:LEU:CB	2.42	0.49
47:R4:22:ILE:HD12	47:R4:22:ILE:H	1.77	0.49
1:XA:135:C:H2'	1:XA:136:C:H5'	1.95	0.49
1:XA:753:A:H4'	1:XA:754:C:O5'	2.12	0.49
1:XA:1297:C:H4'	1:XA:1298:C:H5'	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
14:YN:8:GLU:O	14:YN:10:ALA:N	2.45	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
22:YA:138:G:N2	40:YX:44:GLU:OE2	2.35	0.49
22:YA:141:A:N6	22:YA:1595:G:O2'	2.41	0.49
22:YA:852:G:H1	22:YA:925:C:N4	2.07	0.49
22:YA:878:A:H61	22:YA:899:A:H1'	1.77	0.49
22:YA:1021:A:H3'	22:YA:1021:A:C8	2.47	0.49
22:YA:1036:G:C2	22:YA:1120:G:C6	3.00	0.49
22:YA:1885:A:H5'	22:YA:1886:C:OP2	2.13	0.49
22:YA:1975:G:H2'	22:YA:1976:U:O4'	2.12	0.49
22:YA:2527:C:C4	22:YA:2528:U:C4	3.00	0.49
22:YA:2591:C:H2'	22:YA:2592:G:C8	2.47	0.49
22:YA:2660:A:H2'	22:YA:2661:G:O4'	2.12	0.49
22:YA:2849:U:H4'	22:YA:2868:A:C2	2.47	0.49
24:YD:2:ALA:CB	24:YD:20:ASP:CB	2.90	0.49
24:YD:35:LYS:CG	24:YD:64:ILE:HG22	2.42	0.49
24:YD:72:LYS:O	24:YD:73:VAL:C	2.51	0.49
25:YE:17:ASP:N	25:YE:17:ASP:OD2	2.46	0.49
27:YG:107:LEU:HD11	27:YG:178:PHE:CD1	2.48	0.49
30:YN:95:PRO:O	30:YN:97:ARG:N	2.46	0.49
34:YR:18:LEU:HD13	34:YR:18:LEU:C	2.33	0.49
36:YT:38:ASN:O	36:YT:39:ARG:O	2.30	0.49
40:YX:51:VAL:HG13	40:YX:81:VAL:HG23	1.93	0.49
44:Y1:19:GLN:OE1	44:Y1:19:GLN:HA	2.12	0.49
47:Y4:47:GLN:O	47:Y4:48:ARG:CB	2.60	0.49
52:Y9:7:VAL:HG12	52:Y9:25:VAL:HG21	1.94	0.49
1:QA:6:G:H4'	1:QA:298:A:H4'	1.94	0.49
1:QA:410:G:H2'	1:QA:429:U:C5	2.48	0.49
1:QA:676:A:H1'	11:QK:115:PRO:HB3	1.93	0.49
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.47	0.49
1:QA:1049:U:C2	1:QA:1201:A:H1'	2.48	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
4:QD:166:LYS:CG	24:YD:134:ARG:HH12	2.24	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.13	0.49
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
22:RA:66:C:C4	22:RA:67:U:C4	3.01	0.49
22:RA:923:C:H2'	22:RA:924:C:C6	2.48	0.49
22:RA:1026:U:H1'	22:RA:1027:A:H5''	1.94	0.49
22:RA:1535:U:H2'	22:RA:1536:A:C8	2.48	0.49
23:RB:75:G:H1	23:RB:102:G:N2	2.10	0.49
23:RB:75:G:H1	23:RB:102:G:H22	1.60	0.49
26:RF:196:LEU:C	26:RF:197:ASP:O	2.50	0.49
27:RG:107:LEU:HD11	27:RG:178:PHE:CD1	2.48	0.49
28:RH:103:LEU:HD23	28:RH:103:LEU:H	1.77	0.49
28:RH:128:PRO:HD2	28:RH:129:THR:N	2.25	0.49
30:RN:30:ILE:O	30:RN:34:LEU:HD23	2.13	0.49
30:RN:120:LEU:HD11	30:RN:122:VAL:CG2	2.42	0.49
32:RP:147:LEU:O	32:RP:148:LEU:HB2	2.11	0.49
33:RQ:29:PHE:N	33:RQ:105:GLU:OE2	2.41	0.49
33:RQ:132:VAL:HG12	33:RQ:133:ARG:N	2.27	0.49
35:RS:18:ILE:O	35:RS:19:LYS:O	2.31	0.49
35:RS:99:LYS:O	35:RS:101:LEU:N	2.45	0.49
36:RT:94:ALA:O	36:RT:95:ARG:CB	2.61	0.49
38:RV:76:LYS:HG3	38:RV:81:TYR:CD1	2.48	0.49
41:RY:77:PRO:O	41:RY:78:ALA:HB2	2.11	0.49
44:R1:67:ILE:N	44:R1:68:PRO:CD	2.76	0.49
47:R4:42:PHE:O	47:R4:44:THR:O	2.31	0.49
47:R4:68:ARG:HD3	47:R4:69:LYS:HG2	1.92	0.49
48:R5:20:ARG:C	48:R5:22:HIS:H	2.14	0.49
49:R6:37:ARG:HA	49:R6:37:ARG:HE	1.77	0.49
1:XA:418:C:H1'	1:XA:540:G:O2'	2.12	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	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
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.77	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
22:YA:173:G:C6	22:YA:174:C:C4	3.01	0.49
22:YA:657:U:OP2	22:YA:657:U:H6	1.95	0.49
22:YA:678:C:H2'	22:YA:679:C:C6	2.48	0.49
22:YA:1043:C:H42	22:YA:1112:G:H1	1.59	0.49
22:YA:1971:A:H1'	24:YD:240:ALA:O	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2051:A:H5'	22:YA:2578:G:O4'	2.12	0.49
22:YA:2360:A:H2'	22:YA:2361:A:O4'	2.13	0.49
22:YA:2751:G:O2'	22:YA:2752:C:O5'	2.28	0.49
24:YD:130:ALA:C	24:YD:131:LEU:HD12	2.33	0.49
25:YE:179:GLU:HA	25:YE:179:GLU:OE1	2.10	0.49
27:YG:56:ALA:HB2	27:YG:153:ARG:NE	2.27	0.49
28:YH:153:LYS:O	28:YH:154:PRO:O	2.30	0.49
31:YO:1:MET:HE3	31:YO:67:LYS:HE2	1.93	0.49
32:YP:30:THR:O	32:YP:33:ARG:HB2	2.12	0.49
34:YR:1:MET:O	34:YR:2:ARG:CB	2.60	0.49
34:YR:33:ARG:NH2	48:Y5:55:ARG:CG	2.66	0.49
38:YV:29:PRO:O	38:YV:61:VAL:HG22	2.12	0.49
41:YY:61:ILE:HG22	41:YY:62:GLU:N	2.28	0.49
41:YY:84:ARG:HD3	41:YY:86:ARG:NH1	2.28	0.49
44:Y1:60:PHE:HE2	44:Y1:91:LYS:HZ1	1.57	0.49
47:Y4:1:MET:HG3	47:Y4:1:MET:O	2.12	0.49
49:Y6:20:ASN:CG	49:Y6:21:TYR:N	2.66	0.49
51:Y8:16:ILE:CD1	51:Y8:57:ARG:HG2	2.42	0.49
51:Y8:52:LYS:H	51:Y8:53:PRO:HD2	1.66	0.49
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.49
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.78	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
22:RA:445:C:O2	22:RA:449:A:H2	1.95	0.49
22:RA:667:U:H2'	22:RA:668:G:O4'	2.12	0.49
22:RA:827:U:H2'	22:RA:2068:U:C2	2.48	0.49
22:RA:846:C:H42	22:RA:931:G:H1	1.61	0.49
25:RE:95:ILE:H	25:RE:95:ILE:CD1	2.18	0.49
27:RG:143:GLU:HA	47:R4:28:LYS:HD3	1.95	0.49
28:RH:24:VAL:HG21	28:RH:72:ILE:HG12	1.93	0.49
28:RH:54:ARG:HD3	28:RH:65:HIS:ND1	2.27	0.49
28:RH:98:LEU:HD12	28:RH:102:ALA:O	2.13	0.49
29:RI:13:GLY:HA3	29:RI:17:GLN:CD	2.32	0.49
30:RN:95:PRO:O	30:RN:97:ARG:N	2.46	0.49
31:RO:8:LEU:N	31:RO:8:LEU:CD2	2.76	0.49
33:RQ:23:GLY:O	33:RQ:24:GLY:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RR:71:GLN:HA	34:RR:71:GLN:HE21	1.77	0.49
36:RT:16:ARG:NE	36:RT:19:LEU:HD21	2.28	0.49
38:RV:7:THR:HG23	38:RV:22:VAL:HG11	1.94	0.49
40:RX:51:VAL:HG13	40:RX:81:VAL:HG23	1.93	0.49
43:R0:29:GLN:O	43:R0:31:VAL:HG13	2.13	0.49
44:R1:40:ARG:NH2	44:R1:42:GLN:HG2	2.27	0.49
49:R6:7:ILE:C	49:R6:9:LEU:N	2.65	0.49
50:R7:9:ARG:HH12	50:R7:47:ARG:HG3	1.76	0.49
1:XA:987:G:H1	1:XA:1218:C:H42	1.60	0.49
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.13	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
9:XI:110:GLU:O	9:XI:110:GLU:HG3	2.12	0.49
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.49
22:YA:34:C:H41	22:YA:447:A:H61	1.59	0.49
22:YA:422:A:C6	22:YA:423:A:C6	3.01	0.49
22:YA:442:G:H1'	26:YF:48:THR:HG21	1.95	0.49
22:YA:519:U:H2'	22:YA:520:G:H8	1.76	0.49
22:YA:817:C:O2'	22:YA:839:U:OP1	2.23	0.49
22:YA:928:G:O2'	46:Y3:43:ILE:HD11	2.12	0.49
22:YA:1436:G:H2'	22:YA:1437:C:O4'	2.13	0.49
22:YA:1729:A:H2'	22:YA:1730:U:H5''	1.94	0.49
22:YA:2086:U:H3	22:YA:2233:U:H3	1.58	0.49
22:YA:2159:G:H2'	22:YA:2160:G:H8	1.77	0.49
25:YE:61:ARG:O	25:YE:62:PRO:C	2.51	0.49
25:YE:179:GLU:O	25:YE:180:ASN:HB2	2.12	0.49
26:YF:51:THR:O	26:YF:93:LYS:NZ	2.38	0.49
28:YH:98:LEU:HD12	28:YH:102:ALA:O	2.13	0.49
31:YO:20:MET:HG2	31:YO:21:CYS:O	2.11	0.49
34:YR:96:ARG:NH2	34:YR:117:VAL:HG23	2.27	0.49
35:YS:11:LYS:HG2	35:YS:11:LYS:O	2.12	0.49
36:YT:57:PHE:O	36:YT:59:THR:N	2.46	0.49
48:Y5:2:ALA:O	48:Y5:3:LYS:CB	2.60	0.49
51:Y8:58:ILE:O	51:Y8:61:LEU:HD12	2.13	0.49
1:QA:190:G:HO2'	1:QA:191(A):G:P	2.34	0.49
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.12	0.49
1:QA:962:C:H2'	1:QA:963:G:C8	2.47	0.49
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.46	0.49
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.78	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	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
11:QK:91:ARG:NH2	18:QR:88:LYS:HZ1	2.10	0.49
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
22:RA:64:A:C4	40:RX:66:LEU:HD13	2.48	0.49
22:RA:260:G:O4'	22:RA:621:A:H1'	2.13	0.49
22:RA:2602:A:C2	56:Z6:76:PPU:H8	2.48	0.49
22:RA:2636:U:H1'	22:RA:2783:G:N2	2.28	0.49
22:RA:2795:G:H3'	22:RA:2797:U:H5'	1.95	0.49
23:RB:8:U:H3	23:RB:112:G:H1	1.61	0.49
23:RB:44:G:H5''	23:RB:45:A:OP1	2.12	0.49
24:RD:2:ALA:CB	24:RD:20:ASP:HB3	2.42	0.49
24:RD:182:LEU:H	24:RD:272:ALA:CB	2.25	0.49
25:RE:38:THR:O	25:RE:42:ASP:HB2	2.13	0.49
25:RE:119:ARG:HD3	25:RE:160:TYR:HD2	1.78	0.49
27:RG:35:GLU:CD	27:RG:35:GLU:C	2.71	0.49
27:RG:113:ARG:HD2	47:R4:33:VAL:CG1	2.43	0.49
27:RG:114:ILE:HG21	27:RG:117:PHE:HB2	1.93	0.49
30:RN:73:THR:CG2	30:RN:82:LEU:HD11	2.43	0.49
32:RP:47:ASP:OD1	32:RP:49:ARG:NH1	2.46	0.49
36:RT:16:ARG:HD3	36:RT:19:LEU:CG	2.43	0.49
39:RW:30:GLU:O	39:RW:34:ASN:ND2	2.46	0.49
40:RX:44:GLU:OE1	40:RX:50:LYS:HD2	2.13	0.49
41:RY:84:ARG:HD3	41:RY:86:ARG:NH1	2.28	0.49
41:RY:95:LYS:N	41:RY:95:LYS:CD	2.76	0.49
47:R4:10:VAL:CG2	47:R4:11:PRO:HD2	2.43	0.49
48:R5:48:GLU:HA	48:R5:59:GLU:CG	2.43	0.49
48:R5:52:TYR:O	48:R5:53:ALA:CB	2.60	0.49
49:R6:8:LYS:O	49:R6:27:LYS:HA	2.13	0.49
51:R8:33:ASN:O	51:R8:35:GLN:N	2.46	0.49
1:XA:411:A:H62	1:XA:413:G:N2	2.07	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
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
3:XC:188:LEU:N	3:XC:188:LEU:CD2	2.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
10:XJ:63:PHE:CD1	14:YN:58:LYS:HA	2.35	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.94	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
22:YA:524:U:H2'	22:YA:525:U:C6	2.47	0.49
22:YA:565:C:H2'	22:YA:566:U:O4'	2.13	0.49
22:YA:962:G:OP1	22:YA:963:U:OP2	2.31	0.49
22:YA:1139:G:O2'	22:YA:1143:A:N1	2.38	0.49
22:YA:1203:G:H3'	22:YA:1204:A:H5''	1.93	0.49
22:YA:1258:C:O4'	26:YF:84:VAL:HG11	2.13	0.49
22:YA:1270:C:H5''	22:YA:1271:G:C5'	2.42	0.49
22:YA:1790:C:H2'	22:YA:1791:A:C4	2.48	0.49
22:YA:2464:C:H2'	22:YA:2465:C:H6	1.76	0.49
24:YD:123:ALA:HB3	24:YD:131:LEU:HG	1.94	0.49
25:YE:119:ARG:HD3	25:YE:160:TYR:CD2	2.47	0.49
28:YH:151:ILE:C	28:YH:152:ARG:O	2.49	0.49
30:YN:56:ASN:ND2	30:YN:125:GLY:C	2.65	0.49
35:YS:25:ARG:HH12	35:YS:42:ASP:CG	2.16	0.49
38:YV:79:VAL:HG22	38:YV:79:VAL:O	2.12	0.49
41:YY:95:LYS:N	41:YY:95:LYS:CD	2.76	0.49
1:QA:581:G:OP1	15:QO:61:GLY:HA3	2.12	0.49
1:QA:1238:A:H62	1:QA:1299:A:H61	1.60	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.49
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.49
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.49
22:RA:189:G:N2	22:RA:206:U:C5	2.80	0.49
22:RA:2405:G:O2'	22:RA:2406:U:OP2	2.29	0.49
22:RA:2630:G:O4'	22:RA:2894:G:H1'	2.12	0.49
22:RA:2790:A:H2'	22:RA:2791:C:H5''	1.94	0.49
24:RD:233:HIS:CD2	24:RD:233:HIS:H	2.29	0.49
25:RE:46:ALA:HB1	25:RE:80:GLU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:45:ARG:NH1	26:RF:45:ARG:HG2	2.28	0.49
28:RH:12:PRO:HD3	28:RH:48:GLY:O	2.13	0.49
28:RH:137:ASP:CB	28:RH:140:LYS:HB2	2.43	0.49
31:RO:107:ARG:NH1	36:RT:36:GLU:OE1	2.46	0.49
32:RP:101:VAL:CG1	32:RP:102:ARG:N	2.75	0.49
34:RR:52:ILE:CG2	34:RR:94:TYR:CD1	2.96	0.49
35:RS:48:LEU:N	35:RS:48:LEU:CD1	2.76	0.49
42:RZ:48:PHE:CZ	42:RZ:52:SER:HA	2.48	0.49
44:R1:19:GLN:HA	44:R1:19:GLN:OE1	2.12	0.49
48:R5:2:ALA:O	48:R5:3:LYS:CB	2.60	0.49
49:R6:7:ILE:O	49:R6:9:LEU:N	2.46	0.49
51:R8:41:ILE:HG13	51:R8:42:ARG:N	2.28	0.49
1:XA:137:C:N4	1:XA:226:G:H1	2.11	0.49
1:XA:292:G:C5	1:XA:293:G:H1'	2.48	0.49
1:XA:554:C:H2'	1:XA:555:C:C6	2.48	0.49
1:XA:974:A:N3	14:YN:31:ARG:NE	2.60	0.49
1:XA:1238:A:N3	1:XA:1241:G:O2'	2.38	0.49
1:XA:1317:C:H5''	1:XA:1318:A:OP2	2.12	0.49
1:XA:1453:G:H8	20:XT:39:LYS:HZ1	1.60	0.49
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	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:50:SER:O	12:XL:51:ALA:CB	2.60	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.12	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
22:YA:38:A:H2'	22:YA:39:C:C6	2.47	0.49
22:YA:483:A:H5''	22:YA:484:C:OP2	2.13	0.49
22:YA:1036:G:OP1	28:YH:59:ARG:HB2	2.12	0.49
22:YA:1638:C:OP1	22:YA:2710:C:O2'	2.28	0.49
22:YA:1803:A:O2'	24:YD:259:THR:HG21	2.13	0.49
22:YA:2025:C:H2'	22:YA:2026:C:C6	2.48	0.49
24:YD:44:ASN:H	24:YD:44:ASN:ND2	1.97	0.49
27:YG:3:LEU:HD21	47:Y4:25:TYR:CE1	2.48	0.49
28:YH:54:ARG:HD3	28:YH:65:HIS:ND1	2.27	0.49
28:YH:124:GLU:HB3	28:YH:132:ARG:CG	2.43	0.49
29:YI:5:LEU:H	29:YI:5:LEU:CD1	2.24	0.49
32:YP:14:LYS:O	32:YP:15:ARG:C	2.51	0.49
32:YP:52:GLU:OE2	32:YP:57:THR:HA	2.13	0.49
37:YU:64:ARG:CG	37:YU:64:ARG:NH2	2.70	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YV:91:TYR:C	38:YV:91:TYR:CD1	2.87	0.49
39:YW:88:ARG:HB3	39:YW:92:ARG:CB	2.41	0.49
41:YY:81:LYS:HD3	41:YY:97:ARG:HD3	1.94	0.49
44:Y1:80:LEU:C	44:Y1:81:LYS:CE	2.77	0.49
48:Y5:49:CYS:SG	48:Y5:58:LEU:HB2	2.53	0.49
49:Y6:9:LEU:HD13	49:Y6:26:ASN:HD22	1.76	0.49
49:Y6:37:ARG:HE	49:Y6:37:ARG:HA	1.77	0.49
1:QA:410:G:H3'	4:QD:25:ARG:HH21	1.78	0.49
1:QA:678:U:H2'	1:QA:679:C:C6	2.48	0.49
1:QA:695:A:H2'	1:QA:696:A:C8	2.48	0.49
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	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:47:LYS:NZ	54:QX:6:C:C5'	2.66	0.49
22:RA:139:G:N2	22:RA:1596:A:H4'	2.28	0.49
22:RA:252:G:OP2	32:RP:50:ARG:NH1	2.46	0.49
22:RA:311:A:C6	22:RA:328:U:C4	3.01	0.49
22:RA:554:U:H2'	22:RA:556:G:C8	2.47	0.49
22:RA:746:A:O2'	22:RA:747:U:OP2	2.29	0.49
22:RA:1359:A:C6	22:RA:1373:A:C5	3.01	0.49
22:RA:1431:U:H2'	22:RA:1432:C:C6	2.48	0.49
22:RA:1497:U:H5''	22:RA:1498:C:H5	1.78	0.49
22:RA:1667:G:N1	22:RA:1992:G:OP2	2.37	0.49
27:RG:6:ALA:H	47:R4:23:GLU:CG	2.25	0.49
27:RG:115:ARG:HG2	27:RG:115:ARG:NH1	2.27	0.49
28:RH:42:ARG:O	28:RH:52:VAL:HA	2.12	0.49
31:RO:55:GLY:O	31:RO:56:ASP:C	2.50	0.49
33:RQ:86:GLY:O	33:RQ:88:GLY:N	2.46	0.49
34:RR:44:LEU:HD22	34:RR:48:VAL:CG2	2.42	0.49
35:RS:11:LYS:O	35:RS:11:LYS:HG2	2.12	0.49
36:RT:111:ARG:O	36:RT:112:ARG:CG	2.55	0.49
38:RV:18:LEU:HB3	38:RV:96:ILE:CG1	2.43	0.49
38:RV:29:PRO:O	38:RV:61:VAL:HG22	2.12	0.49
39:RW:51:LEU:HD23	39:RW:105:VAL:HG11	1.95	0.49
41:RY:6:HIS:O	41:RY:7:VAL:CG1	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RZ:53:ILE:HG22	42:RZ:71:VAL:O	2.13	0.49
44:R1:25:LYS:C	44:R1:27:GLU:H	2.16	0.49
44:R1:81:LYS:O	44:R1:82:LEU:O	2.30	0.49
49:R6:27:LYS:NZ	49:R6:27:LYS:CB	2.73	0.49
49:R6:44:ARG:O	49:R6:45:LYS:CB	2.60	0.49
1:XA:521:G:H4'	12:XL:73:GLU:HG3	1.95	0.49
1:XA:532:A:H2	1:XA:1206:G:H21	1.60	0.49
1:XA:745:C:H2'	1:XA:746:A:C8	2.47	0.49
1:XA:792:A:H4'	1:XA:793:U:O5'	2.13	0.49
1:XA:953:G:H2'	1:XA:954:G:O4'	2.13	0.49
1:XA:1374:A:H2'	1:XA:1375:A:O4'	2.13	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.49
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.49
22:YA:270(T):G:OP1	44:Y1:97:LEU:HD13	2.13	0.49
22:YA:1310:G:OP2	50:Y7:9:ARG:CZ	2.60	0.49
22:YA:1484:G:H1	22:YA:1505:C:N4	2.10	0.49
22:YA:1931:U:H6	22:YA:1932:A:C8	2.31	0.49
27:YG:115:ARG:HH11	27:YG:115:ARG:HG2	1.77	0.49
27:YG:143:GLU:HA	47:Y4:28:LYS:HD3	1.95	0.49
33:YQ:23:GLY:O	33:YQ:24:GLY:O	2.30	0.49
35:YS:48:LEU:N	35:YS:48:LEU:CD1	2.76	0.49
35:YS:55:ALA:O	35:YS:56:LEU:HB3	2.13	0.49
38:YV:35:LEU:HD22	38:YV:57:VAL:O	2.13	0.49
47:Y4:53:GLU:O	47:Y4:57:GLU:HG3	2.13	0.49
51:Y8:35:GLN:HA	51:Y8:35:GLN:OE1	2.12	0.49
53:XV:75:C:H2'	53:XV:76:A:O4'	2.12	0.49
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.48	0.48
1:QA:505:G:H2'	1:QA:506:G:H8	1.78	0.48
1:QA:889:A:N1	1:QA:907:A:H5''	2.28	0.48
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.48
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.48
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
22:RA:900:A:H5'	22:RA:901:A:OP2	2.13	0.48
22:RA:1794:U:H2'	22:RA:1795:C:C6	2.48	0.48
22:RA:2053:G:O6	22:RA:2614:A:H2	1.96	0.48
22:RA:2405:G:O2'	22:RA:2411:A:N6	2.45	0.48
22:RA:2553:G:H21	56:Z6:76:PPU:H2	1.68	0.48
26:RF:129:PHE:CD2	26:RF:163:VAL:HG21	2.48	0.48
27:RG:36:LYS:HA	27:RG:95:ARG:HG2	1.95	0.48
27:RG:77:ILE:O	27:RG:81:LYS:O	2.31	0.48
28:RH:124:GLU:HB3	28:RH:132:ARG:CG	2.43	0.48
32:RP:30:THR:O	32:RP:33:ARG:HB2	2.12	0.48
33:RQ:31:ASP:O	33:RQ:32:TYR:CG	2.66	0.48
41:RY:101:LYS:O	41:RY:102:CYS:SG	2.66	0.48
44:R1:93:GLU:O	44:R1:97:LEU:HD11	2.12	0.48
47:R4:47:GLN:O	47:R4:48:ARG:CB	2.61	0.48
48:R5:45:VAL:O	48:R5:45:VAL:HG12	2.13	0.48
49:R6:20:ASN:CG	49:R6:21:TYR:N	2.66	0.48
51:R8:58:ILE:O	51:R8:61:LEU:HD12	2.13	0.48
1:XA:941:G:H1	1:XA:1342:C:N4	2.09	0.48
1:XA:1124:G:H8	1:XA:1124:G:OP2	1.95	0.48
1:XA:1128:C:N4	1:XA:1144:G:H1	2.09	0.48
1:XA:1191:A:OP1	3:XC:4:LYS:HG3	2.12	0.48
1:XA:1365:G:H3'	1:XA:1365:G:OP2	2.13	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.48
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
12:XL:49:ASN:ND2	12:XL:92:ASP:CG	2.62	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
22:YA:540:G:H5'	22:YA:541:C:OP2	2.13	0.48
22:YA:962:G:H2'	22:YA:963:U:C6	2.48	0.48
22:YA:988:A:OP1	46:Y3:11:SER:N	2.43	0.48
22:YA:1788:C:O2'	22:YA:1789:A:H5'	2.13	0.48
22:YA:1805:U:O2	24:YD:50:THR:HB	2.13	0.48
22:YA:2356:C:O3'	43:Y0:20:ARG:HD3	2.13	0.48
24:YD:25:THR:O	24:YD:27:THR:HG22	2.12	0.48
27:YG:77:ILE:O	27:YG:81:LYS:O	2.31	0.48
27:YG:113:ARG:HD2	47:Y4:33:VAL:CG1	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:153:LYS:CB	28:YH:154:PRO:CD	2.69	0.48
30:YN:4:TYR:OH	30:YN:7:LYS:NZ	2.46	0.48
31:YO:107:ARG:HA	31:YO:112:MET:HE1	1.94	0.48
32:YP:6:LEU:O	32:YP:7:ARG:O	2.31	0.48
32:YP:47:ASP:OD1	32:YP:49:ARG:NH1	2.46	0.48
32:YP:101:VAL:CG1	32:YP:102:ARG:N	2.75	0.48
32:YP:144:GLU:O	32:YP:144:GLU:OE1	2.31	0.48
33:YQ:34:LEU:HD23	33:YQ:104:PHE:HD1	1.77	0.48
33:YQ:86:GLY:O	33:YQ:88:GLY:N	2.46	0.48
34:YR:71:GLN:HE21	34:YR:71:GLN:HA	1.77	0.48
38:YV:76:LYS:HG3	38:YV:81:TYR:CD1	2.48	0.48
49:Y6:7:ILE:O	49:Y6:9:LEU:N	2.46	0.48
51:Y8:33:ASN:O	51:Y8:35:GLN:N	2.46	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	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
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.48
22:RA:1263:U:C4	22:RA:1264:G:C6	3.01	0.48
22:RA:1337:G:H2'	22:RA:1338:G:H8	1.77	0.48
22:RA:1568:G:P	24:RD:63:ARG:HH22	2.36	0.48
22:RA:1788:C:OP1	24:RD:222:ARG:NH2	2.43	0.48
22:RA:2228:G:C6	22:RA:2229:C:C4	3.00	0.48
22:RA:2364:C:H2'	22:RA:2365:G:O4'	2.14	0.48
26:RF:155:LEU:HD23	26:RF:186:ILE:HA	1.95	0.48
27:RG:115:ARG:HG2	27:RG:115:ARG:HH11	1.77	0.48
27:RG:125:PHE:HB3	27:RG:166:ASP:HB2	1.95	0.48
28:RH:123:PHE:O	28:RH:125:VAL:HG23	2.13	0.48
30:RN:10:GLU:HA	30:RN:11:PRO:HD3	1.73	0.48
32:RP:35:HIS:O	32:RP:36:LYS:O	2.31	0.48
32:RP:36:LYS:HB2	32:RP:40:SER:HB3	1.94	0.48
34:RR:70:LEU:C	34:RR:72:ASP:H	2.16	0.48
36:RT:132:LYS:O	36:RT:136:GLN:HG3	2.13	0.48
37:RU:81:HIS:CE1	37:RU:117:GLN:HG3	2.48	0.48
38:RV:22:VAL:HG12	38:RV:23:GLU:H	1.76	0.48
38:RV:91:TYR:C	38:RV:91:TYR:CD1	2.87	0.48
39:RW:36:LEU:CD1	39:RW:47:VAL:HG12	2.43	0.48
40:RX:11:PRO:HB3	40:RX:92:LEU:CD2	2.43	0.48
48:R5:56:LYS:HD2	48:R5:56:LYS:N	2.13	0.48
1:XA:186(C):G:H2'	1:XA:186(D):C:C6	2.48	0.48
1:XA:502:G:C2	1:XA:503:C:C2	3.01	0.48
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.27	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	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
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
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
22:YA:239:U:H2'	22:YA:240:G:O4'	2.13	0.48
22:YA:1140:C:H5''	30:YN:66:LYS:NZ	2.28	0.48
22:YA:1213:A:OP2	22:YA:1235:G:N1	2.41	0.48
24:YD:198:ASN:C	24:YD:198:ASN:HD22	2.16	0.48
25:YE:38:THR:O	25:YE:42:ASP:HB2	2.13	0.48
27:YG:92:VAL:O	27:YG:92:VAL:HG13	2.12	0.48
28:YH:13:LYS:HE2	28:YH:13:LYS:CA	2.40	0.48
28:YH:42:ARG:O	28:YH:52:VAL:HA	2.13	0.48
33:YQ:80:GLU:OE1	43:Y0:7:LEU:HG	2.13	0.48
35:YS:33:LYS:HB3	35:YS:34:HIS:CD2	2.48	0.48
37:YU:91:ASP:O	37:YU:95:LEU:N	2.42	0.48
38:YV:18:LEU:HB3	38:YV:96:ILE:CG1	2.43	0.48
41:YY:47:LYS:C	41:YY:49:VAL:H	2.16	0.48
41:YY:97:ARG:HG2	41:YY:97:ARG:NH1	2.28	0.48
53:QV:35:A:C2	54:QX:3:G:C4	2.97	0.48
1:QA:811:C:H4'	1:QA:900:A:N6	2.28	0.48
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.78	0.48
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.28	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.43	0.48
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
22:RA:483:A:H3'	22:RA:484:C:H6	1.77	0.48
22:RA:689:A:H2'	22:RA:690:G:C8	2.48	0.48
22:RA:857:C:H2'	22:RA:858:U:C6	2.48	0.48
22:RA:1149:G:H2'	22:RA:1150:C:C6	2.49	0.48
22:RA:1203:G:O2'	22:RA:1242:A:N6	2.38	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1454:U:O2'	22:RA:1455:G:N7	2.37	0.48
22:RA:1647:G:H3'	22:RA:1647:G:OP2	2.12	0.48
22:RA:2286:A:H2'	49:R6:31:PRO:HG2	1.95	0.48
28:RH:10:PRO:C	28:RH:11:VAL:HG22	2.34	0.48
30:RN:12:ARG:NH1	30:RN:50:ASP:CG	2.67	0.48
32:RP:101:VAL:C	32:RP:103:ALA:H	2.17	0.48
33:RQ:112:GLU:CD	33:RQ:112:GLU:H	2.17	0.48
34:RR:42:LYS:HA	34:RR:45:ARG:HD2	1.95	0.48
35:RS:33:LYS:HB3	35:RS:34:HIS:CD2	2.48	0.48
35:RS:46:VAL:HG12	35:RS:47:THR:N	2.28	0.48
38:RV:35:LEU:HD22	38:RV:57:VAL:O	2.13	0.48
38:RV:79:VAL:HG22	38:RV:79:VAL:O	2.12	0.48
40:RX:35:THR:O	40:RX:37:THR:N	2.47	0.48
41:RY:5:MET:HE1	41:RY:32:PRO:HB3	1.94	0.48
42:RZ:27:VAL:N	42:RZ:37:VAL:HG22	2.28	0.48
42:RZ:153:SER:HB2	42:RZ:167:PRO:HB3	1.93	0.48
44:R1:80:LEU:C	44:R1:81:LYS:CE	2.77	0.48
50:R7:12:ARG:HG3	50:R7:12:ARG:HH11	1.78	0.48
1:XA:131:C:H2'	1:XA:132:C:C6	2.48	0.48
1:XA:1422:G:H5''	31:YO:48:PRO:HB3	1.93	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
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
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
12:XL:46:LYS:HG3	12:XL:47:LYS:N	2.23	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.48
22:YA:630:G:N2	22:YA:632:A:H3'	2.28	0.48
22:YA:2151:G:H2'	22:YA:2152:G:H8	1.78	0.48
22:YA:2373:G:H2'	22:YA:2374:C:C6	2.48	0.48
22:YA:2547:U:H2'	22:YA:2548:G:H8	1.78	0.48
25:YE:47:VAL:O	25:YE:48:GLN:C	2.52	0.48
26:YF:128:ALA:O	26:YF:129:PHE:HB2	2.13	0.48
27:YG:115:ARG:NH1	27:YG:115:ARG:HG2	2.27	0.48
28:YH:12:PRO:HD3	28:YH:48:GLY:O	2.13	0.48
28:YH:137:ASP:CB	28:YH:140:LYS:HB2	2.43	0.48
29:YI:27:ARG:HD3	44:Y1:71:TYR:CE1	2.37	0.48
30:YN:30:ILE:O	30:YN:34:LEU:HD23	2.13	0.48
32:YP:71:VAL:HG13	32:YP:72:PRO:CD	2.43	0.48
33:YQ:112:GLU:CD	33:YQ:112:GLU:H	2.17	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:16:ARG:HD3	36:YT:19:LEU:CG	2.43	0.48
36:YT:58:ASN:HD22	36:YT:58:ASN:N	2.10	0.48
37:YU:52:ARG:NH1	37:YU:52:ARG:CG	2.76	0.48
38:YV:7:THR:HG23	38:YV:22:VAL:HG11	1.94	0.48
45:Y2:16:LEU:O	45:Y2:17:SER:CB	2.56	0.48
49:Y6:27:LYS:O	49:Y6:28:ARG:HG2	2.13	0.48
50:Y7:48:LYS:CG	50:Y7:49:ARG:H	2.23	0.48
53:QV:34:C:N3	54:QX:3:G:N2	2.61	0.48
53:XV:4:G:O2'	53:XV:5:G:H8	1.96	0.48
1:QA:707:C:H5''	11:QK:85:ARG:NH1	2.29	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.94	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
12:QL:47:LYS:CG	12:QL:48:PRO:N	2.75	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
22:RA:49:A:H5''	22:RA:51:G:H5'	1.93	0.48
22:RA:1030:G:OP2	33:RQ:128:LYS:HE2	2.13	0.48
23:RB:13:A:O2'	23:RB:14:U:H3'	2.13	0.48
25:RE:78:LEU:CD2	25:RE:79:ARG:HD2	2.43	0.48
25:RE:93:VAL:H	25:RE:95:ILE:CD1	2.22	0.48
30:RN:95:PRO:O	30:RN:96:GLU:C	2.51	0.48
32:RP:52:GLU:OE2	32:RP:57:THR:HA	2.13	0.48
32:RP:112:LEU:HD12	32:RP:127:ALA:CB	2.44	0.48
41:RY:47:LYS:C	41:RY:49:VAL:H	2.16	0.48
45:R2:69:ARG:HH11	45:R2:69:ARG:HB3	1.79	0.48
49:R6:14:THR:OG1	49:R6:19:ARG:NE	2.40	0.48
1:XA:176:C:O2'	1:XA:1451:A:N1	2.46	0.48
1:XA:626:U:H2'	1:XA:627:G:C8	2.48	0.48
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.28	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
3:XC:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.13	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.75	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
22:YA:177:G:H3'	22:YA:178:G:C8	2.48	0.48
22:YA:372:G:O2'	22:YA:373:U:P	2.72	0.48
22:YA:464:U:H2'	22:YA:465:G:O4'	2.14	0.48
22:YA:2232:U:P	44:Y1:40:ARG:HH12	2.36	0.48
22:YA:2277:G:OP2	43:Y0:12:ASN:ND2	2.45	0.48
24:YD:48:ARG:HG3	24:YD:48:ARG:HH11	1.78	0.48
26:YF:107:LYS:O	26:YF:110:LEU:N	2.47	0.48
26:YF:155:LEU:HD23	26:YF:186:ILE:HA	1.95	0.48
35:YS:18:ILE:O	35:YS:19:LYS:O	2.31	0.48
36:YT:135:ALA:C	36:YT:137:LYS:H	2.16	0.48
44:Y1:56:GLN:NE2	44:Y1:56:GLN:H	2.10	0.48
48:Y5:48:GLU:HA	48:Y5:59:GLU:HG2	1.94	0.48
53:QV:4:G:O2'	53:QV:5:G:H8	1.96	0.48
55:XY:40:G:O2'	55:XY:41:A:H5'	2.13	0.48
1:QA:986:A:H1'	19:QS:54:GLY:O	2.14	0.48
1:QA:1226:C:O2'	13:QM:103:THR:O	2.25	0.48
1:QA:1317:C:H5''	1:QA:1318:A:OP2	2.13	0.48
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.48	0.48
1:QA:1443:G:N2	22:RA:2864:G:OP1	2.43	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.27	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
22:RA:582:G:H2'	22:RA:583:G:C8	2.48	0.48
22:RA:1019:U:O2'	22:RA:1021:A:H2	1.96	0.48
22:RA:1057:A:H62	22:RA:1086:A:H2'	1.78	0.48
22:RA:1153:C:H2'	22:RA:1154:G:O4'	2.14	0.48
22:RA:1433:U:H1'	22:RA:1561:G:N2	2.28	0.48
22:RA:1803:A:O2'	24:RD:259:THR:HG21	2.13	0.48
22:RA:2612:C:C4	22:RA:2613:U:H5	2.32	0.48
22:RA:2815:C:O2'	48:R5:42:PRO:HB2	2.14	0.48
24:RD:35:LYS:HD2	24:RD:104:TYR:CE1	2.49	0.48
26:RF:128:ALA:O	26:RF:129:PHE:HB2	2.13	0.48
26:RF:198:ALA:O	26:RF:201:VAL:HG12	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:16:ARG:HB3	27:RG:17:PRO:HD3	1.94	0.48
29:RI:83:ALA:HA	29:RI:88:ILE:HA	1.94	0.48
32:RP:71:VAL:HG13	32:RP:72:PRO:CD	2.43	0.48
33:RQ:87:LYS:O	33:RQ:89:ASN:N	2.43	0.48
35:RS:59:LYS:HG2	35:RS:60:GLY:N	2.13	0.48
38:RV:6:LYS:HD3	38:RV:11:GLN:HG2	1.96	0.48
40:RX:53:LYS:HZ2	40:RX:55:ASN:HD21	1.62	0.48
45:R2:69:ARG:CB	45:R2:69:ARG:HH11	2.25	0.48
47:R4:42:PHE:O	47:R4:43:TYR:C	2.50	0.48
51:R8:35:GLN:HA	51:R8:35:GLN:OE1	2.13	0.48
51:R8:56:GLU:O	51:R8:58:ILE:N	2.47	0.48
1:XA:119:A:H4'	1:XA:120:A:C8	2.49	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.96	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
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	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
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
22:YA:666:G:H4'	32:YP:49:ARG:HH12	1.77	0.48
22:YA:869:G:H2'	22:YA:870:A:H8	1.77	0.48
22:YA:1799:G:H4'	22:YA:1800:C:O5'	2.13	0.48
22:YA:2105:C:H2'	22:YA:2106:G:C8	2.48	0.48
22:YA:2415:G:H4'	32:YP:67:MET:N	2.28	0.48
22:YA:2498:C:O2'	22:YA:2499:C:H5'	2.14	0.48
24:YD:35:LYS:HD2	24:YD:104:TYR:CE1	2.48	0.48
25:YE:174:ASP:O	25:YE:182:LEU:HD12	2.14	0.48
28:YH:23:ARG:HD2	28:YH:34:GLU:OE2	2.12	0.48
28:YH:82:GLY:O	28:YH:83:TYR:O	2.31	0.48
30:YN:42:TRP:HA	30:YN:48:MET:CE	2.42	0.48
32:YP:6:LEU:N	32:YP:6:LEU:CD2	2.75	0.48
34:YR:52:ILE:CG2	34:YR:94:TYR:CD1	2.96	0.48
41:YY:35:TYR:CD1	41:YY:69:ALA:HB3	2.48	0.48
42:YZ:53:ILE:HG22	42:YZ:71:VAL:HG13	1.96	0.48
48:Y5:52:TYR:O	48:Y5:53:ALA:CB	2.61	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.43	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.96	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
22:RA:50:U:H3'	22:RA:51:G:H5'	1.96	0.48
22:RA:76:C:O2'	45:R2:62:THR:HG21	2.13	0.48
22:RA:336:C:H4'	41:RY:6:HIS:CE1	2.48	0.48
22:RA:570:G:H2'	22:RA:2030:A:C6	2.49	0.48
22:RA:2875:C:H4'	36:RT:5:ALA:HB2	1.95	0.48
24:RD:65:ILE:HD13	24:RD:65:ILE:C	2.32	0.48
24:RD:198:ASN:C	24:RD:198:ASN:HD22	2.17	0.48
26:RF:107:LYS:O	26:RF:110:LEU:N	2.47	0.48
27:RG:136:ARG:O	27:RG:154:GLY:CA	2.62	0.48
28:RH:7:LEU:N	28:RH:8:PRO:CD	2.77	0.48
32:RP:138:LEU:HD11	32:RP:144:GLU:CG	2.42	0.48
41:RY:44:ILE:O	41:RY:62:GLU:O	2.32	0.48
41:RY:57:GLN:O	41:RY:58:GLY:O	2.32	0.48
42:RZ:30:ASN:N	42:RZ:30:ASN:OD1	2.47	0.48
42:RZ:48:PHE:HE2	42:RZ:71:VAL:HG11	1.78	0.48
44:R1:56:GLN:NE2	44:R1:56:GLN:H	2.10	0.48
49:R6:27:LYS:O	49:R6:28:ARG:HG2	2.13	0.48
1:XA:827:U:H5	1:XA:870:U:C2	2.32	0.48
1:XA:946:A:H2'	1:XA:947:G:C8	2.49	0.48
1:XA:1054:C:N4	55:XY:34:C:C6	2.71	0.48
1:XA:1483:A:H2	22:YA:1959:G:N3	2.11	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
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.14	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
9:XI:18:PHE:O	9:XI:61:ALA: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
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.45	0.48
22:YA:49:A:H4'	22:YA:50:U:H5''	1.96	0.48
22:YA:270(U):C:H2'	22:YA:270(V):G:C8	2.47	0.48
22:YA:821:A:C2	22:YA:946:G:H1'	2.48	0.48
22:YA:855:G:C6	22:YA:856:C:N4	2.81	0.48
22:YA:1203:G:H5'	32:YP:3:LEU:HD12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1535:U:OP2	22:YA:1537:C:N4	2.47	0.48
22:YA:1543:A:O2'	22:YA:1544:C:P	2.71	0.48
22:YA:1783:A:H5'	22:YA:2608:G:H4'	1.95	0.48
22:YA:1789:A:OP1	24:YD:221:VAL:HA	2.14	0.48
22:YA:2266:A:H4'	22:YA:2267:A:N3	2.28	0.48
22:YA:2394:C:OP1	32:YP:63:PRO:HD2	2.13	0.48
22:YA:2467:C:C2'	22:YA:2468:G:H5'	2.44	0.48
23:YB:71:C:C2	23:YB:72:G:C8	3.01	0.48
25:YE:77:ILE:CD1	25:YE:78:LEU:N	2.70	0.48
26:YF:198:ALA:O	26:YF:201:VAL:HG12	2.13	0.48
27:YG:125:PHE:HB3	27:YG:166:ASP:HB2	1.95	0.48
28:YH:7:LEU:N	28:YH:8:PRO:CD	2.77	0.48
33:YQ:19:GLY:O	33:YQ:98:LYS:HD3	2.14	0.48
36:YT:96:ARG:NH1	36:YT:96:ARG:CB	2.77	0.48
47:Y4:42:PHE:O	47:Y4:44:THR:O	2.31	0.48
1:QA:105:G:C6	1:QA:106:C:C4	3.01	0.48
1:QA:177:C:H2'	1:QA:178:C:C6	2.49	0.48
1:QA:602:A:H2'	1:QA:603:U:C6	2.49	0.48
1:QA:818:G:H3'	1:QA:819:A:H5''	1.94	0.48
1:QA:1176:A:H2'	1:QA:1177:G:H5'	1.95	0.48
1:QA:1228:C:OP1	13:QM:114:ARG:HA	2.14	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
4:QD:165:MET:HE3	4:QD:168:ARG:HD2	1.96	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.78	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
22:RA:376:C:H2'	22:RA:377:C:C6	2.48	0.48
22:RA:1041:C:H2'	22:RA:1042:G:C8	2.49	0.48
22:RA:1270:C:H5''	22:RA:1271:G:H5'	1.95	0.48
22:RA:1366:A:H2'	22:RA:1367:A:O4'	2.13	0.48
22:RA:2052:G:C6	22:RA:2053:G:N7	2.82	0.48
22:RA:2227:A:H5''	24:RD:263:ARG:NH1	2.28	0.48
22:RA:2403:C:N3	22:RA:2415:G:C2	2.81	0.48
22:RA:2450:A:C2	22:RA:2451:A:C4	3.02	0.48
24:RD:48:ARG:HG3	24:RD:48:ARG:HH11	1.78	0.48
25:RE:77:ILE:CD1	25:RE:78:LEU:N	2.70	0.48
28:RH:104:GLU:HG3	28:RH:114:VAL:HG22	1.96	0.48
32:RP:14:LYS:O	32:RP:15:ARG:C	2.51	0.48
32:RP:144:GLU:OE1	32:RP:144:GLU:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:19:GLY:O	33:RQ:98:LYS:HD3	2.14	0.48
33:RQ:34:LEU:HD23	33:RQ:104:PHE:HD1	1.77	0.48
34:RR:61:HIS:O	34:RR:65:LEU:HD13	2.14	0.48
1:XA:431:A:H2'	1:XA:432:A:O4'	2.14	0.48
1:XA:1048:G:OP1	14:YN:3:ARG:HB3	2.14	0.48
1:XA:1443:G:N2	22:YA:2864:G:OP1	2.44	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	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: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
13:XM:68:GLY:HA2	27:YG:116:ASP:CG	2.33	0.48
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
22:YA:869:G:H2'	22:YA:870:A:C8	2.49	0.48
22:YA:898:C:H2'	22:YA:899:A:H5'	1.95	0.48
22:YA:1259:G:H2'	22:YA:1260:G:H8	1.77	0.48
22:YA:1870:C:H2'	22:YA:1871:A:O4'	2.14	0.48
22:YA:2715:C:H2'	22:YA:2716:U:H6	1.79	0.48
22:YA:2786:U:O2'	25:YE:62:PRO:O	2.32	0.48
22:YA:2863:C:H2'	22:YA:2864:G:H8	1.77	0.48
24:YD:25:THR:O	24:YD:26:LYS:C	2.52	0.48
25:YE:93:VAL:C	25:YE:95:ILE:H	2.17	0.48
28:YH:120:GLY:HA3	28:YH:140:LYS:NZ	2.27	0.48
28:YH:124:GLU:HB3	28:YH:132:ARG:CD	2.44	0.48
30:YN:95:PRO:O	30:YN:96:GLU:C	2.51	0.48
32:YP:35:HIS:O	32:YP:36:LYS:O	2.31	0.48
32:YP:101:VAL:C	32:YP:103:ALA:H	2.17	0.48
33:YQ:31:ASP:O	33:YQ:32:TYR:CG	2.66	0.48
40:YX:44:GLU:OE1	40:YX:50:LYS:HD2	2.13	0.48
41:YY:11:ASP:HB2	41:YY:27:VAL:HG11	1.94	0.48
45:Y2:33:MET:O	45:Y2:37:PHE:HD1	1.95	0.48
47:Y4:36:CYS:O	47:Y4:37:SER:C	2.52	0.48
50:Y7:12:ARG:HG3	50:Y7:12:ARG:HH11	1.78	0.48
1:QA:583:A:H2'	1:QA:584:G:O4'	2.12	0.48
1:QA:713:G:H21	1:QA:777:A:H1'	1.79	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.79	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	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:21:VAL:HG23	16:QP:34:GLU:H	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
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.43	0.48
22:RA:593:G:C2	22:RA:594:U:C2	3.02	0.48
22:RA:1093:G:OP1	28:RH:170:ARG:HD2	2.13	0.48
22:RA:2090:G:C2	22:RA:2230:G:C5	3.01	0.48
22:RA:2183:C:H2'	22:RA:2184:G:H8	1.79	0.48
22:RA:2277:G:P	33:RQ:85:LYS:HB2	2.53	0.48
22:RA:2555:U:N3	56:Z6:74:C:C5	2.80	0.48
24:RD:130:ALA:HA	24:RD:192:THR:HA	1.95	0.48
25:RE:93:VAL:C	25:RE:95:ILE:H	2.17	0.48
26:RF:155:LEU:HA	26:RF:174:VAL:HG12	1.95	0.48
30:RN:34:LEU:O	30:RN:49:GLY:HA3	2.13	0.48
30:RN:75:TYR:C	30:RN:76:SER:O	2.52	0.48
36:RT:57:PHE:O	36:RT:59:THR:N	2.46	0.48
36:RT:135:ALA:C	36:RT:137:LYS:H	2.16	0.48
37:RU:79:PHE:HE2	37:RU:83:LEU:CD2	2.26	0.48
48:R5:49:CYS:SG	48:R5:58:LEU:HB2	2.53	0.48
1:XA:8:A:N6	4:XD:205:GLU:O	2.46	0.48
1:XA:411:A:C5	1:XA:413:G:H1'	2.49	0.48
1:XA:1330:U:H5''	1:XA:1331:G:OP2	2.14	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:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.48
4:XD:114:ARG:HH11	4:XD:114:ARG:CG	2.17	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	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
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.13	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:3:ARG:HG3	47:Y4:34:GLU:OE1	2.13	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
22:YA:27:G:N2	22:YA:512:G:H2'	2.28	0.48
22:YA:270(R):G:H1'	44:Y1:78:LYS:HZ1	1.79	0.48
22:YA:442:G:O4'	26:YF:46:ARG:HD3	2.14	0.48
22:YA:757:U:H2'	22:YA:758:C:H6	1.79	0.48
22:YA:1138:G:H21	30:YN:106:MET:HE3	1.77	0.48
22:YA:1385:G:H1'	22:YA:1386:C:C6	2.49	0.48
22:YA:1427:A:H4'	22:YA:1428:C:O5'	2.13	0.48
22:YA:1818:U:H2'	24:YD:157:ARG:HG3	1.96	0.48
22:YA:1889:A:N1	22:YA:2234:G:H1'	2.29	0.48
22:YA:2356:C:H2'	22:YA:2357:U:O4'	2.12	0.48
24:YD:35:LYS:CG	24:YD:64:ILE:CG2	2.92	0.48
25:YE:23:VAL:HG12	25:YE:173:VAL:HG21	1.94	0.48
25:YE:64:LYS:C	25:YE:66:HIS:N	2.67	0.48
26:YF:45:ARG:NH1	26:YF:45:ARG:HG2	2.28	0.48
30:YN:34:LEU:O	30:YN:49:GLY:HA3	2.13	0.48
34:YR:42:LYS:HA	34:YR:45:ARG:HD2	1.95	0.48
34:YR:107:ASP:C	34:YR:107:ASP:OD2	2.52	0.48
35:YS:66:ALA:HA	35:YS:69:VAL:HG12	1.96	0.48
36:YT:16:ARG:NE	36:YT:19:LEU:HD21	2.27	0.48
42:YZ:97:GLU:HB3	42:YZ:125:LEU:HD11	1.95	0.48
47:Y4:8:LYS:O	47:Y4:9:LEU:CB	2.62	0.48
49:Y6:8:LYS:O	49:Y6:27:LYS:HA	2.13	0.48
49:Y6:41:PRO:HD2	49:Y6:46:HIS:H	1.78	0.48
1:QA:881:G:OP1	12:QL:12:ARG:NH2	2.47	0.48
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.77	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.48
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.48
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.48
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.48
22:RA:345:A:H2'	22:RA:347:A:H62	1.79	0.48
22:RA:389:G:H1	32:RP:71:VAL:HG12	1.79	0.48
22:RA:1508:A:O2'	22:RA:1509:C:O4'	2.25	0.48
22:RA:2123:G:H2'	22:RA:2124:G:C8	2.48	0.48
22:RA:2518:A:H4'	22:RA:2519:U:OP1	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:25:THR:O	24:RD:26:LYS:C	2.52	0.48
24:RD:130:ALA:C	24:RD:131:LEU:HD12	2.33	0.48
25:RE:61:ARG:CB	25:RE:62:PRO:CD	2.90	0.48
26:RF:51:THR:O	26:RF:93:LYS:NZ	2.38	0.48
27:RG:3:LEU:HD21	47:R4:25:TYR:CE1	2.48	0.48
29:RI:95:LYS:HA	29:RI:111:PRO:HG3	1.96	0.48
30:RN:18:ALA:O	30:RN:19:GLU:C	2.53	0.48
30:RN:57:ALA:O	30:RN:58:ASP:CB	2.61	0.48
30:RN:82:LEU:HD12	30:RN:83:LYS:N	2.27	0.48
33:RQ:42:ILE:HD12	33:RQ:42:ILE:N	2.29	0.48
35:RS:56:LEU:C	35:RS:56:LEU:HD23	2.34	0.48
37:RU:107:ALA:O	37:RU:110:VAL:HB	2.14	0.48
41:RY:11:ASP:HB2	41:RY:27:VAL:HG11	1.94	0.48
47:R4:60:GLN:O	47:R4:63:TYR:HB3	2.14	0.48
1:XA:45:U:H2'	1:XA:46:G:C8	2.49	0.48
1:XA:261:U:H2'	1:XA:263:A:OP2	2.14	0.48
1:XA:406:G:H2'	1:XA:407:G:H8	1.78	0.48
1:XA:981:U:H5'	14:XN:21:TYR:CZ	2.49	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	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
14:XN:15:LYS:HD2	14:XN:16:PHE:CE2	2.49	0.48
22:YA:141:A:H8	22:YA:1408:C:H1'	1.78	0.48
22:YA:152:G:H2'	22:YA:153:C:C6	2.48	0.48
22:YA:218:A:C2	22:YA:235:U:H4'	2.49	0.48
22:YA:1798:U:C5'	24:YD:259:THR:HG22	2.43	0.48
22:YA:1827:C:H2'	22:YA:1828:G:O4'	2.14	0.48
22:YA:1916:A:H2'	22:YA:1917:U:O4'	2.14	0.48
22:YA:1930:G:O2'	22:YA:1931:U:O5'	2.31	0.48
22:YA:2052:G:OP1	25:YE:141:ILE:HG12	2.14	0.48
22:YA:2722:G:H4'	34:YR:4:LEU:HB2	1.95	0.48
25:YE:55:ASN:O	25:YE:57:LYS:N	2.44	0.48
25:YE:119:ARG:HD3	25:YE:160:TYR:HD2	1.78	0.48
26:YF:34:TRP:HD1	32:YP:6:LEU:HB3	1.79	0.48
26:YF:129:PHE:CD2	26:YF:163:VAL:HG21	2.48	0.48
28:YH:127:GLU:HB3	28:YH:128:PRO:HD2	1.92	0.48
34:YR:44:LEU:HD22	34:YR:48:VAL:CG2	2.43	0.48
35:YS:56:LEU:C	35:YS:56:LEU:HD23	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:94:ALA:O	36:YT:95:ARG:CB	2.61	0.48
38:YV:21:ARG:HD2	38:YV:91:TYR:CZ	2.49	0.48
40:YX:6:ASP:OD1	45:Y2:29:LYS:NZ	2.47	0.48
42:YZ:69:THR:HB	42:YZ:88:PHE:HB3	1.96	0.48
42:YZ:124:ILE:HG23	42:YZ:165:VAL:CG2	2.44	0.48
44:Y1:8:SER:OG	44:Y1:10:LYS:HG3	2.14	0.48
44:Y1:76:ARG:HD2	44:Y1:76:ARG:N	2.29	0.48
45:Y2:69:ARG:HH11	45:Y2:69:ARG:HB3	1.79	0.48
47:Y4:10:VAL:CG2	47:Y4:11:PRO:HD2	2.43	0.48
53:XV:19:G:H4'	53:XV:20:U:OP2	2.14	0.48
1:QA:464:G:O6	1:QA:466:C:H5'	2.13	0.48
1:QA:574:A:HO2'	1:QA:882:C:HO2'	1.55	0.48
1:QA:1446:A:N3	36:RT:118:ARG:HD2	2.29	0.48
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.48
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.48
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
7:QG:51:GLN:HA	7:QG:51:GLN:OE1	2.14	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.48
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.48
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.48
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.43	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
22:RA:309:G:HO2'	22:RA:329:G:C2'	2.27	0.48
22:RA:744:G:H2'	22:RA:745:G:O4'	2.13	0.48
22:RA:2558:C:H2'	22:RA:2559:C:O4'	2.14	0.48
26:RF:34:TRP:HD1	32:RP:6:LEU:HB3	1.79	0.48
27:RG:12:TYR:O	27:RG:16:ARG:HB3	2.14	0.48
27:RG:106:LEU:HA	27:RG:110:ALA:HB3	1.95	0.48
28:RH:131:VAL:HG12	28:RH:132:ARG:N	2.29	0.48
30:RN:56:ASN:ND2	30:RN:125:GLY:C	2.66	0.48
30:RN:97:ARG:HA	30:RN:100:GLU:HB3	1.96	0.48
32:RP:47:ASP:OD1	32:RP:50:ARG:NH2	2.47	0.48
32:RP:75:ILE:H	32:RP:75:ILE:CD1	2.14	0.48
33:RQ:21:THR:HB	33:RQ:22:LYS:H	1.42	0.48
33:RQ:119:ARG:O	33:RQ:123:HIS:HD2	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RR:63:ARG:NH1	34:RR:63:ARG:HG3	2.29	0.48
34:RR:107:ASP:C	34:RR:107:ASP:OD2	2.52	0.48
48:R5:57:VAL:O	48:R5:57:VAL:HG13	2.13	0.48
51:R8:43:GLN:C	51:R8:44:LYS:HD2	2.34	0.48
1:XA:571:U:O2	1:XA:918:A:H5'	2.14	0.48
1:XA:1059:C:OP1	3:XC:199:LYS:NZ	2.38	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
2:XB:195:ASP:O	8:XH:74:PRO:HG3	2.13	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	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
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	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
12:XL:47:LYS:HB2	12:XL:48:PRO:HD3	1.96	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
22:YA:83:G:N1	22:YA:102:G:H1'	2.29	0.48
22:YA:235:U:H2'	22:YA:236:C:C6	2.49	0.48
22:YA:1403:C:H5''	22:YA:1471:A:H1'	1.96	0.48
22:YA:1408:C:C2	22:YA:1595:G:N2	2.82	0.48
22:YA:2789:C:H1'	22:YA:2892:A:C2	2.39	0.48
24:YD:27:THR:O	24:YD:29:PRO:CD	2.62	0.48
24:YD:130:ALA:HA	24:YD:192:THR:HA	1.95	0.48
28:YH:10:PRO:C	28:YH:11:VAL:HG22	2.34	0.48
28:YH:45:VAL:O	28:YH:45:VAL:HG13	2.14	0.48
30:YN:120:LEU:HD11	30:YN:122:VAL:CG2	2.42	0.48
30:YN:137:LYS:CG	30:YN:138:LEU:H	2.27	0.48
31:YO:107:ARG:NH1	36:YT:36:GLU:OE1	2.46	0.48
33:YQ:42:ILE:HD12	33:YQ:42:ILE:N	2.29	0.48
34:YR:63:ARG:NH1	34:YR:63:ARG:HG3	2.29	0.48
34:YR:70:LEU:C	34:YR:72:ASP:H	2.16	0.48
37:YU:79:PHE:HE2	37:YU:83:LEU:CD2	2.27	0.48
40:YX:11:PRO:HB3	40:YX:92:LEU:CD2	2.43	0.48
41:YY:81:LYS:HZ2	41:YY:98:VAL:CG1	2.27	0.48
51:Y8:53:PRO:CD	51:Y8:54:GLU:N	2.77	0.48
1:QA:977:A:O2'	1:QA:981:U:N3	2.39	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
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.47
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	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
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.47
22:RA:270(S):G:C1'	44:R1:78:LYS:HD2	2.44	0.47
22:RA:335:C:H4'	41:RY:73:ARG:CZ	2.43	0.47
22:RA:1429:G:H2'	22:RA:1430:C:C6	2.49	0.47
22:RA:2010:G:H5''	39:RW:42:ARG:HB2	1.96	0.47
22:RA:2420:C:H6	22:RA:2420:C:O5'	1.96	0.47
22:RA:2472:G:H22	22:RA:2477:C:H5''	1.79	0.47
22:RA:2883:A:H3'	22:RA:2884:U:H5'	1.95	0.47
23:RB:54:G:H21	27:RG:29:TRP:HZ2	1.56	0.47
24:RD:145:VAL:O	24:RD:153:ALA:HA	2.14	0.47
25:RE:120:TRP:O	25:RE:121:ASN:HB2	2.14	0.47
26:RF:53:THR:C	26:RF:55:GLY:N	2.68	0.47
29:RI:4:ILE:HG23	29:RI:18:VAL:HG22	1.96	0.47
30:RN:113:GLY:O	30:RN:116:LEU:HB2	2.14	0.47
31:RO:8:LEU:HB2	31:RO:19:ILE:CD1	2.43	0.47
32:RP:6:LEU:O	32:RP:7:ARG:O	2.31	0.47
34:RR:10:LEU:O	34:RR:12:ARG:HG3	2.14	0.47
37:RU:92:ARG:CZ	37:RU:94:ASN:HD22	2.28	0.47
38:RV:35:LEU:O	38:RV:37:VAL:N	2.47	0.47
41:RY:56:PRO:O	41:RY:58:GLY:N	2.47	0.47
42:RZ:141:VAL:HG23	42:RZ:144:LEU:HD23	1.95	0.47
51:R8:53:PRO:CD	51:R8:54:GLU:N	2.77	0.47
1:XA:383:A:C5	1:XA:384:G:H1'	2.48	0.47
1:XA:510:A:OP2	4:XD:49:ARG:NH2	2.48	0.47
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.14	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.47
14:XN:6:LEU:HD22	14:XN:23:ARG:NH2	2.29	0.47
14:XN:26:ARG:NH1	14:XN:43:CYS:SG	2.86	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
18:XR:30:ASP:C	18:XR:32:ARG:H	2.15	0.47
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:36:ARG:HB3	19:XS:36:ARG:NH1	2.29	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
22:YA:120:U:C5	22:YA:149:A:N6	2.82	0.47
22:YA:559:G:H22	37:YU:49:HIS:CE1	2.32	0.47
22:YA:570:G:H2'	22:YA:2030:A:C6	2.48	0.47
22:YA:729:G:C4	22:YA:1775:U:O2	2.67	0.47
22:YA:1019:U:H3	22:YA:1142(A):A:N6	2.08	0.47
22:YA:2639:A:H1'	22:YA:2778:A:C2	2.49	0.47
25:YE:15:PHE:CD1	25:YE:20:ALA:HB2	2.49	0.47
25:YE:61:ARG:CB	25:YE:62:PRO:HD3	2.41	0.47
28:YH:41:MET:HG3	28:YH:54:ARG:HA	1.96	0.47
30:YN:18:ALA:O	30:YN:19:GLU:C	2.53	0.47
30:YN:57:ALA:O	30:YN:58:ASP:CB	2.61	0.47
30:YN:75:TYR:C	30:YN:76:SER:O	2.52	0.47
31:YO:8:LEU:HB2	31:YO:19:ILE:CD1	2.43	0.47
32:YP:61:ARG:HH21	51:Y8:13:ARG:HD2	1.77	0.47
33:YQ:60:ARG:NH2	33:YQ:60:ARG:HB2	2.28	0.47
37:YU:79:PHE:HE2	37:YU:83:LEU:HD22	1.78	0.47
38:YV:38:LEU:HD23	38:YV:39:LEU:H	1.79	0.47
39:YW:30:GLU:O	39:YW:34:ASN:ND2	2.46	0.47
41:YY:57:GLN:O	41:YY:58:GLY:O	2.32	0.47
42:YZ:4:ARG:HH12	42:YZ:58:VAL:HG11	1.79	0.47
44:Y1:94:LEU:O	44:Y1:95:LEU:CB	2.62	0.47
49:Y6:20:ASN:ND2	49:Y6:42:TRP:CZ2	2.82	0.47
1:QA:985:C:H2'	1:QA:986:A:C8	2.49	0.47
1:QA:1054:C:C5	55:QY:34:C:O4'	2.67	0.47
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.42	0.47
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.36	0.47
1:QA:1405:G:N3	1:QA:1518:A:O2'	2.44	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	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
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.47
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
22:RA:265:A:O2'	22:RA:266:G:H4'	2.15	0.47
22:RA:510:C:H2'	22:RA:511:U:O4'	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1543:A:HO2'	22:RA:1544:C:P	2.37	0.47
22:RA:1869:G:H5'	22:RA:1870:C:OP2	2.14	0.47
22:RA:2789:C:H1'	22:RA:2892:A:H2	1.79	0.47
24:RD:35:LYS:CG	24:RD:64:ILE:CG2	2.92	0.47
25:RE:64:LYS:C	25:RE:66:HIS:N	2.68	0.47
25:RE:174:ASP:O	25:RE:182:LEU:HD12	2.14	0.47
28:RH:154:PRO:CG	28:RH:162:ILE:O	2.61	0.47
30:RN:4:TYR:OH	30:RN:7:LYS:NZ	2.46	0.47
30:RN:67:LEU:O	30:RN:88:GLU:HG3	2.14	0.47
30:RN:68:GLU:HG2	30:RN:88:GLU:CD	2.33	0.47
30:RN:137:LYS:CG	30:RN:138:LEU:N	2.77	0.47
32:RP:19:VAL:CG2	32:RP:20:GLY:H	1.98	0.47
34:RR:41:ALA:C	34:RR:43:GLU:N	2.68	0.47
35:RS:55:ALA:O	35:RS:56:LEU:HB3	2.13	0.47
38:RV:4:ILE:HA	38:RV:12:TYR:O	2.14	0.47
38:RV:21:ARG:HD2	38:RV:91:TYR:CZ	2.49	0.47
38:RV:48:GLY:O	38:RV:49:THR:C	2.52	0.47
38:RV:66:ARG:NH1	38:RV:88:ARG:NH1	2.61	0.47
39:RW:32:ALA:O	39:RW:33:ARG:C	2.52	0.47
44:R1:8:SER:OG	44:R1:10:LYS:HG3	2.13	0.47
47:R4:50:VAL:O	47:R4:50:VAL:CG1	2.63	0.47
1:XA:34:C:H2'	1:XA:35:G:C8	2.49	0.47
1:XA:107:G:C2	1:XA:108:G:H1'	2.50	0.47
1:XA:191:G:O2'	20:XT:101:GLY:O	2.32	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.47
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.44	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.47
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.47
19:XS:68:GLY:N	47:Y4:59:PHE:CE1	2.82	0.47
22:YA:663:G:C6	22:YA:664:C:C4	3.02	0.47
22:YA:1259:G:H2'	22:YA:1260:G:C8	2.50	0.47
22:YA:1550:C:H2'	22:YA:1551:C:H6	1.79	0.47
22:YA:1858:G:O2'	22:YA:1884:A:N6	2.47	0.47
22:YA:2150:U:H2'	22:YA:2151:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2306:C:C2	22:YA:2307:G:N2	2.82	0.47
22:YA:2667:C:H2'	22:YA:2668:G:O4'	2.14	0.47
26:YF:132:VAL:O	26:YF:133:ASN:C	2.51	0.47
26:YF:196:LEU:C	26:YF:197:ASP:O	2.50	0.47
27:YG:83:ARG:HB2	27:YG:86:MET:HE3	1.97	0.47
27:YG:97:ASP:N	27:YG:100:TRP:HD1	2.05	0.47
27:YG:111:LEU:HD22	27:YG:120:LEU:HD21	1.96	0.47
29:YI:78:THR:HG22	29:YI:141:LYS:HD2	1.96	0.47
34:YR:1:MET:SD	34:YR:1:MET:N	2.75	0.47
34:YR:117:VAL:O	34:YR:118:GLU:CB	2.62	0.47
35:YS:46:VAL:HG12	35:YS:47:THR:N	2.28	0.47
44:Y1:25:LYS:C	44:Y1:27:GLU:H	2.17	0.47
47:Y4:60:GLN:O	47:Y4:63:TYR:HB3	2.14	0.47
50:Y7:25:PRO:HA	50:Y7:28:ARG:CZ	2.45	0.47
51:Y8:41:ILE:HG13	51:Y8:42:ARG:N	2.28	0.47
51:Y8:56:GLU:O	51:Y8:58:ILE:N	2.47	0.47
1:QA:458:C:H2'	1:QA:464:G:H8	1.80	0.47
1:QA:505:G:H2'	1:QA:506:G:C8	2.49	0.47
1:QA:1314:C:H5	19:QS:4:SER:HB2	1.78	0.47
1:QA:1478:C:H2'	1:QA:1479:C:C6	2.50	0.47
1:QA:1493:A:OP1	58:QA:1666:PAR:H611	2.13	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	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
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
12:QL:7:ILE:HG23	17:QQ:32:TYR:HB3	1.96	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
19:QS:68:GLY:HA2	47:R4:68:ARG:HG2	1.90	0.47
22:RA:108:U:H2'	22:RA:109:G:C8	2.50	0.47
22:RA:572:A:H2'	22:RA:573:G:O4'	2.15	0.47
22:RA:1022:G:C6	22:RA:1140:C:C4	3.03	0.47
22:RA:1201:C:N4	22:RA:1244:G:H1	2.12	0.47
22:RA:1729:A:H2'	22:RA:1730:U:H5''	1.96	0.47
22:RA:2151:G:H2'	22:RA:2152:G:C8	2.49	0.47
22:RA:2289:G:N2	22:RA:2344:U:C2	2.82	0.47
22:RA:2481:G:HO2'	22:RA:2482:G:P	2.37	0.47
22:RA:2725:A:O2'	22:RA:2726:U:H5''	2.15	0.47
30:RN:118:LYS:O	30:RN:120:LEU:N	2.43	0.47
33:RQ:57:HIS:ND1	33:RQ:58:PHE:N	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:91:ASP:O	37:RU:92:ARG:C	2.53	0.47
38:RV:2:PHE:CD2	38:RV:13:ARG:NH2	2.82	0.47
39:RW:66:GLU:O	39:RW:69:LEU:HG	2.15	0.47
41:RY:81:LYS:NZ	41:RY:98:VAL:HB	2.30	0.47
44:R1:94:LEU:O	44:R1:95:LEU:CB	2.62	0.47
47:R4:36:CYS:O	47:R4:37:SER:C	2.52	0.47
1:XA:299:G:H2'	1:XA:300:A:C8	2.49	0.47
1:XA:542:G:H2'	1:XA:543:C:H6	1.79	0.47
1:XA:688:G:H2'	1:XA:689:C:C6	2.46	0.47
1:XA:1064:G:H21	1:XA:1190:G:H2'	1.79	0.47
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.45	0.47
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.14	0.47
1:XA:1239:A:H62	1:XA:1299:A:H62	1.60	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:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.10	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
22:YA:516:C:H2'	22:YA:517:C:H6	1.80	0.47
22:YA:534:U:H5'	37:YU:42:ALA:HB1	1.96	0.47
22:YA:740:U:H2'	22:YA:741:G:C8	2.49	0.47
22:YA:2031:A:N3	22:YA:2455:G:O2'	2.44	0.47
22:YA:2215:G:H2'	22:YA:2216:G:H8	1.80	0.47
22:YA:2515:C:O2	22:YA:2570:G:C2	2.67	0.47
22:YA:2711:A:OP1	22:YA:2712(A):A:P	2.72	0.47
23:YB:16:G:H1	23:YB:68:C:H42	1.62	0.47
23:YB:27:C:H5'	23:YB:28:C:OP2	2.14	0.47
29:YI:68:LEU:HA	29:YI:71:ILE:HG22	1.96	0.47
30:YN:9:VAL:HG21	30:YN:48:MET:CB	2.44	0.47
32:YP:47:ASP:OD1	32:YP:50:ARG:NH2	2.47	0.47
32:YP:112:LEU:HD12	32:YP:127:ALA:CB	2.44	0.47
33:YQ:63:LYS:HD2	42:YZ:175:VAL:HG21	1.97	0.47
34:YR:41:ALA:C	34:YR:43:GLU:N	2.68	0.47
35:YS:40:ILE:HG22	35:YS:41:ASP:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:36:GLU:O	36:YT:37:GLY:C	2.53	0.47
36:YT:132:LYS:O	36:YT:136:GLN:HG3	2.13	0.47
38:YV:2:PHE:CD2	38:YV:13:ARG:NH2	2.82	0.47
38:YV:35:LEU:O	38:YV:37:VAL:N	2.47	0.47
39:YW:32:ALA:O	39:YW:33:ARG:C	2.52	0.47
43:Y0:18:ALA:O	43:Y0:20:ARG:NH1	2.47	0.47
44:Y1:7:ILE:HD12	44:Y1:62:VAL:HG11	1.96	0.47
45:Y2:17:SER:CB	45:Y2:18:PRO:CA	2.92	0.47
52:Y9:27:CYS:SG	52:Y9:28:GLU:N	2.87	0.47
53:QV:19:G:H4'	53:QV:20:U:OP2	2.14	0.47
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.14	0.47
1:QA:1316:G:OP1	14:QN:17:LYS:NZ	2.28	0.47
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.95	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.29	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.33	0.47
14:QN:43:CYS:O	14:QN:46:GLU:N	2.44	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
22:RA:70:G:H21	22:RA:71:A:N6	2.13	0.47
22:RA:330:A:HO2'	22:RA:331:A:H8	1.60	0.47
22:RA:1079:C:H2'	22:RA:1080:C:O4'	2.14	0.47
22:RA:1332:G:N2	22:RA:1609:A:HO2'	2.12	0.47
23:RB:15:A:H5'	23:RB:16:G:H8	1.78	0.47
25:RE:3:GLY:HA3	25:RE:81:ILE:HG21	1.96	0.47
25:RE:129:HIS:O	25:RE:130:GLY:C	2.53	0.47
25:RE:195:LEU:HD12	25:RE:196:VAL:N	2.29	0.47
27:RG:5:VAL:HG22	47:R4:25:TYR:CE2	2.50	0.47
27:RG:106:LEU:HA	27:RG:110:ALA:CB	2.44	0.47
28:RH:45:VAL:O	28:RH:45:VAL:HG13	2.14	0.47
28:RH:67:LEU:O	28:RH:71:LEU:HB2	2.14	0.47
28:RH:82:GLY:O	28:RH:83:TYR:O	2.32	0.47
28:RH:124:GLU:HB3	28:RH:132:ARG:CD	2.44	0.47
29:RI:98:ALA:HB2	29:RI:111:PRO:HB3	1.97	0.47
36:RT:96:ARG:NH1	36:RT:96:ARG:CB	2.77	0.47
38:RV:16:PRO:HA	38:RV:96:ILE:O	2.14	0.47
41:RY:75:ILE:HG12	41:RY:76:CYS:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:81:LYS:HZ2	41:RY:98:VAL:CG1	2.26	0.47
41:RY:97:ARG:HG2	41:RY:97:ARG:NH1	2.28	0.47
43:R0:51:VAL:HG21	43:R0:79:VAL:O	2.15	0.47
44:R1:29:GLY:C	44:R1:30:VAL:CG2	2.82	0.47
47:R4:55:ARG:C	47:R4:59:PHE:HB3	2.35	0.47
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.50	0.47
1:XA:1339:A:H2'	1:XA:1340:A:O4'	2.13	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.12	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.47
20:XT:26:ASN:N	20:XT:26:ASN:ND2	2.62	0.47
22:YA:264:C:C2'	22:YA:265:A:H5''	2.44	0.47
22:YA:747:U:C4	22:YA:2613:U:C4	3.03	0.47
22:YA:957:A:H5'	33:YQ:76:LYS:HD2	1.96	0.47
22:YA:1374:G:H2'	22:YA:1375:C:O4'	2.14	0.47
22:YA:1614:A:H2'	22:YA:1615:C:H5'	1.96	0.47
22:YA:1907:G:C6	22:YA:1908:C:C4	3.03	0.47
22:YA:2309:A:H2'	22:YA:2310:A:O4'	2.14	0.47
22:YA:2324:C:H5''	22:YA:2325:G:H5'	1.96	0.47
22:YA:2555:U:N3	56:Z8:74:C:C6	2.75	0.47
22:YA:2815:C:H5'	48:Y5:29:THR:HG21	1.97	0.47
24:YD:33:LEU:HB3	24:YD:34:VAL:H	1.49	0.47
24:YD:134:ARG:HB2	24:YD:135:PHE:CD2	2.49	0.47
26:YF:155:LEU:HA	26:YF:174:VAL:HG12	1.95	0.47
27:YG:12:TYR:O	27:YG:16:ARG:HB3	2.15	0.47
28:YH:123:PHE:O	28:YH:125:VAL:HG23	2.13	0.47
28:YH:127:GLU:OE2	28:YH:130:ARG:NH2	2.48	0.47
30:YN:12:ARG:NH1	30:YN:50:ASP:CG	2.67	0.47
34:YR:10:LEU:O	34:YR:12:ARG:HG3	2.14	0.47
34:YR:56:LYS:HE2	34:YR:94:TYR:OH	2.14	0.47
43:Y0:7:LEU:O	53:XV:2:G:C4'	2.41	0.47
43:Y0:38:VAL:O	43:Y0:58:THR:HG23	2.14	0.47
43:Y0:70:GLN:NE2	43:Y0:72:ARG:HD3	2.30	0.47
48:Y5:48:GLU:HA	48:Y5:59:GLU:CG	2.43	0.47
55:QY:40:G:O2'	55:QY:41:A:H5'	2.13	0.47
1:QA:15:G:H2'	1:QA:16:A:C8	2.49	0.47
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.48	0.47
1:QA:1300:G:N1	1:QA:1335:C:O4'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.14	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.13	0.47
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
22:RA:278:A:H61	22:RA:362:U:H3	1.61	0.47
22:RA:425:G:H2'	22:RA:426:C:H6	1.78	0.47
22:RA:1341:U:OP1	22:RA:1397:U:N3	2.22	0.47
22:RA:1930:G:HO2'	22:RA:1931:U:P	2.37	0.47
22:RA:2210:G:H2'	22:RA:2210:G:N3	2.30	0.47
22:RA:2228:G:C5	22:RA:2229:C:C4	3.03	0.47
24:RD:72:LYS:CG	24:RD:103:ARG:NH2	2.77	0.47
24:RD:134:ARG:HB2	24:RD:135:PHE:CD2	2.50	0.47
25:RE:56:PRO:O	25:RE:57:LYS:CB	2.61	0.47
27:RG:13:GLU:O	27:RG:13:GLU:HG3	2.14	0.47
30:RN:131:GLN:HE21	30:RN:132:ALA:H	1.58	0.47
32:RP:126:VAL:HA	32:RP:145:PRO:HD2	1.95	0.47
33:RQ:66:ILE:H	33:RQ:104:PHE:HA	1.80	0.47
40:RX:6:ASP:OD1	45:R2:29:LYS:NZ	2.47	0.47
41:RY:39:VAL:O	41:RY:40:GLU:OE2	2.32	0.47
42:RZ:141:VAL:HA	42:RZ:144:LEU:HD23	1.96	0.47
44:R1:7:ILE:HD12	44:R1:62:VAL:HG11	1.96	0.47
1:XA:262:A:H2'	1:XA:263:A:C8	2.49	0.47
1:XA:294:U:O4	1:XA:295:C:N4	2.46	0.47
1:XA:399:G:H2'	1:XA:400:C:C6	2.49	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.97	0.47
13:XM:121:LYS:NZ	55:XY:40:G:O5'	2.45	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
22:YA:627:A:H4'	22:YA:628:G:H5'	1.96	0.47
22:YA:860:U:H5	22:YA:917:A:C2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1666:G:H2'	22:YA:1667:G:H1'	1.97	0.47
24:YD:35:LYS:HD3	24:YD:63:ARG:HB3	1.96	0.47
25:YE:65:GLY:HA2	25:YE:70:ALA:HB3	1.95	0.47
26:YF:53:THR:C	26:YF:55:GLY:N	2.68	0.47
27:YG:5:VAL:HG22	47:Y4:25:TYR:CE2	2.50	0.47
28:YH:131:VAL:HG12	28:YH:132:ARG:N	2.29	0.47
28:YH:154:PRO:CG	28:YH:162:ILE:O	2.61	0.47
30:YN:57:ALA:HA	30:YN:60:ILE:CD1	2.43	0.47
30:YN:67:LEU:O	30:YN:88:GLU:HG3	2.14	0.47
30:YN:137:LYS:CG	30:YN:138:LEU:N	2.77	0.47
32:YP:147:LEU:N	32:YP:147:LEU:HD22	2.29	0.47
37:YU:92:ARG:CZ	37:YU:94:ASN:HD22	2.27	0.47
38:YV:59:ALA:HB2	38:YV:96:ILE:HD13	1.97	0.47
41:YY:44:ILE:CG1	41:YY:45:VAL:N	2.70	0.47
47:Y4:50:VAL:CG1	47:Y4:50:VAL:O	2.62	0.47
1:QA:41:G:H2'	1:QA:42:G:C8	2.50	0.47
1:QA:339:C:H2'	1:QA:340:U:C6	2.50	0.47
1:QA:347:G:O2'	1:QA:348:G:H5''	2.14	0.47
1:QA:502:G:H2'	1:QA:503:C:O4'	2.15	0.47
1:QA:921:U:O2'	5:QE:19:MET:N	2.46	0.47
1:QA:960:U:O2	1:QA:960:U:H2'	2.13	0.47
1:QA:1128:C:N4	1:QA:1144:G:H1	2.12	0.47
1:QA:1277:C:H1'	1:QA:1282:C:O2	2.15	0.47
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.50	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.23	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	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
22:RA:466:A:N1	22:RA:795:C:O2'	2.42	0.47
22:RA:784:A:O2'	22:RA:785:G:H5''	2.15	0.47
22:RA:960:A:C8	22:RA:962:G:C8	3.03	0.47
22:RA:1993:U:H5'	25:RE:128:SER:HB3	1.97	0.47
22:RA:2126:A:H4'	22:RA:2127:G:O5'	2.14	0.47
22:RA:2582:G:N2	22:RA:2583:G:H1'	2.29	0.47
26:RF:184:TYR:CD2	26:RF:188:ARG:HD2	2.50	0.47
27:RG:56:ALA:HB2	27:RG:153:ARG:NE	2.28	0.47
32:RP:147:LEU:N	32:RP:147:LEU:HD22	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:40:ILE:HG22	35:RS:41:ASP:N	2.29	0.47
38:RV:38:LEU:HD23	38:RV:39:LEU:H	1.79	0.47
41:RY:95:LYS:HB2	41:RY:95:LYS:HZ1	1.78	0.47
47:R4:3:GLU:HG3	47:R4:4:GLY:H	1.79	0.47
49:R6:8:LYS:O	49:R6:27:LYS:HG2	2.15	0.47
49:R6:20:ASN:ND2	49:R6:42:TRP:CZ2	2.82	0.47
51:R8:44:LYS:HD2	51:R8:44:LYS:N	2.30	0.47
1:XA:75:C:H2'	1:XA:76:G:O4'	2.14	0.47
1:XA:316:G:OP2	1:XA:351:G:O2'	2.30	0.47
1:XA:374:A:C6	1:XA:375:U:C4	3.02	0.47
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.14	0.47
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.79	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
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
22:YA:1019:U:HO2'	22:YA:1021:A:H2	1.62	0.47
22:YA:1655:A:O3'	25:YE:115:GLY:HA3	2.15	0.47
22:YA:2227:A:H5''	24:YD:263:ARG:NH1	2.29	0.47
22:YA:2619:C:H1'	25:YE:156:MET:HE1	1.96	0.47
24:YD:32:SER:O	24:YD:33:LEU:CB	2.60	0.47
25:YE:56:PRO:O	25:YE:57:LYS:CB	2.61	0.47
27:YG:14:GLU:O	27:YG:17:PRO:HG2	2.15	0.47
27:YG:16:ARG:NH2	27:YG:28:VAL:O	2.48	0.47
27:YG:106:LEU:HA	27:YG:110:ALA:CB	2.44	0.47
33:YQ:59:ARG:CD	33:YQ:59:ARG:N	2.73	0.47
35:YS:56:LEU:O	35:YS:57:LYS:C	2.53	0.47
37:YU:106:PHE:O	37:YU:109:LEU:HB2	2.15	0.47
38:YV:36:PRO:HA	38:YV:56:SER:CB	2.45	0.47
47:Y4:38:LYS:C	47:Y4:40:HIS:H	2.07	0.47
47:Y4:50:VAL:O	47:Y4:50:VAL:HG13	2.15	0.47
54:QX:4:C:O2'	54:QX:5:C:C5'	2.60	0.47
1:QA:167:G:O2'	1:QA:168:G:H5'	2.15	0.47
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.97	0.47
1:QA:853:G:H2'	1:QA:854:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:980:C:H5'	1:QA:981:U:OP2	2.14	0.47
1:QA:1441:G:H4'	1:QA:1442:G:C4	2.49	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.14	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
14:QN:36:PHE:C	14:QN:36:PHE:CD1	2.88	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.77	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
22:RA:391:G:C5	22:RA:392:C:C4	3.02	0.47
22:RA:864:G:C6	22:RA:865:C:N4	2.82	0.47
22:RA:903:C:H2'	22:RA:904:C:C6	2.49	0.47
22:RA:952:G:C6	22:RA:966:G:C6	3.03	0.47
22:RA:1021:A:H8	22:RA:1022:G:H5''	1.78	0.47
22:RA:1084:A:N1	22:RA:1085:A:N6	2.63	0.47
22:RA:1356:G:C6	22:RA:1357:U:C4	3.03	0.47
22:RA:1607:C:H5''	22:RA:1608:A:H5'	1.96	0.47
22:RA:1797:C:O2'	24:RD:259:THR:HB	2.14	0.47
22:RA:2413:G:H21	32:RP:70:GLN:HE22	1.60	0.47
22:RA:2477:C:H2'	52:R9:1:MET:HG3	1.97	0.47
23:RB:57:A:H4'	27:RG:30:GLU:HG2	1.96	0.47
25:RE:197:ILE:CD1	25:RE:199:ARG:HH12	2.26	0.47
26:RF:162:LEU:HD23	26:RF:165:ARG:HH21	1.80	0.47
27:RG:44:GLY:HA2	27:RG:88:ILE:HG12	1.96	0.47
29:RI:88:ILE:HG12	29:RI:122:GLU:N	2.29	0.47
30:RN:57:ALA:CA	30:RN:60:ILE:HD11	2.44	0.47
31:RO:37:ASP:O	31:RO:62:VAL:HG23	2.15	0.47
31:RO:120:GLU:OE1	36:RT:67:SER:OG	2.25	0.47
32:RP:12:ALA:C	32:RP:14:LYS:H	2.17	0.47
33:RQ:34:LEU:HD11	33:RQ:129:THR:CB	2.35	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RR:117:VAL:O	34:RR:118:GLU:CB	2.62	0.47
35:RS:25:ARG:HH12	35:RS:42:ASP:CG	2.16	0.47
35:RS:83:LYS:HG2	35:RS:109:GLY:H	1.76	0.47
35:RS:108:GLY:O	35:RS:110:LEU:N	2.48	0.47
38:RV:2:PHE:CD1	38:RV:2:PHE:C	2.88	0.47
40:RX:26:TYR:HB3	40:RX:92:LEU:HD12	1.97	0.47
41:RY:19:LYS:HE3	41:RY:20:TYR:CE1	2.49	0.47
41:RY:94:LYS:HE3	41:RY:101:LYS:HZ3	1.77	0.47
42:RZ:26:GLY:C	42:RZ:37:VAL:HG22	2.35	0.47
42:RZ:108:PRO:HA	42:RZ:142:SER:HA	1.96	0.47
47:R4:8:LYS:O	47:R4:9:LEU:CB	2.62	0.47
52:R9:1:MET:SD	52:R9:31:LYS:O	2.73	0.47
1:XA:62:U:H2'	1:XA:63:C:C6	2.50	0.47
1:XA:243:A:H4'	1:XA:244:U:H3'	1.97	0.47
1:XA:481:G:O2'	1:XA:482:A:O5'	2.33	0.47
1:XA:731:G:H2'	1:XA:732:C:H6	1.80	0.47
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.78	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	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:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
4:XD:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	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
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	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
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:152:G:H2'	22:YA:153:C:H6	1.80	0.47
22:YA:324:A:C2	22:YA:325:G:H1'	2.50	0.47
22:YA:443:A:OP2	22:YA:615:G:N2	2.42	0.47
22:YA:863:A:O2'	22:YA:864:G:H5'	2.15	0.47
22:YA:993:G:OP1	37:YU:50:ARG:NH1	2.47	0.47
22:YA:1007:C:O3'	30:YN:108:PRO:HB3	2.14	0.47
22:YA:1042:G:H1	22:YA:1113:U:H3	1.63	0.47
22:YA:1113:U:H2'	22:YA:1114:G:C8	2.50	0.47
22:YA:1357:U:H2'	22:YA:1358:G:O4'	2.15	0.47
22:YA:1885:A:H3'	22:YA:1886:C:H6	1.80	0.47
22:YA:2151:G:H2'	22:YA:2152:G:C8	2.49	0.47
22:YA:2283:C:P	49:Y6:5:VAL:HG13	2.55	0.47
22:YA:2326:C:H5''	22:YA:2327:A:OP2	2.15	0.47
22:YA:2478:A:H2'	22:YA:2479:G:O4'	2.14	0.47
22:YA:2743:C:OP2	22:YA:2755:C:N4	2.48	0.47
22:YA:2881:C:H2'	22:YA:2882:A:C8	2.50	0.47
23:YB:81:G:C6	23:YB:82:G:C5	3.03	0.47
24:YD:72:LYS:CG	24:YD:103:ARG:NH2	2.76	0.47
25:YE:52:LEU:HB2	25:YE:75:VAL:CG2	2.40	0.47
25:YE:78:LEU:CD2	25:YE:79:ARG:HD2	2.43	0.47
25:YE:89:ASP:O	25:YE:90:THR:O	2.33	0.47
26:YF:127:GLU:OE1	26:YF:127:GLU:HA	2.07	0.47
26:YF:162:LEU:HD23	26:YF:165:ARG:HH21	1.79	0.47
27:YG:36:LYS:HA	27:YG:95:ARG:HG2	1.95	0.47
27:YG:88:ILE:O	27:YG:88:ILE:CD1	2.54	0.47
31:YO:104:ARG:HD3	36:YT:36:GLU:OE2	2.15	0.47
32:YP:81:GLN:HB3	32:YP:110:TYR:HB3	1.97	0.47
32:YP:126:VAL:HA	32:YP:145:PRO:HD2	1.95	0.47
36:YT:29:ARG:NH1	36:YT:46:GLU:OE1	2.48	0.47
36:YT:51:ARG:CG	36:YT:98:LYS:HG3	2.44	0.47
37:YU:91:ASP:O	37:YU:92:ARG:C	2.52	0.47
37:YU:104:GLN:H	37:YU:104:GLN:CD	2.16	0.47
37:YU:107:ALA:O	37:YU:110:VAL:HB	2.14	0.47
38:YV:4:ILE:HA	38:YV:12:TYR:O	2.14	0.47
38:YV:48:GLY:O	38:YV:49:THR:C	2.52	0.47
39:YW:66:GLU:O	39:YW:69:LEU:HG	2.14	0.47
40:YX:35:THR:O	40:YX:37:THR:N	2.47	0.47
40:YX:43:VAL:HG11	40:YX:51:VAL:HG21	1.97	0.47
41:YY:19:LYS:HE3	41:YY:20:TYR:CE1	2.49	0.47
41:YY:39:VAL:O	41:YY:40:GLU:OE2	2.32	0.47
41:YY:44:ILE:O	41:YY:62:GLU:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YY:81:LYS:NZ	41:YY:98:VAL:HB	2.29	0.47
42:YZ:169:GLU:HG2	42:YZ:170:THR:N	2.30	0.47
43:Y0:12:ASN:HA	43:Y0:14:ARG:HH21	1.80	0.47
44:Y1:29:GLY:C	44:Y1:30:VAL:CG2	2.82	0.47
44:Y1:81:LYS:HE2	44:Y1:81:LYS:H	1.62	0.47
47:Y4:33:VAL:CG1	47:Y4:34:GLU:H	2.22	0.47
1:QA:246:A:N6	1:QA:281:G:H1'	2.30	0.47
1:QA:321:A:H2'	1:QA:322:C:C6	2.49	0.47
1:QA:536:C:H2'	1:QA:537:G:H8	1.79	0.47
1:QA:690:G:H22	11:QK:55:LYS:HZ2	1.62	0.47
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.60	0.47
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.14	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
22:RA:49:A:N7	22:RA:120:U:C5	2.83	0.47
22:RA:74:A:H4'	22:RA:75:G:O4'	2.15	0.47
22:RA:171:G:H2'	22:RA:172:C:C6	2.49	0.47
22:RA:249:C:H4'	22:RA:250:G:O5'	2.15	0.47
22:RA:1378:A:HO2'	22:RA:1379:A:P	2.38	0.47
22:RA:1771:C:H2'	22:RA:1772:G:C8	2.50	0.47
25:RE:17:ASP:N	25:RE:17:ASP:OD2	2.46	0.47
25:RE:63:LEU:O	25:RE:64:LYS:CB	2.62	0.47
30:RN:137:LYS:CG	30:RN:138:LEU:H	2.27	0.47
32:RP:37:GLY:O	32:RP:41:ARG:HD3	2.15	0.47
32:RP:98:GLU:HG2	32:RP:99:LEU:N	2.30	0.47
34:RR:74:LYS:O	34:RR:76:VAL:N	2.44	0.47
1:XA:102:G:O2'	1:XA:151:A:N3	2.35	0.47
1:XA:376:G:OP2	16:XP:67:THR:HG21	2.14	0.47
1:XA:556:C:H2'	1:XA:557:G:H8	1.80	0.47
1:XA:814:A:N7	1:XA:816:A:C4	2.83	0.47
1:XA:837:G:H1	1:XA:849:C:H42	1.62	0.47
1:XA:958:A:C6	1:XA:959:A:C6	3.03	0.47
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.50	0.47
1:XA:1251:A:N1	1:XA:1354:C:O2'	2.40	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
13:XM:50:GLU:HB3	47:Y4:32:TYR:OH	2.15	0.47
14:YN:8:GLU:C	14:YN:10:ALA:N	2.68	0.47
14:YN:41:ARG:NE	14:YN:42:ILE:HG13	2.29	0.47
22:YA:227:A:OP1	32:YP:76:LYS:HE3	2.15	0.47
22:YA:272:G:H2'	22:YA:273:G:H8	1.80	0.47
22:YA:807:U:H2'	22:YA:808:G:H8	1.80	0.47
22:YA:1547:C:O2'	22:YA:1548:C:H5'	2.15	0.47
22:YA:1705:G:C6	22:YA:1706:U:C4	3.03	0.47
22:YA:2020:A:O2'	22:YA:2021:C:H2'	2.14	0.47
24:YD:231:HIS:ND1	24:YD:232:PRO:HD2	2.30	0.47
25:YE:22:PRO:O	25:YE:22:PRO:CG	2.63	0.47
28:YH:67:LEU:O	28:YH:71:LEU:HB2	2.15	0.47
28:YH:104:GLU:HG3	28:YH:114:VAL:HG22	1.96	0.47
30:YN:57:ALA:CA	30:YN:60:ILE:HD11	2.44	0.47
30:YN:73:THR:HA	30:YN:83:LYS:O	2.15	0.47
32:YP:115:LEU:CD1	32:YP:116:GLY:N	2.78	0.47
37:YU:66:ASN:CB	37:YU:76:TYR:HB2	2.44	0.47
41:YY:56:PRO:O	41:YY:57:GLN:C	2.53	0.47
41:YY:56:PRO:O	41:YY:58:GLY:N	2.47	0.47
44:Y1:83:GLU:OE1	44:Y1:85:LEU:HB2	2.15	0.47
48:Y5:57:VAL:O	48:Y5:57:VAL:HG13	2.14	0.47
51:Y8:43:GLN:C	51:Y8:44:LYS:HD2	2.35	0.47
1:QA:746:A:H2'	1:QA:747:C:C6	2.49	0.47
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.15	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.47
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	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
22:RA:70:G:H4'	22:RA:71:A:OP1	2.15	0.47
22:RA:191:A:H2'	22:RA:192:C:C6	2.50	0.47
22:RA:482:A:H4'	41:RY:47:LYS:HD2	1.95	0.47
22:RA:1019:U:C2	22:RA:1144:G:N2	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1681:G:HO2'	22:RA:1762:A:HO2'	1.58	0.47
22:RA:1833:U:O2	22:RA:1973:G:C2	2.67	0.47
22:RA:1937:A:N7	22:RA:1939:U:H2'	2.30	0.47
22:RA:2331:G:O2'	43:R0:43:THR:HG22	2.15	0.47
22:RA:2528:U:H2'	22:RA:2530:A:O5'	2.14	0.47
24:RD:35:LYS:HD3	24:RD:63:ARG:HB3	1.96	0.47
24:RD:102:LYS:O	24:RD:103:ARG:HG3	2.15	0.47
24:RD:165:ILE:C	24:RD:166:GLN:HE21	2.18	0.47
24:RD:205:VAL:O	24:RD:206:LEU:C	2.52	0.47
26:RF:65:TRP:CH2	26:RF:72:ARG:HB3	2.50	0.47
27:RG:16:ARG:NH2	27:RG:28:VAL:O	2.48	0.47
28:RH:18:GLU:HA	28:RH:18:GLU:OE2	2.14	0.47
31:RO:53:LYS:CD	31:RO:56:ASP:OD1	2.63	0.47
35:RS:61:ASN:O	35:RS:65:VAL:HG23	2.15	0.47
38:RV:36:PRO:HA	38:RV:56:SER:CB	2.45	0.47
41:RY:61:ILE:HG22	41:RY:62:GLU:N	2.28	0.47
42:RZ:60:GLU:HA	42:RZ:66:SER:HA	1.97	0.47
42:RZ:150:LEU:HD23	42:RZ:171:ILE:HG13	1.97	0.47
47:R4:53:GLU:O	47:R4:57:GLU:HG3	2.14	0.47
48:R5:20:ARG:C	48:R5:22:HIS:N	2.68	0.47
52:R9:19:ARG:NH2	52:R9:26:ILE:HD11	2.29	0.47
1:XA:319:G:H2'	1:XA:320:C:O4'	2.15	0.47
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.48	0.47
1:XA:966:G:O2'	9:XI:127:LYS:O	2.32	0.47
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.50	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.47
5:XE:13:ILE:HG22	5:XE:13:ILE:O	2.14	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.28	0.47
22:YA:30:G:H2'	22:YA:31:C:O4'	2.15	0.47
22:YA:34:C:N4	22:YA:447:A:H61	2.13	0.47
22:YA:147:U:H2'	22:YA:148:C:C6	2.50	0.47
22:YA:2103:C:H2'	22:YA:2104:G:C8	2.50	0.47
22:YA:2343:C:O2'	22:YA:2373:G:O2'	2.28	0.47
22:YA:2688:U:H1'	22:YA:2721:A:H61	1.80	0.47
24:YD:145:VAL:O	24:YD:153:ALA:HA	2.14	0.47
24:YD:205:VAL:O	24:YD:206:LEU:C	2.52	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:61:ARG:O	25:YE:63:LEU:CG	2.57	0.47
25:YE:120:TRP:O	25:YE:121:ASN:HB2	2.15	0.47
27:YG:52:ILE:HG22	27:YG:52:ILE:O	2.15	0.47
27:YG:106:LEU:HA	27:YG:110:ALA:HB3	1.95	0.47
29:YI:62:LYS:HE3	29:YI:134:PRO:HG2	1.97	0.47
33:YQ:80:GLU:HG3	33:YQ:81:VAL:N	2.27	0.47
37:YU:27:LEU:O	37:YU:30:LYS:N	2.41	0.47
40:YX:53:LYS:HZ2	40:YX:55:ASN:HD21	1.62	0.47
49:Y6:8:LYS:O	49:Y6:27:LYS:HG2	2.15	0.47
49:Y6:20:ASN:O	49:Y6:21:TYR:HB2	2.15	0.47
1:QA:262:A:C6	1:QA:263:A:C6	3.03	0.47
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.26	0.47
1:QA:457:C:H2'	1:QA:458:C:H6	1.80	0.47
1:QA:1397:C:H1'	54:QX:8:A:C5	2.50	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.47
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.47
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.47
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
22:RA:142:G:H2'	22:RA:143:C:C6	2.50	0.47
22:RA:323:G:H2'	26:RF:169:ASN:OD1	2.14	0.47
22:RA:654(S):G:H2'	22:RA:654(T):C:C6	2.50	0.47
22:RA:1278:A:OP1	34:RR:36:THR:HG22	2.14	0.47
23:RB:28:C:OP2	35:RS:33:LYS:HE3	2.15	0.47
23:RB:42:C:C6	27:RG:69:ALA:HB2	2.49	0.47
25:RE:65:GLY:HA2	25:RE:70:ALA:HB3	1.95	0.47
29:RI:9:LEU:O	29:RI:10:GLU:HG3	2.15	0.47
30:RN:134:ARG:N	30:RN:135:PRO:CD	2.58	0.47
35:RS:66:ALA:HA	35:RS:69:VAL:HG12	1.96	0.47
37:RU:8:VAL:O	37:RU:9:VAL:C	2.53	0.47
41:RY:68:HIS:O	41:RY:71:LYS:HB2	2.14	0.47
45:R2:17:SER:CB	45:R2:18:PRO:CA	2.92	0.47
50:R7:2:LYS:HG2	50:R7:3:ARG:N	2.30	0.47
50:R7:25:PRO:HA	50:R7:28:ARG:CZ	2.45	0.47
1:XA:113:G:O2'	1:XA:354:G:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:234:C:H2'	1:XA:235:C:C6	2.49	0.47
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.49	0.47
1:XA:828:A:H2'	1:XA:829:G:O4'	2.15	0.47
1:XA:1160:G:H2'	1:XA:1161:C:H5'	1.97	0.47
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	1.97	0.47
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.37	0.47
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.63	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.47
22:YA:195:A:H4'	22:YA:251:A:O2'	2.14	0.47
22:YA:397:G:H2'	22:YA:398:G:H8	1.79	0.47
22:YA:455:C:N3	22:YA:473:G:H5'	2.29	0.47
22:YA:1222:C:H2'	22:YA:1223:C:H6	1.80	0.47
22:YA:2635:C:H5''	25:YE:78:LEU:HA	1.97	0.47
24:YD:136:ILE:HD12	24:YD:136:ILE:N	2.30	0.47
25:YE:20:ALA:C	25:YE:21:VAL:HG13	2.35	0.47
25:YE:101:ARG:HD2	25:YE:171:GLU:HA	1.97	0.47
25:YE:188:VAL:O	25:YE:188:VAL:HG13	2.15	0.47
26:YF:46:ARG:CG	26:YF:46:ARG:NH1	2.71	0.47
27:YG:135:LEU:HD11	27:YG:157:ILE:HD12	1.97	0.47
28:YH:18:GLU:HA	28:YH:18:GLU:OE2	2.15	0.47
30:YN:35:ARG:HG3	30:YN:35:ARG:O	2.15	0.47
31:YO:37:ASP:O	31:YO:62:VAL:HG23	2.14	0.47
31:YO:53:LYS:CD	31:YO:56:ASP:OD1	2.63	0.47
33:YQ:34:LEU:HD11	33:YQ:129:THR:CB	2.35	0.47
35:YS:59:LYS:HG2	35:YS:60:GLY:N	2.13	0.47
36:YT:111:ARG:C	36:YT:113:LYS:N	2.64	0.47
38:YV:5:VAL:HG13	38:YV:14:VAL:HG21	1.97	0.47
47:Y4:15:ILE:HG22	47:Y4:20:ASN:CA	2.45	0.47
47:Y4:55:ARG:C	47:Y4:59:PHE:HB3	2.35	0.47
51:Y8:9:GLY:O	51:Y8:13:ARG:HG2	2.15	0.47
1:QA:37:U:O2'	1:QA:500:G:H4'	2.14	0.46
1:QA:108:G:H5''	1:QA:109:A:H5''	1.95	0.46
1:QA:156:G:H1	1:QA:165:C:H42	1.61	0.46
1:QA:355:C:C4	1:QA:356:A:N7	2.83	0.46
1:QA:926:G:N2	54:QX:1:A:P	2.85	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
15:QO:82:ILE:O	15:QO:86:GLY:N	2.49	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
22:RA:723:G:C6	22:RA:724:U:C4	3.03	0.46
22:RA:862:G:H2'	22:RA:863:A:O4'	2.15	0.46
22:RA:1179:C:H2'	22:RA:1180:C:O4'	2.15	0.46
22:RA:1694:C:H6	22:RA:1694:C:H5''	1.80	0.46
22:RA:2198:A:O2'	22:RA:2199:A:O5'	2.28	0.46
22:RA:2566:A:H4'	22:RA:2567:G:O5'	2.16	0.46
22:RA:2749:A:H4'	28:RH:62:LYS:HB3	1.95	0.46
23:RB:13:A:H2'	23:RB:70:C:O2'	2.15	0.46
24:RD:27:THR:O	24:RD:29:PRO:CD	2.62	0.46
24:RD:231:HIS:ND1	24:RD:232:PRO:HD2	2.30	0.46
28:RH:4:ILE:H	28:RH:4:ILE:CD1	2.25	0.46
31:RO:104:ARG:HD3	36:RT:36:GLU:OE2	2.15	0.46
32:RP:23:PRO:HG2	32:RP:23:PRO:O	2.15	0.46
34:RR:56:LYS:C	34:RR:58:GLY:H	2.18	0.46
34:RR:56:LYS:HE2	34:RR:94:TYR:OH	2.15	0.46
36:RT:57:PHE:O	36:RT:58:ASN:C	2.53	0.46
42:RZ:52:SER:O	42:RZ:54:HIS:N	2.48	0.46
42:RZ:102:LEU:HB3	42:RZ:104:PHE:CE1	2.50	0.46
44:R1:49:VAL:HG12	44:R1:51:VAL:CG2	2.45	0.46
49:R6:48:VAL:O	49:R6:49:HIS:HB2	2.15	0.46
1:XA:1198:G:H2'	1:XA:1199:U:O4'	2.15	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.15	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.46
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.46
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.46
22:YA:22:C:H2'	22:YA:23:G:O4'	2.15	0.46
22:YA:593:G:H2'	22:YA:594:U:C6	2.50	0.46
22:YA:1838:C:H4'	22:YA:1839:G:C8	2.49	0.46
22:YA:2035:G:H4'	22:YA:2036:C:OP2	2.14	0.46
24:YD:183:ARG:CG	24:YD:183:ARG:NH1	2.69	0.46
25:YE:103:ASP:OD2	25:YE:168:MET:HG2	2.15	0.46
27:YG:104:GLU:OE1	47:Y4:23:GLU:HB3	2.15	0.46
28:YH:9:ILE:O	28:YH:10:PRO:O	2.33	0.46
28:YH:89:ILE:HD13	28:YH:89:ILE:H	1.80	0.46
28:YH:94:TYR:N	28:YH:94:TYR:CD1	2.82	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:46:VAL:HG13	30:YN:47:ALA:N	2.31	0.46
33:YQ:87:LYS:O	33:YQ:89:ASN:N	2.43	0.46
34:YR:56:LYS:C	34:YR:58:GLY:H	2.18	0.46
34:YR:61:HIS:O	34:YR:65:LEU:HD13	2.14	0.46
38:YV:6:LYS:HD3	38:YV:11:GLN:HG2	1.96	0.46
39:YW:4:LYS:HA	39:YW:106:ILE:HA	1.98	0.46
41:YY:68:HIS:O	41:YY:71:LYS:HB2	2.14	0.46
45:Y2:4:SER:OG	45:Y2:5:GLU:OE2	2.26	0.46
48:Y5:45:VAL:HG12	48:Y5:45:VAL:O	2.13	0.46
1:QA:684:A:H2'	1:QA:685:G:C8	2.50	0.46
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.96	0.46
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.46
22:RA:241:A:OP1	22:RA:241:A:H8	1.99	0.46
22:RA:242:G:H1'	22:RA:243:U:OP2	2.14	0.46
22:RA:754:C:H2'	22:RA:755:C:C6	2.50	0.46
22:RA:2046:G:H5'	48:R5:19:ARG:HB2	1.97	0.46
22:RA:2637:U:H5''	25:RE:82:ARG:HH21	1.80	0.46
23:RB:40:U:H1'	23:RB:45:A:N6	2.29	0.46
24:RD:18:VAL:CG1	24:RD:19:ALA:N	2.78	0.46
25:RE:87:GLU:O	25:RE:89:ASP:N	2.48	0.46
28:RH:41:MET:HG3	28:RH:54:ARG:HA	1.96	0.46
30:RN:9:VAL:HG21	30:RN:48:MET:CB	2.45	0.46
34:RR:78:LYS:O	34:RR:78:LYS:HG2	2.15	0.46
38:RV:30:GLY:O	38:RV:31:ALA:O	2.34	0.46
40:RX:12:VAL:O	40:RX:12:VAL:HG13	2.15	0.46
42:RZ:104:PHE:CD1	42:RZ:139:VAL:HB	2.50	0.46
44:R1:79:GLY:N	44:R1:80:LEU:HD23	2.30	0.46
1:XA:338:A:C6	1:XA:339:C:C4	3.04	0.46
1:XA:518:C:H2'	1:XA:530:G:C4	2.50	0.46
1:XA:875:C:C4	1:XA:876:G:N7	2.83	0.46
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.50	0.46
1:XA:1398:A:H5'	1:XA:1401:G:H4'	1.97	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.46
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
22:YA:278:A:O2'	22:YA:279:C:O4'	2.24	0.46
22:YA:581:C:H2'	22:YA:582:G:H8	1.80	0.46
22:YA:674:G:N2	22:YA:2445:G:OP1	2.48	0.46
22:YA:708:C:H42	22:YA:723:G:H1	1.62	0.46
22:YA:1311:G:N2	22:YA:1603:A:H62	2.13	0.46
22:YA:2562:U:H1'	31:YO:23:ARG:HH12	1.79	0.46
23:YB:9:G:H1	23:YB:111:U:H3	1.64	0.46
24:YD:165:ILE:C	24:YD:166:GLN:HE21	2.18	0.46
27:YG:13:GLU:O	27:YG:13:GLU:HG3	2.14	0.46
28:YH:86:GLU:O	28:YH:132:ARG:HA	2.16	0.46
31:YO:61:VAL:O	31:YO:84:ALA:HB1	2.16	0.46
32:YP:12:ALA:C	32:YP:14:LYS:H	2.16	0.46
32:YP:46:LYS:O	32:YP:48:PRO:N	2.48	0.46
36:YT:96:ARG:CB	36:YT:96:ARG:HH11	2.29	0.46
38:YV:2:PHE:CD1	38:YV:2:PHE:C	2.88	0.46
44:Y1:76:ARG:H	44:Y1:76:ARG:CD	2.29	0.46
51:Y8:29:LYS:HE3	51:Y8:41:ILE:O	2.15	0.46
1:QA:164:U:H2'	1:QA:165:C:C6	2.50	0.46
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.30	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	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
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.48	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
20:QT:26:ASN:N	20:QT:26:ASN:ND2	2.62	0.46
22:RA:270(Y):G:H2'	22:RA:270(Z):U:C6	2.50	0.46
22:RA:271(B):G:N3	22:RA:271:G:H1'	2.31	0.46
22:RA:1006:C:H1'	30:RN:106:MET:HE2	1.97	0.46
22:RA:1027:A:N6	22:RA:1126:A:C4	2.84	0.46
22:RA:1414:G:O6	22:RA:1587:A:N6	2.48	0.46
22:RA:1469:A:H2'	22:RA:1470:G:O4'	2.16	0.46
22:RA:1480:G:C6	22:RA:1482:U:N3	2.83	0.46
22:RA:2074:U:H2'	22:RA:2075:U:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2335:A:HO2'	22:RA:2336:A:P	2.38	0.46
25:RE:47:VAL:O	25:RE:48:GLN:C	2.51	0.46
25:RE:188:VAL:O	25:RE:188:VAL:HG13	2.15	0.46
26:RF:31:HIS:O	26:RF:34:TRP:HB3	2.15	0.46
27:RG:95:ARG:O	27:RG:96:ARG:C	2.54	0.46
27:RG:98:ARG:CA	27:RG:101:ILE:HG12	2.40	0.46
28:RH:9:ILE:O	28:RH:10:PRO:O	2.33	0.46
28:RH:153:LYS:HG3	28:RH:162:ILE:H	1.79	0.46
30:RN:1:MET:HE3	37:RU:95:LEU:HD21	1.97	0.46
31:RO:112:MET:O	31:RO:115:VAL:CG2	2.64	0.46
35:RS:52:SER:O	35:RS:56:LEU:CD2	2.60	0.46
36:RT:29:ARG:NH1	36:RT:46:GLU:OE1	2.48	0.46
36:RT:36:GLU:O	36:RT:37:GLY:C	2.53	0.46
39:RW:4:LYS:HA	39:RW:106:ILE:HA	1.97	0.46
41:RY:35:TYR:CD1	41:RY:35:TYR:O	2.69	0.46
44:R1:83:GLU:OE1	44:R1:85:LEU:HB2	2.15	0.46
45:R2:15:LYS:H	45:R2:67:LYS:HZ3	1.63	0.46
51:R8:29:LYS:HE3	51:R8:41:ILE:O	2.15	0.46
1:XA:13:U:O2	1:XA:914:A:H3'	2.14	0.46
1:XA:110:C:H2'	1:XA:111:G:O4'	2.15	0.46
1:XA:186(C):G:C6	1:XA:191(E):G:C6	3.04	0.46
1:XA:587:G:N2	1:XA:754:C:OP2	2.49	0.46
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.50	0.46
1:XA:1366:C:H2'	1:XA:1367:C:C6	2.48	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
4:XD:110:PHE:HD1	4:XD:110:PHE:H	1.62	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
4:XD:146:ILE:N	4:XD:146:ILE:CD1	2.73	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	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
12:XL:46:LYS:CG	12:XL:47:LYS:N	2.77	0.46
14:XN:36:PHE:CD1	14:XN:36:PHE:C	2.88	0.46
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.46
22:YA:200:U:O2	22:YA:386:G:N2	2.48	0.46
22:YA:294:A:C5	22:YA:345:A:C6	3.03	0.46
22:YA:443:A:H3'	26:YF:45:ARG:HH12	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:607:U:N3	22:YA:621:A:H2	2.09	0.46
22:YA:1055:G:O2'	22:YA:1085:A:N1	2.33	0.46
22:YA:1689:A:H62	22:YA:1698:A:H2	1.64	0.46
22:YA:2197:U:O3'	22:YA:2198:A:H8	1.98	0.46
22:YA:2336:A:H61	43:Y0:43:THR:HG21	1.80	0.46
23:YB:63:G:C2	23:YB:64:C:C2	3.04	0.46
25:YE:3:GLY:HA3	25:YE:81:ILE:HG21	1.97	0.46
26:YF:108:LYS:HA	26:YF:108:LYS:HZ3	1.79	0.46
27:YG:20:ILE:HD13	27:YG:25:TYR:HB2	1.98	0.46
32:YP:37:GLY:O	32:YP:41:ARG:HD3	2.15	0.46
34:YR:1:MET:O	34:YR:2:ARG:HB2	2.15	0.46
35:YS:28:VAL:HG11	35:YS:98:VAL:HG12	1.97	0.46
35:YS:61:ASN:O	35:YS:65:VAL:HG23	2.15	0.46
37:YU:8:VAL:O	37:YU:9:VAL:C	2.53	0.46
40:YX:26:TYR:HB3	40:YX:92:LEU:HD12	1.97	0.46
51:Y8:40:GLU:C	51:Y8:42:ARG:N	2.68	0.46
52:Y9:19:ARG:NH2	52:Y9:26:ILE:HD11	2.31	0.46
1:QA:426:G:OP1	4:QD:38:TYR:OH	2.22	0.46
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.80	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	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
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.30	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.18	0.46
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
22:RA:27:G:N2	22:RA:512:G:HO2'	2.12	0.46
22:RA:573:G:O2'	22:RA:574:C:H3'	2.15	0.46
22:RA:868:U:H2'	22:RA:869:G:O4'	2.14	0.46
22:RA:1354:A:H5'	24:RD:38:LYS:NZ	2.30	0.46
22:RA:2366:A:H2'	22:RA:2367:G:O4'	2.16	0.46
22:RA:2776:A:OP1	22:RA:2776:A:H3'	2.15	0.46
23:RB:38:C:N3	23:RB:44:G:N2	2.53	0.46
23:RB:97:G:H2'	23:RB:98:G:O4'	2.15	0.46
24:RD:183:ARG:CG	24:RD:183:ARG:NH1	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:54:GLN:CA	25:RE:54:GLN:HE21	2.27	0.46
25:RE:103:ASP:OD2	25:RE:168:MET:HG2	2.15	0.46
26:RF:132:VAL:O	26:RF:133:ASN:C	2.52	0.46
29:RI:94:ALA:O	29:RI:97:ILE:N	2.48	0.46
32:RP:81:GLN:HB3	32:RP:110:TYR:HB3	1.97	0.46
33:RQ:133:ARG:CG	33:RQ:134:ARG:N	2.78	0.46
34:RR:29:LEU:N	34:RR:29:LEU:CD1	2.79	0.46
34:RR:85:PRO:C	34:RR:87:TYR:H	2.19	0.46
35:RS:26:LEU:HD22	35:RS:87:PHE:CD1	2.46	0.46
40:RX:8:ILE:CD1	40:RX:42:ALA:HB1	2.46	0.46
40:RX:24:GLY:O	40:RX:82:GLN:HA	2.16	0.46
41:RY:15:VAL:O	41:RY:21:LYS:HA	2.16	0.46
42:RZ:158:PRO:HG2	42:RZ:161:VAL:HG21	1.98	0.46
44:R1:76:ARG:HD2	44:R1:76:ARG:N	2.29	0.46
45:R2:7:ARG:HG3	45:R2:7:ARG:NH1	2.25	0.46
48:R5:43:HIS:N	48:R5:43:HIS:ND1	2.63	0.46
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.16	0.46
1:XA:1153:C:P	10:XJ:13:HIS:HE2	2.38	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
22:YA:593:G:O2'	51:Y8:61:LEU:HD13	2.15	0.46
22:YA:1324:G:C4	22:YA:1328:G:O6	2.68	0.46
22:YA:1955:U:O4	22:YA:2554:U:H5	1.98	0.46
22:YA:2011:U:OP2	39:YW:16:LYS:NZ	2.47	0.46
22:YA:2391:G:OP2	51:Y8:32:LEU:HD13	2.15	0.46
24:YD:117:VAL:CG2	24:YD:128:GLY:C	2.84	0.46
24:YD:198:ASN:C	24:YD:198:ASN:ND2	2.69	0.46
26:YF:184:TYR:CD2	26:YF:188:ARG:HD2	2.50	0.46
27:YG:102:PHE:HA	27:YG:105:LYS:HE3	1.98	0.46
28:YH:86:GLU:O	28:YH:87:LEU:CB	2.64	0.46
30:YN:30:ILE:O	30:YN:34:LEU:CD2	2.63	0.46
30:YN:96:GLU:O	30:YN:99:LEU:N	2.34	0.46
31:YO:7:TYR:CD1	31:YO:20:MET:HB2	2.50	0.46
31:YO:101:PRO:HA	31:YO:120:GLU:O	2.16	0.46
32:YP:85:LEU:HD23	32:YP:88:LEU:HD22	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:144:GLU:OE1	32:YP:144:GLU:N	2.48	0.46
33:YQ:66:ILE:H	33:YQ:104:PHE:HA	1.79	0.46
33:YQ:109:VAL:HG13	33:YQ:113:GLN:OE1	2.16	0.46
37:YU:73:GLY:O	37:YU:74:LEU:CB	2.63	0.46
39:YW:36:LEU:CD1	39:YW:47:VAL:HG12	2.44	0.46
40:YX:12:VAL:O	40:YX:12:VAL:HG13	2.15	0.46
1:QA:838:G:C6	1:QA:842:C:H1'	2.50	0.46
1:QA:1162:C:H2'	1:QA:1163:C:O4'	2.16	0.46
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.16	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.81	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.33	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
22:RA:900:A:H3'	22:RA:901:A:C8	2.43	0.46
22:RA:1978:A:H2'	22:RA:1979:C:O4'	2.16	0.46
22:RA:2404:C:H1'	32:RP:67:MET:HE2	1.94	0.46
22:RA:2872:G:C2	22:RA:2873:A:N6	2.83	0.46
23:RB:12:C:O2'	23:RB:13:A:OP2	2.31	0.46
25:RE:33:VAL:HG12	25:RE:90:THR:H	1.81	0.46
28:RH:86:GLU:O	28:RH:132:ARG:HA	2.15	0.46
28:RH:127:GLU:OE2	28:RH:130:ARG:NH2	2.48	0.46
33:RQ:66:ILE:O	33:RQ:104:PHE:N	2.49	0.46
34:RR:75:LEU:HA	34:RR:78:LYS:HB3	1.97	0.46
46:R3:18:ASP:O	46:R3:21:ALA:N	2.49	0.46
46:R3:56:VAL:CG1	46:R3:57:GLU:N	2.74	0.46
49:R6:18:ARG:O	49:R6:19:ARG:O	2.33	0.46
51:R8:52:LYS:O	51:R8:52:LYS:CG	2.64	0.46
1:XA:163:C:H2'	1:XA:164:U:C6	2.51	0.46
1:XA:1350:A:H2'	1:XA:1351:U:O4'	2.15	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.80	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.80	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46
22:YA:26:G:C6	22:YA:27:G:N1	2.83	0.46
22:YA:483:A:H5'	41:YY:49:VAL:HG22	1.98	0.46
22:YA:669:G:H2'	22:YA:669:G:N3	2.31	0.46
22:YA:780:G:N2	22:YA:783:A:H62	2.12	0.46
22:YA:1006:C:H1'	30:YN:106:MET:HE2	1.95	0.46
22:YA:1190:G:H5'	32:YP:32:THR:HA	1.97	0.46
22:YA:2507:C:H2'	22:YA:2508:G:H8	1.81	0.46
22:YA:2540:C:H2'	22:YA:2541:A:O4'	2.14	0.46
24:YD:18:VAL:CG1	24:YD:19:ALA:N	2.78	0.46
24:YD:35:LYS:HE3	24:YD:65:ILE:N	2.31	0.46
24:YD:102:LYS:O	24:YD:103:ARG:HG3	2.15	0.46
24:YD:105:ILE:HG23	24:YD:106:ILE:O	2.15	0.46
24:YD:206:LEU:HD23	24:YD:206:LEU:HA	1.49	0.46
24:YD:211:ARG:HG2	24:YD:211:ARG:HH11	1.80	0.46
27:YG:36:LYS:O	27:YG:37:VAL:HG23	2.15	0.46
27:YG:116:ASP:O	27:YG:117:PHE:CB	2.50	0.46
28:YH:4:ILE:HG13	28:YH:6:ARG:HD3	1.97	0.46
28:YH:53:GLU:OE1	28:YH:53:GLU:HA	2.16	0.46
28:YH:106:THR:HG22	28:YH:112:PRO:HB3	1.98	0.46
30:YN:97:ARG:HA	30:YN:100:GLU:HB3	1.97	0.46
31:YO:8:LEU:N	31:YO:8:LEU:CD2	2.76	0.46
31:YO:104:ARG:HG2	31:YO:121:VAL:HG12	1.97	0.46
32:YP:1:MET:O	32:YP:2:LYS:HG3	2.16	0.46
34:YR:79:LEU:HD23	34:YR:79:LEU:O	2.16	0.46
35:YS:24:LEU:HB2	35:YS:85:VAL:HG12	1.98	0.46
36:YT:118:ARG:NH2	36:YT:121:ILE:HD12	2.31	0.46
37:YU:98:LEU:HD23	37:YU:98:LEU:C	2.36	0.46
38:YV:16:PRO:HA	38:YV:96:ILE:O	2.14	0.46
38:YV:61:VAL:HA	38:YV:94:LEU:HD23	1.97	0.46
40:YX:65:ARG:N	40:YX:65:ARG:CD	2.79	0.46
41:YY:15:VAL:O	41:YY:21:LYS:HA	2.15	0.46
42:YZ:5:LEU:HD23	42:YZ:47:VAL:HG21	1.96	0.46
46:Y3:28:LEU:HA	46:Y3:33:GLN:OE1	2.16	0.46
48:Y5:54:GLY:O	48:Y5:55:ARG:C	2.54	0.46
54:QX:6:C:HO2'	54:QX:7:A:P	2.34	0.46
1:QA:266:G:O2'	1:QA:267:C:OP2	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.49	0.46
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.79	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
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
22:RA:194:G:H2'	22:RA:195:A:O4'	2.15	0.46
22:RA:524:U:H2'	22:RA:525:U:C6	2.50	0.46
22:RA:862:G:N2	22:RA:916:G:H1'	2.31	0.46
22:RA:971:C:H2'	22:RA:972:G:O4'	2.16	0.46
22:RA:2298:A:C2	22:RA:2299:G:H1'	2.51	0.46
22:RA:2528:U:O2'	22:RA:2530:A:OP1	2.23	0.46
22:RA:2617:C:H2'	22:RA:2618:G:O4'	2.15	0.46
24:RD:27:THR:CG2	24:RD:28:GLU:N	2.66	0.46
24:RD:69:ARG:C	24:RD:71:ASP:N	2.69	0.46
24:RD:136:ILE:HD12	24:RD:136:ILE:N	2.30	0.46
25:RE:20:ALA:C	25:RE:21:VAL:HG13	2.36	0.46
25:RE:89:ASP:O	25:RE:90:THR:O	2.33	0.46
28:RH:4:ILE:HG13	28:RH:6:ARG:HD3	1.97	0.46
29:RI:57:ARG:HA	29:RI:60:GLU:HB3	1.98	0.46
29:RI:60:GLU:O	29:RI:64:GLU:N	2.46	0.46
30:RN:46:VAL:HG13	30:RN:47:ALA:N	2.31	0.46
31:RO:101:PRO:HA	31:RO:120:GLU:O	2.16	0.46
33:RQ:109:VAL:HG13	33:RQ:113:GLN:OE1	2.16	0.46
36:RT:51:ARG:CG	36:RT:98:LYS:HG3	2.44	0.46
36:RT:58:ASN:HD22	36:RT:58:ASN:N	2.10	0.46
36:RT:96:ARG:CB	36:RT:96:ARG:HH11	2.29	0.46
38:RV:47:VAL:O	38:RV:48:GLY:O	2.34	0.46
47:R4:15:ILE:HG22	47:R4:20:ASN:CA	2.45	0.46
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.55	0.46
1:XA:811:C:H4'	1:XA:900:A:N6	2.31	0.46
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.46	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
22:YA:1783:A:C6	22:YA:2587:A:C2	3.04	0.46
22:YA:2295:C:OP1	35:YS:10:ARG:HD2	2.15	0.46
22:YA:2563:U:H2'	22:YA:2565:A:OP2	2.16	0.46
22:YA:2645:G:H3'	22:YA:2646:C:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YB:18:G:H1	23:YB:65:C:N4	2.12	0.46
28:YH:151:ILE:O	28:YH:152:ARG:O	2.34	0.46
30:YN:36:GLY:O	30:YN:42:TRP:HE3	1.98	0.46
34:YR:75:LEU:HA	34:YR:78:LYS:HB3	1.97	0.46
34:YR:78:LYS:HG2	34:YR:78:LYS:O	2.15	0.46
36:YT:6:LEU:O	36:YT:10:VAL:HG23	2.16	0.46
39:YW:48:ALA:O	39:YW:49:LYS:C	2.53	0.46
48:Y5:20:ARG:C	48:Y5:22:HIS:N	2.68	0.46
48:Y5:36:CYS:C	48:Y5:38:ALA:H	2.19	0.46
49:Y6:15:GLU:HB3	49:Y6:16:CYS:H	1.46	0.46
55:XY:40:G:H2'	55:XY:41:A:C8	2.51	0.46
1:QA:64:G:H4'	1:QA:65:U:O5'	2.15	0.46
1:QA:502:G:H4'	1:QA:550:G:H4'	1.97	0.46
1:QA:754:C:H5'	15:QO:72:ARG:NH2	2.19	0.46
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.56	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:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.46
4:QD:187:ARG:HH11	4:QD:187:ARG:HG2	1.81	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	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
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	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
15:QO:76:GLU:C	15:QO:78:TYR:N	2.69	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
22:RA:520:G:H2'	22:RA:521:G:C8	2.49	0.46
22:RA:643:A:N1	22:RA:2369:A:O2'	2.47	0.46
22:RA:898:C:C2'	22:RA:899:A:H5'	2.46	0.46
22:RA:1251:C:OP1	37:RU:10:ARG:HG3	2.15	0.46
22:RA:1478:G:O2'	22:RA:1479:G:H5'	2.16	0.46
22:RA:2436:G:C6	22:RA:2437:U:C4	3.03	0.46
22:RA:2570:G:H2'	22:RA:2571:C:O4'	2.16	0.46
24:RD:61:LEU:HB3	24:RD:63:ARG:NH1	2.31	0.46
24:RD:117:VAL:CG2	24:RD:128:GLY:C	2.84	0.46
25:RE:50:GLY:CA	25:RE:74:PRO:HG3	2.46	0.46
27:RG:14:GLU:O	27:RG:17:PRO:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:111:LEU:HD22	27:RG:120:LEU:HD21	1.97	0.46
30:RN:30:ILE:O	30:RN:34:LEU:CD2	2.63	0.46
30:RN:36:GLY:O	30:RN:42:TRP:HE3	1.98	0.46
32:RP:1:MET:O	32:RP:2:LYS:HG3	2.16	0.46
32:RP:6:LEU:N	32:RP:6:LEU:HD22	2.31	0.46
32:RP:45:LEU:CD1	32:RP:45:LEU:N	2.79	0.46
32:RP:85:LEU:HD23	32:RP:88:LEU:HD22	1.97	0.46
35:RS:13:ARG:O	35:RS:14:VAL:HB	2.16	0.46
35:RS:28:VAL:HG11	35:RS:98:VAL:HG12	1.98	0.46
36:RT:118:ARG:NH2	36:RT:121:ILE:HD12	2.31	0.46
37:RU:27:LEU:HD12	37:RU:31:SER:HB3	1.98	0.46
41:RY:56:PRO:O	41:RY:57:GLN:C	2.53	0.46
42:RZ:103:ARG:HD3	42:RZ:136:PHE:CD1	2.50	0.46
43:R0:78:TYR:HB3	43:R0:80:HIS:NE2	2.30	0.46
46:R3:59:VAL:CG1	46:R3:60:GLU:H	2.29	0.46
1:XA:389:A:H2'	1:XA:390:C:O4'	2.16	0.46
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.15	0.46
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.84	0.46
8:XH:49:GLU:HG3	8:XH:49:GLU:O	2.14	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
22:YA:270(G):C:H2'	22:YA:270(H):C:C6	2.50	0.46
22:YA:1028:A:N6	22:YA:1125:G:H2'	2.30	0.46
22:YA:1779:U:OP2	22:YA:1784:A:N6	2.35	0.46
22:YA:2168:G:H2'	22:YA:2168:G:N3	2.31	0.46
24:YD:48:ARG:HG3	24:YD:48:ARG:NH1	2.31	0.46
24:YD:61:LEU:HB3	24:YD:63:ARG:NH1	2.31	0.46
24:YD:79:VAL:HG21	24:YD:111:LEU:HD21	1.98	0.46
25:YE:7:VAL:HG11	36:YT:1:MET:CE	2.45	0.46
25:YE:63:LEU:O	25:YE:64:LYS:CB	2.62	0.46
25:YE:188:VAL:HA	25:YE:189:PRO:HD2	1.79	0.46
25:YE:195:LEU:HD12	25:YE:196:VAL:N	2.29	0.46
27:YG:14:GLU:O	27:YG:17:PRO:HD2	2.16	0.46
29:YI:79:ILE:N	29:YI:141:LYS:O	2.49	0.46
30:YN:128:HIS:HB2	30:YN:129:PRO:CD	2.46	0.46
30:YN:131:GLN:HE21	30:YN:132:ALA:H	1.58	0.46
32:YP:23:PRO:HG2	32:YP:23:PRO:O	2.15	0.46
32:YP:144:GLU:HA	32:YP:145:PRO:HD3	1.76	0.46
33:YQ:11:LYS:HE2	33:YQ:87:LYS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:63:LYS:HE2	33:YQ:65:PHE:CZ	2.51	0.46
33:YQ:87:LYS:O	33:YQ:87:LYS:HG2	2.15	0.46
35:YS:13:ARG:O	35:YS:14:VAL:HB	2.15	0.46
37:YU:69:CYS:O	37:YU:74:LEU:HD12	2.16	0.46
40:YX:35:THR:O	40:YX:35:THR:HG23	2.16	0.46
44:Y1:80:LEU:CB	44:Y1:81:LYS:HE2	2.43	0.46
46:Y3:43:ILE:O	46:Y3:47:VAL:HG23	2.16	0.46
46:Y3:59:VAL:CG1	46:Y3:60:GLU:H	2.29	0.46
51:Y8:48:PHE:N	51:Y8:48:PHE:HD1	2.14	0.46
55:QY:36:G:H8	55:QY:36:G:C5'	2.29	0.46
1:QA:597:G:H2'	1:QA:598:U:H5'	1.97	0.46
1:QA:962:C:H42	1:QA:974:A:H61	1.64	0.46
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.80	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
3:QC:124:ILE:C	3:QC:126:ARG:H	2.19	0.46
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.64	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.46
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
22:RA:412:A:N7	22:RA:2411:A:H2	2.14	0.46
22:RA:1564:C:H2'	22:RA:1565:C:C6	2.51	0.46
22:RA:2083:G:C2	22:RA:2084:C:C2	3.04	0.46
23:RB:83:G:H1	23:RB:93:C:H42	1.63	0.46
25:RE:172:VAL:HG13	25:RE:182:LEU:HD11	1.98	0.46
27:RG:37:VAL:HG22	27:RG:159:VAL:CA	2.34	0.46
27:RG:88:ILE:O	27:RG:88:ILE:CD1	2.54	0.46
27:RG:104:GLU:OE1	47:R4:23:GLU:HB3	2.15	0.46
27:RG:121:ASN:C	27:RG:123:ASN:H	2.19	0.46
27:RG:135:LEU:HD11	27:RG:157:ILE:HD12	1.98	0.46
28:RH:13:LYS:HE2	28:RH:13:LYS:CA	2.40	0.46
28:RH:59:ARG:CG	28:RH:59:ARG:NH1	2.79	0.46
33:RQ:23:GLY:O	33:RQ:24:GLY:C	2.54	0.46
35:RS:24:LEU:HB2	35:RS:85:VAL:HG12	1.98	0.46
35:RS:56:LEU:O	35:RS:57:LYS:C	2.53	0.46
37:RU:69:CYS:O	37:RU:74:LEU:HD12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:106:PHE:O	37:RU:109:LEU:HB2	2.15	0.46
38:RV:51:VAL:CG1	38:RV:52:VAL:N	2.75	0.46
40:RX:35:THR:O	40:RX:35:THR:HG23	2.16	0.46
40:RX:43:VAL:HG11	40:RX:51:VAL:HG21	1.97	0.46
44:R1:60:PHE:CE2	44:R1:91:LYS:NZ	2.84	0.46
47:R4:50:VAL:O	47:R4:50:VAL:HG13	2.15	0.46
1:XA:614:A:OP1	4:XD:86:LYS:HE3	2.16	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
6:XF:100:ASN:HD22	6:XF:100:ASN:HA	1.47	0.46
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	0.46
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
22:YA:414:C:H2'	22:YA:415:A:C8	2.50	0.46
22:YA:1339:G:N2	22:YA:1603:A:H1'	2.31	0.46
22:YA:1930:G:H2'	22:YA:1968:G:N1	2.30	0.46
22:YA:1930:G:HO2'	22:YA:1931:U:P	2.39	0.46
22:YA:2308:G:N2	22:YA:2311:A:H2	2.12	0.46
24:YD:148:GLU:HB2	24:YD:151:LYS:HD2	1.98	0.46
25:YE:87:GLU:O	25:YE:89:ASP:N	2.48	0.46
25:YE:137:HIS:CB	25:YE:138:PRO:HD2	2.41	0.46
27:YG:95:ARG:O	27:YG:96:ARG:C	2.54	0.46
28:YH:88:LEU:HD22	28:YH:163:TYR:O	2.16	0.46
28:YH:128:PRO:HD2	28:YH:129:THR:N	2.25	0.46
30:YN:36:GLY:O	30:YN:42:TRP:CE3	2.69	0.46
32:YP:98:GLU:HG2	32:YP:99:LEU:N	2.30	0.46
35:YS:74:ALA:O	35:YS:75:GLU:C	2.54	0.46
35:YS:108:GLY:O	35:YS:110:LEU:N	2.48	0.46
38:YV:22:VAL:HG12	38:YV:23:GLU:H	1.76	0.46
38:YV:36:PRO:HA	38:YV:56:SER:HG	1.81	0.46
39:YW:28:SER:C	39:YW:30:GLU:N	2.69	0.46
42:YZ:48:PHE:CE2	42:YZ:71:VAL:HG11	2.49	0.46
42:YZ:152:ALA:HB2	42:YZ:168:GLU:HA	1.98	0.46
46:Y3:18:ASP:O	46:Y3:21:ALA:N	2.49	0.46
1:QA:105:G:C5	1:QA:106:C:C4	3.03	0.46
1:QA:219:C:H2'	1:QA:220:G:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:940:C:H2'	1:QA:941:G:H8	1.80	0.46
1:QA:1100:C:OP2	2:QB:96:ARG:HG2	2.16	0.46
1:QA:1432:G:OP1	36:RT:108:ARG:HB2	2.15	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:87:LEU:C	3:QC:89:GLU:H	2.20	0.46
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.46
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.15	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
22:RA:212:G:H2'	22:RA:213:A:C8	2.51	0.46
22:RA:612:G:H2'	22:RA:613:U:O2	2.16	0.46
22:RA:859:G:O2'	22:RA:860:U:O5'	2.34	0.46
22:RA:1268:A:H2'	22:RA:1269:A:O4'	2.16	0.46
22:RA:1796:U:H2'	22:RA:1797:C:H6	1.81	0.46
22:RA:2065:C:HO2'	22:RA:2449:U:H3	1.64	0.46
22:RA:2451:A:N1	56:Z6:76:PPU:HE2	2.30	0.46
22:RA:2692:C:C2	22:RA:2693:A:C8	3.04	0.46
23:RB:34:U:H4'	23:RB:35:U:H5	1.81	0.46
25:RE:7:VAL:HG11	36:RT:1:MET:CE	2.45	0.46
25:RE:47:VAL:O	25:RE:47:VAL:HG23	2.16	0.46
25:RE:61:ARG:O	25:RE:63:LEU:CG	2.57	0.46
27:RG:14:GLU:O	27:RG:17:PRO:HD2	2.16	0.46
27:RG:52:ILE:HG22	27:RG:52:ILE:O	2.15	0.46
28:RH:88:LEU:HD22	28:RH:163:TYR:O	2.16	0.46
32:RP:90:ARG:HB3	32:RP:91:PHE:H	1.60	0.46
33:RQ:26:TYR:O	33:RQ:27:VAL:O	2.33	0.46
35:RS:89:ARG:O	35:RS:90:GLY:C	2.54	0.46
37:RU:79:PHE:CE2	37:RU:83:LEU:HD13	2.51	0.46
41:RY:19:LYS:O	41:RY:19:LYS:CG	2.60	0.46
48:R5:41:PRO:HA	48:R5:42:PRO:HD3	1.82	0.46
1:XA:312:C:H2'	1:XA:313:A:C8	2.51	0.46
1:XA:328:C:H4'	1:XA:329:A:C5'	2.43	0.46
1:XA:575:G:C5	1:XA:881:G:C2	3.04	0.46
1:XA:1002:G:H1	1:XA:1038:C:N4	2.09	0.46
1:XA:1439:C:H42	1:XA:1462:G:H1	1.64	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	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
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
22:YA:27:G:H22	22:YA:512:G:H2'	1.79	0.46
22:YA:177:G:H3'	22:YA:178:G:H8	1.81	0.46
22:YA:242:G:H4'	22:YA:243:U:O5'	2.16	0.46
22:YA:1405:U:H2'	22:YA:1406:U:O4'	2.16	0.46
22:YA:1418:G:O2'	22:YA:1580:A:N6	2.40	0.46
22:YA:1532:C:H2'	22:YA:1533:C:O4'	2.16	0.46
22:YA:2072:G:C6	22:YA:2073:C:C4	3.04	0.46
22:YA:2790:A:H2'	22:YA:2791:C:H5''	1.97	0.46
22:YA:2881:C:C2	22:YA:2882:A:C8	3.04	0.46
24:YD:14:ARG:HG3	24:YD:15:PHE:N	2.31	0.46
24:YD:36:PRO:HB3	24:YD:62:TYR:O	2.16	0.46
25:YE:129:HIS:O	25:YE:130:GLY:C	2.53	0.46
34:YR:3:HIS:C	34:YR:5:LYS:H	2.17	0.46
36:YT:107:ASP:HB2	36:YT:108:ARG:H	1.48	0.46
41:YY:11:ASP:HB2	41:YY:27:VAL:CG1	2.46	0.46
42:YZ:182:LYS:HB2	42:YZ:182:LYS:HE3	1.80	0.46
44:Y1:79:GLY:N	44:Y1:80:LEU:HD23	2.30	0.46
49:Y6:11:LEU:HD11	49:Y6:51:GLU:HG3	1.98	0.46
51:Y8:44:LYS:HD2	51:Y8:44:LYS:N	2.30	0.46
53:QV:49:G:O6	53:QV:65:C:N4	2.49	0.46
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.96	0.46
1:QA:1392:G:H21	1:QA:1502:A:H8	1.63	0.46
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.51	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.46
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.46
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.46
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.46
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.46
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.46
19:QS:68:GLY:C	47:R4:68:ARG:HG2	2.33	0.46
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:250:G:C6	22:RA:251:A:C6	3.04	0.46
22:RA:372:G:H5''	44:R1:66:HIS:CD2	2.51	0.46
22:RA:482:A:O2'	41:RY:47:LYS:NZ	2.48	0.46
22:RA:681:G:H2'	22:RA:682:G:O4'	2.16	0.46
22:RA:2296:U:OP2	35:RS:9:ARG:NH1	2.49	0.46
22:RA:2401:U:HO2'	22:RA:2402:C:H6	1.62	0.46
22:RA:2636:U:OP1	25:RE:79:ARG:HA	2.15	0.46
23:RB:48:A:H4'	35:RS:95:HIS:CD2	2.50	0.46
24:RD:80:ALA:O	24:RD:113:VAL:HG13	2.16	0.46
28:RH:37:VAL:HG11	28:RH:68:THR:HG23	1.98	0.46
29:RI:12:LEU:HG	29:RI:19:VAL:HG11	1.98	0.46
30:RN:73:THR:HA	30:RN:83:LYS:O	2.15	0.46
30:RN:112:LEU:O	30:RN:116:LEU:HG	2.16	0.46
31:RO:7:TYR:CD1	31:RO:20:MET:HB2	2.50	0.46
31:RO:61:VAL:O	31:RO:84:ALA:HB1	2.16	0.46
32:RP:115:LEU:CD1	32:RP:116:GLY:N	2.78	0.46
33:RQ:85:LYS:HD3	33:RQ:86:GLY:H	1.80	0.46
33:RQ:87:LYS:O	33:RQ:87:LYS:HG2	2.15	0.46
35:RS:109:GLY:O	35:RS:110:LEU:HB2	2.16	0.46
37:RU:98:LEU:HD23	37:RU:98:LEU:C	2.36	0.46
47:R4:38:LYS:C	47:R4:40:HIS:H	2.07	0.46
47:R4:56:VAL:HA	47:R4:60:GLN:CB	2.28	0.46
49:R6:15:GLU:OE2	49:R6:44:ARG:NH1	2.49	0.46
51:R8:40:GLU:C	51:R8:42:ARG:N	2.68	0.46
1:XA:343:U:HO2'	1:XA:344:A:H8	1.64	0.46
1:XA:434:U:H2'	1:XA:435:C:C6	2.51	0.46
1:XA:1069:C:O2'	5:XE:25:ARG:NH1	2.47	0.46
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.56	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.46
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.46
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.31	0.46
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.80	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.46
