Full wwPDB X-ray Structure Validation Report ⓘ

Sep 12, 2023 – 06:16 AM EDT

PDB ID	:	4L47
Title	:	Crystal Structure of Frameshift Suppressor tRNA SufA6 Bound to Codon CCC-U on the Ribosome
Authors	:	Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on	:	2013-06-07
Resolution	:	3.22 Å(reported)

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

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

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

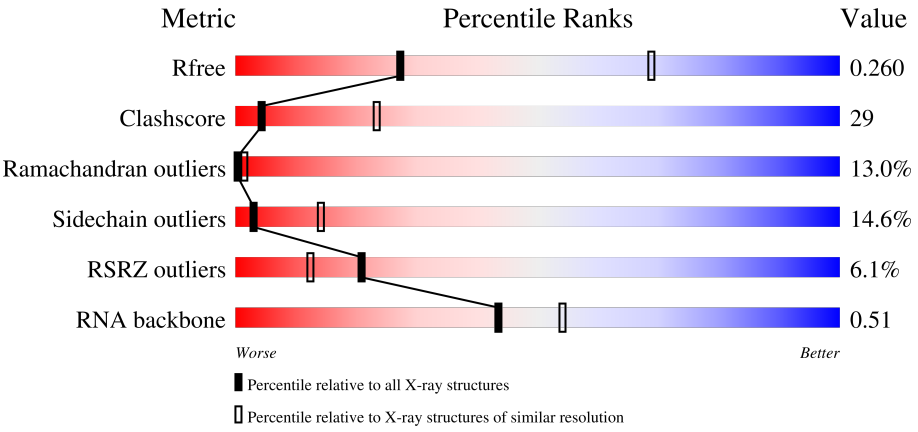
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 3.22 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	1335 (3.24-3.20)
Clashscore	141614	1460 (3.24-3.20)
Ramachandran outliers	138981	1437 (3.24-3.20)
Sidechain outliers	138945	1436 (3.24-3.20)
RSRZ outliers	127900	1291 (3.24-3.20)
RNA backbone	3102	1023 (3.54-2.90)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=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	3% 54% 34% 9% ••
1	XA	1522	3% 54% 33% 10% ••
2	QB	256	7% 16% 59% 16% • 7%
2	XB	256	5% 17% 59% 16% • 7%

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Mol	Chain	Length	Quality of chain
3	QC	239	8% 23% 53% 9% 14%
3	XC	239	2% 23% 53% 9% 14%
4	QD	209	4% 26% 59% 13%
4	XD	209	4% 26% 61% 11%
5	QE	162	6% 30% 52% 11% 7%
5	XE	162	2% 32% 48% 13% 7%
6	QF	101	1% 26% 58% 15%
6	XF	101	2% 24% 59% 16%
7	QG	156	9% 28% 62% 10%
7	XG	156	7% 29% 60% 10%
8	QH	138	5% 29% 58% 12%
8	XH	138	1% 26% 61% 12%
9	QI	128	12% 20% 66% 13%
9	XI	128	8% 20% 65% 14%
10	QJ	105	30% 18% 63% 12% 6%
10	XJ	105	12% 17% 64% 12% 6%
11	QK	129	9% 33% 48% 10% 8%
11	XK	129	3% 33% 49% 10% 8%
12	QL	132	5% 30% 48% 14% 5%
12	XL	132	5% 30% 49% 14% 5%
13	QM	126	9% 20% 53% 21%
13	XM	126	6% 22% 50% 21%
14	QN	61	16% 16% 59% 15% 8%
14	XN	61	3% 15% 61% 18% 5%
15	QO	89	7% 33% 55% 11%

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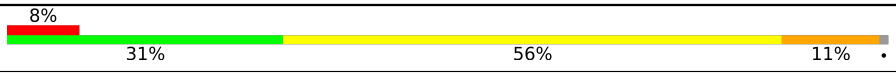
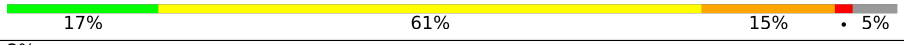
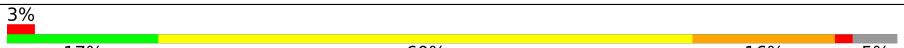
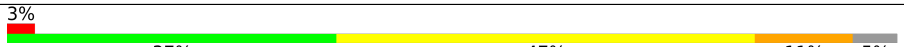
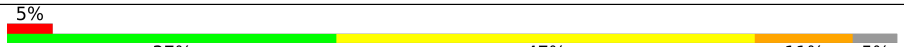
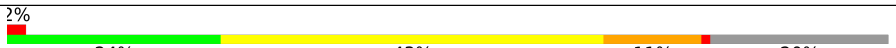
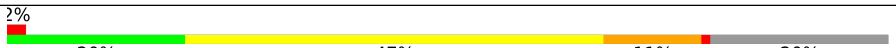
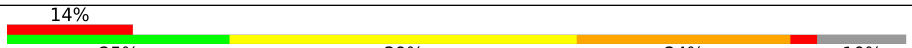
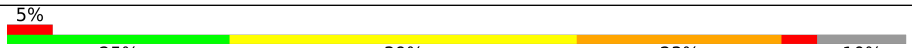
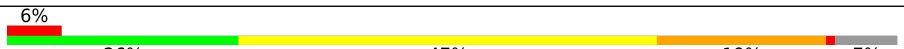
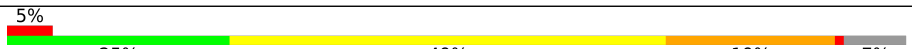
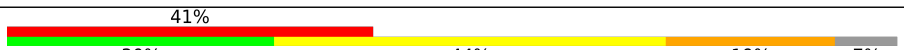
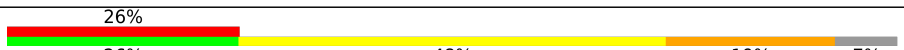
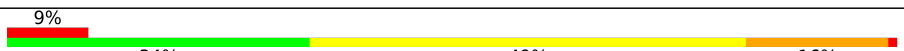
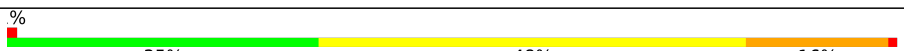
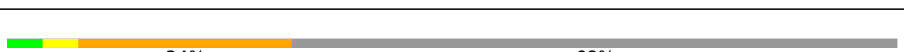
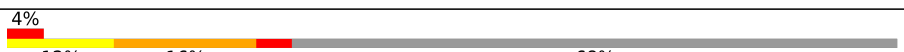
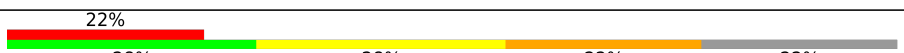
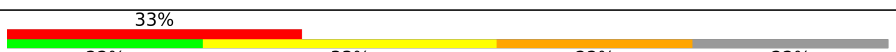
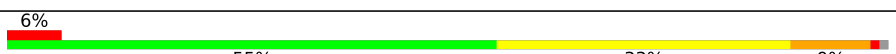
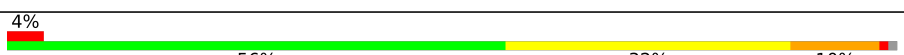
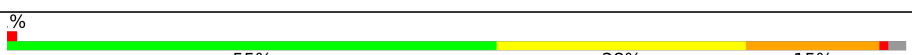
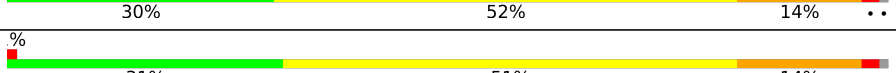
Mol	Chain	Length	Quality of chain
15	XO	89	
16	QP	88	
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QX	25	
23	XX	25	
24	QY	18	
24	XY	18	
25	RA	2916	
25	YA	2916	
26	RB	122	
26	YB	122	
27	RD	276	
27	YD	276	

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Mol	Chain	Length	Quality of chain
28	RE	206	3% 22% 48% 24% 5%
28	YE	206	% 24% 47% 24% 5%
29	RF	210	% 35% 47% 13%
29	YF	210	35% 48% 12%
30	RG	182	39% 23% 58% 16%
30	YG	182	8% 23% 58% 16%
31	RH	180	26% 23% 44% 19% 8% 6%
31	YH	180	5% 23% 44% 19% 8% 6%
32	RI	148	12% 39% 43% 16%
32	YI	148	4% 38% 43% 18%
33	RN	140	5% 18% 54% 26%
33	YN	140	% 19% 54% 26%
34	RO	122	36% 53% 9%
34	YO	122	34% 55% 9%
35	RP	150	7% 19% 51% 23% 8%
35	YP	150	3% 19% 51% 23% 7%
36	RQ	141	6% 32% 50% 16%
36	YQ	141	4% 30% 51% 16%
37	RR	118	32% 49% 16%
37	YR	118	35% 47% 16%
38	RS	112	3% 12% 62% 19% 5%
38	YS	112	3% 13% 62% 20%
39	RT	146	9% 21% 51% 19% 6%
39	YT	146	5% 21% 51% 19% 6%
40	RU	118	3% 34% 52% 12%

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Mol	Chain	Length	Quality of chain
40	YU	118	2% 32% 53% 13%
41	RV	101	3% 27% 52% 21%
41	YV	101	2% 27% 52% 21%
42	RW	113	3% 28% 50% 19%
42	YW	113	% 29% 50% 19%
43	RX	96	5% 40% 42% 15%
43	YX	96	38% 44% 15%
44	RY	110	17% 15% 45% 28% 7%
44	YY	110	5% 19% 42% 28% 7%
45	RZ	206	10% 44% 32% 12% 11%
45	YZ	206	7% 46% 32% 10% 11%
46	R0	85	% 67% 24% 6%
46	Y0	85	73% 19% 5%
47	R1	98	10% 30% 48% 18%
47	Y1	98	6% 29% 49% 18%
48	R2	72	% 22% 54% 18%
48	Y2	72	4% 22% 54% 18%
49	R3	60	12% 33% 50% 15%
49	Y3	60	5% 33% 50% 13%
50	R4	71	38% 7% 42% 39% 11%
50	Y4	71	24% 7% 42% 39% 11%
51	R5	60	18% 23% 47% 22% 7%
51	Y5	60	13% 25% 45% 22% 7%
52	R6	54	41% 9% 44% 31% 6% 9%
52	Y6	54	44% 9% 44% 31% 6% 9%

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Mol	Chain	Length	Quality of chain
53	R7	49	8% 35% 57% 8%
53	Y7	49	6% 37% 55% 8%
54	R8	65	8% 20% 46% 26% 6%
54	Y8	65	3% 22% 43% 28% 6%
55	R9	37	76% 51% 46%
55	Y9	37	49% 62% 32% 5%
56	Z6	3	33% 33% 33%
56	Z8	3	33% 33% 33%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QA	1629	-	-	-	X
57	MG	RA	3083	-	-	-	X
57	MG	RA	3090	-	-	-	X
57	MG	RA	3157	-	-	-	X
57	MG	RA	3178	-	-	-	X
57	MG	RA	3193	-	-	-	X
57	MG	RA	3194	-	-	-	X
57	MG	RA	3210	-	-	-	X
57	MG	RA	3221	-	-	-	X
57	MG	XA	1657	-	-	-	X
57	MG	XA	1662	-	-	-	X
57	MG	YA	3121	-	-	-	X
57	MG	YA	3128	-	-	-	X
57	MG	YA	3239	-	-	-	X
57	MG	YA	3268	-	-	-	X

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 291957 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

- 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
10	XJ	99	Total	C	N	O	S	0	0	0
			801	504	157	139	1			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 24 is a RNA chain called messenger RNA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	66	Total	Mg	0	0
			66	66		
57	QF	1	Total	Mg	0	0
			1	1		
57	QH	1	Total	Mg	0	0
			1	1		
57	QM	1	Total	Mg	0	0
			1	1		
57	QV	2	Total	Mg	0	0
			2	2		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	RA	241	Total Mg 241 241	0	0
57	RB	2	Total Mg 2 2	0	0
57	RD	1	Total Mg 1 1	0	0
57	RE	2	Total Mg 2 2	0	0
57	RF	1	Total Mg 1 1	0	0
57	RP	2	Total Mg 2 2	0	0
57	RR	1	Total Mg 1 1	0	0
57	RU	1	Total Mg 1 1	0	0
57	R0	1	Total Mg 1 1	0	0
57	R5	1	Total Mg 1 1	0	0
57	R8	1	Total Mg 1 1	0	0
57	XA	72	Total Mg 72 72	0	0
57	XM	1	Total Mg 1 1	0	0
57	XT	1	Total Mg 1 1	0	0
57	XV	1	Total Mg 1 1	0	0
57	XX	1	Total Mg 1 1	0	0
57	YA	269	Total Mg 269 269	0	0
57	YB	3	Total Mg 3 3	0	0
57	YD	1	Total Mg 1 1	0	0
57	YE	2	Total Mg 2 2	0	0
57	YX	1	Total Mg 1 1	0	0

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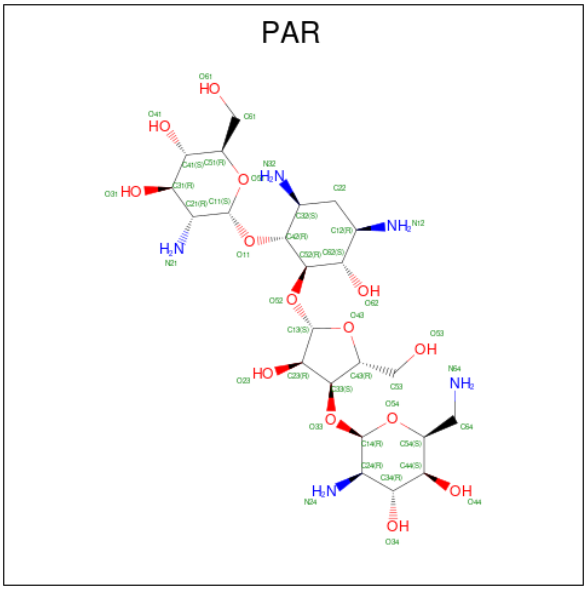
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	Y5	1	Total Mg 1 1	0	0
57	Y7	1	Total Mg 1 1	0	0

- Molecule 58 is PAROMOMYCIN (three-letter code: PAR) (formula: $C_{23}H_{45}N_5O_{14}$).