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.46
14:XN:43:CYS:HB3	14:XN:44:LEU:H	1.66	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.46
16:XP:40:ASP:O	16:XP:42:ARG:N	2.49	0.46
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.64	0.46
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.46
19:XS:2:PRO:HB2	47:Y4:68:ARG:HH12	1.78	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.46
22:YA:27:G:HO2'	22:YA:28:A:H8	1.61	0.46
22:YA:33:U:O2'	22:YA:446:G:N2	2.49	0.46
22:YA:483:A:H3'	22:YA:484:C:H6	1.81	0.46
22:YA:526:A:O2'	22:YA:2043:C:O2	2.28	0.46
22:YA:941:A:H2'	22:YA:942:G:O4'	2.15	0.46
22:YA:1221:C:H2'	22:YA:1222:C:H6	1.81	0.46
22:YA:1798:U:C2	22:YA:1822:G:N2	2.84	0.46
22:YA:1929:G:H4'	22:YA:1930:G:OP1	2.15	0.46
22:YA:2439:A:C8	22:YA:2439:A:H5'	2.51	0.46
24:YD:2:ALA:HB1	24:YD:20:ASP:CB	2.46	0.46
25:YE:77:ILE:O	25:YE:78:LEU:O	2.34	0.46
25:YE:111:ARG:NE	25:YE:160:TYR:CE1	2.76	0.46
27:YG:129:GLY:O	27:YG:130:ASN:OD1	2.34	0.46
28:YH:51:ARG:HG3	28:YH:51:ARG:NH1	2.30	0.46
31:YO:1:MET:HE2	31:YO:67:LYS:HG2	1.98	0.46
32:YP:115:LEU:HA	32:YP:134:ALA:CB	2.46	0.46
36:YT:54:ARG:HG2	36:YT:54:ARG:NH1	2.23	0.46
38:YV:5:VAL:HG22	38:YV:14:VAL:CG2	2.46	0.46
46:Y3:7:LYS:HE2	46:Y3:32:GLN:HA	1.98	0.46
52:Y9:1:MET:SD	52:Y9:31:LYS:O	2.74	0.46
55:QY:39:C:HO2'	55:QY:40:G:P	2.38	0.46
1:QA:1338:G:N3	53:QV:41:C:O2'	2.50	0.45
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.45
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.32	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:167:GLY:HA2	24:YD:135:PHE:CE1	2.51	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.45
22:RA:112:U:P	45:R2:69:ARG:HH21	2.39	0.45
22:RA:748:G:N3	22:RA:750:A:N6	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1138:G:H21	30:RN:106:MET:HE3	1.81	0.45
22:RA:2451:A:C2	56:Z6:76:PPU:HD2	2.50	0.45
22:RA:2543:G:H2'	22:RA:2544:G:C8	2.51	0.45
22:RA:2555:U:C5	22:RA:2556:C:C2	3.05	0.45
22:RA:2739:U:O2	22:RA:2766:G:N2	2.49	0.45
24:RD:35:LYS:HE3	24:RD:65:ILE:N	2.31	0.45
24:RD:148:GLU:HB2	24:RD:151:LYS:HD2	1.98	0.45
25:RE:95:ILE:HG22	25:RE:95:ILE:O	2.16	0.45
27:RG:76:SER:CB	27:RG:83:ARG:HA	2.46	0.45
28:RH:151:ILE:O	28:RH:152:ARG:O	2.34	0.45
30:RN:17:ASP:O	30:RN:55:VAL:O	2.34	0.45
32:RP:46:LYS:O	32:RP:48:PRO:N	2.48	0.45
33:RQ:81:VAL:HG23	33:RQ:82:ARG:N	2.32	0.45
39:RW:28:SER:C	39:RW:30:GLU:N	2.69	0.45
41:RY:90:LEU:N	41:RY:90:LEU:CD2	2.73	0.45
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.45
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.15	0.45
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
13:XM:65:LYS:HZ2	47:Y4:52:THR:CB	2.29	0.45
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.45
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
22:YA:1069:A:H4'	22:YA:1070:A:H5''	1.98	0.45
22:YA:1164:G:H2'	22:YA:1165:U:H6	1.79	0.45
22:YA:1204:A:H2	22:YA:1241:A:N1	2.14	0.45
22:YA:1503:U:H2'	22:YA:1504:C:C6	2.51	0.45
22:YA:1517:G:C6	22:YA:1518:C:C4	3.04	0.45
22:YA:1533:C:H2'	22:YA:1534:G:N7	2.31	0.45
22:YA:1682:G:C2	22:YA:1683:C:C2	3.04	0.45
22:YA:1826:G:H4'	24:YD:242:ARG:HH21	1.82	0.45
22:YA:2331:G:H4'	43:Y0:43:THR:H	1.82	0.45
22:YA:2420:C:H6	22:YA:2420:C:O5'	1.99	0.45
22:YA:2844:G:C6	22:YA:2845:G:C4	3.04	0.45
23:YB:38:C:H42	23:YB:44:G:H1	1.62	0.45
23:YB:48:A:H2'	23:YB:49:C:C6	2.51	0.45
24:YD:11:PRO:O	24:YD:12:SER:CB	2.65	0.45
24:YD:118:VAL:O	24:YD:129:ASN:HA	2.16	0.45
24:YD:241:PRO:O	24:YD:242:ARG:C	2.53	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:1:MET:HA	25:YE:200:GLU:OE2	2.16	0.45
26:YF:31:HIS:O	26:YF:34:TRP:HB3	2.15	0.45
27:YG:6:ALA:HB3	27:YG:104:GLU:OE2	2.16	0.45
29:YI:114:LEU:HD13	29:YI:130:TYR:CD1	2.50	0.45
29:YI:129:THR:HA	29:YI:137:PRO:HA	1.98	0.45
31:YO:86:ILE:H	31:YO:86:ILE:CD1	2.28	0.45
31:YO:112:MET:O	31:YO:115:VAL:CG2	2.64	0.45
32:YP:36:LYS:HZ3	32:YP:36:LYS:HG3	1.39	0.45
37:YU:92:ARG:C	37:YU:94:ASN:N	2.69	0.45
41:YY:35:TYR:CD1	41:YY:35:TYR:O	2.69	0.45
47:Y4:3:GLU:HG3	47:Y4:4:GLY:H	1.79	0.45
49:Y6:17:LYS:O	49:Y6:18:ARG:CB	2.64	0.45
1:QA:232:G:H2'	1:QA:233:C:O4'	2.15	0.45
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.16	0.45
1:QA:1285:A:H4'	1:QA:1286:A:O5'	2.16	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.52	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
20:QT:93:GLU:HG2	20:QT:93:GLU:O	2.15	0.45
22:RA:528:A:C2	22:RA:2042:A:H2'	2.51	0.45
22:RA:795:C:H2'	22:RA:796:C:C6	2.52	0.45
22:RA:1003:G:O2'	22:RA:1010:A:N1	2.37	0.45
22:RA:2292:C:H2'	22:RA:2293:C:C6	2.51	0.45
22:RA:2578:G:OP2	22:RA:2578:G:H4'	2.16	0.45
22:RA:2662:A:C5	22:RA:2663:G:H1'	2.51	0.45
22:RA:2845:G:O2'	22:RA:2846:G:H5'	2.17	0.45
23:RB:52:A:N6	35:RS:33:LYS:HG3	2.30	0.45
24:RD:105:ILE:HG23	24:RD:106:ILE:O	2.15	0.45
24:RD:198:ASN:C	24:RD:198:ASN:ND2	2.69	0.45
25:RE:1:MET:HA	25:RE:200:GLU:OE2	2.16	0.45
25:RE:15:PHE:CD1	25:RE:20:ALA:HB2	2.50	0.45
25:RE:22:PRO:O	25:RE:22:PRO:CG	2.63	0.45
28:RH:89:ILE:H	28:RH:89:ILE:HD13	1.81	0.45
29:RI:93:THR:O	29:RI:97:ILE:HG12	2.16	0.45
32:RP:21:ARG:HB3	32:RP:22:GLY:H	1.65	0.45
33:RQ:63:LYS:HE2	33:RQ:65:PHE:CZ	2.51	0.45
33:RQ:104:PHE:O	33:RQ:105:GLU:CB	2.65	0.45
36:RT:24:PRO:HD3	36:RT:52:ILE:HD12	1.98	0.45
37:RU:73:GLY:O	37:RU:74:LEU:CB	2.64	0.45
41:RY:47:LYS:O	41:RY:49:VAL:N	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:85:LEU:N	44:R1:85:LEU:HD22	2.31	0.45
46:R3:7:LYS:HE2	46:R3:32:GLN:HA	1.98	0.45
46:R3:60:GLU:HG2	46:R3:60:GLU:O	2.16	0.45
49:R6:20:ASN:O	49:R6:21:TYR:HB2	2.15	0.45
51:R8:48:PHE:N	51:R8:48:PHE:HD1	2.14	0.45
52:R9:25:VAL:HG11	52:R9:34:GLN:HE21	1.80	0.45
1:XA:172:A:H8	1:XA:172:A:OP2	1.99	0.45
1:XA:243:A:H2	1:XA:245:C:H2'	1.82	0.45
1:XA:297:G:H4'	1:XA:557:G:H4'	1.98	0.45
1:XA:312:C:H2'	1:XA:313:A:H8	1.81	0.45
1:XA:986:A:H1'	19:XS:54:GLY:O	2.16	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
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.50	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.34	0.45
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.45
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.45
19:XS:2:PRO:HB3	47:Y4:68:ARG:HH12	1.76	0.45
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.31	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
22:YA:94:G:H2'	22:YA:95:G:O4'	2.17	0.45
22:YA:460:A:C2	22:YA:470:A:C4	3.04	0.45
22:YA:1826:G:H5''	24:YD:224:ALA:HB2	1.99	0.45
22:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.51	0.45
24:YD:65:ILE:HD11	24:YD:67:PHE:CE1	2.51	0.45
25:YE:54:GLN:HE21	25:YE:54:GLN:CA	2.27	0.45
26:YF:7:TYR:CD1	26:YF:7:TYR:N	2.84	0.45
26:YF:65:TRP:CH2	26:YF:72:ARG:HB3	2.50	0.45
27:YG:14:GLU:HB3	27:YG:15:VAL:H	1.56	0.45
27:YG:76:SER:CB	27:YG:83:ARG:HA	2.47	0.45
28:YH:109:PHE:CE1	28:YH:152:ARG:NH1	2.84	0.45
30:YN:120:LEU:C	30:YN:120:LEU:HD13	2.37	0.45
34:YR:85:PRO:C	34:YR:87:TYR:H	2.18	0.45
38:YV:47:VAL:O	38:YV:48:GLY:O	2.34	0.45
40:YX:8:ILE:CD1	40:YX:42:ALA:HB1	2.46	0.45
40:YX:24:GLY:O	40:YX:82:GLN:HA	2.16	0.45
41:YY:48:ALA:CB	41:YY:61:ILE:HD13	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y5:16:ARG:O	48:Y5:20:ARG:HG3	2.16	0.45
48:Y5:43:HIS:ND1	48:Y5:43:HIS:N	2.63	0.45
49:Y6:45:LYS:HD3	49:Y6:45:LYS:HA	1.79	0.45
52:Y9:25:VAL:HG11	52:Y9:34:GLN:HE21	1.81	0.45
55:QY:39:C:O2'	55:QY:40:G:P	2.75	0.45
1:QA:362:G:N2	1:QA:364:A:H3'	2.31	0.45
1:QA:1529:G:H3'	1:QA:1529:G:OP2	2.17	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
5:QE:64:ARG:HH11	5:QE:64:ARG:HG3	1.82	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
22:RA:205:G:O2'	22:RA:206:U:OP2	2.35	0.45
22:RA:301:G:HO2'	22:RA:302:C:H6	1.62	0.45
22:RA:631:A:P	51:R8:46:ARG:HH21	2.37	0.45
22:RA:635:C:H2'	22:RA:636:G:O4'	2.16	0.45
22:RA:674:G:H2'	22:RA:804:A:H61	1.81	0.45
22:RA:1030:G:OP2	33:RQ:128:LYS:HG2	2.16	0.45
22:RA:2009:G:OP1	39:RW:41:LYS:HE2	2.16	0.45
22:RA:2088:G:C2	22:RA:2089:U:C2	3.04	0.45
22:RA:2311:A:H1'	27:RG:82:LEU:HD11	1.98	0.45
24:RD:65:ILE:HD11	24:RD:67:PHE:CE1	2.51	0.45
28:RH:137:ASP:HB2	28:RH:140:LYS:HE3	1.98	0.45
29:RI:110:ASP:HB3	29:RI:112:LYS:N	2.31	0.45
31:RO:104:ARG:HG2	31:RO:121:VAL:HG12	1.97	0.45
32:RP:144:GLU:OE1	32:RP:144:GLU:N	2.48	0.45
33:RQ:30:GLY:CA	33:RQ:107:ALA:HB2	2.39	0.45
33:RQ:134:ARG:HH12	42:RZ:119:GLU:HG3	1.81	0.45
34:RR:1:MET:O	34:RR:2:ARG:HB2	2.15	0.45
36:RT:6:LEU:O	36:RT:10:VAL:HG23	2.16	0.45
37:RU:57:PHE:O	37:RU:59:ARG:N	2.50	0.45
39:RW:34:ASN:O	39:RW:35:ILE:C	2.55	0.45
40:RX:35:THR:O	40:RX:36:LYS:C	2.55	0.45
41:RY:75:ILE:HA	41:RY:80:GLY:HA2	1.99	0.45
41:RY:81:LYS:CD	41:RY:97:ARG:HE	2.20	0.45
46:R3:43:ILE:O	46:R3:47:VAL:HG23	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R5:54:GLY:O	48:R5:55:ARG:C	2.54	0.45
49:R6:7:ILE:O	49:R6:8:LYS:HG2	2.16	0.45
1:XA:658:G:H2'	1:XA:659:U:C6	2.51	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.98	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
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	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:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
22:YA:320:A:H1'	26:YF:169:ASN:HD22	1.81	0.45
22:YA:459:U:OP1	50:Y7:39:ARG:HA	2.15	0.45
22:YA:568:U:N3	22:YA:571:A:OP2	2.31	0.45
22:YA:571:A:H1'	22:YA:573:G:C8	2.51	0.45
22:YA:860:U:C5	22:YA:917:A:C2	3.05	0.45
22:YA:1434:A:H2'	22:YA:1435:G:C8	2.51	0.45
22:YA:1641:A:H2'	22:YA:1642:G:O4'	2.16	0.45
22:YA:2320:A:C8	22:YA:2333:A:N6	2.85	0.45
22:YA:2560:C:H2'	22:YA:2561:A:H8	1.82	0.45
25:YE:13:ARG:HH11	25:YE:13:ARG:HB3	1.82	0.45
25:YE:51:PHE:HD1	25:YE:52:LEU:H	1.59	0.45
26:YF:167:ALA:HB1	26:YF:173:VAL:HG11	1.99	0.45
28:YH:16:SER:OG	28:YH:17:VAL:N	2.50	0.45
30:YN:113:GLY:O	30:YN:116:LEU:HB2	2.14	0.45
33:YQ:26:TYR:O	33:YQ:27:VAL:O	2.34	0.45
33:YQ:85:LYS:HD3	33:YQ:86:GLY:H	1.81	0.45
35:YS:5:THR:OG1	35:YS:8:GLU:HG3	2.16	0.45
38:YV:4:ILE:HG22	38:YV:39:LEU:HD23	1.98	0.45
39:YW:40:ASN:C	39:YW:41:LYS:HG2	2.36	0.45
44:Y1:49:VAL:HG12	44:Y1:51:VAL:CG2	2.45	0.45
47:Y4:42:PHE:CD1	47:Y4:42:PHE:C	2.90	0.45
55:QY:40:G:H2'	55:QY:41:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:177:C:H2'	1:QA:178:C:H6	1.80	0.45
1:QA:1213:A:N1	1:QA:1215:G:H1'	2.32	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
3:QC:34:LEU:HD23	3:QC:34:LEU:C	2.37	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.99	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	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:101:LEU:HD21	4:QD:121:VAL:HG13	1.98	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
4:QD:194:LEU:HD11	6:XF:17:SER:OG	2.16	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
22:RA:17:G:H2'	22:RA:18:C:C6	2.51	0.45
22:RA:204:A:OP1	22:RA:204:A:H8	1.99	0.45
22:RA:448:U:O4	22:RA:583:G:H1'	2.17	0.45
22:RA:451:C:H4'	26:RF:52:LYS:HZ1	1.80	0.45
22:RA:464:U:H4'	50:R7:5:TRP:CZ3	2.51	0.45
22:RA:531:C:C5	22:RA:2035:G:C2	3.04	0.45
22:RA:1012:U:O2'	22:RA:1013:C:OP2	2.30	0.45
22:RA:1475:G:C2	22:RA:1519:G:C2	3.05	0.45
22:RA:1506:C:H3'	22:RA:1507:A:H5''	1.98	0.45
22:RA:1570:A:C6	22:RA:1571:A:C6	3.04	0.45
22:RA:1588:C:H2'	22:RA:1589:C:C6	2.51	0.45
22:RA:2285:C:N3	22:RA:2346:A:N6	2.64	0.45
23:RB:55:U:C5'	27:RG:28:VAL:HG21	2.46	0.45
24:RD:2:ALA:HB1	24:RD:20:ASP:CB	2.46	0.45
24:RD:31:LYS:C	24:RD:32:SER:O	2.54	0.45
24:RD:145:VAL:HB	24:RD:155:LEU:HB2	1.99	0.45
24:RD:211:ARG:HH11	24:RD:211:ARG:HG2	1.80	0.45
27:RG:20:ILE:HD13	27:RG:25:TYR:HB2	1.98	0.45
27:RG:51:ARG:NH2	27:RG:52:ILE:HD11	2.32	0.45
28:RH:94:TYR:N	28:RH:94:TYR:CD1	2.82	0.45
28:RH:106:THR:HG22	28:RH:112:PRO:HB3	1.97	0.45
28:RH:109:PHE:CE1	28:RH:152:ARG:NH1	2.84	0.45
29:RI:21:VAL:HG22	29:RI:22:LYS:H	1.81	0.45
30:RN:22:THR:O	30:RN:60:ILE:HG22	2.16	0.45
30:RN:129:PRO:C	30:RN:131:GLN:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:21:ARG:HE	32:RP:21:ARG:HA	1.81	0.45
32:RP:62:LEU:CD2	32:RP:62:LEU:H	2.19	0.45
33:RQ:5:ARG:O	33:RQ:6:ARG:O	2.35	0.45
35:RS:5:THR:OG1	35:RS:8:GLU:HG3	2.17	0.45
35:RS:74:ALA:O	35:RS:75:GLU:C	2.54	0.45
37:RU:92:ARG:C	37:RU:94:ASN:N	2.69	0.45
39:RW:40:ASN:C	39:RW:41:LYS:HG2	2.37	0.45
39:RW:48:ALA:O	39:RW:49:LYS:C	2.53	0.45
48:R5:16:ARG:O	48:R5:20:ARG:HG3	2.16	0.45
48:R5:36:CYS:C	48:R5:38:ALA:H	2.19	0.45
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.29	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: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
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.30	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
19:XS:2:PRO:CB	47:Y4:68:ARG:NH1	2.71	0.45
22:YA:83:G:O2'	22:YA:84:A:P	2.74	0.45
22:YA:565:C:H4'	22:YA:1253:A:C6	2.51	0.45
22:YA:783:A:H8	22:YA:784:A:H4'	1.81	0.45
22:YA:1654:A:OP1	34:YR:1:MET:O	2.34	0.45
22:YA:2846:G:P	36:YT:54:ARG:HB2	2.57	0.45
24:YD:69:ARG:C	24:YD:71:ASP:N	2.69	0.45
27:YG:44:GLY:HA2	27:YG:88:ILE:HG12	1.97	0.45
33:YQ:23:GLY:O	33:YQ:24:GLY:C	2.54	0.45
33:YQ:30:GLY:CA	33:YQ:107:ALA:HB2	2.39	0.45
33:YQ:104:PHE:O	33:YQ:105:GLU:CB	2.65	0.45
34:YR:10:LEU:O	34:YR:11:ASN:C	2.55	0.45
35:YS:109:GLY:O	35:YS:110:LEU:HB2	2.16	0.45
37:YU:95:LEU:HD13	38:YV:4:ILE:HD12	1.98	0.45
42:YZ:10:ARG:HD2	42:YZ:36:LYS:HB3	1.99	0.45
44:Y1:54:ALA:O	44:Y1:55:GLY:O	2.35	0.45
44:Y1:60:PHE:CE2	44:Y1:91:LYS:NZ	2.84	0.45
44:Y1:85:LEU:N	44:Y1:85:LEU:HD22	2.31	0.45
50:Y7:24:THR:O	50:Y7:28:ARG:HG3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:771:G:H2'	1:QA:772:U:C6	2.51	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:29:PRO:HD2	4:QD:30:LYS:H	1.81	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
22:RA:519:U:H2'	22:RA:520:G:H8	1.81	0.45
22:RA:527:C:C4	22:RA:2779:U:H5''	2.52	0.45
22:RA:779:U:OP1	24:RD:49:ILE:HG23	2.17	0.45
22:RA:804:A:H2'	22:RA:806:C:C4	2.50	0.45
22:RA:1041:C:H2'	22:RA:1042:G:H8	1.80	0.45
22:RA:1252:G:O4'	37:RU:33:ARG:HD3	2.17	0.45
22:RA:1274:A:H2	22:RA:1644:C:O2	1.99	0.45
22:RA:1427:A:H4'	22:RA:1428:C:O5'	2.16	0.45
22:RA:2414:G:H21	32:RP:67:MET:CE	2.29	0.45
22:RA:2734:A:C8	22:RA:2735:G:C8	3.05	0.45
24:RD:166:GLN:CA	24:RD:166:GLN:NE2	2.78	0.45
27:RG:14:GLU:HB3	27:RG:15:VAL:H	1.56	0.45
28:RH:86:GLU:O	28:RH:87:LEU:CB	2.64	0.45
30:RN:5:VAL:O	30:RN:5:VAL:HG13	2.16	0.45
30:RN:128:HIS:HB2	30:RN:129:PRO:CD	2.46	0.45
31:RO:47:ILE:HG13	31:RO:48:PRO:HD2	1.99	0.45
33:RQ:93:TYR:CD1	33:RQ:93:TYR:N	2.85	0.45
36:RT:36:GLU:CG	36:RT:41:ARG:HD3	2.46	0.45
37:RU:53:ARG:C	37:RU:55:ARG:H	2.19	0.45
39:RW:65:LEU:CD1	39:RW:68:ARG:NH1	2.75	0.45
44:R1:80:LEU:CB	44:R1:81:LYS:HE2	2.44	0.45
1:XA:148:G:H2'	1:XA:149:A:H8	1.80	0.45
1:XA:411:A:C8	1:XA:413:G:H1'	2.52	0.45
1:XA:985:C:H2'	1:XA:986:A:C8	2.51	0.45
1:XA:1417:G:N2	1:XA:1482:G:H2'	2.32	0.45
2:XB:240:GLN:HG2	2:XB:240:GLN:O	2.16	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.31	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:117:G:C6	22:YA:119:A:C6	3.05	0.45
22:YA:389:G:H22	32:YP:72:PRO:HD3	1.82	0.45
22:YA:753:C:O5'	22:YA:753:C:H6	2.00	0.45
22:YA:1256:G:C2	22:YA:1257:C:C2	3.05	0.45
22:YA:1357:U:C4	22:YA:1358:G:C5	3.05	0.45
22:YA:1639:U:H4'	22:YA:2699:C:H4'	1.98	0.45
22:YA:1991:U:H2'	22:YA:1992:G:H5''	1.99	0.45
22:YA:2355:C:H5''	22:YA:2356:C:OP2	2.16	0.45
23:YB:15:A:H3'	23:YB:16:G:H5'	1.98	0.45
24:YD:68:LYS:HD2	24:YD:70:TRP:CZ2	2.52	0.45
24:YD:109:ASP:HB2	24:YD:197:GLY:CA	2.46	0.45
24:YD:198:ASN:ND2	24:YD:198:ASN:O	2.50	0.45
25:YE:47:VAL:O	25:YE:47:VAL:HG23	2.16	0.45
25:YE:95:ILE:HG22	25:YE:95:ILE:O	2.16	0.45
27:YG:51:ARG:NH2	27:YG:52:ILE:HD11	2.32	0.45
30:YN:20:GLY:HA2	30:YN:61:ARG:HD2	1.99	0.45
30:YN:114:ARG:O	30:YN:115:ARG:CB	2.65	0.45
33:YQ:65:PHE:O	33:YQ:66:ILE:CG1	2.48	0.45
34:YR:29:LEU:N	34:YR:29:LEU:CD1	2.79	0.45
41:YY:2:ARG:O	41:YY:3:VAL:C	2.55	0.45
41:YY:75:ILE:HA	41:YY:80:GLY:HA2	1.99	0.45
45:Y2:28:LYS:HB3	45:Y2:57:ILE:HG12	1.97	0.45
49:Y6:9:LEU:CD1	49:Y6:26:ASN:ND2	2.80	0.45
49:Y6:11:LEU:H	49:Y6:25:LYS:HA	1.81	0.45
53:QV:58:A:O2'	53:QV:60:U:OP2	2.16	0.45
1:QA:34:C:H2'	1:QA:35:G:C8	2.51	0.45
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.49	0.45
1:QA:378:G:H2'	1:QA:379:C:C6	2.52	0.45
1:QA:921:U:O2	5:QE:19:MET:HB2	2.16	0.45
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.32	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	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:78:HIS:CB	8:QH:104:ARG:HG2	2.46	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
12:QL:91:LYS:HB2	12:QL:91:LYS:HE2	1.76	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
22:RA:675:A:H4'	26:RF:67:GLN:OE1	2.17	0.45
22:RA:709:U:H3	22:RA:722:A:N6	2.13	0.45
22:RA:2002:G:OP2	34:RR:9:LYS:HD3	2.17	0.45
22:RA:2306:C:H2'	22:RA:2307:G:N2	2.29	0.45
24:RD:109:ASP:HB2	24:RD:197:GLY:CA	2.46	0.45
25:RE:21:VAL:HG23	25:RE:22:PRO:CD	2.46	0.45
30:RN:96:GLU:O	30:RN:99:LEU:N	2.34	0.45
31:RO:40:VAL:CG1	31:RO:41:ALA:N	2.80	0.45
32:RP:31:ALA:C	32:RP:32:THR:CG2	2.85	0.45
32:RP:81:GLN:CD	32:RP:106:LEU:O	2.55	0.45
32:RP:88:LEU:O	32:RP:90:ARG:N	2.50	0.45
37:RU:76:TYR:CD2	37:RU:76:TYR:C	2.90	0.45
37:RU:79:PHE:C	37:RU:79:PHE:HD2	2.18	0.45
38:RV:59:ALA:HB2	38:RV:96:ILE:HD13	1.97	0.45
39:RW:14:PRO:O	39:RW:16:LYS:N	2.50	0.45
46:R3:28:LEU:HA	46:R3:33:GLN:OE1	2.16	0.45
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.82	0.45
1:XA:953:G:H5'	1:XA:965:A:H61	1.82	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
22:YA:242:G:C8	51:Y8:5:LYS:HG2	2.52	0.45
22:YA:419:C:H2'	22:YA:420:C:O4'	2.17	0.45
22:YA:858:U:O2	22:YA:2268:A:H2'	2.17	0.45
22:YA:1231:G:H2'	22:YA:1232:G:C8	2.51	0.45
22:YA:1396:U:H2'	22:YA:1396:U:O2	2.16	0.45
22:YA:2056:G:H2'	22:YA:2056:G:N3	2.31	0.45
22:YA:2347:C:OP1	49:Y6:39:TYR:CE2	2.69	0.45
22:YA:2572:A:H62	25:YE:145:LYS:HG3	1.82	0.45
24:YD:25:THR:CG2	24:YD:25:THR:O	2.65	0.45
26:YF:45:ARG:CG	26:YF:45:ARG:NH1	2.71	0.45
26:YF:117:ARG:NH2	26:YF:189:THR:O	2.50	0.45
28:YH:7:LEU:C	28:YH:7:LEU:HD12	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YI:144:VAL:O	29:YI:145:VAL:HG22	2.16	0.45
30:YN:10:GLU:HA	30:YN:11:PRO:HD3	1.73	0.45
35:YS:78:LEU:HD21	35:YS:108:GLY:HA2	1.99	0.45
35:YS:83:LYS:HG2	35:YS:109:GLY:H	1.76	0.45
38:YV:30:GLY:O	38:YV:31:ALA:O	2.34	0.45
39:YW:88:ARG:CB	39:YW:92:ARG:HB3	2.47	0.45
41:YY:97:ARG:HG2	41:YY:97:ARG:HH11	1.82	0.45
43:Y0:57:PHE:CD2	43:Y0:57:PHE:N	2.85	0.45
55:XY:39:C:O2'	55:XY:40:G:P	2.74	0.45
1:QA:97:U:O2'	1:QA:99:C:H5'	2.16	0.45
1:QA:574:A:O2'	1:QA:882:C:O2'	2.27	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.82	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.46	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.98	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	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
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
22:RA:1534:G:N3	22:RA:1534:G:H2'	2.32	0.45
22:RA:1551:C:H2'	22:RA:1552:G:O4'	2.17	0.45
22:RA:1814:G:H2'	22:RA:1815:A:C8	2.52	0.45
22:RA:2627:G:H2'	22:RA:2628:C:C6	2.51	0.45
22:RA:2724:C:OP1	25:RE:118:LYS:NZ	2.46	0.45
22:RA:2821:A:H2'	22:RA:2822:G:O4'	2.17	0.45
22:RA:2893:G:H5''	22:RA:2894:G:H5'	1.98	0.45
24:RD:36:PRO:HB3	24:RD:62:TYR:O	2.16	0.45
25:RE:2:LYS:HG2	25:RE:95:ILE:HG22	1.99	0.45
26:RF:123:LEU:HD12	26:RF:124:LEU:H	1.82	0.45
26:RF:184:TYR:CE2	26:RF:188:ARG:HD2	2.52	0.45
32:RP:88:LEU:C	32:RP:88:LEU:HD23	2.37	0.45
32:RP:92:GLU:HA	32:RP:123:LEU:HD23	1.99	0.45
41:RY:2:ARG:O	41:RY:3:VAL:C	2.55	0.45
41:RY:36:ALA:HB1	41:RY:67:LEU:O	2.16	0.45
42:RZ:111:VAL:HG22	42:RZ:112:ARG:H	1.81	0.45
49:R6:11:LEU:H	49:R6:25:LYS:HA	1.81	0.45
1:XA:390:C:H2'	1:XA:391:G:C8	2.51	0.45
1:XA:701:C:H1'	1:XA:703:G:C2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.51	0.45
1:XA:1200:C:O2'	1:XA:1201:A:OP2	2.25	0.45
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.52	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.64	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
22:YA:270(J):G:H2'	22:YA:270(K):C:O4'	2.17	0.45
22:YA:1124:C:H1'	52:Y9:36:GLN:OE1	2.17	0.45
22:YA:1206:G:C6	22:YA:1207:C:C4	3.05	0.45
22:YA:2259:G:C2	22:YA:2282:G:N1	2.84	0.45
23:YB:89:G:H8	23:YB:89:G:OP2	2.00	0.45
24:YD:92:ILE:HD12	24:YD:104:TYR:HD2	1.82	0.45
25:YE:2:LYS:O	25:YE:199:ARG:HA	2.17	0.45
25:YE:33:VAL:HG12	25:YE:90:THR:H	1.81	0.45
25:YE:199:ARG:HH11	25:YE:199:ARG:HG3	1.82	0.45
30:YN:22:THR:O	30:YN:60:ILE:HG22	2.16	0.45
31:YO:104:ARG:NH2	36:YT:34:VAL:HG11	2.32	0.45
35:YS:89:ARG:O	35:YS:90:GLY:C	2.54	0.45
36:YT:24:PRO:HD3	36:YT:52:ILE:HD12	1.98	0.45
37:YU:27:LEU:HD12	37:YU:31:SER:HB3	1.98	0.45
37:YU:76:TYR:CD2	37:YU:76:TYR:C	2.90	0.45
37:YU:79:PHE:CE2	37:YU:83:LEU:HD13	2.51	0.45
39:YW:21:VAL:HG12	39:YW:21:VAL:O	2.17	0.45
40:YX:47:PHE:O	40:YX:48:LYS:C	2.55	0.45
42:YZ:53:ILE:HG22	42:YZ:71:VAL:HG22	1.99	0.45
42:YZ:112:ARG:O	42:YZ:114:GLY:N	2.50	0.45
47:Y4:68:ARG:O	47:Y4:69:LYS:HB2	2.17	0.45
50:Y7:2:LYS:HG2	50:Y7:3:ARG:N	2.31	0.45
51:Y8:52:LYS:O	51:Y8:52:LYS:CG	2.64	0.45
1:QA:730:G:C5	1:QA:731:G:H1'	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.39	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.17	0.45
22:RA:571:A:H5'	22:RA:2030:A:H62	1.81	0.45
22:RA:748:G:C8	39:RW:89:ALA:HB1	2.52	0.45
22:RA:827:U:H1'	22:RA:2246:G:O2'	2.16	0.45
22:RA:2513:G:C2	22:RA:2514:U:C2	3.05	0.45
24:RD:14:ARG:HG3	24:RD:15:PHE:N	2.31	0.45
24:RD:118:VAL:O	24:RD:129:ASN:HA	2.16	0.45
24:RD:213:ARG:HA	24:RD:213:ARG:HD2	1.60	0.45
25:RE:2:LYS:O	25:RE:199:ARG:HA	2.17	0.45
27:RG:102:PHE:HA	27:RG:105:LYS:HE3	1.98	0.45
30:RN:35:ARG:HG3	30:RN:35:ARG:O	2.16	0.45
30:RN:118:LYS:C	30:RN:120:LEU:H	2.20	0.45
32:RP:96:THR:HG22	32:RP:126:VAL:CB	2.47	0.45
33:RQ:11:LYS:HE2	33:RQ:87:LYS:HA	1.98	0.45
34:RR:17:ARG:O	34:RR:20:LEU:HB3	2.17	0.45
37:RU:97:ASP:HA	37:RU:100:VAL:CG2	2.47	0.45
41:RY:88:LYS:HA	41:RY:88:LYS:HZ2	1.81	0.45
44:R1:49:VAL:HG12	44:R1:51:VAL:HG23	1.99	0.45
44:R1:73:LEU:C	44:R1:75:GLU:N	2.70	0.45
44:R1:82:LEU:HD13	44:R1:83:GLU:C	2.36	0.45
49:R6:11:LEU:HD11	49:R6:51:GLU:HG3	1.98	0.45
51:R8:16:ILE:CD1	51:R8:57:ARG:HG2	2.42	0.45
1:XA:405:U:H3'	1:XA:406:G:H5'	1.99	0.45
1:XA:422:C:O2'	1:XA:423:G:H5''	2.16	0.45
1:XA:464:G:C6	1:XA:466:C:H5'	2.52	0.45
1:XA:731:G:OP1	1:XA:766:A:H1'	2.17	0.45
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.49	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.45
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.20	0.45
22:YA:83:G:O2'	22:YA:84:A:C8	2.62	0.45
22:YA:210:C:P	50:Y7:29:LYS:NZ	2.90	0.45
22:YA:688:U:H5'	22:YA:1780:A:C2	2.52	0.45
22:YA:997:G:OP1	37:YU:93:LYS:HD3	2.16	0.45
22:YA:1651:G:N7	34:YR:11:ASN:ND2	2.65	0.45
22:YA:1782:C:O2	22:YA:2608:G:O2'	2.22	0.45
22:YA:2735:G:N2	22:YA:2770:G:H1'	2.32	0.45
22:YA:2864:G:H2'	22:YA:2865:U:O4'	2.15	0.45
24:YD:166:GLN:CA	24:YD:166:GLN:NE2	2.78	0.45
26:YF:155:LEU:HA	26:YF:174:VAL:CG1	2.46	0.45
31:YO:22:ILE:HG12	31:YO:41:ALA:HA	1.98	0.45
31:YO:97:ARG:H	31:YO:117:LEU:CD2	2.24	0.45
32:YP:45:LEU:CD1	32:YP:45:LEU:N	2.79	0.45
32:YP:81:GLN:CD	32:YP:106:LEU:O	2.55	0.45
32:YP:88:LEU:C	32:YP:88:LEU:HD23	2.37	0.45
32:YP:92:GLU:HA	32:YP:123:LEU:HD23	1.99	0.45
33:YQ:58:PHE:O	33:YQ:58:PHE:CD1	2.70	0.45
34:YR:12:ARG:HG3	34:YR:12:ARG:NH1	2.32	0.45
49:Y6:15:GLU:OE2	49:Y6:44:ARG:NH1	2.49	0.45
49:Y6:48:VAL:O	49:Y6:49:HIS:HB2	2.15	0.45
51:Y8:36:LYS:HB3	51:Y8:40:GLU:HG2	1.98	0.45
53:QV:35:A:C6	54:QX:3:G:C6	3.04	0.45
1:QA:16:A:N1	1:QA:920:U:C2	2.85	0.45
1:QA:243:A:N6	1:QA:281:G:O2'	2.50	0.45
1:QA:449:C:H5	16:QP:42:ARG:HH11	1.65	0.45
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.51	0.45
1:QA:698:G:C6	1:QA:699:C:C4	3.05	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.45
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	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
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
22:RA:563:G:C6	22:RA:564:C:C4	3.05	0.45
22:RA:2303:G:O2'	22:RA:2304:G:H5'	2.16	0.45
22:RA:2693:A:H2'	22:RA:2694:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:92:ILE:HD12	24:RD:104:TYR:HD2	1.81	0.45
24:RD:198:ASN:ND2	24:RD:198:ASN:O	2.50	0.45
25:RE:77:ILE:O	25:RE:78:LEU:O	2.34	0.45
26:RF:119:ARG:HH11	26:RF:119:ARG:CG	2.29	0.45
26:RF:196:LEU:O	26:RF:200:GLU:HG2	2.17	0.45
27:RG:6:ALA:HB3	27:RG:104:GLU:OE2	2.16	0.45
27:RG:36:LYS:O	27:RG:37:VAL:HG23	2.16	0.45
28:RH:149:ARG:HA	28:RH:162:ILE:HG21	1.99	0.45
29:RI:144:VAL:HG22	29:RI:145:VAL:H	1.81	0.45
32:RP:115:LEU:CB	32:RP:131:SER:HB2	2.47	0.45
33:RQ:10:ARG:O	33:RQ:11:LYS:CB	2.64	0.45
38:RV:5:VAL:HG22	38:RV:14:VAL:CG2	2.46	0.45
38:RV:5:VAL:HG13	38:RV:14:VAL:HG21	1.98	0.45
38:RV:61:VAL:HA	38:RV:94:LEU:HD23	1.97	0.45
39:RW:67:ASP:OD2	39:RW:67:ASP:N	2.50	0.45
40:RX:47:PHE:O	40:RX:48:LYS:C	2.55	0.45
45:R2:28:LYS:HB3	45:R2:57:ILE:HG12	1.98	0.45
48:R5:15:ARG:HA	48:R5:18:ALA:HB3	1.99	0.45
51:R8:36:LYS:HB3	51:R8:40:GLU:HG2	1.99	0.45
1:XA:372:C:C2'	1:XA:373:A:OP2	2.61	0.45
1:XA:546:G:P	4:XD:72:GLU:HB3	2.57	0.45
1:XA:872:A:C8	1:XA:874:G:C8	3.05	0.45
1:XA:1292:U:OP1	7:XG:41:ARG:NH2	2.49	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	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: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
22:YA:774:A:H2	22:YA:787:U:O2'	2.00	0.45
22:YA:1264:G:C3'	22:YA:1265:A:H5''	2.42	0.45
22:YA:1368:G:C2	22:YA:1369:G:C8	3.05	0.45
22:YA:1646:C:H5''	22:YA:1647:G:H5''	1.98	0.45
22:YA:1726:G:C6	22:YA:1727:U:C4	3.04	0.45
22:YA:1892:C:H2'	22:YA:1893:C:O4'	2.16	0.45
22:YA:1928:A:C2'	22:YA:1929:G:H5'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2210:G:H5'	22:YA:2211:G:C5	2.51	0.45
22:YA:2246:G:H1'	22:YA:2426:A:C2	2.52	0.45
22:YA:2250:G:C4	33:YQ:82:ARG:HG3	2.52	0.45
22:YA:2678:C:H2'	22:YA:2679:A:O4'	2.16	0.45
22:YA:2818:G:OP2	34:YR:42:LYS:NZ	2.42	0.45
24:YD:45:ASN:CG	24:YD:46:GLN:N	2.68	0.45
25:YE:4:ILE:HG12	25:YE:91:VAL:HG11	1.99	0.45
25:YE:18:ASP:O	25:YE:19:ARG:C	2.55	0.45
26:YF:196:LEU:O	26:YF:200:GLU:HG2	2.17	0.45
27:YG:121:ASN:C	27:YG:123:ASN:H	2.20	0.45
30:YN:7:LYS:HD3	30:YN:9:VAL:H	1.81	0.45
31:YO:53:LYS:N	31:YO:53:LYS:CD	2.69	0.45
32:YP:75:ILE:HG12	32:YP:77:ARG:HH12	1.82	0.45
32:YP:75:ILE:HG12	32:YP:77:ARG:NH1	2.32	0.45
33:YQ:34:LEU:HB2	33:YQ:118:LEU:HD22	1.99	0.45
33:YQ:133:ARG:CG	33:YQ:134:ARG:N	2.78	0.45
35:YS:83:LYS:CE	35:YS:109:GLY:HA2	2.47	0.45
36:YT:57:PHE:O	36:YT:58:ASN:C	2.53	0.45
41:YY:25:GLY:HA3	41:YY:39:VAL:CG1	2.47	0.45
1:QA:53:A:C2	1:QA:54:C:H1'	2.51	0.45
1:QA:188:U:H2'	1:QA:189:U:H5''	1.98	0.45
1:QA:296:U:H2'	1:QA:297:G:C8	2.52	0.45
1:QA:322:C:O3'	20:QT:23:ARG:HG3	2.17	0.45
1:QA:1059:C:H2'	1:QA:1060:C:C6	2.51	0.45
1:QA:1151:A:H1'	10:QJ:39:PRO:CB	2.43	0.45
1:QA:1412:C:C2	1:QA:1489:G:N2	2.85	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.45
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.45
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.45
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.45
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
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:30:G:C5	22:RA:31:C:C4	3.05	0.45
22:RA:433:C:H2'	22:RA:434:U:C6	2.52	0.45
22:RA:796:C:H2'	22:RA:797:C:C6	2.52	0.45
22:RA:865:C:O2	22:RA:867:C:N4	2.50	0.45
22:RA:1028:A:N6	22:RA:1125:G:H2'	2.31	0.45
22:RA:1349:A:N6	22:RA:1598:C:H42	2.15	0.45
22:RA:2467:C:O2	33:RQ:124:LYS:NZ	2.49	0.45
22:RA:2742:C:H6	22:RA:2742:C:O5'	2.00	0.45
24:RD:68:LYS:HD2	24:RD:70:TRP:CZ2	2.52	0.45
25:RE:36:ARG:HH11	25:RE:36:ARG:CB	2.28	0.45
27:RG:16:ARG:CZ	27:RG:31:VAL:HG11	2.47	0.45
27:RG:129:GLY:O	27:RG:130:ASN:OD1	2.34	0.45
28:RH:53:GLU:OE1	28:RH:53:GLU:HA	2.16	0.45
30:RN:57:ALA:HA	30:RN:60:ILE:CD1	2.43	0.45
33:RQ:90:VAL:C	33:RQ:92:GLY:N	2.70	0.45
37:RU:86:ALA:CB	37:RU:88:ILE:HD11	2.47	0.45
38:RV:4:ILE:HG22	38:RV:39:LEU:HD23	1.98	0.45
41:RY:73:ARG:HE	41:RY:73:ARG:HB3	1.51	0.45
41:RY:84:ARG:HD3	41:RY:86:ARG:HH11	1.82	0.45
42:RZ:52:SER:O	42:RZ:53:ILE:HG13	2.17	0.45
45:R2:41:ILE:HD12	45:R2:41:ILE:O	2.16	0.45
51:R8:9:GLY:O	51:R8:13:ARG:HG2	2.16	0.45
51:R8:17:THR:O	51:R8:20:GLY:N	2.46	0.45
1:XA:28:G:O2'	1:XA:296:U:OP1	2.33	0.45
1:XA:474:G:H2'	1:XA:475:G:C8	2.51	0.45
1:XA:664:G:H22	1:XA:741:G:H1	1.66	0.45
1:XA:713:G:H2'	1:XA:714:G:C8	2.52	0.45
1:XA:814:A:O2'	1:XA:815:A:H3'	2.17	0.45
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.45
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	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
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.45
10:XJ:63:PHE:HB3	14:YN:57:ARG:O	2.17	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:11:ARG:HH21	27:YG:146:TYR:HD2	1.60	0.45
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.45
13:XM:110:ARG:HH11	13:XM:110:ARG:HG3	1.82	0.45
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.42	0.45
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.45
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.45
22:YA:271(B):G:O2'	22:YA:271(C):U:OP2	2.31	0.45
22:YA:1022:G:N2	22:YA:1024:G:C2	2.84	0.45
22:YA:1651:G:H1	22:YA:2006:C:N4	2.15	0.45
22:YA:2587:A:H8	22:YA:2587:A:O5'	2.00	0.45
24:YD:145:VAL:HG12	24:YD:146:GLU:N	2.32	0.45
25:YE:21:VAL:HG23	25:YE:22:PRO:CD	2.46	0.45
26:YF:144:LYS:C	26:YF:146:ALA:H	2.21	0.45
27:YG:83:ARG:HG3	27:YG:86:MET:CE	2.46	0.45
28:YH:137:ASP:HB2	28:YH:140:LYS:HE3	1.98	0.45
30:YN:5:VAL:O	30:YN:5:VAL:HG13	2.16	0.45
35:YS:78:LEU:HD21	35:YS:108:GLY:CA	2.47	0.45
36:YT:23:ARG:CB	36:YT:24:PRO:HD2	2.40	0.45
39:YW:14:PRO:O	39:YW:16:LYS:N	2.50	0.45
48:Y5:56:LYS:O	48:Y5:58:LEU:N	2.50	0.45
49:Y6:7:ILE:O	49:Y6:8:LYS:HG2	2.16	0.45
49:Y6:7:ILE:HG23	49:Y6:8:LYS:N	2.32	0.45
1:QA:122:G:C6	1:QA:123:C:C4	3.06	0.44
1:QA:576:G:O6	1:QA:880:C:O2'	2.27	0.44
1:QA:743:U:H2'	1:QA:744:C:C6	2.52	0.44
1:QA:957:U:H2'	1:QA:959:A:OP2	2.16	0.44
1:QA:1400:C:C4	53:QV:34:C:C2	3.05	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	1.99	0.44
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.44
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.54	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.82	0.44
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	0.44
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.44
22:RA:372:G:O2'	22:RA:373:U:P	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:717:G:H2'	22:RA:718:A:O4'	2.17	0.44
22:RA:991:C:H5'	22:RA:991:C:H6	1.82	0.44
22:RA:1201:C:H42	22:RA:1244:G:H1	1.65	0.44
22:RA:1266:G:O4'	39:RW:15:ARG:NH2	2.47	0.44
22:RA:1421:G:C2	22:RA:1422:G:C8	3.06	0.44
22:RA:1728:G:N1	22:RA:1730:U:OP2	2.50	0.44
22:RA:1871:A:H2'	22:RA:1872:A:C8	2.51	0.44
22:RA:2351:G:O6	51:R8:39:LYS:HG2	2.17	0.44
22:RA:2712:U:OP1	22:RA:2714:G:H4'	2.18	0.44
24:RD:143:HIS:HD2	24:RD:144:ALA:HB2	1.82	0.44
24:RD:176:ARG:HH11	24:RD:176:ARG:CG	2.30	0.44
24:RD:241:PRO:O	24:RD:242:ARG:C	2.55	0.44
25:RE:101:ARG:HD2	25:RE:171:GLU:HA	1.98	0.44
26:RF:7:TYR:N	26:RF:7:TYR:CD1	2.85	0.44
27:RG:67:LYS:CE	47:R4:6:HIS:NE2	2.74	0.44
31:RO:22:ILE:HG12	31:RO:41:ALA:HA	1.98	0.44
31:RO:78:ARG:HH21	36:RT:103:ARG:HH22	1.64	0.44
32:RP:75:ILE:HG12	32:RP:77:ARG:HH12	1.82	0.44
32:RP:115:LEU:HA	32:RP:134:ALA:CB	2.47	0.44
34:RR:10:LEU:O	34:RR:11:ASN:C	2.55	0.44
36:RT:49:VAL:O	36:RT:49:VAL:CG1	2.64	0.44
38:RV:69:LYS:HG3	38:RV:87:HIS:O	2.17	0.44
42:RZ:14:LYS:HA	42:RZ:15:PRO:HD3	1.77	0.44
42:RZ:111:VAL:O	42:RZ:113:ALA:N	2.50	0.44
44:R1:94:LEU:O	44:R1:95:LEU:HB2	2.18	0.44
47:R4:15:ILE:N	47:R4:15:ILE:CD1	2.78	0.44
49:R6:9:LEU:CD1	49:R6:26:ASN:ND2	2.80	0.44
50:R7:24:THR:O	50:R7:28:ARG:HG3	2.16	0.44
1:XA:524:G:C6	1:XA:525:C:N4	2.85	0.44
1:XA:939:G:H5''	7:XG:102:ARG:HH12	1.81	0.44
1:XA:1222:G:H5''	19:XS:78:ARG:NH1	2.32	0.44
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.44
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.44
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	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
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
22:YA:963:U:H2'	22:YA:964:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1662:C:O2'	22:YA:2687:U:H5''	2.16	0.44
22:YA:2313:C:H5''	27:YG:91:ARG:HD3	1.99	0.44
22:YA:2507:C:H2'	22:YA:2508:G:C8	2.52	0.44
22:YA:2588:G:C6	22:YA:2607:G:C2	3.04	0.44
24:YD:52:ARG:HB2	24:YD:53:PHE:CD2	2.53	0.44
24:YD:166:GLN:NE2	24:YD:166:GLN:HA	2.32	0.44
30:YN:112:LEU:O	30:YN:116:LEU:HG	2.16	0.44
31:YO:19:ILE:HD13	31:YO:19:ILE:H	1.83	0.44
31:YO:97:ARG:HA	31:YO:117:LEU:HD22	1.99	0.44
32:YP:112:LEU:CD1	32:YP:114:ILE:HG23	2.47	0.44
33:YQ:5:ARG:O	33:YQ:6:ARG:O	2.35	0.44
33:YQ:93:TYR:CD1	33:YQ:93:TYR:N	2.85	0.44
34:YR:17:ARG:O	34:YR:20:LEU:HB3	2.17	0.44
35:YS:3:ARG:O	35:YS:4:LEU:O	2.35	0.44
36:YT:36:GLU:CG	36:YT:41:ARG:HD3	2.46	0.44
38:YV:69:LYS:HG3	38:YV:87:HIS:O	2.17	0.44
49:Y6:18:ARG:O	49:Y6:19:ARG:O	2.33	0.44
1:QA:1053:G:H2'	1:QA:1199:U:C5	2.52	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.83	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.44
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
22:RA:182:A:H2'	22:RA:183:C:O4'	2.18	0.44
22:RA:229:A:OP1	22:RA:229:A:H4'	2.15	0.44
22:RA:270(H):C:H2'	22:RA:270(I):G:H8	1.79	0.44
22:RA:553:U:H2'	22:RA:554:U:O4'	2.17	0.44
22:RA:2020:A:C2	22:RA:2022:U:O4'	2.71	0.44
22:RA:2242:G:H2'	22:RA:2243:U:O4'	2.17	0.44
22:RA:2372:G:H4'	49:R6:46:HIS:NE2	2.32	0.44
24:RD:79:VAL:HG21	24:RD:111:LEU:HD21	1.98	0.44
24:RD:166:GLN:NE2	24:RD:166:GLN:HA	2.33	0.44
27:RG:44:GLY:HA2	27:RG:88:ILE:HD11	1.99	0.44
28:RH:51:ARG:HG3	28:RH:51:ARG:NH1	2.30	0.44
30:RN:67:LEU:HA	30:RN:87:LEU:HD13	2.00	0.44
30:RN:120:LEU:HD13	30:RN:120:LEU:C	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:2:ILE:HD11	31:RO:82:ASN:ND2	2.16	0.44
31:RO:19:ILE:HD13	31:RO:19:ILE:H	1.83	0.44
33:RQ:119:ARG:HH11	33:RQ:119:ARG:CG	2.25	0.44
39:RW:21:VAL:O	39:RW:21:VAL:HG12	2.17	0.44
44:R1:48:LYS:HA	44:R1:60:PHE:O	2.17	0.44
44:R1:60:PHE:HZ	44:R1:90:ILE:HG21	1.82	0.44
51:R8:15:LYS:HD3	51:R8:15:LYS:C	2.37	0.44
1:XA:31:G:O2'	1:XA:48:C:N4	2.50	0.44
1:XA:95:G:C6	1:XA:96:G:C6	3.05	0.44
1:XA:642:A:H2'	1:XA:643:C:C6	2.52	0.44
1:XA:674:G:H2'	1:XA:675:A:H8	1.81	0.44
1:XA:903:G:N2	1:XA:904:C:C2	2.85	0.44
1:XA:954:G:H21	1:XA:1227:A:H62	1.65	0.44
1:XA:1028(B):C:H42	1:XA:1032(A):G:H1	1.64	0.44
1:XA:1126:U:OP2	1:XA:1281:U:H1'	2.18	0.44
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.38	0.44
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.52	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.98	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.86	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.86	0.44
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	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
22:YA:238:C:C2	22:YA:260:G:C2	3.05	0.44
22:YA:1945:G:C6	22:YA:1946:U:C4	3.05	0.44
22:YA:1977:A:H2'	22:YA:1978:A:O4'	2.17	0.44
22:YA:2422:A:C5	22:YA:2424:C:N4	2.86	0.44
24:YD:80:ALA:O	24:YD:113:VAL:HG13	2.16	0.44
24:YD:177:LEU:O	24:YD:179:SER:N	2.51	0.44
27:YG:19:LEU:HA	27:YG:22:ARG:HB2	1.99	0.44
27:YG:129:GLY:HA2	27:YG:169:ALA:HB2	1.99	0.44
31:YO:104:ARG:NH1	36:YT:36:GLU:CD	2.71	0.44
32:YP:21:ARG:HA	32:YP:21:ARG:HE	1.82	0.44
38:YV:61:VAL:O	38:YV:61:VAL:HG22	2.17	0.44
42:YZ:5:LEU:HB3	42:YZ:59:LEU:HD23	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:48:LYS:HA	44:Y1:60:PHE:O	2.17	0.44
47:Y4:15:ILE:CG2	47:Y4:20:ASN:ND2	2.81	0.44
51:Y8:15:LYS:HD3	51:Y8:15:LYS:C	2.37	0.44
1:QA:327:A:O2'	1:QA:328:C:O4'	2.31	0.44
1:QA:664:G:H2'	1:QA:666:G:OP1	2.17	0.44
1:QA:1112:C:O2	3:QC:179:ARG:HG2	2.17	0.44
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.82	0.44
1:QA:1346:A:C5	7:QG:10:ARG:NH1	2.85	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.47	0.44
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	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
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.51	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
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
20:QT:84:LEU:C	20:QT:84:LEU:HD13	2.36	0.44
22:RA:269:U:C4	22:RA:270(Z):U:C2	3.05	0.44
22:RA:414:C:O2	22:RA:1864:U:O2'	2.33	0.44
22:RA:587:C:H4'	22:RA:588:U:O5'	2.17	0.44
22:RA:724:U:H2'	22:RA:725:G:O4'	2.18	0.44
22:RA:1629:U:O2	22:RA:2698:U:H5''	2.18	0.44
22:RA:2250:G:C8	22:RA:2496:C:H5''	2.53	0.44
22:RA:2633:G:H1'	25:RE:62:PRO:HG2	1.99	0.44
23:RB:104:A:H5'	42:RZ:72:ARG:HD3	1.99	0.44
24:RD:48:ARG:HG3	24:RD:48:ARG:NH1	2.31	0.44
24:RD:145:VAL:HG12	24:RD:146:GLU:N	2.32	0.44
26:RF:155:LEU:HA	26:RF:174:VAL:CG1	2.46	0.44
29:RI:98:ALA:HA	29:RI:109:ILE:HD11	1.99	0.44
30:RN:36:GLY:O	30:RN:42:TRP:CE3	2.69	0.44
31:RO:104:ARG:NH2	36:RT:34:VAL:HG11	2.32	0.44
35:RS:78:LEU:HD21	35:RS:108:GLY:CA	2.47	0.44
37:RU:66:ASN:CB	37:RU:76:TYR:HB2	2.44	0.44
38:RV:61:VAL:O	38:RV:61:VAL:HG22	2.16	0.44
39:RW:74:ALA:O	39:RW:75:TYR:CB	2.65	0.44
39:RW:88:ARG:HH11	39:RW:88:ARG:HG2	1.82	0.44
44:R1:54:ALA:O	44:R1:55:GLY:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R5:56:LYS:O	48:R5:58:LEU:N	2.50	0.44
51:R8:47:LYS:HD2	51:R8:48:PHE:N	2.33	0.44
1:XA:255:G:OP1	17:XQ:69:LYS:NZ	2.47	0.44
1:XA:745:C:OP1	1:XA:851:G:O2'	2.26	0.44
1:XA:781:A:C5	1:XA:802:A:C2	3.06	0.44
1:XA:881:G:P	12:XL:12:ARG:NH2	2.91	0.44
1:XA:1000:A:H2'	1:XA:1001:G:H8	1.82	0.44
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.32	0.44
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.52	0.44
1:XA:1190:G:OP1	3:XC:4:LYS:HA	2.17	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
4:XD:94:LEU:O	4:XD:98:GLU:N	2.50	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
10:XJ:61:GLU:CG	14:YN:58:LYS:HE2	2.47	0.44
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	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:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
22:YA:110:G:C2	22:YA:111:A:C8	3.06	0.44
22:YA:330:A:H2	22:YA:1210:A:O2'	2.00	0.44
22:YA:589:C:H2'	22:YA:590:A:H8	1.83	0.44
22:YA:1138:G:H21	30:YN:106:MET:CE	2.30	0.44
22:YA:1222:C:H2'	22:YA:1223:C:C6	2.52	0.44
22:YA:1517:G:C6	22:YA:1518:C:N4	2.84	0.44
22:YA:1535:U:N3	22:YA:1537:C:H1'	2.32	0.44
22:YA:1676:A:H2'	22:YA:1677:A:O4'	2.17	0.44
22:YA:2294:C:OP2	35:YS:13:ARG:NH1	2.50	0.44
22:YA:2377:A:H4'	35:YS:111:GLU:O	2.18	0.44
22:YA:2601:C:H2'	22:YA:2602:A:OP2	2.18	0.44
22:YA:2732:G:H3'	22:YA:2733:A:O4'	2.18	0.44
23:YB:42:C:N4	27:YG:91:ARG:HH21	2.14	0.44
24:YD:12:SER:C	24:YD:14:ARG:N	2.70	0.44
24:YD:226:MET:H	24:YD:226:MET:HG2	1.53	0.44
27:YG:16:ARG:CZ	27:YG:31:VAL:HG11	2.47	0.44
27:YG:63:ILE:HG12	27:YG:64:THR:N	2.33	0.44
31:YO:40:VAL:CG1	31:YO:41:ALA:N	2.80	0.44
32:YP:45:LEU:N	32:YP:45:LEU:HD12	2.32	0.44
33:YQ:66:ILE:O	33:YQ:104:PHE:N	2.49	0.44
36:YT:80:SER:HA	36:YT:81:PRO:HD3	1.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:10:LYS:HD2	44:Y1:66:HIS:HE1	1.82	0.44
46:Y3:60:GLU:HG2	46:Y3:60:GLU:O	2.16	0.44
49:Y6:19:ARG:HD2	49:Y6:19:ARG:HA	1.77	0.44
1:QA:337:C:H2'	1:QA:338:A:C8	2.52	0.44
1:QA:358:U:H2'	1:QA:359:U:H6	1.83	0.44
1:QA:412:A:H1'	1:QA:413:G:OP2	2.18	0.44
1:QA:468:A:H4'	16:QP:80:PHE:O	2.18	0.44
1:QA:626:U:C2	1:QA:627:G:C8	3.05	0.44
1:QA:722:A:H4'	1:QA:723:U:C4	2.52	0.44
1:QA:1252:A:H61	1:QA:1285:A:H61	1.64	0.44
1:QA:1297:C:O2'	1:QA:1298:C:O5'	2.36	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.17	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.81	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
22:RA:249:C:P	22:RA:2394:C:HO2'	2.41	0.44
22:RA:969:U:OP1	46:R3:17:LYS:N	2.50	0.44
22:RA:1497:U:H3'	22:RA:1498:C:H6	1.82	0.44
22:RA:1516:U:H2'	22:RA:1517:G:H8	1.81	0.44
22:RA:1753:G:N1	22:RA:1756:G:C2	2.85	0.44
22:RA:2049:G:N2	22:RA:2620:C:C2	2.86	0.44
22:RA:2143:C:H2'	22:RA:2144:U:O4'	2.18	0.44
22:RA:2284:C:C5	49:R6:27:LYS:HE2	2.52	0.44
22:RA:2547:U:O2	31:RO:23:ARG:NH2	2.51	0.44
22:RA:2599:G:OP2	24:RD:236:GLY:HA2	2.18	0.44
22:RA:2658:C:H5''	28:RH:158:HIS:CE1	2.53	0.44
25:RE:4:ILE:HG12	25:RE:91:VAL:HG11	1.99	0.44
25:RE:143:ASN:N	25:RE:143:ASN:ND2	2.65	0.44
27:RG:129:GLY:HA2	27:RG:169:ALA:HB2	1.99	0.44
28:RH:7:LEU:C	28:RH:7:LEU:HD12	2.37	0.44
30:RN:7:LYS:HD3	30:RN:9:VAL:H	1.81	0.44
30:RN:20:GLY:HA2	30:RN:61:ARG:HD2	1.99	0.44
32:RP:45:LEU:N	32:RP:45:LEU:HD12	2.32	0.44
32:RP:83:VAL:HG11	32:RP:112:LEU:HD21	1.96	0.44
35:RS:3:ARG:O	35:RS:4:LEU:O	2.35	0.44
35:RS:29:PHE:HD2	35:RS:92:TYR:HH	1.64	0.44
35:RS:78:LEU:HD21	35:RS:108:GLY:HA2	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RW:29:LEU:HD11	39:RW:55:ALA:HB2	1.98	0.44
40:RX:70:LEU:HD23	40:RX:70:LEU:H	1.77	0.44
41:RY:95:LYS:HB2	41:RY:99:CYS:O	2.18	0.44
47:R4:15:ILE:CG2	47:R4:20:ASN:ND2	2.81	0.44
49:R6:17:LYS:O	49:R6:18:ARG:CB	2.64	0.44
49:R6:34:LEU:O	49:R6:36:LEU:HD22	2.17	0.44
50:R7:32:LYS:O	50:R7:33:ARG:C	2.56	0.44
1:XA:32:A:H2'	1:XA:33:A:C8	2.52	0.44
1:XA:684:A:H2'	1:XA:685:G:C8	2.52	0.44
1:XA:1378:C:N4	1:XA:1379:G:N3	2.66	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	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
8:XH:1:MET:H3	8:XH:1:MET:CE	2.31	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
22:YA:903:C:H2'	22:YA:904:C:O4'	2.18	0.44
22:YA:1655:A:H4'	25:YE:115:GLY:N	2.32	0.44
22:YA:2419:U:OP1	49:Y6:23:THR:HG21	2.18	0.44
22:YA:2635:C:OP1	25:YE:78:LEU:HD12	2.17	0.44
25:YE:50:GLY:CA	25:YE:74:PRO:HG3	2.46	0.44
26:YF:116:ASP:OD2	32:YP:1:MET:N	2.44	0.44
26:YF:149:ASP:OD2	26:YF:151:SER:HB3	2.17	0.44
26:YF:201:VAL:HG13	26:YF:202:PHE:N	2.33	0.44
32:YP:6:LEU:N	32:YP:6:LEU:HD22	2.31	0.44
32:YP:31:ALA:C	32:YP:32:THR:CG2	2.85	0.44
33:YQ:21:THR:HB	33:YQ:22:LYS:H	1.42	0.44
33:YQ:60:ARG:HB2	33:YQ:60:ARG:HH21	1.82	0.44
35:YS:56:LEU:O	35:YS:57:LYS:O	2.36	0.44
37:YU:53:ARG:C	37:YU:55:ARG:H	2.20	0.44
37:YU:57:PHE:O	37:YU:59:ARG:N	2.50	0.44
38:YV:72:VAL:HG13	38:YV:85:LYS:HB3	2.00	0.44
39:YW:1:MET:CE	39:YW:2:GLU:H	2.31	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YW:28:SER:O	39:YW:30:GLU:N	2.51	0.44
43:Y0:12:ASN:HB2	43:Y0:13:GLY:H	1.46	0.44
44:Y1:60:PHE:HE2	44:Y1:91:LYS:NZ	2.16	0.44
47:Y4:33:VAL:CG1	47:Y4:34:GLU:N	2.80	0.44
47:Y4:39:CYS:HB3	47:Y4:41:PRO:HD2	2.00	0.44
48:Y5:40:LYS:HZ1	48:Y5:48:GLU:CB	2.19	0.44
51:Y8:47:LYS:HD2	51:Y8:48:PHE:N	2.33	0.44
1:QA:1054:C:N4	55:QY:34:C:C1'	2.47	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	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
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.47	0.44
22:RA:593:G:O3'	51:R8:61:LEU:HD22	2.18	0.44
22:RA:685:A:H5''	22:RA:788:A:H62	1.82	0.44
22:RA:704:G:O2'	22:RA:705:A:O5'	2.35	0.44
22:RA:727:A:C2	24:RD:9:TYR:CD2	3.06	0.44
22:RA:770:G:N3	22:RA:1354:A:H2	2.16	0.44
22:RA:910:A:N6	22:RA:911:A:N6	2.66	0.44
22:RA:1258:C:H2'	22:RA:1259:G:C8	2.52	0.44
22:RA:1405:U:H2'	22:RA:1406:U:C6	2.52	0.44
22:RA:1578:U:H2'	22:RA:1579:A:H5'	2.00	0.44
22:RA:2600:A:C6	22:RA:2601:C:N4	2.86	0.44
22:RA:2776:A:H4'	22:RA:2777:G:O5'	2.16	0.44
24:RD:155:LEU:N	24:RD:155:LEU:HD12	2.32	0.44
26:RF:117:ARG:NH2	26:RF:189:THR:O	2.50	0.44
26:RF:132:VAL:HG23	26:RF:133:ASN:H	1.82	0.44
30:RN:96:GLU:CG	30:RN:97:ARG:N	2.72	0.44
31:RO:91:LEU:N	31:RO:91:LEU:CD2	2.80	0.44
32:RP:81:GLN:HG3	32:RP:82:GLY:N	2.32	0.44
32:RP:101:VAL:HA	32:RP:106:LEU:HB2	1.99	0.44
36:RT:135:ALA:C	36:RT:137:LYS:N	2.71	0.44
38:RV:35:LEU:HD22	38:RV:35:LEU:N	2.23	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RX:87:GLN:HE21	40:RX:87:GLN:HB2	1.55	0.44
41:RY:88:LYS:HB3	41:RY:90:LEU:CD2	2.48	0.44
44:R1:10:LYS:HD2	44:R1:66:HIS:HE1	1.82	0.44
47:R4:68:ARG:HH11	47:R4:69:LYS:HG2	1.82	0.44
50:R7:48:LYS:CG	50:R7:49:ARG:H	2.23	0.44
1:XA:222:U:H2'	1:XA:223:U:H6	1.83	0.44
1:XA:539:A:OP1	12:XL:114:LYS:HE2	2.16	0.44
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.52	0.44
1:XA:730:G:C5	1:XA:731:G:H1'	2.52	0.44
1:XA:985:C:H2'	1:XA:986:A:H8	1.81	0.44
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.35	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.99	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.50	0.44
22:YA:389:G:N1	32:YP:71:VAL:HG12	2.32	0.44
22:YA:424:G:C2	22:YA:425:G:C8	3.06	0.44
22:YA:1207:C:H2'	22:YA:1208:C:H6	1.82	0.44
22:YA:1423:G:H2'	22:YA:1424:G:H8	1.83	0.44
22:YA:1798:U:C4	22:YA:1819:A:C2	3.05	0.44
22:YA:1825:A:H2'	22:YA:1826:G:H8	1.83	0.44
22:YA:2038:G:H2'	22:YA:2039:C:O4'	2.18	0.44
22:YA:2418:A:H2'	22:YA:2419:U:C6	2.53	0.44
22:YA:2464:C:H2'	22:YA:2465:C:C6	2.51	0.44
22:YA:2865:U:C4	22:YA:2866:U:N3	2.85	0.44
25:YE:172:VAL:HG13	25:YE:182:LEU:HD11	1.98	0.44
26:YF:24:LEU:HD12	26:YF:24:LEU:N	2.33	0.44
30:YN:63:THR:HG23	30:YN:66:LYS:HE3	2.00	0.44
36:YT:135:ALA:C	36:YT:137:LYS:N	2.71	0.44
45:Y2:41:ILE:HD12	45:Y2:41:ILE:O	2.16	0.44
47:Y4:23:GLU:O	47:Y4:24:THR:OG1	2.34	0.44
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.52	0.44
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
13:QM:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	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
22:RA:269:U:C5	22:RA:270(Z):U:C4	3.05	0.44
22:RA:605:C:O2	22:RA:657:U:O2'	2.36	0.44
22:RA:1301:A:H2	22:RA:1626:G:N3	2.14	0.44
22:RA:1359:A:OP2	22:RA:1371:G:N2	2.41	0.44
22:RA:1599:C:H2'	22:RA:1600:C:C6	2.52	0.44
22:RA:1803:A:H2	22:RA:1822:G:N3	2.16	0.44
22:RA:1991:U:H2'	22:RA:1992:G:H5''	2.00	0.44
22:RA:2231:C:H2'	22:RA:2232:U:O4'	2.18	0.44
24:RD:95:LEU:HD12	24:RD:95:LEU:O	2.17	0.44
26:RF:174:VAL:CG1	26:RF:174:VAL:O	2.65	0.44
27:RG:67:LYS:HD2	27:RG:67:LYS:N	2.33	0.44
28:RH:84:SER:OG	28:RH:85:LYS:N	2.51	0.44
30:RN:57:ALA:O	30:RN:124:ALA:HA	2.18	0.44
34:RR:41:ALA:C	34:RR:43:GLU:H	2.20	0.44
46:R3:50:VAL:HB	46:R3:53:LEU:HD12	2.00	0.44
1:XA:89:U:H2'	1:XA:90:C:C6	2.53	0.44
1:XA:716:A:C6	1:XA:717:C:C4	3.06	0.44
1:XA:1432:G:H8	1:XA:1432:G:O5'	2.01	0.44
1:XA:1507:A:C8	1:XA:1530:G:N2	2.85	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
10:XJ:53:PRO:C	14:XN:41:ARG:NH2	2.71	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.44
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.44
22:YA:974(A):C:H4'	22:YA:975:G:C5'	2.47	0.44
22:YA:1443:G:H1	22:YA:1548:C:H42	1.66	0.44
22:YA:2370:G:H21	49:Y6:45:LYS:NZ	2.14	0.44
22:YA:2655:G:O2'	22:YA:2656:U:OP2	2.36	0.44
24:YD:44:ASN:CB	24:YD:49:ILE:HG22	2.46	0.44
24:YD:145:VAL:HB	24:YD:155:LEU:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:16:ARG:NH2	27:YG:31:VAL:CG1	2.75	0.44
27:YG:51:ARG:HB3	27:YG:51:ARG:NH1	2.33	0.44
28:YH:37:VAL:HG11	28:YH:68:THR:HG23	1.98	0.44
29:YI:30:LEU:HA	29:YI:35:LEU:HD12	2.00	0.44
31:YO:120:GLU:OE1	36:YT:67:SER:OG	2.24	0.44
32:YP:107:LYS:HB2	32:YP:110:TYR:HD2	1.83	0.44
35:YS:110:LEU:HA	35:YS:112:PHE:CE1	2.53	0.44
37:YU:86:ALA:CB	37:YU:88:ILE:HD11	2.48	0.44
37:YU:97:ASP:HA	37:YU:100:VAL:CG2	2.47	0.44
39:YW:14:PRO:HB3	39:YW:18:ARG:HE	1.83	0.44
41:YY:36:ALA:HB1	41:YY:67:LEU:O	2.16	0.44
41:YY:88:LYS:HB3	41:YY:90:LEU:CD2	2.48	0.44
42:YZ:152:ALA:O	42:YZ:154:ASP:N	2.48	0.44
47:Y4:68:ARG:HH11	47:Y4:69:LYS:HG2	1.82	0.44
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.32	0.44
1:QA:440:A:H3'	1:QA:442:C:H6	1.83	0.44
1:QA:523:A:H8	1:QA:523:A:O5'	2.00	0.44
1:QA:1148:U:H2'	1:QA:1149:C:O4'	2.17	0.44
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.17	0.44
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.52	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.17	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
22:RA:138:G:N2	40:RX:44:GLU:OE2	2.27	0.44
22:RA:345:A:H5''	22:RA:346:A:OP1	2.18	0.44
22:RA:389:G:OP2	44:R1:26:ARG:HB3	2.17	0.44
22:RA:571:A:C6	22:RA:575:A:C8	3.06	0.44
22:RA:2396:G:OP1	44:R1:25:LYS:NZ	2.28	0.44
22:RA:2505:G:H2'	22:RA:2576:G:O6	2.18	0.44
22:RA:2583:G:C6	22:RA:2584:U:C5	3.05	0.44
24:RD:30:GLU:HG3	24:RD:63:ARG:NE	2.32	0.44
24:RD:30:GLU:CD	24:RD:63:ARG:HE	2.21	0.44
24:RD:52:ARG:HB2	24:RD:53:PHE:CD2	2.53	0.44
24:RD:155:LEU:HD23	24:RD:177:LEU:HD21	2.00	0.44
26:RF:65:TRP:CZ2	26:RF:72:ARG:NH2	2.85	0.44
31:RO:77:ILE:O	31:RO:77:ILE:HG23	2.17	0.44
31:RO:104:ARG:NH1	36:RT:36:GLU:CD	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RR:12:ARG:HG3	34:RR:12:ARG:NH1	2.32	0.44
34:RR:33:ARG:HA	34:RR:114:VAL:O	2.18	0.44
34:RR:79:LEU:HD23	34:RR:79:LEU:O	2.16	0.44
37:RU:52:ARG:NH1	37:RU:52:ARG:CG	2.76	0.44
37:RU:79:PHE:CE2	37:RU:83:LEU:CD1	3.00	0.44
41:RY:97:ARG:HG2	41:RY:97:ARG:HH11	1.82	0.44
44:R1:8:SER:CB	44:R1:66:HIS:CE1	3.01	0.44
45:R2:4:SER:OG	45:R2:5:GLU:OE2	2.26	0.44
47:R4:33:VAL:CG1	47:R4:34:GLU:H	2.22	0.44
1:XA:163:C:H2'	1:XA:164:U:H6	1.83	0.44
1:XA:246:A:N6	1:XA:281:G:H1'	2.33	0.44
1:XA:556:C:H2'	1:XA:557:G:C8	2.53	0.44
1:XA:591:U:C2	1:XA:592:G:C8	3.06	0.44
1:XA:1132:C:H2'	1:XA:1133:G:H8	1.82	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	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
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	2.18	0.44
13:XM:3:ARG:HH22	27:YG:113:ARG:NH2	2.15	0.44
22:YA:49:A:C6	22:YA:118:A:C5	3.06	0.44
22:YA:265:A:C6	22:YA:428:A:C4	3.05	0.44
22:YA:270(T):G:C2	22:YA:270(U):C:C2	3.06	0.44
22:YA:774:A:HO2'	22:YA:775:G:P	2.40	0.44
22:YA:1000:A:C6	22:YA:1155:A:C8	3.05	0.44
22:YA:1006:C:H5'	30:YN:28:THR:HG23	1.99	0.44
22:YA:1305:C:C2	22:YA:1624:G:C2	3.06	0.44
22:YA:1469:A:C4	22:YA:1470:G:C8	3.06	0.44
22:YA:1728:G:H3'	22:YA:1729:A:C5'	2.48	0.44
22:YA:1936:A:C8	22:YA:1945:G:C8	3.06	0.44
22:YA:2093:G:H2'	22:YA:2094:G:H8	1.82	0.44
22:YA:2316:C:H1'	27:YG:128:ARG:HH22	1.82	0.44
22:YA:2356:C:C5	22:YA:2357:U:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2633:G:H1'	25:YE:62:PRO:HG2	2.00	0.44
24:YD:17:THR:HG21	24:YD:204:ILE:HA	1.99	0.44
24:YD:143:HIS:HD2	24:YD:144:ALA:HB2	1.82	0.44
25:YE:120:TRP:CE3	25:YE:155:LYS:HD3	2.53	0.44
26:YF:65:TRP:CZ2	26:YF:72:ARG:NH2	2.86	0.44
27:YG:67:LYS:CE	47:Y4:6:HIS:NE2	2.74	0.44
28:YH:6:ARG:CG	28:YH:7:LEU:N	2.81	0.44
30:YN:109:LYS:H	30:YN:109:LYS:CD	2.26	0.44
32:YP:13:ASN:C	32:YP:15:ARG:H	2.21	0.44
32:YP:115:LEU:CB	32:YP:131:SER:HB2	2.47	0.44
33:YQ:81:VAL:HG23	33:YQ:82:ARG:N	2.32	0.44
35:YS:110:LEU:HA	35:YS:112:PHE:CZ	2.53	0.44
36:YT:99:LEU:CD1	36:YT:99:LEU:O	2.65	0.44
40:YX:35:THR:O	40:YX:36:LYS:C	2.55	0.44
42:YZ:107:THR:HA	42:YZ:108:PRO:HD3	1.89	0.44
49:Y6:34:LEU:O	49:Y6:36:LEU:HD22	2.17	0.44
1:QA:258:G:H1	1:QA:268:C:H42	1.66	0.44
1:QA:543:C:OP1	4:QD:14:ARG:NE	2.51	0.44
1:QA:667:G:H4'	15:QO:51:HIS:CE1	2.53	0.44
1:QA:1321:C:C4	1:QA:1322:C:C4	3.05	0.44
1:QA:1446:A:C4	36:RT:118:ARG:HD2	2.52	0.44
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.18	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.17	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.44
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.44
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
22:RA:94:G:H2'	22:RA:95:G:O4'	2.18	0.44
22:RA:530:G:O2'	22:RA:2021:C:O2'	2.35	0.44
22:RA:947:G:H2'	22:RA:948:G:C8	2.53	0.44
22:RA:1599:C:H2'	22:RA:1600:C:H6	1.83	0.44
22:RA:2006:C:O2'	22:RA:2823:A:N3	2.51	0.44
24:RD:10:THR:O	24:RD:11:PRO:C	2.56	0.44
24:RD:12:SER:C	24:RD:14:ARG:N	2.70	0.44
24:RD:44:ASN:H	24:RD:44:ASN:ND2	1.97	0.44
25:RE:52:LEU:HB2	25:RE:75:VAL:CG2	2.40	0.44
25:RE:199:ARG:HH11	25:RE:199:ARG:HG3	1.82	0.44
28:RH:119:GLU:CD	28:RH:120:GLY:H	2.22	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:125:VAL:CG1	28:RH:126:PRO:CG	2.94	0.44
30:RN:114:ARG:O	30:RN:115:ARG:CB	2.65	0.44
31:RO:86:ILE:H	31:RO:86:ILE:CD1	2.27	0.44
34:RR:3:HIS:C	34:RR:5:LYS:H	2.17	0.44
47:R4:39:CYS:HB3	47:R4:41:PRO:HD2	2.00	0.44
48:R5:52:TYR:CD1	48:R5:52:TYR:N	2.85	0.44
49:R6:11:LEU:HD12	49:R6:51:GLU:HG3	2.00	0.44
1:XA:35:G:C6	1:XA:36:C:N4	2.86	0.44
1:XA:1001:G:H2'	1:XA:1002:G:O4'	2.18	0.44
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.53	0.44
1:XA:1378:C:O2	7:XG:76:ARG:NH1	2.51	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
4:XD:180:GLY:O	4:XD:181:MET:C	2.54	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.44
19:XS:5:LEU:HD11	47:Y4:66:SER:HA	1.95	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
22:YA:744:G:H2'	22:YA:745:G:O4'	2.18	0.44
22:YA:809:G:H2'	22:YA:810:U:C6	2.53	0.44
22:YA:868:U:C4	22:YA:869:G:N7	2.86	0.44
22:YA:1333:C:H2'	22:YA:1334:G:H8	1.83	0.44
22:YA:2558:C:H2'	22:YA:2559:C:O4'	2.17	0.44
22:YA:2689:U:P	22:YA:2719:G:H22	2.40	0.44
23:YB:112:G:H2'	23:YB:113:C:H6	1.82	0.44
24:YD:44:ASN:HB2	24:YD:49:ILE:HA	1.93	0.44
24:YD:95:LEU:HD12	24:YD:95:LEU:O	2.17	0.44
24:YD:155:LEU:N	24:YD:155:LEU:HD12	2.33	0.44
24:YD:213:ARG:HD2	24:YD:213:ARG:HA	1.59	0.44
25:YE:48:GLN:HE21	25:YE:48:GLN:HB3	1.55	0.44
26:YF:184:TYR:CE2	26:YF:188:ARG:HD2	2.52	0.44
28:YH:153:LYS:HG3	28:YH:162:ILE:H	1.79	0.44
30:YN:67:LEU:HA	30:YN:87:LEU:HD13	2.00	0.44
32:YP:88:LEU:O	32:YP:90:ARG:N	2.50	0.44
33:YQ:132:VAL:HG11	42:YZ:81:ARG:NH1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:41:ALA:C	34:YR:43:GLU:H	2.20	0.44
36:YT:114:LEU:HA	36:YT:114:LEU:HD23	1.74	0.44
37:YU:79:PHE:CE2	37:YU:83:LEU:CD1	3.01	0.44
39:YW:67:ASP:OD2	39:YW:67:ASP:N	2.50	0.44
39:YW:88:ARG:HH11	39:YW:88:ARG:HG2	1.82	0.44
47:Y4:39:CYS:O	47:Y4:40:HIS:CB	2.66	0.44
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.16	0.44
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.53	0.44
1:QA:328:C:H1'	1:QA:329:A:OP2	2.18	0.44
1:QA:563:A:N7	1:QA:567:G:H1'	2.33	0.44
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.47	0.44
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.53	0.44
1:QA:1425:U:H1'	1:QA:1476:G:N2	2.33	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	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:53:SER:C	11:QK:55:LYS:H	2.20	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
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
22:RA:810:U:C2	32:RP:29:LYS:O	2.71	0.44
22:RA:1069:A:H4'	22:RA:1070:A:H5''	1.99	0.44
22:RA:1502:C:H5'	22:RA:1503:U:OP2	2.18	0.44
22:RA:2168:G:H2'	22:RA:2168:G:N3	2.32	0.44
24:RD:11:PRO:O	24:RD:12:SER:CB	2.65	0.44
24:RD:12:SER:O	24:RD:14:ARG:N	2.51	0.44
24:RD:25:THR:CG2	24:RD:25:THR:O	2.65	0.44
24:RD:45:ASN:CG	24:RD:46:GLN:N	2.68	0.44
24:RD:237:GLU:HB3	24:RD:238:GLY:H	1.49	0.44
25:RE:11:MET:O	25:RE:12:THR:HB	2.18	0.44
29:RI:4:ILE:HG22	29:RI:16:GLY:HA2	1.99	0.44
32:RP:75:ILE:HG12	32:RP:77:ARG:NH1	2.32	0.44
33:RQ:34:LEU:HB2	33:RQ:118:LEU:HD22	1.99	0.44
36:RT:29:ARG:HA	36:RT:45:PHE:O	2.17	0.44
38:RV:72:VAL:HG13	38:RV:85:LYS:HB3	2.00	0.44
40:RX:3:THR:HA	40:RX:6:ASP:OD2	2.18	0.44
47:R4:39:CYS:O	47:R4:40:HIS:CB	2.66	0.44
48:R5:3:LYS:O	48:R5:4:HIS:C	2.56	0.44
1:XA:44:G:C2	1:XA:45:U:H1'	2.53	0.44
1:XA:131:C:H2'	1:XA:132:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:688:G:C6	1:XA:700:G:C6	3.06	0.44
1:XA:775:G:H2'	1:XA:776:G:O4'	2.18	0.44
1:XA:1036:G:C8	1:XA:1037:C:C4	3.06	0.44
1:XA:1224:G:O6	1:XA:1322:C:H1'	2.18	0.44
1:XA:1244:C:C2	1:XA:1294:G:N2	2.86	0.44
1:XA:1417:G:C6	1:XA:1482:G:C6	3.06	0.44
2:XB:33:TYR:HD1	2:XB:33:TYR:O	2.00	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	2.00	0.44
10:XJ:96:ILE:HD13	10:XJ:96:ILE:H	1.83	0.44
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
22:YA:192:C:O2	22:YA:802:A:O2'	2.28	0.44
22:YA:325:G:H2'	22:YA:326:G:H8	1.83	0.44
22:YA:479:A:H4'	22:YA:480:A:OP1	2.18	0.44
22:YA:601:C:O2'	22:YA:605:C:H5''	2.18	0.44
22:YA:846:C:O2'	22:YA:847:U:OP2	2.26	0.44
22:YA:1126:A:OP1	22:YA:1126:A:H8	2.00	0.44
22:YA:1707:G:H2'	22:YA:1708:C:O4'	2.18	0.44
24:YD:30:GLU:HG3	24:YD:63:ARG:NE	2.32	0.44
25:YE:2:LYS:HG2	25:YE:95:ILE:HG22	1.99	0.44
26:YF:42:ALA:O	26:YF:45:ARG:HB2	2.18	0.44
28:YH:109:PHE:C	28:YH:111:HIS:H	2.21	0.44
29:YI:64:GLU:O	29:YI:67:ARG:HB3	2.18	0.44
32:YP:19:VAL:HG22	32:YP:21:ARG:H	1.83	0.44
32:YP:70:GLN:N	32:YP:70:GLN:OE1	2.51	0.44
33:YQ:27:VAL:HG13	33:YQ:28:ALA:N	2.32	0.44
35:YS:86:ALA:O	35:YS:87:PHE:CB	2.65	0.44
53:XV:49:G:O6	53:XV:65:C:N4	2.49	0.44
1:QA:46:G:H2'	1:QA:366:C:C5	2.53	0.43
1:QA:675:A:H2'	1:QA:676:A:H8	1.83	0.43
1:QA:1107:C:C4	1:QA:1108:G:C8	3.06	0.43
1:QA:1527:C:O2'	1:QA:1528:U:H5'	2.17	0.43
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.43
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.43
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.43
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
22:RA:273(C):C:H42	22:RA:363(C):G:H1	1.64	0.43
22:RA:858:U:O2	22:RA:2268:A:H2'	2.17	0.43
22:RA:1593:G:H2'	22:RA:1594:G:C8	2.53	0.43
22:RA:2607:G:H2'	22:RA:2608:G:O4'	2.18	0.43
23:RB:4:C:C2	23:RB:117:G:N2	2.86	0.43
24:RD:102:LYS:O	24:RD:103:ARG:CG	2.66	0.43
24:RD:206:LEU:HD23	24:RD:206:LEU:HA	1.49	0.43
25:RE:3:GLY:CA	25:RE:81:ILE:HG21	2.48	0.43
25:RE:13:ARG:HH11	25:RE:13:ARG:HB3	1.82	0.43
25:RE:51:PHE:HD1	25:RE:52:LEU:H	1.59	0.43
26:RF:24:LEU:HD12	26:RF:24:LEU:N	2.33	0.43
27:RG:139:LEU:HA	27:RG:144:ILE:HG21	2.00	0.43
28:RH:109:PHE:C	28:RH:111:HIS:H	2.21	0.43
29:RI:86:THR:H	29:RI:123:LEU:HD12	1.83	0.43
31:RO:63:VAL:O	31:RO:63:VAL:HG23	2.18	0.43
32:RP:101:VAL:HG13	32:RP:102:ARG:N	2.33	0.43
35:RS:38:GLN:CG	35:RS:47:THR:HG21	2.48	0.43
36:RT:99:LEU:CD1	36:RT:99:LEU:O	2.65	0.43
39:RW:70:TYR:HD2	39:RW:70:TYR:N	2.06	0.43
40:RX:14:SER:HB2	40:RX:15:GLU:OE1	2.18	0.43
41:RY:11:ASP:HB2	41:RY:27:VAL:CG1	2.46	0.43
41:RY:15:VAL:HB	41:RY:20:TYR:O	2.17	0.43
41:RY:25:GLY:HA3	41:RY:39:VAL:CG1	2.47	0.43
47:R4:42:PHE:CD1	47:R4:42:PHE:C	2.90	0.43
49:R6:7:ILE:HG23	49:R6:8:LYS:N	2.32	0.43
51:R8:40:GLU:O	51:R8:43:GLN:N	2.50	0.43
1:XA:136:C:H42	1:XA:227:G:H1	1.65	0.43
1:XA:688:G:O6	1:XA:700:G:C6	2.70	0.43
1:XA:827:U:H5	1:XA:870:U:N3	2.16	0.43
1:XA:1074:G:C6	1:XA:1075:C:C4	3.06	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
5:XE:20:GLN:O	5:XE:21:ALA:C	2.57	0.43
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.43
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
19:XS:2:PRO:CG	47:Y4:68:ARG:HH12	2.31	0.43
22:YA:176:G:C6	22:YA:177:G:N7	2.85	0.43
22:YA:259:G:N2	22:YA:621:A:H8	2.11	0.43
22:YA:715:G:H2'	22:YA:716:A:C8	2.53	0.43
22:YA:950:G:C5	22:YA:951:C:C5	3.06	0.43
22:YA:1263:U:O2'	48:Y5:11:THR:HG23	2.18	0.43
22:YA:1438:U:H2'	22:YA:1439:A:H8	1.82	0.43
22:YA:1756:G:H4'	22:YA:1758:G:O4'	2.18	0.43
22:YA:2845:G:O2'	22:YA:2846:G:H5'	2.18	0.43
24:YD:35:LYS:HB3	24:YD:36:PRO:HA	2.00	0.43
24:YD:102:LYS:O	24:YD:103:ARG:CG	2.66	0.43
28:YH:53:GLU:CD	28:YH:54:ARG:H	2.21	0.43
29:YI:73:GLU:HG3	29:YI:136:VAL:HG23	1.98	0.43
29:YI:109:ILE:HB	29:YI:130:TYR:OH	2.18	0.43
30:YN:129:PRO:C	30:YN:131:GLN:H	2.20	0.43
31:YO:47:ILE:HG13	31:YO:48:PRO:HD2	1.99	0.43
31:YO:77:ILE:HG23	31:YO:77:ILE:O	2.17	0.43
31:YO:91:LEU:N	31:YO:91:LEU:CD2	2.80	0.43
32:YP:96:THR:HG22	32:YP:126:VAL:CB	2.46	0.43
32:YP:101:VAL:HA	32:YP:106:LEU:HB2	1.99	0.43
35:YS:57:LYS:O	35:YS:58:LEU:HB3	2.18	0.43
39:YW:29:LEU:HD11	39:YW:55:ALA:HB2	1.98	0.43
41:YY:15:VAL:HB	41:YY:20:TYR:O	2.17	0.43
41:YY:95:LYS:HB2	41:YY:99:CYS:O	2.17	0.43
44:Y1:49:VAL:HG12	44:Y1:51:VAL:HG23	1.99	0.43
47:Y4:2:LYS:HD2	47:Y4:2:LYS:HA	1.61	0.43
1:QA:524:G:H2'	1:QA:525:C:C6	2.53	0.43
1:QA:597:G:N2	8:QH:94:TYR:OH	2.51	0.43
1:QA:826:C:H2'	1:QA:827:U:O2	2.17	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.06	0.43
1:QA:1347:G:H2'	1:QA:1373:G:O6	2.18	0.43
1:QA:1360:A:OP1	1:QA:1360:A:H8	2.01	0.43
1:QA:1502:A:H3'	1:QA:1503:A:H3'	2.01	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	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:166:LYS:CD	24:YD:134:ARG:NH1	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.18	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.43
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.43
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.71	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
20:QT:101:GLY:C	20:QT:103:GLY:H	2.22	0.43
22:RA:374:A:C2	22:RA:401:A:C4	3.05	0.43
22:RA:696:G:N2	22:RA:697:C:H1'	2.33	0.43
22:RA:1000:A:H2'	22:RA:1001:A:C8	2.53	0.43
22:RA:1870:C:H2'	22:RA:1871:A:O4'	2.18	0.43
22:RA:2155:G:H2'	22:RA:2156:G:O4'	2.17	0.43
23:RB:111:U:H2'	23:RB:112:G:H8	1.82	0.43
26:RF:149:ASP:OD2	26:RF:151:SER:HB3	2.17	0.43
27:RG:131:TYR:HE2	27:RG:133:LEU:HD22	1.83	0.43
30:RN:30:ILE:HG22	30:RN:34:LEU:CD2	2.48	0.43
31:RO:97:ARG:HA	31:RO:117:LEU:HD22	2.00	0.43
33:RQ:27:VAL:HG13	33:RQ:28:ALA:N	2.32	0.43
35:RS:86:ALA:O	35:RS:87:PHE:CB	2.65	0.43
36:RT:105:LEU:C	36:RT:107:ASP:OD1	2.56	0.43
38:RV:66:ARG:NH1	38:RV:88:ARG:CD	2.74	0.43
39:RW:14:PRO:HB3	39:RW:18:ARG:HE	1.83	0.43
40:RX:7:VAL:O	40:RX:30:VAL:CG1	2.66	0.43
40:RX:65:ARG:N	40:RX:65:ARG:CD	2.79	0.43
41:RY:48:ALA:CB	41:RY:61:ILE:HD13	2.45	0.43
43:R0:27:GLU:HB2	43:R0:69:PHE:HD1	1.83	0.43
47:R4:48:ARG:C	47:R4:49:PHE:HD1	2.22	0.43
49:R6:15:GLU:HB3	49:R6:16:CYS:H	1.46	0.43
51:R8:58:ILE:O	51:R8:61:LEU:CG	2.66	0.43
1:XA:44:G:C6	1:XA:45:U:C2	3.06	0.43
1:XA:191(D):U:H2'	1:XA:191(E):G:H8	1.82	0.43
1:XA:530:G:H4'	1:XA:531:U:OP2	2.18	0.43
1:XA:678:U:C4	1:XA:679:C:N4	2.86	0.43
1:XA:738:C:H2'	1:XA:739:C:H6	1.83	0.43
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.33	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:78:ARG:HH11	7:XG:78:ARG:CG	2.30	0.43
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
14:YN:17:LYS:HG3	14:YN:18:VAL:N	2.33	0.43
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.43
22:YA:821:A:H5''	22:YA:822:U:H6	1.83	0.43
22:YA:1534:G:H2'	22:YA:1534:G:N3	2.33	0.43
22:YA:2436:G:C5	22:YA:2437:U:C5	3.06	0.43
22:YA:2832:U:H4'	22:YA:2833:G:H5''	2.00	0.43
22:YA:2838:G:C4	22:YA:2839:G:C8	3.06	0.43
22:YA:2875:C:C4'	36:YT:5:ALA:HB2	2.47	0.43
24:YD:10:THR:O	24:YD:11:PRO:C	2.56	0.43
25:YE:11:MET:O	25:YE:12:THR:HB	2.18	0.43
26:YF:174:VAL:CG1	26:YF:174:VAL:O	2.65	0.43
27:YG:31:VAL:O	27:YG:31:VAL:HG13	2.18	0.43
28:YH:137:ASP:OD1	28:YH:138:LYS:N	2.51	0.43
36:YT:29:ARG:HA	36:YT:45:PHE:O	2.17	0.43
36:YT:49:VAL:O	36:YT:49:VAL:CG1	2.64	0.43
36:YT:107:ASP:OD2	36:YT:109:GLU:HB2	2.19	0.43
43:Y0:70:GLN:CD	43:Y0:72:ARG:HD3	2.39	0.43
44:Y1:82:LEU:HD12	44:Y1:82:LEU:O	2.10	0.43
49:Y6:11:LEU:HD12	49:Y6:51:GLU:HG3	2.00	0.43
50:Y7:19:ARG:HG2	50:Y7:19:ARG:NH1	2.33	0.43
55:QY:39:C:H4'	55:QY:40:G:OP1	2.18	0.43
1:QA:19:C:OP1	5:QE:125:SER:OG	2.24	0.43
1:QA:297:G:H4'	1:QA:557:G:H4'	1.99	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
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.00	0.43
5:QE:75:THR:CG2	5:QE:76:ILE:N	2.80	0.43
5:QE:152:ARG:HD3	8:QH:44:PHE:CE1	2.53	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:173:G:H2'	22:RA:174:C:C6	2.52	0.43
22:RA:512:G:O2'	22:RA:513:A:P	2.76	0.43
22:RA:1519:G:C6	22:RA:1520:U:C4	3.06	0.43
22:RA:1615:C:C2	39:RW:87:PRO:HG3	2.54	0.43
22:RA:1678:G:H22	22:RA:1989:G:N2	2.12	0.43
22:RA:1929:G:H4'	22:RA:1930:G:OP1	2.18	0.43
22:RA:2543:G:H21	22:RA:2646:C:H5''	1.82	0.43
23:RB:3:C:H2'	23:RB:4:C:C6	2.53	0.43
23:RB:56:G:P	27:RG:27:ASN:HD21	2.41	0.43
24:RD:17:THR:HG22	24:RD:204:ILE:HA	1.98	0.43
25:RE:51:PHE:CD1	25:RE:52:LEU:N	2.76	0.43
26:RF:63:LYS:CE	26:RF:67:GLN:HB2	2.48	0.43
26:RF:201:VAL:HG13	26:RF:202:PHE:N	2.33	0.43
28:RH:136:ILE:HD12	28:RH:136:ILE:N	2.32	0.43
28:RH:137:ASP:OD1	28:RH:138:LYS:N	2.51	0.43
32:RP:81:GLN:HE21	32:RP:81:GLN:HB2	1.59	0.43
32:RP:107:LYS:HB2	32:RP:110:TYR:HD2	1.83	0.43
34:RR:81:ASP:N	34:RR:81:ASP:OD2	2.50	0.43
35:RS:56:LEU:O	35:RS:57:LYS:O	2.36	0.43
35:RS:110:LEU:HA	35:RS:112:PHE:CE1	2.53	0.43
36:RT:111:ARG:C	36:RT:113:LYS:N	2.64	0.43
38:RV:15:GLU:O	38:RV:96:ILE:HB	2.19	0.43
38:RV:25:LEU:H	38:RV:92:THR:CG2	2.28	0.43
40:RX:31:HIS:HA	40:RX:32:PRO:HD3	1.88	0.43
42:RZ:157:LEU:HA	42:RZ:158:PRO:HD2	1.81	0.43
44:R1:53:VAL:CG1	44:R1:54:ALA:N	2.81	0.43
44:R1:92:LYS:O	44:R1:93:GLU:C	2.56	0.43
47:R4:49:PHE:N	47:R4:49:PHE:HD1	2.17	0.43
49:R6:20:ASN:O	49:R6:21:TYR:CG	2.71	0.43
50:R7:5:TRP:CD1	50:R7:7:PRO:HG3	2.53	0.43
51:R8:58:ILE:O	51:R8:61:LEU:CD1	2.67	0.43
1:XA:240:C:H2'	1:XA:241:C:C6	2.53	0.43
1:XA:416:G:H2'	1:XA:417:C:C6	2.53	0.43
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.18	0.43
1:XA:780:A:H1'	1:XA:803:G:N2	2.32	0.43
1:XA:1100:C:O2'	1:XA:1102:A:OP1	2.34	0.43
1:XA:1264:C:H2'	1:XA:1265:G:H8	1.82	0.43
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.17	0.43
1:XA:1442:G:C5	1:XA:1446:A:C6	3.07	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
11:XK:70:LYS:HA	11:XK:73:MET:HE2	1.99	0.43
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
19:XS:2:PRO:HB2	47:Y4:68:ARG:NH1	2.33	0.43
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.01	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
22:YA:99:U:H1'	22:YA:102:G:C5	2.53	0.43
22:YA:498:G:N2	22:YA:506:G:O6	2.32	0.43
22:YA:1682:G:C6	22:YA:1683:C:C4	3.06	0.43
22:YA:2013:A:N3	39:YW:88:ARG:NH2	2.65	0.43
22:YA:2310:A:H62	27:YG:77:ILE:HG21	1.83	0.43
22:YA:2329:G:H2'	22:YA:2330:G:C8	2.53	0.43
22:YA:2863:C:H2'	22:YA:2864:G:C8	2.53	0.43
24:YD:272:ALA:HB1	24:YD:273:ARG:H	1.58	0.43
25:YE:3:GLY:HA3	25:YE:81:ILE:CD1	2.48	0.43
25:YE:69:LYS:C	25:YE:71:GLY:N	2.71	0.43
28:YH:35:VAL:CG2	28:YH:75:ALA:HB2	2.48	0.43
28:YH:136:ILE:HD12	28:YH:136:ILE:N	2.31	0.43
28:YH:149:ARG:HA	28:YH:162:ILE:HG21	1.99	0.43
30:YN:87:LEU:C	30:YN:87:LEU:CD2	2.87	0.43
30:YN:103:VAL:O	30:YN:104:LYS:C	2.56	0.43
34:YR:33:ARG:HA	34:YR:114:VAL:O	2.18	0.43
35:YS:14:VAL:CG1	35:YS:15:ARG:N	2.81	0.43
35:YS:38:GLN:CG	35:YS:47:THR:HG21	2.48	0.43
38:YV:66:ARG:NH1	38:YV:88:ARG:CD	2.74	0.43
38:YV:66:ARG:NH1	38:YV:88:ARG:NH1	2.61	0.43
39:YW:50:VAL:O	39:YW:53:SER:N	2.50	0.43
39:YW:111:HIS:CG	39:YW:112:GLY:H	2.37	0.43
40:YX:3:THR:HA	40:YX:6:ASP:OD2	2.18	0.43
40:YX:14:SER:HB2	40:YX:15:GLU:OE1	2.18	0.43
43:Y0:65:GLY:HA3	43:Y0:82:ARG:O	2.17	0.43
44:Y1:60:PHE:HZ	44:Y1:90:ILE:HG21	1.82	0.43
47:Y4:48:ARG:NH1	47:Y4:51:ASP:HA	2.34	0.43
49:Y6:20:ASN:O	49:Y6:21:TYR:CG	2.71	0.43
51:Y8:40:GLU:O	51:Y8:43:GLN:N	2.50	0.43
51:Y8:58:ILE:O	51:Y8:61:LEU:CD1	2.67	0.43
53:QV:4:G:C6	53:QV:70:G:N1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:QV:15:G:N2	53:QV:48:C:H42	2.17	0.43
1:QA:109:A:C6	1:QA:326:G:C6	3.06	0.43
1:QA:325:A:H2'	1:QA:326:G:O4'	2.18	0.43
1:QA:643:C:H2'	1:QA:644:G:C8	2.52	0.43
1:QA:671:G:H2'	1:QA:672:U:H6	1.84	0.43
1:QA:701:C:H1'	1:QA:703:G:N1	2.33	0.43
1:QA:922:G:N3	1:QA:1398:A:H2	2.16	0.43
1:QA:1077:G:N1	1:QA:1081:G:C6	2.87	0.43
1:QA:1399:C:C2	1:QA:1502:A:N6	2.86	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.81	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	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	2.82	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
22:RA:1495:A:H2'	22:RA:1496:A:N3	2.34	0.43
22:RA:2226:C:H2'	22:RA:2227:A:O4'	2.18	0.43
22:RA:2341:G:H2'	22:RA:2342:C:O4'	2.17	0.43
24:RD:227:ASN:CB	24:RD:228:PRO:CD	2.93	0.43
25:RE:36:ARG:HB3	25:RE:36:ARG:NH1	2.31	0.43
25:RE:52:LEU:O	25:RE:74:PRO:HA	2.18	0.43
26:RF:144:LYS:C	26:RF:146:ALA:H	2.20	0.43
26:RF:167:ALA:HB1	26:RF:173:VAL:HG11	1.99	0.43
27:RG:19:LEU:HA	27:RG:22:ARG:HB2	1.99	0.43
27:RG:83:ARG:HG3	27:RG:86:MET:CE	2.46	0.43
28:RH:92:ILE:CD1	28:RH:160:LYS:HD3	2.48	0.43
35:RS:14:VAL:CG1	35:RS:15:ARG:N	2.81	0.43
35:RS:57:LYS:O	35:RS:58:LEU:HB3	2.18	0.43
36:RT:89:VAL:O	36:RT:90:GLN:HB2	2.19	0.43
36:RT:105:LEU:O	36:RT:105:LEU:HG	2.19	0.43
36:RT:114:LEU:HD23	36:RT:114:LEU:HA	1.74	0.43
41:RY:6:HIS:ND1	41:RY:6:HIS:N	2.66	0.43
41:RY:95:LYS:HA	41:RY:101:LYS:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:80:LEU:O	44:R1:81:LYS:CD	2.65	0.43
52:R9:7:VAL:HG21	52:R9:36:GLN:HB2	2.00	0.43
1:XA:143:A:H2	1:XA:220:G:H1	1.66	0.43
1:XA:1190:G:OP2	3:XC:5:ILE:HG23	2.18	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.34	0.43
1:XA:1486:G:C6	1:XA:1487:G:C6	3.06	0.43
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.52	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
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.57	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.86	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
22:YA:49:A:N7	22:YA:120:U:H5	2.16	0.43
22:YA:190:A:C4	22:YA:207:A:C2	3.06	0.43
22:YA:356:G:H2'	22:YA:357:A:H8	1.82	0.43
22:YA:596:G:H2'	22:YA:597:U:O4'	2.19	0.43
22:YA:844:C:H2'	22:YA:845:G:O4'	2.18	0.43
22:YA:1030:G:OP2	33:YQ:128:LYS:HE2	2.18	0.43
22:YA:1388:G:C2'	22:YA:1389:G:H5'	2.48	0.43
22:YA:1815:A:OP2	24:YD:54:ARG:NH2	2.46	0.43
22:YA:2263:C:H41	43:Y0:15:ASP:HA	1.83	0.43
22:YA:2322:A:H2'	22:YA:2323:G:O4'	2.19	0.43
22:YA:2489:G:O6	22:YA:2490:G:O6	2.36	0.43
22:YA:2543:G:C6	22:YA:2544:G:C6	3.06	0.43
23:YB:11:C:OP2	23:YB:12:C:N4	2.44	0.43
23:YB:66:A:C6	23:YB:107:U:C4	3.06	0.43
24:YD:44:ASN:HB3	24:YD:49:ILE:CG2	2.47	0.43
25:YE:3:GLY:CA	25:YE:81:ILE:HG21	2.49	0.43
25:YE:25:VAL:HG21	36:YT:8:LYS:HG3	2.00	0.43
27:YG:44:GLY:HA2	27:YG:88:ILE:HD11	2.00	0.43
27:YG:67:LYS:N	27:YG:67:LYS:HD2	2.33	0.43
29:YI:83:ALA:O	29:YI:85:GLU:N	2.51	0.43
30:YN:17:ASP:O	30:YN:55:VAL:O	2.34	0.43
31:YO:63:VAL:O	31:YO:63:VAL:HG23	2.17	0.43
34:YR:48:VAL:O	34:YR:49:ASP:C	2.57	0.43
36:YT:105:LEU:C	36:YT:107:ASP:OD1	2.56	0.43
37:YU:79:PHE:C	37:YU:79:PHE:HD2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YV:1:MET:HE1	38:YV:43:GLU:HG2	2.00	0.43
39:YW:34:ASN:O	39:YW:35:ILE:C	2.55	0.43
40:YX:70:LEU:HD23	40:YX:70:LEU:H	1.77	0.43
41:YY:75:ILE:HG12	41:YY:76:CYS:H	1.79	0.43
42:YZ:166:SER:HB2	42:YZ:167:PRO:C	2.39	0.43
45:Y2:59:ARG:O	45:Y2:62:THR:HG23	2.18	0.43
47:Y4:59:PHE:CE1	47:Y4:70:GLY:N	2.87	0.43
51:Y8:58:ILE:O	51:Y8:61:LEU:CG	2.66	0.43
53:XV:54:U:C4	53:XV:55:U:C4	3.06	0.43
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.36	0.43
1:QA:357:G:O2'	29:YI:89:TYR:O	2.29	0.43
1:QA:558:G:H2'	1:QA:559:A:H2	1.84	0.43
1:QA:801:U:H2'	1:QA:802:A:H8	1.81	0.43
1:QA:1084:G:H5'	1:QA:1102:A:OP2	2.18	0.43
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.25	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	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
7:QG:23:VAL:O	7:QG:27:ILE:HD12	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
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.19	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
22:RA:646:A:H2'	22:RA:647:G:O4'	2.19	0.43
22:RA:825:C:H2'	22:RA:826:U:O4'	2.19	0.43
22:RA:957:A:N1	22:RA:2459:A:C8	2.86	0.43
22:RA:1086:A:H3'	22:RA:1086:A:N3	2.34	0.43
22:RA:2467:C:H4'	33:RQ:123:HIS:CG	2.53	0.43
24:RD:177:LEU:O	24:RD:179:SER:N	2.51	0.43
25:RE:16:ARG:O	25:RE:18:ASP:O	2.36	0.43
25:RE:69:LYS:C	25:RE:71:GLY:N	2.71	0.43
25:RE:120:TRP:CE3	25:RE:155:LYS:HD3	2.53	0.43
26:RF:62:ARG:NH1	26:RF:62:ARG:CB	2.82	0.43
26:RF:101:LEU:HD12	26:RF:102:PRO:N	2.33	0.43
27:RG:59:GLU:O	27:RG:62:LEU:HB3	2.18	0.43
30:RN:1:MET:HG3	30:RN:1:MET:O	2.19	0.43
30:RN:103:VAL:O	30:RN:104:LYS:C	2.57	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:70:GLN:N	32:RP:70:GLN:OE1	2.51	0.43
37:RU:88:ILE:HG22	37:RU:90:VAL:CG2	2.44	0.43
40:RX:14:SER:O	40:RX:15:GLU:C	2.57	0.43
1:XA:719:C:C2	18:XR:50:ILE:HD13	2.53	0.43
1:XA:947:G:C6	1:XA:948:C:C4	3.07	0.43
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.54	0.43
1:XA:1506:U:N3	1:XA:1522:U:OP1	2.36	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
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
22:YA:298:G:P	41:YY:85:VAL:HG22	2.58	0.43
22:YA:606:U:H4'	22:YA:658:C:H4'	2.01	0.43
22:YA:814:C:H41	32:YP:25:SER:HA	1.83	0.43
22:YA:856:C:H1'	43:Y0:27:GLU:HB3	2.00	0.43
22:YA:1674:G:H1'	22:YA:1676:A:N6	2.33	0.43
22:YA:1786:A:C8	22:YA:1938:A:C6	3.06	0.43
22:YA:1944:U:O2	22:YA:1955:U:H5''	2.19	0.43
23:YB:80:U:O2'	23:YB:81:G:H5'	2.18	0.43
25:YE:51:PHE:O	25:YE:74:PRO:CB	2.67	0.43
25:YE:155:LYS:O	25:YE:156:MET:HG3	2.19	0.43
27:YG:114:ILE:O	27:YG:116:ASP:N	2.51	0.43
27:YG:136:ARG:O	27:YG:154:GLY:CA	2.62	0.43
29:YI:93:THR:HG22	29:YI:119:PRO:HB3	1.99	0.43
30:YN:118:LYS:C	30:YN:120:LEU:H	2.20	0.43
30:YN:131:GLN:HE21	30:YN:131:GLN:HB3	1.57	0.43
34:YR:74:LYS:O	34:YR:76:VAL:N	2.45	0.43
35:YS:110:LEU:HD23	35:YS:112:PHE:CE2	2.54	0.43
36:YT:19:LEU:HA	36:YT:20:PRO:HD3	1.88	0.43
37:YU:99:ALA:HA	37:YU:106:PHE:HB2	2.01	0.43
43:Y0:27:GLU:HB2	43:Y0:69:PHE:CD1	2.53	0.43
44:Y1:44:PRO:O	44:Y1:46:LEU:N	2.51	0.43
44:Y1:94:LEU:O	44:Y1:95:LEU:HB2	2.18	0.43
47:Y4:15:ILE:N	47:Y4:15:ILE:CD1	2.78	0.43
48:Y5:15:ARG:HA	48:Y5:18:ALA:HB3	1.99	0.43
53:QV:53:G:HO2'	53:QV:54:U:H6	1.64	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:160:A:H1'	1:QA:344:A:N7	2.33	0.43
1:QA:555:C:H2'	1:QA:556:C:C6	2.53	0.43
1:QA:1502:A:H2	1:QA:1505:G:N1	2.14	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
6:QF:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
22:RA:1222:C:C2	22:RA:1229(A):G:C2	3.07	0.43
22:RA:1728:G:H5'	22:RA:1729:A:OP2	2.18	0.43
22:RA:2166:G:N2	22:RA:2168:G:OP1	2.52	0.43
22:RA:2373:G:H2'	22:RA:2374:C:C6	2.54	0.43
22:RA:2657:A:H1'	22:RA:2665:A:N6	2.33	0.43
25:RE:31:CYS:HB3	25:RE:49:LEU:HG	2.01	0.43
30:RN:61:ARG:HA	30:RN:61:ARG:NE	2.33	0.43
30:RN:63:THR:HG23	30:RN:66:LYS:HE3	2.00	0.43
31:RO:51:ALA:O	31:RO:53:LYS:HE3	2.19	0.43
34:RR:54:LEU:O	34:RR:62:ALA:HB1	2.19	0.43
35:RS:110:LEU:HD23	35:RS:112:PHE:CE2	2.54	0.43
37:RU:64:ARG:CG	37:RU:64:ARG:NH2	2.70	0.43
42:RZ:1:MET:HG2	42:RZ:2:GLU:H	1.83	0.43
51:R8:40:GLU:O	51:R8:41:ILE:C	2.56	0.43
1:XA:35:G:O2'	12:XL:118:SER:O	2.27	0.43
1:XA:191(D):U:H2'	1:XA:191(E):G:C8	2.53	0.43
1:XA:698:G:C6	1:XA:699:C:C4	3.06	0.43
1:XA:859:A:H2'	1:XA:860:A:H8	1.84	0.43
1:XA:1059:C:O2	10:XJ:53:PRO:HG3	2.18	0.43
1:XA:1187:G:P	9:XI:113:LYS:NZ	2.92	0.43
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
7:XG:151:TYR:CE1	11:XK:54:ARG:HD3	2.53	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.43
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.43
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.43
22:YA:564:C:H2'	22:YA:565:C:O4'	2.18	0.43
22:YA:604:G:C6	22:YA:625:G:C2	3.06	0.43
22:YA:943:U:OP1	32:YP:36:LYS:HG2	2.19	0.43
22:YA:1266:G:N7	39:YW:15:ARG:NH1	2.66	0.43
22:YA:1292:U:H2'	22:YA:1293:C:C6	2.54	0.43
22:YA:1313:U:H4'	22:YA:1332:G:H4'	1.99	0.43
22:YA:2581:G:H2'	22:YA:2581:G:N3	2.34	0.43
23:YB:112:G:H2'	23:YB:113:C:C6	2.54	0.43
24:YD:43:ARG:CZ	24:YD:49:ILE:HG21	2.49	0.43
25:YE:143:ASN:N	25:YE:143:ASN:ND2	2.65	0.43
28:YH:59:ARG:CG	28:YH:59:ARG:NH1	2.79	0.43
28:YH:86:GLU:H	28:YH:86:GLU:CD	2.16	0.43
28:YH:92:ILE:CD1	28:YH:160:LYS:HD3	2.48	0.43
30:YN:30:ILE:HG22	30:YN:34:LEU:CD2	2.48	0.43
31:YO:51:ALA:O	31:YO:53:LYS:HE3	2.19	0.43
31:YO:61:VAL:O	31:YO:61:VAL:HG13	2.18	0.43
35:YS:42:ASP:C	35:YS:44:LYS:N	2.72	0.43
36:YT:89:VAL:O	36:YT:90:GLN:HB2	2.19	0.43
41:YY:6:HIS:ND1	41:YY:6:HIS:N	2.66	0.43
41:YY:84:ARG:HD3	41:YY:86:ARG:HH11	1.83	0.43
44:Y1:29:GLY:O	44:Y1:31:GLY:N	2.49	0.43
44:Y1:92:LYS:O	44:Y1:93:GLU:C	2.56	0.43
50:Y7:17:GLY:O	50:Y7:20:ALA:HB3	2.19	0.43
53:QV:54:U:C4	53:QV:55:U:C4	3.06	0.43
1:QA:347:G:OP2	36:RT:68:TYR:OH	2.35	0.43
1:QA:369:C:OP2	1:QA:388:G:N1	2.51	0.43
1:QA:833:U:H2'	1:QA:834:C:C6	2.54	0.43
1:QA:872:A:O2'	1:QA:873:A:H3'	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.44	0.43
1:QA:1225:A:H2'	1:QA:1225:A:N3	2.34	0.43
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.54	0.43
1:QA:1305:G:N2	1:QA:1332:A:OP2	2.52	0.43
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.18	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	2.28	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.18	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
22:RA:103:A:O5'	22:RA:103:A:H8	2.01	0.43
22:RA:262:A:H2'	22:RA:263:C:O4'	2.19	0.43
22:RA:391:G:O2'	22:RA:410:G:OP1	2.28	0.43
22:RA:558:G:OP1	30:RN:111:PRO:HD2	2.18	0.43
22:RA:646:A:H5'	22:RA:646:A:N3	2.34	0.43
22:RA:1279:G:H4'	34:RR:31:HIS:HD2	1.84	0.43
22:RA:1688:U:O2	22:RA:1700:A:H5''	2.18	0.43
22:RA:1959:G:H2'	22:RA:1960:A:O4'	2.19	0.43
22:RA:2183:C:H2'	22:RA:2184:G:C8	2.53	0.43
22:RA:2712:U:H1'	22:RA:2712(A):A:C8	2.53	0.43
24:RD:69:ARG:NH2	24:RD:130:ALA:HB2	2.20	0.43
25:RE:51:PHE:O	25:RE:74:PRO:CB	2.67	0.43
25:RE:203:LYS:HD2	25:RE:203:LYS:C	2.39	0.43
28:RH:6:ARG:CG	28:RH:7:LEU:N	2.81	0.43
30:RN:42:TRP:HA	30:RN:48:MET:HE1	1.99	0.43
30:RN:96:GLU:O	30:RN:97:ARG:C	2.57	0.43
32:RP:120:ALA:HB1	32:RP:138:LEU:CB	2.48	0.43
32:RP:135:LEU:HD13	32:RP:139:LYS:HE3	2.01	0.43
36:RT:107:ASP:OD2	36:RT:109:GLU:HB2	2.18	0.43
42:RZ:76:LEU:HA	42:RZ:83:PRO:HA	2.01	0.43
44:R1:44:PRO:O	44:R1:46:LEU:N	2.51	0.43
47:R4:68:ARG:O	47:R4:69:LYS:HB2	2.17	0.43
1:XA:891:U:C2	1:XA:892:A:C8	3.07	0.43
1:XA:1129:C:H4'	1:XA:1130:A:H8	1.84	0.43
1:XA:1451:A:N3	1:XA:1451:A:H2'	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
4:XD:163:GLU:OE2	4:XD:163:GLU:HA	2.19	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
9:XI:127:LYS:NZ	53:XV:34:C:OP2	2.50	0.43
13:XM:65:LYS:HB3	47:Y4:50:VAL:HG21	2.01	0.43
14:YN:12:ARG:C	14:YN:14:PRO:CD	2.81	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
22:YA:214:G:H1'	22:YA:216:A:O2'	2.19	0.43
22:YA:238:C:H2'	22:YA:239:U:O4'	2.19	0.43
22:YA:363(B):G:H2'	22:YA:363(C):G:C8	2.50	0.43
22:YA:372:G:HO2'	22:YA:373:U:H5	1.63	0.43
22:YA:448:U:H1'	26:YF:84:VAL:CG2	2.49	0.43
22:YA:529:A:H8	22:YA:530:G:C6	2.37	0.43
22:YA:577:G:O2'	22:YA:1254:A:OP1	2.37	0.43
22:YA:869:G:H1	22:YA:908:C:H42	1.67	0.43
22:YA:1503:U:H2'	22:YA:1504:C:H6	1.84	0.43
22:YA:1695:G:H1'	24:YD:8:PRO:O	2.18	0.43
22:YA:1959:G:C6	22:YA:1960:A:C5	3.07	0.43
22:YA:2281:C:O2'	22:YA:2282:G:H5'	2.19	0.43
25:YE:13:ARG:HH11	25:YE:13:ARG:HB2	1.81	0.43
25:YE:16:ARG:O	25:YE:18:ASP:O	2.36	0.43
27:YG:131:TYR:HE2	27:YG:133:LEU:HD22	1.84	0.43
27:YG:145:THR:O	27:YG:146:TYR:HB3	2.19	0.43
29:YI:4:ILE:HG22	29:YI:16:GLY:HA2	2.00	0.43
30:YN:90:MET:O	30:YN:91:LEU:C	2.57	0.43
34:YR:54:LEU:O	34:YR:62:ALA:HB1	2.19	0.43
36:YT:64:ARG:HH11	36:YT:64:ARG:HG2	1.84	0.43
37:YU:43:GLY:HA3	38:YV:73:SER:OG	2.19	0.43
45:Y2:62:THR:O	45:Y2:65:ASN:HB2	2.18	0.43
47:Y4:43:TYR:O	47:Y4:46:GLN:HA	2.19	0.43
48:Y5:40:LYS:HE2	48:Y5:47:PRO:CG	2.49	0.43
1:QA:335:C:H2'	1:QA:336:C:C6	2.54	0.43
1:QA:720:C:H5''	18:QR:52:PRO:HA	2.00	0.43
1:QA:1036:G:C8	1:QA:1037:C:C4	3.07	0.43
1:QA:1297:C:HO2'	1:QA:1298:C:H6	1.65	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	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
13:QM:77:ASN:HA	47:R4:71:ARG:HH22	1.79	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43
22:RA:270(T):G:P	44:R1:97:LEU:HD13	2.57	0.43
22:RA:298:G:OP2	41:RY:85:VAL:HG22	2.18	0.43
22:RA:623:G:H2'	22:RA:624:C:C6	2.53	0.43
22:RA:890:A:O2'	22:RA:892:G:H8	2.01	0.43
22:RA:1270:C:H5''	22:RA:1271:G:C5'	2.48	0.43
22:RA:1287:A:N7	34:RR:107:ASP:HB2	2.33	0.43
22:RA:1468:C:H2'	22:RA:1469:A:C8	2.53	0.43
22:RA:2355:C:H5''	22:RA:2356:C:OP2	2.19	0.43
22:RA:2370:G:H2'	22:RA:2371:G:C8	2.54	0.43
24:RD:76:PRO:O	24:RD:98:VAL:CG2	2.65	0.43
26:RF:176:LEU:HD11	26:RF:180:GLY:O	2.19	0.43
27:RG:51:ARG:HB3	27:RG:51:ARG:NH1	2.33	0.43
28:RH:35:VAL:CG2	28:RH:75:ALA:HB2	2.48	0.43
29:RI:63:ALA:O	29:RI:66:GLU:HG2	2.19	0.43
32:RP:52:GLU:OE2	32:RP:58:THR:N	2.52	0.43
34:RR:10:LEU:O	34:RR:12:ARG:N	2.52	0.43
35:RS:52:SER:HB2	35:RS:55:ALA:CB	2.49	0.43
37:RU:95:LEU:HD13	38:RV:4:ILE:HD12	1.98	0.43
39:RW:111:HIS:CG	39:RW:112:GLY:H	2.37	0.43
42:RZ:74:VAL:HG13	42:RZ:86:VAL:HG22	2.00	0.43
42:RZ:104:PHE:HB3	42:RZ:141:VAL:CG1	2.49	0.43
47:R4:48:ARG:NH1	47:R4:51:ASP:HA	2.34	0.43
50:R7:19:ARG:HG2	50:R7:19:ARG:NH1	2.33	0.43
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.37	0.43
1:XA:501:C:H2'	1:XA:502:G:C8	2.54	0.43
1:XA:807:A:H2'	1:XA:808:C:C6	2.54	0.43
1:XA:825:G:H2'	1:XA:826:C:O4'	2.18	0.43
1:XA:934:C:HO2'	1:XA:935:A:P	2.41	0.43
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.81	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
22:YA:207:A:H2'	22:YA:208:C:O4'	2.19	0.43
22:YA:1085:A:HO2'	22:YA:1086:A:P	2.39	0.43
22:YA:1136:G:H2'	22:YA:1137:G:C8	2.54	0.43
22:YA:1142(A):A:H4'	30:YN:25:ARG:HH22	1.84	0.43
22:YA:1164:G:H2'	22:YA:1165:U:O4'	2.19	0.43
22:YA:1194:A:H8	22:YA:1194:A:OP2	2.02	0.43
22:YA:2583:G:HO2'	56:Z8:76:PPU:H103	1.80	0.43
23:YB:44:G:H5''	23:YB:45:A:OP1	2.19	0.43
23:YB:99:A:C4	23:YB:100:G:C8	3.06	0.43
23:YB:103:U:O3'	42:YZ:72:ARG:HD3	2.18	0.43
24:YD:17:THR:HG22	24:YD:204:ILE:HA	1.98	0.43
24:YD:30:GLU:CD	24:YD:63:ARG:HE	2.21	0.43
24:YD:181:GLU:HA	24:YD:272:ALA:CB	2.38	0.43
25:YE:52:LEU:O	25:YE:74:PRO:HA	2.18	0.43
27:YG:59:GLU:O	27:YG:62:LEU:HB3	2.18	0.43
30:YN:26:LEU:HG	30:YN:30:ILE:CD1	2.49	0.43
34:YR:51:LEU:HD13	34:YR:66:VAL:HG22	2.01	0.43
35:YS:30:ARG:NH2	35:YS:92:TYR:HD1	2.17	0.43
41:YY:47:LYS:O	41:YY:49:VAL:N	2.48	0.43
43:Y0:11:ARG:H	43:Y0:11:ARG:HG2	1.64	0.43
47:Y4:48:ARG:C	47:Y4:49:PHE:HD1	2.22	0.43
50:Y7:5:TRP:CD1	50:Y7:7:PRO:HG3	2.53	0.43
53:XV:53:G:HO2'	53:XV:54:U:H6	1.65	0.43
1:QA:601:C:H2'	1:QA:602:A:H8	1.84	0.43
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.18	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.22	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	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
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
22:RA:556:G:C6	22:RA:557:U:C4	3.07	0.43
22:RA:695:G:H4'	22:RA:1380:G:H5'	2.01	0.43
22:RA:754:C:H2'	22:RA:755:C:H6	1.84	0.43
22:RA:1077:A:H5'	22:RA:1078:U:H5''	2.00	0.43
22:RA:1526:G:C6	22:RA:1527:G:C2	3.07	0.43
22:RA:1540:G:C6	22:RA:1541:U:C4	3.07	0.43
22:RA:2015:A:C8	22:RA:2016:U:C6	3.07	0.43
22:RA:2075:U:OP2	22:RA:2238:G:O2'	2.35	0.43
22:RA:2228:G:OP1	24:RD:261:LYS:HE2	2.18	0.43
22:RA:2337:G:C2	22:RA:2338:G:C8	3.07	0.43
22:RA:2477:C:H41	52:R9:10:ILE:HG23	1.83	0.43
23:RB:38:C:N4	23:RB:44:G:H1	2.14	0.43
23:RB:42:C:H2'	23:RB:43:C:O4'	2.19	0.43
24:RD:44:ASN:HB3	24:RD:49:ILE:CG2	2.47	0.43
24:RD:44:ASN:CB	24:RD:49:ILE:HG22	2.46	0.43
25:RE:18:ASP:O	25:RE:19:ARG:C	2.56	0.43
25:RE:188:VAL:HA	25:RE:189:PRO:HD2	1.79	0.43
26:RF:183:VAL:O	26:RF:184:TYR:C	2.56	0.43
27:RG:25:TYR:CZ	27:RG:32:PRO:HD3	2.54	0.43
30:RN:7:LYS:HD2	30:RN:7:LYS:N	2.29	0.43
30:RN:90:MET:O	30:RN:91:LEU:C	2.57	0.43
31:RO:17:ARG:HH11	31:RO:17:ARG:HG2	1.84	0.43
31:RO:61:VAL:O	31:RO:61:VAL:HG13	2.18	0.43
34:RR:48:VAL:O	34:RR:49:ASP:C	2.57	0.43
35:RS:105:ALA:C	35:RS:110:LEU:HD21	2.38	0.43
36:RT:64:ARG:HH11	36:RT:64:ARG:HG2	1.84	0.43
36:RT:80:SER:HA	36:RT:81:PRO:HD3	1.73	0.43
47:R4:43:TYR:O	47:R4:46:GLN:HA	2.19	0.43
47:R4:59:PHE:CE1	47:R4:70:GLY:N	2.87	0.43
49:R6:50:ARG:HH11	49:R6:50:ARG:HG2	1.84	0.43
50:R7:3:ARG:HA	50:R7:3:ARG:HD3	1.88	0.43
50:R7:47:ARG:HB2	50:R7:48:LYS:H	1.64	0.43
51:R8:28:GLY:O	51:R8:29:LYS:O	2.36	0.43
1:XA:234:C:H2'	1:XA:235:C:H6	1.82	0.43
1:XA:678:U:C4	1:XA:679:C:C4	3.07	0.43
1:XA:827:U:C5	1:XA:870:U:C2	3.06	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	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
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
12:XL:47:LYS:C	12:XL:49:ASN:H	2.22	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
22:YA:106:C:H2'	22:YA:107:C:H6	1.84	0.43
22:YA:320:A:H5''	22:YA:321:G:OP1	2.18	0.43
22:YA:349:G:C5	22:YA:350:U:C5	3.06	0.43
22:YA:389:G:H22	32:YP:72:PRO:CD	2.30	0.43
22:YA:468:G:N7	50:Y7:39:ARG:NH2	2.64	0.43
22:YA:709:U:H2'	22:YA:710:G:C8	2.54	0.43
22:YA:1102:C:H2'	22:YA:1103:A:H5''	2.00	0.43
22:YA:1319:G:C6	22:YA:1320:C:N4	2.87	0.43
22:YA:1469:A:C5	22:YA:1470:G:N7	2.87	0.43
22:YA:1857:G:O2'	22:YA:1885:A:N6	2.51	0.43
22:YA:2584:U:H5''	56:Z8:76:PPU:H92	2.00	0.43
25:YE:23:VAL:HG12	25:YE:184:VAL:O	2.19	0.43
28:YH:120:GLY:O	28:YH:136:ILE:HD12	2.19	0.43
29:YI:88:ILE:HB	29:YI:121:LYS:HG3	1.99	0.43
30:YN:57:ALA:O	30:YN:124:ALA:HA	2.18	0.43
33:YQ:57:HIS:ND1	33:YQ:58:PHE:N	2.66	0.43
33:YQ:81:VAL:CG2	43:Y0:7:LEU:HD21	2.45	0.43
36:YT:89:VAL:O	36:YT:90:GLN:CB	2.67	0.43
46:Y3:50:VAL:HB	46:Y3:53:LEU:HD12	2.00	0.43
48:Y5:56:LYS:O	48:Y5:57:VAL:C	2.57	0.43
1:QA:255:G:C6	1:QA:256:U:C4	3.07	0.43
1:QA:301:G:H2'	1:QA:302:G:H8	1.84	0.43
1:QA:377:G:P	16:QP:5:ARG:HH11	2.39	0.43
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.19	0.43
1:QA:600:C:H2'	1:QA:601:C:H6	1.84	0.43
1:QA:663:A:H5'	18:QR:61:LYS:NZ	2.34	0.43
1:QA:1043:C:H2'	1:QA:1044:A:H8	1.84	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:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.43
5:QE:148:VAL:HG21	8:QH:107:LEU:HD13	1.99	0.43
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.47	0.43
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.43
22:RA:137:C:N4	22:RA:137(A):G:O6	2.52	0.43
22:RA:141:A:H1'	22:RA:1408:C:H1'	2.01	0.43
22:RA:222:A:H3'	22:RA:421:U:H5''	2.01	0.43
22:RA:247:G:O2'	22:RA:250:G:N7	2.47	0.43
22:RA:588:U:H1'	26:RF:90:PHE:CG	2.54	0.43
22:RA:1162:G:H1'	38:RV:23:GLU:OE2	2.18	0.43
22:RA:1416:G:H2'	22:RA:1417:C:C6	2.54	0.43
22:RA:1429:G:N3	22:RA:1568:G:C2	2.87	0.43
22:RA:2224:G:O2'	22:RA:2225:A:O4'	2.26	0.43
22:RA:2277:G:C6	22:RA:2278:A:N7	2.87	0.43
23:RB:33:G:P	27:RG:2:PRO:HG3	2.59	0.43
25:RE:48:GLN:HE21	25:RE:48:GLN:HB3	1.55	0.43
26:RF:20:LEU:HD12	26:RF:21:ALA:N	2.26	0.43
27:RG:4:ASP:O	27:RG:5:VAL:HB	2.19	0.43
32:RP:13:ASN:C	32:RP:15:ARG:H	2.21	0.43
32:RP:19:VAL:HG22	32:RP:21:ARG:H	1.83	0.43
32:RP:112:LEU:CD1	32:RP:114:ILE:HG23	2.47	0.43
36:RT:6:LEU:HD12	36:RT:9:LEU:HD12	2.01	0.43
38:RV:72:VAL:HG13	38:RV:72:VAL:O	2.19	0.43
39:RW:19:LEU:O	39:RW:22:ASP:HB2	2.19	0.43
39:RW:28:SER:O	39:RW:30:GLU:N	2.50	0.43
44:R1:13:ILE:CG1	44:R1:42:GLN:HB2	2.49	0.43
45:R2:62:THR:O	45:R2:65:ASN:HB2	2.19	0.43
50:R7:17:GLY:O	50:R7:20:ALA:HB3	2.19	0.43
1:XA:310:G:H4'	16:XP:31:LYS:HD3	2.01	0.43
1:XA:693:G:C6	1:XA:694:A:C6	3.07	0.43
1:XA:1053:G:H2'	1:XA:1199:U:C5	2.54	0.43
1:XA:1297:C:HO2'	1:XA:1298:C:P	2.42	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.43
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.43
7:XG:89:MET:HE3	7:XG:156:TRP:H	1.83	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
22:YA:422:A:C6	22:YA:423:A:C5	3.06	0.43
22:YA:1006:C:O2	30:YN:106:MET:HG2	2.18	0.43
22:YA:1136:G:H2'	22:YA:1137:G:H8	1.84	0.43
22:YA:1239:G:H2'	22:YA:1240:U:O4'	2.19	0.43
22:YA:1352:U:O2	22:YA:1570:A:H2	2.02	0.43
22:YA:1364:G:OP1	44:Y1:3:LYS:HG3	2.19	0.43
22:YA:1508:A:O2'	22:YA:1509:C:O4'	2.34	0.43
22:YA:1770:G:C5	22:YA:1771:C:C5	3.07	0.43
22:YA:2103:C:H2'	22:YA:2104:G:H8	1.84	0.43
22:YA:2114:A:N6	22:YA:2119:A:H62	2.17	0.43
22:YA:2335:A:OP2	35:YS:13:ARG:HB2	2.19	0.43
22:YA:2723:C:OP1	34:YR:3:HIS:CD2	2.70	0.43
22:YA:2865:U:C4	22:YA:2866:U:C4	3.07	0.43
26:YF:63:LYS:CE	26:YF:67:GLN:HB2	2.49	0.43
27:YG:7:LEU:CD2	27:YG:176:LEU:HD22	2.44	0.43
27:YG:25:TYR:CZ	27:YG:32:PRO:HD3	2.54	0.43
27:YG:139:LEU:HA	27:YG:144:ILE:HG21	2.00	0.43
29:YI:5:LEU:HD11	29:YI:19:VAL:HG12	2.00	0.43
29:YI:98:ALA:HB2	29:YI:111:PRO:HB3	2.01	0.43
30:YN:62:VAL:HG12	30:YN:66:LYS:HB2	2.01	0.43
31:YO:78:ARG:HH21	36:YT:103:ARG:HH22	1.64	0.43
32:YP:101:VAL:HG13	32:YP:102:ARG:N	2.33	0.43
34:YR:81:ASP:N	34:YR:81:ASP:OD2	2.51	0.43
41:YY:94:LYS:HE3	41:YY:101:LYS:HZ3	1.79	0.43
43:Y0:11:ARG:NH2	53:XV:63:G:H5'	2.34	0.43
44:Y1:53:VAL:CG1	44:Y1:54:ALA:N	2.81	0.43
48:Y5:3:LYS:O	48:Y5:4:HIS:C	2.56	0.43
50:Y7:32:LYS:O	50:Y7:33:ARG:C	2.56	0.43
1:QA:129(A):G:C2	1:QA:188:U:O2'	2.72	0.42
1:QA:184:G:H2'	1:QA:185:A:C8	2.52	0.42
1:QA:186:C:H4'	20:QT:82:SER:HB3	2.00	0.42
1:QA:782:A:O3'	1:QA:1515:C:H4'	2.19	0.42
1:QA:976:G:N2	1:QA:1362:C:H2'	2.34	0.42
1:QA:1324:A:H2'	1:QA:1325:C:O4'	2.19	0.42
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.19	0.42
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.19	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.42
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.42
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.84	0.42
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.42
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.02	0.42
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.84	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
22:RA:860:U:H5	22:RA:917:A:N1	2.17	0.42
22:RA:1026:U:H1'	22:RA:1027:A:C5'	2.48	0.42
22:RA:1636:C:H2'	22:RA:1637:A:C8	2.54	0.42
22:RA:1655:A:O3'	25:RE:115:GLY:HA3	2.18	0.42
22:RA:1916:A:H2'	22:RA:1917:U:O4'	2.18	0.42
22:RA:2346:A:H5''	22:RA:2383:G:H1'	2.01	0.42
22:RA:2372:G:H4'	49:R6:46:HIS:CD2	2.53	0.42
22:RA:2602:A:H2	56:Z6:76:PPU:H8	1.84	0.42
23:RB:104:A:OP1	42:RZ:72:ARG:NE	2.52	0.42
24:RD:33:LEU:HB3	24:RD:34:VAL:H	1.49	0.42
24:RD:71:ASP:CB	24:RD:103:ARG:HH22	2.32	0.42
25:RE:23:VAL:HG12	25:RE:184:VAL:O	2.19	0.42
25:RE:25:VAL:HG21	36:RT:8:LYS:HG3	2.00	0.42
26:RF:64:ILE:HG23	26:RF:65:TRP:CD1	2.54	0.42
27:RG:31:VAL:O	27:RG:31:VAL:HG13	2.18	0.42
28:RH:16:SER:OG	28:RH:17:VAL:N	2.50	0.42
28:RH:53:GLU:CD	28:RH:54:ARG:H	2.21	0.42
29:RI:2:LYS:HA	29:RI:20:ASP:HA	2.01	0.42
29:RI:79:ILE:HD13	29:RI:79:ILE:HA	1.88	0.42
29:RI:128:LEU:HA	29:RI:128:LEU:HD13	1.78	0.42
30:RN:15:LEU:C	30:RN:15:LEU:HD13	2.39	0.42
30:RN:87:LEU:C	30:RN:87:LEU:CD2	2.87	0.42
31:RO:31:LYS:O	31:RO:32:TYR:HD2	2.02	0.42
32:RP:49:ARG:HG2	32:RP:49:ARG:HH11	1.84	0.42
34:RR:51:LEU:HD13	34:RR:66:VAL:HG22	2.01	0.42
35:RS:110:LEU:HA	35:RS:112:PHE:CZ	2.53	0.42
36:RT:50:ILE:HD11	36:RT:102:ILE:HG12	2.01	0.42
45:R2:6:VAL:O	45:R2:7:ARG:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R5:3:LYS:HA	48:R5:3:LYS:CE	2.36	0.42
1:XA:380:G:N2	1:XA:383:A:OP2	2.52	0.42
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.19	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
14:YN:44:LEU:CD1	14:YN:48:ALA:HB2	2.47	0.42
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.42
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
22:YA:260:G:C6	22:YA:261:G:N7	2.86	0.42
22:YA:582:G:H2'	22:YA:583:G:H8	1.84	0.42
22:YA:770:G:N3	22:YA:1354:A:H2	2.17	0.42
22:YA:772:C:H2'	22:YA:773:U:H6	1.83	0.42
22:YA:842:G:N2	22:YA:937:U:C2	2.86	0.42
22:YA:910:A:C6	22:YA:911:A:C6	3.07	0.42
22:YA:1027:A:C6	22:YA:1126:A:C4	3.06	0.42
22:YA:1165:U:H2'	22:YA:1166:C:C6	2.53	0.42
22:YA:1234:U:H2'	22:YA:1235:G:O4'	2.19	0.42
22:YA:1257:C:O2'	26:YF:84:VAL:HG12	2.20	0.42
22:YA:1309:G:H4'	50:Y7:7:PRO:HB2	1.99	0.42
22:YA:1382:G:H4'	22:YA:1573:G:N2	2.34	0.42
22:YA:1465:G:C4	22:YA:1466:G:C8	3.07	0.42
22:YA:1928:A:O2'	22:YA:1929:G:H5'	2.19	0.42
22:YA:2832:U:H4'	22:YA:2833:G:C5'	2.49	0.42
25:YE:179:GLU:CB	25:YE:181:LEU:HD23	2.24	0.42
25:YE:203:LYS:HD2	25:YE:203:LYS:C	2.39	0.42
26:YF:45:ARG:HH11	26:YF:45:ARG:HG2	1.82	0.42
27:YG:16:ARG:NE	27:YG:31:VAL:HG11	2.34	0.42
27:YG:34:LEU:HD11	27:YG:99:MET:CE	2.49	0.42
28:YH:125:VAL:HG12	28:YH:126:PRO:CD	2.49	0.42
28:YH:125:VAL:CG1	28:YH:126:PRO:CG	2.94	0.42
29:YI:133:HIS:HB2	29:YI:134:PRO:CD	2.48	0.42
32:YP:52:GLU:OE2	32:YP:58:THR:N	2.52	0.42
32:YP:107:LYS:O	32:YP:108:LYS:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:94:TYR:N	34:YR:94:TYR:CD2	2.87	0.42
35:YS:105:ALA:C	35:YS:110:LEU:HD21	2.39	0.42
38:YV:38:LEU:CD2	38:YV:39:LEU:N	2.82	0.42
41:YY:97:ARG:HH21	41:YY:98:VAL:CG2	2.32	0.42
42:YZ:9:TYR:CE2	42:YZ:61:LEU:HD13	2.54	0.42
43:Y0:72:ARG:HB3	43:Y0:75:LEU:HB2	2.00	0.42
45:Y2:6:VAL:O	45:Y2:7:ARG:C	2.57	0.42
49:Y6:50:ARG:HH11	49:Y6:50:ARG:HG2	1.84	0.42
53:QV:43:A:H2'	53:QV:44:A:C8	2.54	0.42
55:XY:36:G:C2	55:XY:37:1MG:C4	3.07	0.42
1:QA:284:G:H2'	1:QA:285:G:H8	1.84	0.42
1:QA:408:A:H5'	4:QD:116:GLN:HB2	2.01	0.42
1:QA:736:C:OP1	18:QR:68:LYS:HE3	2.20	0.42
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.20	0.42
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.83	0.42
1:QA:1417:G:C6	1:QA:1482:G:C6	3.07	0.42
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.21	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.42
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	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
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.42
22:RA:7:G:H2'	22:RA:8:A:O4'	2.18	0.42
22:RA:330:A:H2	22:RA:1210:A:HO2'	1.67	0.42
22:RA:1045:A:O2'	22:RA:1046:A:OP2	2.35	0.42
22:RA:1068:G:O2'	22:RA:1096:A:N3	2.53	0.42
22:RA:1728:G:H3'	22:RA:1729:A:C5'	2.49	0.42
22:RA:1805:U:C2	22:RA:1806:C:C5	3.07	0.42
22:RA:2683:C:OP1	36:RT:53:ARG:NH2	2.44	0.42
24:RD:17:THR:HG21	24:RD:204:ILE:HA	1.99	0.42
24:RD:33:LEU:O	24:RD:35:LYS:N	2.52	0.42
24:RD:108:PRO:HG2	24:RD:111:LEU:HB2	2.01	0.42
25:RE:155:LYS:O	25:RE:156:MET:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:27:ASN:HB3	27:RG:30:GLU:OE2	2.19	0.42
30:RN:30:ILE:HG22	30:RN:34:LEU:HD21	2.01	0.42
32:RP:119:GLU:OE1	32:RP:119:GLU:HA	2.19	0.42
34:RR:10:LEU:C	34:RR:12:ARG:N	2.72	0.42
37:RU:27:LEU:O	37:RU:30:LYS:N	2.41	0.42
37:RU:91:ASP:O	37:RU:95:LEU:N	2.43	0.42
37:RU:98:LEU:O	37:RU:102:GLU:N	2.49	0.42
39:RW:88:ARG:CB	39:RW:92:ARG:HB3	2.47	0.42
42:RZ:143:GLY:C	42:RZ:144:LEU:HD22	2.39	0.42
47:R4:22:ILE:CG2	47:R4:23:GLU:N	2.81	0.42
49:R6:33:LYS:C	49:R6:35:GLU:H	2.22	0.42
1:XA:409:G:H3'	1:XA:410:G:H8	1.84	0.42
1:XA:498:A:C6	1:XA:547:A:C8	3.07	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	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
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
22:YA:264:C:O2'	22:YA:265:A:H5''	2.19	0.42
22:YA:569:U:C4	22:YA:570:G:C6	3.07	0.42
22:YA:984:A:H5''	22:YA:985:C:C5	2.48	0.42
22:YA:1027:A:N6	22:YA:1126:A:C4	2.87	0.42
22:YA:1381:G:C6	22:YA:1382:G:C5	3.06	0.42
22:YA:2037:G:H2'	22:YA:2038:G:C8	2.54	0.42
22:YA:2572:A:N3	25:YE:144:ARG:NH2	2.67	0.42
22:YA:2771:C:H5''	25:YE:202:LYS:HG2	2.00	0.42
24:YD:33:LEU:O	24:YD:35:LYS:N	2.52	0.42
33:YQ:25:ASP:H	33:YQ:102:VAL:HG23	1.84	0.42
34:YR:10:LEU:O	34:YR:12:ARG:N	2.52	0.42
35:YS:99:LYS:C	35:YS:101:LEU:N	2.72	0.42
39:YW:65:LEU:CD1	39:YW:68:ARG:NH1	2.75	0.42