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

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

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

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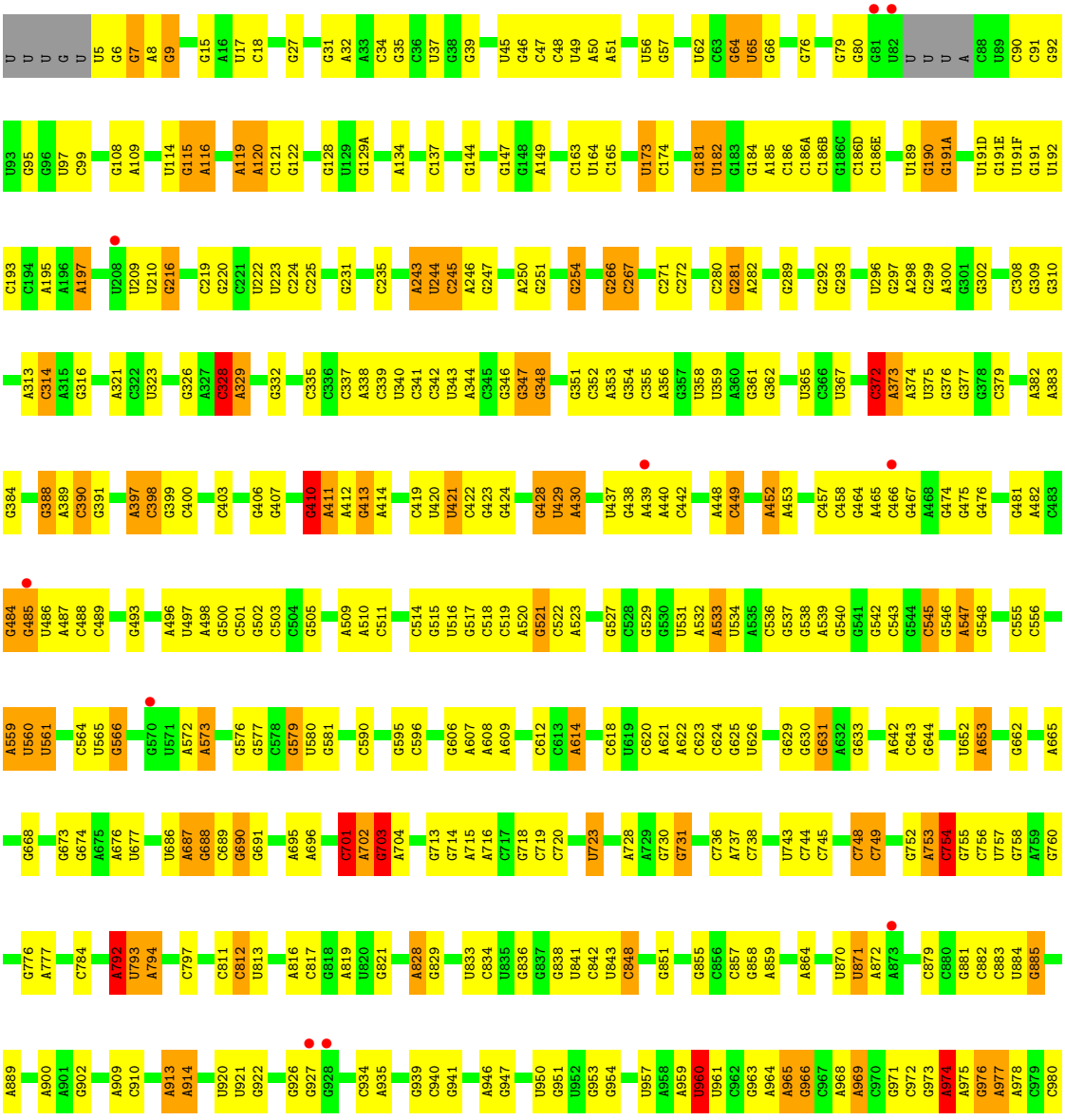
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
59	Y9	1	1	1	0	0

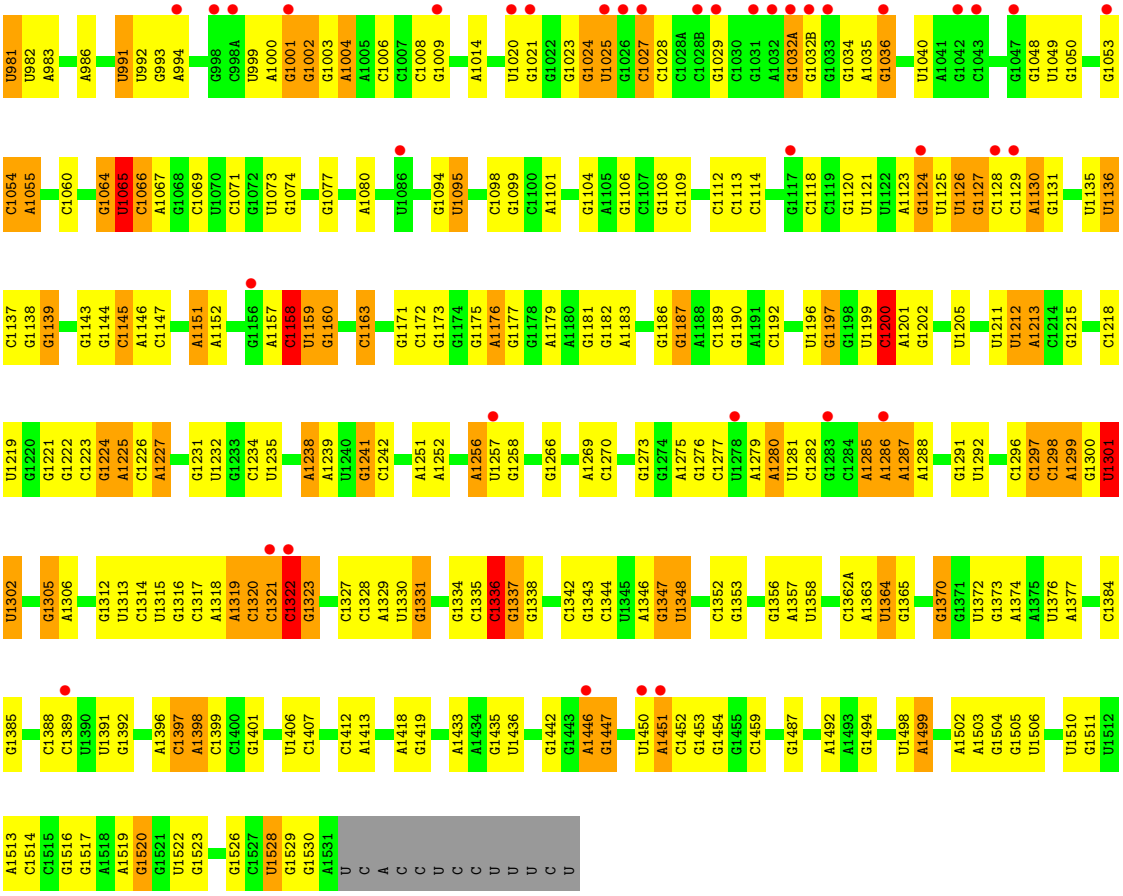
3 Residue-property plots (i)

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 rRNA

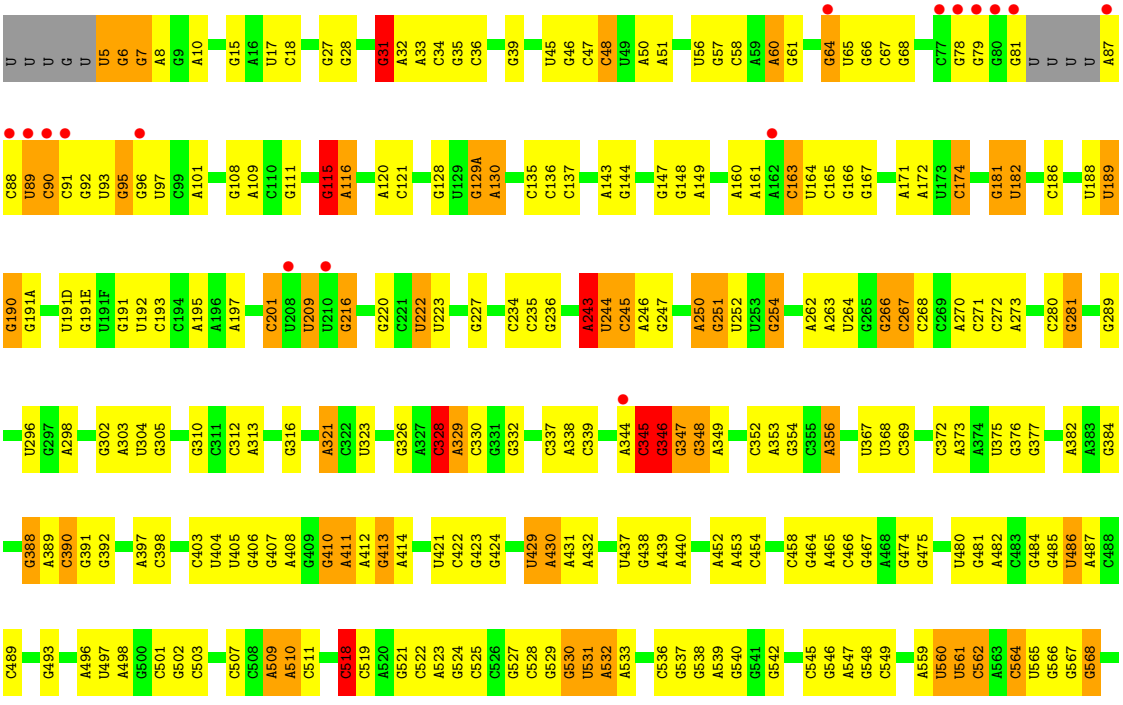
Chain QA:

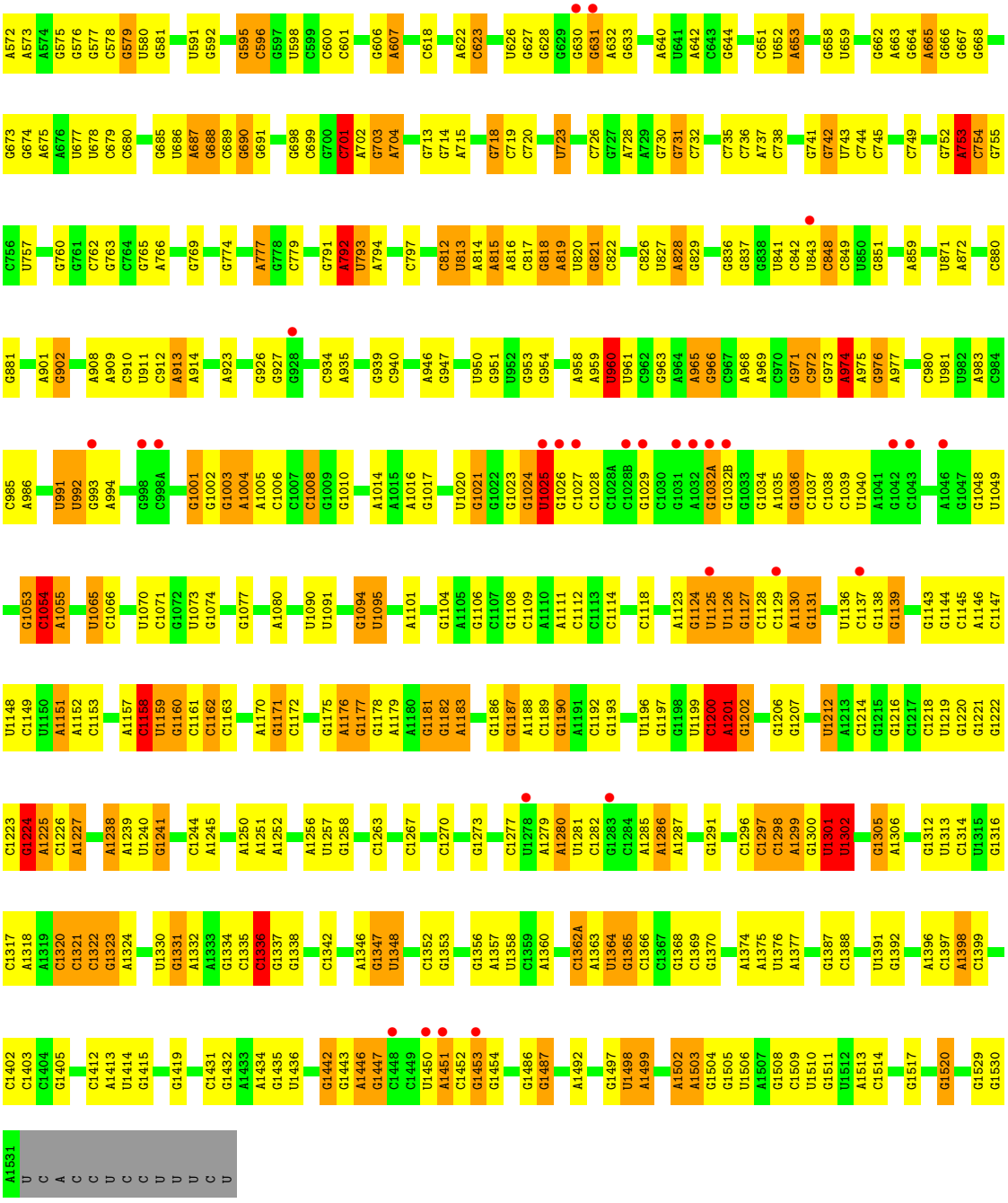




• Molecule 1: 16S rRNA

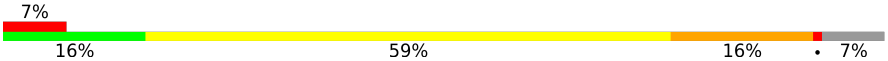
Chain XA:

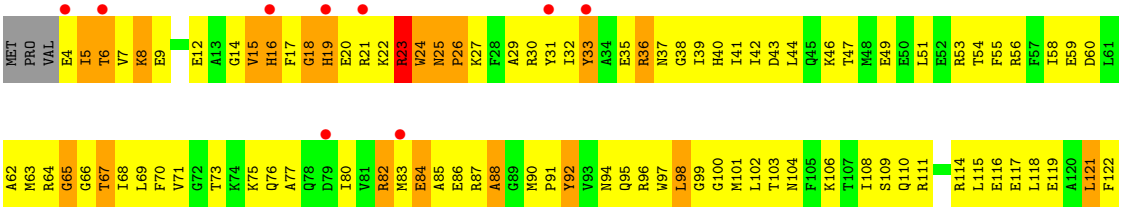


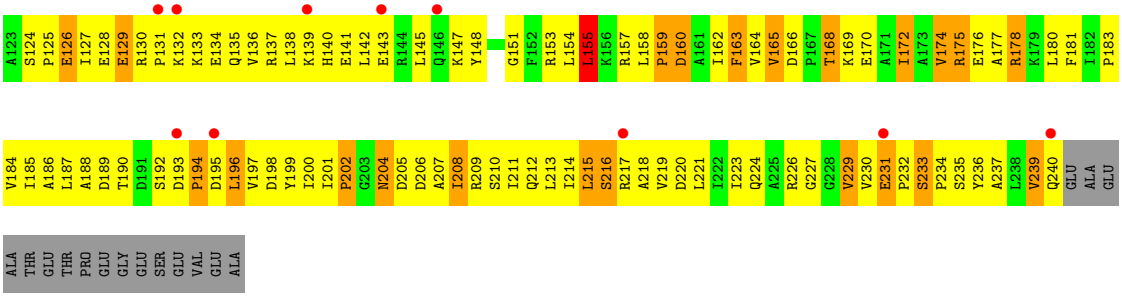


• Molecule 2: 30S ribosomal protein S2

Chain QB:

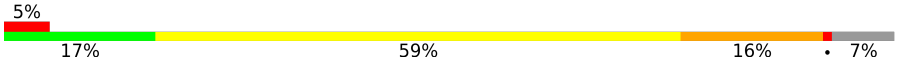


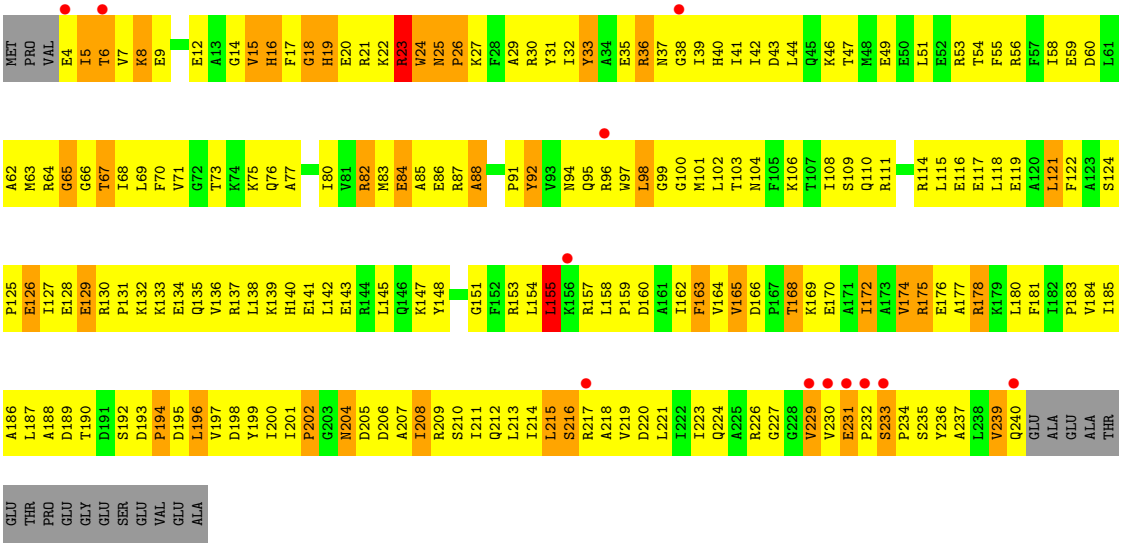




• Molecule 2: 30S ribosomal protein S2

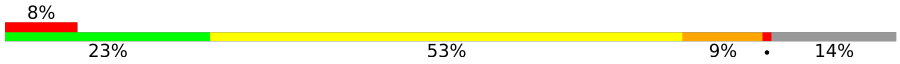
Chain XB:

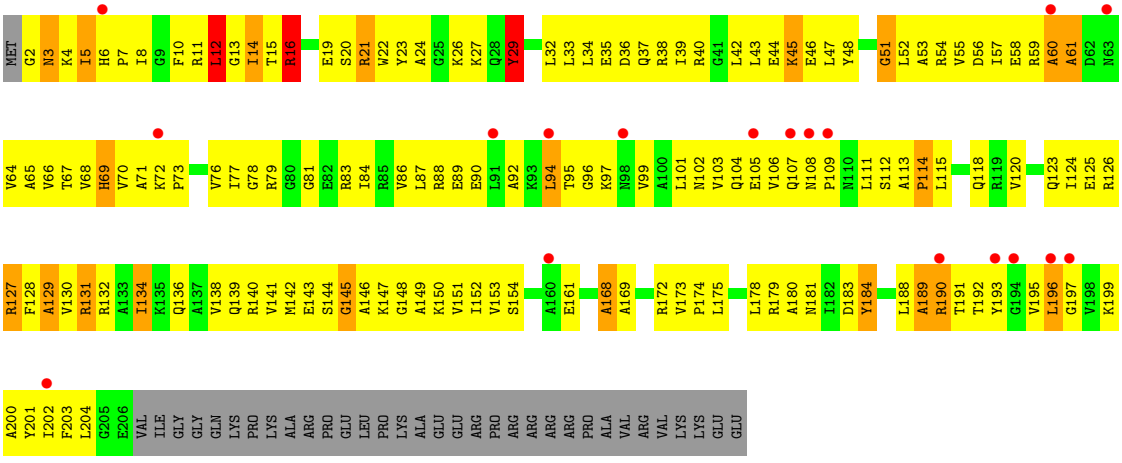




• Molecule 3: 30S ribosomal protein S3

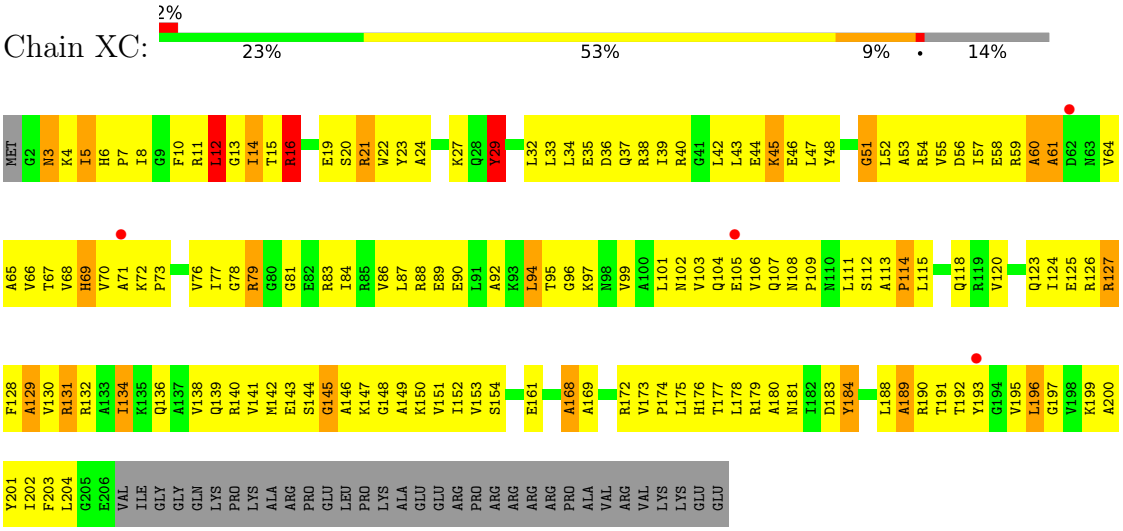
Chain QC:





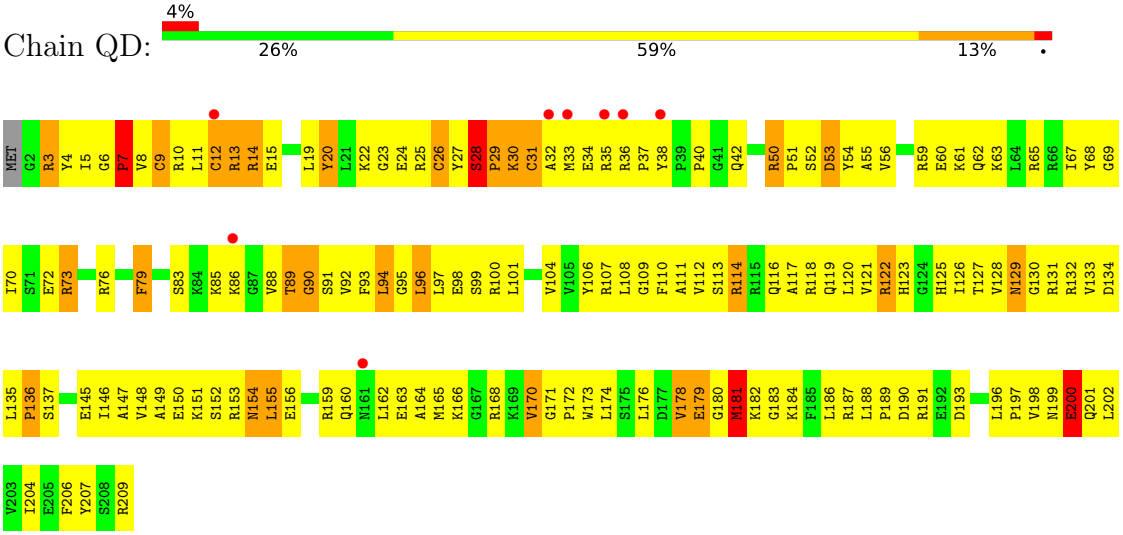
• Molecule 3: 30S ribosomal protein S3

Chain XC:



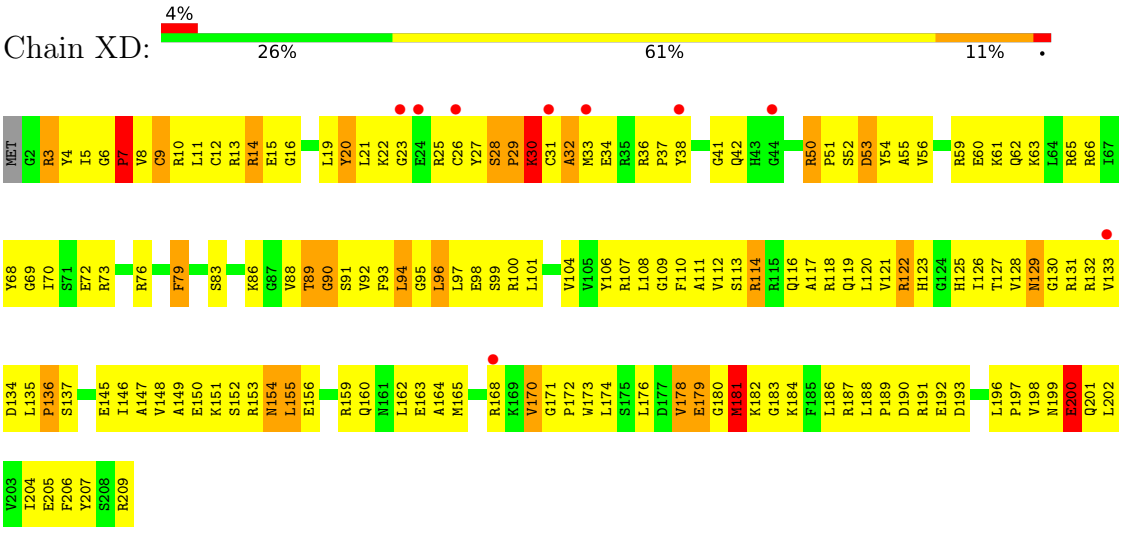
• Molecule 4: 30S ribosomal protein S4

Chain QD:



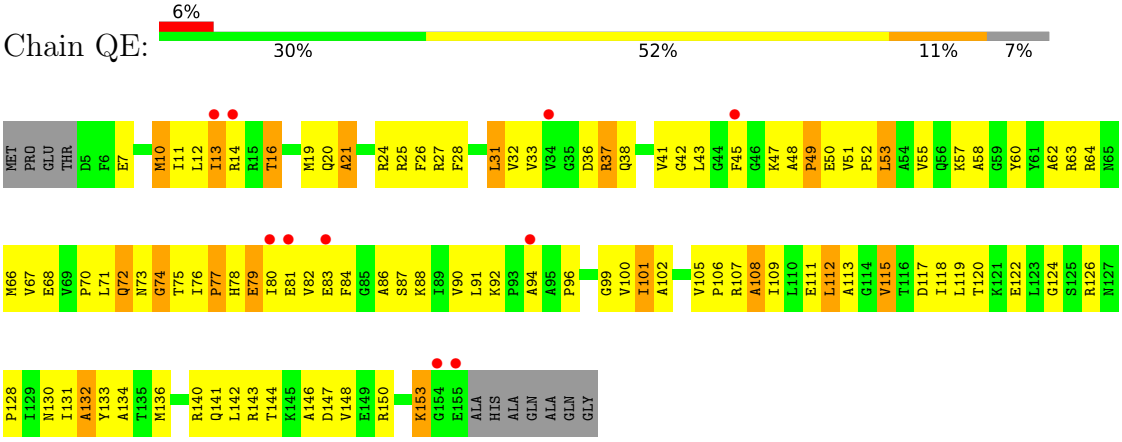
• Molecule 4: 30S ribosomal protein S4

Chain XD:



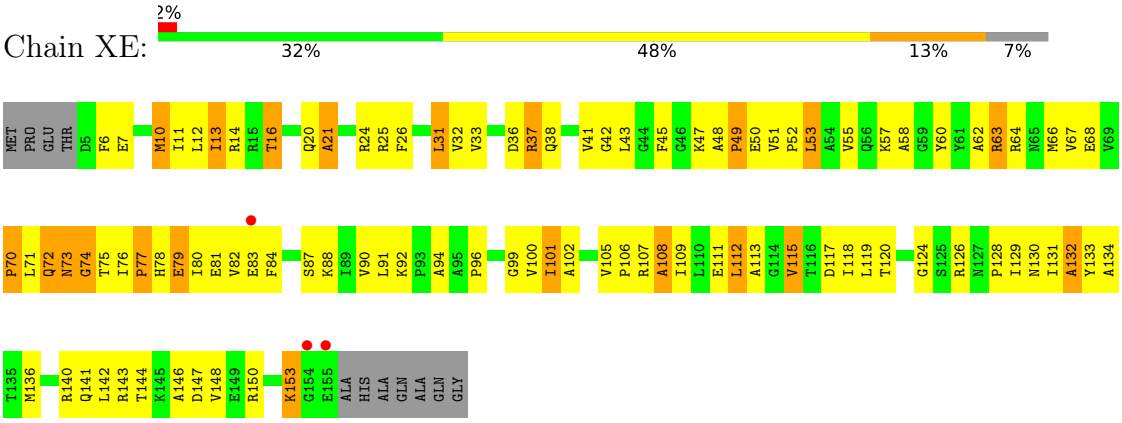
• Molecule 5: 30S ribosomal protein S5

Chain QE:



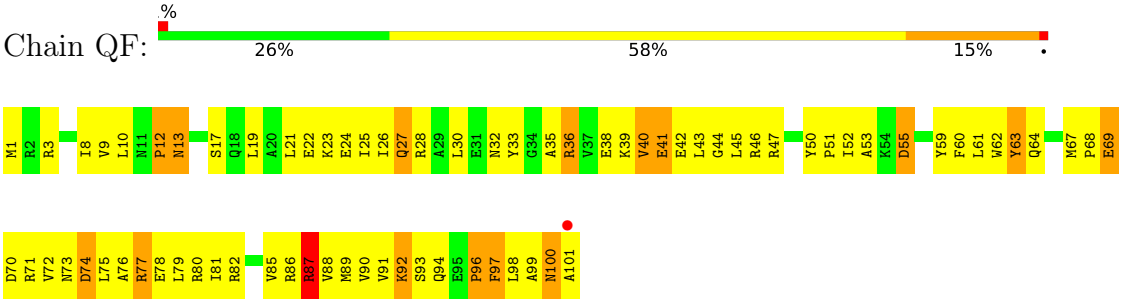
• Molecule 5: 30S ribosomal protein S5

Chain XE:



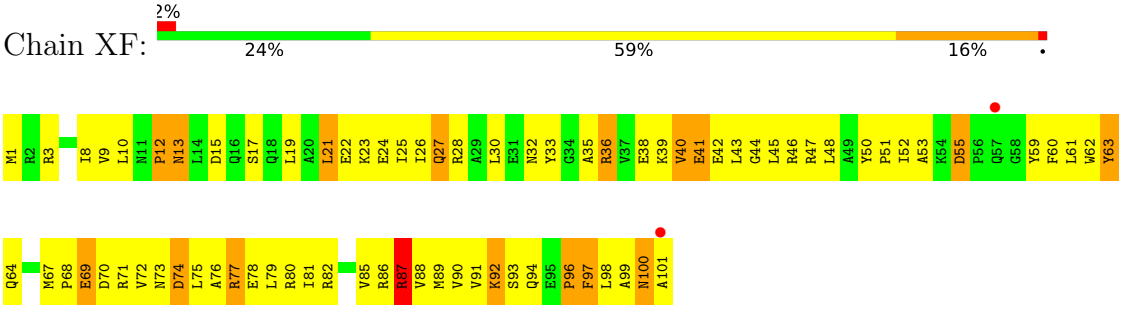
• Molecule 6: 30S ribosomal protein S6

Chain QF:



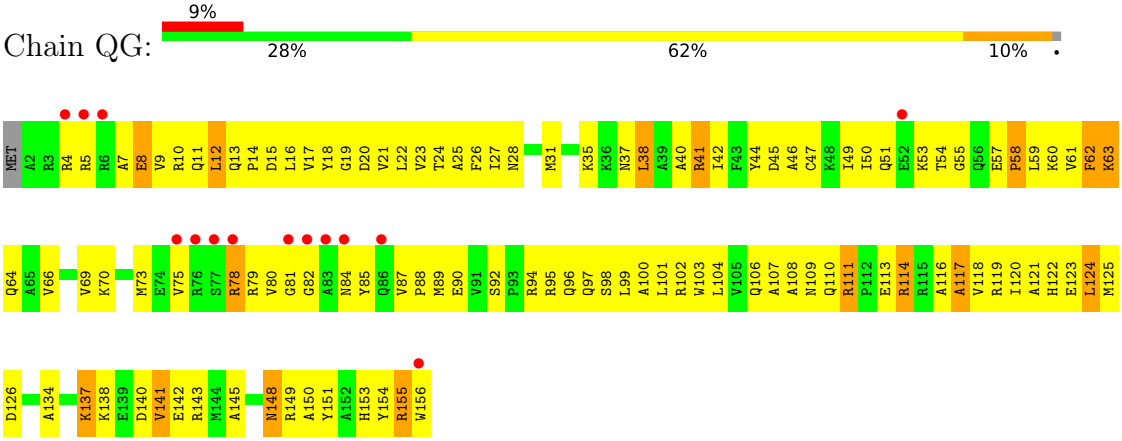
• Molecule 6: 30S ribosomal protein S6

Chain XF:



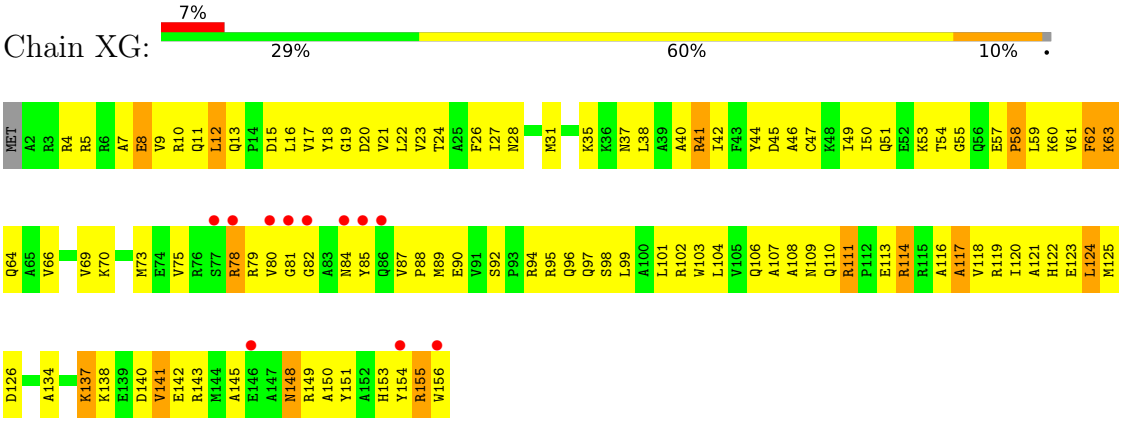
• Molecule 7: 30S ribosomal protein S7

Chain QG:



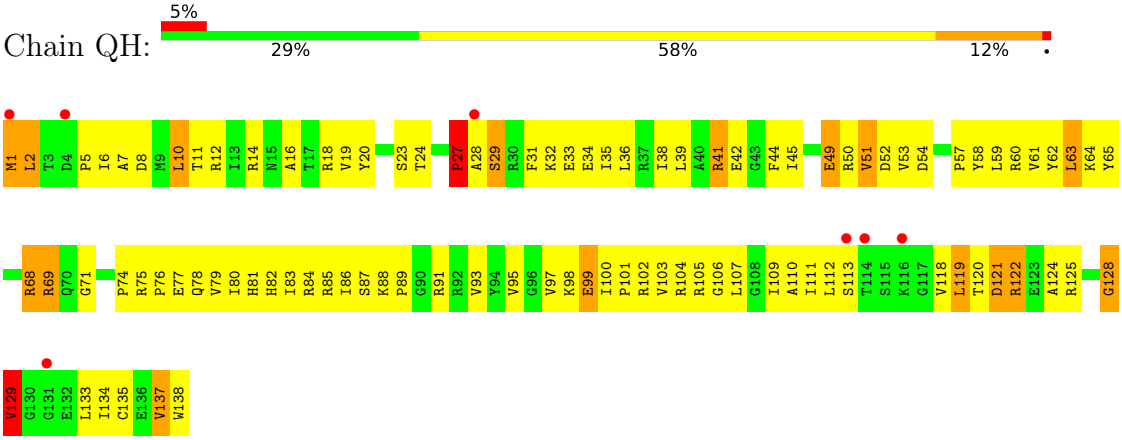
• Molecule 7: 30S ribosomal protein S7

Chain XG:



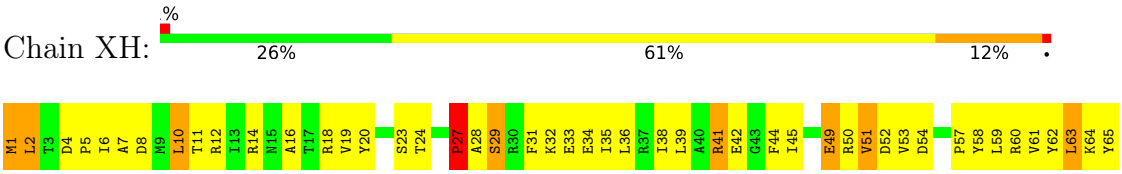
• Molecule 8: 30S ribosomal protein S8

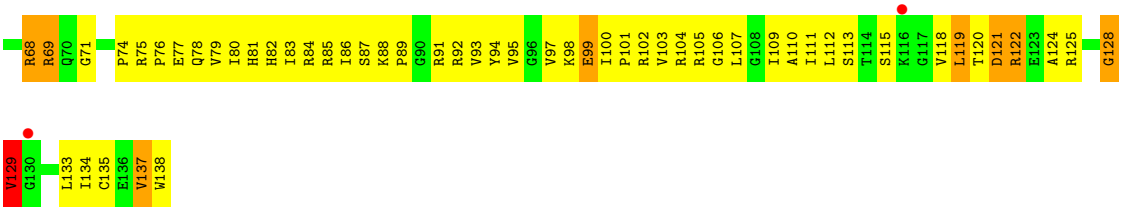
Chain QH:



• Molecule 8: 30S ribosomal protein S8

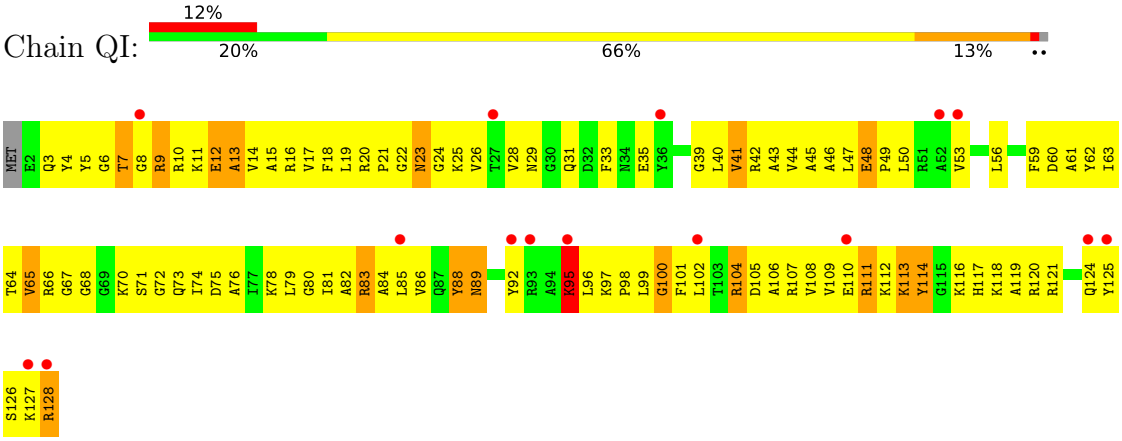
Chain XH:





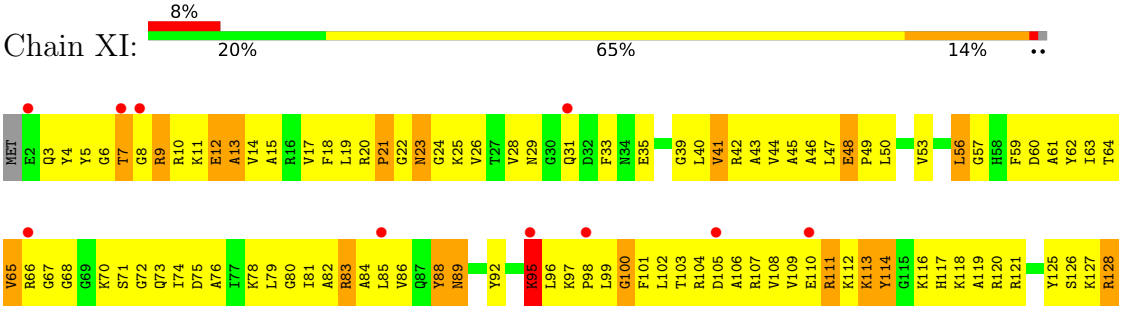
• Molecule 9: 30S ribosomal protein S9

Chain QI:



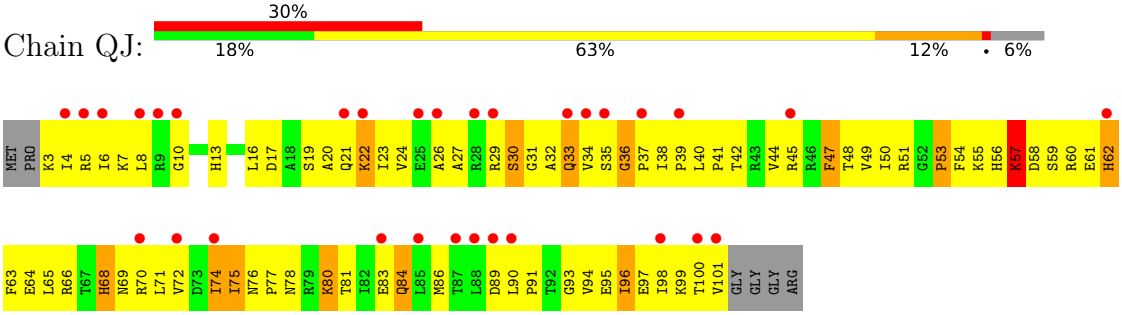
• Molecule 9: 30S ribosomal protein S9

Chain XI:



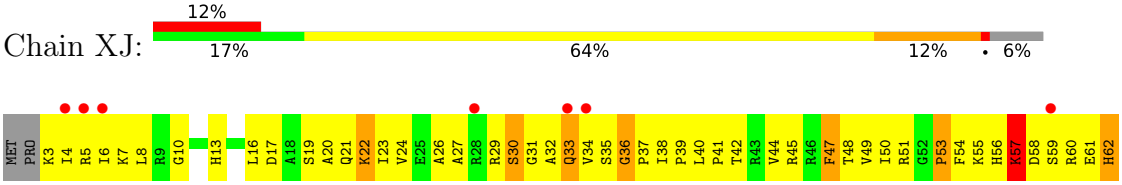
• Molecule 10: 30S ribosomal protein S10

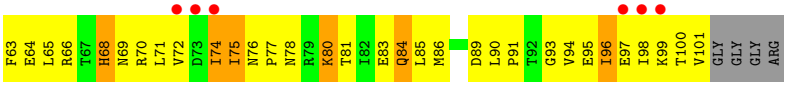
Chain QJ:



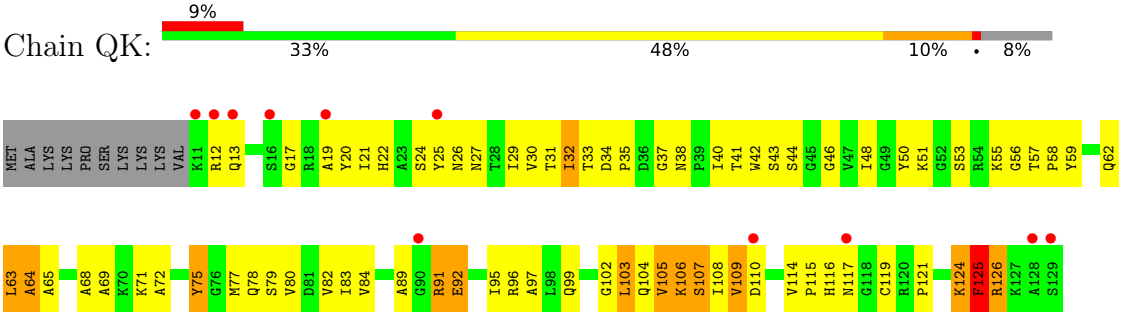
• Molecule 10: 30S ribosomal protein S10

Chain XJ:

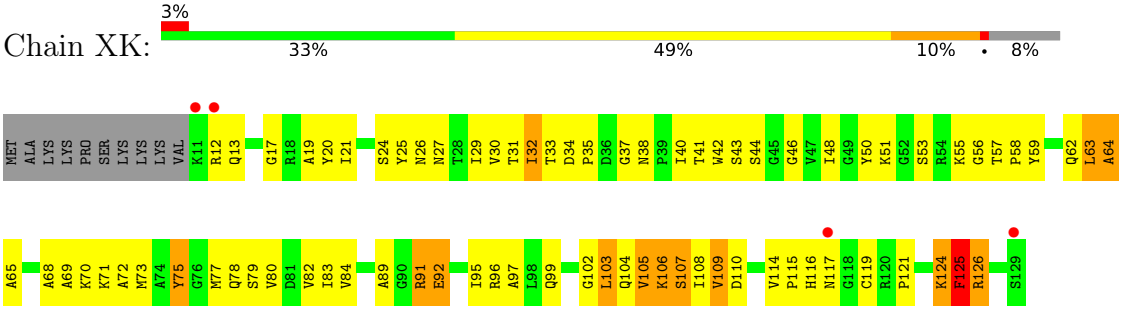




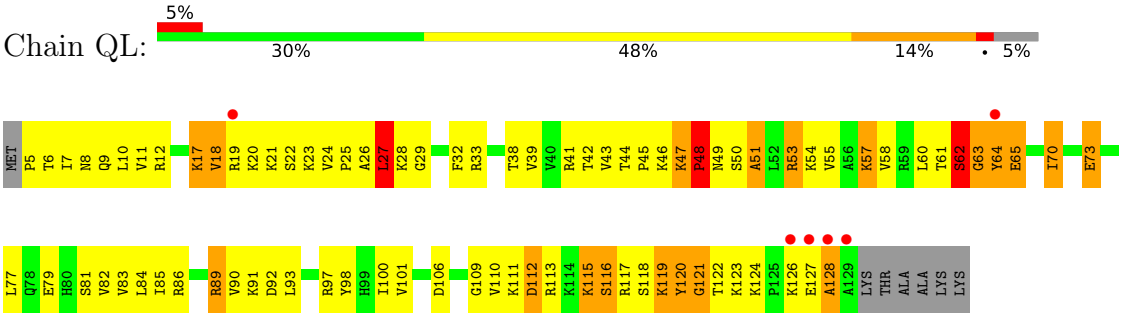
• Molecule 11: 30S ribosomal protein S11



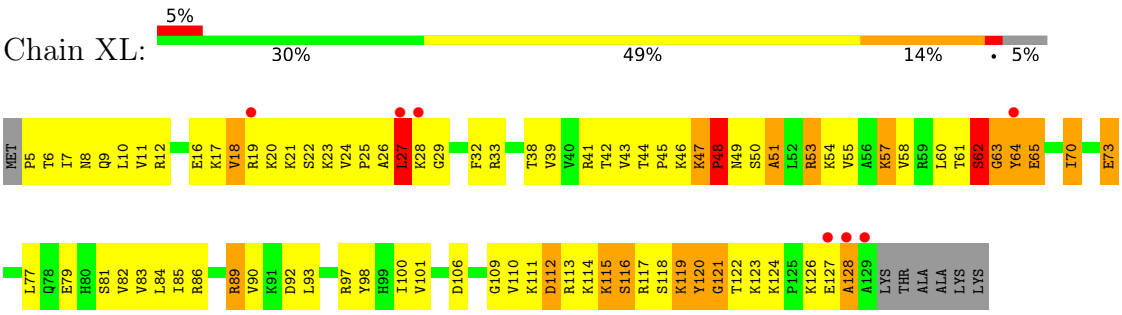
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

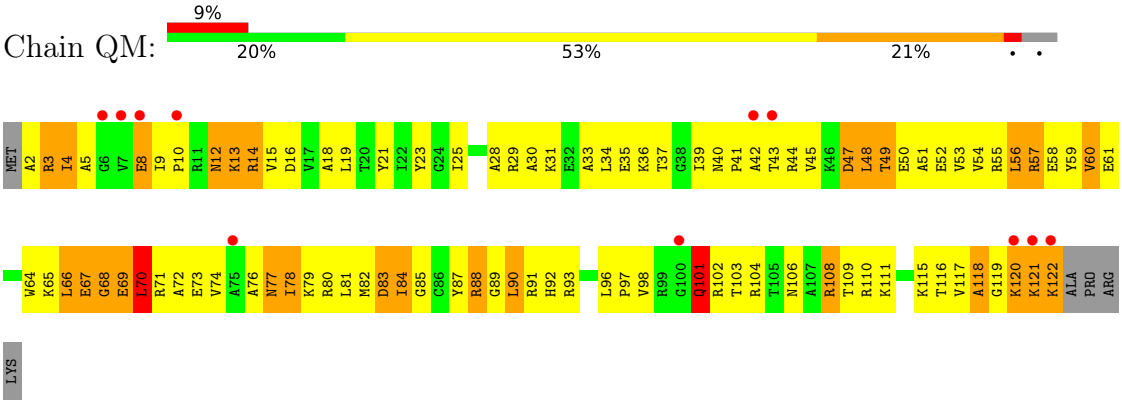


• Molecule 12: 30S ribosomal protein S12



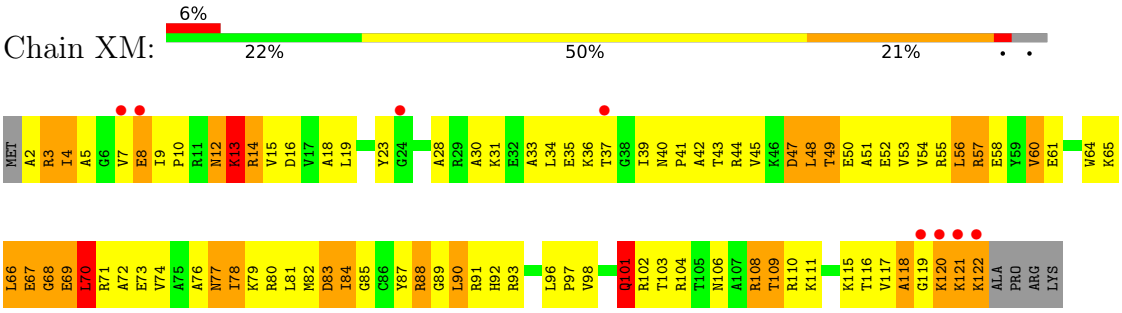
• Molecule 13: 30S ribosomal protein S13

Chain QM:



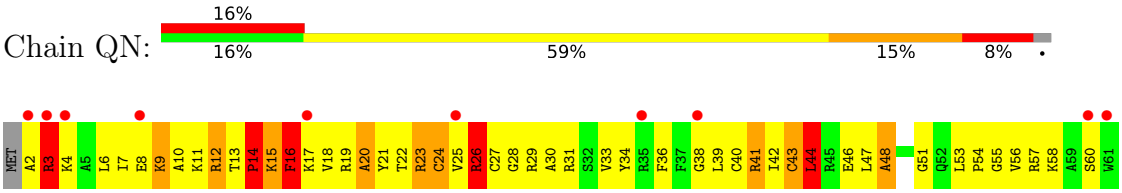
• Molecule 13: 30S ribosomal protein S13

Chain XM:



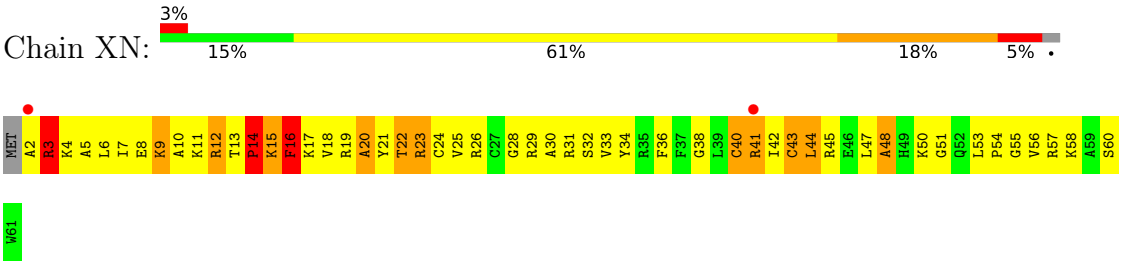
• Molecule 14: 30S ribosomal protein S14

Chain QN:



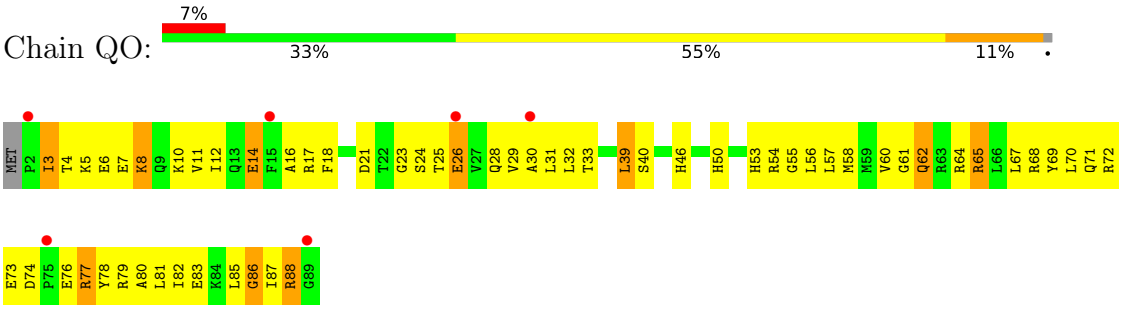
• Molecule 14: 30S ribosomal protein S14

Chain XN:



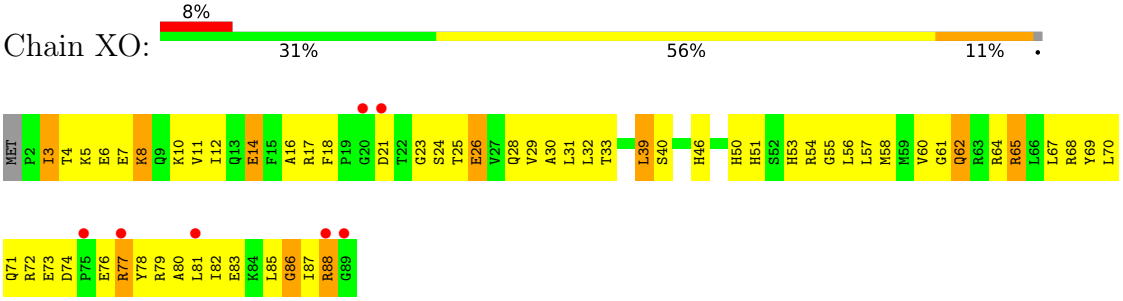
• Molecule 15: 30S ribosomal protein S15

Chain QO:



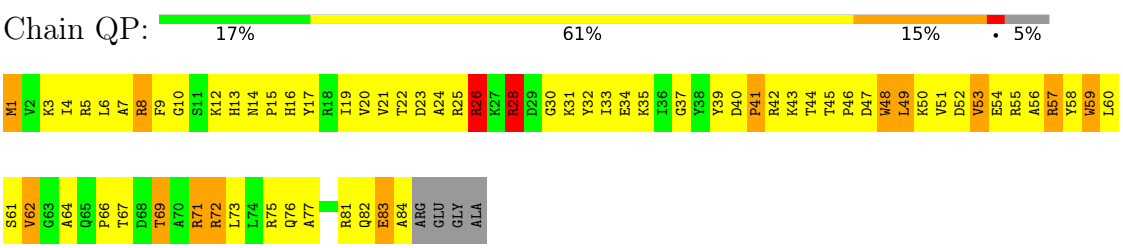
• Molecule 15: 30S ribosomal protein S15

Chain XO:



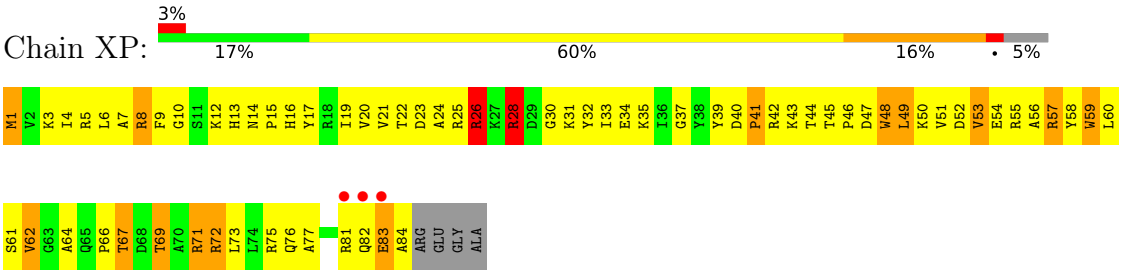
• Molecule 16: 30S ribosomal protein S16

Chain QP:



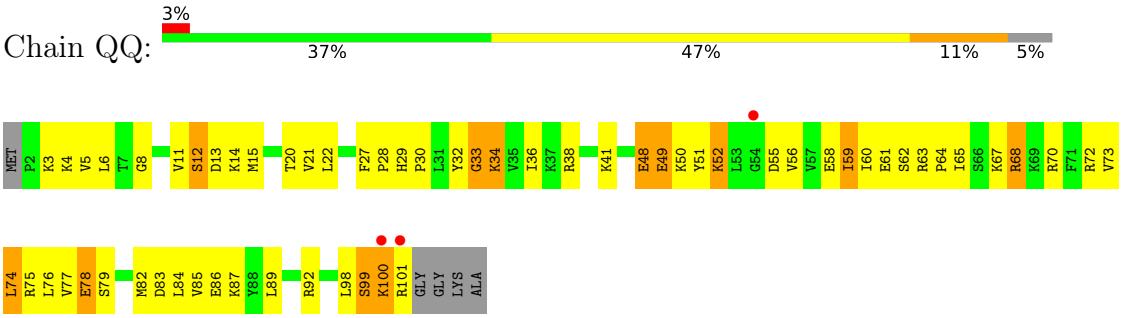
• Molecule 16: 30S ribosomal protein S16

Chain XP:



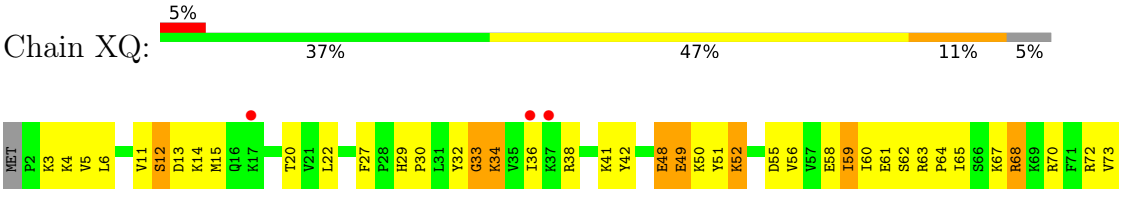
• Molecule 17: 30S ribosomal protein S17

Chain QQ:



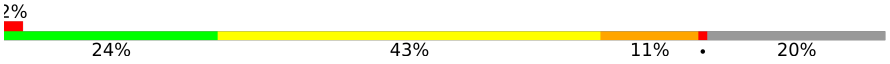
• Molecule 17: 30S ribosomal protein S17

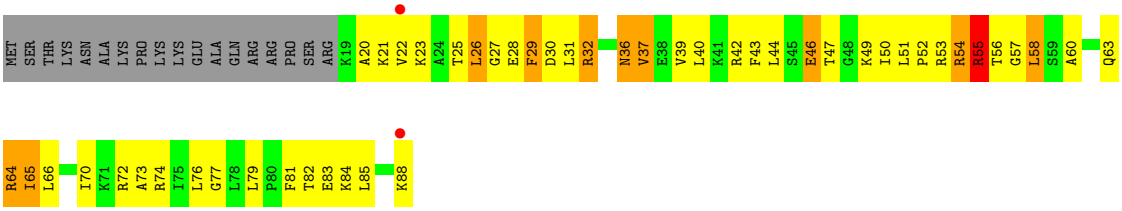
Chain XQ:



• Molecule 18: 30S ribosomal protein S18

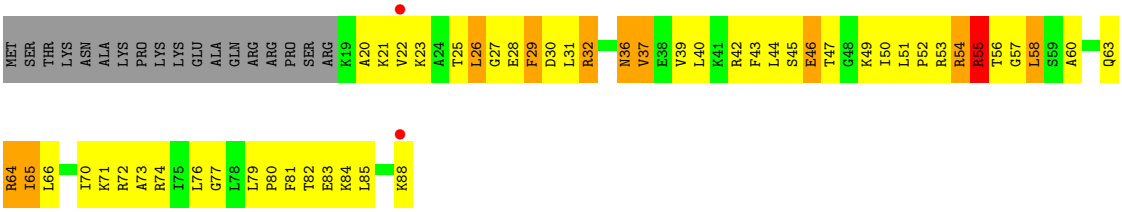
Chain QR:





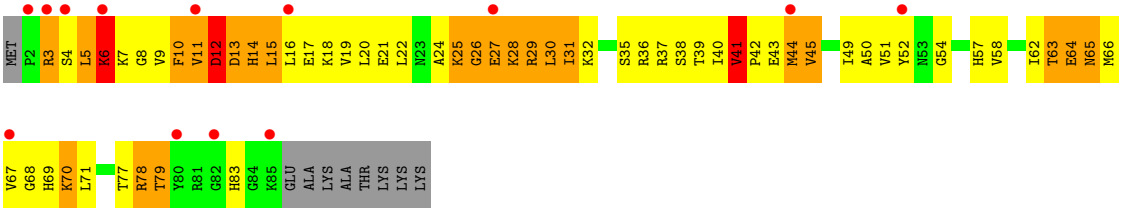
• Molecule 18: 30S ribosomal protein S18

Chain XR:



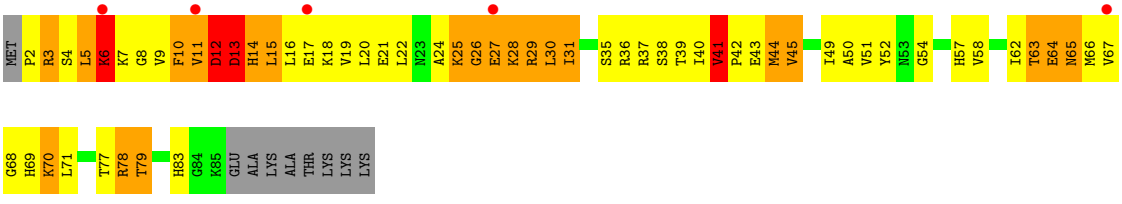
• Molecule 19: 30S ribosomal protein S19

Chain QS:



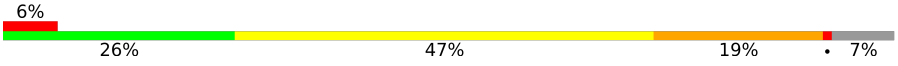
• Molecule 19: 30S ribosomal protein S19

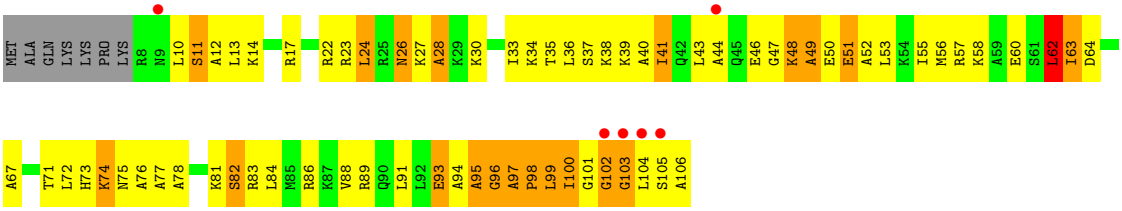
Chain XS:



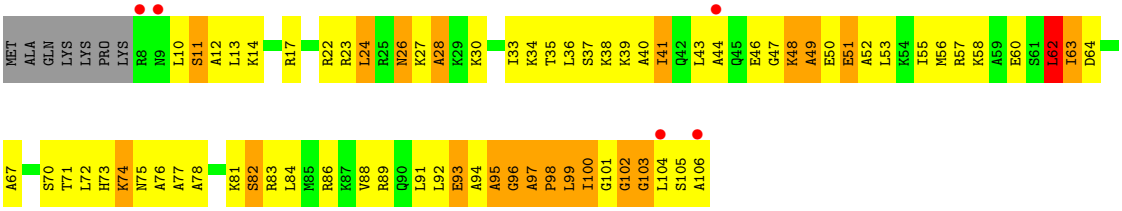
• Molecule 20: 30S ribosomal protein S20

Chain QT:





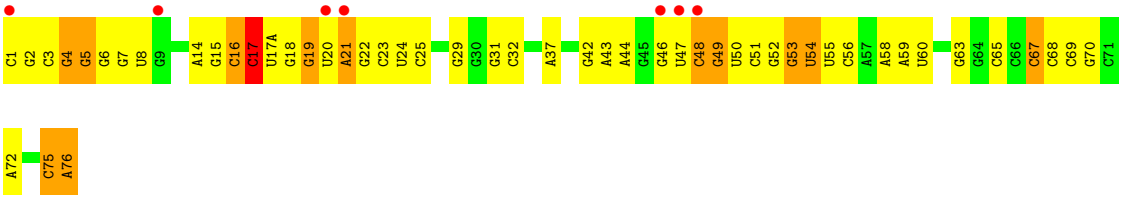
• Molecule 20: 30S ribosomal protein S20



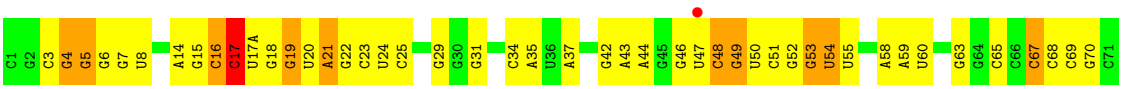
• Molecule 21: 30S ribosomal protein S21

• Molecule 21: 30S ribosomal protein S21

• Molecule 22: P-site tRNA fMet



• Molecule 22: P-site tRNA fMet



• Molecule 23: A-site ASL SufA6

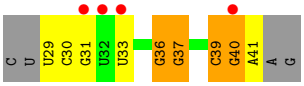
Chain QX:

• Molecule 23: A-site ASL SufA6

Chain XX:

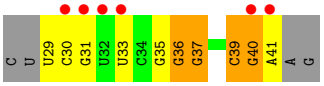
• Molecule 24: messenger RNA

Chain QY:



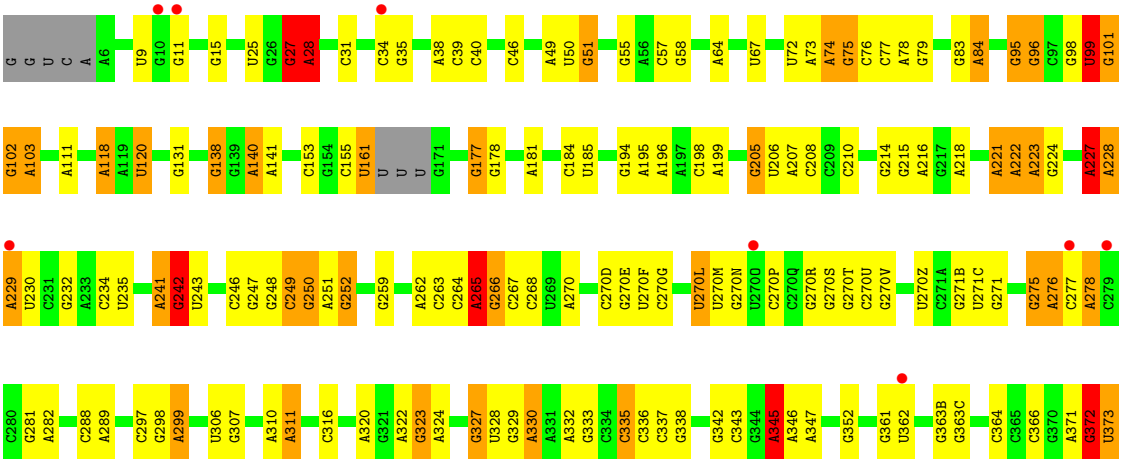
• Molecule 24: messenger RNA

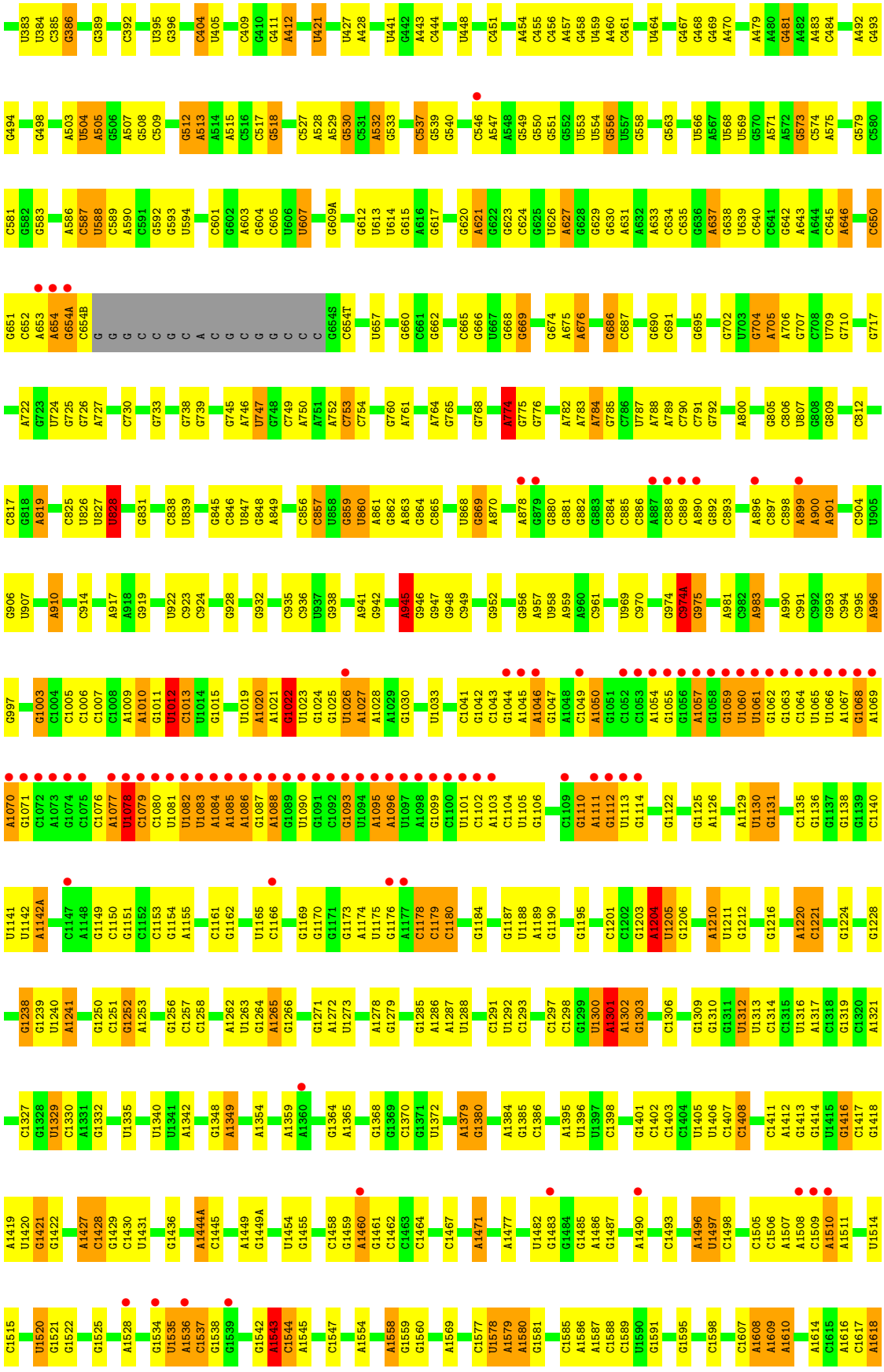
Chain XY:



• Molecule 25: 23S rRNA

Chain RA:

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A1070 G1071 C1072 A1073 G1074 C1075 C1076 A1077 U1078 C1079 C1080 U1081 U1082 U1083 A1084 A1085 A1086 G1087 A1088 G1089 U1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100 U1101 C1102 A1103 C1104 U1105 G1106 C1109 G1110 A1111 G1112 U1113 G1114 G1122 G1125 A1126 A1129 U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140
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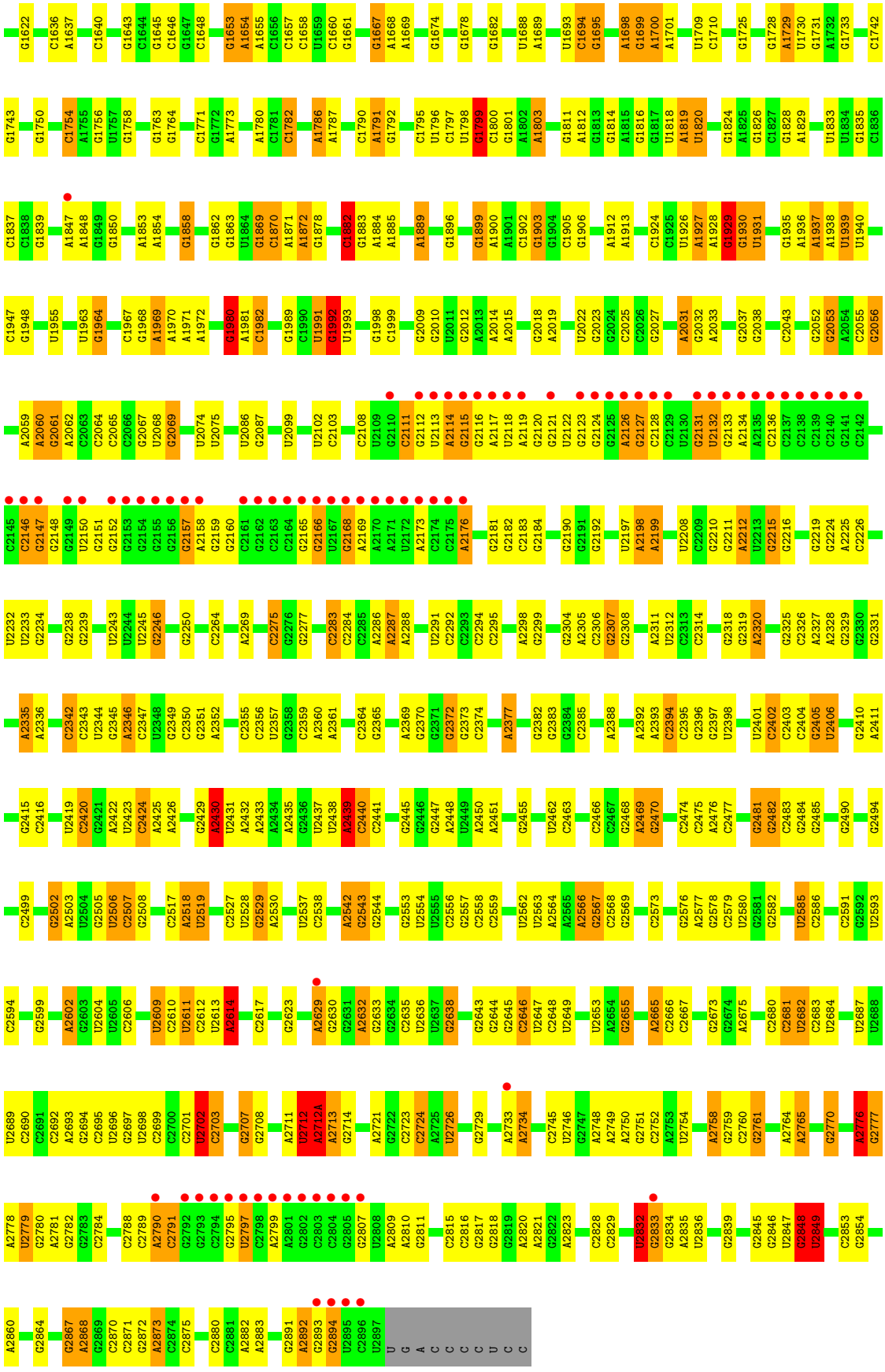
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• Molecule 25: 23S rRNA