42:YZ:177:PRO:HB2	42:YZ:178:GLU:H	1.74	0.42
44:Y1:8:SER:CB	44:Y1:66:HIS:CE1	3.01	0.42
44:Y1:13:ILE:CG1	44:Y1:42:GLN:HB2	2.49	0.42
45:Y2:27:GLU:H	45:Y2:27:GLU:CD	2.17	0.42
46:Y3:46:ASN:O	46:Y3:50:VAL:HG22	2.19	0.42
53:XV:4:G:C6	53:XV:70:G:N1	2.87	0.42
1:QA:17:U:H2'	1:QA:18:C:C6	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:286:G:C6	1:QA:287:U:C4	3.07	0.42
1:QA:452:A:O2'	1:QA:453:A:O4'	2.35	0.42
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.54	0.42
1:QA:974:A:N3	14:QN:31:ARG:NE	2.66	0.42
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.20	0.42
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.84	0.42
1:QA:1413:A:N1	1:QA:1488:G:C2	2.87	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
5:QE:78:HIS:HB2	8:QH:104:ARG:C	2.40	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
22:RA:111:A:C6	22:RA:112:U:C4	3.07	0.42
22:RA:121:G:H4'	22:RA:149:A:H5'	2.01	0.42
22:RA:270(F):U:H2'	22:RA:270(G):C:C6	2.54	0.42
22:RA:686:G:H8	50:R7:6:GLN:O	2.02	0.42
22:RA:751:A:C6	22:RA:789:A:C5	3.06	0.42
22:RA:1273:U:H4'	22:RA:1275:A:OP1	2.19	0.42
22:RA:1394:U:C4	22:RA:1395:A:C6	3.07	0.42
22:RA:1622:G:C2	22:RA:1623:G:C8	3.07	0.42
22:RA:1638:C:H2'	22:RA:1639:U:O4'	2.19	0.42
22:RA:1733:G:C6	22:RA:1734:C:N3	2.88	0.42
22:RA:1820:U:O2'	24:RD:159:ALA:HB3	2.19	0.42
22:RA:1998:G:H4'	22:RA:2724:C:O2'	2.19	0.42
22:RA:2056:G:H2'	22:RA:2056:G:N3	2.34	0.42
22:RA:2252:G:H2'	22:RA:2253:G:C8	2.53	0.42
22:RA:2355:C:H1'	43:R0:39:ARG:NH2	2.28	0.42
22:RA:2455:G:C6	22:RA:2456:C:N4	2.88	0.42
22:RA:2529:G:O6	52:R9:31:LYS:NZ	2.50	0.42
23:RB:43:C:C4	23:RB:45:A:C6	3.07	0.42
24:RD:134:ARG:H	24:RD:134:ARG:HG3	1.55	0.42
27:RG:41:GLN:NE2	27:RG:154:GLY:O	2.52	0.42
27:RG:63:ILE:HG12	27:RG:64:THR:N	2.32	0.42
27:RG:114:ILE:O	27:RG:116:ASP:N	2.51	0.42
28:RH:26:VAL:CG1	28:RH:33:LEU:HB2	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:10:GLU:OE2	30:RN:11:PRO:CD	2.67	0.42
31:RO:2:ILE:N	31:RO:2:ILE:CD1	2.82	0.42
32:RP:114:ILE:CD1	32:RP:130:PHE:CE1	2.98	0.42
33:RQ:63:LYS:HD2	42:RZ:175:VAL:HG21	2.01	0.42
39:RW:8:ARG:HG3	39:RW:8:ARG:NH1	2.34	0.42
41:RY:42:VAL:HG11	41:RY:65:ALA:HB3	2.02	0.42
43:R0:23:VAL:HG13	43:R0:38:VAL:HG22	2.00	0.42
48:R5:20:ARG:HA	48:R5:23:HIS:CE1	2.54	0.42
1:XA:16:A:O2'	1:XA:17:U:H5'	2.19	0.42
1:XA:51:A:N3	1:XA:116:A:H1'	2.34	0.42
1:XA:674:G:H2'	1:XA:675:A:C8	2.55	0.42
1:XA:825:G:O4'	8:XH:2:LEU:HD21	2.19	0.42
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.20	0.42
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.34	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.25	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	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
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.84	0.42
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42
14:XN:9:LYS:HG2	14:XN:9:LYS:O	2.19	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	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
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
22:YA:478:A:C6	22:YA:480:A:C6	3.08	0.42
22:YA:978:G:H2'	22:YA:979:G:O4'	2.19	0.42
22:YA:1199:U:O5'	22:YA:1199:U:H6	2.02	0.42
22:YA:1759:A:H1'	22:YA:2711:A:C2	2.54	0.42
22:YA:2532:G:H1'	22:YA:2663:G:H22	1.84	0.42
22:YA:2585:U:C5	56:Z8:76:PPU:O2'	2.69	0.42
24:YD:31:LYS:C	24:YD:32:SER:O	2.54	0.42
25:YE:36:ARG:HH11	25:YE:36:ARG:CB	2.28	0.42
25:YE:197:ILE:CD1	25:YE:199:ARG:HH12	2.26	0.42
26:YF:128:ALA:O	26:YF:129:PHE:CB	2.67	0.42
27:YG:77:ILE:H	27:YG:82:LEU:HB2	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:121:ASN:HA	27:YG:181:ARG:NH2	2.34	0.42
30:YN:43:THR:HA	30:YN:44:PRO:HD2	1.92	0.42
32:YP:98:GLU:O	32:YP:99:LEU:C	2.57	0.42
32:YP:120:ALA:HB1	32:YP:138:LEU:CB	2.49	0.42
35:YS:64:GLU:O	35:YS:68:GLN:HG3	2.19	0.42
36:YT:110:ILE:CG2	36:YT:111:ARG:N	2.82	0.42
39:YW:19:LEU:O	39:YW:22:ASP:HB2	2.19	0.42
42:YZ:92:SER:HB3	42:YZ:93:ASP:H	1.66	0.42
44:Y1:72:GLU:O	44:Y1:75:GLU:HB2	2.19	0.42
44:Y1:73:LEU:C	44:Y1:75:GLU:N	2.70	0.42
48:Y5:20:ARG:HA	48:Y5:23:HIS:CE1	2.54	0.42
49:Y6:33:LYS:C	49:Y6:35:GLU:H	2.22	0.42
55:QY:35:G:H2'	55:QY:36:G:C5'	2.43	0.42
1:QA:31:G:O2'	1:QA:48:C:N4	2.52	0.42
1:QA:362:G:N2	1:QA:365:U:OP2	2.48	0.42
1:QA:857:C:H2'	1:QA:858:G:O4'	2.20	0.42
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.19	0.42
1:QA:1244:C:N4	1:QA:1293:G:H1	2.15	0.42
1:QA:1347:G:H2'	1:QA:1373:G:C6	2.55	0.42
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.19	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.35	0.42
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
12:QL:49:ASN:HD22	12:QL:92:ASP:CG	2.22	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42
22:RA:372:G:H8	44:R1:65:SER:O	2.02	0.42
22:RA:608:A:H2'	22:RA:609:A:H8	1.84	0.42
22:RA:634:C:H2'	22:RA:635:C:C6	2.55	0.42
22:RA:1043:C:H42	22:RA:1112:G:H1	1.67	0.42
22:RA:1425:G:H2'	22:RA:1426:G:C8	2.54	0.42
22:RA:1516:U:H2'	22:RA:1517:G:C8	2.54	0.42
22:RA:1701:A:C8	22:RA:1702:G:C8	3.08	0.42
22:RA:1988:C:H2'	22:RA:1989:G:H8	1.84	0.42
23:RB:6:C:C2	23:RB:115:G:N2	2.87	0.42
24:RD:14:ARG:CG	24:RD:15:PHE:N	2.83	0.42
25:RE:3:GLY:HA3	25:RE:81:ILE:CD1	2.48	0.42
25:RE:54:GLN:N	25:RE:54:GLN:CD	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:164:ARG:HG2	26:RF:164:ARG:NH1	2.34	0.42
27:RG:109:VAL:C	27:RG:112:PRO:HD2	2.39	0.42
27:RG:145:THR:O	27:RG:146:TYR:HB3	2.19	0.42
28:RH:89:ILE:CD1	28:RH:89:ILE:H	2.32	0.42
28:RH:120:GLY:O	28:RH:136:ILE:HD12	2.19	0.42
29:RI:133:HIS:HB2	29:RI:134:PRO:CD	2.48	0.42
32:RP:37:GLY:O	32:RP:38:GLN:C	2.58	0.42
36:RT:24:PRO:HA	36:RT:49:VAL:CG1	2.39	0.42
37:RU:79:PHE:CD2	37:RU:83:LEU:HD13	2.54	0.42
37:RU:92:ARG:NH2	38:RV:11:GLN:O	2.53	0.42
45:R2:59:ARG:O	45:R2:62:THR:HG23	2.19	0.42
49:R6:19:ARG:HA	49:R6:19:ARG:HD2	1.76	0.42
52:R9:2:LYS:HD2	52:R9:2:LYS:HA	1.93	0.42
1:XA:64:G:H5'	1:XA:65:U:OP1	2.19	0.42
1:XA:736:C:H2'	1:XA:737:A:C8	2.54	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
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
22:YA:106:C:H2'	22:YA:107:C:C6	2.54	0.42
22:YA:174:C:H2'	22:YA:175:G:O4'	2.19	0.42
22:YA:685:A:O4'	22:YA:687:C:N4	2.52	0.42
22:YA:747:U:C4	48:Y5:2:ALA:N	2.88	0.42
22:YA:846:C:C4	22:YA:930:U:C4	3.08	0.42
22:YA:1429:G:H2'	22:YA:1430:C:C6	2.54	0.42
22:YA:1473:G:C6	22:YA:1474:C:C4	3.08	0.42
22:YA:1843:C:H2'	22:YA:1844:C:C6	2.54	0.42
22:YA:1929:G:H3'	22:YA:1929:G:C8	2.54	0.42
22:YA:2512:C:H4'	25:YE:122:PHE:CE2	2.55	0.42
23:YB:16:G:H2'	23:YB:17:C:C6	2.55	0.42
24:YD:108:PRO:HG2	24:YD:111:LEU:HB2	2.01	0.42
24:YD:155:LEU:HD23	24:YD:177:LEU:HD21	2.00	0.42
25:YE:94:GLU:C	25:YE:96:PHE:N	2.73	0.42
27:YG:114:ILE:HG22	27:YG:117:PHE:HB2	2.01	0.42
29:YI:39:ALA:HB1	29:YI:44:LEU:HD13	2.00	0.42
30:YN:15:LEU:C	30:YN:15:LEU:HD13	2.40	0.42
32:YP:119:GLU:HA	32:YP:119:GLU:OE1	2.19	0.42
37:YU:91:ASP:OD2	37:YU:96:ALA:HB2	2.19	0.42
38:YV:38:LEU:CD1	38:YV:55:ALA:HB1	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YY:60:PHE:CD2	41:YY:60:PHE:N	2.87	0.42
45:Y2:48:HIS:O	45:Y2:49:LYS:C	2.57	0.42
47:Y4:23:GLU:C	47:Y4:24:THR:HG1	2.22	0.42
50:Y7:47:ARG:HB2	50:Y7:48:LYS:H	1.64	0.42
55:XY:39:C:H4'	55:XY:40:G:OP1	2.18	0.42
1:QA:322:C:O2'	20:QT:23:ARG:HD2	2.20	0.42
1:QA:439:A:C5	1:QA:440:A:H1'	2.54	0.42
1:QA:502:G:C2	1:QA:503:C:C2	3.08	0.42
1:QA:600:C:H2'	1:QA:601:C:C6	2.54	0.42
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	2.01	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.42
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.42
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.52	0.42
2:QB:204:ASN:HD22	2:QB:204:ASN:C	2.22	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.73	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.01	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
4:QD:24:GLU:O	4:QD:28:SER:OG	2.21	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	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
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.57	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
22:RA:96:G:H4'	45:R2:48:HIS:NE2	2.34	0.42
22:RA:779:U:H2'	22:RA:780:G:O4'	2.20	0.42
22:RA:1425:G:H2'	22:RA:1426:G:O4'	2.19	0.42
22:RA:2212:A:H1'	22:RA:2215:G:C5	2.54	0.42
22:RA:2849:U:OP1	36:RT:95:ARG:NH1	2.53	0.42
24:RD:43:ARG:CZ	24:RD:49:ILE:HG21	2.49	0.42
25:RE:24:THR:HB	25:RE:184:VAL:HG23	2.02	0.42
25:RE:121:ASN:O	25:RE:122:PHE:C	2.57	0.42
25:RE:143:ASN:HB2	25:RE:147:PRO:HD2	2.00	0.42
26:RF:132:VAL:CG2	26:RF:133:ASN:N	2.80	0.42
27:RG:55:LYS:O	27:RG:59:GLU:HB2	2.19	0.42
28:RH:58:GLU:O	28:RH:60:ARG:N	2.53	0.42
28:RH:125:VAL:HG12	28:RH:126:PRO:CD	2.49	0.42
28:RH:136:ILE:O	28:RH:137:ASP:O	2.37	0.42
29:RI:79:ILE:N	29:RI:141:LYS:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:26:LEU:HG	30:RN:30:ILE:CD1	2.49	0.42
34:RR:29:LEU:HD11	34:RR:48:VAL:CG1	2.50	0.42
34:RR:44:LEU:HD23	34:RR:44:LEU:HA	1.79	0.42
35:RS:95:HIS:O	35:RS:96:GLY:C	2.57	0.42
37:RU:91:ASP:OD2	37:RU:96:ALA:HB2	2.19	0.42
38:RV:44:LYS:HB3	38:RV:45:THR:H	1.56	0.42
41:RY:20:TYR:CE1	41:RY:42:VAL:HA	2.55	0.42
46:R3:46:ASN:O	46:R3:50:VAL:HG22	2.20	0.42
47:R4:54:GLY:HA2	47:R4:57:GLU:CG	2.50	0.42
49:R6:7:ILE:O	49:R6:8:LYS:CG	2.68	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.18	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.50	0.42
11:XK:17:GLY:CA	11:XK:77:MET:HE3	2.45	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
22:YA:381:G:OP1	44:Y1:16:ASN:ND2	2.42	0.42
22:YA:452:G:C2	22:YA:458:G:C5	3.08	0.42
22:YA:482:A:O2'	41:YY:47:LYS:NZ	2.50	0.42
22:YA:1061:U:H4'	22:YA:1070:A:H1'	2.00	0.42
22:YA:1360:A:C6	22:YA:1372:U:O4	2.72	0.42
22:YA:1379:A:H4'	22:YA:1380:G:OP2	2.18	0.42
22:YA:1389:G:C2	22:YA:1390:U:C2	3.08	0.42
22:YA:1952:A:C4	31:YO:22:ILE:HD12	2.53	0.42
22:YA:2230:G:C6	22:YA:2231:C:C4	3.08	0.42
22:YA:2392:A:C2	22:YA:2429:G:C2	3.08	0.42
23:YB:50:G:OP1	35:YS:63:THR:HG23	2.20	0.42
24:YD:75:ILE:HG21	24:YD:99:ASP:HB2	2.02	0.42
24:YD:177:LEU:C	24:YD:179:SER:H	2.23	0.42
25:YE:104:VAL:CG1	25:YE:188:VAL:HG23	2.49	0.42
25:YE:117:MET:HA	25:YE:122:PHE:N	2.35	0.42
25:YE:176:ILE:HD12	25:YE:176:ILE:N	2.35	0.42
27:YG:73:ALA:O	27:YG:84:LYS:O	2.38	0.42
27:YG:117:PHE:CE1	27:YG:119:GLY:CA	3.03	0.42
28:YH:136:ILE:O	28:YH:137:ASP:O	2.37	0.42
31:YO:1:MET:HG2	31:YO:67:LYS:HG2	2.01	0.42
32:YP:125:VAL:C	32:YP:145:PRO:HD2	2.39	0.42
36:YT:3:ARG:O	36:YT:4:GLY:C	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:54:ARG:HA	36:YT:59:THR:HG23	2.02	0.42
36:YT:96:ARG:HB2	36:YT:96:ARG:CZ	2.49	0.42
38:YV:59:ALA:HA	38:YV:95:LEU:O	2.19	0.42
40:YX:87:GLN:C	40:YX:88:LYS:HG3	2.40	0.42
42:YZ:24:LEU:HD21	42:YZ:86:VAL:CG2	2.50	0.42
50:Y7:12:ARG:HH21	50:Y7:44:PRO:HB3	1.85	0.42
51:Y8:28:GLY:O	51:Y8:29:LYS:O	2.37	0.42
51:Y8:53:PRO:HD2	51:Y8:54:GLU:H	1.84	0.42
53:QV:1:C:O2'	53:QV:2:G:H5'	2.19	0.42
1:QA:608:A:H2'	1:QA:609:A:O4'	2.20	0.42
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.55	0.42
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.55	0.42
1:QA:1312:G:H1	1:QA:1325:C:H42	1.68	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
22:RA:185:U:H2'	22:RA:186:G:C8	2.55	0.42
22:RA:443:A:H1'	22:RA:1201:C:O4'	2.18	0.42
22:RA:709:U:H2'	22:RA:710:G:C8	2.55	0.42
22:RA:734:A:O2'	22:RA:1635:G:H5'	2.19	0.42
22:RA:735:A:H2'	22:RA:736:C:O4'	2.19	0.42
22:RA:846:C:C4	22:RA:930:U:C4	3.07	0.42
22:RA:1140:C:H5''	30:RN:66:LYS:HZ1	1.85	0.42
22:RA:1993:U:H2'	22:RA:1994:C:H6	1.84	0.42
25:RE:28:ALA:HB3	25:RE:93:VAL:CG2	2.46	0.42
25:RE:35:GLN:HB3	25:RE:48:GLN:HB2	2.01	0.42
25:RE:104:VAL:CG1	25:RE:188:VAL:HG23	2.49	0.42
26:RF:63:LYS:HE2	26:RF:67:GLN:HB2	2.01	0.42
27:RG:16:ARG:NE	27:RG:31:VAL:HG11	2.34	0.42
28:RH:169:VAL:HG22	28:RH:170:ARG:N	2.26	0.42
29:RI:83:ALA:O	29:RI:85:GLU:N	2.53	0.42
31:RO:50:GLY:O	31:RO:51:ALA:C	2.57	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:118:LEU:HD23	33:RQ:118:LEU:HA	1.87	0.42
35:RS:51:ALA:HB3	35:RS:73:LEU:HD23	2.01	0.42
35:RS:102:ALA:C	35:RS:104:GLY:N	2.73	0.42
37:RU:97:ASP:HA	37:RU:100:VAL:HG23	2.01	0.42
38:RV:59:ALA:HA	38:RV:95:LEU:O	2.19	0.42
39:RW:14:PRO:O	39:RW:15:ARG:C	2.58	0.42
39:RW:81:ALA:C	39:RW:82:LEU:HD12	2.40	0.42
44:R1:74:VAL:O	44:R1:74:VAL:CG1	2.64	0.42
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.19	0.42
1:XA:372:C:C5	1:XA:387:U:C5	3.07	0.42
1:XA:692:U:O2	1:XA:694:A:C8	2.73	0.42
1:XA:1081:G:P	5:XE:16:THR:OG1	2.78	0.42
1:XA:1095:U:H5'	1:XA:1109:C:O2	2.19	0.42
1:XA:1321:C:C4	1:XA:1322:C:C4	3.07	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.42
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	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
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
19:XS:66:MET:O	19:XS:66:MET:HG3	2.19	0.42
22:YA:307:G:H21	22:YA:330:A:H62	1.66	0.42
22:YA:312:G:H5'	22:YA:331:A:O2'	2.20	0.42
22:YA:536:A:N6	22:YA:556:G:O6	2.52	0.42
22:YA:758:C:O2	22:YA:1981:A:H2	2.02	0.42
22:YA:1707:G:C5	22:YA:1756:G:C6	3.07	0.42
22:YA:2238:G:N3	22:YA:2238:G:H2'	2.34	0.42
22:YA:2283:C:C2	22:YA:2389:G:C2	3.07	0.42
22:YA:2516:G:C6	22:YA:2517:C:N4	2.87	0.42
22:YA:2804:C:H2'	22:YA:2805:G:O4'	2.20	0.42
23:YB:11:C:O5'	23:YB:12:C:H5	2.03	0.42
24:YD:2:ALA:O	24:YD:3:VAL:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:12:SER:O	24:YD:14:ARG:N	2.51	0.42
24:YD:25:THR:HG23	24:YD:27:THR:HB	2.02	0.42
26:YF:183:VAL:HG22	26:YF:184:TYR:N	2.35	0.42
27:YG:55:LYS:O	27:YG:59:GLU:HB2	2.19	0.42
28:YH:26:VAL:CG1	28:YH:33:LEU:HB2	2.50	0.42
29:YI:144:VAL:HG22	29:YI:145:VAL:H	1.85	0.42
32:YP:37:GLY:O	32:YP:38:GLN:C	2.58	0.42
32:YP:64:LYS:HG3	51:Y8:25:MET:CE	2.50	0.42
33:YQ:20:ALA:HA	33:YQ:98:LYS:HB3	2.02	0.42
34:YR:10:LEU:C	34:YR:12:ARG:N	2.72	0.42
35:YS:15:ARG:O	35:YS:19:LYS:HD3	2.20	0.42
37:YU:79:PHE:CD2	37:YU:83:LEU:HD13	2.54	0.42
39:YW:81:ALA:C	39:YW:82:LEU:HD12	2.40	0.42
42:YZ:16:SER:O	42:YZ:20:ARG:HB2	2.19	0.42
42:YZ:72:ARG:HH22	42:YZ:97:GLU:C	2.18	0.42
47:Y4:54:GLY:HA2	47:Y4:57:GLU:CG	2.50	0.42
55:QY:35:G:C2'	55:QY:36:G:H5''	2.41	0.42
1:QA:474:G:H2'	1:QA:475:G:H8	1.84	0.42
1:QA:475:G:H2'	1:QA:476:G:C8	2.55	0.42
1:QA:559:A:H5''	1:QA:560:U:H3'	2.01	0.42
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.33	0.42
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.49	0.42
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.55	0.42
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.72	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.35	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	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
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	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
22:RA:483:A:H3'	22:RA:484:C:C6	2.54	0.42
22:RA:689:A:H2'	22:RA:690:G:H8	1.85	0.42
22:RA:959:A:N3	22:RA:2457:U:O2'	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1156:A:OP1	37:RU:55:ARG:HD3	2.20	0.42
22:RA:2126:A:H1'	22:RA:2127:G:OP2	2.20	0.42
22:RA:2246:G:H2'	22:RA:2247:A:C8	2.55	0.42
22:RA:2461:C:H2'	22:RA:2462:U:C6	2.54	0.42
22:RA:2543:G:N3	22:RA:2765:A:H2'	2.35	0.42
22:RA:2630:G:N3	22:RA:2894:G:N2	2.68	0.42
25:RE:101:ARG:C	25:RE:201:THR:OG1	2.58	0.42
27:RG:121:ASN:HA	27:RG:181:ARG:NH2	2.34	0.42
30:RN:75:TYR:HA	30:RN:82:LEU:HA	2.01	0.42
32:RP:115:LEU:HB3	32:RP:131:SER:HB2	2.02	0.42
32:RP:144:GLU:HA	32:RP:145:PRO:HD3	1.76	0.42
33:RQ:27:VAL:HG11	33:RQ:134:ARG:HG3	2.00	0.42
36:RT:3:ARG:O	36:RT:4:GLY:C	2.58	0.42
36:RT:134:GLU:OE1	36:RT:135:ALA:N	2.53	0.42
42:RZ:69:THR:HG22	42:RZ:90:VAL:HA	2.02	0.42
44:R1:60:PHE:HE2	44:R1:91:LYS:NZ	2.16	0.42
44:R1:72:GLU:O	44:R1:75:GLU:HB2	2.20	0.42
46:R3:37:LEU:HD12	46:R3:43:ILE:CG2	2.50	0.42
1:XA:89:U:HO2'	1:XA:90:C:P	2.41	0.42
1:XA:621:A:H2'	1:XA:622:A:C8	2.55	0.42
1:XA:1224:G:HO2'	1:XA:1225:A:P	2.28	0.42
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.34	0.42
1:XA:1508:G:H2'	1:XA:1509:C:C6	2.54	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:H	2.21	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.33	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.53	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
19:XS:4:SER:CA	47:Y4:67:TYR:HE2	2.33	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	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
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
22:YA:568:U:O2'	22:YA:570:G:N7	2.45	0.42
22:YA:729:G:C4	22:YA:1775:U:C2	3.08	0.42
22:YA:918:A:C5	22:YA:919:G:H1'	2.55	0.42
22:YA:1208:C:C4	22:YA:1209:G:N7	2.88	0.42
22:YA:1353:A:C8	22:YA:1377:G:N2	2.87	0.42
22:YA:1798:U:O2	22:YA:1822:G:N2	2.53	0.42
22:YA:2009:G:H1'	34:YR:107:ASP:O	2.20	0.42
22:YA:2306:C:N4	27:YG:42:GLY:O	2.51	0.42
22:YA:2630:G:O4'	22:YA:2894:G:H1'	2.19	0.42
23:YB:24:G:H1'	23:YB:27:C:N4	2.34	0.42
25:YE:28:ALA:HB3	25:YE:93:VAL:CG2	2.47	0.42
25:YE:36:ARG:HB3	25:YE:36:ARG:NH1	2.30	0.42
25:YE:143:ASN:HB2	25:YE:147:PRO:HD2	2.00	0.42
26:YF:62:ARG:NH1	26:YF:62:ARG:CB	2.82	0.42
26:YF:109:GLY:O	26:YF:110:LEU:C	2.58	0.42
27:YG:4:ASP:O	27:YG:5:VAL:HB	2.19	0.42
27:YG:109:VAL:C	27:YG:112:PRO:HD2	2.40	0.42
28:YH:58:GLU:O	28:YH:60:ARG:N	2.53	0.42
28:YH:89:ILE:CD1	28:YH:89:ILE:H	2.32	0.42
29:YI:79:ILE:HG21	29:YI:142:VAL:HG12	2.01	0.42
33:YQ:27:VAL:HG11	33:YQ:134:ARG:HG3	2.00	0.42
34:YR:34:ILE:HG22	34:YR:35:THR:N	2.35	0.42
35:YS:95:HIS:O	35:YS:96:GLY:C	2.57	0.42
40:YX:60:ARG:HH12	50:Y7:47:ARG:HH22	1.67	0.42
41:YY:95:LYS:HA	41:YY:101:LYS:N	2.33	0.42
46:Y3:7:LYS:O	46:Y3:7:LYS:HG2	2.19	0.42
47:Y4:12:ALA:HB1	47:Y4:30:GLU:N	2.35	0.42
48:Y5:40:LYS:HE2	48:Y5:47:PRO:HG2	2.02	0.42
49:Y6:7:ILE:O	49:Y6:8:LYS:CG	2.68	0.42
49:Y6:25:LYS:HE2	49:Y6:27:LYS:CD	2.50	0.42
49:Y6:36:LEU:HD13	49:Y6:50:ARG:HH12	1.81	0.42
50:Y7:9:ARG:NH1	50:Y7:47:ARG:HG3	2.35	0.42
52:Y9:17:ILE:CG2	52:Y9:18:ARG:N	2.82	0.42
53:XV:35:A:N3	54:XX:3:G:N2	2.68	0.42
1:QA:18:C:H5''	5:QE:127:ASN:ND2	2.33	0.42
1:QA:222:U:H2'	1:QA:223:U:H6	1.85	0.42
1:QA:681:C:H2'	1:QA:682:G:C8	2.55	0.42
1:QA:683:G:C6	1:QA:684:A:C5	3.08	0.42
1:QA:792:A:H1'	1:QA:793:U:OP2	2.19	0.42
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1333:A:C2	1:QA:1334:G:H1'	2.55	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
8:QH:95:VAL:O	8:QH:95:VAL:HG23	2.20	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
18:QR:76:LEU:N	18:QR:76:LEU:HD22	2.35	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
22:RA:565:C:H4'	22:RA:1253:A:N6	2.35	0.42
22:RA:570:G:H2'	22:RA:2030:A:C5	2.55	0.42
22:RA:571:A:C5	22:RA:575:A:C8	3.08	0.42
22:RA:802:A:C6	22:RA:803:U:C4	3.07	0.42
22:RA:857:C:H2'	22:RA:858:U:H6	1.84	0.42
22:RA:1079:C:O4'	22:RA:1088:A:N6	2.53	0.42
22:RA:1113:U:H2'	22:RA:1114:G:C8	2.55	0.42
22:RA:1309:G:OP1	50:R7:9:ARG:HD3	2.19	0.42
22:RA:1310:G:OP2	50:R7:9:ARG:NH1	2.52	0.42
22:RA:1488:G:C6	22:RA:1489:U:C4	3.08	0.42
22:RA:2093:G:OP1	29:RI:23:PRO:HG2	2.19	0.42
22:RA:2119:A:C2	22:RA:2171:A:H1'	2.54	0.42
22:RA:2273:A:H2'	22:RA:2274:A:C8	2.54	0.42
24:RD:9:TYR:CZ	24:RD:13:ARG:HD3	2.54	0.42
24:RD:182:LEU:N	24:RD:272:ALA:HB3	2.32	0.42
24:RD:196:VAL:O	24:RD:196:VAL:CG1	2.68	0.42
25:RE:117:MET:HA	25:RE:122:PHE:N	2.35	0.42
25:RE:128:SER:O	25:RE:129:HIS:HB2	2.19	0.42
27:RG:34:LEU:HD11	27:RG:99:MET:CE	2.49	0.42
30:RN:62:VAL:HG12	30:RN:66:LYS:HB2	2.01	0.42
31:RO:1:MET:HG2	31:RO:67:LYS:HG2	2.02	0.42
31:RO:97:ARG:CA	31:RO:117:LEU:HD22	2.50	0.42
35:RS:49:VAL:HG21	35:RS:77:ALA:HA	2.02	0.42
36:RT:89:VAL:O	36:RT:90:GLN:CB	2.67	0.42
36:RT:110:ILE:CG2	36:RT:111:ARG:N	2.82	0.42
37:RU:39:LEU:O	37:RU:42:ALA:N	2.53	0.42
37:RU:99:ALA:HA	37:RU:106:PHE:HB2	2.01	0.42
39:RW:71:VAL:HA	39:RW:107:LEU:HD12	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:2:LYS:HD2	47:R4:2:LYS:HA	1.61	0.42
48:R5:40:LYS:HE2	48:R5:47:PRO:HG2	2.02	0.42
51:R8:56:GLU:C	51:R8:58:ILE:N	2.73	0.42
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.20	0.42
1:XA:134:A:H1'	1:XA:325:A:C5	2.55	0.42
1:XA:542:G:H2'	1:XA:543:C:C6	2.54	0.42
1:XA:626:U:H2'	1:XA:627:G:H8	1.85	0.42
1:XA:908:A:H2'	1:XA:909:A:C8	2.55	0.42
1:XA:1499:A:H1'	1:XA:1520:G:H5'	2.02	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
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	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	2.40	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.20	0.42
12:XL:47:LYS:C	12:XL:49:ASN:N	2.73	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
22:YA:213:A:H2'	22:YA:214:G:O4'	2.19	0.42
22:YA:223:A:N1	22:YA:407:G:O2'	2.37	0.42
22:YA:294:A:N6	22:YA:345:A:C4	2.88	0.42
22:YA:449:A:O2'	22:YA:450:G:H5'	2.19	0.42
22:YA:458:G:O2'	50:Y7:39:ARG:HD3	2.20	0.42
22:YA:484:C:OP1	41:YY:51:VAL:CG1	2.68	0.42
22:YA:612:G:N3	22:YA:613:U:O2	2.52	0.42
22:YA:732:C:H2'	22:YA:733:G:O4'	2.20	0.42
22:YA:772:C:H2'	22:YA:773:U:C6	2.55	0.42
22:YA:1432:C:H2'	22:YA:1433:U:O4'	2.20	0.42
22:YA:2450:A:H2'	53:XV:76:A:C2	2.55	0.42
22:YA:2522:U:O2'	22:YA:2647:U:OP1	2.23	0.42
22:YA:2547:U:H2'	22:YA:2548:G:C8	2.53	0.42
22:YA:2655:G:O2'	22:YA:2656:U:P	2.78	0.42
23:YB:37:C:O2	35:YS:95:HIS:NE2	2.52	0.42
24:YD:71:ASP:CB	24:YD:103:ARG:HH22	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:31:CYS:HB3	25:YE:49:LEU:HG	2.01	0.42
25:YE:152:LYS:HG2	30:YN:78:TYR:CD1	2.55	0.42
26:YF:11:VAL:HG12	26:YF:12:LEU:H	1.85	0.42
27:YG:99:MET:O	27:YG:103:LEU:HB2	2.20	0.42
28:YH:77:LYS:HB3	28:YH:77:LYS:HZ2	1.78	0.42
28:YH:84:SER:O	28:YH:85:LYS:CB	2.64	0.42
30:YN:75:TYR:HA	30:YN:82:LEU:HA	2.02	0.42
30:YN:96:GLU:O	30:YN:97:ARG:C	2.57	0.42
31:YO:2:ILE:HG12	31:YO:8:LEU:HD11	2.02	0.42
31:YO:20:MET:O	31:YO:41:ALA:CB	2.67	0.42
31:YO:50:GLY:O	31:YO:51:ALA:C	2.57	0.42
32:YP:65:ARG:HH21	51:Y8:15:LYS:HB3	1.84	0.42
32:YP:81:GLN:HE21	32:YP:81:GLN:HB2	1.59	0.42
32:YP:135:LEU:HD13	32:YP:139:LYS:HE3	2.01	0.42
35:YS:26:LEU:HB3	35:YS:87:PHE:HA	2.02	0.42
35:YS:52:SER:HB2	35:YS:55:ALA:CB	2.50	0.42
36:YT:24:PRO:HA	36:YT:49:VAL:CG1	2.39	0.42
37:YU:27:LEU:C	37:YU:29:SER:N	2.73	0.42
38:YV:25:LEU:H	38:YV:92:THR:CG2	2.29	0.42
41:YY:91:GLU:CG	41:YY:92:ASN:N	2.83	0.42
51:Y8:40:GLU:O	51:Y8:41:ILE:C	2.56	0.42
53:XV:15:G:N2	53:XV:48:C:H42	2.17	0.42
1:QA:149:A:H2'	1:QA:150:C:C6	2.55	0.42
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.20	0.42
1:QA:752:G:H1'	1:QA:754:C:H41	1.85	0.42
1:QA:1151:A:N3	10:QJ:39:PRO:HG3	2.34	0.42
1:QA:1190:G:H5'	3:QC:176:HIS:NE2	2.34	0.42
1:QA:1418:A:H5''	1:QA:1419:G:OP2	2.20	0.42
1:QA:1451:A:N3	1:QA:1451:A:H2'	2.35	0.42
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	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:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.42
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
22:RA:76:C:O2'	22:RA:77:C:H5'	2.19	0.42
22:RA:278:A:N6	22:RA:362:U:H3	2.18	0.42
22:RA:425:G:H2'	22:RA:426:C:C6	2.53	0.42
22:RA:602:G:H1'	22:RA:656:G:N2	2.35	0.42
22:RA:729:G:N7	24:RD:209:ALA:HB3	2.35	0.42
22:RA:1688:U:H1'	22:RA:1701:A:C6	2.55	0.42
22:RA:1927:A:H2'	22:RA:1928:A:C8	2.54	0.42
22:RA:2059:A:H5'	26:RF:71:GLY:HA2	2.00	0.42
22:RA:2432:A:C6	22:RA:2433:A:C6	3.07	0.42
22:RA:2882:A:OP1	34:RR:96:ARG:NH1	2.53	0.42
24:RD:158:ALA:HB3	24:RD:161:THR:CG2	2.49	0.42
24:RD:165:ILE:O	24:RD:166:GLN:NE2	2.53	0.42
25:RE:10:GLY:HA3	36:RT:8:LYS:HD3	2.02	0.42
25:RE:137:HIS:CB	25:RE:138:PRO:HD2	2.42	0.42
25:RE:176:ILE:HD12	25:RE:176:ILE:N	2.35	0.42
27:RG:51:ARG:NH1	27:RG:51:ARG:CB	2.83	0.42
27:RG:78:SER:O	27:RG:80:PHE:N	2.53	0.42
27:RG:99:MET:O	27:RG:103:LEU:HB2	2.20	0.42
28:RH:66:GLY:O	28:RH:67:LEU:C	2.58	0.42
28:RH:86:GLU:H	28:RH:86:GLU:CD	2.16	0.42
28:RH:146:ALA:HA	28:RH:164:TYR:OH	2.20	0.42
30:RN:43:THR:HA	30:RN:44:PRO:HD2	1.92	0.42
31:RO:71:ARG:HH11	36:RT:74:ARG:HH21	1.65	0.42
32:RP:98:GLU:O	32:RP:99:LEU:C	2.57	0.42
32:RP:107:LYS:O	32:RP:108:LYS:C	2.58	0.42
34:RR:55:ALA:HA	34:RR:80:PHE:CE2	2.55	0.42
35:RS:30:ARG:NH2	35:RS:92:TYR:HD1	2.17	0.42
35:RS:83:LYS:HE3	35:RS:84:GLN:CG	2.50	0.42
35:RS:83:LYS:HE3	35:RS:84:GLN:HG3	2.02	0.42
37:RU:43:GLY:HA3	38:RV:73:SER:OG	2.19	0.42
38:RV:21:ARG:HD2	38:RV:91:TYR:CE2	2.55	0.42
38:RV:35:LEU:HB2	38:RV:37:VAL:CG2	2.49	0.42
41:RY:60:PHE:CD2	41:RY:60:PHE:N	2.87	0.42
43:R0:48:GLY:HA3	43:R0:80:HIS:ND1	2.34	0.42
45:R2:50:ILE:H	45:R2:50:ILE:HG13	1.64	0.42
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.20	0.42
1:XA:792:A:C5	1:XA:794:A:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1098:C:C2	1:XA:1099:G:C8	3.08	0.42
1:XA:1161:C:O2'	1:XA:1162:C:H5'	2.20	0.42
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.20	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
14:YN:3:ARG:CG	14:YN:4:LYS:N	2.83	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
22:YA:573:G:N1	22:YA:2031:A:OP2	2.35	0.42
22:YA:813:U:H2'	22:YA:814:C:C6	2.55	0.42
22:YA:1093:G:OP1	28:YH:170:ARG:HD2	2.20	0.42
22:YA:1158:C:H4'	46:Y3:31:LEU:O	2.20	0.42
22:YA:1543:A:O2'	22:YA:1544:C:H3'	2.19	0.42
22:YA:2212:A:H1'	22:YA:2215:G:C5	2.54	0.42
22:YA:2525:G:C2	22:YA:2539:C:N3	2.88	0.42
22:YA:2699:C:H2'	22:YA:2700:C:O4'	2.20	0.42
24:YD:158:ALA:HB3	24:YD:161:THR:CG2	2.49	0.42
24:YD:263:ARG:NH1	24:YD:263:ARG:CB	2.75	0.42
25:YE:9:VAL:HB	25:YE:10:GLY:H	1.70	0.42
25:YE:25:VAL:CG1	36:YT:11:GLU:HG2	2.50	0.42
25:YE:35:GLN:HB3	25:YE:48:GLN:HB2	2.01	0.42
25:YE:128:SER:O	25:YE:129:HIS:HB2	2.20	0.42
26:YF:101:LEU:HD12	26:YF:102:PRO:N	2.33	0.42
26:YF:123:LEU:HD12	26:YF:124:LEU:H	1.82	0.42
26:YF:192:LEU:HD21	26:YF:194:MET:HE3	2.02	0.42
27:YG:27:ASN:HB3	27:YG:30:GLU:OE2	2.19	0.42
28:YH:84:SER:OG	28:YH:85:LYS:N	2.51	0.42
28:YH:119:GLU:CD	28:YH:120:GLY:H	2.22	0.42
30:YN:30:ILE:HG22	30:YN:34:LEU:HD21	2.01	0.42
31:YO:97:ARG:CA	31:YO:117:LEU:HD22	2.50	0.42
36:YT:105:LEU:O	36:YT:105:LEU:HG	2.18	0.42
39:YW:73:ALA:HB3	39:YW:106:ILE:CG1	2.45	0.42
39:YW:74:ALA:O	39:YW:75:TYR:CB	2.65	0.42
39:YW:96:ILE:O	39:YW:96:ILE:CG2	2.68	0.42
40:YX:14:SER:O	40:YX:15:GLU:C	2.57	0.42
41:YY:20:TYR:CE1	41:YY:42:VAL:HA	2.55	0.42
41:YY:51:VAL:CG1	41:YY:52:SER:N	2.74	0.42
42:YZ:163:LEU:H	42:YZ:163:LEU:HG	1.74	0.42
44:Y1:56:GLN:HB2	44:Y1:57:GLU:H	1.48	0.42
49:Y6:24:GLU:HB3	49:Y6:25:LYS:H	1.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y7:25:PRO:HA	50:Y7:28:ARG:NH2	2.35	0.42
1:QA:15:G:H2'	1:QA:16:A:H8	1.85	0.42
1:QA:112:G:H4'	1:QA:389:A:H5''	2.01	0.42
1:QA:782:A:H4'	1:QA:1514:C:O2'	2.20	0.42
1:QA:807:A:H2'	1:QA:808:C:O4'	2.19	0.42
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.42
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	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:74:PRO:O	8:QH:75:ARG:C	2.59	0.42
22:RA:335:C:H5'	41:RY:73:ARG:NH1	2.35	0.42
22:RA:675:A:N3	22:RA:2443:C:O2'	2.46	0.42
22:RA:935:C:H2'	22:RA:936:C:H6	1.85	0.42
22:RA:1229:G:N2	22:RA:1229(A):G:HI1'	2.35	0.42
22:RA:1309:G:C6	22:RA:1310:G:C5	3.08	0.42
22:RA:1373:A:C6	22:RA:1374:G:C4	3.08	0.42
22:RA:1537:C:H2'	22:RA:1538:G:C8	2.54	0.42
22:RA:1921:G:H2'	22:RA:1922:G:H8	1.85	0.42
22:RA:2255:G:C6	22:RA:2256:G:C5	3.08	0.42
22:RA:2697:G:C2	22:RA:2711:A:C2	3.08	0.42
24:RD:35:LYS:HB3	24:RD:36:PRO:HA	2.00	0.42
24:RD:110:GLY:O	24:RD:111:LEU:C	2.59	0.42
24:RD:168:ARG:O	24:RD:169:GLU:HB2	2.19	0.42
26:RF:34:TRP:CA	32:RP:6:LEU:HD12	2.47	0.42
26:RF:61:GLY:O	26:RF:62:ARG:C	2.58	0.42
26:RF:192:LEU:HD21	26:RF:194:MET:HE3	2.02	0.42
26:RF:198:ALA:HA	26:RF:201:VAL:CG1	2.41	0.42
27:RG:22:ARG:HH22	27:RG:175:LEU:HD21	1.85	0.42
30:RN:27:ALA:O	30:RN:28:THR:C	2.57	0.42
31:RO:31:LYS:HA	31:RO:31:LYS:HD3	1.92	0.42
31:RO:86:ILE:N	31:RO:86:ILE:CD1	2.82	0.42
36:RT:39:ARG:CG	36:RT:40:THR:H	2.22	0.42
36:RT:96:ARG:HB2	36:RT:96:ARG:CZ	2.49	0.42
37:RU:35:ALA:O	37:RU:39:LEU:HG	2.19	0.42
39:RW:19:LEU:HA	39:RW:19:LEU:HD12	1.79	0.42
40:RX:60:ARG:HA	40:RX:75:ASP:OD2	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:91:GLU:CG	41:RY:92:ASN:N	2.83	0.42
45:R2:41:ILE:C	45:R2:41:ILE:CD1	2.81	0.42
46:R3:37:LEU:N	46:R3:37:LEU:HD23	2.35	0.42
47:R4:26:SER:C	47:R4:27:THR:O	2.58	0.42
47:R4:38:LYS:HG3	47:R4:44:THR:OG1	2.20	0.42
48:R5:56:LYS:O	48:R5:57:VAL:C	2.57	0.42
49:R6:25:LYS:HE2	49:R6:27:LYS:CD	2.49	0.42
50:R7:9:ARG:NH1	50:R7:47:ARG:HG3	2.35	0.42
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.55	0.42
1:XA:632:A:C8	1:XA:633:G:C8	3.08	0.42
1:XA:743:U:H2'	1:XA:744:C:C6	2.54	0.42
1:XA:836:G:C6	1:XA:851:G:C6	3.07	0.42
1:XA:924:C:O2'	1:XA:1502:A:N6	2.53	0.42
1:XA:939:G:H5''	7:XG:102:ARG:NH1	2.35	0.42
1:XA:945:G:C2	1:XA:1337:G:C2	3.08	0.42
1:XA:991:U:O2	1:XA:993:G:H8	2.02	0.42
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.84	0.42
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.42
8:XH:4:ASP:HA	8:XH:5:PRO:HD3	1.85	0.42
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.42
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
19:XS:67:VAL:HG21	47:Y4:60:GLN:CD	2.38	0.42
22:YA:270:A:H1'	22:YA:370:G:C2	2.54	0.42
22:YA:273(A):G:C2	22:YA:364:C:C2	3.08	0.42
22:YA:654(A):G:N2	22:YA:654(U):A:H1'	2.35	0.42
22:YA:654(A):G:N2	22:YA:654(U):A:N3	2.67	0.42
22:YA:947:G:N2	22:YA:971:C:C2	2.87	0.42
22:YA:1847:A:H5'	22:YA:1848:A:OP2	2.19	0.42
22:YA:1884:A:H2'	22:YA:1885:A:O4'	2.20	0.42
22:YA:1885:A:H3'	22:YA:1886:C:C6	2.55	0.42
22:YA:1924:C:H4'	53:XV:13:C:O2'	2.20	0.42
22:YA:2072:G:C2	22:YA:2073:C:C2	3.08	0.42
22:YA:2359:C:H2'	22:YA:2360:A:C8	2.55	0.42
22:YA:2522:U:H3	22:YA:2543:G:H1	1.68	0.42
22:YA:2597:G:C5	22:YA:2598:A:C6	3.08	0.42
22:YA:2785:C:O2'	25:YE:64:LYS:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:110:GLY:O	24:YD:111:LEU:C	2.58	0.42
24:YD:165:ILE:O	24:YD:166:GLN:NE2	2.53	0.42
24:YD:196:VAL:O	24:YD:196:VAL:CG1	2.68	0.42
25:YE:10:GLY:HA3	36:YT:8:LYS:HD3	2.02	0.42
26:YF:132:VAL:HG23	26:YF:133:ASN:H	1.83	0.42
27:YG:78:SER:O	27:YG:80:PHE:N	2.53	0.42
28:YH:105:LEU:CD1	28:YH:105:LEU:N	2.81	0.42
30:YN:10:GLU:OE2	30:YN:11:PRO:CD	2.68	0.42
30:YN:42:TRP:HA	30:YN:48:MET:HE3	2.02	0.42
30:YN:52:VAL:CG1	30:YN:53:VAL:N	2.82	0.42
31:YO:2:ILE:N	31:YO:2:ILE:CD1	2.82	0.42
32:YP:39:LYS:HA	32:YP:45:LEU:HD11	1.83	0.42
32:YP:83:VAL:HG11	32:YP:112:LEU:HD21	1.97	0.42
32:YP:114:ILE:CD1	32:YP:130:PHE:CE1	2.98	0.42
32:YP:115:LEU:HB3	32:YP:131:SER:HB2	2.02	0.42
33:YQ:34:LEU:HD23	33:YQ:104:PHE:CD1	2.55	0.42
34:YR:28:LEU:HD12	34:YR:29:LEU:HD12	2.02	0.42
36:YT:6:LEU:HD12	36:YT:9:LEU:HD12	2.01	0.42
36:YT:50:ILE:HD11	36:YT:102:ILE:HG12	2.01	0.42
37:YU:35:ALA:O	37:YU:39:LEU:HG	2.19	0.42
38:YV:15:GLU:O	38:YV:96:ILE:HB	2.19	0.42
38:YV:47:VAL:HG13	38:YV:48:GLY:N	2.27	0.42
44:Y1:80:LEU:O	44:Y1:81:LYS:CD	2.65	0.42
48:Y5:39:MET:C	48:Y5:40:LYS:HG3	2.39	0.42
53:XV:43:A:H2'	53:XV:44:A:C8	2.54	0.42
1:QA:106:C:H2'	1:QA:107:G:H8	1.85	0.41
1:QA:452:A:O2'	1:QA:453:A:O5'	2.37	0.41
1:QA:458:C:H2'	1:QA:464:G:C8	2.55	0.41
1:QA:622:A:C8	1:QA:623:C:C6	3.08	0.41
1:QA:1277:C:O2'	1:QA:1279:A:H8	1.96	0.41
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	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	2.49	0.41
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.41
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.41
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.41
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:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.41
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.41
19:QS:5:LEU:HD22	47:R4:67:TYR:CE2	2.55	0.41
22:RA:447:A:C8	22:RA:473:G:C6	3.08	0.41
22:RA:589:C:H2'	22:RA:590:A:C8	2.55	0.41
22:RA:738:G:C2	22:RA:759:G:C5	3.08	0.41
22:RA:937:U:H2'	22:RA:938:G:C8	2.54	0.41
22:RA:1090:U:N3	22:RA:1102:C:H1'	2.34	0.41
22:RA:1582:C:HO2'	22:RA:1586:A:H8	1.65	0.41
22:RA:2271:G:OP1	43:R0:18:ALA:HB1	2.20	0.41
22:RA:2396:G:O2'	22:RA:2397:G:H5'	2.20	0.41
22:RA:2625:G:C2	22:RA:2626:C:C2	3.08	0.41
25:RE:13:ARG:HH11	25:RE:13:ARG:HB2	1.81	0.41
25:RE:144:ARG:HB3	25:RE:145:LYS:H	1.58	0.41
25:RE:152:LYS:HG2	30:RN:78:TYR:CD1	2.55	0.41
26:RF:42:ALA:O	26:RF:45:ARG:HB2	2.18	0.41
26:RF:118:ALA:HA	26:RF:123:LEU:HB3	2.02	0.41
27:RG:60:LEU:HD23	27:RG:60:LEU:C	2.41	0.41
27:RG:73:ALA:O	27:RG:84:LYS:O	2.38	0.41
28:RH:128:PRO:CG	28:RH:129:THR:H	2.33	0.41
30:RN:131:GLN:HE21	30:RN:131:GLN:HB3	1.57	0.41
31:RO:16:ALA:HA	31:RO:46:ALA:CB	2.50	0.41
32:RP:125:VAL:C	32:RP:145:PRO:HD2	2.39	0.41
33:RQ:65:PHE:O	33:RQ:66:ILE:CG1	2.48	0.41
35:RS:99:LYS:HE2	35:RS:103:GLU:OE2	2.20	0.41
35:RS:99:LYS:C	35:RS:101:LEU:N	2.73	0.41
38:RV:81:TYR:C	38:RV:82:ARG:CG	2.89	0.41
40:RX:54:VAL:C	40:RX:55:ASN:HD22	2.24	0.41
40:RX:60:ARG:HH12	50:R7:47:ARG:HH22	1.67	0.41
40:RX:87:GLN:C	40:RX:88:LYS:HG3	2.40	0.41
42:RZ:82:ARG:HA	42:RZ:83:PRO:HD3	1.93	0.41
44:R1:76:ARG:H	44:R1:76:ARG:CD	2.29	0.41
47:R4:68:ARG:HB2	47:R4:69:LYS:H	1.35	0.41
48:R5:40:LYS:HE2	48:R5:47:PRO:CG	2.49	0.41
49:R6:41:PRO:HG3	49:R6:44:ARG:HB2	2.01	0.41
50:R7:25:PRO:HA	50:R7:28:ARG:NH2	2.35	0.41
1:XA:692:U:H5	11:XK:26:ASN:OD1	2.03	0.41
1:XA:832:C:C2	1:XA:855:G:C2	3.08	0.41
1:XA:942:G:C2	1:XA:943:U:C6	3.08	0.41
1:XA:962:C:H1'	1:XA:1201:A:C6	2.55	0.41
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.02	0.41
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.41
22:YA:307:G:H21	22:YA:330:A:N6	2.18	0.41
22:YA:532:A:N3	37:YU:28:ARG:NH2	2.67	0.41
22:YA:654:A:O2'	22:YA:654(A):G:N7	2.47	0.41
22:YA:1011:G:OP1	37:YU:75:ASN:HB3	2.20	0.41
22:YA:1048:A:P	22:YA:1110:G:H22	2.43	0.41
22:YA:1206:G:C2	22:YA:1207:C:C2	3.08	0.41
22:YA:1364:G:OP2	44:Y1:2:SER:O	2.38	0.41
22:YA:1543:A:HO2'	22:YA:1544:C:H3'	1.84	0.41
22:YA:1654:A:OP1	34:YR:2:ARG:HD2	2.20	0.41
22:YA:2164:C:H2'	22:YA:2165:G:O4'	2.20	0.41
22:YA:2355:C:O2	43:Y0:39:ARG:NH2	2.46	0.41
22:YA:2638:G:P	25:YE:82:ARG:HH22	2.43	0.41
24:YD:9:TYR:CZ	24:YD:13:ARG:HD3	2.54	0.41
24:YD:14:ARG:CG	24:YD:15:PHE:N	2.83	0.41
24:YD:109:ASP:HB2	24:YD:197:GLY:HA2	2.02	0.41
25:YE:4:ILE:HG22	25:YE:198:VAL:HB	2.02	0.41
26:YF:20:LEU:HD12	26:YF:21:ALA:N	2.26	0.41
26:YF:53:THR:O	26:YF:55:GLY:N	2.53	0.41
27:YG:41:GLN:NE2	27:YG:154:GLY:O	2.52	0.41
29:YI:130:TYR:CG	29:YI:131:LYS:N	2.87	0.41
30:YN:1:MET:O	30:YN:1:MET:HG3	2.19	0.41
31:YO:31:LYS:O	31:YO:32:TYR:HD2	2.02	0.41
32:YP:49:ARG:HG2	32:YP:49:ARG:HH11	1.84	0.41
33:YQ:20:ALA:HB2	33:YQ:99:PRO:HD2	1.99	0.41
33:YQ:118:LEU:HD13	33:YQ:131:ILE:HG23	2.02	0.41
35:YS:49:VAL:HG21	35:YS:77:ALA:HA	2.02	0.41
35:YS:92:TYR:HB2	35:YS:98:VAL:HG11	2.02	0.41
37:YU:6:THR:HG21	37:YU:10:ARG:CZ	2.50	0.41
38:YV:35:LEU:HB2	38:YV:37:VAL:CG2	2.49	0.41
38:YV:72:VAL:HG13	38:YV:72:VAL:O	2.19	0.41
39:YW:17:VAL:O	39:YW:18:ARG:C	2.57	0.41
40:YX:57:LEU:HD12	40:YX:57:LEU:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:60:ARG:HH22	50:Y7:47:ARG:HH12	1.68	0.41
41:YY:6:HIS:O	41:YY:7:VAL:CG1	2.59	0.41
48:Y5:41:PRO:HA	48:Y5:42:PRO:HD3	1.82	0.41
49:Y6:41:PRO:HG3	49:Y6:44:ARG:HB2	2.01	0.41
1:QA:190:G:N3	1:QA:190:G:H2'	2.36	0.41
1:QA:607:A:C2	16:QP:31:LYS:HB2	2.56	0.41
1:QA:1089:G:C6	1:QA:1090:U:C4	3.09	0.41
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.35	0.41
1:QA:1190:G:P	3:QC:5:ILE:HG23	2.60	0.41
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.55	0.41
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	2.02	0.41
1:QA:1512:U:N3	1:QA:1513:A:N7	2.68	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
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.38	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
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
22:RA:242:G:H22	22:RA:254:G:H2'	1.85	0.41
22:RA:718:A:H3'	22:RA:719:C:C6	2.55	0.41
22:RA:738:G:H3'	22:RA:739:G:C8	2.55	0.41
22:RA:777:A:C2	22:RA:778:G:C5	3.08	0.41
22:RA:859:G:O2'	22:RA:860:U:P	2.77	0.41
22:RA:997:G:OP1	37:RU:93:LYS:HD3	2.19	0.41
22:RA:1351:C:C2	22:RA:1381:G:C2	3.08	0.41
22:RA:1786:A:C8	22:RA:1938:A:C6	3.07	0.41
25:RE:25:VAL:CG1	36:RT:11:GLU:HG2	2.50	0.41
28:RH:86:GLU:HG3	28:RH:165:ALA:CA	2.49	0.41
28:RH:105:LEU:CD1	28:RH:105:LEU:N	2.81	0.41
29:RI:48:GLU:O	29:RI:51:ILE:HB	2.20	0.41
29:RI:113:ARG:HG3	29:RI:131:LYS:HZ3	1.85	0.41
30:RN:63:THR:HG22	30:RN:66:LYS:HZ1	1.84	0.41
32:RP:18:ARG:HD2	32:RP:27:HIS:CD2	2.56	0.41
37:RU:83:LEU:HG	37:RU:88:ILE:HG13	2.02	0.41
38:RV:38:LEU:CD1	38:RV:55:ALA:HB1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RX:57:LEU:HD12	40:RX:57:LEU:H	1.85	0.41
42:RZ:45:ASP:O	42:RZ:49:ARG:HG2	2.20	0.41
44:R1:29:GLY:O	44:R1:31:GLY:N	2.49	0.41
44:R1:81:LYS:N	44:R1:81:LYS:CD	2.83	0.41
47:R4:61:ARG:C	47:R4:63:TYR:N	2.73	0.41
1:XA:51:A:H4'	1:XA:52:G:H5''	2.01	0.41
1:XA:1344:C:H5'	9:XI:120:ARG:O	2.21	0.41
1:XA:1374:A:C4	1:XA:1375:A:C8	3.08	0.41
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.20	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:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
8:XH:91:ARG:HB2	12:XL:7:ILE:HG13	2.00	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
14:YN:18:VAL:CG2	14:YN:19:ARG:N	2.82	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
21:XU:2:GLY:C	21:XU:4:GLY:H	2.24	0.41
22:YA:319:C:H2'	22:YA:320:A:O4'	2.20	0.41
22:YA:356:G:H2'	22:YA:357:A:C8	2.55	0.41
22:YA:674:G:N2	22:YA:2444:G:O3'	2.54	0.41
22:YA:729:G:H2'	22:YA:1775:U:H1'	2.02	0.41
22:YA:784:A:N7	24:YD:229:VAL:HG21	2.34	0.41
22:YA:812:C:H5''	22:YA:1250:G:O2'	2.20	0.41
22:YA:818:G:H3'	22:YA:1187:G:H22	1.84	0.41
22:YA:1196:C:C2	22:YA:1197:G:C8	3.08	0.41
22:YA:1278:A:O3'	34:YR:34:ILE:HG23	2.20	0.41
22:YA:1322:A:C5	22:YA:1323:U:C4	3.08	0.41
22:YA:1381:G:H1'	22:YA:1571:A:N1	2.36	0.41
22:YA:1543:A:C2	22:YA:1545:A:C4	3.08	0.41
22:YA:1778:U:H2'	22:YA:1784:A:N6	2.35	0.41
22:YA:2564:A:OP1	22:YA:2648:C:H4'	2.19	0.41
22:YA:2619:C:H5'	25:YE:150:VAL:O	2.20	0.41
22:YA:2667:C:N3	28:YH:110:SER:OG	2.50	0.41
25:YE:167:VAL:CG1	25:YE:189:PRO:HD3	2.50	0.41
26:YF:64:ILE:HG23	26:YF:65:TRP:CD1	2.54	0.41
26:YF:80:ALA:O	26:YF:83:PHE:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:183:VAL:O	26:YF:184:TYR:C	2.57	0.41
29:YI:77:LEU:HD11	29:YI:140:LEU:HD12	2.01	0.41
31:YO:17:ARG:HG2	31:YO:17:ARG:HH11	1.84	0.41
31:YO:92:GLU:O	31:YO:93:PRO:C	2.58	0.41
34:YR:28:LEU:HD13	34:YR:28:LEU:C	2.40	0.41
34:YR:85:PRO:C	34:YR:87:TYR:N	2.73	0.41
37:YU:57:PHE:C	37:YU:59:ARG:N	2.74	0.41
37:YU:92:ARG:NH2	38:YV:11:GLN:O	2.53	0.41
37:YU:97:ASP:HA	37:YU:100:VAL:HG23	2.01	0.41
43:Y0:43:THR:HG23	43:Y0:43:THR:O	2.20	0.41
51:Y8:26:LYS:HD3	51:Y8:26:LYS:HA	1.86	0.41
53:QV:17:C:H2'	53:QV:17:C:O2	2.20	0.41
53:QV:23:C:H2'	53:QV:24:U:C6	2.55	0.41
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.21	0.41
1:QA:579:G:C6	1:QA:580:U:C4	3.09	0.41
1:QA:601:C:C2	1:QA:602:A:C8	3.08	0.41
1:QA:1285:A:H1'	1:QA:1286:A:OP2	2.20	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.50	0.41
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
17:QQ:74:LEU:O	17:QQ:74:LEU:HD13	2.20	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.41
22:RA:31:C:O2'	22:RA:1238:G:H5'	2.19	0.41
22:RA:598:G:H2'	22:RA:599:G:O4'	2.21	0.41
22:RA:2150:U:H2'	22:RA:2151:G:H8	1.85	0.41
22:RA:2343:C:O2'	22:RA:2373:G:O2'	2.14	0.41
22:RA:2376:A:H8	22:RA:2376:A:OP1	2.03	0.41
22:RA:2600:A:O2'	22:RA:2601:C:H5'	2.21	0.41
24:RD:13:ARG:HG2	24:RD:13:ARG:O	2.20	0.41
25:RE:35:GLN:HG3	25:RE:37:ARG:NH2	2.35	0.41
25:RE:94:GLU:C	25:RE:96:PHE:N	2.73	0.41
25:RE:179:GLU:CB	25:RE:181:LEU:HD23	2.24	0.41
26:RF:53:THR:O	26:RF:55:GLY:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RI:63:ALA:HA	29:RI:66:GLU:CD	2.41	0.41
29:RI:68:LEU:HA	29:RI:71:ILE:HG22	2.01	0.41
30:RN:52:VAL:CG1	30:RN:53:VAL:N	2.82	0.41
30:RN:62:VAL:CG1	30:RN:66:LYS:HB2	2.51	0.41
30:RN:114:ARG:C	30:RN:116:LEU:N	2.74	0.41
33:RQ:20:ALA:HA	33:RQ:98:LYS:HB3	2.02	0.41
34:RR:2:ARG:HG2	34:RR:5:LYS:HZ1	1.83	0.41
35:RS:42:ASP:C	35:RS:44:LYS:N	2.72	0.41
38:RV:16:PRO:HB3	38:RV:97:LYS:O	2.20	0.41
38:RV:38:LEU:CD1	38:RV:55:ALA:CB	2.98	0.41
51:R8:16:ILE:HD11	51:R8:57:ARG:CG	2.44	0.41
1:XA:148:G:H1	1:XA:174:C:H42	1.68	0.41
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.85	0.41
1:XA:874:G:C6	1:XA:875:C:C4	3.08	0.41
1:XA:1245:A:H2'	1:XA:1246:C:C6	2.55	0.41
1:XA:1336:C:O2	1:XA:1336:C:H2'	2.20	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.02	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
9:XI:128:ARG:NH2	53:XV:35:A:P	2.93	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.20	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
19:XS:2:PRO:HB2	47:Y4:68:ARG:CZ	2.50	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
22:YA:155:C:H5'	22:YA:161:U:OP2	2.19	0.41
22:YA:385:C:O2	32:YP:71:VAL:HG21	2.20	0.41
22:YA:412:A:N6	22:YA:2412:A:O4'	2.53	0.41
22:YA:582:G:H2'	22:YA:583:G:C8	2.55	0.41
22:YA:686:G:N2	22:YA:788:A:H61	2.18	0.41
22:YA:860:U:H5	22:YA:917:A:N1	2.18	0.41
22:YA:928:G:H5''	22:YA:929:G:OP2	2.19	0.41
22:YA:1022:G:H4'	22:YA:1023:U:H5'	2.02	0.41
22:YA:1071:G:H8	22:YA:1071:G:O5'	2.03	0.41
22:YA:1417:C:H1'	22:YA:1586:A:H62	1.84	0.41
22:YA:1651:G:H2'	22:YA:1652:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1764:G:H2'	22:YA:1765:C:C6	2.56	0.41
22:YA:1843:C:H5'	24:YD:253:GLN:CD	2.40	0.41
22:YA:1929:G:C8	22:YA:1929:G:C3'	3.03	0.41
22:YA:2174:C:H2'	22:YA:2175:C:C6	2.55	0.41
22:YA:2271:G:H5''	43:Y0:18:ALA:HB1	2.02	0.41
22:YA:2316:C:H2'	22:YA:2317:C:C6	2.56	0.41
22:YA:2376:A:H2'	22:YA:2377:A:O4'	2.20	0.41
22:YA:2706:G:N2	22:YA:2707:G:H1'	2.35	0.41
22:YA:2860:A:C8	22:YA:2861:G:H1'	2.55	0.41
29:YI:116:LEU:O	29:YI:118:LYS:N	2.53	0.41
30:YN:58:ASP:HB3	30:YN:95:PRO:HB3	2.02	0.41
36:YT:134:GLU:OE1	36:YT:135:ALA:N	2.53	0.41
38:YV:16:PRO:HB3	38:YV:97:LYS:O	2.20	0.41
38:YV:81:TYR:C	38:YV:82:ARG:CG	2.89	0.41
39:YW:1:MET:HG3	39:YW:2:GLU:N	2.36	0.41
39:YW:8:ARG:HG3	39:YW:8:ARG:NH1	2.34	0.41
39:YW:25:ARG:NH1	39:YW:25:ARG:CB	2.79	0.41
43:Y0:15:ASP:OD1	43:Y0:16:SER:N	2.53	0.41
47:Y4:38:LYS:HG3	47:Y4:44:THR:OG1	2.20	0.41
1:QA:56:U:H2'	1:QA:57:G:C8	2.55	0.41
1:QA:96:G:C6	1:QA:97:U:C4	3.08	0.41
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.88	0.41
1:QA:770:C:O2'	1:QA:771:G:H5'	2.21	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
10:QJ:45:ARG:HG3	10:QJ:45:ARG:HH11	1.86	0.41
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
22:RA:181:A:H5''	50:R7:36:GLN:NE2	2.35	0.41
22:RA:396:G:H8	22:RA:396:G:O5'	2.03	0.41
22:RA:823:G:H2'	22:RA:824:A:C8	2.56	0.41
22:RA:1258:C:C2	22:RA:1259:G:C8	3.09	0.41
22:RA:1682:G:OP2	22:RA:1699:G:N2	2.46	0.41
22:RA:2401:U:C2'	22:RA:2402:C:H5''	2.47	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2665:A:H2'	22:RA:2666:C:O4'	2.19	0.41
24:RD:269:PHE:CD2	24:RD:269:PHE:N	2.88	0.41
25:RE:7:VAL:CG2	25:RE:8:LYS:H	2.11	0.41
27:RG:53:LEU:CD1	27:RG:87:PRO:HB2	2.51	0.41
27:RG:143:GLU:C	47:R4:28:LYS:HZ2	2.24	0.41
30:RN:21:LYS:O	30:RN:22:THR:O	2.39	0.41
32:RP:64:LYS:HG3	51:R8:25:MET:CE	2.50	0.41
33:RQ:34:LEU:HD23	33:RQ:104:PHE:CD1	2.55	0.41
35:RS:53:SER:HA	35:RS:56:LEU:CD2	2.50	0.41
35:RS:64:GLU:O	35:RS:68:GLN:HG3	2.19	0.41
36:RT:134:GLU:O	36:RT:135:ALA:CB	2.69	0.41
37:RU:91:ASP:OD2	37:RU:96:ALA:CA	2.68	0.41
39:RW:55:ALA:O	39:RW:58:ALA:HB3	2.21	0.41
42:RZ:94:GLU:HB2	42:RZ:130:PRO:CD	2.45	0.41
43:R0:18:ALA:HB3	43:R0:20:ARG:NH1	2.35	0.41
45:R2:61:LEU:HD23	45:R2:64:LEU:HD12	2.03	0.41
47:R4:64:GLY:C	47:R4:66:SER:N	2.73	0.41
1:XA:25:C:H6	1:XA:25:C:O5'	2.02	0.41
1:XA:44:G:N2	1:XA:399:G:C4	2.89	0.41
1:XA:359:U:H2'	1:XA:360:A:C8	2.56	0.41
1:XA:1239:A:H4'	1:XA:1240:U:H5''	2.03	0.41
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.34	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.80	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.50	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.20	0.41
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	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
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
12:XL:11:VAL:HG21	17:XQ:34:LYS:HD3	2.02	0.41
14:XN:9:LYS:HB3	14:XN:9:LYS:HE2	1.85	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
22:YA:388:G:C4	22:YA:390:A:C6	3.08	0.41
22:YA:1156:A:C8	37:YU:51:LYS:HD2	2.54	0.41
22:YA:1382:G:H4'	22:YA:1573:G:C2	2.56	0.41
22:YA:1817:G:C6	22:YA:1818:U:C4	3.08	0.41
22:YA:1899:G:H21	22:YA:1902:C:H41	1.65	0.41
22:YA:2372:G:O2'	49:Y6:46:HIS:NE2	2.35	0.41
22:YA:2494:G:OP1	43:Y0:3:HIS:HB2	2.20	0.41
22:YA:2635:C:H5'	25:YE:77:ILE:CD1	2.51	0.41
22:YA:2688:U:H2'	22:YA:2719:G:N2	2.35	0.41
24:YD:145:VAL:CG1	24:YD:146:GLU:N	2.84	0.41
24:YD:158:ALA:O	24:YD:196:VAL:HG11	2.21	0.41
24:YD:269:PHE:CD2	24:YD:269:PHE:N	2.88	0.41
25:YE:35:GLN:HG3	25:YE:37:ARG:NH2	2.35	0.41
25:YE:54:GLN:N	25:YE:54:GLN:CD	2.73	0.41
26:YF:34:TRP:CA	32:YP:6:LEU:HD12	2.46	0.41
28:YH:169:VAL:HG22	28:YH:170:ARG:N	2.26	0.41
30:YN:114:ARG:C	30:YN:116:LEU:N	2.74	0.41
35:YS:51:ALA:HB3	35:YS:73:LEU:HD23	2.01	0.41
35:YS:83:LYS:HE3	35:YS:84:GLN:CG	2.50	0.41
38:YV:21:ARG:HD2	38:YV:91:TYR:CE2	2.55	0.41
41:YY:95:LYS:HB2	41:YY:95:LYS:HZ1	1.86	0.41
46:Y3:37:LEU:HD23	46:Y3:37:LEU:N	2.35	0.41
1:QA:51:A:N7	1:QA:114:U:O2'	2.52	0.41
1:QA:64:G:H4'	1:QA:65:U:C5'	2.51	0.41
1:QA:149:A:H4'	1:QA:1450:U:C4	2.56	0.41
1:QA:486:U:H2'	1:QA:487:A:C8	2.55	0.41
1:QA:518:C:H2'	1:QA:530:G:N3	2.35	0.41
1:QA:754:C:C5'	15:QO:72:ARG:HH22	2.23	0.41
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.20	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.39	0.41
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.41
6:QF:92:LYS:NZ	6:QF:92:LYS:CB	2.84	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.02	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.35	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.02	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
22:RA:177:G:H5'	22:RA:178:G:C8	2.55	0.41
22:RA:470:A:H2'	22:RA:471:A:C8	2.55	0.41
22:RA:618(A):C:OP2	26:RF:103:LYS:HE2	2.20	0.41
22:RA:684:G:N2	22:RA:788:A:OP2	2.40	0.41
22:RA:754:C:C2	22:RA:755:C:C5	3.08	0.41
22:RA:1449:A:H5'	22:RA:1449(A):G:OP2	2.19	0.41
22:RA:2524:G:H2'	22:RA:2525:G:O4'	2.21	0.41
23:RB:42:C:O2'	27:RG:67:LYS:O	2.31	0.41
23:RB:52:A:O2'	23:RB:53:A:N7	2.44	0.41
24:RD:75:ILE:HG21	24:RD:99:ASP:HB2	2.02	0.41
26:RF:183:VAL:HG22	26:RF:184:TYR:N	2.35	0.41
27:RG:135:LEU:N	27:RG:135:LEU:CD1	2.84	0.41
34:RR:28:LEU:HD13	34:RR:28:LEU:C	2.40	0.41
34:RR:28:LEU:HD12	34:RR:29:LEU:HD12	2.01	0.41
38:RV:61:VAL:CG2	38:RV:61:VAL:O	2.68	0.41
39:RW:1:MET:HG3	39:RW:2:GLU:N	2.35	0.41
39:RW:17:VAL:O	39:RW:18:ARG:C	2.57	0.41
42:RZ:20:ARG:O	42:RZ:20:ARG:HD3	2.20	0.41
47:R4:4:GLY:O	47:R4:5:ILE:C	2.59	0.41
49:R6:6:ARG:HA	49:R6:6:ARG:NE	2.36	0.41
1:XA:346:G:H1'	1:XA:347:G:H5'	2.03	0.41
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.21	0.41
1:XA:1036:G:H3'	1:XA:1037:C:C6	2.55	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.19	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.88	0.41
7:XG:103:TRP:O	7:XG:104:LEU:C	2.58	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	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
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.38	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
22:YA:806:C:OP2	32:YP:41:ARG:NE	2.54	0.41
22:YA:2415:G:O3'	32:YP:66:GLY:HA3	2.21	0.41
22:YA:2418:A:C5	22:YA:2419:U:C4	3.09	0.41
22:YA:2509:G:C6	22:YA:2510:C:C4	3.08	0.41
22:YA:2873:A:N3	34:YR:5:LYS:HA	2.36	0.41
23:YB:66:A:HO2'	23:YB:67:G:P	2.43	0.41
24:YD:134:ARG:H	24:YD:134:ARG:HG3	1.55	0.41
24:YD:145:VAL:O	24:YD:154:LYS:N	2.48	0.41
24:YD:182:LEU:N	24:YD:272:ALA:HB3	2.32	0.41
24:YD:215:LEU:H	24:YD:215:LEU:HG	1.59	0.41
26:YF:129:PHE:O	26:YF:142:TRP:HD1	2.03	0.41
26:YF:176:LEU:HD11	26:YF:180:GLY:O	2.19	0.41
27:YG:51:ARG:NH1	27:YG:51:ARG:CB	2.83	0.41
30:YN:27:ALA:O	30:YN:28:THR:C	2.57	0.41
30:YN:28:THR:O	30:YN:29:LYS:C	2.59	0.41
30:YN:109:LYS:N	30:YN:109:LYS:CD	2.83	0.41
31:YO:71:ARG:HH11	36:YT:74:ARG:HH21	1.65	0.41
33:YQ:27:VAL:HG22	33:YQ:105:GLU:CD	2.41	0.41
37:YU:39:LEU:O	37:YU:42:ALA:N	2.53	0.41
37:YU:83:LEU:HG	37:YU:88:ILE:HG13	2.03	0.41
39:YW:14:PRO:C	39:YW:16:LYS:N	2.73	0.41
40:YX:7:VAL:O	40:YX:30:VAL:CG1	2.67	0.41
40:YX:83:VAL:CG1	40:YX:87:GLN:HB2	2.50	0.41
41:YY:95:LYS:H	41:YY:95:LYS:CD	2.33	0.41
46:Y3:39:ASP:O	46:Y3:40:THR:C	2.59	0.41
47:Y4:61:ARG:C	47:Y4:63:TYR:N	2.73	0.41
51:Y8:14:VAL:CG1	51:Y8:60:LEU:HD11	2.50	0.41
53:XV:17:C:O2	53:XV:17:C:H2'	2.20	0.41
1:QA:298:A:H3'	1:QA:299:G:C8	2.55	0.41
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.53	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
12:QL:47:LYS:HZ2	54:QX:6:C:H5''	1.72	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.85	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	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:RA:817:C:H2'	22:RA:818:G:C8	2.54	0.41
22:RA:1115:G:C6	22:RA:1116:C:C4	3.08	0.41
22:RA:1582:C:O2'	22:RA:1586:A:C8	2.70	0.41
22:RA:2050:C:N4	22:RA:2051:A:C6	2.88	0.41
22:RA:2353:G:H2'	22:RA:2354:G:O4'	2.21	0.41
22:RA:2469:A:OP1	22:RA:2469:A:H4'	2.19	0.41
22:RA:2512:C:H2'	22:RA:2513:G:O4'	2.19	0.41
22:RA:2553:G:N2	56:Z6:76:PPU:N1	2.66	0.41
22:RA:2646:C:H2'	22:RA:2647:U:O4'	2.21	0.41
22:RA:2849:U:H4'	22:RA:2868:A:C2	2.55	0.41
23:RB:57:A:H1'	27:RG:29:TRP:HB2	2.01	0.41
24:RD:2:ALA:O	24:RD:3:VAL:CB	2.68	0.41
24:RD:68:LYS:HG3	24:RD:68:LYS:O	2.20	0.41
24:RD:134:ARG:HD3	24:RD:135:PHE:HE2	1.82	0.41
24:RD:158:ALA:O	24:RD:196:VAL:HG11	2.21	0.41
25:RE:111:ARG:NE	25:RE:160:TYR:CE1	2.76	0.41
25:RE:167:VAL:CG1	25:RE:189:PRO:HD3	2.50	0.41
25:RE:197:ILE:HD11	25:RE:199:ARG:NH1	2.30	0.41
26:RF:111:ALA:O	26:RF:112:MET:C	2.59	0.41
27:RG:117:PHE:CE1	27:RG:119:GLY:CA	3.03	0.41
31:RO:48:PRO:O	31:RO:50:GLY:N	2.54	0.41
32:RP:55:ARG:HG2	32:RP:55:ARG:NH2	2.36	0.41
34:RR:47:PHE:O	34:RR:51:LEU:HD23	2.21	0.41
38:RV:38:LEU:CD2	38:RV:39:LEU:N	2.82	0.41
41:RY:2:ARG:O	41:RY:3:VAL:O	2.38	0.41
41:RY:13:VAL:O	41:RY:24:VAL:HA	2.20	0.41
41:RY:97:ARG:HH21	41:RY:98:VAL:CG2	2.32	0.41
47:R4:12:ALA:HB1	47:R4:30:GLU:N	2.35	0.41
47:R4:14:ILE:HA	47:R4:31:ILE:O	2.21	0.41
1:XA:222:U:H2'	1:XA:223:U:C6	2.56	0.41
1:XA:243:A:C2	1:XA:245:C:H2'	2.56	0.41
1:XA:266:G:H5''	1:XA:267:C:C5	2.56	0.41
1:XA:783:C:H2'	1:XA:784:C:H6	1.85	0.41
1:XA:1072:G:C2	1:XA:1104:G:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1216:G:H5'	14:YN:5:ALA:CB	2.50	0.41
1:XA:1297:C:O2'	1:XA:1298:C:P	2.79	0.41
1:XA:1322:C:O2'	1:XA:1323:G:H5'	2.21	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.24	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.34	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.71	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
22:YA:449:A:H2'	22:YA:450:G:H8	1.86	0.41
22:YA:851:U:H1'	46:Y3:46:ASN:HD21	1.86	0.41
22:YA:1230:C:H2'	22:YA:1231:G:C8	2.56	0.41
22:YA:1846:G:N2	22:YA:1895:C:C2	2.88	0.41
22:YA:2450:A:C2'	53:XV:76:A:C2	3.03	0.41
22:YA:2467:C:OP1	52:Y9:6:SER:OG	2.26	0.41
22:YA:2545:G:N3	22:YA:2565:A:H2	2.18	0.41
22:YA:2636:U:H2'	22:YA:2637:U:C6	2.56	0.41
22:YA:2726:U:H6	31:YO:67:LYS:HZ3	1.63	0.41
22:YA:2776:A:C2	22:YA:2778:A:C4	3.08	0.41
22:YA:2816:C:O3'	34:YR:99:LYS:NZ	2.54	0.41
22:YA:2817:G:N2	22:YA:2830:G:H1'	2.35	0.41
24:YD:168:ARG:O	24:YD:169:GLU:HB2	2.19	0.41
25:YE:161:GLY:O	25:YE:162:ALA:HB3	2.20	0.41
27:YG:60:LEU:HD23	27:YG:60:LEU:C	2.41	0.41
27:YG:95:ARG:CA	27:YG:99:MET:HB3	2.50	0.41
28:YH:146:ALA:HB2	28:YH:164:TYR:OH	2.21	0.41
30:YN:9:VAL:HB	30:YN:10:GLU:H	1.70	0.41
30:YN:21:LYS:O	30:YN:22:THR:O	2.39	0.41
39:YW:14:PRO:C	39:YW:18:ARG:HD2	2.41	0.41
39:YW:14:PRO:HG3	39:YW:101:SER:OG	2.21	0.41
39:YW:29:LEU:HD23	39:YW:29:LEU:C	2.41	0.41
39:YW:68:ARG:O	39:YW:110:LYS:N	2.46	0.41
40:YX:31:HIS:HA	40:YX:32:PRO:HD3	1.88	0.41
40:YX:60:ARG:HA	40:YX:75:ASP:OD2	2.20	0.41
42:YZ:24:LEU:HD21	42:YZ:86:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:82:LEU:HD13	44:Y1:83:GLU:C	2.35	0.41
46:Y3:37:LEU:HD12	46:Y3:43:ILE:CG2	2.50	0.41
47:Y4:4:GLY:O	47:Y4:5:ILE:C	2.59	0.41
51:Y8:25:MET:HB3	51:Y8:26:LYS:H	1.69	0.41
54:XX:4:C:O2'	54:XX:5:C:H5'	2.20	0.41
1:QA:36:C:O2'	1:QA:501:C:OP1	2.38	0.41
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.21	0.41
1:QA:401:C:H2'	1:QA:402:G:C8	2.56	0.41
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.20	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:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
3:QC:55:VAL:HG12	3:QC:55:VAL:O	2.20	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.02	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
22:RA:146:G:H2'	22:RA:147:U:O4'	2.21	0.41
22:RA:702:G:C6	22:RA:703:U:C4	3.08	0.41
22:RA:921:G:H4'	22:RA:2269:A:C5	2.54	0.41
22:RA:1169:G:H1	22:RA:1180:C:N4	2.16	0.41
22:RA:1638:C:H5''	22:RA:2710:C:O2'	2.20	0.41
22:RA:1845:G:OP1	24:RD:258:LYS:NZ	2.43	0.41
22:RA:1952:A:C6	22:RA:1953:A:N1	2.88	0.41
22:RA:2250:G:C4	33:RQ:82:ARG:HG3	2.55	0.41
22:RA:2441:C:H2'	22:RA:2442:C:H6	1.85	0.41
22:RA:2527:C:H5''	52:R9:30:PRO:HB2	2.01	0.41
24:RD:177:LEU:C	24:RD:179:SER:H	2.23	0.41
25:RE:93:VAL:HG21	25:RE:180:ASN:HA	2.03	0.41
27:RG:44:GLY:C	27:RG:46:ALA:N	2.73	0.41
30:RN:133:GLN:CB	30:RN:135:PRO:HD3	2.42	0.41
33:RQ:139:GLU:CG	33:RQ:140:ALA:N	2.84	0.41
36:RT:76:PHE:HA	36:RT:77:PRO:HD3	1.75	0.41
37:RU:33:ARG:O	37:RU:37:GLU:HB2	2.21	0.41
37:RU:76:TYR:O	37:RU:80:ILE:HG12	2.21	0.41
38:RV:22:VAL:CG1	38:RV:23:GLU:H	2.32	0.41
39:RW:29:LEU:HD23	39:RW:29:LEU:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:R2:18:PRO:C	45:R2:20:GLU:N	2.73	0.41
45:R2:41:ILE:HD12	45:R2:43:GLN:N	2.35	0.41
46:R3:7:LYS:O	46:R3:7:LYS:HG2	2.20	0.41
51:R8:14:VAL:CG1	51:R8:60:LEU:HD11	2.50	0.41
1:XA:540:G:N2	1:XA:541:G:H1'	2.35	0.41
1:XA:662:G:H2'	1:XA:663:A:H8	1.84	0.41
1:XA:718:G:H1'	11:XK:116:HIS:HA	2.03	0.41
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.21	0.41
1:XA:1298:C:H4'	1:XA:1299:A:C8	2.55	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
2:XB:172:ILE:H	2:XB:172:ILE:CD1	2.18	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	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
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	0.41
13:XM:3:ARG:NH2	27:YG:113:ARG:HH21	2.18	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
14:XN:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
22:YA:667:U:H2'	22:YA:668:G:O4'	2.20	0.41
22:YA:738:G:C6	22:YA:739:G:C2	3.09	0.41
22:YA:1087:G:C5	22:YA:1089:G:H1'	2.56	0.41
22:YA:1349:A:N6	22:YA:1598:C:H42	2.18	0.41
22:YA:1449:A:O2'	22:YA:1530:G:N2	2.35	0.41
22:YA:1514:U:C4	22:YA:1515:C:N4	2.89	0.41
22:YA:1769:G:O2'	22:YA:1958:C:OP1	2.32	0.41
22:YA:1949:G:H2'	22:YA:1950:G:O4'	2.20	0.41
22:YA:2451:A:O2'	53:XV:76:A:C2'	2.68	0.41
25:YE:63:LEU:CD1	25:YE:64:LYS:N	2.71	0.41
27:YG:44:GLY:C	27:YG:46:ALA:N	2.73	0.41
27:YG:67:LYS:NZ	47:Y4:6:HIS:CD2	2.89	0.41
28:YH:86:GLU:HG3	28:YH:165:ALA:CA	2.49	0.41
30:YN:62:VAL:CG1	30:YN:66:LYS:HB2	2.51	0.41
32:YP:12:ALA:C	32:YP:14:LYS:N	2.73	0.41
34:YR:55:ALA:HA	34:YR:80:PHE:CE2	2.55	0.41
35:YS:93:LYS:HE3	35:YS:93:LYS:HB2	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:28:VAL:HG23	36:YT:87:ASP:O	2.21	0.41
37:YU:92:ARG:O	37:YU:92:ARG:CG	2.54	0.41
38:YV:38:LEU:O	38:YV:51:VAL:HA	2.21	0.41
42:YZ:5:LEU:O	42:YZ:6:LYS:HB2	2.20	0.41
42:YZ:158:PRO:HG2	42:YZ:161:VAL:HG21	2.03	0.41
44:Y1:86:SER:O	44:Y1:89:GLU:HB2	2.21	0.41
50:Y7:24:THR:HB	50:Y7:25:PRO:HD2	2.03	0.41
53:QV:16:C:O2'	53:QV:17:C:OP1	2.39	0.41
53:QV:21:A:N6	53:QV:46:G:H2'	2.36	0.41
54:XX:4:C:C2	55:XY:37:1MG:C2	3.08	0.41
1:QA:190:G:O2'	1:QA:191(A):G:P	2.78	0.41
1:QA:193:C:H5'	20:QT:57:ARG:HG3	2.02	0.41
1:QA:299:G:H2'	1:QA:300:A:C8	2.56	0.41
1:QA:596:C:N4	1:QA:644:G:H1	2.18	0.41
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.55	0.41
1:QA:1228:C:OP1	13:QM:115:LYS:HE3	2.20	0.41
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.36	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.41	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.89	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	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
22:RA:110:G:C2	22:RA:111:A:C8	3.09	0.41
22:RA:297:C:OP1	41:RY:85:VAL:HG21	2.21	0.41
22:RA:409:C:H2'	22:RA:410:G:H8	1.85	0.41
22:RA:596:G:C6	22:RA:597:U:C4	3.09	0.41
22:RA:805:G:O4'	32:RP:38:GLN:OE1	2.38	0.41
22:RA:910:A:C6	22:RA:911:A:C6	3.09	0.41
22:RA:1287:A:C5	22:RA:1288:U:C4	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1444(A):A:O2'	22:RA:1460:A:N3	2.52	0.41
22:RA:1849:G:C2	22:RA:1850:G:C5	3.09	0.41
22:RA:2116:G:H1	22:RA:2162:G:P	2.44	0.41
22:RA:2635:C:H5''	25:RE:78:LEU:HA	2.02	0.41
22:RA:2662:A:O5'	22:RA:2662:A:H8	2.04	0.41
22:RA:2712:U:O2'	22:RA:2712(A):A:P	2.78	0.41
23:RB:43:C:O5'	27:RG:67:LYS:HE3	2.20	0.41
23:RB:55:U:C4'	27:RG:28:VAL:HG21	2.46	0.41
25:RE:9:VAL:HB	25:RE:10:GLY:H	1.71	0.41
27:RG:95:ARG:HA	27:RG:99:MET:HB3	2.03	0.41
28:RH:45:VAL:O	28:RH:45:VAL:CG1	2.69	0.41
28:RH:137:ASP:HB2	28:RH:140:LYS:CE	2.51	0.41
31:RO:2:ILE:HG12	31:RO:8:LEU:HD11	2.02	0.41
31:RO:10:VAL:HG21	31:RO:16:ALA:HB3	2.03	0.41
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CG	2.51	0.41
34:RR:55:ALA:O	34:RR:58:GLY:HA3	2.21	0.41
35:RS:15:ARG:O	35:RS:19:LYS:HD3	2.20	0.41
35:RS:66:ALA:HA	35:RS:69:VAL:CG1	2.51	0.41
37:RU:6:THR:HG21	37:RU:10:ARG:CZ	2.50	0.41
39:RW:14:PRO:C	39:RW:18:ARG:HD2	2.41	0.41
39:RW:96:ILE:O	39:RW:96:ILE:CG2	2.68	0.41
40:RX:83:VAL:CG1	40:RX:87:GLN:HB2	2.50	0.41
41:RY:43:ASN:O	41:RY:43:ASN:OD1	2.39	0.41
41:RY:86:ARG:HD2	41:RY:86:ARG:HA	1.92	0.41
43:R0:26:TYR:HB2	43:R0:29:GLN:OE1	2.20	0.41
44:R1:18:ILE:O	44:R1:18:ILE:HG22	2.21	0.41
45:R2:48:HIS:O	45:R2:49:LYS:C	2.57	0.41
49:R6:8:LYS:O	49:R6:9:LEU:HB2	2.21	0.41
1:XA:113:G:H2'	1:XA:114:U:O4'	2.20	0.41
1:XA:477:G:H2'	1:XA:478:A:C8	2.56	0.41
1:XA:501:C:H2'	1:XA:502:G:H8	1.86	0.41
1:XA:504:C:C2	1:XA:542:G:C2	3.08	0.41
1:XA:538:G:H5''	12:XL:114:LYS:HB2	2.02	0.41
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.86	0.41
1:XA:1392:G:H21	1:XA:1502:A:H8	1.67	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	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
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
22:YA:608:A:C4	22:YA:621:A:C6	3.09	0.41
22:YA:747:U:N1	48:Y5:2:ALA:HB3	2.36	0.41
22:YA:817:C:H4'	22:YA:932:G:C5	2.56	0.41
22:YA:956:G:N2	22:YA:959:A:H3'	2.36	0.41
22:YA:1449:A:H5'	22:YA:1449(A):G:OP2	2.20	0.41
22:YA:1528:A:H2	22:YA:1542:G:C2	2.38	0.41
22:YA:2392:A:C2	22:YA:2429:G:N3	2.89	0.41
24:YD:117:VAL:HG22	24:YD:118:VAL:N	2.35	0.41
24:YD:197:GLY:O	24:YD:198:ASN:HB3	2.21	0.41
25:YE:24:THR:HB	25:YE:184:VAL:HG23	2.02	0.41
25:YE:36:ARG:O	25:YE:37:ARG:C	2.59	0.41
27:YG:22:ARG:HH22	27:YG:175:LEU:HD21	1.85	0.41
27:YG:47:LYS:HE3	27:YG:47:LYS:HB2	1.80	0.41
31:YO:10:VAL:HG21	31:YO:16:ALA:HB3	2.03	0.41
31:YO:48:PRO:O	31:YO:50:GLY:N	2.54	0.41
32:YP:101:VAL:O	32:YP:103:ALA:N	2.53	0.41
34:YR:29:LEU:HD11	34:YR:48:VAL:CG1	2.50	0.41
35:YS:53:SER:HA	35:YS:56:LEU:CD2	2.50	0.41
35:YS:66:ALA:HA	35:YS:69:VAL:CG1	2.51	0.41
36:YT:39:ARG:HG2	36:YT:40:THR:N	2.25	0.41
37:YU:57:PHE:O	37:YU:60:LEU:N	2.54	0.41
41:YY:49:VAL:O	41:YY:50:ARG:C	2.59	0.41
45:Y2:41:ILE:HD12	45:Y2:43:GLN:N	2.35	0.41
45:Y2:53:LEU:O	45:Y2:57:ILE:HG13	2.21	0.41
51:Y8:56:GLU:C	51:Y8:58:ILE:N	2.73	0.41
53:QV:37:A:N3	54:QX:1:A:C2	2.89	0.41
1:QA:15:G:C2	1:QA:16:A:C4	3.08	0.41
1:QA:198:G:H2'	1:QA:199:G:H8	1.86	0.41
1:QA:420:U:H4'	1:QA:421:U:H5	1.85	0.41
1:QA:475:G:H2'	1:QA:476:G:H8	1.86	0.41
1:QA:748:C:H1'	1:QA:749:C:H5	1.86	0.41
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.54	0.41
1:QA:1080:A:H4'	5:QE:16:THR:HB	2.03	0.41
1:QA:1157:A:O2'	1:QA:1158:C:H5''	2.21	0.41
1:QA:1329:A:H5''	13:QM:29:ARG:HG3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.41
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.41
5:QE:68:GLU:O	5:QE:68:GLU:CG	2.68	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	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
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
10:QJ:8:LEU:HD11	10:QJ:23:ILE:CD1	2.37	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	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:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.59	0.41
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.41
22:RA:181:A:H1'	22:RA:435:C:H5'	2.02	0.41
22:RA:192:C:O2'	22:RA:802:A:N3	2.49	0.41
22:RA:196:A:N3	22:RA:196:A:H2'	2.34	0.41
22:RA:225:A:N6	22:RA:226:G:C2	2.89	0.41
22:RA:270(T):G:C5'	44:R1:97:LEU:HD22	2.50	0.41
22:RA:301:G:C6	22:RA:317:G:C6	3.09	0.41
22:RA:619:G:H3'	22:RA:620:G:H21	1.84	0.41
22:RA:671:C:H2'	22:RA:672:C:C6	2.55	0.41
22:RA:686:G:C2	50:R7:11:LYS:HE3	2.56	0.41
22:RA:868:U:C4	22:RA:869:G:N7	2.88	0.41
22:RA:1263:U:OP1	48:R5:16:ARG:NE	2.54	0.41
22:RA:1286:A:O2'	22:RA:1288:U:P	2.79	0.41
22:RA:1408:C:C2	22:RA:1595:G:N2	2.89	0.41
22:RA:1569:A:H2'	22:RA:1570:A:O4'	2.20	0.41
22:RA:1658:C:H2'	22:RA:1659:U:C6	2.56	0.41
22:RA:2283:C:OP1	49:R6:5:VAL:HG13	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2293:C:H2'	22:RA:2294:C:O4'	2.21	0.41
22:RA:2311:A:C1'	27:RG:82:LEU:HD11	2.50	0.41
22:RA:2481:G:O2'	22:RA:2482:G:P	2.78	0.41
22:RA:2515:C:O2	22:RA:2570:G:C2	2.73	0.41
22:RA:2629:A:O2'	22:RA:2630:G:H5''	2.21	0.41
22:RA:2633:G:H2'	22:RA:2634:G:O4'	2.21	0.41
24:RD:147:LEU:CD1	24:RD:155:LEU:HD21	2.51	0.41
24:RD:197:GLY:O	24:RD:198:ASN:HB3	2.21	0.41
24:RD:272:ALA:HB1	24:RD:273:ARG:H	1.58	0.41
25:RE:4:ILE:HG22	25:RE:198:VAL:HB	2.02	0.41
26:RF:46:ARG:CG	26:RF:46:ARG:NH1	2.72	0.41
27:RG:7:LEU:CD2	27:RG:176:LEU:HD22	2.45	0.41
27:RG:47:LYS:HB2	27:RG:47:LYS:HE3	1.80	0.41
27:RG:61:ALA:CB	27:RG:67:LYS:HA	2.50	0.41
27:RG:67:LYS:NZ	47:R4:6:HIS:CD2	2.89	0.41
27:RG:77:ILE:H	27:RG:82:LEU:HB2	1.85	0.41
28:RH:145:ALA:O	28:RH:148:ILE:HB	2.21	0.41
30:RN:10:GLU:OE2	30:RN:11:PRO:HD2	2.21	0.41
30:RN:56:ASN:ND2	30:RN:126:PRO:N	2.69	0.41
30:RN:58:ASP:HB3	30:RN:95:PRO:HB3	2.02	0.41
30:RN:133:GLN:C	30:RN:134:ARG:HG2	2.41	0.41
31:RO:20:MET:O	31:RO:41:ALA:CB	2.67	0.41
32:RP:9:ASN:HB2	32:RP:10:PRO:HD2	2.03	0.41
32:RP:65:ARG:C	32:RP:66:GLY:O	2.59	0.41
32:RP:66:GLY:O	32:RP:67:MET:CB	2.63	0.41
32:RP:101:VAL:HG23	32:RP:106:LEU:HB3	2.03	0.41
33:RQ:27:VAL:HG22	33:RQ:105:GLU:CD	2.41	0.41
33:RQ:39:PRO:HA	33:RQ:97:VAL:O	2.21	0.41
33:RQ:139:GLU:HG2	33:RQ:140:ALA:N	2.36	0.41
34:RR:94:TYR:N	34:RR:94:TYR:CD2	2.87	0.41
36:RT:28:VAL:HG23	36:RT:87:ASP:O	2.21	0.41
36:RT:84:GLN:HG2	36:RT:85:LYS:N	2.36	0.41
37:RU:57:PHE:O	37:RU:60:LEU:N	2.54	0.41
37:RU:83:LEU:CD1	37:RU:113:ALA:HB2	2.50	0.41
38:RV:67:GLY:O	38:RV:68:LYS:C	2.60	0.41
39:RW:50:VAL:O	39:RW:53:SER:N	2.50	0.41
43:R0:24:LYS:N	43:R0:37:LEU:O	2.40	0.41
44:R1:94:LEU:HA	44:R1:94:LEU:HD23	1.81	0.41
45:R2:65:ASN:O	45:R2:66:GLU:C	2.59	0.41
50:R7:24:THR:HB	50:R7:25:PRO:HD2	2.03	0.41
51:R8:3:LYS:HE2	51:R8:3:LYS:HB3	1.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:35:G:N2	1:XA:550:G:N3	2.69	0.41
1:XA:150:C:O5'	1:XA:150:C:H6	2.04	0.41
1:XA:346:G:N2	1:XA:347:G:C6	2.89	0.41
1:XA:372:C:N4	1:XA:387:U:C2	2.88	0.41
1:XA:403:C:H4'	4:XD:122:ARG:NH2	2.35	0.41
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.36	0.41
1:XA:518:C:O2	12:XL:50:SER:N	2.53	0.41
1:XA:545:C:H5''	4:XD:72:GLU:HG2	2.02	0.41
1:XA:545:C:O2'	1:XA:549:C:OP1	2.39	0.41
1:XA:574:A:N3	1:XA:883:C:H1'	2.36	0.41
1:XA:575:G:O2'	1:XA:821:G:H5'	2.21	0.41
1:XA:680:C:H2'	1:XA:681:C:C6	2.56	0.41
1:XA:877:C:OP1	8:XH:88:LYS:HD3	2.20	0.41
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.62	0.41
1:XA:1152:A:P	10:XJ:68:HIS:HE2	2.40	0.41
1:XA:1153:C:N3	1:XA:1154:G:C8	2.89	0.41
1:XA:1164:G:C6	1:XA:1165:C:C4	3.09	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
4:XD:15:GLU:N	4:XD:15:GLU:OE1	2.54	0.41
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.86	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	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
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	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:65:LYS:HE3	47:Y4:50:VAL:HG13	2.03	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.41
22:YA:142:G:H2'	22:YA:143:C:C6	2.56	0.41
22:YA:251:A:C5	22:YA:252:G:H1'	2.55	0.41
22:YA:299:A:C5	22:YA:322:A:C2	3.09	0.41
22:YA:311:A:C6	22:YA:328:U:C4	3.08	0.41
22:YA:330:A:O2'	22:YA:331:A:H8	2.03	0.41
22:YA:353:G:H2'	22:YA:354:G:C8	2.54	0.41
22:YA:364:C:H5''	22:YA:364:C:H6	1.86	0.41
22:YA:445:C:H2'	22:YA:446:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:520:G:H2'	22:YA:521:G:C8	2.55	0.41
22:YA:534:U:H2'	22:YA:535:C:C6	2.56	0.41
22:YA:581:C:H2'	22:YA:582:G:C8	2.56	0.41
22:YA:695:G:C6	22:YA:768:G:C6	3.08	0.41
22:YA:910:A:C5	33:YQ:13:GLN:HG3	2.56	0.41
22:YA:995:C:C4	37:YU:57:PHE:CZ	3.08	0.41
22:YA:1027:A:C6	22:YA:1126:A:C5	3.09	0.41
22:YA:1184:G:C5	22:YA:1185:C:C5	3.09	0.41
22:YA:1469:A:C6	22:YA:1470:G:C5	3.09	0.41
22:YA:1815:A:C8	22:YA:1817:G:C4	3.09	0.41
22:YA:2126:A:H1'	22:YA:2127:G:OP2	2.21	0.41
22:YA:2230:G:C5	22:YA:2231:C:C5	3.08	0.41
22:YA:2392:A:H1'	32:YP:60:MET:CG	2.50	0.41
22:YA:2404:C:O3'	32:YP:77:ARG:NH2	2.53	0.41
22:YA:2520:C:C6	22:YA:2567:G:H1'	2.55	0.41
22:YA:2702:U:H6	22:YA:2702:U:OP1	2.03	0.41
22:YA:2731:G:C6	22:YA:2732:G:O6	2.74	0.41
22:YA:2776:A:C6	22:YA:2778:A:C6	3.09	0.41
23:YB:89(A):A:C5	23:YB:90:C:H1'	2.56	0.41
24:YD:68:LYS:O	24:YD:68:LYS:HG3	2.20	0.41
24:YD:154:LYS:C	24:YD:155:LEU:HD12	2.41	0.41
25:YE:62:PRO:O	25:YE:63:LEU:C	2.59	0.41
26:YF:59:TYR:HB3	26:YF:60:SER:H	1.70	0.41
26:YF:68:LYS:O	26:YF:69:HIS:HB2	2.21	0.41
27:YG:18:GLU:HA	27:YG:18:GLU:OE2	2.21	0.41
27:YG:53:LEU:CD1	27:YG:87:PRO:HB2	2.51	0.41
27:YG:78:SER:O	27:YG:79:ASN:C	2.59	0.41
28:YH:45:VAL:O	28:YH:45:VAL:CG1	2.69	0.41
28:YH:137:ASP:HB2	28:YH:140:LYS:CE	2.51	0.41
28:YH:145:ALA:O	28:YH:148:ILE:HB	2.21	0.41
28:YH:146:ALA:HA	28:YH:164:TYR:OH	2.21	0.41
29:YI:97:ILE:HD12	29:YI:140:LEU:HD11	2.03	0.41
31:YO:31:LYS:HA	31:YO:31:LYS:HD3	1.92	0.41
32:YP:18:ARG:HD2	32:YP:27:HIS:CD2	2.56	0.41
32:YP:101:VAL:HG23	32:YP:106:LEU:HB3	2.03	0.41
33:YQ:90:VAL:C	33:YQ:92:GLY:N	2.71	0.41
34:YR:55:ALA:O	34:YR:58:GLY:HA3	2.21	0.41
36:YT:76:PHE:HA	36:YT:77:PRO:HD3	1.75	0.41
37:YU:91:ASP:OD2	37:YU:96:ALA:CA	2.69	0.41
38:YV:38:LEU:CD1	38:YV:55:ALA:CB	2.98	0.41
39:YW:55:ALA:O	39:YW:58:ALA:HB3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:54:VAL:C	40:YX:55:ASN:HD22	2.24	0.41
41:YY:2:ARG:O	41:YY:3:VAL:O	2.38	0.41
41:YY:13:VAL:O	41:YY:24:VAL:HA	2.20	0.41
41:YY:98:VAL:O	41:YY:99:CYS:HB3	2.21	0.41
42:YZ:20:ARG:HD3	42:YZ:20:ARG:O	2.20	0.41
42:YZ:95:PRO:HB2	42:YZ:127:LYS:HG2	2.02	0.41
42:YZ:157:LEU:HA	42:YZ:158:PRO:HD2	1.95	0.41
43:Y0:21:LEU:HD11	43:Y0:41:ARG:CZ	2.51	0.41
45:Y2:61:LEU:HD23	45:Y2:61:LEU:HA	1.85	0.41
47:Y4:60:GLN:HB3	47:Y4:61:ARG:H	1.56	0.41
49:Y6:8:LYS:O	49:Y6:9:LEU:HB2	2.21	0.41
49:Y6:27:LYS:NZ	49:Y6:27:LYS:CB	2.73	0.41
49:Y6:50:ARG:NH1	49:Y6:50:ARG:HG2	2.36	0.41
52:Y9:2:LYS:HD2	52:Y9:2:LYS:HA	1.96	0.41
54:XX:6:C:H2'	54:XX:7:A:O5'	2.21	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.41
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.41
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.41
4:QD:14:ARG:HA	4:QD:14:ARG:HD3	1.89	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
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.41
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.41
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.41
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.21	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.41
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.56	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.41
14:QN:26:ARG:HB3	14:QN:27:CYS:H	1.64	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
17:QQ:60:ILE:HG23	17:QQ:60:ILE:O	2.21	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
22:RA:94:G:N1	22:RA:95:G:C5	2.89	0.41
22:RA:328:U:H4'	41:RY:68:HIS:CG	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:468:G:H2'	22:RA:469:G:O4'	2.21	0.41
22:RA:626:U:H5'	22:RA:627:A:H5'	2.03	0.41
22:RA:686:G:O6	50:R7:12:ARG:HG3	2.21	0.41
22:RA:765:G:H2'	22:RA:766:C:C6	2.56	0.41
22:RA:1191:G:H2'	22:RA:1192:G:O4'	2.21	0.41
22:RA:1303:G:C6	22:RA:1304:C:C4	3.09	0.41
22:RA:2335:A:C8	22:RA:2337:G:C5	3.09	0.41
22:RA:2414:G:H21	32:RP:67:MET:HE1	1.86	0.41
22:RA:2637:U:H5''	25:RE:82:ARG:NH2	2.36	0.41
24:RD:31:LYS:O	24:RD:32:SER:O	2.39	0.41
24:RD:145:VAL:CG1	24:RD:146:GLU:N	2.83	0.41
24:RD:154:LYS:C	24:RD:155:LEU:HD12	2.41	0.41
24:RD:263:ARG:NH1	24:RD:263:ARG:CB	2.75	0.41
25:RE:147:PRO:HB2	25:RE:149:ARG:HG2	2.03	0.41
25:RE:161:GLY:O	25:RE:162:ALA:HB3	2.20	0.41
27:RG:95:ARG:CA	27:RG:99:MET:HB3	2.50	0.41
31:RO:31:LYS:C	31:RO:32:TYR:CD2	2.94	0.41
33:RQ:52:VAL:O	33:RQ:53:ALA:C	2.59	0.41
34:RR:22:ARG:O	34:RR:26:LYS:HG3	2.21	0.41
35:RS:6:ALA:O	35:RS:10:ARG:HD3	2.21	0.41
35:RS:100:ALA:CA	35:RS:103:GLU:HG2	2.49	0.41
35:RS:106:ARG:HB2	35:RS:106:ARG:CZ	2.49	0.41
36:RT:39:ARG:HG2	36:RT:40:THR:N	2.25	0.41
37:RU:27:LEU:C	37:RU:29:SER:N	2.74	0.41
39:RW:14:PRO:HG3	39:RW:101:SER:OG	2.21	0.41
42:RZ:15:PRO:HA	42:RZ:18:LEU:HD13	2.03	0.41
43:R0:70:GLN:CD	43:R0:72:ARG:HD3	2.41	0.41
47:R4:63:TYR:O	47:R4:65:ASP:N	2.54	0.41
51:R8:64:TYR:HB3	51:R8:65:GLU:H	1.40	0.41
1:XA:300:A:H1'	1:XA:565:U:O2	2.21	0.41
1:XA:1054:C:C4	55:XY:34:C:O4'	2.74	0.41
1:XA:1129:C:C4'	1:XA:1130:A:H5'	2.47	0.41
1:XA:1234:C:H2'	1:XA:1235:U:C6	2.55	0.41
1:XA:1520:G:C2	1:XA:1521:G:C8	3.08	0.41
2:XB:37:ASN:C	2:XB:39:ILE:N	2.74	0.41
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.41
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.41
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	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
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.41
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.41
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.41
22:YA:108:U:C2	22:YA:109:G:C8	3.09	0.41
22:YA:270(T):G:C6	22:YA:270(U):C:C4	3.08	0.41
22:YA:278:A:H4'	22:YA:279:C:OP1	2.21	0.41
22:YA:449:A:H2'	22:YA:450:G:C8	2.56	0.41
22:YA:479:A:O2'	22:YA:481:G:H5'	2.21	0.41
22:YA:863:A:H2'	22:YA:864:G:H8	1.85	0.41
22:YA:1410:G:C2	22:YA:1593:G:C2	3.09	0.41
22:YA:1655:A:H2'	22:YA:1656:C:O4'	2.21	0.41
22:YA:2238:G:H5'	22:YA:2239:G:N7	2.36	0.41
22:YA:2561:A:H2'	22:YA:2562:U:O4'	2.20	0.41
22:YA:2712:U:H1'	22:YA:2712(A):A:N7	2.35	0.41
23:YB:105:G:C2	23:YB:106:G:C8	3.08	0.41
24:YD:13:ARG:HG2	24:YD:13:ARG:O	2.20	0.41
24:YD:147:LEU:CD1	24:YD:155:LEU:HD21	2.51	0.41
25:YE:101:ARG:C	25:YE:201:THR:OG1	2.58	0.41
28:YH:20:ALA:HB3	28:YH:23:ARG:HG2	2.03	0.41
29:YI:93:THR:O	29:YI:97:ILE:HG12	2.21	0.41
30:YN:10:GLU:OE2	30:YN:11:PRO:HD2	2.21	0.41
30:YN:101:HIS:HD2	30:YN:102:ALA:N	2.19	0.41
32:YP:84:ASN:HB2	32:YP:87:ASP:OD2	2.21	0.41
35:YS:89:ARG:HG2	35:YS:89:ARG:NH1	2.36	0.41
39:YW:71:VAL:HA	39:YW:107:LEU:HD12	2.02	0.41
42:YZ:108:PRO:HG3	42:YZ:117:LEU:HD22	2.03	0.41
44:Y1:85:LEU:N	44:Y1:85:LEU:CD2	2.84	0.41
44:Y1:91:LYS:HG3	44:Y1:92:LYS:N	2.32	0.41
45:Y2:11:GLU:HA	45:Y2:14:ARG:HD2	2.02	0.41
45:Y2:18:PRO:C	45:Y2:20:GLU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:65:ASN:O	45:Y2:66:GLU:C	2.59	0.41
47:Y4:26:SER:C	47:Y4:27:THR:O	2.58	0.41
47:Y4:63:TYR:O	47:Y4:65:ASP:N	2.53	0.41
49:Y6:6:ARG:HA	49:Y6:6:ARG:NE	2.36	0.41
51:Y8:40:GLU:O	51:Y8:42:ARG:N	2.54	0.41
53:XV:16:C:O2'	53:XV:17:C:OP1	2.39	0.41
53:XV:23:C:H2'	53:XV:24:U:C6	2.55	0.41
54:XX:4:C:N3	55:XY:37:1MG:C2	2.89	0.41
1:QA:360:A:C6	1:QA:361:G:C6	3.09	0.40
1:QA:752:G:HO2'	1:QA:753:A:P	2.44	0.40
1:QA:922:G:C6	1:QA:923:A:C6	3.10	0.40
1:QA:978:A:O2'	1:QA:1322:C:N3	2.47	0.40
1:QA:1178:G:C8	1:QA:1180:A:OP2	2.75	0.40
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.54	0.40
1:QA:1516:G:H2'	1:QA:1518:A:OP2	2.21	0.40
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	0.40
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.40
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.40
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	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:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
22:RA:303:U:H2'	22:RA:304:G:C8	2.56	0.40
22:RA:397:G:H1'	22:RA:2231:C:O2'	2.21	0.40
22:RA:443:A:OP1	26:RF:46:ARG:HB2	2.21	0.40
22:RA:871:U:H5'	22:RA:872:A:OP1	2.21	0.40
22:RA:900:A:C5	22:RA:901:A:C5	3.09	0.40
22:RA:1819:A:H3'	24:RD:178:PRO:HB2	2.02	0.40
22:RA:1894:C:H2'	22:RA:1895:C:H6	1.86	0.40
22:RA:2290:G:C6	22:RA:2291:U:C4	3.09	0.40
22:RA:2622:C:O2'	22:RA:2825:C:O2	2.34	0.40
22:RA:2660:A:H2'	22:RA:2661:G:O4'	2.21	0.40
23:RB:31:C:H42	23:RB:51:G:H1	1.68	0.40
25:RE:51:PHE:CG	25:RE:52:LEU:N	2.90	0.40
26:RF:13:SER:OG	26:RF:14:PRO:HD2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:128:ALA:O	26:RF:129:PHE:CB	2.67	0.40
28:RH:26:VAL:HG12	28:RH:33:LEU:HB2	2.03	0.40
31:RO:47:ILE:HD12	31:RO:48:PRO:CD	2.43	0.40
33:RQ:76:LYS:HB3	33:RQ:90:VAL:CG1	2.51	0.40
38:RV:38:LEU:O	38:RV:51:VAL:HA	2.21	0.40
39:RW:14:PRO:C	39:RW:16:LYS:N	2.73	0.40
41:RY:49:VAL:O	41:RY:50:ARG:C	2.59	0.40
41:RY:87:LYS:HB2	41:RY:87:LYS:HZ2	1.85	0.40
47:R4:42:PHE:CZ	47:R4:43:TYR:HB3	2.57	0.40
51:R8:53:PRO:HD2	51:R8:54:GLU:H	1.84	0.40
1:XA:254:G:H21	17:XQ:16:GLN:NE2	2.20	0.40
1:XA:266:G:O2'	1:XA:267:C:P	2.79	0.40
1:XA:716:A:N6	1:XA:717:C:N4	2.70	0.40
1:XA:791:G:H22	1:XA:1498:U:P	2.44	0.40
1:XA:1217:C:H2'	1:XA:1218:C:O4'	2.20	0.40
1:XA:1465:C:H2'	1:XA:1466:C:O4'	2.20	0.40
1:XA:1508:G:H2'	1:XA:1509:C:H6	1.85	0.40
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	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
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.20	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.40
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
14:YN:43:CYS:C	14:YN:45:ARG:N	2.73	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
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.21	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
22:YA:221:A:H4'	22:YA:222:A:O5'	2.20	0.40
22:YA:607:U:H5	22:YA:619:G:C5	2.39	0.40
22:YA:686:G:C2	50:Y7:11:LYS:HE3	2.56	0.40
22:YA:757:U:H2'	22:YA:758:C:C6	2.55	0.40
22:YA:761:A:O5'	22:YA:761:A:H8	2.04	0.40
22:YA:952:G:P	33:YQ:16:ARG:HH12	2.45	0.40
22:YA:1130:U:HO2'	22:YA:1131:G:P	2.45	0.40
22:YA:1439:A:C8	22:YA:1440:G:C8	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1839:G:C8	22:YA:1927:A:H1'	2.56	0.40
22:YA:2292:C:P	35:YS:17:ARG:HH22	2.43	0.40
22:YA:2322:A:H2'	22:YA:2323:G:C8	2.56	0.40
22:YA:2338:G:H2'	22:YA:2339:G:H8	1.86	0.40
22:YA:2689:U:H4'	22:YA:2690:C:O5'	2.21	0.40
23:YB:16:G:C6	23:YB:69:G:C2	3.08	0.40
23:YB:116:G:H2'	23:YB:117:G:O4'	2.20	0.40
24:YD:31:LYS:O	24:YD:32:SER:O	2.39	0.40
24:YD:228:PRO:HD3	24:YD:234:GLY:O	2.21	0.40
25:YE:93:VAL:H	25:YE:95:ILE:CD1	2.22	0.40
25:YE:119:ARG:HG2	25:YE:160:TYR:HB2	2.03	0.40
26:YF:13:SER:OG	26:YF:14:PRO:HD2	2.21	0.40
26:YF:62:ARG:HB3	26:YF:62:ARG:CZ	2.51	0.40
29:YI:71:ILE:O	29:YI:71:ILE:HG12	2.22	0.40
29:YI:109:ILE:HB	29:YI:110:ASP:H	1.65	0.40
29:YI:114:LEU:HD12	29:YI:129:THR:O	2.21	0.40
30:YN:7:LYS:CG	30:YN:8:GLN:N	2.81	0.40
31:YO:13:ASN:HD21	31:YO:97:ARG:HB3	1.86	0.40
33:YQ:52:VAL:O	33:YQ:53:ALA:C	2.59	0.40
33:YQ:139:GLU:CG	33:YQ:140:ALA:N	2.84	0.40
34:YR:61:HIS:CE1	34:YR:65:LEU:HD11	2.56	0.40
36:YT:10:VAL:O	36:YT:11:GLU:C	2.60	0.40
37:YU:5:LYS:C	37:YU:7:GLY:N	2.74	0.40
37:YU:57:PHE:O	37:YU:58:ARG:C	2.59	0.40
37:YU:76:TYR:O	37:YU:80:ILE:HG12	2.21	0.40
41:YY:42:VAL:HG21	41:YY:67:LEU:CD1	2.52	0.40
41:YY:97:ARG:NH2	41:YY:98:VAL:CG2	2.85	0.40
43:Y0:35:ASN:N	43:Y0:35:ASN:OD1	2.54	0.40
43:Y0:72:ARG:N	43:Y0:76:GLY:O	2.52	0.40
54:QX:6:C:O2'	54:QX:7:A:P	2.79	0.40
1:QA:130:A:C8	17:QQ:63:ARG:HG3	2.56	0.40
1:QA:191:G:N9	20:QT:105:SER:HB3	2.36	0.40
1:QA:236:G:C6	1:QA:237:C:C4	3.08	0.40
1:QA:376:G:H5''	16:QP:5:ARG:HD2	2.03	0.40
1:QA:485:G:O2'	1:QA:486:U:H6	2.03	0.40
1:QA:560:U:H4'	1:QA:561:U:O5'	2.19	0.40
1:QA:793:U:C2	1:QA:1516:G:H4'	2.56	0.40
1:QA:858:G:O6	1:QA:869:G:H3'	2.21	0.40
1:QA:1525:G:OP1	11:QK:120:ARG:NH2	2.38	0.40
2:QB:212:GLN:NE2	2:QB:212:GLN:O	2.54	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.01	0.40
5:QE:48:ALA:C	5:QE:50:GLU:H	2.24	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.50	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
22:RA:154:G:C2	22:RA:173:G:C2	3.09	0.40
22:RA:392:C:H2'	22:RA:393:C:C6	2.57	0.40
22:RA:464:U:H2'	22:RA:465:G:O4'	2.21	0.40
22:RA:899:A:H8	22:RA:899:A:OP2	2.05	0.40
22:RA:1047:G:H2'	22:RA:1110:G:N1	2.36	0.40
22:RA:1204:A:HO2'	22:RA:1205:U:P	2.43	0.40
22:RA:1359:A:C6	22:RA:1372:U:O4	2.73	0.40
22:RA:1365:A:N6	22:RA:1366:A:C6	2.89	0.40
22:RA:1579:A:C2	22:RA:1580:A:C4	3.09	0.40
23:RB:5:C:OP1	23:RB:61:G:O2'	2.38	0.40
24:RD:117:VAL:HG22	24:RD:118:VAL:N	2.35	0.40
24:RD:228:PRO:HD3	24:RD:234:GLY:O	2.21	0.40
25:RE:62:PRO:O	25:RE:63:LEU:C	2.59	0.40
25:RE:119:ARG:HG2	25:RE:160:TYR:HB2	2.03	0.40
26:RF:62:ARG:HB3	26:RF:62:ARG:CZ	2.51	0.40
26:RF:80:ALA:O	26:RF:83:PHE:HB2	2.20	0.40
26:RF:144:LYS:C	26:RF:146:ALA:N	2.75	0.40
29:RI:49:ALA:O	29:RI:52:ARG:HG2	2.21	0.40
30:RN:23:LEU:CD1	30:RN:99:LEU:HD23	2.51	0.40
30:RN:137:LYS:HA	30:RN:137:LYS:HD2	1.89	0.40
32:RP:84:ASN:HB2	32:RP:87:ASP:OD2	2.22	0.40
35:RS:52:SER:HB2	35:RS:55:ALA:HB3	2.03	0.40
37:RU:34:LYS:CE	37:RU:34:LYS:CA	2.96	0.40
39:RW:88:ARG:HA	39:RW:88:ARG:HD2	1.92	0.40
40:RX:60:ARG:HH22	50:R7:47:ARG:HH12	1.68	0.40
41:RY:57:GLN:O	41:RY:58:GLY:C	2.60	0.40
44:R1:85:LEU:N	44:R1:85:LEU:CD2	2.84	0.40
44:R1:96:LYS:O	44:R1:96:LYS:HG2	2.21	0.40
45:R2:32:LEU:O	45:R2:32:LEU:HD23	2.21	0.40
49:R6:50:ARG:NH1	49:R6:50:ARG:HG2	2.36	0.40
52:R9:10:ILE:HD12	52:R9:32:HIS:CG	2.56	0.40
1:XA:96:G:C6	1:XA:97:U:C2	3.09	0.40
1:XA:321:A:N6	1:XA:328:C:H1'	2.32	0.40
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1153:C:C2	1:XA:1154:G:C8	3.09	0.40
1:XA:1254:C:N4	10:XJ:43:ARG:HH22	2.19	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.20	0.40
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
3:XC:178:LEU:N	3:XC:178:LEU:CD2	2.85	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
9:XI:56:LEU:HB3	9:XI:57:GLY:H	1.66	0.40
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.40
14:YN:44:LEU:HD12	14:YN:53:LEU:HD12	1.94	0.40
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:YA:716:A:C2	22:YA:717:G:H1'	2.56	0.40
22:YA:1053:C:N4	22:YA:1106:G:H1	2.19	0.40
22:YA:1093:G:H4'	28:YH:170:ARG:NH2	2.36	0.40
22:YA:1262:A:N3	48:Y5:10:LYS:HE3	2.36	0.40
22:YA:1340:U:OP2	40:YX:78:LYS:NZ	2.50	0.40
22:YA:1371:G:O2'	22:YA:1372:U:H5	2.04	0.40
22:YA:1654:A:P	34:YR:2:ARG:HD2	2.62	0.40
22:YA:1872:A:H5'	22:YA:1878:G:OP2	2.21	0.40
22:YA:1918:A:C2	22:YA:1919:A:N6	2.89	0.40
22:YA:2063:C:O2	22:YA:2450:A:N1	2.53	0.40
22:YA:2277:G:C5'	33:YQ:85:LYS:HG3	2.50	0.40
22:YA:2327:A:H2'	22:YA:2328:A:C8	2.57	0.40
22:YA:2469:A:H5'	22:YA:2470:G:OP2	2.21	0.40
22:YA:2506:U:H6	56:Z8:76:PPU:N3'	2.18	0.40
23:YB:3:C:H2'	23:YB:4:C:C6	2.56	0.40
23:YB:77:U:OP1	42:YZ:19:ARG:NH2	2.53	0.40
24:YD:35:LYS:CE	24:YD:64:ILE:C	2.89	0.40
26:YF:118:ALA:HA	26:YF:123:LEU:HB3	2.02	0.40
27:YG:112:PRO:CA	47:Y4:37:SER:HB2	2.51	0.40
28:YH:26:VAL:HG12	28:YH:33:LEU:HB2	2.03	0.40
28:YH:66:GLY:O	28:YH:67:LEU:C	2.58	0.40
29:YI:8:PRO:HD3	29:YI:15:VAL:HG13	2.02	0.40
30:YN:1:MET:HE3	37:YU:95:LEU:HD21	1.98	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YO:16:ALA:HA	31:YO:46:ALA:CB	2.50	0.40
31:YO:86:ILE:N	31:YO:86:ILE:CD1	2.83	0.40
31:YO:106:LEU:HD23	31:YO:106:LEU:HA	1.88	0.40
35:YS:20:ARG:HE	35:YS:21:THR:HA	1.87	0.40
35:YS:59:LYS:CG	35:YS:60:GLY:N	2.80	0.40
36:YT:20:PRO:HG2	36:YT:86:ILE:O	2.21	0.40
36:YT:50:ILE:CG2	36:YT:62:THR:OG1	2.68	0.40
39:YW:14:PRO:O	39:YW:15:ARG:C	2.58	0.40
39:YW:66:GLU:HG2	39:YW:67:ASP:N	2.37	0.40
41:YY:97:ARG:O	41:YY:97:ARG:CG	2.69	0.40
47:Y4:64:GLY:C	47:Y4:66:SER:N	2.73	0.40
51:Y8:64:TYR:HB3	51:Y8:65:GLU:H	1.40	0.40
1:QA:457:C:H2'	1:QA:458:C:C6	2.57	0.40
1:QA:627:G:H2'	1:QA:628:G:H8	1.87	0.40
1:QA:1187:G:C6	1:QA:1188:A:C5	3.10	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:79:ARG:CZ	11:XK:99:GLN:HB2	2.51	0.40
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
4:QD:206:PHE:CD2	4:QD:207:TYR:HD1	2.37	0.40
5:QE:31:LEU:HD22	5:QE:31:LEU:HA	1.86	0.40
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
22:RA:48:G:N2	22:RA:177:G:H21	2.20	0.40
22:RA:234:C:H2'	22:RA:235:U:C6	2.56	0.40
22:RA:299:A:N3	22:RA:319:C:O2'	2.52	0.40
22:RA:579:G:O2'	22:RA:2019:A:OP1	2.35	0.40
22:RA:1503:U:H2'	22:RA:1504:C:C6	2.57	0.40
22:RA:1520:U:H2'	22:RA:1521:G:O4'	2.21	0.40
22:RA:1952:A:C2	31:RO:22:ILE:HG23	2.56	0.40
22:RA:2086:U:H2'	22:RA:2087:G:H8	1.85	0.40
22:RA:2462:U:C2	22:RA:2489:G:N2	2.90	0.40
25:RE:5:LEU:O	25:RE:28:ALA:HA	2.22	0.40
26:RF:36:VAL:HG11	26:RF:183:VAL:HG11	2.04	0.40
31:RO:92:GLU:O	31:RO:93:PRO:C	2.58	0.40
32:RP:19:VAL:HG22	32:RP:21:ARG:N	2.36	0.40
32:RP:65:ARG:HH21	51:R8:15:LYS:HB3	1.85	0.40
32:RP:65:ARG:O	32:RP:66:GLY:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:62:LYS:HD3	35:RS:97:ARG:CZ	2.52	0.40
36:RT:54:ARG:HA	36:RT:59:THR:HG23	2.02	0.40
38:RV:55:ALA:O	38:RV:56:SER:OG	2.31	0.40
39:RW:1:MET:CE	39:RW:2:GLU:H	2.31	0.40
41:RY:95:LYS:HA	41:RY:101:LYS:CB	2.51	0.40
44:R1:82:LEU:HD13	44:R1:83:GLU:CA	2.49	0.40
45:R2:11:GLU:HA	45:R2:14:ARG:HD2	2.02	0.40
45:R2:53:LEU:O	45:R2:57:ILE:HG13	2.21	0.40
47:R4:21:VAL:O	47:R4:22:ILE:O	2.40	0.40
47:R4:26:SER:O	47:R4:27:THR:O	2.40	0.40
51:R8:53:PRO:CG	51:R8:54:GLU:N	2.84	0.40
1:XA:60:A:H4'	1:XA:61:G:O5'	2.21	0.40
1:XA:160:A:H2'	1:XA:161:A:O4'	2.22	0.40
1:XA:721:G:C6	1:XA:733:A:C2	3.10	0.40
1:XA:728:A:H2'	1:XA:729:A:C8	2.56	0.40
1:XA:1127:G:N1	1:XA:1145:C:C2	2.88	0.40
1:XA:1161:C:C2'	1:XA:1162:C:H5'	2.52	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	2.52	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.22	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.40
22:YA:272:G:H2'	22:YA:273:G:C8	2.54	0.40
22:YA:597:U:H2'	22:YA:598:G:C8	2.56	0.40
22:YA:660:G:O3'	26:YF:38:ARG:NH2	2.54	0.40
22:YA:818:G:N7	22:YA:1187:G:C6	2.89	0.40
22:YA:1422:G:C6	22:YA:1423:G:C5	3.09	0.40
22:YA:1422:G:C1'	22:YA:1495:A:H61	2.35	0.40
22:YA:2081:C:H2'	22:YA:2082:A:H8	1.86	0.40
22:YA:2320:A:C2	22:YA:2333:A:C8	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2512:C:H2'	22:YA:2513:G:O4'	2.21	0.40
22:YA:2572:A:C4	25:YE:144:ARG:NH2	2.88	0.40
23:YB:78:A:C2	23:YB:99:A:C4	3.09	0.40
26:YF:198:ALA:HA	26:YF:201:VAL:CG1	2.41	0.40
28:YH:170:ARG:HB3	28:YH:171:LEU:H	1.47	0.40
30:YN:133:GLN:C	30:YN:134:ARG:HG2	2.41	0.40
31:YO:47:ILE:HD12	31:YO:48:PRO:CD	2.43	0.40
32:YP:85:LEU:HA	32:YP:85:LEU:HD23	1.92	0.40
32:YP:126:VAL:HG12	32:YP:147:LEU:CD2	2.23	0.40
33:YQ:139:GLU:HG2	33:YQ:140:ALA:N	2.36	0.40
35:YS:102:ALA:C	35:YS:104:GLY:N	2.73	0.40
36:YT:29:ARG:HB2	36:YT:29:ARG:NH1	2.36	0.40
37:YU:33:ARG:O	37:YU:37:GLU:HB2	2.21	0.40
42:YZ:3:TYR:O	42:YZ:58:VAL:HG23	2.21	0.40
42:YZ:157:LEU:HA	42:YZ:157:LEU:HD23	1.89	0.40
44:Y1:94:LEU:HD23	44:Y1:94:LEU:HA	1.81	0.40
47:Y4:49:PHE:N	47:Y4:49:PHE:HD1	2.17	0.40
47:Y4:52:THR:O	47:Y4:53:GLU:CB	2.69	0.40
51:Y8:17:THR:O	51:Y8:20:GLY:N	2.47	0.40
51:Y8:32:LEU:HD23	51:Y8:32:LEU:HA	1.94	0.40
53:XV:21:A:N6	53:XV:46:G:H2'	2.36	0.40
54:XX:4:C:N4	55:XY:37:1MG:CM1	2.74	0.40
1:QA:109:A:H5'	1:QA:110:C:C5	2.57	0.40
1:QA:182:U:C4	1:QA:183:G:H1'	2.56	0.40
1:QA:186(F):C:H2'	1:QA:187:C:O4'	2.22	0.40
1:QA:229:U:H2'	1:QA:230:G:H8	1.87	0.40
1:QA:692:U:H2'	1:QA:694:A:OP2	2.21	0.40
1:QA:815:A:N6	1:QA:1509:C:H1'	2.36	0.40
1:QA:976:G:OP2	1:QA:1358:U:O2'	2.39	0.40
1:QA:1081:G:H2'	1:QA:1082:G:O4'	2.22	0.40
1:QA:1385:G:C6	1:QA:1386:G:N7	2.89	0.40
2:QB:5:ILE:CG2	2:QB:224:GLN:HG2	2.51	0.40
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.40
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
7:QG:122:HIS:ND1	7:QG:122:HIS:N	2.69	0.40
8:QH:109:ILE:HG13	8:QH:120:THR:HB	2.03	0.40
10:QJ:22:LYS:C	10:QJ:22:LYS:CD	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40
13:QM:122:LYS:HE2	13:QM:122:LYS:O	2.21	0.40
14:QN:41:ARG:CG	14:QN:41:ARG:NH1	2.83	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
16:QP:39:TYR:CD2	16:QP:41:PRO:HD3	2.56	0.40
19:QS:39:THR:O	19:QS:40:ILE:HB	2.20	0.40
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.40
22:RA:701:G:N2	22:RA:702:G:H1'	2.35	0.40
22:RA:845:G:H5'	22:RA:846:C:OP1	2.22	0.40
22:RA:911:A:H2'	33:RQ:9:TYR:OH	2.21	0.40
22:RA:1061:U:H5'	22:RA:1070:A:O2'	2.22	0.40
22:RA:1434:A:H2'	22:RA:1435:G:C8	2.56	0.40
22:RA:1509:C:H3'	22:RA:1510:A:C5'	2.48	0.40
22:RA:1988:C:H2'	22:RA:1989:G:C8	2.55	0.40
22:RA:2257:U:H2'	22:RA:2258:C:C6	2.56	0.40
22:RA:2628:C:H1'	22:RA:2781:A:C4	2.57	0.40
22:RA:2693:A:H2'	22:RA:2694:G:C8	2.57	0.40
23:RB:45:A:H2'	23:RB:46:A:O4'	2.20	0.40
23:RB:46:A:C5	23:RB:47:C:C4	3.09	0.40
24:RD:72:LYS:HG3	24:RD:97:TYR:CE2	2.56	0.40
24:RD:92:ILE:CD1	24:RD:104:TYR:CD2	3.05	0.40
24:RD:185:VAL:HG12	24:RD:186:HIS:N	2.37	0.40
25:RE:93:VAL:C	25:RE:95:ILE:N	2.75	0.40
26:RF:68:LYS:O	26:RF:69:HIS:HB2	2.21	0.40
27:RG:41:GLN:HB3	27:RG:43:LEU:CD1	2.51	0.40
27:RG:112:PRO:CA	47:R4:37:SER:HB2	2.51	0.40
27:RG:114:ILE:HG22	27:RG:117:PHE:HB2	2.01	0.40
28:RH:20:ALA:HB3	28:RH:23:ARG:HG2	2.03	0.40
29:RI:3:VAL:O	29:RI:18:VAL:HA	2.22	0.40
31:RO:13:ASN:HD21	31:RO:97:ARG:HB3	1.86	0.40
35:RS:12:PHE:HD2	35:RS:12:PHE:HA	1.80	0.40
35:RS:20:ARG:HE	35:RS:21:THR:HA	1.86	0.40
35:RS:24:LEU:HD22	35:RS:24:LEU:N	2.37	0.40
35:RS:92:TYR:HB2	35:RS:98:VAL:HG11	2.02	0.40
36:RT:23:ARG:O	36:RT:49:VAL:HG11	2.21	0.40
39:RW:100:THR:O	39:RW:100:THR:HG23	2.22	0.40
42:RZ:166:SER:H	42:RZ:167:PRO:HA	1.86	0.40
48:R5:6:VAL:HA	48:R5:7:PRO:HD3	1.81	0.40
49:R6:7:ILE:CG1	49:R6:8:LYS:N	2.76	0.40
49:R6:24:GLU:HB3	49:R6:25:LYS:H	1.56	0.40
49:R6:36:LEU:CD1	49:R6:50:ARG:NH1	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:32:LEU:HD23	51:R8:32:LEU:HA	1.94	0.40
1:XA:397:A:H5'	1:XA:398:C:OP1	2.21	0.40
1:XA:1129:C:H41	1:XA:1141:C:N4	2.20	0.40
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.22	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
4:XD:120:LEU:CD2	4:XD:125:HIS:HB2	2.46	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:101:ILE:CD1	5:XE:119:LEU:HD23	2.36	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.22	0.40
6:XF:75:LEU:HD23	6:XF:75:LEU:C	2.41	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.85	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.51	0.40
13:XM:40:ASN:HA	13:XM:41:PRO:HD3	1.84	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
13:XM:88:ARG:HG2	13:XM:98:VAL:CG1	2.52	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.22	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.86	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
19:XS:29:ARG:HG2	19:XS:29:ARG:NH1	2.37	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
22:YA:252:G:O2'	22:YA:253:C:H5'	2.21	0.40
22:YA:299:A:C4	22:YA:322:A:C6	3.10	0.40
22:YA:470:A:H2'	22:YA:471:A:O4'	2.21	0.40
22:YA:873:G:H1	22:YA:904:C:N4	2.16	0.40
22:YA:1380:G:H8	22:YA:1380:G:O5'	2.04	0.40
22:YA:1388:G:O2'	22:YA:1389:G:H5'	2.22	0.40
22:YA:1655:A:C8	22:YA:1656:C:C5	3.09	0.40
22:YA:2001:A:H2'	22:YA:2002:G:C8	2.56	0.40
23:YB:16:G:H1	23:YB:68:C:N4	2.20	0.40
23:YB:52:A:N6	35:YS:33:LYS:HG3	2.29	0.40
24:YD:230:ASP:OD2	24:YD:230:ASP:N	2.54	0.40
25:YE:93:VAL:HG21	25:YE:180:ASN:HA	2.03	0.40
26:YF:33:LEU:O	26:YF:37:VAL:HG23	2.21	0.40
26:YF:36:VAL:HG11	26:YF:183:VAL:HG11	2.04	0.40
26:YF:124:LEU:HD12	26:YF:125:LEU:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:61:ALA:CB	27:YG:67:LYS:HA	2.51	0.40
27:YG:98:ARG:CA	27:YG:101:ILE:HG12	2.40	0.40
28:YH:128:PRO:CG	28:YH:129:THR:H	2.33	0.40
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CG	2.51	0.40
33:YQ:39:PRO:HA	33:YQ:97:VAL:O	2.21	0.40
34:YR:31:HIS:C	34:YR:33:ARG:H	2.25	0.40
35:YS:24:LEU:HD22	35:YS:24:LEU:N	2.37	0.40
35:YS:83:LYS:HE3	35:YS:84:GLN:HG3	2.02	0.40
36:YT:125:ARG:O	36:YT:128:GLU:N	2.50	0.40
37:YU:30:LYS:HA	37:YU:30:LYS:HD3	1.84	0.40
38:YV:70:ILE:O	38:YV:70:ILE:HG22	2.21	0.40
42:YZ:131:ARG:H	42:YZ:131:ARG:HG2	1.74	0.40
44:Y1:96:LYS:O	44:Y1:96:LYS:HG2	2.21	0.40
45:Y2:18:PRO:C	45:Y2:20:GLU:H	2.24	0.40
45:Y2:37:PHE:O	45:Y2:40:SER:HB3	2.22	0.40
45:Y2:47:ASN:HD22	45:Y2:47:ASN:N	1.99	0.40
47:Y4:21:VAL:O	47:Y4:22:ILE:O	2.40	0.40
53:QV:74:C:H2'	53:QV:75:C:H5'	2.03	0.40
1:QA:19:C:OP1	5:QE:127:ASN:HB2	2.21	0.40
1:QA:643:C:H5'	8:QH:31:PHE:CD1	2.56	0.40
1:QA:665:A:H2'	1:QA:725:G:H22	1.86	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.52	0.40
3:QC:70:VAL:CG1	3:QC:71:ALA:H	2.35	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.40
4:QD:11:LEU:O	4:QD:12:CYS:C	2.60	0.40
4:QD:68:TYR:OH	4:QD:196:LEU:HD21	2.21	0.40
4:QD:129:ASN:CA	4:QD:145:GLU:HB2	2.51	0.40
8:QH:36:LEU:O	8:QH:45:ILE:HD11	2.21	0.40
8:QH:44:PHE:HA	8:QH:79:VAL:CG1	2.52	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.40
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.40
10:QJ:54:PHE:CZ	10:QJ:55:LYS:CE	3.04	0.40
13:QM:4:ILE:O	13:QM:5:ALA:C	2.60	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.22	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
22:RA:337:C:O3'	41:RY:4:LYS:HG3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:345:A:O2'	22:RA:347:A:N7	2.49	0.40
22:RA:631:A:H4'	32:RP:65:ARG:HA	2.03	0.40
22:RA:649:G:H2'	22:RA:650:C:C6	2.57	0.40
22:RA:728:G:C5	22:RA:730:C:C4	3.10	0.40
22:RA:1024:G:H1	22:RA:1140:C:H42	1.70	0.40
22:RA:1178:C:H2'	22:RA:1179:C:C6	2.56	0.40
22:RA:1473:G:H2'	22:RA:1474:C:O4'	2.21	0.40
22:RA:1800:C:H5	22:RA:1819:A:H62	1.70	0.40
22:RA:1946:U:H2'	22:RA:1947:C:C6	2.56	0.40
22:RA:1959:G:C2	22:RA:1960:A:C4	3.10	0.40
22:RA:2003:G:C6	22:RA:2004:G:C5	3.09	0.40
22:RA:2359:C:H2'	22:RA:2360:A:O4'	2.22	0.40
22:RA:2417:C:C4	22:RA:2418:A:N7	2.89	0.40
22:RA:2532:G:N2	22:RA:2663:G:O2'	2.54	0.40
24:RD:25:THR:HG23	24:RD:27:THR:HB	2.01	0.40
24:RD:117:VAL:HG21	24:RD:128:GLY:O	2.22	0.40
25:RE:92:THR:HB	25:RE:93:VAL:H	1.57	0.40
25:RE:154:LYS:C	25:RE:154:LYS:HD3	2.42	0.40
26:RF:33:LEU:O	26:RF:37:VAL:HG23	2.21	0.40
26:RF:64:ILE:HD12	26:RF:64:ILE:HA	1.89	0.40
27:RG:78:SER:O	27:RG:79:ASN:C	2.59	0.40
30:RN:28:THR:O	30:RN:29:LYS:C	2.59	0.40
31:RO:112:MET:O	31:RO:115:VAL:HG23	2.22	0.40
32:RP:2:LYS:O	32:RP:5:ASP:CB	2.70	0.40
33:RQ:66:ILE:O	33:RQ:67:ARG:HB2	2.22	0.40
34:RR:34:ILE:HG22	34:RR:35:THR:N	2.35	0.40
34:RR:84:ALA:O	34:RR:85:PRO:C	2.59	0.40
35:RS:89:ARG:HG2	35:RS:89:ARG:NH1	2.36	0.40
36:RT:10:VAL:O	36:RT:11:GLU:C	2.59	0.40
36:RT:20:PRO:HG2	36:RT:86:ILE:O	2.21	0.40
36:RT:50:ILE:HD11	36:RT:102:ILE:CG1	2.52	0.40
36:RT:58:ASN:N	36:RT:58:ASN:ND2	2.70	0.40
41:RY:5:MET:CE	41:RY:32:PRO:HB3	2.51	0.40
41:RY:90:LEU:HB2	41:RY:91:GLU:H	1.53	0.40
42:RZ:100:VAL:HA	42:RZ:101:PRO:HD3	1.85	0.40
44:R1:86:SER:O	44:R1:89:GLU:HB2	2.21	0.40
49:R6:36:LEU:HD23	49:R6:36:LEU:N	2.37	0.40
49:R6:37:ARG:O	49:R6:48:VAL:O	2.39	0.40
51:R8:40:GLU:O	51:R8:42:ARG:N	2.54	0.40
1:XA:52:G:C6	1:XA:53:A:C5	3.10	0.40
1:XA:345:C:OP2	36:YT:41:ARG:HG2	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:406:G:H2'	1:XA:407:G:C8	2.56	0.40
1:XA:544:G:H2'	1:XA:545:C:H6	1.80	0.40
1:XA:690:G:N2	11:XK:55:LYS:HZ1	2.20	0.40
1:XA:768:A:C5	1:XA:769:G:C8	3.09	0.40
1:XA:1000:A:O2'	1:XA:1001:G:H5'	2.21	0.40
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.37	0.40
1:XA:1229:A:OP1	13:XM:116:THR:HG23	2.21	0.40
1:XA:1321:C:C5'	1:XA:1322:C:H5''	2.50	0.40
2:XB:201:ILE:HG21	2:XB:214:ILE:HG21	2.02	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CD1	2.52	0.40
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.40
5:XE:75:THR:CG2	5:XE:76:ILE:N	2.80	0.40
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.40
10:XJ:65:LEU:HA	14:XN:55:GLY:O	2.21	0.40
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
12:XL:9:GLN:O	12:XL:13:LYS:N	2.55	0.40
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.40
15:XO:87:ILE:CG2	15:XO:88:ARG:N	2.71	0.40
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.41	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
20:XT:98:PRO:O	20:XT:100:ILE:N	2.42	0.40
22:YA:51:G:N3	22:YA:119:A:C2	2.90	0.40
22:YA:121:G:H4'	22:YA:148:C:H2'	2.04	0.40
22:YA:161:U:H3'	22:YA:162:U:C5'	2.51	0.40
22:YA:1750:G:O2'	22:YA:1751:C:H5'	2.22	0.40
22:YA:2419:U:C5'	49:Y6:23:THR:HG22	2.43	0.40
22:YA:2857:G:H22	22:YA:2859:G:H3'	1.87	0.40
23:YB:50:G:H8	23:YB:50:G:O5'	2.04	0.40
24:YD:107:ALA:HA	24:YD:108:PRO:HD2	2.01	0.40
25:YE:5:LEU:O	25:YE:28:ALA:HA	2.22	0.40
25:YE:154:LYS:HD3	25:YE:154:LYS:C	2.42	0.40
26:YF:61:GLY:O	26:YF:62:ARG:C	2.57	0.40
26:YF:198:ALA:C	26:YF:200:GLU:H	2.25	0.40
28:YH:101:ARG:O	28:YH:117:PRO:HG3	2.21	0.40
31:YO:7:TYR:CE1	31:YO:20:MET:HE3	2.53	0.40
31:YO:31:LYS:C	31:YO:32:TYR:CD2	2.95	0.40
34:YR:22:ARG:O	34:YR:26:LYS:HG3	2.21	0.40
35:YS:99:LYS:HE2	35:YS:103:GLU:OE2	2.20	0.40
38:YV:35:LEU:C	38:YV:37:VAL:N	2.75	0.40
38:YV:95:LEU:HD13	38:YV:95:LEU:C	2.42	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YW:82:LEU:N	39:YW:98:LYS:O	2.42	0.40
40:YX:9:LEU:HA	45:Y2:36:ARG:HH21	1.86	0.40
41:YY:95:LYS:HA	41:YY:101:LYS:CB	2.51	0.40
42:YZ:140:ASP:OD2	42:YZ:140:ASP:N	2.53	0.40
44:Y1:86:SER:O	44:Y1:89:GLU:N	2.54	0.40
47:Y4:42:PHE:CZ	47:Y4:43:TYR:HB3	2.57	0.40
47:Y4:51:ASP:O	47:Y4:51:ASP:CG	2.60	0.40
51:Y8:39:LYS:HD2	51:Y8:39:LYS:O	2.22	0.40

All (5) 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)
28:YH:45:VAL:O	41:YY:24:VAL:N[4_445]	1.97	0.23
29:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.05	0.15
28:YH:44:VAL:CG2	41:YY:23:ARG:CD[4_445]	2.08	0.12
6:QF:15:ASP:OD2	4:XD:27:TYR:OH[4_555]	2.14	0.06
28:YH:47:GLU:OE2	41:YY:79:CYS:CB[4_445]	2.18	0.02

## 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
4	XD	206/209 (99%)	135 (66%)	48 (23%)	23 (11%)	0 7
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0 10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	101 (66%)	37 (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%)	22 (19%)	8 (7%)	1	18
11	XK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1	18
12	QL	123/132 (93%)	84 (68%)	23 (19%)	16 (13%)	0	5
12	XL	123/132 (93%)	84 (68%)	24 (20%)	15 (12%)	0	6
13	QM	119/126 (94%)	71 (60%)	29 (24%)	19 (16%)	0	3
13	XM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0	3
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0	2
14	XN	58/61 (95%)	33 (57%)	13 (22%)	12 (21%)	0	2
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	17
15	XO	86/89 (97%)	61 (71%)	19 (22%)	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%)	45 (66%)	15 (22%)	8 (12%)	0	6
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	6
19	QS	82/93 (88%)	47 (57%)	17 (21%)	18 (22%)	0	1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	3
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0	3
24	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1	17
24	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	17
25	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
25	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	2
26	RF	200/210 (95%)	143 (72%)	37 (18%)	20 (10%)	0	10
26	YF	200/210 (95%)	143 (72%)	37 (18%)	20 (10%)	0	10
27	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	6
27	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	6
28	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
28	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
29	RI	144/148 (97%)	106 (74%)	21 (15%)	17 (12%)	0	6
29	YI	144/148 (97%)	100 (69%)	27 (19%)	17 (12%)	0	6
30	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
30	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
31	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	16
31	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	16
32	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
32	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
33	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0	10
33	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0	10
34	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	6
34	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	6
35	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	3
35	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	3
36	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
36	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	4
37	RU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	15
37	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	15
38	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	10

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	10
39	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	5
39	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	5
40	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	21
40	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	21
41	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0	1
41	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0	1
42	RZ	181/206 (88%)	131 (72%)	28 (16%)	22 (12%)	0	6
42	YZ	181/206 (88%)	128 (71%)	35 (19%)	18 (10%)	0	10
43	R0	80/85 (94%)	67 (84%)	12 (15%)	1 (1%)	12	48
43	Y0	80/85 (94%)	67 (84%)	11 (14%)	2 (2%)	5	36
44	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	6
44	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	6
45	R2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	4
45	Y2	67/72 (93%)	46 (69%)	12 (18%)	9 (13%)	0	4
46	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	22
46	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	22
47	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
47	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
48	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
48	Y5	56/60 (93%)	32 (57%)	9 (16%)	15 (27%)	0	0
49	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
49	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
50	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	19
50	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	19
51	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
51	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
52	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
52	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	11469/12128 (95%)	7649 (67%)	2333 (20%)	1487 (13%)	0	5

All (1487) 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
12	QL	27	LEU
12	QL	47	LYS
12	QL	51	ALA
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
24	RD	26	LYS
24	RD	28	GLU
24	RD	123	ALA
24	RD	231	HIS
25	RE	4	ILE
25	RE	7	VAL
25	RE	9	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RE	22	PRO
25	RE	54	GLN
25	RE	57	LYS
25	RE	60	ASN
25	RE	63	LEU
25	RE	64	LYS
25	RE	68	ALA
25	RE	70	ALA
25	RE	73	GLU
25	RE	90	THR
25	RE	92	THR
25	RE	93	VAL
25	RE	169	ASN
25	RE	187	ALA
25	RE	189	PRO
26	RF	25	PRO
26	RF	66	PRO
26	RF	68	LYS
26	RF	73	ALA
26	RF	89	VAL
26	RF	128	ALA
26	RF	176	LEU
27	RG	4	ASP
27	RG	14	GLU
27	RG	79	ASN
27	RG	86	MET
28	RH	10	PRO
28	RH	12	PRO
28	RH	83	TYR
28	RH	85	LYS
28	RH	86	GLU
28	RH	87	LEU
28	RH	90	LYS
28	RH	92	ILE
28	RH	126	PRO
28	RH	127	GLU
28	RH	128	PRO
28	RH	137	ASP
28	RH	138	LYS
28	RH	153	LYS
28	RH	154	PRO
28	RH	155	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	RH	169	VAL
29	RI	15	VAL
29	RI	115	ALA
30	RN	6	PRO
30	RN	9	VAL
30	RN	22	THR
30	RN	36	GLY
30	RN	58	ASP
30	RN	95	PRO
30	RN	97	ARG
30	RN	119	ARG
30	RN	131	GLN
30	RN	133	GLN
30	RN	134	ARG
31	RO	49	ARG
32	RP	5	ASP
32	RP	10	PRO
32	RP	15	ARG
32	RP	19	VAL
32	RP	21	ARG
32	RP	25	SER
32	RP	27	HIS
32	RP	36	LYS
32	RP	38	GLN
32	RP	42	SER
32	RP	65	ARG
32	RP	95	VAL
32	RP	106	LEU
32	RP	107	LYS
32	RP	141	ALA
32	RP	148	LEU
33	RQ	6	ARG
33	RQ	18	LYS
33	RQ	22	LYS
33	RQ	27	VAL
33	RQ	81	VAL
33	RQ	90	VAL
33	RQ	134	ARG
34	RR	2	ARG
34	RR	3	HIS
34	RR	4	LEU
34	RR	14	SER

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	RR	58	GLY
34	RR	86	ARG
34	RR	117	VAL
35	RS	4	LEU
35	RS	12	PHE
35	RS	14	VAL
35	RS	23	ARG
35	RS	56	LEU
35	RS	57	LYS
35	RS	88	ASP
35	RS	89	ARG
35	RS	90	GLY
35	RS	107	GLU
36	RT	2	ASN
36	RT	3	ARG
36	RT	39	ARG
36	RT	55	ASN
36	RT	58	ASN
36	RT	90	GLN
36	RT	94	ALA
36	RT	97	ALA
36	RT	106	SER
36	RT	107	ASP
38	RV	28	GLU
38	RV	31	ALA
38	RV	45	THR
38	RV	48	GLY
38	RV	49	THR
38	RV	50	PRO
38	RV	53	GLU
38	RV	79	VAL
39	RW	59	VAL
39	RW	67	ASP
39	RW	75	TYR
39	RW	111	HIS
40	RX	36	LYS
41	RY	3	VAL
41	RY	23	ARG
41	RY	48	ALA
41	RY	49	VAL
41	RY	50	ARG
41	RY	53	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	RY	58	GLY
41	RY	63	LYS
41	RY	77	PRO
41	RY	78	ALA
41	RY	96	ILE
42	RZ	6	LYS
44	R1	30	VAL
44	R1	54	ALA
44	R1	81	LYS
44	R1	82	LEU
44	R1	95	LEU
45	R2	16	LEU
45	R2	43	GLN
45	R2	47	ASN
45	R2	48	HIS
45	R2	71	ASN
46	R3	3	ARG
47	R4	5	ILE
47	R4	14	ILE
47	R4	16	CYS
47	R4	22	ILE
47	R4	23	GLU
47	R4	36	CYS
47	R4	37	SER
47	R4	40	HIS
47	R4	42	PHE
47	R4	43	TYR
47	R4	49	PHE
47	R4	50	VAL
47	R4	51	ASP
47	R4	53	GLU
47	R4	62	ARG
47	R4	66	SER
47	R4	68	ARG
48	R5	3	LYS
48	R5	4	HIS
48	R5	35	GLU
48	R5	51	TYR
48	R5	53	ALA
49	R6	7	ILE
49	R6	14	THR
49	R6	15	GLU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	R6	19	ARG
49	R6	21	TYR
49	R6	33	LYS
49	R6	45	LYS
49	R6	48	VAL
51	R8	29	LYS
51	R8	31	HIS
51	R8	34	TRP
51	R8	52	LYS
51	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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	51	ALA
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
21	XU	7	ARG
21	XU	9	ARG
21	XU	22	ARG
24	YD	26	LYS
24	YD	28	GLU
24	YD	123	ALA
24	YD	231	HIS
25	YE	4	ILE
25	YE	7	VAL
25	YE	9	VAL
25	YE	22	PRO
25	YE	54	GLN
25	YE	57	LYS
25	YE	60	ASN
25	YE	63	LEU
25	YE	64	LYS
25	YE	68	ALA
25	YE	70	ALA
25	YE	73	GLU
25	YE	90	THR
25	YE	92	THR
25	YE	93	VAL
25	YE	169	ASN
25	YE	187	ALA
25	YE	189	PRO
26	YF	25	PRO
26	YF	66	PRO
26	YF	68	LYS
26	YF	73	ALA
26	YF	89	VAL
26	YF	128	ALA
26	YF	176	LEU
27	YG	4	ASP
27	YG	14	GLU
27	YG	79	ASN
27	YG	86	MET
28	YH	10	PRO
28	YH	12	PRO
28	YH	83	TYR
28	YH	85	LYS
28	YH	86	GLU
28	YH	87	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	YH	90	LYS
28	YH	92	ILE
28	YH	126	PRO
28	YH	127	GLU
28	YH	128	PRO
28	YH	137	ASP
28	YH	138	LYS
28	YH	153	LYS
28	YH	154	PRO
28	YH	155	SER
28	YH	169	VAL
29	YI	10	GLU
29	YI	87	LYS
29	YI	145	VAL
30	YN	6	PRO
30	YN	9	VAL
30	YN	22	THR
30	YN	36	GLY
30	YN	58	ASP
30	YN	95	PRO
30	YN	97	ARG
30	YN	119	ARG
30	YN	131	GLN
30	YN	133	GLN
30	YN	134	ARG
31	YO	49	ARG
32	YP	5	ASP
32	YP	10	PRO
32	YP	15	ARG
32	YP	19	VAL
32	YP	21	ARG
32	YP	25	SER
32	YP	27	HIS
32	YP	36	LYS
32	YP	38	GLN
32	YP	42	SER
32	YP	65	ARG
32	YP	95	VAL
32	YP	106	LEU
32	YP	107	LYS
32	YP	141	ALA
32	YP	148	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	YQ	6	ARG
33	YQ	18	LYS
33	YQ	22	LYS
33	YQ	27	VAL
33	YQ	81	VAL
33	YQ	90	VAL
33	YQ	134	ARG
34	YR	2	ARG
34	YR	3	HIS
34	YR	4	LEU
34	YR	14	SER
34	YR	58	GLY
34	YR	86	ARG
34	YR	117	VAL
35	YS	4	LEU
35	YS	12	PHE
35	YS	14	VAL
35	YS	23	ARG
35	YS	56	LEU
35	YS	57	LYS
35	YS	88	ASP
35	YS	89	ARG
35	YS	90	GLY
35	YS	107	GLU
36	YT	2	ASN
36	YT	3	ARG
36	YT	39	ARG
36	YT	55	ASN
36	YT	58	ASN
36	YT	90	GLN
36	YT	94	ALA
36	YT	97	ALA
36	YT	106	SER
36	YT	107	ASP
38	YV	28	GLU
38	YV	31	ALA
38	YV	45	THR
38	YV	48	GLY
38	YV	49	THR
38	YV	50	PRO
38	YV	53	GLU
38	YV	79	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	YW	59	VAL
39	YW	67	ASP
39	YW	75	TYR
39	YW	111	HIS
40	YX	36	LYS
41	YY	3	VAL
41	YY	23	ARG
41	YY	48	ALA
41	YY	49	VAL
41	YY	50	ARG
41	YY	58	GLY
41	YY	63	LYS
41	YY	77	PRO
41	YY	78	ALA
41	YY	96	ILE
42	YZ	81	ARG
42	YZ	146	ILE
42	YZ	152	ALA
42	YZ	159	PRO
42	YZ	166	SER
44	Y1	30	VAL
44	Y1	54	ALA
44	Y1	81	LYS
44	Y1	82	LEU
44	Y1	95	LEU
45	Y2	16	LEU
45	Y2	43	GLN
45	Y2	47	ASN
45	Y2	48	HIS
45	Y2	71	ASN
46	Y3	3	ARG
47	Y4	5	ILE
47	Y4	14	ILE
47	Y4	16	CYS
47	Y4	22	ILE
47	Y4	23	GLU
47	Y4	36	CYS
47	Y4	37	SER
47	Y4	40	HIS
47	Y4	42	PHE
47	Y4	43	TYR
47	Y4	49	PHE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	Y4	50	VAL
47	Y4	51	ASP
47	Y4	53	GLU
47	Y4	62	ARG
47	Y4	66	SER
47	Y4	68	ARG
48	Y5	3	LYS
48	Y5	4	HIS
48	Y5	35	GLU
48	Y5	51	TYR
48	Y5	53	ALA
49	Y6	7	ILE
49	Y6	14	THR
49	Y6	15	GLU
49	Y6	19	ARG
49	Y6	21	TYR
49	Y6	33	LYS
49	Y6	45	LYS
49	Y6	48	VAL
51	Y8	29	LYS
51	Y8	31	HIS
51	Y8	34	TRP
51	Y8	52	LYS
51	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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	46	LYS
12	QL	48	PRO
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
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
24	RD	3	VAL
24	RD	32	SER
24	RD	58	HIS
24	RD	122	ASP
24	RD	169	GLU
25	RE	8	LYS
25	RE	20	ALA
25	RE	37	ARG
25	RE	53	PRO
25	RE	61	ARG
25	RE	78	LEU
25	RE	88	GLY
25	RE	186	GLY
25	RE	190	GLY
25	RE	204	ALA
26	RF	18	ARG
26	RF	107	LYS
26	RF	108	LYS
26	RF	111	ALA
26	RF	132	VAL
26	RF	134	GLY
26	RF	168	ARG
27	RG	36	LYS
27	RG	81	LYS
27	RG	82	LEU
27	RG	96	ARG
27	RG	110	ALA
27	RG	115	ARG
27	RG	126	ASP
27	RG	136	ARG
28	RH	3	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	RH	8	PRO
28	RH	55	PRO
28	RH	59	ARG
28	RH	84	SER
28	RH	151	ILE
28	RH	156	ALA
28	RH	168	PRO
29	RI	10	GLU
29	RI	72	LEU
29	RI	133	HIS
29	RI	145	VAL
30	RN	23	LEU
30	RN	76	SER
31	RO	51	ALA
31	RO	56	ASP
31	RO	68	GLU
32	RP	6	LEU
32	RP	11	GLY
32	RP	12	ALA
32	RP	16	ARG
33	RQ	13	GLN
33	RQ	24	GLY
33	RQ	28	ALA
33	RQ	57	HIS
34	RR	11	ASN
35	RS	87	PHE
35	RS	96	GLY
35	RS	100	ALA
35	RS	109	GLY
35	RS	111	GLU
36	RT	4	GLY
36	RT	36	GLU
36	RT	43	GLN
36	RT	67	SER
36	RT	124	ASP
37	RU	9	VAL
37	RU	28	ARG
37	RU	73	GLY
37	RU	90	VAL
39	RW	63	ASP
39	RW	66	GLU
40	RX	67	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	RY	4	LYS
41	RY	41	GLY
41	RY	56	PRO
41	RY	57	GLN
41	RY	99	CYS
42	RZ	59	LEU
42	RZ	108	PRO
42	RZ	111	VAL
42	RZ	112	ARG
42	RZ	116	VAL
42	RZ	177	PRO
44	R1	45	ASN
44	R1	55	GLY
44	R1	84	GLY
45	R2	24	LEU
45	R2	44	LEU
45	R2	70	GLN
47	R4	9	LEU
47	R4	24	THR
48	R5	43	HIS
48	R5	55	ARG
50	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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
8	XH	128	GLY
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
24	YD	3	VAL
24	YD	32	SER
24	YD	58	HIS
24	YD	122	ASP
24	YD	169	GLU
25	YE	8	LYS
25	YE	20	ALA
25	YE	37	ARG
25	YE	53	PRO
25	YE	61	ARG
25	YE	71	GLY
25	YE	78	LEU
25	YE	88	GLY
25	YE	186	GLY
25	YE	190	GLY
25	YE	204	ALA
26	YF	18	ARG
26	YF	107	LYS
26	YF	108	LYS
26	YF	111	ALA
26	YF	132	VAL
26	YF	134	GLY
26	YF	168	ARG
27	YG	36	LYS
27	YG	81	LYS
27	YG	82	LEU
27	YG	96	ARG
27	YG	110	ALA
27	YG	126	ASP
27	YG	136	ARG
28	YH	3	ARG
28	YH	8	PRO
28	YH	55	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	YH	59	ARG
28	YH	84	SER
28	YH	151	ILE
28	YH	156	ALA
28	YH	168	PRO
29	YI	11	ASN
29	YI	114	LEU
29	YI	117	GLU
29	YI	133	HIS
30	YN	23	LEU
30	YN	76	SER
31	YO	51	ALA
31	YO	56	ASP
31	YO	68	GLU
32	YP	6	LEU
32	YP	11	GLY
32	YP	12	ALA
32	YP	16	ARG
33	YQ	13	GLN
33	YQ	24	GLY
33	YQ	28	ALA
34	YR	11	ASN
35	YS	61	ASN
35	YS	87	PHE
35	YS	96	GLY
35	YS	100	ALA
35	YS	109	GLY
35	YS	111	GLU
36	YT	4	GLY
36	YT	36	GLU
36	YT	43	GLN
36	YT	67	SER
36	YT	124	ASP
37	YU	9	VAL
37	YU	28	ARG
37	YU	73	GLY
37	YU	90	VAL
39	YW	63	ASP
39	YW	66	GLU
40	YX	67	GLY
41	YY	4	LYS
41	YY	41	GLY

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	YY	53	PRO
41	YY	56	PRO
41	YY	57	GLN
41	YY	91	GLU
41	YY	99	CYS
42	YZ	6	LYS
42	YZ	51	ALA
42	YZ	113	ALA
43	Y0	18	ALA
44	Y1	45	ASN
44	Y1	55	GLY
44	Y1	84	GLY
45	Y2	24	LEU
45	Y2	44	LEU
45	Y2	70	GLN
47	Y4	9	LEU
47	Y4	24	THR
48	Y5	43	HIS
48	Y5	55	ARG
50	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
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	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	QN	9	LYS
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
19	QS	64	GLU
20	QT	82	SER
20	QT	98	PRO
24	RD	111	LEU
24	RD	242	ARG
24	RD	262	ARG
25	RE	62	PRO
25	RE	69	LYS
25	RE	71	GLY
25	RE	82	ARG
25	RE	117	MET
25	RE	130	GLY
25	RE	132	HIS
27	RG	5	VAL
27	RG	128	ARG
27	RG	174	GLU
28	RH	50	VAL
28	RH	81	GLU
28	RH	152	ARG
29	RI	11	ASN
29	RI	84	GLY
29	RI	102	SER
29	RI	118	LYS
30	RN	45	ASN
30	RN	130	HIS
30	RN	135	PRO
32	RP	7	ARG
32	RP	14	LYS
32	RP	43	GLY
32	RP	89	ALA
32	RP	102	ARG
32	RP	115	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	RQ	88	GLY
33	RQ	91	GLU
34	RR	42	LYS
34	RR	45	ARG
34	RR	71	GLN
34	RR	107	ASP
35	RS	19	LYS
35	RS	61	ASN
35	RS	74	ALA
35	RS	75	GLU
36	RT	78	LEU
36	RT	112	ARG
37	RU	46	ALA
37	RU	58	ARG
37	RU	93	LYS
38	RV	54	GLY
39	RW	68	ARG
39	RW	93	ALA
40	RX	48	LYS
40	RX	87	GLN
41	RY	21	LYS
41	RY	39	VAL
41	RY	42	VAL
41	RY	69	ALA
41	RY	91	GLU
41	RY	102	CYS
42	RZ	13	GLU
42	RZ	51	ALA
42	RZ	81	ARG
42	RZ	92	SER
44	R1	74	VAL
44	R1	91	LYS
44	R1	93	GLU
47	R4	8	LYS
47	R4	27	THR
47	R4	46	GLN
49	R6	18	ARG
50	R7	32	LYS
51	R8	46	ARG
51	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
9	XI	12	GLU
9	XI	13	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
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
24	YD	111	LEU
24	YD	239	ARG
24	YD	242	ARG
24	YD	262	ARG
25	YE	62	PRO
25	YE	69	LYS
25	YE	82	ARG
25	YE	117	MET
25	YE	130	GLY
25	YE	132	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	YG	5	VAL
27	YG	115	ARG
27	YG	128	ARG
27	YG	174	GLU
28	YH	50	VAL
28	YH	81	GLU
28	YH	152	ARG
28	YH	159	GLU
29	YI	72	LEU
29	YI	84	GLY
29	YI	118	LYS
29	YI	122	GLU
30	YN	45	ASN
30	YN	130	HIS
30	YN	135	PRO
32	YP	7	ARG
32	YP	14	LYS
32	YP	43	GLY
32	YP	89	ALA
32	YP	102	ARG
32	YP	115	LEU
33	YQ	57	HIS
33	YQ	88	GLY
33	YQ	91	GLU
34	YR	42	LYS
34	YR	45	ARG
34	YR	71	GLN
34	YR	107	ASP
35	YS	19	LYS
35	YS	74	ALA
35	YS	75	GLU
36	YT	78	LEU
36	YT	112	ARG
37	YU	46	ALA
37	YU	58	ARG
37	YU	93	LYS
38	YV	54	GLY
39	YW	68	ARG
39	YW	93	ALA
40	YX	48	LYS
40	YX	87	GLN
41	YY	21	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	YY	39	VAL
41	YY	42	VAL
41	YY	69	ALA
41	YY	102	CYS
42	YZ	13	GLU
42	YZ	177	PRO
42	YZ	179	ASP
42	YZ	181	GLU
44	Y1	74	VAL
44	Y1	91	LYS
44	Y1	93	GLU
47	Y4	27	THR
47	Y4	46	GLN
49	Y6	18	ARG
50	Y7	32	LYS
51	Y8	46	ARG
51	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
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
11	QK	105	VAL
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
14	QN	48	ALA
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
19	QS	28	LYS
19	QS	44	MET
20	QT	40	ALA
20	QT	51	GLU
24	RD	12	SER
24	RD	73	VAL
24	RD	238	GLY
25	RE	66	HIS
25	RE	126	PRO
26	RF	43	LYS
26	RF	130	ALA
26	RF	145	GLU
27	RG	12	TYR
27	RG	117	PHE
27	RG	146	TYR
28	RH	13	LYS
28	RH	109	PHE
28	RH	159	GLU
29	RI	113	ARG
29	RI	114	LEU
30	RN	96	GLU
30	RN	132	ALA
31	RO	17	ARG
31	RO	97	ARG
32	RP	29	LYS
32	RP	47	ASP
32	RP	139	LYS
36	RT	37	GLY
36	RT	95	ARG
37	RU	74	LEU
39	RW	14	PRO
39	RW	48	ALA
42	RZ	53	ILE
42	RZ	62	PRO
42	RZ	119	GLU
43	R0	3	HIS
48	R5	14	ALA

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	R5	37	LYS
48	R5	45	VAL
48	R5	48	GLU
49	R6	8	LYS
49	R6	9	LEU
49	R6	10	LEU
49	R6	49	HIS
51	R8	25	MET
51	R8	53	PRO
51	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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	XS	64	GLU
20	XT	40	ALA
20	XT	51	GLU
24	YD	12	SER
24	YD	73	VAL
25	YE	66	HIS
25	YE	126	PRO
26	YF	43	LYS
26	YF	130	ALA
26	YF	136	THR
26	YF	145	GLU
27	YG	12	TYR
27	YG	117	PHE
27	YG	146	TYR
28	YH	13	LYS
28	YH	109	PHE
29	YI	113	ARG
30	YN	96	GLU
30	YN	127	ASP
30	YN	132	ALA
31	YO	17	ARG
31	YO	97	ARG
32	YP	29	LYS
32	YP	47	ASP
32	YP	139	LYS
36	YT	37	GLY
36	YT	95	ARG
37	YU	74	LEU
39	YW	14	PRO
39	YW	48	ALA
42	YZ	7	ALA
42	YZ	59	LEU
42	YZ	61	LEU
47	Y4	8	LYS
48	Y5	14	ALA
48	Y5	37	LYS
48	Y5	45	VAL
48	Y5	48	GLU
49	Y6	8	LYS
49	Y6	9	LEU
49	Y6	10	LEU
49	Y6	49	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	Y8	25	MET
51	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
7	QG	109	ASN
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	88	TYR
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
24	RD	33	LEU
25	RE	79	ARG
26	RF	47	GLY
26	RF	118	ALA
26	RF	136	THR
27	RG	181	ARG
28	RH	11	VAL
28	RH	27	LYS
28	RH	47	GLU
28	RH	77	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	RH	170	ARG
30	RN	29	LYS
30	RN	104	LYS
30	RN	127	ASP
30	RN	128	HIS
31	RO	25	LEU
32	RP	50	ARG
32	RP	97	PRO
32	RP	108	LYS
34	RR	85	PRO
37	RU	91	ASP
39	RW	32	ALA
41	RY	7	VAL
42	RZ	61	LEU
42	RZ	66	SER
42	RZ	166	SER
42	RZ	179	ASP
46	R3	13	ILE
47	R4	30	GLU
47	R4	69	LYS
47	R4	70	GLY
48	R5	42	PRO
49	R6	35	GLU
51	R8	64	TYR
2	XB	23	ARG
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
24	YD	33	LEU
25	YE	79	ARG
26	YF	47	GLY
26	YF	118	ALA
28	YH	11	VAL
28	YH	27	LYS
28	YH	47	GLU
28	YH	77	LYS
28	YH	170	ARG
29	YI	15	VAL
29	YI	18	VAL
30	YN	29	LYS
30	YN	104	LYS
30	YN	128	HIS
31	YO	25	LEU
32	YP	50	ARG
32	YP	97	PRO
32	YP	108	LYS
34	YR	85	PRO
36	YT	38	ASN
37	YU	91	ASP
39	YW	32	ALA
40	YX	19	ALA
41	YY	7	VAL
42	YZ	53	ILE
42	YZ	153	SER
46	Y3	13	ILE
47	Y4	30	GLU
47	Y4	33	VAL
47	Y4	70	GLY
48	Y5	42	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
49	Y6	35	GLU
50	Y7	44	PRO
51	Y8	57	ARG
51	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL
14	QN	20	ALA
16	QP	57	ARG
24	RD	178	PRO
27	RG	109	VAL
28	RH	7	LEU
28	RH	26	VAL
29	RI	13	GLY
29	RI	18	VAL
36	RT	38	ASN
38	RV	36	PRO
39	RW	11	ARG
39	RW	33	ARG
40	RX	19	ALA
42	RZ	165	VAL
47	R4	33	VAL
48	R5	57	VAL
50	R7	44	PRO
2	XB	25	ASN
3	XC	51	GLY
4	XD	72	GLU
5	XE	115	VAL
6	XF	32	ASN
10	XJ	85	LEU
13	XM	48	LEU
13	XM	109	THR
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
24	YD	178	PRO
24	YD	241	PRO
27	YG	109	VAL
27	YG	181	ARG
28	YH	7	LEU
28	YH	26	VAL
29	YI	13	GLY
29	YI	80	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
38	YV	36	PRO
39	YW	11	ARG
39	YW	33	ARG
47	Y4	69	LYS
48	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
25	RE	86	PRO
25	RE	184	VAL
33	RQ	86	GLY
34	RR	32	GLY
39	RW	35	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
25	YE	86	PRO
25	YE	184	VAL
33	YQ	86	GLY
34	YR	32	GLY
39	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
24	RD	241	PRO
29	RI	80	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
41	RY	27	VAL
41	RY	32	PRO
42	RZ	130	PRO
42	RZ	146	ILE
48	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
27	YG	52	ILE
29	YI	71	ILE
41	YY	27	VAL
41	YY	32	PRO
42	YZ	143	GLY
48	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
24	RD	34	VAL
27	RG	52	ILE
29	RI	71	ILE
31	RO	114	ILE
41	RY	51	VAL
48	R5	34	PRO
12	XL	48	PRO
13	XM	84	ILE
24	YD	34	VAL
31	YO	114	ILE
41	YY	51	VAL
43	Y0	48	GLY
48	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
25	RE	52	LEU
25	RE	55	ASN
31	RO	27	GLY
46	R3	40	THR
5	XE	129	ILE
9	XI	21	PRO

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Mol	Chain	Res	Type
13	XM	78	ILE
25	YE	52	LEU
25	YE	55	ASN
31	YO	27	GLY
46	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
16	QP	41	PRO
20	QT	97	ALA
29	RI	109	ILE
42	RZ	39	VAL
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
45	R2	18	PRO
45	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	26
2	XB	205/220 (93%)	181 (88%)	24 (12%)	5	26
3	QC	159/188 (85%)	143 (90%)	16 (10%)	7	30
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%)	114 (90%)	12 (10%)	8	33

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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	36
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	9	36
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%)	88 (85%)	16 (15%)	2	17
12	XL	104/109 (95%)	89 (86%)	15 (14%)	3	20
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
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%)	69 (91%)	7 (9%)	9	34
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24	53
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24	53
24	RD	214/218 (98%)	177 (83%)	37 (17%)	2	13
24	YD	214/218 (98%)	178 (83%)	36 (17%)	2	15

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	RE	165/166 (99%)	127 (77%)	38 (23%)	1	6
25	YE	165/166 (99%)	127 (77%)	38 (23%)	1	6
26	RF	161/166 (97%)	140 (87%)	21 (13%)	4	23
26	YF	161/166 (97%)	140 (87%)	21 (13%)	4	23
27	RG	155/156 (99%)	130 (84%)	25 (16%)	2	16
27	YG	155/156 (99%)	131 (84%)	24 (16%)	2	17
28	RH	142/148 (96%)	114 (80%)	28 (20%)	1	9
28	YH	142/148 (96%)	114 (80%)	28 (20%)	1	9
29	RI	122/124 (98%)	100 (82%)	22 (18%)	1	12
29	YI	122/124 (98%)	101 (83%)	21 (17%)	2	14
30	RN	117/119 (98%)	98 (84%)	19 (16%)	2	16
30	YN	117/119 (98%)	98 (84%)	19 (16%)	2	16
31	RO	100/100 (100%)	90 (90%)	10 (10%)	7	30
31	YO	100/100 (100%)	90 (90%)	10 (10%)	7	30
32	RP	116/116 (100%)	89 (77%)	27 (23%)	1	5
32	YP	116/116 (100%)	89 (77%)	27 (23%)	1	5
33	RQ	111/111 (100%)	93 (84%)	18 (16%)	2	16
33	YQ	111/111 (100%)	93 (84%)	18 (16%)	2	16
34	RR	101/101 (100%)	84 (83%)	17 (17%)	2	15
34	YR	101/101 (100%)	84 (83%)	17 (17%)	2	15
35	RS	87/88 (99%)	74 (85%)	13 (15%)	3	18
35	YS	87/88 (99%)	74 (85%)	13 (15%)	3	18
36	RT	120/127 (94%)	97 (81%)	23 (19%)	1	10
36	YT	120/127 (94%)	97 (81%)	23 (19%)	1	10
37	RU	93/94 (99%)	80 (86%)	13 (14%)	3	21
37	YU	93/94 (99%)	80 (86%)	13 (14%)	3	21
38	RV	82/82 (100%)	71 (87%)	11 (13%)	4	22
38	YV	82/82 (100%)	71 (87%)	11 (13%)	4	22
39	RW	92/92 (100%)	77 (84%)	15 (16%)	2	16
39	YW	92/92 (100%)	77 (84%)	15 (16%)	2	16
40	RX	74/78 (95%)	63 (85%)	11 (15%)	3	18

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
40	YX	74/78 (95%)	63 (85%)	11 (15%)	3	18
41	RY	85/91 (93%)	70 (82%)	15 (18%)	2	13
41	YY	85/91 (93%)	70 (82%)	15 (18%)	2	13
42	RZ	162/179 (90%)	141 (87%)	21 (13%)	4	23
42	YZ	162/179 (90%)	139 (86%)	23 (14%)	3	20
43	R0	65/67 (97%)	57 (88%)	8 (12%)	4	24
43	Y0	65/67 (97%)	60 (92%)	5 (8%)	13	42
44	R1	82/83 (99%)	67 (82%)	15 (18%)	1	11
44	Y1	82/83 (99%)	67 (82%)	15 (18%)	1	11
45	R2	64/67 (96%)	57 (89%)	7 (11%)	6	28
45	Y2	64/67 (96%)	57 (89%)	7 (11%)	6	28
46	R3	51/52 (98%)	40 (78%)	11 (22%)	1	7
46	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	7
47	R4	63/63 (100%)	44 (70%)	19 (30%)	0	2
47	Y4	63/63 (100%)	44 (70%)	19 (30%)	0	2
48	R5	51/52 (98%)	39 (76%)	12 (24%)	1	5
48	Y5	50/52 (96%)	38 (76%)	12 (24%)	0	5
49	R6	48/52 (92%)	38 (79%)	10 (21%)	1	7
49	Y6	48/52 (92%)	38 (79%)	10 (21%)	1	7
50	R7	42/42 (100%)	39 (93%)	3 (7%)	14	44
50	Y7	42/42 (100%)	39 (93%)	3 (7%)	14	44
51	R8	54/55 (98%)	39 (72%)	15 (28%)	0	3
51	Y8	54/55 (98%)	39 (72%)	15 (28%)	0	3
52	R9	34/34 (100%)	32 (94%)	2 (6%)	19	49
52	Y9	34/34 (100%)	32 (94%)	2 (6%)	19	49
All	All	9701/10066 (96%)	8295 (86%)	1406 (14%)	3	19

All (1406) 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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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	38	LEU
7	QG	78	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	46	LYS
12	QL	47	LYS
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
24	RD	10	THR
24	RD	17	THR
24	RD	26	LYS
24	RD	33	LEU
24	RD	43	ARG
24	RD	44	ASN
24	RD	61	LEU
24	RD	65	ILE
24	RD	67	PHE
24	RD	71	ASP
24	RD	73	VAL
24	RD	94	LEU
24	RD	98	VAL
24	RD	105	ILE
24	RD	106	ILE
24	RD	131	LEU
24	RD	134	ARG
24	RD	135	PHE
24	RD	155	LEU
24	RD	157	ARG
24	RD	166	GLN
24	RD	173	VAL
24	RD	183	ARG
24	RD	192	THR
24	RD	198	ASN
24	RD	200	ASP
24	RD	215	LEU
24	RD	217	ARG
24	RD	218	ARG
24	RD	226	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	RD	230	ASP
24	RD	237	GLU
24	RD	257	LEU
24	RD	259	THR
24	RD	261	LYS
24	RD	262	ARG
24	RD	271	ILE
25	RE	2	LYS
25	RE	4	ILE
25	RE	13	ARG
25	RE	16	ARG
25	RE	17	ASP
25	RE	25	VAL
25	RE	26	ILE
25	RE	27	LEU
25	RE	33	VAL
25	RE	36	ARG
25	RE	37	ARG
25	RE	38	THR
25	RE	41	LYS
25	RE	45	THR
25	RE	54	GLN
25	RE	61	ARG
25	RE	62	PRO
25	RE	66	HIS
25	RE	73	GLU
25	RE	75	VAL
25	RE	77	ILE
25	RE	78	LEU
25	RE	79	ARG
25	RE	80	GLU
25	RE	101	ARG
25	RE	113	PHE
25	RE	117	MET
25	RE	119	ARG
25	RE	143	ASN
25	RE	146	THR
25	RE	154	LYS
25	RE	167	VAL
25	RE	179	GLU
25	RE	184	VAL
25	RE	196	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	RE	200	GLU
25	RE	202	LYS
25	RE	203	LYS
26	RF	7	TYR
26	RF	9	ILE
26	RF	25	PRO
26	RF	32	LEU
26	RF	45	ARG
26	RF	46	ARG
26	RF	65	TRP
26	RF	66	PRO
26	RF	67	GLN
26	RF	70	THR
26	RF	82	ILE
26	RF	106	ARG
26	RF	108	LYS
26	RF	117	ARG
26	RF	124	LEU
26	RF	127	GLU
26	RF	145	GLU
26	RF	164	ARG
26	RF	181	LEU
26	RF	183	VAL
26	RF	206	ILE
27	RG	4	ASP
27	RG	22	ARG
27	RG	26	GLN
27	RG	33	ARG
27	RG	34	LEU
27	RG	35	GLU
27	RG	43	LEU
27	RG	45	GLU
27	RG	63	ILE
27	RG	67	LYS
27	RG	71	THR
27	RG	88	ILE
27	RG	94	LEU
27	RG	96	ARG
27	RG	97	ASP
27	RG	103	LEU
27	RG	115	ARG
27	RG	118	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
27	RG	133	LEU
27	RG	147	ASP
27	RG	155	MET
27	RG	156	ASP
27	RG	159	VAL
27	RG	167	GLU
27	RG	174	GLU
28	RH	3	ARG
28	RH	4	ILE
28	RH	9	ILE
28	RH	10	PRO
28	RH	11	VAL
28	RH	16	SER
28	RH	27	LYS
28	RH	32	GLU
28	RH	37	VAL
28	RH	41	MET
28	RH	43	VAL
28	RH	59	ARG
28	RH	64	LEU
28	RH	77	LYS
28	RH	81	GLU
28	RH	85	LYS
28	RH	88	LEU
28	RH	89	ILE
28	RH	105	LEU
28	RH	132	ARG
28	RH	139	GLN
28	RH	143	GLN
28	RH	152	ARG
28	RH	153	LYS
28	RH	154	PRO
28	RH	155	SER
28	RH	158	HIS
28	RH	169	VAL
29	RI	2	LYS
29	RI	7	GLU
29	RI	10	GLU
29	RI	27	ARG
29	RI	33	ARG
29	RI	38	LEU
29	RI	40	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
29	RI	56	LYS
29	RI	57	ARG
29	RI	67	ARG
29	RI	70	GLU
29	RI	86	THR
29	RI	88	ILE
29	RI	92	VAL
29	RI	93	THR
29	RI	101	LEU
29	RI	113	ARG
29	RI	130	TYR
29	RI	135	GLU
29	RI	139	GLN
29	RI	142	VAL
29	RI	145	VAL
30	RN	2	LYS
30	RN	7	LYS
30	RN	43	THR
30	RN	48	MET
30	RN	60	ILE
30	RN	61	ARG
30	RN	65	LYS
30	RN	73	THR
30	RN	78	TYR
30	RN	90	MET
30	RN	93	THR
30	RN	94	HIS
30	RN	101	HIS
30	RN	109	LYS
30	RN	112	LEU
30	RN	120	LEU
30	RN	127	ASP
30	RN	131	GLN
30	RN	136	GLU
31	RO	8	LEU
31	RO	9	GLU
31	RO	17	ARG
31	RO	19	ILE
31	RO	23	ARG
31	RO	31	LYS
31	RO	39	ILE
31	RO	49	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
31	RO	53	LYS
31	RO	65	THR
32	RP	5	ASP
32	RP	9	ASN
32	RP	10	PRO
32	RP	16	ARG
32	RP	21	ARG
32	RP	27	HIS
32	RP	29	LYS
32	RP	30	THR
32	RP	32	THR
32	RP	36	LYS
32	RP	38	GLN
32	RP	41	ARG
32	RP	50	ARG
32	RP	55	ARG
32	RP	61	ARG
32	RP	62	LEU
32	RP	64	LYS
32	RP	65	ARG
32	RP	75	ILE
32	RP	81	GLN
32	RP	88	LEU
32	RP	91	PHE
32	RP	99	LEU
32	RP	100	LEU
32	RP	108	LYS
32	RP	144	GLU
32	RP	146	VAL
33	RQ	2	LEU
33	RQ	25	ASP
33	RQ	26	TYR
33	RQ	27	VAL
33	RQ	45	GLN
33	RQ	46	GLN
33	RQ	54	MET
33	RQ	55	VAL
33	RQ	58	PHE
33	RQ	60	ARG
33	RQ	79	LEU
33	RQ	83	MET
33	RQ	89	ASN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
33	RQ	90	VAL
33	RQ	91	GLU
33	RQ	130	LYS
33	RQ	135	ASP
33	RQ	139	GLU
34	RR	14	SER
34	RR	31	HIS
34	RR	37	THR
34	RR	44	LEU
34	RR	51	LEU
34	RR	57	ARG
34	RR	66	VAL
34	RR	67	LEU
34	RR	71	GLN
34	RR	75	LEU
34	RR	76	VAL
34	RR	81	ASP
34	RR	95	THR
34	RR	104	ARG
34	RR	105	ARG
34	RR	107	ASP
34	RR	113	LEU
35	RS	4	LEU
35	RS	12	PHE
35	RS	17	ARG
35	RS	18	ILE
35	RS	20	ARG
35	RS	44	LYS
35	RS	56	LEU
35	RS	57	LYS
35	RS	89	ARG
35	RS	101	LEU
35	RS	103	GLU
35	RS	106	ARG
35	RS	111	GLU
36	RT	2	ASN
36	RT	14	TYR
36	RT	22	PHE
36	RT	23	ARG
36	RT	26	ASP
36	RT	27	THR
36	RT	42	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
36	RT	51	ARG
36	RT	58	ASN
36	RT	65	LYS
36	RT	73	GLU
36	RT	78	LEU
36	RT	86	ILE
36	RT	87	ASP
36	RT	99	LEU
36	RT	100	TYR
36	RT	104	ASN
36	RT	107	ASP
36	RT	111	ARG
36	RT	112	ARG
36	RT	115	ARG
36	RT	128	GLU
36	RT	134	GLU
37	RU	5	LYS
37	RU	9	VAL
37	RU	31	SER
37	RU	52	ARG
37	RU	74	LEU
37	RU	76	TYR
37	RU	79	PHE
37	RU	88	ILE
37	RU	92	ARG
37	RU	98	LEU
37	RU	108	GLU
37	RU	114	LYS
37	RU	117	GLN
38	RV	13	ARG
38	RV	14	VAL
38	RV	18	LEU
38	RV	35	LEU
38	RV	38	LEU
38	RV	39	LEU
38	RV	40	LEU
38	RV	66	ARG
38	RV	75	PHE
38	RV	91	TYR
38	RV	99	ILE
39	RW	11	ARG
39	RW	14	PRO

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
39	RW	16	LYS
39	RW	18	ARG
39	RW	19	LEU
39	RW	20	VAL
39	RW	63	ASP
39	RW	67	ASP
39	RW	69	LEU
39	RW	70	TYR
39	RW	87	PRO
39	RW	88	ARG
39	RW	92	ARG
39	RW	107	LEU
39	RW	109	GLU
40	RX	3	THR
40	RX	6	ASP
40	RX	15	GLU
40	RX	27	THR
40	RX	30	VAL
40	RX	55	ASN
40	RX	57	LEU
40	RX	65	ARG
40	RX	70	LEU
40	RX	80	ILE
40	RX	88	LYS
41	RY	7	VAL
41	RY	11	ASP
41	RY	27	VAL
41	RY	45	VAL
41	RY	57	GLN
41	RY	64	GLU
41	RY	75	ILE
41	RY	77	PRO
41	RY	79	CYS
41	RY	87	LYS
41	RY	88	LYS
41	RY	89	PHE
41	RY	90	LEU
41	RY	95	LYS
41	RY	97	ARG
42	RZ	2	GLU
42	RZ	8	TYR
42	RZ	20	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	RZ	52	SER
42	RZ	76	LEU
42	RZ	81	ARG
42	RZ	87	ASP
42	RZ	93	ASP
42	RZ	94	GLU
42	RZ	112	ARG
42	RZ	117	LEU
42	RZ	121	HIS
42	RZ	128	VAL
42	RZ	145	GLU
42	RZ	150	LEU
42	RZ	151	HIS
42	RZ	168	GLU
42	RZ	174	VAL
42	RZ	179	ASP
42	RZ	182	LYS
42	RZ	183	LEU
43	R0	4	LYS
43	R0	7	LEU
43	R0	10	THR
43	R0	11	ARG
43	R0	36	ILE
43	R0	64	ASP
43	R0	66	VAL
43	R0	74	ARG
44	R1	2	SER
44	R1	11	ARG
44	R1	21	ARG
44	R1	30	VAL
44	R1	40	ARG
44	R1	41	ARG
44	R1	56	GLN
44	R1	76	ARG
44	R1	80	LEU
44	R1	81	LYS
44	R1	83	GLU
44	R1	87	PRO
44	R1	91	LYS
44	R1	92	LYS
44	R1	97	LEU
45	R2	7	ARG

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
45	R2	9	GLN
45	R2	16	LEU
45	R2	24	LEU
45	R2	53	LEU
45	R2	62	THR
45	R2	64	LEU
46	R3	4	LEU
46	R3	8	LEU
46	R3	9	VAL
46	R3	10	LYS
46	R3	17	LYS
46	R3	30	ARG
46	R3	31	LEU
46	R3	32	GLN
46	R3	37	LEU
46	R3	40	THR
46	R3	44	ARG
47	R4	6	HIS
47	R4	15	ILE
47	R4	18	CYS
47	R4	21	VAL
47	R4	23	GLU
47	R4	39	CYS
47	R4	42	PHE
47	R4	48	ARG
47	R4	49	PHE
47	R4	50	VAL
47	R4	51	ASP
47	R4	53	GLU
47	R4	57	GLU
47	R4	61	ARG
47	R4	62	ARG
47	R4	63	TYR
47	R4	67	TYR
47	R4	68	ARG
47	R4	71	ARG
48	R5	3	LYS
48	R5	4	HIS
48	R5	6	VAL
48	R5	11	THR
48	R5	19	ARG
48	R5	25	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
48	R5	36	CYS
48	R5	37	LYS
48	R5	43	HIS
48	R5	52	TYR
48	R5	56	LYS
48	R5	58	LEU
49	R6	6	ARG
49	R6	8	LYS
49	R6	18	ARG
49	R6	19	ARG
49	R6	28	ARG
49	R6	34	LEU
49	R6	37	ARG
49	R6	42	TRP
49	R6	44	ARG
49	R6	46	HIS
50	R7	1	MET
50	R7	9	ARG
50	R7	43	THR
51	R8	15	LYS
51	R8	16	ILE
51	R8	30	ARG
51	R8	35	GLN
51	R8	39	LYS
51	R8	43	GLN
51	R8	44	LYS
51	R8	47	LYS
51	R8	48	PHE
51	R8	49	VAL
51	R8	52	LYS
51	R8	53	PRO
51	R8	62	LEU
51	R8	63	PRO
51	R8	65	GLU
52	R9	1	MET
52	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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
12	XL	27	LEU
12	XL	41	ARG
12	XL	46	LYS
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
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

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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
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	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
24	YD	10	THR
24	YD	17	THR
24	YD	26	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
24	YD	33	LEU
24	YD	43	ARG
24	YD	44	ASN
24	YD	61	LEU
24	YD	65	ILE
24	YD	67	PHE
24	YD	71	ASP
24	YD	73	VAL
24	YD	94	LEU
24	YD	98	VAL
24	YD	105	ILE
24	YD	106	ILE
24	YD	131	LEU
24	YD	134	ARG
24	YD	135	PHE
24	YD	155	LEU
24	YD	157	ARG
24	YD	166	GLN
24	YD	173	VAL
24	YD	183	ARG
24	YD	192	THR
24	YD	198	ASN
24	YD	200	ASP
24	YD	215	LEU
24	YD	217	ARG
24	YD	218	ARG
24	YD	226	MET
24	YD	230	ASP
24	YD	237	GLU
24	YD	257	LEU
24	YD	259	THR
24	YD	261	LYS
24	YD	262	ARG
25	YE	2	LYS
25	YE	4	ILE
25	YE	13	ARG
25	YE	16	ARG
25	YE	17	ASP
25	YE	25	VAL
25	YE	26	ILE
25	YE	27	LEU
25	YE	33	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
25	YE	36	ARG
25	YE	37	ARG
25	YE	38	THR
25	YE	41	LYS
25	YE	45	THR
25	YE	54	GLN
25	YE	61	ARG
25	YE	62	PRO
25	YE	66	HIS
25	YE	73	GLU
25	YE	75	VAL
25	YE	77	ILE
25	YE	78	LEU
25	YE	79	ARG
25	YE	80	GLU
25	YE	101	ARG
25	YE	113	PHE
25	YE	117	MET
25	YE	119	ARG
25	YE	143	ASN
25	YE	146	THR
25	YE	154	LYS
25	YE	167	VAL
25	YE	179	GLU
25	YE	184	VAL
25	YE	196	VAL
25	YE	200	GLU
25	YE	202	LYS
25	YE	203	LYS
26	YF	7	TYR
26	YF	9	ILE
26	YF	25	PRO
26	YF	32	LEU
26	YF	45	ARG
26	YF	46	ARG
26	YF	65	TRP
26	YF	66	PRO
26	YF	67	GLN
26	YF	70	THR
26	YF	82	ILE
26	YF	106	ARG
26	YF	108	LYS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
26	YF	117	ARG
26	YF	124	LEU
26	YF	127	GLU
26	YF	145	GLU
26	YF	164	ARG
26	YF	181	LEU
26	YF	183	VAL
26	YF	206	ILE
27	YG	4	ASP
27	YG	22	ARG
27	YG	26	GLN
27	YG	33	ARG
27	YG	34	LEU
27	YG	35	GLU
27	YG	43	LEU
27	YG	45	GLU
27	YG	63	ILE
27	YG	67	LYS
27	YG	71	THR
27	YG	88	ILE
27	YG	94	LEU
27	YG	96	ARG
27	YG	97	ASP
27	YG	103	LEU
27	YG	115	ARG
27	YG	118	ARG
27	YG	133	LEU
27	YG	147	ASP
27	YG	155	MET
27	YG	156	ASP
27	YG	159	VAL
27	YG	174	GLU
28	YH	3	ARG
28	YH	4	ILE
28	YH	9	ILE
28	YH	10	PRO
28	YH	11	VAL
28	YH	16	SER
28	YH	27	LYS
28	YH	32	GLU
28	YH	37	VAL
28	YH	41	MET

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
28	YH	43	VAL
28	YH	59	ARG
28	YH	64	LEU
28	YH	77	LYS
28	YH	81	GLU
28	YH	85	LYS
28	YH	88	LEU
28	YH	89	ILE
28	YH	105	LEU
28	YH	132	ARG
28	YH	139	GLN
28	YH	143	GLN
28	YH	152	ARG
28	YH	153	LYS
28	YH	154	PRO
28	YH	155	SER
28	YH	158	HIS
28	YH	169	VAL
29	YI	1	MET
29	YI	2	LYS
29	YI	5	LEU
29	YI	27	ARG
29	YI	33	ARG
29	YI	35	LEU
29	YI	38	LEU
29	YI	56	LYS
29	YI	67	ARG
29	YI	70	GLU
29	YI	81	VAL
29	YI	96	ASP
29	YI	101	LEU
29	YI	113	ARG
29	YI	130	TYR
29	YI	131	LYS
29	YI	134	PRO
29	YI	135	GLU
29	YI	139	GLN
29	YI	140	LEU
29	YI	142	VAL
30	YN	2	LYS
30	YN	7	LYS
30	YN	43	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
30	YN	48	MET
30	YN	60	ILE
30	YN	61	ARG
30	YN	65	LYS
30	YN	73	THR
30	YN	78	TYR
30	YN	90	MET
30	YN	93	THR
30	YN	94	HIS
30	YN	101	HIS
30	YN	109	LYS
30	YN	112	LEU
30	YN	120	LEU
30	YN	127	ASP
30	YN	131	GLN
30	YN	136	GLU
31	YO	8	LEU
31	YO	9	GLU
31	YO	17	ARG
31	YO	19	ILE
31	YO	23	ARG
31	YO	31	LYS
31	YO	39	ILE
31	YO	49	ARG
31	YO	53	LYS
31	YO	65	THR
32	YP	5	ASP
32	YP	9	ASN
32	YP	10	PRO
32	YP	16	ARG
32	YP	21	ARG
32	YP	27	HIS
32	YP	29	LYS
32	YP	30	THR
32	YP	32	THR
32	YP	36	LYS
32	YP	38	GLN
32	YP	41	ARG
32	YP	50	ARG
32	YP	55	ARG
32	YP	61	ARG
32	YP	62	LEU

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
32	YP	64	LYS
32	YP	65	ARG
32	YP	75	ILE
32	YP	81	GLN
32	YP	88	LEU
32	YP	91	PHE
32	YP	99	LEU
32	YP	100	LEU
32	YP	108	LYS
32	YP	144	GLU
32	YP	146	VAL
33	YQ	2	LEU
33	YQ	25	ASP
33	YQ	26	TYR
33	YQ	27	VAL
33	YQ	45	GLN
33	YQ	46	GLN
33	YQ	54	MET
33	YQ	55	VAL
33	YQ	59	ARG
33	YQ	60	ARG
33	YQ	79	LEU
33	YQ	83	MET
33	YQ	89	ASN
33	YQ	90	VAL
33	YQ	91	GLU
33	YQ	130	LYS
33	YQ	135	ASP
33	YQ	139	GLU
34	YR	14	SER
34	YR	31	HIS
34	YR	37	THR
34	YR	44	LEU
34	YR	51	LEU
34	YR	57	ARG
34	YR	66	VAL
34	YR	67	LEU
34	YR	71	GLN
34	YR	75	LEU
34	YR	76	VAL
34	YR	81	ASP
34	YR	95	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
34	YR	104	ARG
34	YR	105	ARG
34	YR	107	ASP
34	YR	113	LEU
35	YS	4	LEU
35	YS	12	PHE
35	YS	17	ARG
35	YS	18	ILE
35	YS	20	ARG
35	YS	44	LYS
35	YS	56	LEU
35	YS	57	LYS
35	YS	89	ARG
35	YS	101	LEU
35	YS	103	GLU
35	YS	106	ARG
35	YS	111	GLU
36	YT	2	ASN
36	YT	14	TYR
36	YT	22	PHE
36	YT	23	ARG
36	YT	26	ASP
36	YT	27	THR
36	YT	42	ILE
36	YT	51	ARG
36	YT	58	ASN
36	YT	65	LYS
36	YT	73	GLU
36	YT	78	LEU
36	YT	86	ILE
36	YT	87	ASP
36	YT	99	LEU
36	YT	100	TYR
36	YT	104	ASN
36	YT	107	ASP
36	YT	111	ARG
36	YT	112	ARG
36	YT	115	ARG
36	YT	128	GLU
36	YT	134	GLU
37	YU	5	LYS
37	YU	9	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
37	YU	31	SER
37	YU	52	ARG
37	YU	74	LEU
37	YU	76	TYR
37	YU	79	PHE
37	YU	88	ILE
37	YU	92	ARG
37	YU	98	LEU
37	YU	108	GLU
37	YU	114	LYS
37	YU	117	GLN
38	YV	13	ARG
38	YV	14	VAL
38	YV	18	LEU
38	YV	35	LEU
38	YV	38	LEU
38	YV	39	LEU
38	YV	40	LEU
38	YV	66	ARG
38	YV	75	PHE
38	YV	91	TYR
38	YV	99	ILE
39	YW	11	ARG
39	YW	14	PRO
39	YW	16	LYS
39	YW	18	ARG
39	YW	19	LEU
39	YW	20	VAL
39	YW	63	ASP
39	YW	67	ASP
39	YW	69	LEU
39	YW	70	TYR
39	YW	87	PRO
39	YW	88	ARG
39	YW	92	ARG
39	YW	107	LEU
39	YW	109	GLU
40	YX	3	THR
40	YX	6	ASP
40	YX	15	GLU
40	YX	27	THR
40	YX	30	VAL

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
40	YX	55	ASN
40	YX	57	LEU
40	YX	65	ARG
40	YX	70	LEU
40	YX	80	ILE
40	YX	88	LYS
41	YY	7	VAL
41	YY	11	ASP
41	YY	27	VAL
41	YY	45	VAL
41	YY	57	GLN
41	YY	64	GLU
41	YY	75	ILE
41	YY	77	PRO
41	YY	79	CYS
41	YY	87	LYS
41	YY	88	LYS
41	YY	89	PHE
41	YY	90	LEU
41	YY	95	LYS
41	YY	97	ARG
42	YZ	2	GLU
42	YZ	8	TYR
42	YZ	20	ARG
42	YZ	39	VAL
42	YZ	41	LEU
42	YZ	52	SER
42	YZ	66	SER
42	YZ	71	VAL
42	YZ	76	LEU
42	YZ	81	ARG
42	YZ	87	ASP
42	YZ	92	SER
42	YZ	94	GLU
42	YZ	111	VAL
42	YZ	123	ASP
42	YZ	139	VAL
42	YZ	140	ASP
42	YZ	141	VAL
42	YZ	144	LEU
42	YZ	150	LEU
42	YZ	151	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
42	YZ	156	LYS
42	YZ	182	LYS
43	Y0	12	ASN
43	Y0	35	ASN
43	Y0	36	ILE
43	Y0	55	ARG
43	Y0	74	ARG
44	Y1	2	SER
44	Y1	11	ARG
44	Y1	21	ARG
44	Y1	30	VAL
44	Y1	40	ARG
44	Y1	41	ARG
44	Y1	56	GLN
44	Y1	76	ARG
44	Y1	80	LEU
44	Y1	81	LYS
44	Y1	83	GLU
44	Y1	87	PRO
44	Y1	91	LYS
44	Y1	92	LYS
44	Y1	97	LEU
45	Y2	7	ARG
45	Y2	9	GLN
45	Y2	16	LEU
45	Y2	24	LEU
45	Y2	53	LEU
45	Y2	62	THR
45	Y2	64	LEU
46	Y3	4	LEU
46	Y3	8	LEU
46	Y3	9	VAL
46	Y3	10	LYS
46	Y3	17	LYS
46	Y3	30	ARG
46	Y3	31	LEU
46	Y3	32	GLN
46	Y3	37	LEU
46	Y3	40	THR
46	Y3	44	ARG
47	Y4	6	HIS
47	Y4	15	ILE

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
47	Y4	18	CYS
47	Y4	21	VAL
47	Y4	23	GLU
47	Y4	39	CYS
47	Y4	42	PHE
47	Y4	48	ARG
47	Y4	49	PHE
47	Y4	50	VAL
47	Y4	51	ASP
47	Y4	53	GLU
47	Y4	57	GLU
47	Y4	61	ARG
47	Y4	62	ARG
47	Y4	63	TYR
47	Y4	67	TYR
47	Y4	68	ARG
47	Y4	71	ARG
48	Y5	3	LYS
48	Y5	4	HIS
48	Y5	6	VAL
48	Y5	11	THR
48	Y5	19	ARG
48	Y5	25	LEU
48	Y5	36	CYS
48	Y5	37	LYS
48	Y5	43	HIS
48	Y5	52	TYR
48	Y5	56	LYS
48	Y5	58	LEU
49	Y6	6	ARG
49	Y6	8	LYS
49	Y6	18	ARG
49	Y6	19	ARG
49	Y6	28	ARG
49	Y6	34	LEU
49	Y6	37	ARG
49	Y6	42	TRP
49	Y6	44	ARG
49	Y6	46	HIS
50	Y7	1	MET
50	Y7	9	ARG
50	Y7	43	THR

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
51	Y8	15	LYS
51	Y8	16	ILE
51	Y8	30	ARG
51	Y8	35	GLN
51	Y8	39	LYS
51	Y8	43	GLN
51	Y8	44	LYS
51	Y8	47	LYS
51	Y8	48	PHE
51	Y8	49	VAL
51	Y8	52	LYS
51	Y8	53	PRO
51	Y8	62	LEU
51	Y8	63	PRO
51	Y8	65	GLU
52	Y9	1	MET
52	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (112) such sidechains are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	78	ASN
11	QK	117	ASN
12	QL	9	GLN
13	QM	40	ASN
13	QM	101	GLN
15	QO	53	HIS

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
19	QS	47	HIS
19	QS	65	ASN
20	QT	26	ASN
24	RD	44	ASN
24	RD	143	HIS
24	RD	166	GLN
24	RD	198	ASN
25	RE	48	GLN
28	RH	143	GLN
28	RH	147	ASN
30	RN	56	ASN
30	RN	131	GLN
31	RO	5	GLN
31	RO	82	ASN
32	RP	81	GLN
32	RP	84	ASN
34	RR	3	HIS
36	RT	55	ASN
36	RT	58	ASN
37	RU	94	ASN
38	RV	11	GLN
39	RW	61	ASN
40	RX	31	HIS
40	RX	55	ASN
40	RX	87	GLN
41	RY	57	GLN
43	R0	29	GLN
44	R1	56	GLN
45	R2	9	GLN
45	R2	47	ASN
46	R3	19	GLN
46	R3	32	GLN
49	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
5	XE	73	ASN
5	XE	78	HIS
6	XF	64	GLN

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
6	XF	100	ASN
7	XG	28	ASN
7	XG	37	ASN
7	XG	86	GLN
7	XG	148	ASN
10	XJ	78	ASN
11	XK	99	GLN
11	XK	117	ASN
12	XL	9	GLN
12	XL	49	ASN
13	XM	62	ASN
13	XM	77	ASN
13	XM	101	GLN
19	XS	47	HIS
19	XS	65	ASN
20	XT	26	ASN
24	YD	44	ASN
24	YD	143	HIS
24	YD	166	GLN
24	YD	198	ASN
25	YE	48	GLN
25	YE	135	HIS
28	YH	143	GLN
28	YH	147	ASN
30	YN	56	ASN
30	YN	101	HIS
30	YN	131	GLN
31	YO	5	GLN
31	YO	82	ASN
32	YP	81	GLN
32	YP	84	ASN
34	YR	3	HIS
36	YT	55	ASN
36	YT	58	ASN
37	YU	94	ASN
38	YV	11	GLN
39	YW	61	ASN
40	YX	55	ASN
40	YX	87	GLN
41	YY	57	GLN
42	YZ	32	HIS
43	Y0	29	GLN

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Mol	Chain	Res	Type
44	Y1	56	GLN
45	Y2	9	GLN
45	Y2	47	ASN
46	Y3	19	GLN
46	Y3	32	GLN
47	Y4	47	GLN
49	Y6	32	ASN

### 5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	281 (18%)	47 (3%)
1	XA	1498/1522 (98%)	299 (19%)	52 (3%)
22	RA	2879/2916 (98%)	658 (22%)	65 (2%)
22	YA	2880/2916 (98%)	639 (22%)	65 (2%)
23	RB	119/122 (97%)	20 (16%)	2 (1%)
23	YB	119/122 (97%)	25 (21%)	1 (0%)
53	QV	76/77 (98%)	30 (39%)	1 (1%)
53	XV	76/77 (98%)	30 (39%)	1 (1%)
54	QX	7/25 (28%)	5 (71%)	2 (28%)
54	XX	7/25 (28%)	4 (57%)	1 (14%)
55	QY	13/18 (72%)	6 (46%)	2 (15%)
55	XY	13/18 (72%)	5 (38%)	1 (7%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9188/9366 (98%)	2002 (21%)	240 (2%)

All (2002) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	64	G
1	QA	65	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	66	G
1	QA	76	G
1	QA	79	G
1	QA	80	G
1	QA	90	C
1	QA	91	C
1	QA	92	G
1	QA	95	G
1	QA	101	A
1	QA	108	G
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	122	G
1	QA	129(A)	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	163	C
1	QA	171	A
1	QA	174	C
1	QA	182	U
1	QA	190	G
1	QA	191(A)	G
1	QA	195	A
1	QA	197	A
1	QA	209	U
1	QA	216	G
1	QA	231	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	266	G
1	QA	267	C
1	QA	281	G
1	QA	289	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	332	G
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	388	G
1	QA	389	A
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	419	C
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	429	U
1	QA	430	A
1	QA	435	C
1	QA	440	A
1	QA	442	C
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	517	G
1	QA	518	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	521	G
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	547	A
1	QA	559	A
1	QA	561	U
1	QA	564	C
1	QA	566	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	579	G
1	QA	596	C
1	QA	614	A
1	QA	615	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
1	QA	633	G
1	QA	653	A
1	QA	665	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	729	A
1	QA	731	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	777	A
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	813	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	817	C
1	QA	819	A
1	QA	821	G
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	871	U
1	QA	872	A
1	QA	885	G
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
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	974	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1040	U
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
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	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1163	C
1	QA	1171	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1187	G
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A
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	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	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1305	G
1	QA	1317	C
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1370	G
1	QA	1397	C
1	QA	1401	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1487	G
1	QA	1492	A
1	QA	1499	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	RA	9	U
22	RA	15	G
22	RA	27	G
22	RA	34	C
22	RA	35	G
22	RA	46	C
22	RA	49	A
22	RA	51	G
22	RA	55	G
22	RA	63	U
22	RA	72	U
22	RA	74	A
22	RA	75	G
22	RA	96	G
22	RA	97	C
22	RA	99	U
22	RA	101	G
22	RA	102	G
22	RA	103	A
22	RA	118	A
22	RA	120	U
22	RA	124	G
22	RA	131	G
22	RA	138	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	161	U
22	RA	177	G
22	RA	181	A
22	RA	196	A
22	RA	199	A
22	RA	205	G
22	RA	206	U
22	RA	215	G
22	RA	216	A
22	RA	221	A
22	RA	222	A
22	RA	223	A
22	RA	224	G
22	RA	228	A
22	RA	229	A
22	RA	230	U
22	RA	232	G
22	RA	233	A
22	RA	242	G
22	RA	243	U
22	RA	248	G
22	RA	249	C
22	RA	250	G
22	RA	252	G
22	RA	265	A
22	RA	266	G
22	RA	270(L)	U
22	RA	270(M)	U
22	RA	270(N)	G
22	RA	270(P)	C
22	RA	270(T)	G
22	RA	271(C)	U
22	RA	271	G
22	RA	275	G
22	RA	276	A
22	RA	277	C
22	RA	278	A
22	RA	299	A
22	RA	306	U
22	RA	311	A
22	RA	316	C
22	RA	323	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	324	A
22	RA	327	G
22	RA	329	G
22	RA	330	A
22	RA	331	A
22	RA	332	A
22	RA	335	C
22	RA	342	G
22	RA	343	C
22	RA	346	A
22	RA	347	A
22	RA	352	G
22	RA	364	C
22	RA	371	A
22	RA	372	G
22	RA	373	U
22	RA	386	G
22	RA	393	C
22	RA	395	U
22	RA	405	U
22	RA	411	G
22	RA	412	A
22	RA	428	A
22	RA	444	C
22	RA	448	U
22	RA	449	A
22	RA	451	C
22	RA	454	A
22	RA	457	A
22	RA	470	A
22	RA	481	G
22	RA	494	G
22	RA	504	U
22	RA	505	A
22	RA	509	C
22	RA	512	G
22	RA	513	A
22	RA	518	G
22	RA	519	U
22	RA	527	C
22	RA	529	A
22	RA	532	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	533	G
22	RA	537	C
22	RA	539	G
22	RA	540	G
22	RA	546	C
22	RA	547	A
22	RA	549	G
22	RA	563	G
22	RA	571	A
22	RA	573	G
22	RA	575	A
22	RA	588	U
22	RA	599	G
22	RA	603	A
22	RA	604	G
22	RA	607	U
22	RA	614	U
22	RA	615	G
22	RA	617	G
22	RA	621	A
22	RA	627	A
22	RA	637	A
22	RA	638	G
22	RA	645	C
22	RA	646	A
22	RA	651	G
22	RA	652	C
22	RA	654	A
22	RA	654(A)	G
22	RA	654(B)	C
22	RA	657	U
22	RA	668	G
22	RA	669	G
22	RA	686	G
22	RA	702	G
22	RA	705	A
22	RA	717	G
22	RA	722	A
22	RA	728	G
22	RA	730	C
22	RA	747	U
22	RA	753	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	764	A
22	RA	765	G
22	RA	771	G
22	RA	775	G
22	RA	776	G
22	RA	782	A
22	RA	784	A
22	RA	785	G
22	RA	789	A
22	RA	790	C
22	RA	792	G
22	RA	793	A
22	RA	800	A
22	RA	805	G
22	RA	806	C
22	RA	812	C
22	RA	818	G
22	RA	819	A
22	RA	822	U
22	RA	827	U
22	RA	828	U
22	RA	831	G
22	RA	833	U
22	RA	846	C
22	RA	847	U
22	RA	856	C
22	RA	857	C
22	RA	859	G
22	RA	860	U
22	RA	866	A
22	RA	869	G
22	RA	872	A
22	RA	880	G
22	RA	881	G
22	RA	882	G
22	RA	884	C
22	RA	885	C
22	RA	886	C
22	RA	888	C
22	RA	889	C
22	RA	893	C
22	RA	896	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	897	C
22	RA	899	A
22	RA	900	A
22	RA	901	A
22	RA	904	C
22	RA	906	G
22	RA	907	U
22	RA	910	A
22	RA	911	A
22	RA	917	A
22	RA	932	G
22	RA	938	G
22	RA	941	A
22	RA	944	G
22	RA	945	A
22	RA	946	G
22	RA	959	A
22	RA	961	C
22	RA	973	A
22	RA	974	G
22	RA	974(A)	C
22	RA	975	G
22	RA	980	A
22	RA	983	A
22	RA	989	G
22	RA	990	A
22	RA	991	C
22	RA	996	A
22	RA	1003	G
22	RA	1005	C
22	RA	1011	G
22	RA	1012	U
22	RA	1013	C
22	RA	1015	G
22	RA	1023	U
22	RA	1025	G
22	RA	1026	U
22	RA	1027	A
22	RA	1033	U
22	RA	1044	G
22	RA	1045	A
22	RA	1046	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1050	A
22	RA	1054	A
22	RA	1055	G
22	RA	1057	A
22	RA	1059	G
22	RA	1060	U
22	RA	1061	U
22	RA	1066	U
22	RA	1067	A
22	RA	1068	G
22	RA	1070	A
22	RA	1071	G
22	RA	1076	C
22	RA	1077	A
22	RA	1078	U
22	RA	1079	C
22	RA	1082	U
22	RA	1083	U
22	RA	1084	A
22	RA	1085	A
22	RA	1086	A
22	RA	1087	G
22	RA	1088	A
22	RA	1091	G
22	RA	1093	G
22	RA	1095	A
22	RA	1096	A
22	RA	1099	G
22	RA	1104	C
22	RA	1110	G
22	RA	1111	A
22	RA	1112	G
22	RA	1122	G
22	RA	1126	A
22	RA	1130	U
22	RA	1131	G
22	RA	1135	C
22	RA	1136	G
22	RA	1142	U
22	RA	1142(A)	A
22	RA	1151	G
22	RA	1155	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1170	G
22	RA	1173	G
22	RA	1174	A
22	RA	1175	U
22	RA	1176	G
22	RA	1178	C
22	RA	1179	C
22	RA	1180	C
22	RA	1183	G
22	RA	1190	G
22	RA	1191	G
22	RA	1195	G
22	RA	1204	A
22	RA	1205	U
22	RA	1206	G
22	RA	1210	A
22	RA	1211	U
22	RA	1212	G
22	RA	1220	A
22	RA	1221	C
22	RA	1236	G
22	RA	1238	G
22	RA	1247	A
22	RA	1248	G
22	RA	1253	A
22	RA	1256	G
22	RA	1265	A
22	RA	1271	G
22	RA	1272	A
22	RA	1282	U
22	RA	1300	U
22	RA	1301	A
22	RA	1302	A
22	RA	1303	G
22	RA	1306	C
22	RA	1309	G
22	RA	1312	U
22	RA	1313	U
22	RA	1314	C
22	RA	1319	G
22	RA	1321	A
22	RA	1329	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1332	G
22	RA	1349	A
22	RA	1352	U
22	RA	1365	A
22	RA	1368	G
22	RA	1370	C
22	RA	1372	U
22	RA	1379	A
22	RA	1380	G
22	RA	1384	A
22	RA	1385	G
22	RA	1386	C
22	RA	1396	U
22	RA	1407	C
22	RA	1408	C
22	RA	1411	C
22	RA	1412	A
22	RA	1413	G
22	RA	1416	G
22	RA	1419	A
22	RA	1420	U
22	RA	1421	G
22	RA	1428	C
22	RA	1444(A)	A
22	RA	1445	C
22	RA	1449	A
22	RA	1449(A)	G
22	RA	1455	G
22	RA	1458	C
22	RA	1459	G
22	RA	1460	A
22	RA	1461	G
22	RA	1467	C
22	RA	1471	A
22	RA	1474	C
22	RA	1482	U
22	RA	1483	G
22	RA	1485	G
22	RA	1493	C
22	RA	1497	U
22	RA	1502	C
22	RA	1504	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1506	C
22	RA	1507	A
22	RA	1508	A
22	RA	1510	A
22	RA	1514	U
22	RA	1522	G
22	RA	1525	G
22	RA	1534	G
22	RA	1535	U
22	RA	1536	A
22	RA	1537	C
22	RA	1538	G
22	RA	1543	A
22	RA	1544	C
22	RA	1545	A
22	RA	1547	C
22	RA	1558	A
22	RA	1559	G
22	RA	1566	A
22	RA	1569	A
22	RA	1578	U
22	RA	1579	A
22	RA	1581	G
22	RA	1585	C
22	RA	1586	A
22	RA	1591	G
22	RA	1598	C
22	RA	1608	A
22	RA	1609	A
22	RA	1610	A
22	RA	1616	A
22	RA	1617	C
22	RA	1618	A
22	RA	1622	G
22	RA	1630(A)	C
22	RA	1647	G
22	RA	1648	C
22	RA	1654	A
22	RA	1667	G
22	RA	1668	A
22	RA	1674	G
22	RA	1694	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1695	G
22	RA	1698	A
22	RA	1699	G
22	RA	1701	A
22	RA	1725	G
22	RA	1729	A
22	RA	1730	U
22	RA	1731	G
22	RA	1733	G
22	RA	1742	C
22	RA	1743	G
22	RA	1754	C
22	RA	1756	G
22	RA	1763	G
22	RA	1764	G
22	RA	1769	G
22	RA	1773	A
22	RA	1780	A
22	RA	1787	A
22	RA	1791	A
22	RA	1799	G
22	RA	1800	C
22	RA	1801	G
22	RA	1811	G
22	RA	1816	G
22	RA	1820	U
22	RA	1829	A
22	RA	1835	G
22	RA	1847	A
22	RA	1848	A
22	RA	1858	G
22	RA	1869	G
22	RA	1870	C
22	RA	1872	A
22	RA	1878	G
22	RA	1882	C
22	RA	1888	G
22	RA	1889	A
22	RA	1896	G
22	RA	1903	G
22	RA	1906	G
22	RA	1926	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	1927	A
22	RA	1930	G
22	RA	1931	U
22	RA	1934	C
22	RA	1936	A
22	RA	1937	A
22	RA	1938	A
22	RA	1939	U
22	RA	1955	U
22	RA	1963	U
22	RA	1964	G
22	RA	1965	C
22	RA	1967	C
22	RA	1969	A
22	RA	1970	A
22	RA	1971	A
22	RA	1972	A
22	RA	1981	A
22	RA	1982	C
22	RA	1991	U
22	RA	1992	G
22	RA	1993	U
22	RA	1996	C
22	RA	2020	A
22	RA	2023	G
22	RA	2031	A
22	RA	2032	G
22	RA	2033	A
22	RA	2039	C
22	RA	2043	C
22	RA	2049	G
22	RA	2054	A
22	RA	2055	C
22	RA	2056	G
22	RA	2059	A
22	RA	2060	A
22	RA	2061	G
22	RA	2062	A
22	RA	2069	G
22	RA	2089	U
22	RA	2092	U
22	RA	2093	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2096	U
22	RA	2099	U
22	RA	2108	C
22	RA	2111	C
22	RA	2113	U
22	RA	2114	A
22	RA	2115	G
22	RA	2116	G
22	RA	2117	A
22	RA	2120	G
22	RA	2126	A
22	RA	2127	G
22	RA	2128	C
22	RA	2131	G
22	RA	2132	U
22	RA	2133	G
22	RA	2136	C
22	RA	2146	C
22	RA	2148	G
22	RA	2157	G
22	RA	2158	A
22	RA	2161	C
22	RA	2166	G
22	RA	2168	G
22	RA	2169	A
22	RA	2173	A
22	RA	2176	A
22	RA	2190	G
22	RA	2192	G
22	RA	2198	A
22	RA	2199	A
22	RA	2210	G
22	RA	2211	G
22	RA	2212	A
22	RA	2213	U
22	RA	2215	G
22	RA	2225	A
22	RA	2238	G
22	RA	2239	G
22	RA	2243	U
22	RA	2268	A
22	RA	2275	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2283	C
22	RA	2287	A
22	RA	2288	A
22	RA	2303	G
22	RA	2305	A
22	RA	2307	G
22	RA	2308	G
22	RA	2311	A
22	RA	2314	C
22	RA	2319	G
22	RA	2320	A
22	RA	2322	A
22	RA	2325	G
22	RA	2326	C
22	RA	2334	G
22	RA	2336	A
22	RA	2346	A
22	RA	2347	C
22	RA	2350	C
22	RA	2382	G
22	RA	2383	G
22	RA	2385	C
22	RA	2392	A
22	RA	2394	C
22	RA	2399	G
22	RA	2400	G
22	RA	2402	C
22	RA	2403	C
22	RA	2406	U
22	RA	2423	U
22	RA	2424	C
22	RA	2425	A
22	RA	2429	G
22	RA	2430	A
22	RA	2435	A
22	RA	2439	A
22	RA	2440	C
22	RA	2441	C
22	RA	2445	G
22	RA	2448	A
22	RA	2450	A
22	RA	2469	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2470	G
22	RA	2474	C
22	RA	2475	C
22	RA	2476	A
22	RA	2482	G
22	RA	2483	C
22	RA	2484	G
22	RA	2494	G
22	RA	2502	G
22	RA	2505	G
22	RA	2506	U
22	RA	2507	C
22	RA	2519	U
22	RA	2529	G
22	RA	2535	G
22	RA	2542	A
22	RA	2543	G
22	RA	2554	U
22	RA	2566	A
22	RA	2567	G
22	RA	2569	G
22	RA	2573	C
22	RA	2574	G
22	RA	2581	G
22	RA	2582	G
22	RA	2586	C
22	RA	2601	C
22	RA	2602	A
22	RA	2609	U
22	RA	2611	U
22	RA	2612	C
22	RA	2614	A
22	RA	2623	G
22	RA	2629	A
22	RA	2646	C
22	RA	2655	G
22	RA	2665	A
22	RA	2673	G
22	RA	2681	C
22	RA	2682	U
22	RA	2689	U
22	RA	2690	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2691	C
22	RA	2702	U
22	RA	2703	C
22	RA	2707	G
22	RA	2712	U
22	RA	2712(A)	A
22	RA	2713	A
22	RA	2714	G
22	RA	2724	C
22	RA	2726	U
22	RA	2733	A
22	RA	2734	A
22	RA	2748	A
22	RA	2750	A
22	RA	2751	G
22	RA	2752	C
22	RA	2758	A
22	RA	2761	G
22	RA	2764	A
22	RA	2765	A
22	RA	2777	G
22	RA	2778	A
22	RA	2779	U
22	RA	2780	G
22	RA	2790	A
22	RA	2791	C
22	RA	2797	U
22	RA	2807	G
22	RA	2810	A
22	RA	2818	G
22	RA	2820	A
22	RA	2821	A
22	RA	2823	A
22	RA	2833	G
22	RA	2834	G
22	RA	2835	A
22	RA	2846	G
22	RA	2849	U
22	RA	2867	G
22	RA	2868	A
22	RA	2872	G
22	RA	2879	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2880	C
22	RA	2891	G
22	RA	2892	A
22	RA	2894	G
23	RB	8	U
23	RB	9	G
23	RB	13	A
23	RB	15	A
23	RB	16	G
23	RB	19	G
23	RB	21	G
23	RB	22	U
23	RB	25	A
23	RB	27	C
23	RB	32	C
23	RB	33	G
23	RB	42	C
23	RB	45	A
23	RB	52	A
23	RB	56	G
23	RB	67	G
23	RB	73	A
23	RB	81	G
23	RB	109	G
1	XA	6	G
1	XA	7	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	76	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	122	G
1	XA	129(A)	G
1	XA	130	A
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	172	A
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	222	U
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	289	G
1	XA	305	G
1	XA	315	A
1	XA	316	G
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	348	G
1	XA	349	A
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	371	G
1	XA	372	C
1	XA	373	A
1	XA	384	G
1	XA	388	G
1	XA	390	C
1	XA	397	A
1	XA	398	C
1	XA	406	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	465	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	563	A
1	XA	564	C
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	595	G
1	XA	596	C
1	XA	630	G
1	XA	631	G
1	XA	633	G
1	XA	652	U
1	XA	653	A
1	XA	665	A
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	723	U
1	XA	731	G
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	774	G
1	XA	777	A
1	XA	784	C
1	XA	786	G
1	XA	792	A
1	XA	793	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	794	A
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	836	G
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	885	G
1	XA	902	G
1	XA	914	A
1	XA	916	G
1	XA	922	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	936	C
1	XA	940	C
1	XA	942	G
1	XA	960	U
1	XA	961	U
1	XA	966	G
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	982	U
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1009	G
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	1040	U
1	XA	1054	C
1	XA	1055	A
1	XA	1066	C
1	XA	1094	G
1	XA	1095	U
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	1151	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	1187	G
1	XA	1190	G
1	XA	1193	G
1	XA	1196	U
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1212	U
1	XA	1214	C
1	XA	1225	A
1	XA	1227	A
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	1270	C
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
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	1331	G
1	XA	1334	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1347	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	1348	U
1	XA	1349	A
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1397	C
1	XA	1398	A
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	YA	9	U
22	YA	11	G
22	YA	15	G
22	YA	27	G
22	YA	34	C
22	YA	46	C
22	YA	49	A
22	YA	55	G
22	YA	63	U
22	YA	72	U
22	YA	74	A
22	YA	75	G
22	YA	84	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	97	C
22	YA	99	U
22	YA	101	G
22	YA	102	G
22	YA	103	A
22	YA	118	A
22	YA	120	U
22	YA	124	G
22	YA	131	G
22	YA	161	U
22	YA	162	U
22	YA	181	A
22	YA	188	G
22	YA	196	A
22	YA	199	A
22	YA	206	U
22	YA	214	G
22	YA	215	G
22	YA	216	A
22	YA	221	A
22	YA	222	A
22	YA	223	A
22	YA	228	A
22	YA	229	A
22	YA	230	U
22	YA	232	G
22	YA	233	A
22	YA	242	G
22	YA	243	U
22	YA	245	G
22	YA	248	G
22	YA	252	G
22	YA	265	A
22	YA	266	G
22	YA	269	U
22	YA	270(L)	U
22	YA	270(M)	U
22	YA	270(P)	C
22	YA	271(B)	G
22	YA	271(C)	U
22	YA	271	G
22	YA	274	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	275	G
22	YA	276	A
22	YA	278	A
22	YA	279	C
22	YA	287	C
22	YA	299	A
22	YA	305	U
22	YA	311	A
22	YA	315	G
22	YA	323	G
22	YA	324	A
22	YA	329	G
22	YA	330	A
22	YA	332	A
22	YA	342	G
22	YA	352	G
22	YA	363	G
22	YA	364	C
22	YA	371	A
22	YA	372	G
22	YA	373	U
22	YA	386	G
22	YA	387	U
22	YA	396	G
22	YA	405	U
22	YA	406	G
22	YA	411	G
22	YA	412	A
22	YA	421	U
22	YA	428	A
22	YA	442	G
22	YA	443	A
22	YA	444	C
22	YA	448	U
22	YA	457	A
22	YA	470	A
22	YA	479	A
22	YA	481	G
22	YA	483	A
22	YA	504	U
22	YA	505	A
22	YA	509	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	512	G
22	YA	518	G
22	YA	527	C
22	YA	529	A
22	YA	531	C
22	YA	532	A
22	YA	533	G
22	YA	537	C
22	YA	539	G
22	YA	540	G
22	YA	546	C
22	YA	547	A
22	YA	549	G
22	YA	563	G
22	YA	573	G
22	YA	575	A
22	YA	586	A
22	YA	588	U
22	YA	603	A
22	YA	607	U
22	YA	613	U
22	YA	614	U
22	YA	615	G
22	YA	617	G
22	YA	620	G
22	YA	622	G
22	YA	624	C
22	YA	626	U
22	YA	627	A
22	YA	629	G
22	YA	631	A
22	YA	634	C
22	YA	637	A
22	YA	638	G
22	YA	645	C
22	YA	646	A
22	YA	648	G
22	YA	651	G
22	YA	654	A
22	YA	654(A)	G
22	YA	654(B)	C
22	YA	654(V)	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	657	U
22	YA	664	C
22	YA	668	G
22	YA	686	G
22	YA	702	G
22	YA	704	G
22	YA	708	C
22	YA	709	U
22	YA	717	G
22	YA	722	A
22	YA	730	C
22	YA	747	U
22	YA	753	C
22	YA	765	G
22	YA	775	G
22	YA	776	G
22	YA	782	A
22	YA	784	A
22	YA	785	G
22	YA	790	C
22	YA	791	C
22	YA	792	G
22	YA	805	G
22	YA	812	C
22	YA	817	C
22	YA	818	G
22	YA	819	A
22	YA	827	U
22	YA	828	U
22	YA	831	G
22	YA	833	U
22	YA	847	U
22	YA	856	C
22	YA	857	C
22	YA	860	U
22	YA	866	A
22	YA	872	A
22	YA	880	G
22	YA	881	G
22	YA	882	G
22	YA	884	C
22	YA	885	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	886	C
22	YA	888	C
22	YA	889	C
22	YA	890	A
22	YA	896	A
22	YA	899	A
22	YA	900	A
22	YA	901	A
22	YA	907	U
22	YA	910	A
22	YA	914	C
22	YA	915	C
22	YA	917	A
22	YA	918	A
22	YA	932	G
22	YA	938	G
22	YA	941	A
22	YA	945	A
22	YA	946	G
22	YA	959	A
22	YA	961	C
22	YA	965	C
22	YA	973	A
22	YA	974	G
22	YA	974(A)	C
22	YA	975	G
22	YA	980	A
22	YA	983	A
22	YA	990	A
22	YA	991	C
22	YA	996	A
22	YA	1003	G
22	YA	1005	C
22	YA	1008	C
22	YA	1011	G
22	YA	1012	U
22	YA	1013	C
22	YA	1020	A
22	YA	1022	G
22	YA	1023	U
22	YA	1024	G
22	YA	1025	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1026	U
22	YA	1027	A
22	YA	1033	U
22	YA	1045	A
22	YA	1046	A
22	YA	1050	A
22	YA	1054	A
22	YA	1055	G
22	YA	1057	A
22	YA	1059	G
22	YA	1060	U
22	YA	1061	U
22	YA	1066	U
22	YA	1067	A
22	YA	1068	G
22	YA	1071	G
22	YA	1076	C
22	YA	1077	A
22	YA	1078	U
22	YA	1079	C
22	YA	1082	U
22	YA	1083	U
22	YA	1084	A
22	YA	1085	A
22	YA	1086	A
22	YA	1088	A
22	YA	1090	U
22	YA	1093	G
22	YA	1095	A
22	YA	1096	A
22	YA	1097	U
22	YA	1099	G
22	YA	1103	A
22	YA	1104	C
22	YA	1105	U
22	YA	1110	G
22	YA	1111	A
22	YA	1122	G
22	YA	1128	A
22	YA	1131	G
22	YA	1135	C
22	YA	1136	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1142	U
22	YA	1142(A)	A
22	YA	1151	G
22	YA	1170	G
22	YA	1173	G
22	YA	1174	A
22	YA	1175	U
22	YA	1176	G
22	YA	1178	C
22	YA	1179	C
22	YA	1180	C
22	YA	1195	G
22	YA	1198	U
22	YA	1204	A
22	YA	1205	U
22	YA	1206	G
22	YA	1211	U
22	YA	1220	A
22	YA	1221	C
22	YA	1236	G
22	YA	1238	G
22	YA	1240	U
22	YA	1244	G
22	YA	1248	G
22	YA	1250	G
22	YA	1253	A
22	YA	1256	G
22	YA	1265	A
22	YA	1271	G
22	YA	1272	A
22	YA	1273	U
22	YA	1276	A
22	YA	1282	U
22	YA	1300	U
22	YA	1301	A
22	YA	1304	C
22	YA	1313	U
22	YA	1321	A
22	YA	1329	U
22	YA	1349	A
22	YA	1352	U
22	YA	1365	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1368	G
22	YA	1370	C
22	YA	1379	A
22	YA	1384	A
22	YA	1385	G
22	YA	1386	C
22	YA	1389	G
22	YA	1391	U
22	YA	1398	C
22	YA	1402	C
22	YA	1407	C
22	YA	1411	C
22	YA	1412	A
22	YA	1416	G
22	YA	1419	A
22	YA	1420	U
22	YA	1421	G
22	YA	1428	C
22	YA	1444(A)	A
22	YA	1445	C
22	YA	1449	A
22	YA	1449(A)	G
22	YA	1455	G
22	YA	1458	C
22	YA	1460	A
22	YA	1461	G
22	YA	1467	C
22	YA	1471	A
22	YA	1482	U
22	YA	1483	G
22	YA	1485	G
22	YA	1490	A
22	YA	1493	C
22	YA	1494	A
22	YA	1497	U
22	YA	1505	C
22	YA	1506	C
22	YA	1507	A
22	YA	1508	A
22	YA	1510	A
22	YA	1511	A
22	YA	1513	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1514	U
22	YA	1522	G
22	YA	1534	G
22	YA	1535	U
22	YA	1536	A
22	YA	1537	C
22	YA	1540	G
22	YA	1543	A
22	YA	1544	C
22	YA	1545	A
22	YA	1558	A
22	YA	1559	G
22	YA	1569	A
22	YA	1578	U
22	YA	1579	A
22	YA	1585	C
22	YA	1586	A
22	YA	1592	C
22	YA	1597	A
22	YA	1598	C
22	YA	1608	A
22	YA	1609	A
22	YA	1616	A
22	YA	1617	C
22	YA	1618	A
22	YA	1640	C
22	YA	1646	C
22	YA	1648	C
22	YA	1654	A
22	YA	1667	G
22	YA	1669	A
22	YA	1674	G
22	YA	1695	G
22	YA	1699	G
22	YA	1700	A
22	YA	1725	G
22	YA	1728	G
22	YA	1729	A
22	YA	1730	U
22	YA	1731	G
22	YA	1733	G
22	YA	1734	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1742	C
22	YA	1743	G
22	YA	1753	G
22	YA	1754	C
22	YA	1756	G
22	YA	1762	A
22	YA	1763	G
22	YA	1764	G
22	YA	1772	G
22	YA	1773	A
22	YA	1780	A
22	YA	1781	C
22	YA	1784	A
22	YA	1787	A
22	YA	1791	A
22	YA	1799	G
22	YA	1800	C
22	YA	1801	G
22	YA	1815	A
22	YA	1816	G
22	YA	1819	A
22	YA	1820	U
22	YA	1829	A
22	YA	1835	G
22	YA	1836	C
22	YA	1839	G
22	YA	1847	A
22	YA	1848	A
22	YA	1850	G
22	YA	1858	G
22	YA	1869	G
22	YA	1872	A
22	YA	1878	G
22	YA	1882	C
22	YA	1884	A
22	YA	1889	A
22	YA	1896	G
22	YA	1903	G
22	YA	1906	G
22	YA	1913	A
22	YA	1923	U
22	YA	1924	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	1930	G
22	YA	1931	U
22	YA	1936	A
22	YA	1939	U
22	YA	1944	U
22	YA	1955	U
22	YA	1956	U
22	YA	1960	A
22	YA	1963	U
22	YA	1964	G
22	YA	1966	A
22	YA	1967	C
22	YA	1968	G
22	YA	1969	A
22	YA	1970	A
22	YA	1971	A
22	YA	1972	A
22	YA	1982	C
22	YA	1991	U
22	YA	1993	U
22	YA	2020	A
22	YA	2021	C
22	YA	2023	G
22	YA	2031	A
22	YA	2033	A
22	YA	2039	C
22	YA	2043	C
22	YA	2055	C
22	YA	2056	G
22	YA	2059	A
22	YA	2060	A
22	YA	2061	G
22	YA	2062	A
22	YA	2069	G
22	YA	2097	C
22	YA	2100	G
22	YA	2111	C
22	YA	2113	U
22	YA	2114	A
22	YA	2115	G
22	YA	2116	G
22	YA	2117	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	2119	A
22	YA	2120	G
22	YA	2126	A
22	YA	2127	G
22	YA	2128	C
22	YA	2131	G
22	YA	2132	U
22	YA	2133	G
22	YA	2136	C
22	YA	2146	C
22	YA	2148	G
22	YA	2157	G
22	YA	2158	A
22	YA	2166	G
22	YA	2168	G
22	YA	2173	A
22	YA	2176	A
22	YA	2190	G
22	YA	2192	G
22	YA	2198	A
22	YA	2199	A
22	YA	2205	C
22	YA	2210	G
22	YA	2211	G
22	YA	2212	A
22	YA	2213	U
22	YA	2215	G
22	YA	2225	A
22	YA	2238	G
22	YA	2246	G
22	YA	2275	C
22	YA	2280	G
22	YA	2283	C
22	YA	2287	A
22	YA	2288	A
22	YA	2304	G
22	YA	2307	G
22	YA	2308	G
22	YA	2310	A
22	YA	2311	A
22	YA	2319	G
22	YA	2320	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	2325	G
22	YA	2326	C
22	YA	2334	G
22	YA	2336	A
22	YA	2343	C
22	YA	2345	G
22	YA	2346	A
22	YA	2347	C
22	YA	2350	C
22	YA	2355	C
22	YA	2372	G
22	YA	2379	G
22	YA	2382	G
22	YA	2383	G
22	YA	2385	C
22	YA	2394	C
22	YA	2402	C
22	YA	2403	C
22	YA	2406	U
22	YA	2410	G
22	YA	2423	U
22	YA	2424	C
22	YA	2425	A
22	YA	2426	A
22	YA	2429	G
22	YA	2430	A
22	YA	2435	A
22	YA	2439	A
22	YA	2440	C
22	YA	2441	C
22	YA	2446	G
22	YA	2448	A
22	YA	2450	A
22	YA	2469	A
22	YA	2470	G
22	YA	2475	C
22	YA	2476	A
22	YA	2482	G
22	YA	2494	G
22	YA	2502	G
22	YA	2504	U
22	YA	2505	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	2506	U
22	YA	2518	A
22	YA	2519	U
22	YA	2524	G
22	YA	2525	G
22	YA	2529	G
22	YA	2542	A
22	YA	2543	G
22	YA	2554	U
22	YA	2562	U
22	YA	2567	G
22	YA	2569	G
22	YA	2573	C
22	YA	2602	A
22	YA	2609	U
22	YA	2611	U
22	YA	2612	C
22	YA	2621	A
22	YA	2623	G
22	YA	2629	A
22	YA	2632	A
22	YA	2641	G
22	YA	2646	C
22	YA	2655	G
22	YA	2656	U
22	YA	2665	A
22	YA	2673	G
22	YA	2682	U
22	YA	2689	U
22	YA	2690	C
22	YA	2691	C
22	YA	2702	U
22	YA	2703	C
22	YA	2707	G
22	YA	2712	U
22	YA	2712(A)	A
22	YA	2713	A
22	YA	2714	G
22	YA	2724	C
22	YA	2726	U
22	YA	2730	C
22	YA	2733	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	2734	A
22	YA	2744	G
22	YA	2748	A
22	YA	2752	C
22	YA	2758	A
22	YA	2761	G
22	YA	2765	A
22	YA	2766	G
22	YA	2770	G
22	YA	2777	G
22	YA	2778	A
22	YA	2779	U
22	YA	2789	C
22	YA	2790	A
22	YA	2791	C
22	YA	2797	U
22	YA	2807	G
22	YA	2808	U
22	YA	2818	G
22	YA	2820	A
22	YA	2821	A
22	YA	2823	A
22	YA	2833	G
22	YA	2834	G
22	YA	2835	A
22	YA	2846	G
22	YA	2847	U
22	YA	2849	U
22	YA	2859	G
22	YA	2867	G
22	YA	2868	A
22	YA	2872	G
22	YA	2874	C
22	YA	2880	C
22	YA	2891	G
22	YA	2892	A
22	YA	2893	G
22	YA	2894	G
23	YB	8	U
23	YB	9	G
23	YB	13	A
23	YB	15	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
23	YB	16	G
23	YB	19	G
23	YB	21	G
23	YB	25	A
23	YB	26	A
23	YB	27	C
23	YB	33	G
23	YB	40	U
23	YB	41	U
23	YB	42	C
23	YB	44	G
23	YB	45	A
23	YB	52	A
23	YB	56	G
23	YB	67	G
23	YB	73	A
23	YB	82	G
23	YB	88	C
23	YB	89	G
23	YB	105	G
23	YB	109	G
53	QV	3	C
53	QV	4	G
53	QV	5	G
53	QV	7	G
53	QV	8	U
53	QV	14	A
53	QV	16	C
53	QV	17	C
53	QV	17(A)	U
53	QV	18	G
53	QV	19	G
53	QV	21	A
53	QV	22	G
53	QV	25	C
53	QV	31	G
53	QV	37	A
53	QV	42	G
53	QV	47	U
53	QV	48	C
53	QV	49	G
53	QV	50	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	QV	51	C
53	QV	52	G
53	QV	54	U
53	QV	59	A
53	QV	63	G
53	QV	67	C
53	QV	72	A
53	QV	75	C
53	QV	76	A
54	QX	3	G
54	QX	4	C
54	QX	5	C
54	QX	7	A
54	QX	8	A
55	QY	31	G
55	QY	33	U
55	QY	36	G
55	QY	37	1MG
55	QY	39	C
55	QY	40	G
53	XV	3	C
53	XV	4	G
53	XV	5	G
53	XV	7	G
53	XV	8	U
53	XV	14	A
53	XV	16	C
53	XV	17	C
53	XV	17(A)	U
53	XV	18	G
53	XV	19	G
53	XV	21	A
53	XV	22	G
53	XV	25	C
53	XV	31	G
53	XV	37	A
53	XV	42	G
53	XV	47	U
53	XV	48	C
53	XV	49	G
53	XV	50	U
53	XV	51	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
53	XV	52	G
53	XV	54	U
53	XV	59	A
53	XV	63	G
53	XV	67	C
53	XV	72	A
53	XV	75	C
53	XV	76	A
54	XX	3	G
54	XX	4	C
54	XX	7	A
54	XX	8	A
55	XY	31	G
55	XY	33	U
55	XY	36	G
55	XY	39	C
55	XY	40	G

All (240) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	5	U
1	QA	31	G
1	QA	64	G
1	QA	115	G
1	QA	119	A
1	QA	181	G
1	QA	190	G
1	QA	243	A
1	QA	244	U
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	428	G
1	QA	429	U
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	509	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	703	G
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	992	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1285	A
1	QA	1297	C
1	QA	1336	C
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	RA	74	A
22	RA	99	U
22	RA	102	G
22	RA	205	G
22	RA	221	A
22	RA	222	A
22	RA	227	A
22	RA	229	A
22	RA	241	A
22	RA	242	G
22	RA	271(B)	G
22	RA	271(C)	U
22	RA	277	C
22	RA	345	A
22	RA	372	G
22	RA	404	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	503	A
22	RA	512	G
22	RA	587	C
22	RA	637	A
22	RA	704	G
22	RA	752	A
22	RA	774	A
22	RA	846	C
22	RA	856	C
22	RA	859	G
22	RA	974(A)	C
22	RA	1012	U
22	RA	1022	G
22	RA	1026	U
22	RA	1045	A
22	RA	1078	U
22	RA	1085	A
22	RA	1130	U
22	RA	1178	C
22	RA	1204	A
22	RA	1210	A
22	RA	1312	U
22	RA	1427	A
22	RA	1543	A
22	RA	1558	A
22	RA	1653	G
22	RA	1694	C
22	RA	1698	A
22	RA	1799	G
22	RA	1819	A
22	RA	1929	G
22	RA	1930	G
22	RA	1936	A
22	RA	1980	G
22	RA	1992	G
22	RA	2060	A
22	RA	2126	A
22	RA	2405	G
22	RA	2439	A
22	RA	2481	G
22	RA	2518	A
22	RA	2566	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	RA	2610	C
22	RA	2689	U
22	RA	2712	U
22	RA	2776	A
22	RA	2832	U
22	RA	2848	G
22	RA	2867	G
23	RB	24	G
23	RB	66	A
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	328	C
1	XA	345	C
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	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	815	A
1	XA	913	A
1	XA	934	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	XA	960	U
1	XA	992	U
1	XA	993	G
1	XA	1027	C
1	XA	1065	U
1	XA	1094	G
1	XA	1200	C
1	XA	1201	A
1	XA	1224	G
1	XA	1285	A
1	XA	1297	C
1	XA	1301	U
1	XA	1319	A
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	YA	74	A
22	YA	83	G
22	YA	99	U
22	YA	102	G
22	YA	196	A
22	YA	205	G
22	YA	221	A
22	YA	222	A
22	YA	227	A
22	YA	229	A
22	YA	241	A
22	YA	242	G
22	YA	271(B)	G
22	YA	278	A
22	YA	372	G
22	YA	404	C
22	YA	503	A
22	YA	508	G
22	YA	587	C
22	YA	637	A
22	YA	653	A
22	YA	669	G
22	YA	752	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
22	YA	774	A
22	YA	846	C
22	YA	856	C
22	YA	859	G
22	YA	974(A)	C
22	YA	1022	G
22	YA	1026	U
22	YA	1045	A
22	YA	1078	U
22	YA	1085	A
22	YA	1109	C
22	YA	1130	U
22	YA	1178	C
22	YA	1210	A
22	YA	1275	A
22	YA	1427	A
22	YA	1543	A
22	YA	1558	A
22	YA	1653	G
22	YA	1694	C
22	YA	1698	A
22	YA	1786	A
22	YA	1799	G
22	YA	1819	A
22	YA	1929	G
22	YA	1930	G
22	YA	1955	U
22	YA	1992	G
22	YA	2126	A
22	YA	2439	A
22	YA	2481	G
22	YA	2518	A
22	YA	2566	A
22	YA	2610	C
22	YA	2655	G
22	YA	2681	C
22	YA	2689	U
22	YA	2712	U
22	YA	2751	G
22	YA	2776	A
22	YA	2832	U
22	YA	2867	G

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Mol	Chain	Res	Type
23	YB	66	A
53	QV	53	G
54	QX	4	C
54	QX	6	C
55	QY	36	G
55	QY	39	C
53	XV	53	G
54	XX	6	C
55	XY	39	C

## 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
56	PPU	Z6	76	22,56	32,40,41	2.56	6 (18%)	33,57,60	2.16	5 (15%)
56	PPU	Z8	76	22,56	32,40,41	2.55	6 (18%)	33,57,60	2.15	5 (15%)
55	1MG	XY	37	55	18,26,27	2.29	2 (11%)	19,39,42	1.55	2 (10%)
55	1MG	QY	37	55	18,26,27	1.05	2 (11%)	19,39,42	1.53	3 (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
56	PPU	Z6	76	22,56	-	2/21/43/44	0/4/4/4
56	PPU	Z8	76	22,56	-	2/21/43/44	0/4/4/4
55	1MG	XY	37	55	-	0/3/25/26	0/3/3/3
55	1MG	QY	37	55	-	0/3/25/26	0/3/3/3

All (16) bond length outliers are listed below:



Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	O-C	9.30	1.41	1.23
56	Z8	76	PPU	O-C	9.27	1.41	1.23
55	XY	37	1MG	C2-N2	7.85	1.48	1.34
56	Z6	76	PPU	C9-N6	-6.00	1.31	1.45
56	Z8	76	PPU	C9-N6	-5.94	1.32	1.45
56	Z6	76	PPU	C-N3'	5.70	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	-5.59	1.32	1.45
55	XY	37	1MG	C4-N3	4.87	1.49	1.37
56	Z6	76	PPU	O4'-C1'	2.76	1.44	1.41
56	Z8	76	PPU	O4'-C1'	2.69	1.44	1.41
55	QY	37	1MG	C5-C4	-2.60	1.36	1.43
55	QY	37	1MG	C6-N1	2.31	1.43	1.39
56	Z8	76	PPU	C4-N3	-2.08	1.32	1.35
56	Z6	76	PPU	C4-N3	-2.07	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	-8.63	110.20	123.21
56	Z8	76	PPU	C3'-N3'-C	-8.59	110.25	123.21
56	Z8	76	PPU	N3-C2-N1	-4.69	121.34	128.68
56	Z6	76	PPU	N3-C2-N1	-4.64	121.42	128.68
55	QY	37	1MG	CM1-N1-C2	4.59	125.48	120.72
55	XY	37	1MG	C8-N7-C5	4.14	110.88	102.99
56	Z6	76	PPU	CA-C-N3'	4.03	121.74	116.15
56	Z8	76	PPU	CA-C-N3'	4.02	121.73	116.15
55	XY	37	1MG	C2-N1-C6	3.73	123.98	120.95
55	QY	37	1MG	CM1-N1-C6	-3.47	112.80	117.55
56	Z6	76	PPU	CM-OC-CZ	-3.42	110.09	117.51
56	Z8	76	PPU	CM-OC-CZ	-3.37	110.19	117.51
56	Z6	76	PPU	C4-C5-N7	-3.33	105.93	109.40
56	Z8	76	PPU	C4-C5-N7	-3.25	106.01	109.40
55	QY	37	1MG	O6-C6-C5	2.13	127.97	124.19

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

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Mol	Chain	Res	Type	Atoms
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 34 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	Z6	76	PPU	14	0
56	Z8	76	PPU	11	0
55	XY	37	1MG	7	0
55	QY	37	1MG	2	0

## 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

## 5.6 Ligand geometry [i](#)

Of 684 ligands modelled in this entry, 682 are monoatomic - leaving 2 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
58	PAR	QA	1666	-	45,45,45	1.48	7 (15%)	64,67,67	1.39	8 (12%)
58	PAR	XA	1673	-	45,45,45	1.51	7 (15%)	64,67,67	1.34	5 (7%)

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
58	PAR	QA	1666	-	-	8/18/94/94	0/4/4/4

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Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	PAR	XA	1673	-	-	6/18/94/94	0/4/4/4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1666	PAR	C64-C54	5.19	1.59	1.52
58	XA	1673	PAR	C64-C54	4.99	1.58	1.52
58	QA	1666	PAR	C52-C42	3.07	1.58	1.52
58	XA	1673	PAR	C52-C42	2.95	1.58	1.52
58	XA	1673	PAR	O54-C14	2.92	1.49	1.41
58	QA	1666	PAR	O54-C14	2.88	1.49	1.41
58	XA	1673	PAR	C11-C21	2.83	1.57	1.52
58	XA	1673	PAR	O51-C11	2.63	1.48	1.41
58	QA	1666	PAR	O51-C11	2.30	1.47	1.41
58	XA	1673	PAR	C14-C24	2.29	1.56	1.52
58	QA	1666	PAR	C11-C21	2.27	1.56	1.52
58	QA	1666	PAR	C31-C21	2.18	1.56	1.53
58	QA	1666	PAR	C14-C24	2.14	1.56	1.52
58	XA	1673	PAR	C31-C21	2.06	1.56	1.53

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
58	XA	1673	PAR	O33-C14-C24	4.73	116.36	108.22
58	XA	1673	PAR	C14-O54-C54	4.31	122.15	113.69
58	QA	1666	PAR	O52-C13-C23	3.86	115.96	107.96
58	QA	1666	PAR	C14-O54-C54	3.83	121.21	113.69
58	QA	1666	PAR	O33-C14-C24	3.75	114.67	108.22
58	XA	1673	PAR	O52-C13-C23	3.44	115.10	107.96
58	QA	1666	PAR	O11-C42-C32	-3.15	101.67	109.18
58	QA	1666	PAR	O11-C42-C52	3.13	115.42	107.48
58	QA	1666	PAR	O54-C54-C64	3.00	111.59	106.01
58	XA	1673	PAR	O54-C54-C64	2.88	111.36	106.01
58	XA	1673	PAR	C11-O51-C51	2.61	118.80	113.69
58	QA	1666	PAR	O54-C54-C44	-2.14	105.81	109.69
58	QA	1666	PAR	C22-C32-C42	2.04	114.67	109.53

There are no chirality outliers.

All (14) torsion outliers are listed below:

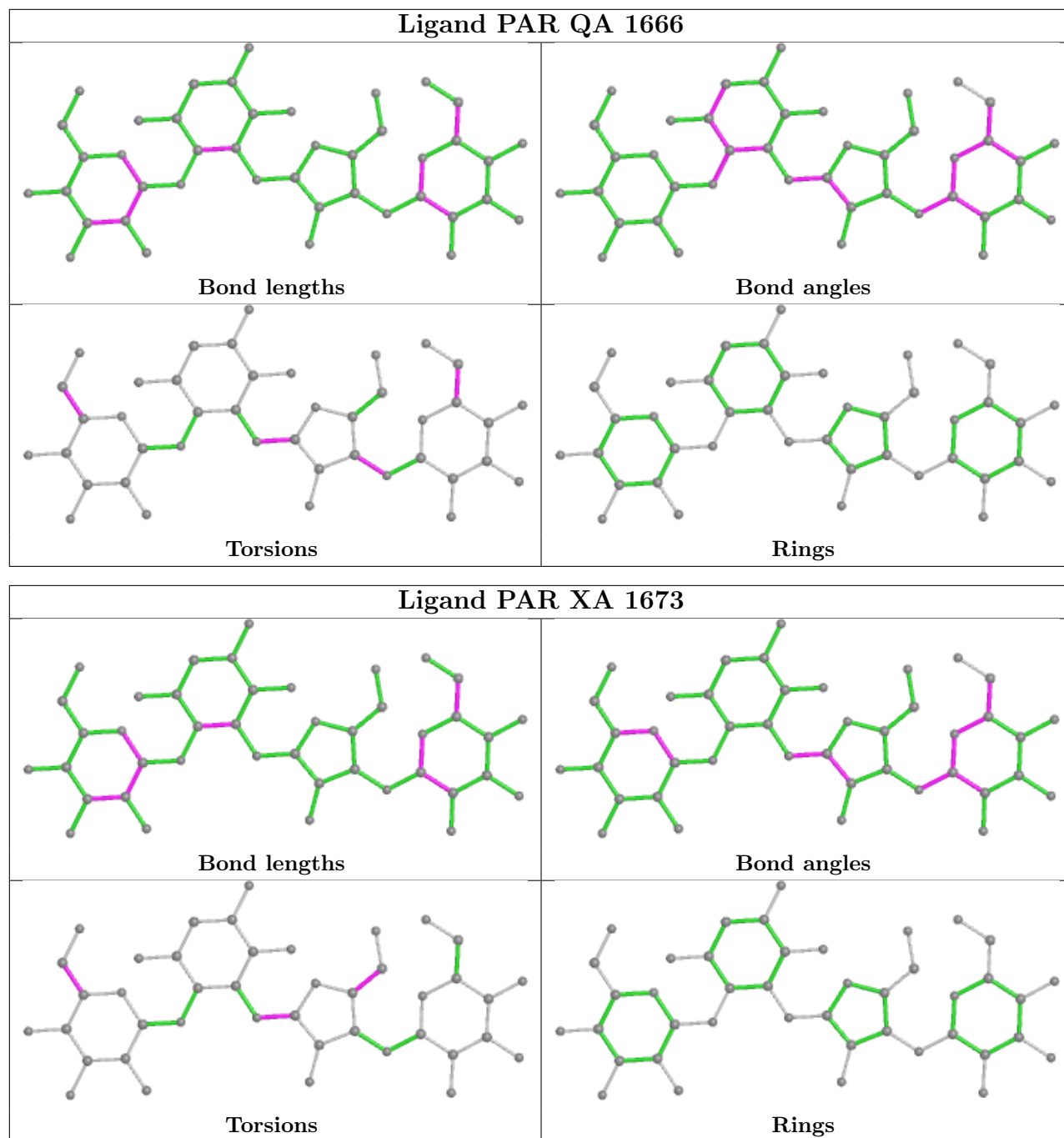
Mol	Chain	Res	Type	Atoms
58	QA	1666	PAR	C44-C54-C64-N64
58	QA	1666	PAR	O54-C54-C64-N64
58	QA	1666	PAR	O51-C51-C61-O61
58	XA	1673	PAR	O51-C51-C61-O61
58	QA	1666	PAR	C41-C51-C61-O61
58	XA	1673	PAR	C41-C51-C61-O61
58	XA	1673	PAR	C33-C43-C53-O53
58	QA	1666	PAR	O43-C13-O52-C52
58	XA	1673	PAR	O43-C13-O52-C52
58	XA	1673	PAR	O43-C43-C53-O53
58	QA	1666	PAR	C23-C13-O52-C52
58	XA	1673	PAR	C23-C13-O52-C52
58	QA	1666	PAR	C23-C33-O33-C14
58	QA	1666	PAR	C43-C33-O33-C14

There are no ring outliers.

2 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QA	1666	PAR	4	0
58	XA	1673	PAR	2	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

### 6.1 Protein, DNA and RNA chains

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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
1	QA	1500/1522 (98%)	-0.09	27 (1%) 68 59	22, 75, 152, 231	0
1	XA	1500/1522 (98%)	-0.25	9 (0%) 89 84	7, 55, 142, 232	0
2	QB	237/256 (92%)	0.39	16 (6%) 17 12	47, 109, 145, 182	0
2	XB	237/256 (92%)	0.18	9 (3%) 40 31	38, 88, 133, 159	0
3	QC	205/239 (85%)	0.14	4 (1%) 65 55	39, 98, 133, 150	0
3	XC	205/239 (85%)	-0.18	2 (0%) 82 75	20, 67, 110, 138	0
4	QD	208/209 (99%)	0.14	2 (0%) 82 75	29, 79, 128, 167	0
4	XD	208/209 (99%)	0.05	2 (0%) 82 75	10, 72, 110, 139	0
5	QE	151/162 (93%)	0.28	6 (3%) 38 30	25, 85, 122, 159	0
5	XE	151/162 (93%)	-0.03	2 (1%) 77 68	1, 62, 104, 134	0
6	QF	101/101 (100%)	0.15	1 (0%) 82 75	16, 74, 116, 131	0
6	XF	101/101 (100%)	-0.03	1 (0%) 82 75	16, 65, 110, 133	0
7	QG	155/156 (99%)	0.48	17 (10%) 5 5	30, 84, 125, 149	0
7	XG	155/156 (99%)	0.18	6 (3%) 39 30	20, 71, 109, 131	0
8	QH	138/138 (100%)	0.32	3 (2%) 62 51	45, 88, 124, 156	0
8	XH	138/138 (100%)	0.10	1 (0%) 87 82	19, 70, 102, 125	0
9	QI	127/128 (99%)	0.71	13 (10%) 6 6	46, 97, 137, 144	0
9	XI	127/128 (99%)	0.20	3 (2%) 59 48	16, 79, 119, 129	0
10	QJ	99/105 (94%)	1.05	19 (19%) 1 1	44, 108, 142, 161	0
10	XJ	99/105 (94%)	0.56	11 (11%) 5 5	9, 83, 129, 147	0
11	QK	119/129 (92%)	0.40	14 (11%) 4 4	18, 71, 123, 149	0
11	XK	119/129 (92%)	0.26	5 (4%) 36 29	15, 63, 110, 147	0
12	QL	125/132 (94%)	0.45	8 (6%) 19 14	20, 72, 108, 139	0
12	XL	125/132 (94%)	-0.02	2 (1%) 72 62	0, 48, 91, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
13	QM	121/126 (96%)	0.52	13 (10%) 6 5	39, 96, 131, 170	0
13	XM	121/126 (96%)	-0.00	3 (2%) 57 47	4, 68, 125, 149	0
14	QN	60/61 (98%)	0.64	5 (8%) 11 9	52, 98, 137, 146	0
14	XN	60/61 (98%)	-0.07	0 100 100	4, 60, 100, 120	0
15	QO	88/89 (98%)	0.14	6 (6%) 17 12	30, 79, 120, 136	0
15	XO	88/89 (98%)	0.01	1 (1%) 80 73	10, 64, 93, 107	0
16	QP	84/88 (95%)	0.32	3 (3%) 42 33	12, 68, 103, 138	0
16	XP	84/88 (95%)	0.45	2 (2%) 59 48	30, 70, 106, 135	0
17	QQ	100/105 (95%)	0.56	7 (7%) 16 12	33, 82, 115, 141	0
17	XQ	100/105 (95%)	0.21	0 100 100	14, 64, 102, 124	0
18	QR	70/88 (79%)	0.53	9 (12%) 3 3	18, 78, 119, 147	0
18	XR	70/88 (79%)	0.38	4 (5%) 23 19	22, 67, 109, 135	0
19	QS	84/93 (90%)	0.67	7 (8%) 11 9	60, 102, 132, 147	0
19	XS	84/93 (90%)	0.21	2 (2%) 59 48	15, 73, 112, 164	0
20	QT	99/106 (93%)	0.19	3 (3%) 50 38	3, 77, 111, 131	0
20	XT	99/106 (93%)	0.29	3 (3%) 50 38	19, 77, 117, 126	0
21	QU	25/27 (92%)	1.78	9 (36%) 0 0	37, 85, 131, 145	0
21	XU	25/27 (92%)	0.97	3 (12%) 4 4	30, 75, 103, 134	0
22	RA	2882/2916 (98%)	-0.17	97 (3%) 45 35	2, 45, 174, 236	0
22	YA	2883/2916 (98%)	-0.27	71 (2%) 57 47	1, 35, 165, 227	0
23	RB	120/122 (98%)	-0.17	0 100 100	46, 89, 131, 152	0
23	YB	120/122 (98%)	-0.48	1 (0%) 86 79	18, 58, 93, 139	0
24	RD	272/276 (98%)	-0.11	0 100 100	4, 41, 81, 123	0
24	YD	272/276 (98%)	-0.05	1 (0%) 92 87	1, 33, 74, 140	0
25	RE	205/206 (99%)	0.13	4 (1%) 65 55	7, 62, 112, 141	0
25	YE	205/206 (99%)	0.04	2 (0%) 82 75	6, 56, 103, 125	0
26	RF	202/210 (96%)	-0.04	2 (0%) 82 75	1, 64, 110, 129	0
26	YF	202/210 (96%)	-0.06	2 (0%) 82 75	1, 47, 95, 112	0
27	RG	181/182 (99%)	0.37	9 (4%) 28 24	34, 99, 142, 166	0
27	YG	181/182 (99%)	-0.06	1 (0%) 89 84	9, 66, 115, 163	0
28	RH	170/180 (94%)	1.11	37 (21%) 0 1	32, 108, 152, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
28	YH	170/180 (94%)	0.20	6 (3%) 44 34	14, 68, 110, 133	0
29	RI	146/148 (98%)	0.36	3 (2%) 63 53	16, 78, 122, 154	0
29	YI	146/148 (98%)	0.17	3 (2%) 63 53	8, 72, 119, 159	0
30	RN	138/140 (98%)	0.31	5 (3%) 42 33	14, 70, 110, 124	0
30	YN	138/140 (98%)	0.03	4 (2%) 51 40	8, 55, 103, 128	0
31	RO	122/122 (100%)	0.15	0 100 100	5, 56, 97, 126	0
31	YO	122/122 (100%)	-0.01	0 100 100	0, 42, 79, 94	0
32	RP	150/150 (100%)	0.49	11 (7%) 15 11	6, 65, 126, 159	0
32	YP	150/150 (100%)	0.04	2 (1%) 77 68	5, 53, 105, 154	0
33	RQ	141/141 (100%)	0.18	3 (2%) 63 53	2, 62, 106, 142	0
33	YQ	141/141 (100%)	-0.12	0 100 100	3, 42, 94, 132	0
34	RR	118/118 (100%)	-0.05	0 100 100	8, 50, 92, 118	0
34	YR	118/118 (100%)	-0.07	0 100 100	6, 43, 89, 109	0
35	RS	111/112 (99%)	0.37	3 (2%) 54 43	35, 78, 114, 141	0
35	YS	111/112 (99%)	0.01	0 100 100	7, 61, 94, 111	0
36	RT	137/146 (93%)	0.11	2 (1%) 73 64	13, 64, 125, 165	0
36	YT	137/146 (93%)	-0.10	1 (0%) 87 82	10, 58, 111, 158	0
37	RU	117/118 (99%)	-0.06	3 (2%) 56 45	10, 61, 104, 147	0
37	YU	117/118 (99%)	-0.16	2 (1%) 70 60	0, 44, 108, 129	0
38	RV	101/101 (100%)	0.07	0 100 100	20, 75, 116, 144	0
38	YV	101/101 (100%)	0.19	2 (1%) 65 55	11, 65, 104, 156	0
39	RW	113/113 (100%)	0.10	0 100 100	3, 43, 93, 149	0
39	YW	113/113 (100%)	-0.09	2 (1%) 68 59	2, 42, 91, 144	0
40	RX	92/96 (95%)	-0.09	1 (1%) 80 73	15, 52, 96, 125	0
40	YX	92/96 (95%)	-0.11	0 100 100	3, 37, 76, 96	0
41	RY	102/110 (92%)	1.27	28 (27%) 0 0	26, 88, 132, 159	0
41	YY	102/110 (92%)	0.34	4 (3%) 39 30	9, 63, 120, 140	0
42	RZ	183/206 (88%)	0.39	10 (5%) 25 20	21, 88, 132, 152	0
42	YZ	183/206 (88%)	0.01	3 (1%) 72 62	20, 70, 123, 155	0
43	R0	82/85 (96%)	0.36	3 (3%) 41 32	14, 48, 79, 112	0
43	Y0	82/85 (96%)	0.18	1 (1%) 79 70	3, 36, 66, 97	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å <sup>2</sup> )	Q<0.9
44	R1	97/98 (98%)	0.47	4 (4%) 37 29	5, 53, 126, 159	0
44	Y1	97/98 (98%)	0.29	3 (3%) 49 38	5, 43, 104, 139	0
45	R2	69/72 (95%)	0.05	0 100 100	13, 72, 111, 129	0
45	Y2	69/72 (95%)	-0.20	0 100 100	5, 50, 104, 121	0
46	R3	59/60 (98%)	1.17	9 (15%) 2 2	12, 63, 111, 138	0
46	Y3	59/60 (98%)	0.47	5 (8%) 10 8	2, 44, 101, 174	0
47	R4	71/71 (100%)	0.89	12 (16%) 1 1	75, 131, 170, 189	0
47	Y4	71/71 (100%)	0.27	4 (5%) 24 19	46, 102, 154, 161	0
48	R5	59/60 (98%)	0.11	4 (6%) 17 12	6, 55, 133, 141	0
48	Y5	58/60 (96%)	0.14	2 (3%) 45 35	10, 59, 143, 162	0
49	R6	49/54 (90%)	3.21	31 (63%) 0 0	83, 118, 150, 157	0
49	Y6	49/54 (90%)	2.67	31 (63%) 0 0	51, 109, 141, 149	0
50	R7	49/49 (100%)	0.07	2 (4%) 37 29	8, 35, 87, 146	0
50	Y7	49/49 (100%)	0.08	1 (2%) 65 55	1, 29, 71, 121	0
51	R8	64/65 (98%)	0.23	2 (3%) 49 38	1, 52, 96, 158	0
51	Y8	64/65 (98%)	0.01	0 100 100	5, 40, 81, 149	0
52	R9	37/37 (100%)	3.91	32 (86%) 0 0	66, 110, 156, 168	0
52	Y9	37/37 (100%)	4.48	37 (100%) 0 0	78, 107, 132, 166	0
53	QV	77/77 (100%)	0.14	2 (2%) 56 45	46, 99, 145, 169	0
53	XV	77/77 (100%)	0.04	2 (2%) 56 45	28, 72, 119, 180	0
54	QX	8/25 (32%)	3.09	6 (75%) 0 0	103, 130, 144, 183	0
54	XX	8/25 (32%)	1.62	2 (25%) 0 0	56, 75, 115, 190	0
55	QY	13/18 (72%)	1.53	4 (30%) 0 0	112, 161, 199, 206	0
55	XY	13/18 (72%)	1.16	2 (15%) 2 2	72, 116, 180, 193	0
56	Z6	2/3 (66%)	0.35	0 100 100	52, 52, 52, 57	0
56	Z8	2/3 (66%)	0.56	0 100 100	46, 46, 46, 46	0
All	All	20870/21494 (97%)	0.06	789 (3%) 40 31	0, 61, 135, 236	0

All (789) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
52	R9	11	CYS	11.7
52	Y9	34	GLN	9.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
49	R6	22	ALA	9.7
52	R9	14	CYS	9.5
13	QM	121	LYS	8.4
52	R9	34	GLN	8.4
49	R6	50	ARG	8.3
52	Y9	1	MET	8.2
22	RA	1096	A	7.9
22	RA	2799	A	7.9
22	RA	1095	A	7.6
52	R9	1	MET	7.5
49	R6	13	CYS	7.4
22	YA	1536	A	7.3
12	QL	129	ALA	7.3
21	QU	26	LYS	7.2
22	RA	2145	C	7.1
22	YA	1060	U	6.9
22	YA	2799	A	6.8
52	Y9	32	HIS	6.8
54	QX	8	A	6.7
22	RA	1536	A	6.7
32	RP	150	ALA	6.7
22	RA	1093	G	6.6
52	Y9	4	ARG	6.5
52	Y9	29	ASN	6.4
49	Y6	26	ASN	6.4
49	R6	14	THR	6.4
22	RA	1094	U	6.3
7	QG	82	GLY	6.3
22	RA	1068	G	6.3
22	RA	1061	U	6.3
22	YA	2167	U	6.3
22	RA	2801	A	6.2
52	Y9	36	GLN	6.1
49	R6	7	ILE	6.1
7	QG	81	GLY	6.0
22	YA	2801	A	5.9
7	QG	156	TRP	5.9
49	R6	49	HIS	5.9
49	R6	6	ARG	5.8
22	RA	1084	A	5.8
49	Y6	49	HIS	5.7
22	RA	1070	A	5.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	RA	2798	C	5.7
22	RA	1103	A	5.7
22	RA	1059	G	5.6
22	RA	1098	A	5.6
22	YA	2121	G	5.6
22	RA	2894	G	5.6
49	R6	29	ASN	5.5
22	RA	1060	U	5.5
49	Y6	13	CYS	5.5
22	RA	1066	U	5.5
7	QG	86	GLN	5.5
22	RA	1176	G	5.4
1	XA	210	U	5.4
46	Y3	60	GLU	5.4
25	YE	205	ALA	5.4
22	RA	1065	U	5.4
1	QA	81	G	5.4
13	QM	120	LYS	5.3
52	R9	25	VAL	5.3
52	Y9	25	VAL	5.3
47	R4	71	ARG	5.3
52	Y9	23	VAL	5.3
52	Y9	14	CYS	5.2
22	YA	2125	G	5.2
1	QA	1451	A	5.1
52	R9	36	GLN	5.1
37	RU	117	GLN	5.1
52	Y9	35	ARG	5.1
11	QK	11	LYS	5.1
22	RA	2116	G	5.0
49	R6	42	TRP	5.0
22	YA	2136	C	5.0
52	R9	12	ASP	5.0
22	RA	1067	A	5.0
52	R9	37	GLY	5.0
49	Y6	43	CYS	5.0
49	R6	24	GLU	5.0
22	RA	2797	U	5.0
7	XG	156	TRP	4.9
37	YU	117	GLN	4.9
22	RA	1058	G	4.9
49	R6	52	VAL	4.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
1	QA	1032	A	4.9
22	RA	1057	A	4.9
22	RA	2795	G	4.8
49	R6	21	TYR	4.8
52	Y9	16	VAL	4.8
47	R4	70	GLY	4.8
52	R9	4	ARG	4.8
52	Y9	18	ARG	4.8
52	Y9	24	TYR	4.8
52	Y9	11	CYS	4.8
22	RA	2802	G	4.7
47	Y4	67	TYR	4.7
46	R3	3	ARG	4.7
41	RY	45	VAL	4.7
52	Y9	12	ASP	4.7
22	RA	2147	G	4.7
54	XX	8	A	4.7
32	RP	1	MET	4.7
49	R6	23	THR	4.6
11	QK	13	GLN	4.6
49	R6	26	ASN	4.6
22	YA	2112	G	4.6
52	Y9	17	ILE	4.6
49	R6	20	ASN	4.6
52	Y9	10	ILE	4.6
22	RA	1064	C	4.5
25	RE	205	ALA	4.5
52	R9	35	ARG	4.5
52	R9	29	ASN	4.5
8	QH	87	SER	4.5
7	XG	84	ASN	4.5
49	R6	12	GLU	4.5
36	YT	1	MET	4.5
11	XK	11	LYS	4.5
1	XA	1451	A	4.5
15	QO	2	PRO	4.5
49	Y6	12	GLU	4.4
22	RA	1099	G	4.4
52	Y9	21	GLY	4.4
22	RA	1083	U	4.4
52	Y9	9	ARG	4.4
49	Y6	53	LYS	4.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	RH	32	GLU	4.3
22	YA	2122	U	4.3
49	Y6	9	LEU	4.3
52	Y9	37	GLY	4.3
22	RA	1063	G	4.3
22	RA	2110	G	4.3
52	R9	3	VAL	4.3
22	RA	889	C	4.3
49	Y6	14	THR	4.3
42	YZ	113	ALA	4.2
25	YE	204	ALA	4.2
9	QI	27	THR	4.2
10	QJ	5	ARG	4.2
10	QJ	34	VAL	4.2
52	Y9	27	CYS	4.1
21	XU	26	LYS	4.1
7	QG	78	ARG	4.1
11	QK	12	ARG	4.1
47	R4	69	LYS	4.1
47	R4	68	ARG	4.1
7	XG	85	TYR	4.1
10	QJ	6	ILE	4.1
41	RY	5	MET	4.1
10	QJ	4	ILE	4.1
21	QU	25	LYS	4.1
22	RA	2804	C	4.0
22	YA	1061	U	4.0
22	RA	2112	G	4.0
10	QJ	71	LEU	4.0
25	RE	204	ALA	4.0
41	RY	87	LYS	4.0
28	RH	43	VAL	4.0
52	Y9	7	VAL	4.0
41	RY	46	LYS	4.0
52	R9	19	ARG	4.0
13	QM	122	LYS	4.0
22	RA	1092	C	4.0
1	XA	208	U	3.9
32	RP	88	LEU	3.9
49	Y6	40	CYS	3.9
1	QA	1531	A	3.9
29	RI	83	ALA	3.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
44	Y1	96	LYS	3.9
52	Y9	5	ALA	3.9
20	XT	106	ALA	3.9
22	RA	2125	G	3.9
46	R3	60	GLU	3.9
9	QI	127	LYS	3.9
22	YA	2119	A	3.9
19	QS	6	LYS	3.9
22	YA	887	A	3.9
52	R9	24	TYR	3.9
22	YA	2804	C	3.9
10	XJ	4	ILE	3.8
47	R4	55	ARG	3.8
49	R6	9	LEU	3.8
55	QY	33	U	3.8
22	YA	2803	C	3.8
13	QM	6	GLY	3.8
28	RH	3	ARG	3.8
22	RA	654	A	3.8
22	YA	2795	G	3.8
49	R6	5	VAL	3.8
46	R3	2	PRO	3.8
22	RA	1100	C	3.8
47	R4	67	TYR	3.8
22	YA	2178	C	3.8
41	RY	52	SER	3.8
46	Y3	59	VAL	3.7
18	QR	88	LYS	3.7
49	R6	19	ARG	3.7
52	Y9	26	ILE	3.7
28	RH	161	GLY	3.7
52	R9	10	ILE	3.7
35	RS	37	ALA	3.7
43	R0	76	GLY	3.7
11	XK	129	SER	3.7
49	R6	43	CYS	3.7
52	R9	2	LYS	3.7
22	YA	2798	C	3.7
10	XJ	33	GLN	3.7
22	RA	1082	U	3.7
52	R9	32	HIS	3.7
28	RH	101	ARG	3.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
7	QG	84	ASN	3.7
27	RG	26	GLN	3.7
41	RY	58	GLY	3.6
3	QC	148	GLY	3.6
48	Y5	51	TYR	3.6
32	RP	91	PHE	3.6
11	XK	12	ARG	3.6
28	RH	81	GLU	3.6
19	QS	38	SER	3.6
22	RA	277	C	3.6
22	RA	2805	G	3.6
22	RA	2146	C	3.6
52	R9	13	LYS	3.6
52	R9	5	ALA	3.6
55	XY	32	U	3.6
7	XG	78	ARG	3.6
41	RY	57	GLN	3.6
36	RT	1	MET	3.6
49	R6	53	LYS	3.6
49	Y6	11	LEU	3.6
52	R9	33	LYS	3.5
32	RP	135	LEU	3.5
41	RY	47	LYS	3.5
18	QR	58	LEU	3.5
22	RA	2154	G	3.5
22	YA	654	A	3.5
54	QX	7	A	3.5
14	QN	38	GLY	3.5
22	RA	2803	C	3.5
10	XJ	98	ILE	3.5
22	YA	1075	C	3.5
24	YD	26	LYS	3.5
11	QK	129	SER	3.5
11	QK	127	LYS	3.5
22	YA	2127	G	3.5
41	RY	103	GLY	3.5
22	RA	2174	C	3.4
49	Y6	19	ARG	3.4
22	RA	1097	U	3.4
7	QG	83	ALA	3.4
28	RH	24	VAL	3.4
22	YA	2145	C	3.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
16	XP	35	LYS	3.4
44	R1	96	LYS	3.4
10	XJ	34	VAL	3.4
22	RA	1089	G	3.4
54	QX	5	C	3.4
54	QX	6	C	3.4
27	RG	2	PRO	3.4
9	QI	62	TYR	3.4
49	Y6	29	ASN	3.4
3	QC	194	GLY	3.4
19	QS	39	THR	3.4
10	QJ	7	LYS	3.4
28	RH	5	GLY	3.4
41	RY	22	GLY	3.4
22	YA	2116	G	3.4
22	YA	2132	U	3.4
52	R9	15	LYS	3.4
46	Y3	58	VAL	3.4
49	Y6	33	LYS	3.4
22	RA	10	G	3.3
28	RH	30	LYS	3.3
14	QN	25	VAL	3.3
52	R9	9	ARG	3.3
10	XJ	8	LEU	3.3
9	XI	94	ALA	3.3
49	Y6	32	ASN	3.3
13	XM	121	LYS	3.3
28	RH	103	LEU	3.3
52	Y9	31	LYS	3.3
52	Y9	22	ARG	3.3
11	QK	128	ALA	3.3
49	Y6	37	ARG	3.3
49	R6	33	LYS	3.3
52	R9	16	VAL	3.3
44	R1	97	LEU	3.3
51	R8	65	GLU	3.3
1	QA	995	C	3.3
41	RY	41	GLY	3.3
47	Y4	66	SER	3.3
37	YU	118	GLY	3.3
22	YA	1066	U	3.3
52	Y9	33	LYS	3.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	QB	6	THR	3.3
11	QK	51	LYS	3.3
1	XA	87	A	3.3
17	QQ	101	ARG	3.2
52	Y9	15	LYS	3.2
2	QB	4	GLU	3.2
41	RY	86	ARG	3.2
49	Y6	42	TRP	3.2
12	QL	64	TYR	3.2
52	Y9	28	GLU	3.2
55	QY	32	U	3.2
22	YA	2793	G	3.2
32	RP	118	GLY	3.2
10	QJ	28	ARG	3.2
44	R1	42	GLN	3.2
28	RH	123	PHE	3.2
22	RA	2896	C	3.2
28	YH	3	ARG	3.2
32	RP	149	GLU	3.2
22	RA	1177	A	3.1
22	RA	2128	C	3.1
53	QV	1	C	3.1
22	RA	1077	A	3.1
10	QJ	37	PRO	3.1
41	RY	34	LYS	3.1
49	R6	18	ARG	3.1
22	YA	1095	A	3.1
52	R9	27	CYS	3.1
46	Y3	57	GLU	3.1
39	YW	113	LYS	3.1
12	QL	127	GLU	3.1
22	YA	271(C)	U	3.1
5	QE	80	ILE	3.1
37	RU	112	ARG	3.1
22	YA	2790	A	3.1
48	R5	54	GLY	3.1
32	RP	108	LYS	3.1
28	YH	2	SER	3.1
25	RE	1	MET	3.0
35	RS	57	LYS	3.0
1	QA	1047	G	3.0
22	RA	11	G	3.0

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	RA	2139	C	3.0
1	QA	994	A	3.0
22	YA	2802	G	3.0
1	QA	210	U	3.0
15	QO	15	PHE	3.0
21	XU	25	LYS	3.0
1	QA	980	C	3.0
2	QB	133	LYS	3.0
47	Y4	68	ARG	3.0
35	RS	2	ALA	3.0
22	RA	2121	G	3.0
1	XA	1032	A	3.0
26	YF	8	GLN	3.0
42	RZ	113	ALA	3.0
52	Y9	2	LYS	3.0
20	QT	9	ASN	3.0
30	YN	133	GLN	3.0
22	YA	1096	A	3.0
41	RY	56	PRO	3.0
1	XA	723	U	3.0
48	R5	60	VAL	2.9
19	QS	79	THR	2.9
46	R3	38	GLU	2.9
13	XM	122	LYS	2.9
2	QB	163	PHE	2.9
5	QE	23	GLY	2.9
13	QM	7	VAL	2.9
4	QD	145	GLU	2.9
22	YA	1058	G	2.9
52	Y9	3	VAL	2.9
41	YY	63	LYS	2.9
2	XB	4	GLU	2.9
7	QG	146	GLU	2.9
22	RA	1104	C	2.9
1	QA	1036	G	2.9
2	QB	96	ARG	2.9
2	XB	130	ARG	2.9
22	RA	229	A	2.9
52	Y9	30	PRO	2.9
52	Y9	20	HIS	2.9
28	RH	110	SER	2.9
44	Y1	36	GLY	2.9

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
12	QL	128	ALA	2.9
13	QM	96	LEU	2.9
22	YA	1177	A	2.9
6	QF	101	ALA	2.9
1	XA	1453	G	2.9
54	QX	3	G	2.9
18	QR	22	VAL	2.9
22	YA	1076	C	2.9
5	QE	24	ARG	2.9
49	R6	34	LEU	2.9
21	QU	18	TYR	2.9
52	Y9	19	ARG	2.9
22	RA	1088	A	2.9
2	XB	133	LYS	2.9
22	RA	2138	C	2.9
22	RA	887	A	2.9
28	RH	96	ALA	2.9
55	QY	34	C	2.9
2	QB	114	ARG	2.8
28	RH	109	PHE	2.8
22	YA	654(A)	G	2.8
25	RE	69	LYS	2.8
52	Y9	13	LYS	2.8
13	QM	97	PRO	2.8
50	Y7	48	LYS	2.8
10	QJ	72	VAL	2.8
22	YA	2176	A	2.8
49	Y6	6	ARG	2.8
2	QB	214	ILE	2.8
18	XR	31	LEU	2.8
41	RY	4	LYS	2.8
49	Y6	35	GLU	2.8
22	RA	2173	A	2.8
41	RY	74	PRO	2.8
22	RA	2144	U	2.8
42	RZ	87	ASP	2.8
9	QI	31	GLN	2.8
49	R6	11	LEU	2.8
40	RX	92	LEU	2.8
17	QQ	71	PHE	2.8
10	XJ	101	VAL	2.8
1	QA	1110	A	2.8

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	YA	1508	A	2.8
22	YA	2126	A	2.8
2	XB	125	PRO	2.8
22	YA	1534	G	2.8
2	QB	130	ARG	2.8
17	QQ	8	GLY	2.8
52	Y9	6	SER	2.8
10	QJ	99	LYS	2.8
22	YA	2173	A	2.8
18	XR	88	LYS	2.7
44	Y1	93	GLU	2.7
22	YA	2174	C	2.7
28	RH	35	VAL	2.7
22	RA	2165	G	2.7
37	RU	118	GLY	2.7
9	QI	128	ARG	2.7
13	QM	112	GLY	2.7
30	RN	9	VAL	2.7
7	QG	75	VAL	2.7
11	XK	127	LYS	2.7
1	QA	1129	C	2.7
28	RH	97	ARG	2.7
41	RY	79	CYS	2.7
22	RA	1078	U	2.7
52	R9	31	LYS	2.7
46	R3	15	TYR	2.7
22	YA	2797	U	2.7
47	R4	49	PHE	2.7
9	QI	36	TYR	2.7
41	RY	35	TYR	2.7
22	RA	2159	G	2.7
12	QL	19	ARG	2.7
49	Y6	16	CYS	2.7
5	XE	80	ILE	2.7
22	YA	2164	C	2.7
18	XR	22	VAL	2.7
22	RA	1026	U	2.7
28	RH	52	VAL	2.7
47	Y4	3	GLU	2.7
32	YP	13	ASN	2.7
49	R6	25	LYS	2.7
52	Y9	8	LYS	2.7

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	RG	148	MET	2.6
21	QU	17	THR	2.6
52	R9	18	ARG	2.6
29	YI	144	VAL	2.6
10	XJ	5	ARG	2.6
22	RA	2893	G	2.6
18	QR	43	PHE	2.6
18	QR	52	PRO	2.6
32	RP	109	GLY	2.6
30	RN	8	GLN	2.6
49	Y6	7	ILE	2.6
12	XL	28	LYS	2.6
42	RZ	162	GLU	2.6
1	QA	1001	G	2.6
6	XF	55	ASP	2.6
17	QQ	32	TYR	2.6
33	RQ	5	ARG	2.6
48	Y5	54	GLY	2.6
19	QS	64	GLU	2.6
42	RZ	163	LEU	2.6
22	RA	2790	A	2.6
1	QA	723	U	2.6
22	RA	2167	U	2.6
14	QN	8	GLU	2.6
28	RH	4	ILE	2.6
22	YA	2110	G	2.6
11	QK	117	ASN	2.6
27	YG	25	TYR	2.6
22	YA	2118	U	2.6
22	YA	2894	G	2.6
10	QJ	70	ARG	2.5
22	YA	654(U)	A	2.5
27	RG	182	LYS	2.5
29	RI	12	LEU	2.5
21	QU	22	ARG	2.5
28	RH	100	GLY	2.5
11	QK	75	TYR	2.5
33	RQ	80	GLU	2.5
49	Y6	5	VAL	2.5
1	QA	1286	A	2.5
42	RZ	93	ASP	2.5
49	Y6	52	VAL	2.5

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
2	XB	6	THR	2.5
7	QG	76	ARG	2.5
41	YY	50	ARG	2.5
4	QD	7	PRO	2.5
22	YA	2117	A	2.5
22	YA	2175	C	2.5
22	YA	2177	C	2.5
2	XB	126	GLU	2.5
41	YY	46	LYS	2.5
1	QA	1020	U	2.5
42	RZ	155	LEU	2.5
10	XJ	72	VAL	2.5
49	R6	32	ASN	2.5
10	QJ	74	ILE	2.5
16	QP	18	ARG	2.5
22	YA	2135	A	2.5
42	RZ	55	HIS	2.5
46	R3	57	GLU	2.5
11	XK	128	ALA	2.5
41	RY	61	ILE	2.5
28	RH	116	GLU	2.5
9	XI	8	GLY	2.5
11	QK	90	GLY	2.5
7	QG	88	PRO	2.5
28	RH	29	PRO	2.5
29	YI	84	GLY	2.5
3	XC	179	ARG	2.5
26	YF	133	ASN	2.4
3	QC	190	ARG	2.4
9	QI	95	LYS	2.4
28	RH	31	GLY	2.4
2	XB	134	GLU	2.4
30	RN	63	THR	2.4
46	R3	4	LEU	2.4
22	RA	2137	C	2.4
8	XH	119	LEU	2.4
49	Y6	51	GLU	2.4
8	QH	86	ILE	2.4
49	R6	41	PRO	2.4
32	RP	106	LEU	2.4
10	QJ	100	THR	2.4
55	XY	40	G	2.4

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
28	RH	41	MET	2.4
28	RH	89	ILE	2.4
5	QE	30	ALA	2.4
22	RA	2135	A	2.4
22	YA	1067	A	2.4
22	YA	2111	C	2.4
28	RH	18	GLU	2.4
4	XD	23	GLY	2.4
10	XJ	74	ILE	2.4
49	R6	40	CYS	2.4
49	Y6	15	GLU	2.4
10	QJ	98	ILE	2.4
21	QU	24	ARG	2.4
49	Y6	21	TYR	2.4
10	XJ	77	PRO	2.4
18	QR	42	ARG	2.4
22	RA	1508	A	2.4
22	RA	2807	G	2.4
5	QE	78	HIS	2.4
10	QJ	83	GLU	2.4
11	QK	89	ALA	2.4
42	YZ	63	ASP	2.4
7	XG	154	TYR	2.4
15	QO	7	GLU	2.4
22	RA	2119	A	2.4
27	RG	137	GLU	2.4
36	RT	115	ARG	2.4
22	RA	2895	U	2.4
47	R4	29	PRO	2.4
55	QY	35	G	2.4
22	RA	2175	C	2.4
29	RI	4	ILE	2.3
52	R9	22	ARG	2.3
28	RH	94	TYR	2.3
9	QI	47	LEU	2.3
32	YP	150	ALA	2.3
41	RY	3	VAL	2.3
1	QA	1249	C	2.3
49	R6	46	HIS	2.3
9	QI	70	LYS	2.3
18	XR	54	ARG	2.3
43	Y0	76	GLY	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
22	YA	2159	G	2.3
41	RY	29	GLU	2.3
5	XE	91	LEU	2.3
7	XG	86	GLN	2.3
29	YI	65	ALA	2.3
51	R8	64	TYR	2.3
13	QM	8	GLU	2.3
15	QO	26	GLU	2.3
15	QO	30	ALA	2.3
22	YA	2156	G	2.3
1	QA	1019	C	2.3
22	YA	9	U	2.3
28	RH	95	ARG	2.3
41	RY	62	GLU	2.3
41	YY	99	CYS	2.3
18	QR	63	GLN	2.3
12	QL	28	LYS	2.3
13	QM	5	ALA	2.3
1	QA	1034	G	2.3
28	RH	99	VAL	2.3
39	YW	111	HIS	2.3
17	QQ	7	THR	2.3
1	QA	979	C	2.3
20	QT	56	MET	2.3
22	RA	2179	C	2.3
22	YA	2792	G	2.3
23	YB	88	C	2.3
48	R5	2	ALA	2.3
9	XI	17	VAL	2.3
54	XX	7	A	2.3
5	QE	14	ARG	2.3
12	QL	95	GLY	2.3
22	RA	2136	C	2.3
10	QJ	25	GLU	2.3
22	RA	2169	A	2.3
44	R1	98	LEU	2.3
7	QG	2	ALA	2.3
28	YH	114	VAL	2.3
28	RH	159	GLU	2.3
52	R9	30	PRO	2.3
47	R4	51	ASP	2.3
49	R6	30	THR	2.3

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
54	QX	4	C	2.3
38	YV	36	PRO	2.2
47	R4	13	ARG	2.2
22	YA	2896	C	2.2
19	XS	67	VAL	2.2
1	QA	1202	G	2.2
47	R4	11	PRO	2.2
3	XC	166	GLU	2.2
22	YA	2141	G	2.2
27	RG	138	GLN	2.2
2	QB	132	LYS	2.2
22	RA	2140	C	2.2
32	RP	120	ALA	2.2
21	QU	23	PRO	2.2
21	XU	15	ARG	2.2
42	RZ	107	THR	2.2
26	RF	56	GLU	2.2
1	QA	1450	U	2.2
13	QM	75	ALA	2.2
22	RA	2111	C	2.2
33	RQ	1	MET	2.2
41	RY	16	ALA	2.2
43	R0	72	ARG	2.2
49	Y6	30	THR	2.2
19	XS	27	GLU	2.2
20	QT	104	LEU	2.2
22	YA	1059	G	2.2
22	YA	2155	G	2.2
28	RH	111	HIS	2.2
49	Y6	47	THR	2.2
7	QG	149	ARG	2.2
19	QS	82	GLY	2.2
28	RH	162	ILE	2.2
38	YV	98	GLU	2.2
22	RA	1102	C	2.2
13	QM	103	THR	2.2
26	RF	15	SER	2.2
52	R9	6	SER	2.2
17	QQ	44	ALA	2.2
22	RA	1074	G	2.2
22	YA	2123	G	2.2
11	QK	50	TYR	2.2

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
18	QR	31	LEU	2.2
20	XT	9	ASN	2.2
42	YZ	96	VAL	2.2
9	QI	52	ALA	2.2
2	QB	165	VAL	2.2
16	XP	69	THR	2.2
27	RG	80	PHE	2.2
22	RA	2793	G	2.2
2	QB	161	ALA	2.2
10	QJ	35	SER	2.2
28	RH	104	GLU	2.2
7	QG	85	TYR	2.2
1	XA	1531	A	2.1
2	QB	79	ASP	2.1
9	QI	28	VAL	2.1
43	R0	77	ARG	2.1
22	RA	1087	G	2.1
53	QV	34	C	2.1
2	QB	31	TYR	2.1
42	RZ	156	LYS	2.1
15	QO	3	ILE	2.1
41	RY	92	ASN	2.1
49	Y6	20	ASN	2.1
10	QJ	10	GLY	2.1
22	YA	2165	G	2.1
28	RH	170	ARG	2.1
41	RY	50	ARG	2.1
2	QB	233	SER	2.1
2	XB	96	ARG	2.1
2	XB	157	ARG	2.1
30	YN	53	VAL	2.1
42	RZ	159	PRO	2.1
1	QA	993	G	2.1
22	YA	2893	G	2.1
41	RY	88	LYS	2.1
49	Y6	25	LYS	2.1
7	QG	87	VAL	2.1
22	RA	2126	A	2.1
28	RH	88	LEU	2.1
46	R3	56	VAL	2.1
41	RY	6	HIS	2.1
46	Y3	55	ARG	2.1

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>RSRZ</b>
27	RG	155	MET	2.1
13	XM	120	LYS	2.1
21	QU	5	ASP	2.1
22	RA	654(A)	G	2.1
22	YA	1421	G	2.1
48	R5	59	GLU	2.1
49	Y6	24	GLU	2.1
22	RA	2132	U	2.1
28	YH	96	ALA	2.1
30	YN	8	GLN	2.1
11	QK	31	THR	2.1
4	XD	24	GLU	2.1
15	XO	21	ASP	2.1
28	RH	115	VAL	2.1
12	XL	129	ALA	2.1
47	R4	1	MET	2.1
22	YA	2154	G	2.1
18	QR	54	ARG	2.1
13	QM	95	GLY	2.1
28	YH	103	LEU	2.1
30	YN	51	PHE	2.1
19	QS	80	TYR	2.1
28	RH	51	ARG	2.1
17	QQ	24	GLU	2.1
22	RA	2164	C	2.1
30	RN	138	LEU	2.1
16	QP	19	ILE	2.1
1	QA	82	U	2.1
2	QB	70	PHE	2.1
1	QA	1029	G	2.0
53	XV	1	C	2.0
12	QL	72	GLY	2.0
1	QA	1257	U	2.0
11	QK	32	ILE	2.0
21	QU	9	ARG	2.0
53	XV	17(A)	U	2.0
28	RH	106	THR	2.0
7	QG	80	VAL	2.0
9	QI	124	GLN	2.0
22	RA	1847	A	2.0
22	RA	2170	A	2.0
22	YA	276	A	2.0

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Mol	Chain	Res	Type	RSRZ
22	YA	1103	A	2.0
27	RG	149	VAL	2.0
1	XA	88	C	2.0
49	Y6	34	LEU	2.0
52	R9	21	GLY	2.0
52	R9	28	GLU	2.0
7	QG	5	ARG	2.0
20	XT	52	ALA	2.0
22	RA	890	A	2.0
3	QC	94	LEU	2.0
50	R7	48	LYS	2.0
2	QB	146	GLN	2.0
10	QJ	64	GLU	2.0
10	XJ	97	GLU	2.0
9	QI	20	ARG	2.0
22	RA	273(F)	C	2.0
22	RA	2129	C	2.0
22	YA	2146	C	2.0
30	RN	69	GLN	2.0
22	YA	2109	U	2.0
41	RY	94	LYS	2.0
8	QH	24	THR	2.0
14	QN	13	THR	2.0
52	R9	26	ILE	2.0
14	QN	37	PHE	2.0
1	QA	1124	G	2.0
46	R3	8	LEU	2.0
50	R7	1	MET	2.0
16	QP	9	PHE	2.0
22	YA	229	A	2.0
28	YH	116	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, 95<sup>th</sup> 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 <sup>2</sup> )	Q<0.9
55	1MG	QY	37	24/25	0.84	0.31	125,125,125,125	0
55	1MG	XY	37	24/25	0.89	0.20	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
56	PPU	Z6	76	37/38	0.93	0.32	51,51,51,51	0
56	PPU	Z8	76	37/38	0.93	0.33	48,48,48,48	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, 95<sup>th</sup> 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( $\text{\AA}^2$ )	Q<0.9
59	ZN	R9	101	1/1	0.30	0.76	177,177,177,177	0
57	MG	QH	201	1/1	0.31	0.27	27,27,27,27	0
57	MG	RA	3230	1/1	0.47	0.48	45,45,45,45	0
57	MG	YA	3148	1/1	0.49	0.23	38,38,38,38	0
57	MG	QA	1631	1/1	0.50	0.24	63,63,63,63	0
57	MG	RA	3229	1/1	0.52	0.33	50,50,50,50	0
57	MG	YA	3012	1/1	0.55	1.42	50,50,50,50	0
57	MG	YA	3163	1/1	0.57	0.31	9,9,9,9	0
57	MG	RA	3071	1/1	0.57	0.89	50,50,50,50	0
57	MG	QA	1628	1/1	0.61	0.43	21,21,21,21	0
57	MG	XA	1662	1/1	0.62	0.74	50,50,50,50	0
57	MG	YA	3235	1/1	0.63	0.47	34,34,34,34	0
57	MG	YA	3156	1/1	0.65	0.24	8,8,8,8	0
57	MG	RA	3217	1/1	0.67	0.91	16,16,16,16	0
57	MG	RA	3186	1/1	0.68	0.72	51,51,51,51	0
57	MG	QF	201	1/1	0.69	0.32	40,40,40,40	0
57	MG	QA	1640	1/1	0.69	0.23	6,6,6,6	0
57	MG	RA	3116	1/1	0.70	0.32	0,0,0,0	0
59	ZN	Y9	101	1/1	0.70	0.53	158,158,158,158	0
57	MG	YA	3150	1/1	0.71	0.59	16,16,16,16	0
57	MG	YA	3117	1/1	0.72	0.80	50,50,50,50	0
57	MG	RA	3004	1/1	0.72	0.44	9,9,9,9	0
57	MG	RA	3065	1/1	0.72	1.22	50,50,50,50	0
57	MG	RA	3127	1/1	0.72	0.52	15,15,15,15	0
57	MG	YA	3151	1/1	0.73	0.55	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3153	1/1	0.73	0.28	16,16,16,16	0
57	MG	RA	3181	1/1	0.73	0.33	9,9,9,9	0
57	MG	QA	1638	1/1	0.73	0.20	8,8,8,8	0
57	MG	RA	3205	1/1	0.73	0.46	33,33,33,33	0
57	MG	XA	1635	1/1	0.73	1.57	50,50,50,50	0
57	MG	XA	1650	1/1	0.73	0.31	22,22,22,22	0
57	MG	YA	3247	1/1	0.74	0.59	16,16,16,16	0
57	MG	XA	1601	1/1	0.74	1.10	50,50,50,50	0
57	MG	YA	3070	1/1	0.74	0.30	33,33,33,33	0
57	MG	QA	1665	1/1	0.75	0.48	37,37,37,37	0
57	MG	YA	3126	1/1	0.75	0.33	50,50,50,50	0
57	MG	RA	3223	1/1	0.75	0.33	16,16,16,16	0
57	MG	RA	3064	1/1	0.75	1.71	50,50,50,50	0
57	MG	RA	3140	1/1	0.75	0.24	61,61,61,61	0
57	MG	RA	3212	1/1	0.75	0.26	33,33,33,33	0
57	MG	YA	3250	1/1	0.76	1.15	50,50,50,50	0
57	MG	QA	1643	1/1	0.76	0.14	20,20,20,20	0
57	MG	YA	3223	1/1	0.76	0.93	11,11,11,11	0
57	MG	XA	1649	1/1	0.77	0.39	16,16,16,16	0
57	MG	XA	1605	1/1	0.77	0.61	16,16,16,16	0
57	MG	YA	3043	1/1	0.77	1.09	50,50,50,50	0
57	MG	QA	1602	1/1	0.78	1.00	11,11,11,11	0
57	MG	QA	1664	1/1	0.78	0.35	10,10,10,10	0
57	MG	RA	3034	1/1	0.78	1.60	50,50,50,50	0
57	MG	YA	3259	1/1	0.78	0.67	2,2,2,2	0
57	MG	YA	3261	1/1	0.78	0.96	50,50,50,50	0
57	MG	RA	3164	1/1	0.78	0.55	15,15,15,15	0
57	MG	YA	3053	1/1	0.78	1.01	50,50,50,50	0
57	MG	QA	1601	1/1	0.79	0.40	21,21,21,21	0
57	MG	RA	3201	1/1	0.79	0.36	41,41,41,41	0
57	MG	RA	3219	1/1	0.79	0.56	40,40,40,40	0
57	MG	YA	3079	1/1	0.79	1.26	50,50,50,50	0
57	MG	RA	3123	1/1	0.79	0.94	50,50,50,50	0
57	MG	XA	1634	1/1	0.79	0.21	11,11,11,11	0
57	MG	YA	3137	1/1	0.79	0.28	22,22,22,22	0
57	MG	XA	1615	1/1	0.80	0.48	50,50,50,50	0
57	MG	RA	3041	1/1	0.80	0.64	50,50,50,50	0
57	MG	QA	1603	1/1	0.80	0.52	10,10,10,10	0
57	MG	QA	1655	1/1	0.80	0.39	66,66,66,66	0
58	PAR	QA	1666	42/42	0.80	0.38	104,104,104,104	0
57	MG	YA	3119	1/1	0.80	0.41	66,66,66,66	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	YA	3245	1/1	0.80	0.57	3,3,3,3	0
57	MG	RA	3063	1/1	0.81	0.11	19,19,19,19	0
57	MG	QA	1622	1/1	0.81	0.45	52,52,52,52	0
57	MG	RA	3231	1/1	0.81	0.35	3,3,3,3	0
57	MG	RA	3184	1/1	0.81	0.36	40,40,40,40	0
57	MG	RA	3007	1/1	0.81	1.30	50,50,50,50	0
57	MG	YA	3171	1/1	0.81	0.22	7,7,7,7	0
57	MG	RA	3050	1/1	0.81	0.14	8,8,8,8	0
57	MG	RA	3225	1/1	0.81	0.29	47,47,47,47	0
57	MG	R8	101	1/1	0.82	0.39	6,6,6,6	0
57	MG	YA	3041	1/1	0.82	0.85	50,50,50,50	0
57	MG	YA	3253	1/1	0.82	1.86	50,50,50,50	0
57	MG	YA	3187	1/1	0.82	0.21	47,47,47,47	0
57	MG	YA	3193	1/1	0.82	0.74	7,7,7,7	0
57	MG	RA	3027	1/1	0.82	0.97	50,50,50,50	0
57	MG	RA	3157	1/1	0.82	0.25	39,39,39,39	0
57	MG	XA	1664	1/1	0.82	0.40	27,27,27,27	0
57	MG	YA	3105	1/1	0.83	0.74	8,8,8,8	0
57	MG	QA	1651	1/1	0.83	0.43	16,16,16,16	0
57	MG	YA	3204	1/1	0.83	0.16	11,11,11,11	0
57	MG	XA	1653	1/1	0.83	0.15	29,29,29,29	0
57	MG	RA	3128	1/1	0.83	0.23	10,10,10,10	0
57	MG	RA	3001	1/1	0.83	0.78	1,1,1,1	0
57	MG	XA	1607	1/1	0.83	0.32	17,17,17,17	0
57	MG	YA	3154	1/1	0.84	0.26	5,5,5,5	0
57	MG	YA	3191	1/1	0.84	0.39	14,14,14,14	0
57	MG	XA	1665	1/1	0.84	0.19	18,18,18,18	0
57	MG	YA	3157	1/1	0.84	0.32	8,8,8,8	0
57	MG	YA	3206	1/1	0.84	0.29	20,20,20,20	0
57	MG	QX	101	1/1	0.84	0.15	6,6,6,6	0
57	MG	YA	3024	1/1	0.84	0.53	50,50,50,50	0
57	MG	YA	3047	1/1	0.84	1.00	50,50,50,50	0
57	MG	YA	3185	1/1	0.84	0.16	74,74,74,74	0
57	MG	RA	3136	1/1	0.85	0.24	14,14,14,14	0
57	MG	QA	1639	1/1	0.85	0.26	27,27,27,27	0
57	MG	YA	3217	1/1	0.85	0.62	52,52,52,52	0
57	MG	RA	3078	1/1	0.85	0.83	50,50,50,50	0
57	MG	RA	3051	1/1	0.85	0.83	50,50,50,50	0
57	MG	XM	201	1/1	0.85	0.17	78,78,78,78	0
57	MG	RA	3119	1/1	0.85	0.25	88,88,88,88	0
57	MG	YA	3168	1/1	0.85	0.16	13,13,13,13	0
57	MG	YA	3125	1/1	0.85	0.45	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	QA	1637	1/1	0.85	0.26	3,3,3,3	0
57	MG	QA	1610	1/1	0.85	0.57	50,50,50,50	0
57	MG	YB	201	1/1	0.85	0.29	14,14,14,14	0
57	MG	RA	3194	1/1	0.85	0.15	82,82,82,82	0
57	MG	RA	3043	1/1	0.85	0.70	50,50,50,50	0
57	MG	YA	3198	1/1	0.85	0.28	2,2,2,2	0
57	MG	YA	3202	1/1	0.85	0.42	13,13,13,13	0
57	MG	XA	1652	1/1	0.86	0.26	50,50,50,50	0
57	MG	RA	3021	1/1	0.86	1.12	50,50,50,50	0
57	MG	RA	3166	1/1	0.86	0.94	9,9,9,9	0
57	MG	RA	3085	1/1	0.86	0.22	27,27,27,27	0
57	MG	XA	1606	1/1	0.86	0.64	13,13,13,13	0
57	MG	YA	3134	1/1	0.86	0.66	50,50,50,50	0
57	MG	RA	3131	1/1	0.86	0.18	25,25,25,25	0
57	MG	YA	3006	1/1	0.86	0.86	50,50,50,50	0
57	MG	RA	3023	1/1	0.86	0.49	50,50,50,50	0
57	MG	YA	3242	1/1	0.86	0.20	5,5,5,5	0
57	MG	XA	1616	1/1	0.86	0.77	50,50,50,50	0
57	MG	YA	3030	1/1	0.86	0.89	50,50,50,50	0
57	MG	YA	3031	1/1	0.86	1.04	50,50,50,50	0
57	MG	XA	1628	1/1	0.86	0.14	2,2,2,2	0
57	MG	QA	1658	1/1	0.86	0.42	46,46,46,46	0
57	MG	RA	3146	1/1	0.86	0.41	7,7,7,7	0
57	MG	YA	3262	1/1	0.86	0.33	9,9,9,9	0
57	MG	XA	1638	1/1	0.86	0.17	27,27,27,27	0
57	MG	YB	202	1/1	0.86	0.43	5,5,5,5	0
57	MG	QA	1623	1/1	0.86	0.52	13,13,13,13	0
57	MG	YA	3176	1/1	0.86	0.31	11,11,11,11	0
57	MG	RP	202	1/1	0.86	0.31	75,75,75,75	0
57	MG	YA	3083	1/1	0.86	0.21	16,16,16,16	0
57	MG	XA	1671	1/1	0.87	0.18	28,28,28,28	0
57	MG	RA	3180	1/1	0.87	0.36	1,1,1,1	0
57	MG	XA	1609	1/1	0.87	0.55	8,8,8,8	0
57	MG	RA	3222	1/1	0.87	0.37	4,4,4,4	0
57	MG	RA	3039	1/1	0.87	0.66	50,50,50,50	0
57	MG	RA	3151	1/1	0.87	0.35	37,37,37,37	0
57	MG	YA	3234	1/1	0.87	0.09	2,2,2,2	0
57	MG	RA	3121	1/1	0.87	0.15	0,0,0,0	0
57	MG	RA	3160	1/1	0.87	0.33	2,2,2,2	0
57	MG	RA	3005	1/1	0.87	0.80	50,50,50,50	0
57	MG	XA	1641	1/1	0.87	0.33	14,14,14,14	0
57	MG	YA	3249	1/1	0.87	0.70	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3237	1/1	0.87	0.23	4,4,4,4	0
57	MG	YA	3162	1/1	0.87	0.29	30,30,30,30	0
57	MG	RA	3241	1/1	0.87	0.38	0,0,0,0	0
57	MG	YA	3074	1/1	0.87	0.61	4,4,4,4	0
57	MG	YA	3169	1/1	0.87	0.86	7,7,7,7	0
57	MG	YA	3264	1/1	0.87	0.53	14,14,14,14	0
57	MG	RA	3003	1/1	0.87	1.15	50,50,50,50	0
57	MG	RA	3206	1/1	0.87	0.25	11,11,11,11	0
57	MG	RA	3211	1/1	0.87	0.25	11,11,11,11	0
57	MG	YA	3115	1/1	0.87	0.29	15,15,15,15	0
58	PAR	XA	1673	42/42	0.87	0.32	132,132,132,132	0
57	MG	RA	3174	1/1	0.87	0.15	40,40,40,40	0
57	MG	RA	3175	1/1	0.87	0.28	12,12,12,12	0
57	MG	YA	3236	1/1	0.88	0.20	12,12,12,12	0
57	MG	RA	3196	1/1	0.88	0.33	22,22,22,22	0
57	MG	YA	3138	1/1	0.88	0.49	4,4,4,4	0
57	MG	YA	3183	1/1	0.88	0.19	17,17,17,17	0
57	MG	RA	3228	1/1	0.88	0.15	7,7,7,7	0
57	MG	RA	3020	1/1	0.88	0.71	50,50,50,50	0
57	MG	YA	3113	1/1	0.88	0.48	50,50,50,50	0
57	MG	YA	3254	1/1	0.88	0.37	0,0,0,0	0
57	MG	RA	3139	1/1	0.88	0.54	18,18,18,18	0
57	MG	YA	3197	1/1	0.88	1.38	50,50,50,50	0
57	MG	YA	3045	1/1	0.88	0.55	0,0,0,0	0
57	MG	XA	1625	1/1	0.88	0.48	50,50,50,50	0
57	MG	RA	3069	1/1	0.88	0.26	9,9,9,9	0
57	MG	QA	1618	1/1	0.88	0.42	8,8,8,8	0
57	MG	Y7	101	1/1	0.88	0.27	14,14,14,14	0
57	MG	YA	3128	1/1	0.88	0.23	0,0,0,0	0
57	MG	YA	3220	1/1	0.88	0.15	26,26,26,26	0
57	MG	YA	3131	1/1	0.88	0.50	17,17,17,17	0
57	MG	XA	1656	1/1	0.88	0.89	12,12,12,12	0
57	MG	YA	3170	1/1	0.88	0.28	8,8,8,8	0
57	MG	YA	3207	1/1	0.89	0.25	0,0,0,0	0
57	MG	YA	3215	1/1	0.89	0.25	2,2,2,2	0
57	MG	RA	3202	1/1	0.89	0.31	2,2,2,2	0
57	MG	YA	3062	1/1	0.89	0.23	0,0,0,0	0
57	MG	QA	1612	1/1	0.89	0.38	4,4,4,4	0
57	MG	YA	3232	1/1	0.89	0.22	15,15,15,15	0
57	MG	RA	3178	1/1	0.89	0.37	5,5,5,5	0
57	MG	RA	3207	1/1	0.89	0.25	5,5,5,5	0
57	MG	RA	3091	1/1	0.89	0.49	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3085	1/1	0.89	0.81	50,50,50,50	0
57	MG	YA	3103	1/1	0.89	0.15	31,31,31,31	0
57	MG	YA	3246	1/1	0.89	0.51	2,2,2,2	0
57	MG	YA	3001	1/1	0.89	1.16	50,50,50,50	0
57	MG	YA	3005	1/1	0.89	0.21	2,2,2,2	0
57	MG	RA	3240	1/1	0.89	0.67	12,12,12,12	0
57	MG	YA	3116	1/1	0.89	0.40	11,11,11,11	0
57	MG	RA	3156	1/1	0.89	0.16	7,7,7,7	0
57	MG	YA	3178	1/1	0.89	0.52	32,32,32,32	0
57	MG	YA	3180	1/1	0.89	0.71	5,5,5,5	0
57	MG	RD	301	1/1	0.89	0.28	15,15,15,15	0
57	MG	YA	3027	1/1	0.89	0.17	1,1,1,1	0
57	MG	RA	3114	1/1	0.89	0.18	3,3,3,3	0
57	MG	RA	3054	1/1	0.89	0.31	4,4,4,4	0
57	MG	YA	3130	1/1	0.89	0.10	3,3,3,3	0
57	MG	YA	3040	1/1	0.89	0.69	50,50,50,50	0
57	MG	XX	101	1/1	0.89	0.17	88,88,88,88	0
57	MG	RA	3221	1/1	0.89	0.69	79,79,79,79	0
57	MG	QA	1657	1/1	0.89	0.10	19,19,19,19	0
57	MG	QA	1608	1/1	0.89	0.23	63,63,63,63	0
57	MG	RA	3122	1/1	0.89	0.30	19,19,19,19	0
57	MG	RA	3149	1/1	0.90	0.62	17,17,17,17	0
57	MG	YA	3226	1/1	0.90	0.23	10,10,10,10	0
57	MG	YA	3112	1/1	0.90	0.21	19,19,19,19	0
57	MG	QA	1633	1/1	0.90	0.43	1,1,1,1	0
57	MG	RA	3153	1/1	0.90	0.41	36,36,36,36	0
57	MG	RA	3216	1/1	0.90	0.29	1,1,1,1	0
57	MG	RA	3092	1/1	0.90	0.23	59,59,59,59	0
57	MG	YA	3173	1/1	0.90	0.20	14,14,14,14	0
57	MG	RA	3093	1/1	0.90	0.71	50,50,50,50	0
57	MG	RA	3220	1/1	0.90	0.15	25,25,25,25	0
57	MG	XA	1603	1/1	0.90	0.95	50,50,50,50	0
57	MG	RA	3038	1/1	0.90	0.73	50,50,50,50	0
57	MG	XA	1659	1/1	0.90	0.16	15,15,15,15	0
57	MG	RA	3010	1/1	0.90	0.31	56,56,56,56	0
57	MG	YA	3190	1/1	0.90	0.51	17,17,17,17	0
57	MG	YA	3055	1/1	0.90	0.19	24,24,24,24	0
57	MG	RA	3197	1/1	0.90	0.16	9,9,9,9	0
57	MG	RA	3072	1/1	0.90	0.35	0,0,0,0	0
57	MG	YA	3145	1/1	0.90	0.22	25,25,25,25	0
57	MG	YA	3073	1/1	0.90	0.29	4,4,4,4	0
57	MG	RA	3167	1/1	0.90	0.09	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3075	1/1	0.90	1.18	50,50,50,50	0
57	MG	RA	3203	1/1	0.90	0.20	34,34,34,34	0
57	MG	YA	3213	1/1	0.90	0.31	15,15,15,15	0
57	MG	RA	3006	1/1	0.90	1.06	50,50,50,50	0
57	MG	RA	3030	1/1	0.90	0.73	50,50,50,50	0
57	MG	XA	1629	1/1	0.90	0.14	32,32,32,32	0
57	MG	YA	3205	1/1	0.91	0.24	40,40,40,40	0
57	MG	RA	3182	1/1	0.91	0.50	10,10,10,10	0
57	MG	YA	3143	1/1	0.91	0.23	11,11,11,11	0
57	MG	RA	3014	1/1	0.91	0.90	50,50,50,50	0
57	MG	YA	3214	1/1	0.91	0.24	23,23,23,23	0
57	MG	RA	3218	1/1	0.91	0.35	10,10,10,10	0
57	MG	XA	1660	1/1	0.91	0.10	19,19,19,19	0
57	MG	QA	1627	1/1	0.91	0.15	1,1,1,1	0
57	MG	YA	3221	1/1	0.91	0.24	7,7,7,7	0
57	MG	RA	3188	1/1	0.91	0.13	16,16,16,16	0
57	MG	RA	3190	1/1	0.91	0.14	4,4,4,4	0
57	MG	XA	1667	1/1	0.91	0.14	4,4,4,4	0
57	MG	RA	3087	1/1	0.91	0.43	0,0,0,0	0
57	MG	YA	3080	1/1	0.91	0.83	50,50,50,50	0
57	MG	YA	3081	1/1	0.91	0.28	7,7,7,7	0
57	MG	RA	3090	1/1	0.91	0.45	4,4,4,4	0
57	MG	YA	3244	1/1	0.91	0.48	6,6,6,6	0
57	MG	RA	3035	1/1	0.91	0.81	50,50,50,50	0
57	MG	YA	3098	1/1	0.91	0.84	50,50,50,50	0
57	MG	QA	1617	1/1	0.91	0.44	2,2,2,2	0
57	MG	YA	3248	1/1	0.91	0.87	15,15,15,15	0
57	MG	YA	3172	1/1	0.91	0.14	19,19,19,19	0
57	MG	RA	3134	1/1	0.91	0.09	23,23,23,23	0
57	MG	QA	1611	1/1	0.91	0.27	4,4,4,4	0
57	MG	YA	3016	1/1	0.91	0.20	8,8,8,8	0
57	MG	YA	3179	1/1	0.91	0.27	20,20,20,20	0
57	MG	YA	3019	1/1	0.91	0.80	50,50,50,50	0
57	MG	YA	3020	1/1	0.91	0.58	6,6,6,6	0
57	MG	RA	3026	1/1	0.91	0.17	13,13,13,13	0
57	MG	RA	3011	1/1	0.91	0.38	7,7,7,7	0
57	MG	YA	3189	1/1	0.91	0.42	7,7,7,7	0
57	MG	RA	3239	1/1	0.91	0.79	10,10,10,10	0
57	MG	RA	3118	1/1	0.91	0.20	1,1,1,1	0
57	MG	YA	3035	1/1	0.91	0.80	50,50,50,50	0
57	MG	XA	1648	1/1	0.91	0.19	10,10,10,10	0
57	MG	RA	3210	1/1	0.91	0.15	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3148	1/1	0.91	0.13	0,0,0,0	0
57	MG	RA	3028	1/1	0.91	0.23	23,23,23,23	0
57	MG	RA	3195	1/1	0.92	0.14	23,23,23,23	0
57	MG	XA	1621	1/1	0.92	0.57	6,6,6,6	0
57	MG	YA	3149	1/1	0.92	0.76	7,7,7,7	0
57	MG	YA	3071	1/1	0.92	0.32	6,6,6,6	0
57	MG	XA	1666	1/1	0.92	0.21	34,34,34,34	0
57	MG	RA	3238	1/1	0.92	0.71	3,3,3,3	0
57	MG	XA	1669	1/1	0.92	0.08	15,15,15,15	0
57	MG	QA	1646	1/1	0.92	0.58	11,11,11,11	0
57	MG	QA	1626	1/1	0.92	0.17	17,17,17,17	0
57	MG	YA	3160	1/1	0.92	0.38	4,4,4,4	0
57	MG	YA	3227	1/1	0.92	0.17	15,15,15,15	0
57	MG	XA	1630	1/1	0.92	0.31	1,1,1,1	0
57	MG	XA	1631	1/1	0.92	0.18	10,10,10,10	0
57	MG	RA	3045	1/1	0.92	0.28	0,0,0,0	0
57	MG	YA	3086	1/1	0.92	0.42	19,19,19,19	0
57	MG	RA	3244	1/1	0.92	0.20	9,9,9,9	0
57	MG	YA	3099	1/1	0.92	0.79	50,50,50,50	0
57	MG	RA	3013	1/1	0.92	0.35	0,0,0,0	0
57	MG	QA	1614	1/1	0.92	0.24	21,21,21,21	0
57	MG	XA	1643	1/1	0.92	0.75	50,50,50,50	0
57	MG	XA	1646	1/1	0.92	0.17	8,8,8,8	0
57	MG	RA	3162	1/1	0.92	0.21	18,18,18,18	0
57	MG	RA	3185	1/1	0.92	0.19	3,3,3,3	0
57	MG	YA	3182	1/1	0.92	0.63	14,14,14,14	0
57	MG	XA	1602	1/1	0.92	0.92	50,50,50,50	0
57	MG	YA	3258	1/1	0.92	0.52	4,4,4,4	0
57	MG	YA	3032	1/1	0.92	0.52	50,50,50,50	0
57	MG	XA	1651	1/1	0.92	0.17	84,84,84,84	0
57	MG	YA	3188	1/1	0.92	0.12	36,36,36,36	0
57	MG	RA	3224	1/1	0.92	0.17	16,16,16,16	0
57	MG	RA	3142	1/1	0.92	0.43	8,8,8,8	0
57	MG	QA	1656	1/1	0.92	0.09	63,63,63,63	0
57	MG	XA	1657	1/1	0.92	0.26	4,4,4,4	0
57	MG	YA	3194	1/1	0.92	0.19	15,15,15,15	0
57	MG	XV	101	1/1	0.92	0.39	1,1,1,1	0
57	MG	RA	3101	1/1	0.92	0.27	9,9,9,9	0
57	MG	RA	3056	1/1	0.92	0.20	0,0,0,0	0
57	MG	YA	3054	1/1	0.92	0.59	50,50,50,50	0
57	MG	YA	3140	1/1	0.92	0.22	19,19,19,19	0
57	MG	RA	3214	1/1	0.92	0.21	43,43,43,43	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3090	1/1	0.93	0.22	17,17,17,17	0
57	MG	YA	3158	1/1	0.93	0.24	6,6,6,6	0
57	MG	YA	3219	1/1	0.93	0.10	22,22,22,22	0
57	MG	RA	3008	1/1	0.93	0.28	0,0,0,0	0
57	MG	XA	1654	1/1	0.93	0.43	17,17,17,17	0
57	MG	YA	3100	1/1	0.93	0.71	0,0,0,0	0
57	MG	YA	3102	1/1	0.93	0.84	6,6,6,6	0
57	MG	XA	1614	1/1	0.93	0.31	25,25,25,25	0
57	MG	RA	3187	1/1	0.93	0.16	10,10,10,10	0
57	MG	YA	3036	1/1	0.93	0.19	3,3,3,3	0
57	MG	RA	3233	1/1	0.93	1.47	50,50,50,50	0
57	MG	RA	3234	1/1	0.93	0.85	50,50,50,50	0
57	MG	RA	3031	1/1	0.93	0.77	50,50,50,50	0
57	MG	YA	3243	1/1	0.93	0.77	50,50,50,50	0
57	MG	RA	3215	1/1	0.93	0.28	14,14,14,14	0
57	MG	RA	3046	1/1	0.93	0.45	0,0,0,0	0
57	MG	YA	3048	1/1	0.93	0.46	50,50,50,50	0
57	MG	RA	3147	1/1	0.93	0.24	6,6,6,6	0
57	MG	RA	3171	1/1	0.93	0.44	15,15,15,15	0
57	MG	XA	1633	1/1	0.93	0.18	13,13,13,13	0
57	MG	YA	3056	1/1	0.93	0.88	50,50,50,50	0
57	MG	YA	3132	1/1	0.93	0.37	26,26,26,26	0
57	MG	XA	1670	1/1	0.93	0.19	44,44,44,44	0
57	MG	YA	3255	1/1	0.93	1.37	50,50,50,50	0
57	MG	RA	3172	1/1	0.93	0.27	17,17,17,17	0
57	MG	QA	1642	1/1	0.93	0.16	9,9,9,9	0
57	MG	YA	3072	1/1	0.93	0.49	50,50,50,50	0
57	MG	YA	3142	1/1	0.93	0.27	9,9,9,9	0
57	MG	QA	1659	1/1	0.93	0.19	4,4,4,4	0
57	MG	YA	3265	1/1	0.93	0.65	11,11,11,11	0
57	MG	RA	3104	1/1	0.93	0.13	5,5,5,5	0
57	MG	YA	3199	1/1	0.93	0.18	11,11,11,11	0
57	MG	RA	3108	1/1	0.93	0.24	5,5,5,5	0
57	MG	RA	3154	1/1	0.93	0.45	6,6,6,6	0
57	MG	QA	1650	1/1	0.93	0.23	8,8,8,8	0
57	MG	RA	3226	1/1	0.93	0.32	29,29,29,29	0
57	MG	QA	1605	1/1	0.93	0.52	4,4,4,4	0
57	MG	YA	3211	1/1	0.93	0.13	3,3,3,3	0
57	MG	RA	3016	1/1	0.93	0.65	50,50,50,50	0
57	MG	XA	1608	1/1	0.93	0.18	50,50,50,50	0
57	MG	RA	3200	1/1	0.94	0.20	31,31,31,31	0
57	MG	RA	3173	1/1	0.94	0.35	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3120	1/1	0.94	0.20	31,31,31,31	0
57	MG	RA	3037	1/1	0.94	0.43	0,0,0,0	0
57	MG	YA	3141	1/1	0.94	0.10	18,18,18,18	0
57	MG	RA	3176	1/1	0.94	0.28	30,30,30,30	0
57	MG	YA	3065	1/1	0.94	0.75	8,8,8,8	0
57	MG	RA	3048	1/1	0.94	1.15	50,50,50,50	0
57	MG	YA	3147	1/1	0.94	0.17	0,0,0,0	0
57	MG	XA	1619	1/1	0.94	0.41	8,8,8,8	0
57	MG	RA	3232	1/1	0.94	0.30	5,5,5,5	0
57	MG	RA	3002	1/1	0.94	0.19	8,8,8,8	0
57	MG	QA	1661	1/1	0.94	0.10	44,44,44,44	0
57	MG	YA	3222	1/1	0.94	0.11	2,2,2,2	0
57	MG	RA	3103	1/1	0.94	0.22	8,8,8,8	0
57	MG	RA	3130	1/1	0.94	0.17	19,19,19,19	0
57	MG	YA	3003	1/1	0.94	0.46	50,50,50,50	0
57	MG	RA	3213	1/1	0.94	0.31	10,10,10,10	0
57	MG	RA	3052	1/1	0.94	0.48	50,50,50,50	0
57	MG	YA	3084	1/1	0.94	0.28	2,2,2,2	0
57	MG	YA	3007	1/1	0.94	0.22	1,1,1,1	0
57	MG	YA	3241	1/1	0.94	0.27	13,13,13,13	0
57	MG	RA	3075	1/1	0.94	0.36	37,37,37,37	0
57	MG	YA	3166	1/1	0.94	0.13	14,14,14,14	0
57	MG	RA	3242	1/1	0.94	0.61	8,8,8,8	0
57	MG	YA	3093	1/1	0.94	0.48	4,4,4,4	0
57	MG	YA	3018	1/1	0.94	0.82	50,50,50,50	0
57	MG	RA	3243	1/1	0.94	0.38	18,18,18,18	0
57	MG	XA	1640	1/1	0.94	0.14	119,119,119,119	0
57	MG	RA	3113	1/1	0.94	0.30	1,1,1,1	0
57	MG	YA	3026	1/1	0.94	1.28	50,50,50,50	0
57	MG	YA	3251	1/1	0.94	1.32	50,50,50,50	0
57	MG	QA	1621	1/1	0.94	0.19	35,35,35,35	0
57	MG	YA	3109	1/1	0.94	0.20	9,9,9,9	0
57	MG	YA	3111	1/1	0.94	0.24	7,7,7,7	0
57	MG	YA	3181	1/1	0.94	0.57	5,5,5,5	0
57	MG	RE	302	1/1	0.94	0.20	15,15,15,15	0
57	MG	YA	3260	1/1	0.94	0.57	50,50,50,50	0
57	MG	RF	301	1/1	0.94	0.27	10,10,10,10	0
57	MG	RA	3189	1/1	0.94	0.17	16,16,16,16	0
57	MG	YA	3186	1/1	0.94	0.18	10,10,10,10	0
57	MG	RU	201	1/1	0.94	0.16	86,86,86,86	0
57	MG	QA	1630	1/1	0.94	0.13	14,14,14,14	0
57	MG	RA	3193	1/1	0.94	0.15	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	YE	301	1/1	0.94	0.24	1,1,1,1	0
57	MG	RA	3061	1/1	0.94	0.77	50,50,50,50	0
57	MG	RA	3168	1/1	0.94	0.23	10,10,10,10	0
57	MG	RA	3144	1/1	0.94	0.18	29,29,29,29	0
57	MG	XV	102	1/1	0.94	0.16	16,16,16,16	0
57	MG	RA	3019	1/1	0.94	1.19	50,50,50,50	0
57	MG	YA	3195	1/1	0.94	0.19	21,21,21,21	0
57	MG	XA	1658	1/1	0.94	0.28	17,17,17,17	0
57	MG	YA	3049	1/1	0.94	1.10	50,50,50,50	0
59	ZN	XD	301	1/1	0.94	0.39	50,50,50,50	0
57	MG	YA	3133	1/1	0.94	0.08	12,12,12,12	0
57	MG	RA	3102	1/1	0.95	0.13	10,10,10,10	0
57	MG	RA	3208	1/1	0.95	0.14	50,50,50,50	0
57	MG	XA	1642	1/1	0.95	0.23	11,11,11,11	0
57	MG	RA	3135	1/1	0.95	0.13	28,28,28,28	0
57	MG	XA	1645	1/1	0.95	0.45	8,8,8,8	0
57	MG	QA	1624	1/1	0.95	0.29	16,16,16,16	0
57	MG	YA	3203	1/1	0.95	0.40	29,29,29,29	0
57	MG	YA	3033	1/1	0.95	0.73	50,50,50,50	0
57	MG	YA	3124	1/1	0.95	0.27	13,13,13,13	0
57	MG	YA	3034	1/1	0.95	0.34	7,7,7,7	0
57	MG	XA	1647	1/1	0.95	0.34	11,11,11,11	0
57	MG	YA	3209	1/1	0.95	0.20	9,9,9,9	0
57	MG	QA	1625	1/1	0.95	0.08	74,74,74,74	0
57	MG	YA	3037	1/1	0.95	0.34	3,3,3,3	0
57	MG	YA	3039	1/1	0.95	0.23	0,0,0,0	0
57	MG	RA	3107	1/1	0.95	0.27	9,9,9,9	0
57	MG	RP	201	1/1	0.95	0.43	85,85,85,85	0
57	MG	RA	3076	1/1	0.95	0.17	3,3,3,3	0
57	MG	YA	3135	1/1	0.95	0.39	9,9,9,9	0
57	MG	YA	3044	1/1	0.95	0.53	16,16,16,16	0
57	MG	RA	3177	1/1	0.95	0.27	30,30,30,30	0
57	MG	R5	101	1/1	0.95	0.15	14,14,14,14	0
57	MG	RA	3143	1/1	0.95	0.08	12,12,12,12	0
57	MG	RA	3179	1/1	0.95	0.24	10,10,10,10	0
57	MG	YA	3229	1/1	0.95	0.13	5,5,5,5	0
57	MG	RA	3077	1/1	0.95	0.39	50,50,50,50	0
57	MG	YA	3233	1/1	0.95	0.10	3,3,3,3	0
57	MG	YA	3144	1/1	0.95	0.54	6,6,6,6	0
57	MG	QA	1652	1/1	0.95	0.21	24,24,24,24	0
57	MG	RA	3080	1/1	0.95	0.16	5,5,5,5	0
57	MG	RA	3057	1/1	0.95	0.77	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3057	1/1	0.95	0.50	8,8,8,8	0
57	MG	YA	3059	1/1	0.95	0.30	3,3,3,3	0
57	MG	QA	1653	1/1	0.95	0.11	6,6,6,6	0
57	MG	YA	3064	1/1	0.95	0.17	4,4,4,4	0
57	MG	RA	3089	1/1	0.95	0.38	0,0,0,0	0
57	MG	QA	1613	1/1	0.95	0.42	1,1,1,1	0
57	MG	RA	3047	1/1	0.95	0.16	2,2,2,2	0
57	MG	RA	3155	1/1	0.95	0.19	9,9,9,9	0
57	MG	XA	1668	1/1	0.95	0.27	6,6,6,6	0
57	MG	QA	1604	1/1	0.95	0.37	7,7,7,7	0
57	MG	RA	3126	1/1	0.95	0.22	14,14,14,14	0
57	MG	RA	3158	1/1	0.95	0.26	15,15,15,15	0
57	MG	XA	1672	1/1	0.95	0.26	5,5,5,5	0
57	MG	XA	1624	1/1	0.95	0.60	8,8,8,8	0
57	MG	YA	3082	1/1	0.95	0.58	50,50,50,50	0
57	MG	QA	1619	1/1	0.95	0.25	29,29,29,29	0
57	MG	YA	3002	1/1	0.95	0.73	50,50,50,50	0
57	MG	RA	3161	1/1	0.95	0.14	8,8,8,8	0
57	MG	RA	3098	1/1	0.95	0.40	4,4,4,4	0
57	MG	YA	3089	1/1	0.95	0.24	13,13,13,13	0
57	MG	RA	3100	1/1	0.95	1.01	50,50,50,50	0
57	MG	YA	3091	1/1	0.95	0.58	12,12,12,12	0
57	MG	YA	3092	1/1	0.95	0.40	2,2,2,2	0
57	MG	YX	101	1/1	0.95	0.41	50,50,50,50	0
57	MG	Y5	101	1/1	0.95	0.14	2,2,2,2	0
57	MG	RA	3165	1/1	0.95	0.25	3,3,3,3	0
57	MG	YA	3097	1/1	0.95	0.70	50,50,50,50	0
57	MG	YA	3008	1/1	0.95	0.21	1,1,1,1	0
57	MG	XA	1632	1/1	0.95	0.41	2,2,2,2	0
57	MG	QA	1649	1/1	0.95	0.10	19,19,19,19	0
57	MG	RA	3132	1/1	0.95	0.38	7,7,7,7	0
57	MG	RA	3133	1/1	0.95	0.14	4,4,4,4	0
57	MG	RA	3169	1/1	0.95	0.12	19,19,19,19	0
57	MG	YA	3106	1/1	0.95	0.49	50,50,50,50	0
59	ZN	XN	101	1/1	0.95	0.18	59,59,59,59	0
57	MG	YA	3021	1/1	0.95	0.56	50,50,50,50	0
57	MG	RA	3138	1/1	0.96	0.37	8,8,8,8	0
57	MG	RA	3009	1/1	0.96	0.57	7,7,7,7	0
57	MG	RA	3235	1/1	0.96	0.14	2,2,2,2	0
57	MG	RA	3170	1/1	0.96	0.41	2,2,2,2	0
57	MG	YA	3061	1/1	0.96	0.49	9,9,9,9	0
57	MG	RA	3111	1/1	0.96	0.44	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	RA	3141	1/1	0.96	0.45	5,5,5,5	0
57	MG	YA	3210	1/1	0.96	0.30	30,30,30,30	0
57	MG	RA	3112	1/1	0.96	0.38	2,2,2,2	0
57	MG	YA	3212	1/1	0.96	0.24	8,8,8,8	0
57	MG	YA	3139	1/1	0.96	0.27	13,13,13,13	0
57	MG	YA	3069	1/1	0.96	0.10	8,8,8,8	0
57	MG	RA	3081	1/1	0.96	0.34	10,10,10,10	0
57	MG	RA	3083	1/1	0.96	0.39	3,3,3,3	0
57	MG	RA	3022	1/1	0.96	0.25	5,5,5,5	0
57	MG	RA	3086	1/1	0.96	0.30	50,50,50,50	0
57	MG	RA	3060	1/1	0.96	0.70	13,13,13,13	0
57	MG	YA	3146	1/1	0.96	0.21	6,6,6,6	0
57	MG	YA	3009	1/1	0.96	0.74	50,50,50,50	0
57	MG	YA	3225	1/1	0.96	0.36	23,23,23,23	0
57	MG	YA	3076	1/1	0.96	0.39	1,1,1,1	0
57	MG	RE	301	1/1	0.96	0.13	2,2,2,2	0
57	MG	YA	3013	1/1	0.96	0.37	1,1,1,1	0
57	MG	YA	3014	1/1	0.96	0.39	1,1,1,1	0
57	MG	YA	3152	1/1	0.96	0.39	7,7,7,7	0
57	MG	YA	3015	1/1	0.96	0.77	50,50,50,50	0
57	MG	QA	1647	1/1	0.96	0.15	55,55,55,55	0
57	MG	YA	3155	1/1	0.96	0.18	8,8,8,8	0
57	MG	YA	3237	1/1	0.96	0.20	38,38,38,38	0
57	MG	YA	3017	1/1	0.96	0.28	7,7,7,7	0
57	MG	RA	3042	1/1	0.96	0.58	50,50,50,50	0
57	MG	RA	3152	1/1	0.96	0.16	26,26,26,26	0
57	MG	XA	1644	1/1	0.96	0.30	11,11,11,11	0
57	MG	QA	1662	1/1	0.96	0.08	39,39,39,39	0
57	MG	RA	3012	1/1	0.96	0.27	1,1,1,1	0
57	MG	RA	3124	1/1	0.96	0.29	19,19,19,19	0
57	MG	QA	1648	1/1	0.96	0.19	16,16,16,16	0
57	MG	YA	3094	1/1	0.96	0.38	8,8,8,8	0
57	MG	RA	3097	1/1	0.96	0.60	11,11,11,11	0
57	MG	QA	1620	1/1	0.96	0.12	21,21,21,21	0
57	MG	QA	1615	1/1	0.96	0.18	54,54,54,54	0
57	MG	XA	1604	1/1	0.96	1.07	50,50,50,50	0
57	MG	YA	3175	1/1	0.96	0.12	2,2,2,2	0
57	MG	YA	3256	1/1	0.96	0.14	9,9,9,9	0
57	MG	RA	3073	1/1	0.96	0.28	36,36,36,36	0
57	MG	RA	3192	1/1	0.96	0.16	27,27,27,27	0
57	MG	XA	1655	1/1	0.96	0.22	7,7,7,7	0
57	MG	RA	3033	1/1	0.96	0.60	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	RA	3227	1/1	0.96	0.14	39,39,39,39	0
57	MG	RA	3163	1/1	0.96	0.18	38,38,38,38	0
57	MG	XA	1610	1/1	0.96	0.26	1,1,1,1	0
57	MG	XA	1611	1/1	0.96	0.33	1,1,1,1	0
57	MG	YA	3114	1/1	0.96	0.29	16,16,16,16	0
57	MG	YB	203	1/1	0.96	0.18	17,17,17,17	0
57	MG	RA	3018	1/1	0.96	0.28	3,3,3,3	0
57	MG	YQ	201	1/1	0.96	0.20	79,79,79,79	0
57	MG	XA	1663	1/1	0.96	0.17	3,3,3,3	0
57	MG	QA	1644	1/1	0.96	0.29	24,24,24,24	0
57	MG	RA	3105	1/1	0.96	0.21	1,1,1,1	0
57	MG	YA	3120	1/1	0.96	0.16	16,16,16,16	0
57	MG	YA	3192	1/1	0.96	0.15	15,15,15,15	0
57	MG	YA	3121	1/1	0.96	0.15	8,8,8,8	0
57	MG	YA	3123	1/1	0.96	0.18	0,0,0,0	0
57	MG	XA	1617	1/1	0.96	0.26	2,2,2,2	0
57	MG	YA	3050	1/1	0.96	0.50	50,50,50,50	0
59	ZN	QN	101	1/1	0.96	0.13	56,56,56,56	0
57	MG	QA	1641	1/1	0.96	0.08	3,3,3,3	0
57	MG	XA	1620	1/1	0.96	0.15	0,0,0,0	0
57	MG	YA	3200	1/1	0.96	0.15	35,35,35,35	0
57	MG	YA	3201	1/1	0.96	0.16	10,10,10,10	0
57	MG	RA	3062	1/1	0.97	0.49	2,2,2,2	0
57	MG	RA	3145	1/1	0.97	0.42	3,3,3,3	0
57	MG	YA	3077	1/1	0.97	0.22	0,0,0,0	0
57	MG	YA	3078	1/1	0.97	0.26	10,10,10,10	0
57	MG	YA	3231	1/1	0.97	0.35	11,11,11,11	0
57	MG	YA	3177	1/1	0.97	0.07	92,92,92,92	0
57	MG	RA	3040	1/1	0.97	0.23	11,11,11,11	0
57	MG	YA	3129	1/1	0.97	0.11	1,1,1,1	0
57	MG	XA	1612	1/1	0.97	0.22	23,23,23,23	0
57	MG	XA	1613	1/1	0.97	0.08	16,16,16,16	0
57	MG	RA	3183	1/1	0.97	0.49	11,11,11,11	0
57	MG	RA	3032	1/1	0.97	0.68	50,50,50,50	0
57	MG	YA	3184	1/1	0.97	0.32	50,50,50,50	0
57	MG	RA	3095	1/1	0.97	0.42	24,24,24,24	0
57	MG	YA	3004	1/1	0.97	0.43	5,5,5,5	0
57	MG	RA	3025	1/1	0.97	0.25	7,7,7,7	0
57	MG	YA	3088	1/1	0.97	0.26	3,3,3,3	0
57	MG	XA	1618	1/1	0.97	0.31	4,4,4,4	0
57	MG	RA	3115	1/1	0.97	0.16	8,8,8,8	0
57	MG	YA	3046	1/1	0.97	0.27	12,12,12,12	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å <sup>2</sup> )	Q<0.9
57	MG	QA	1632	1/1	0.97	0.11	71,71,71,71	0
57	MG	RR	201	1/1	0.97	0.27	9,9,9,9	0
57	MG	YA	3252	1/1	0.97	0.15	4,4,4,4	0
57	MG	YA	3010	1/1	0.97	0.60	50,50,50,50	0
57	MG	YA	3095	1/1	0.97	0.32	8,8,8,8	0
57	MG	YA	3196	1/1	0.97	0.27	76,76,76,76	0
57	MG	RA	3117	1/1	0.97	0.35	4,4,4,4	0
57	MG	YA	3257	1/1	0.97	0.78	50,50,50,50	0
57	MG	YA	3052	1/1	0.97	0.33	5,5,5,5	0
57	MG	RA	3084	1/1	0.97	0.31	6,6,6,6	0
57	MG	XA	1627	1/1	0.97	0.35	9,9,9,9	0
57	MG	RA	3015	1/1	0.97	0.29	15,15,15,15	0
57	MG	QM	201	1/1	0.97	0.10	34,34,34,34	0
57	MG	YA	3263	1/1	0.97	0.29	2,2,2,2	0
57	MG	RA	3059	1/1	0.97	0.50	50,50,50,50	0
57	MG	RA	3236	1/1	0.97	0.49	2,2,2,2	0
57	MG	RA	3088	1/1	0.97	0.25	10,10,10,10	0
57	MG	YA	3110	1/1	0.97	0.16	5,5,5,5	0
57	MG	RA	3017	1/1	0.97	0.30	0,0,0,0	0
57	MG	YA	3208	1/1	0.97	0.16	0,0,0,0	0
57	MG	YP	202	1/1	0.97	0.33	5,5,5,5	0
57	MG	QA	1616	1/1	0.97	0.28	10,10,10,10	0
57	MG	YA	3022	1/1	0.97	0.75	50,50,50,50	0
57	MG	YA	3159	1/1	0.97	0.19	22,22,22,22	0
57	MG	YA	3068	1/1	0.97	0.27	1,1,1,1	0
57	MG	RA	3198	1/1	0.97	0.06	35,35,35,35	0
57	MG	XA	1636	1/1	0.97	0.23	9,9,9,9	0
57	MG	YA	3164	1/1	0.97	0.76	97,97,97,97	0
57	MG	YA	3216	1/1	0.97	0.25	30,30,30,30	0
57	MG	YA	3165	1/1	0.97	0.20	42,42,42,42	0
57	MG	XA	1637	1/1	0.97	0.27	13,13,13,13	0
57	MG	YA	3029	1/1	0.97	0.32	6,6,6,6	0
57	MG	RA	3125	1/1	0.97	0.08	14,14,14,14	0
57	MG	XA	1639	1/1	0.97	0.06	11,11,11,11	0
57	MG	YA	3122	1/1	0.97	0.58	50,50,50,50	0
57	MG	YA	3224	1/1	0.97	0.80	50,50,50,50	0
57	MG	RA	3044	1/1	0.98	0.23	8,8,8,8	0
57	MG	YA	3239	1/1	0.98	0.12	13,13,13,13	0
57	MG	YA	3101	1/1	0.98	0.12	11,11,11,11	0
57	MG	YA	3060	1/1	0.98	0.09	9,9,9,9	0
57	MG	QA	1645	1/1	0.98	0.27	37,37,37,37	0
57	MG	YA	3104	1/1	0.98	0.14	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	YA	3023	1/1	0.98	0.46	5,5,5,5	0
57	MG	RA	3099	1/1	0.98	0.33	20,20,20,20	0
57	MG	YA	3107	1/1	0.98	0.45	2,2,2,2	0
57	MG	YA	3108	1/1	0.98	0.12	10,10,10,10	0
57	MG	YA	3025	1/1	0.98	0.27	3,3,3,3	0
57	MG	QA	1609	1/1	0.98	0.12	10,10,10,10	0
57	MG	RA	3036	1/1	0.98	0.40	0,0,0,0	0
57	MG	YA	3028	1/1	0.98	0.22	8,8,8,8	0
57	MG	QA	1606	1/1	0.98	0.06	23,23,23,23	0
57	MG	RA	3204	1/1	0.98	0.53	15,15,15,15	0
57	MG	RA	3082	1/1	0.98	0.14	5,5,5,5	0
57	MG	QA	1635	1/1	0.98	0.14	11,11,11,11	0
57	MG	RA	3129	1/1	0.98	0.10	19,19,19,19	0
57	MG	YA	3161	1/1	0.98	0.35	14,14,14,14	0
57	MG	YA	3118	1/1	0.98	0.46	12,12,12,12	0
57	MG	RA	3029	1/1	0.98	0.24	5,5,5,5	0
57	MG	RA	3209	1/1	0.98	0.12	44,44,44,44	0
57	MG	RA	3066	1/1	0.98	0.24	23,23,23,23	0
57	MG	RA	3067	1/1	0.98	0.17	6,6,6,6	0
57	MG	YA	3167	1/1	0.98	0.18	39,39,39,39	0
57	MG	RA	3109	1/1	0.98	0.25	11,11,11,11	0
57	MG	RA	3110	1/1	0.98	0.10	15,15,15,15	0
57	MG	RA	3068	1/1	0.98	0.48	4,4,4,4	0
57	MG	YA	3042	1/1	0.98	0.46	50,50,50,50	0
57	MG	YA	3218	1/1	0.98	0.27	5,5,5,5	0
57	MG	YP	201	1/1	0.98	0.05	83,83,83,83	0
57	MG	YA	3127	1/1	0.98	0.10	12,12,12,12	0
57	MG	QA	1654	1/1	0.98	0.12	17,17,17,17	0
57	MG	RA	3070	1/1	0.98	0.15	21,21,21,21	0
57	MG	RA	3053	1/1	0.98	0.63	50,50,50,50	0
57	MG	RB	201	1/1	0.98	0.08	38,38,38,38	0
57	MG	RB	202	1/1	0.98	0.20	15,15,15,15	0
57	MG	QA	1636	1/1	0.98	0.18	11,11,11,11	0
57	MG	RA	3191	1/1	0.98	0.26	38,38,38,38	0
57	MG	XA	1622	1/1	0.98	0.11	6,6,6,6	0
57	MG	YA	3136	1/1	0.98	0.12	1,1,1,1	0
57	MG	QA	1663	1/1	0.98	0.09	19,19,19,19	0
59	ZN	QD	301	1/1	0.98	0.19	12,12,12,12	0
57	MG	RA	3074	1/1	0.98	0.19	20,20,20,20	0
57	MG	XA	1626	1/1	0.98	0.21	1,1,1,1	0
57	MG	RA	3094	1/1	0.98	0.36	3,3,3,3	0
57	MG	RA	3024	1/1	0.98	0.36	15,15,15,15	0

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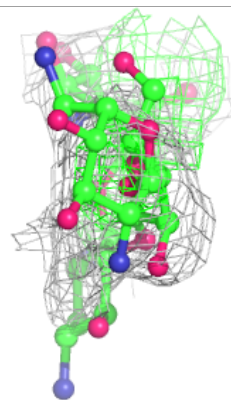
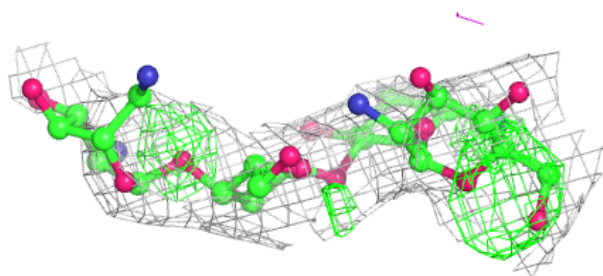
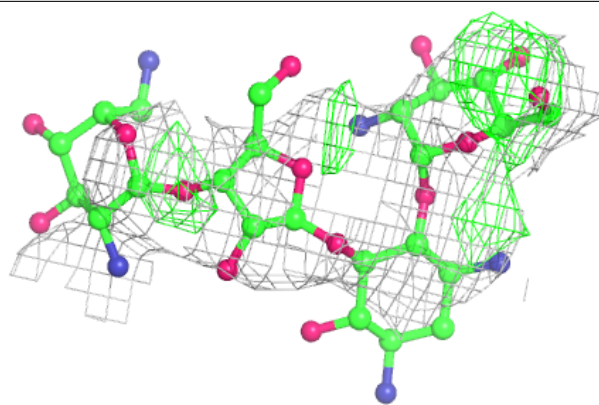
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors( $\text{\AA}^2$ )	Q<0.9
57	MG	RA	3096	1/1	0.98	0.48	11,11,11,11	0
57	MG	YA	3230	1/1	0.99	0.20	19,19,19,19	0
57	MG	XA	1623	1/1	0.99	0.22	23,23,23,23	0
57	MG	RA	3058	1/1	0.99	0.29	0,0,0,0	0
57	MG	QA	1607	1/1	0.99	0.06	30,30,30,30	0
57	MG	YA	3063	1/1	0.99	0.29	15,15,15,15	0
57	MG	YA	3011	1/1	0.99	0.41	3,3,3,3	0
57	MG	YA	3087	1/1	0.99	0.37	6,6,6,6	0
57	MG	RA	3106	1/1	0.99	0.26	3,3,3,3	0
57	MG	YA	3238	1/1	0.99	0.10	33,33,33,33	0
57	MG	YA	3066	1/1	0.99	0.19	9,9,9,9	0
57	MG	YA	3240	1/1	0.99	0.14	15,15,15,15	0
57	MG	YA	3067	1/1	0.99	0.45	7,7,7,7	0
57	MG	QA	1660	1/1	0.99	0.33	16,16,16,16	0
57	MG	RA	3049	1/1	0.99	0.34	1,1,1,1	0
57	MG	RA	3055	1/1	0.99	0.28	12,12,12,12	0
57	MG	RA	3137	1/1	0.99	0.10	3,3,3,3	0
57	MG	RA	3159	1/1	0.99	0.14	18,18,18,18	0
57	MG	YA	3096	1/1	0.99	0.24	17,17,17,17	0
57	MG	YA	3051	1/1	0.99	0.21	5,5,5,5	0
57	MG	QA	1629	1/1	0.99	0.08	38,38,38,38	0
57	MG	XA	1661	1/1	0.99	0.07	14,14,14,14	0
57	MG	QA	1634	1/1	0.99	0.12	44,44,44,44	0
57	MG	RA	3150	1/1	0.99	0.26	4,4,4,4	0
57	MG	YA	3174	1/1	0.99	0.37	3,3,3,3	0
57	MG	YA	3038	1/1	0.99	0.25	5,5,5,5	0
57	MG	RA	3199	1/1	0.99	0.16	1,1,1,1	0
57	MG	YA	3058	1/1	0.99	0.20	13,13,13,13	0
57	MG	YA	3228	1/1	0.99	0.17	67,67,67,67	0
57	MG	RA	3079	1/1	0.99	0.40	0,0,0,0	0

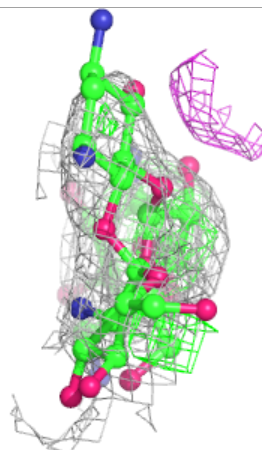
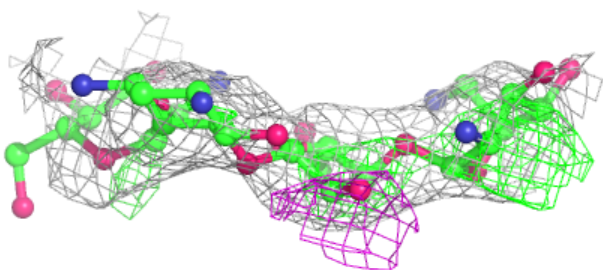
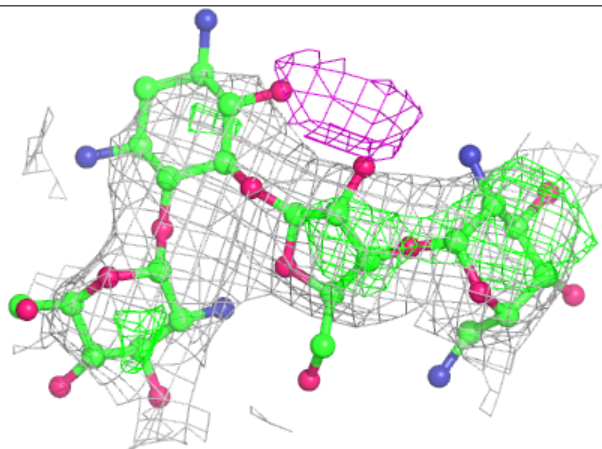
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.

**Electron density around PAR QA 1666:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)

**Electron density around PAR XA 1673:**

$2mF_o-DF_c$  (at 0.7 rmsd) in gray  
 $mF_o-DF_c$  (at 3 rmsd) in purple (negative)  
and green (positive)



## 6.5 Other polymers [i](#)

There are no such residues in this entry.