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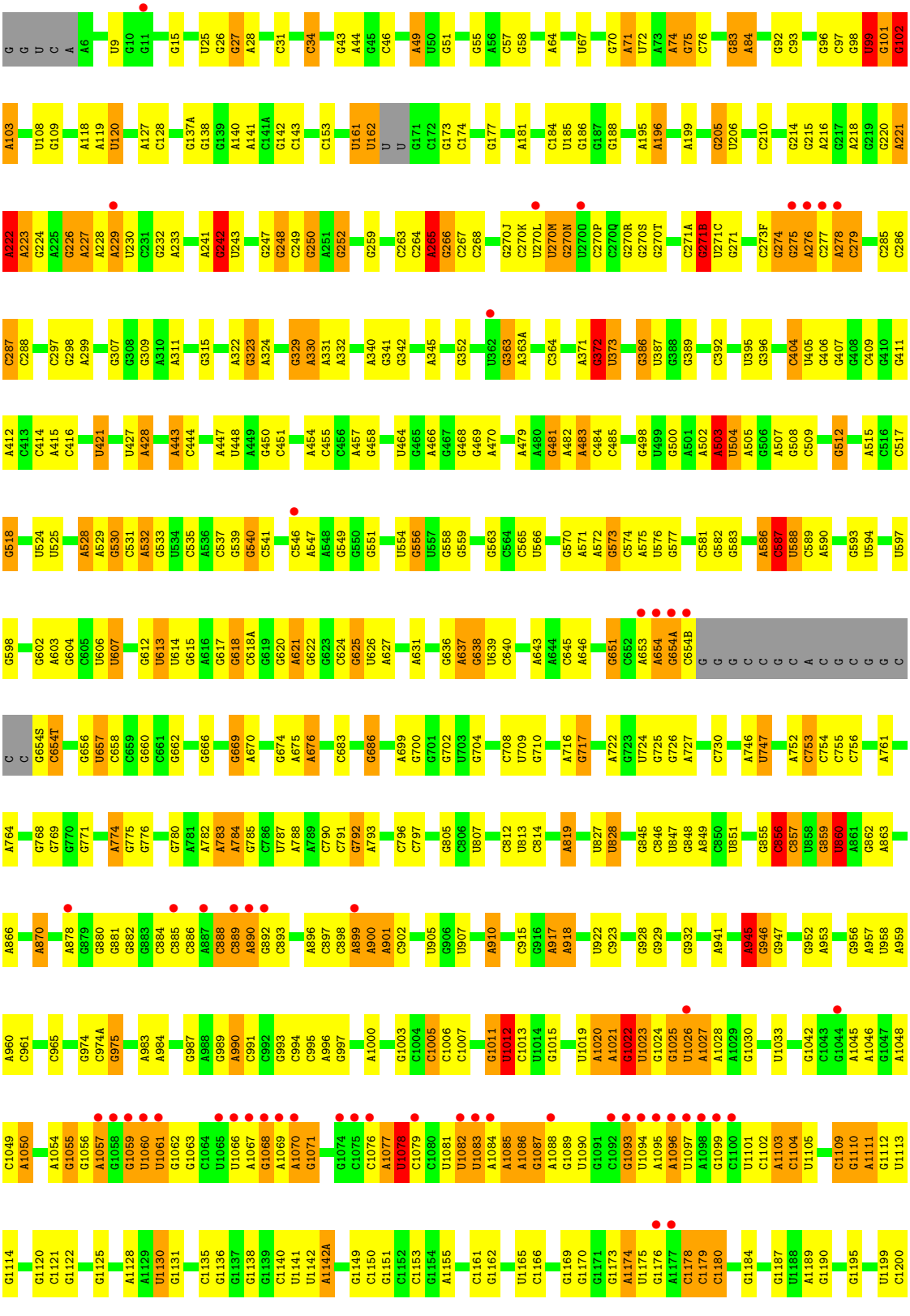

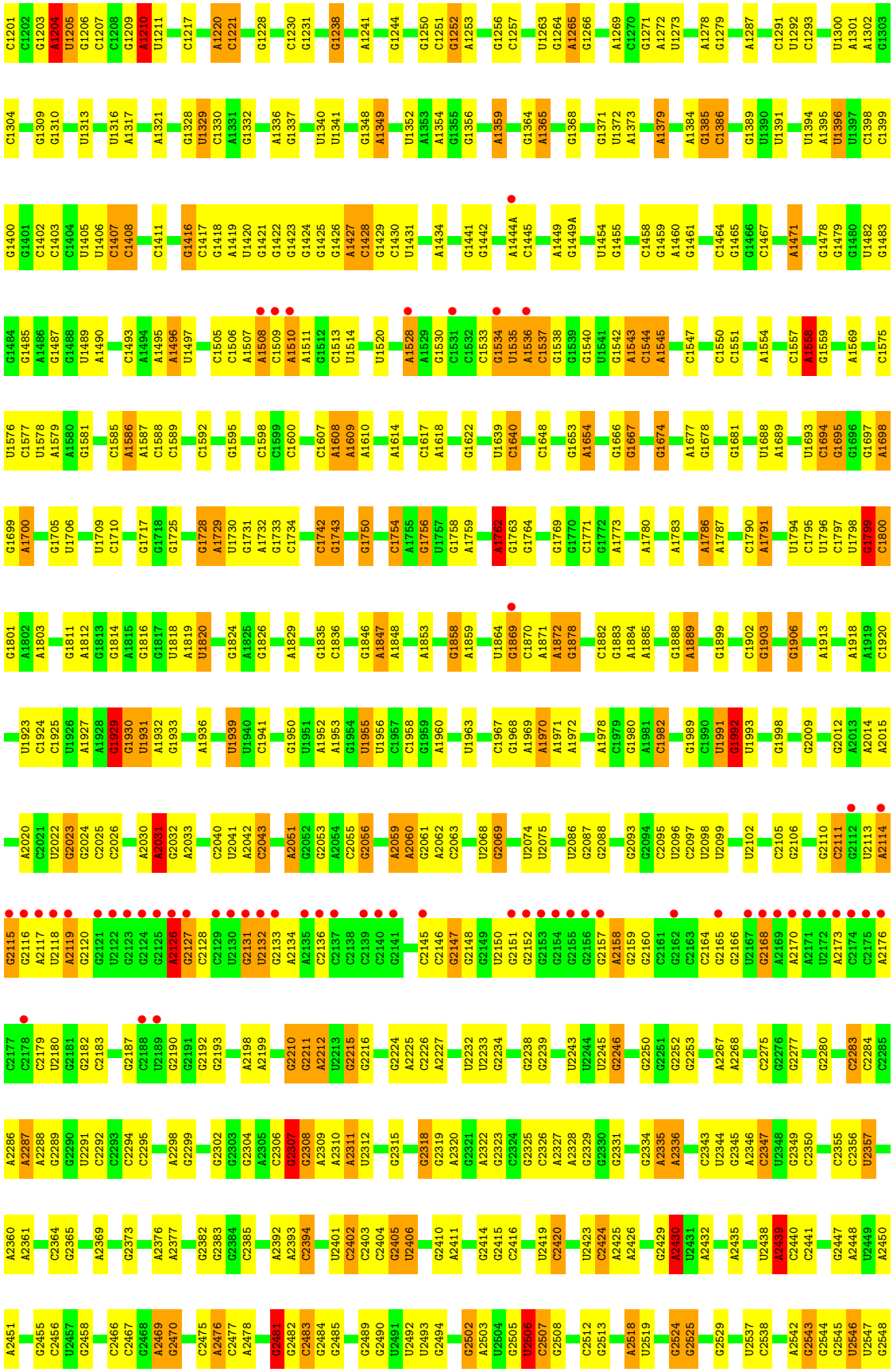
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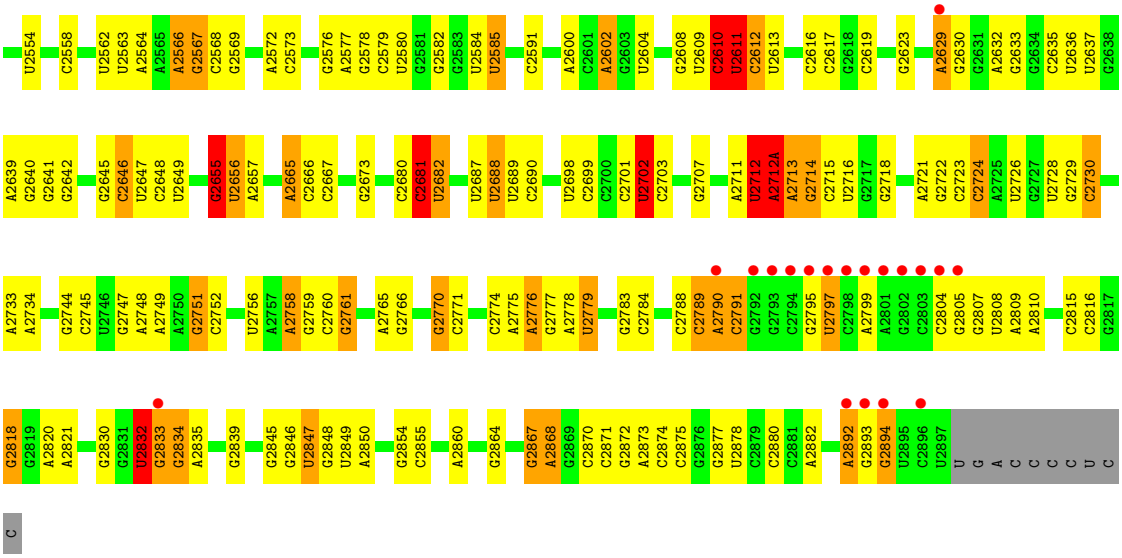

• Molecule 26: 5S rRNA

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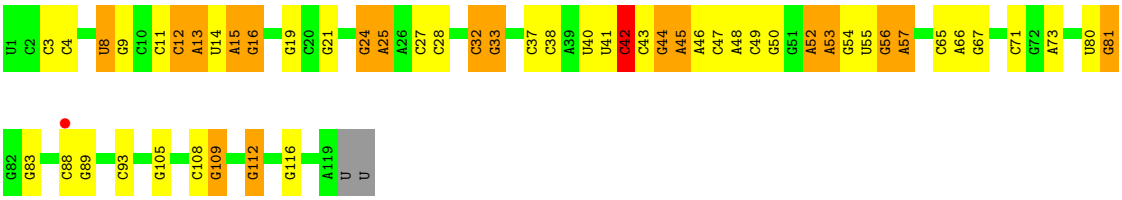
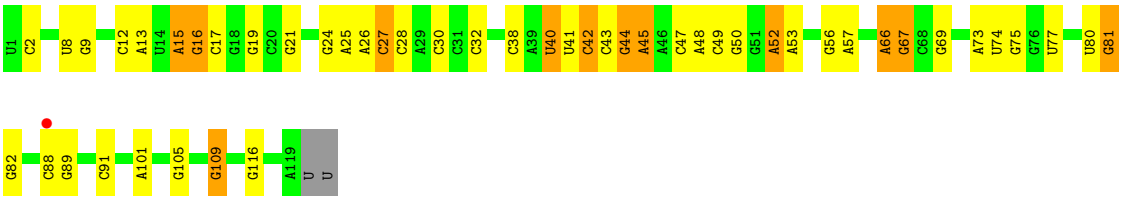


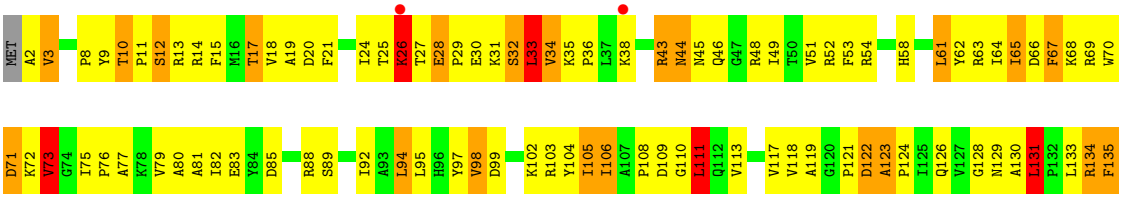
• Molecule 26: 5S rRNA

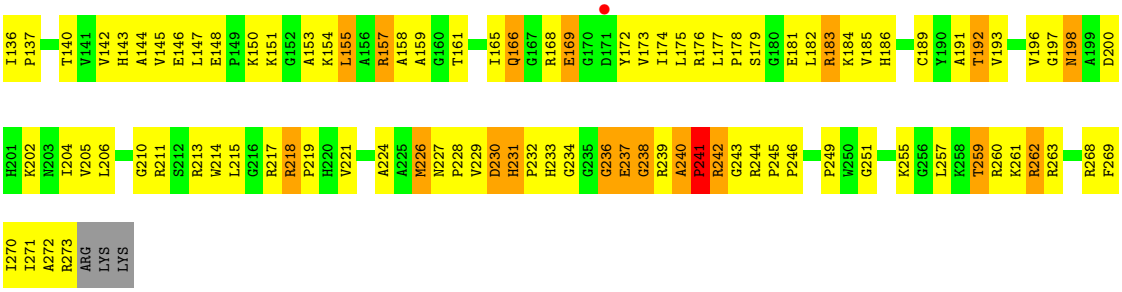
Chain YB:



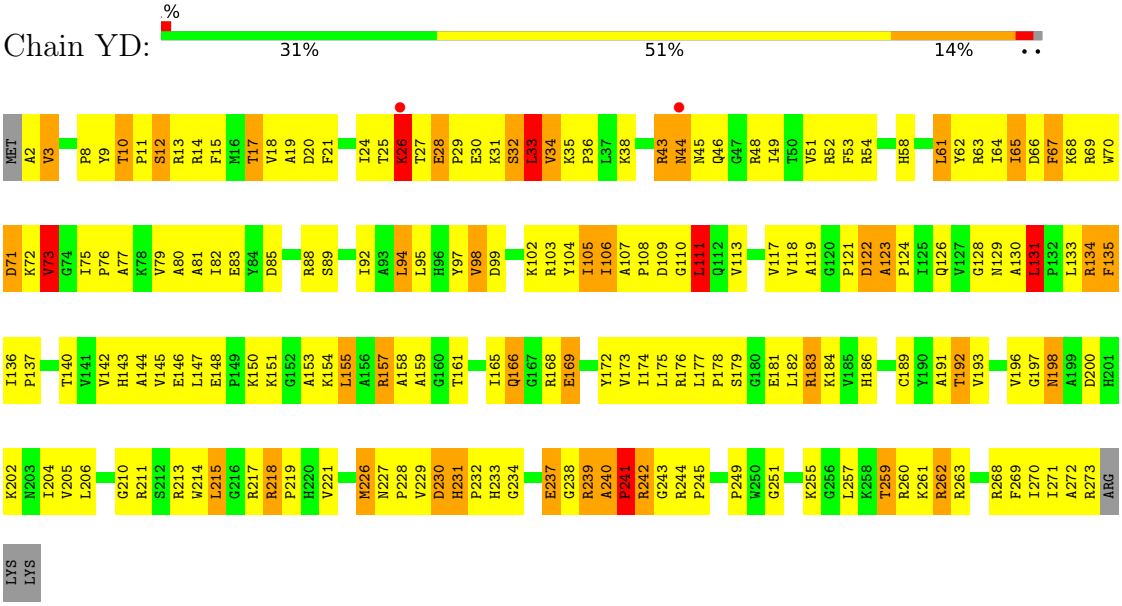
• Molecule 27: 50S ribosomal protein L2

Chain RD:

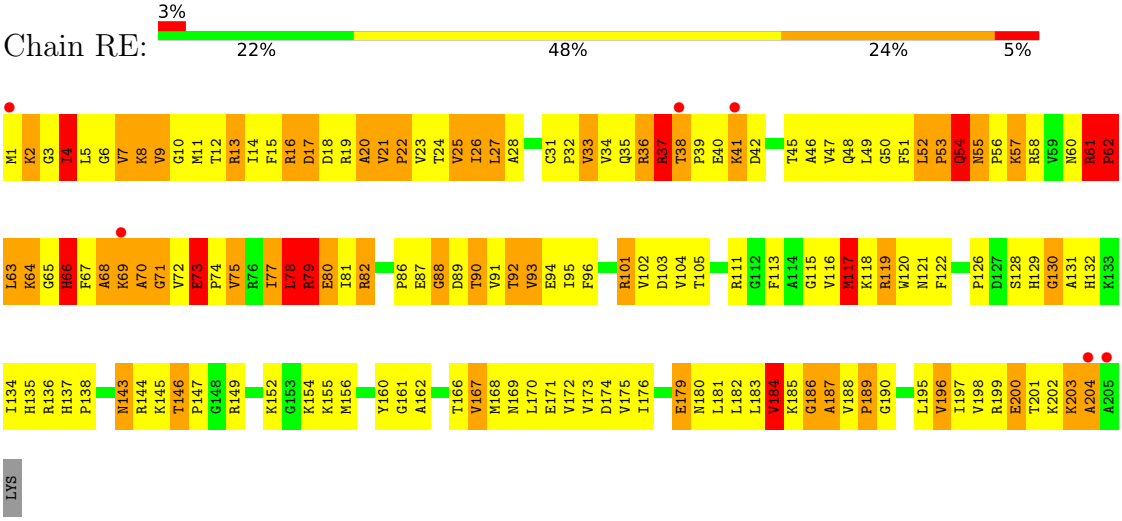




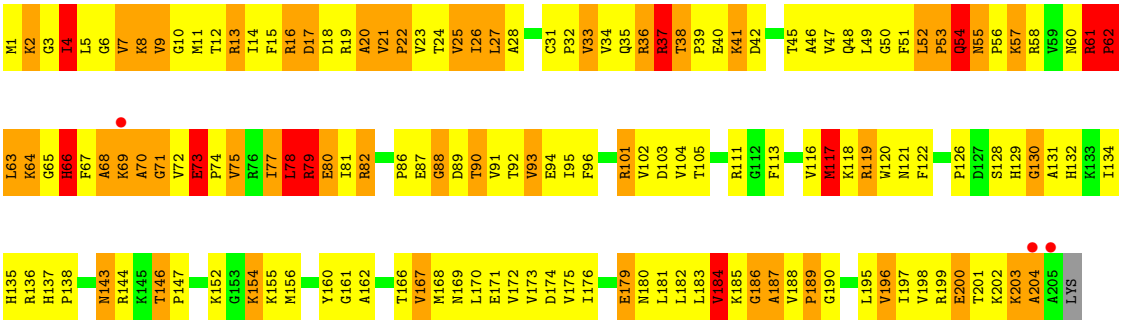
• Molecule 27: 50S ribosomal protein L2



• Molecule 28: 50S ribosomal protein L3



• Molecule 28: 50S ribosomal protein L3



• Molecule 29: 50S ribosomal protein L4

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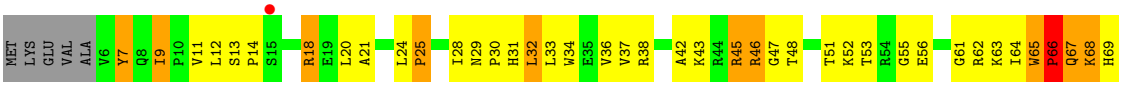

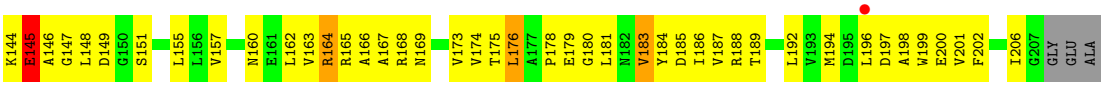

• Molecule 29: 50S ribosomal protein L4

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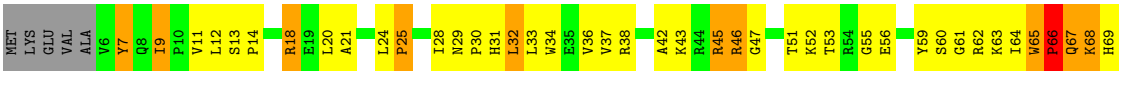

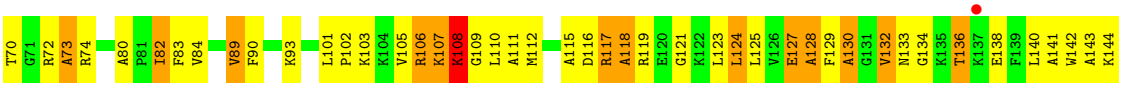

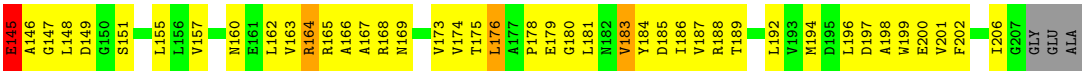

• Molecule 30: 50S ribosomal protein L5

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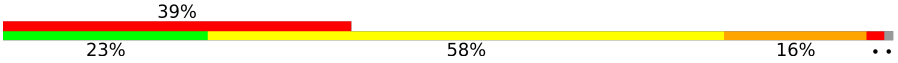
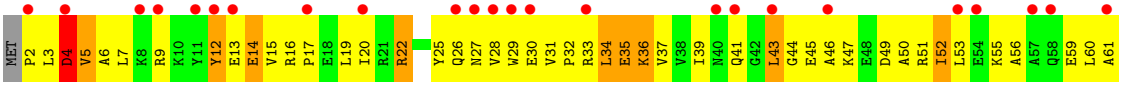
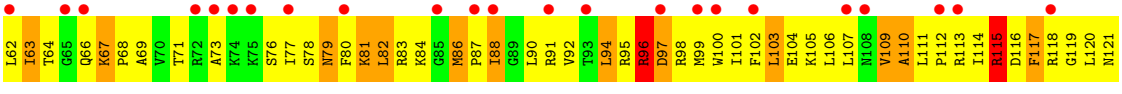
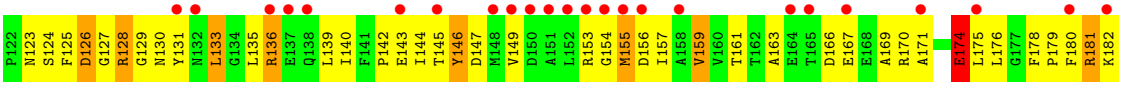


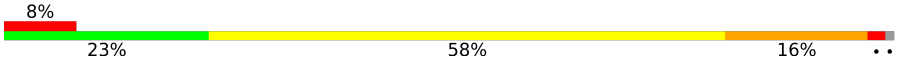


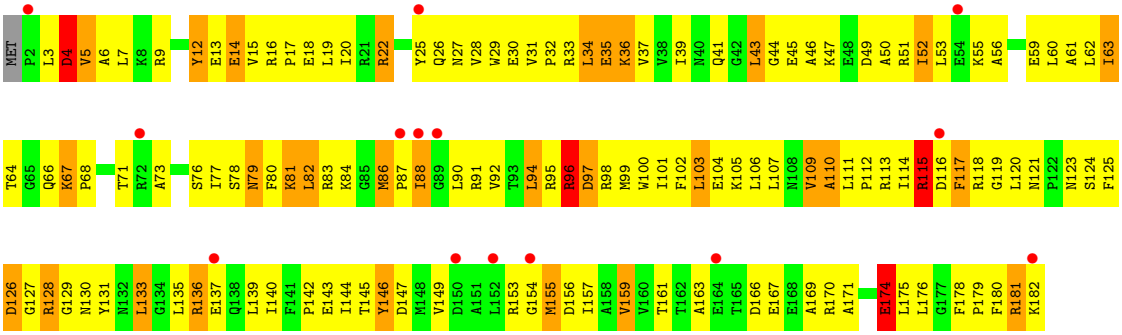




• Molecule 30: 50S ribosomal protein L5

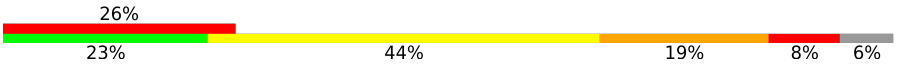
Chain YG:

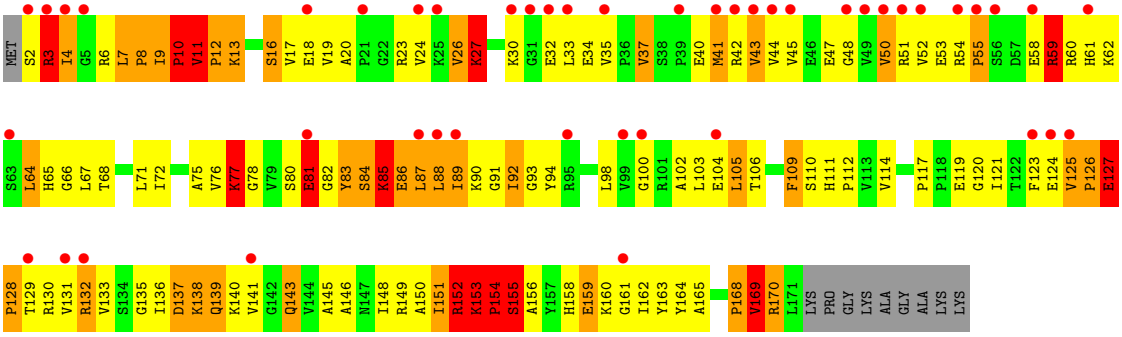




• Molecule 31: 50S ribosomal protein L6

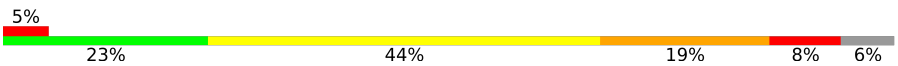
Chain RH:

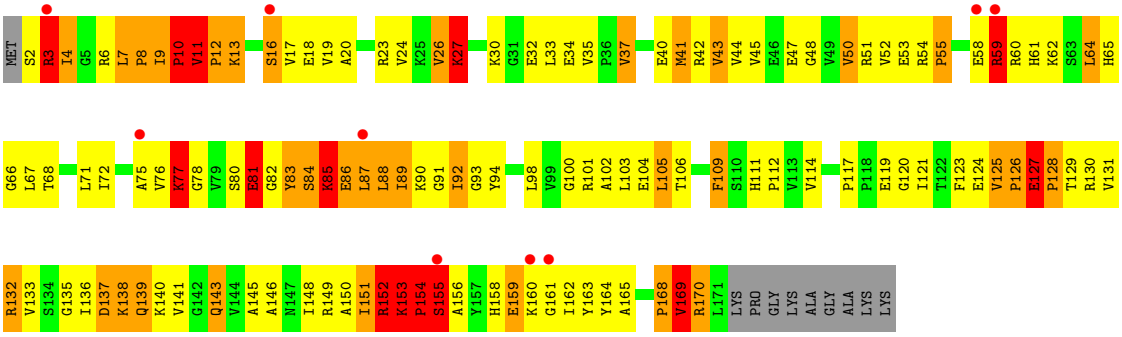




• Molecule 31: 50S ribosomal protein L6

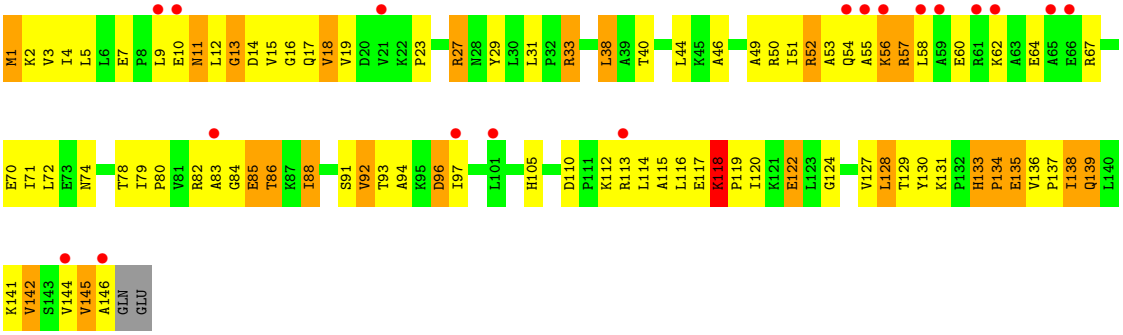
Chain YH:





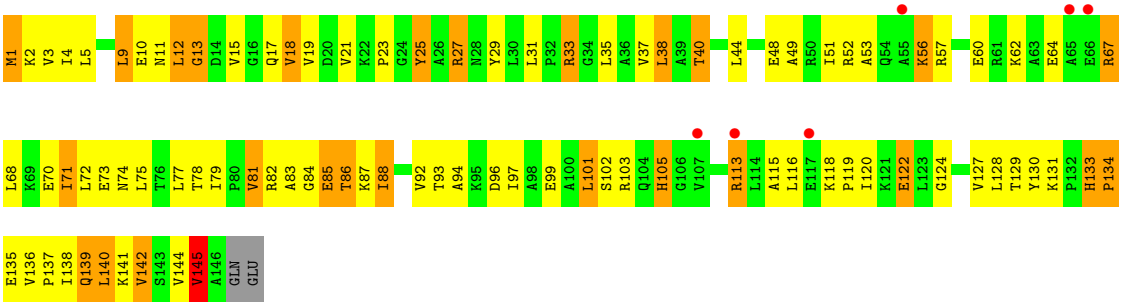
• Molecule 32: 50S ribosomal protein L9

Chain RI:



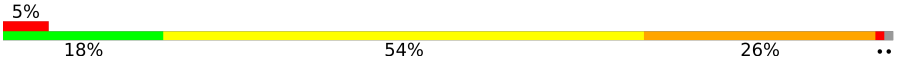
• Molecule 32: 50S ribosomal protein L9

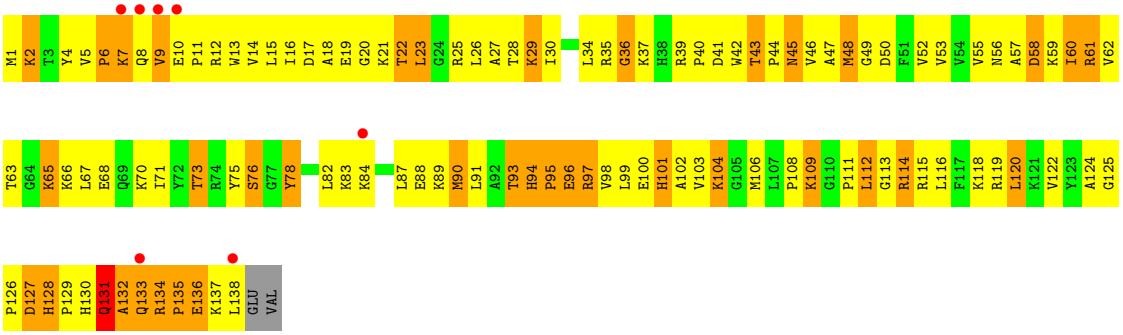
Chain YI:



• Molecule 33: 50S ribosomal protein L13

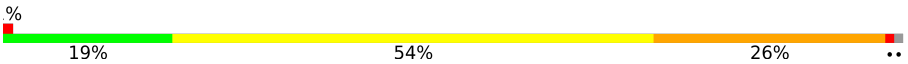
Chain RN:

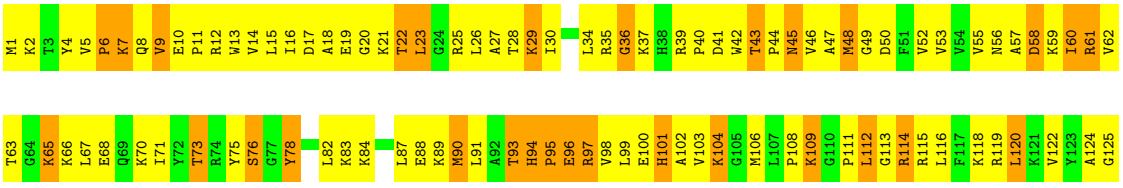


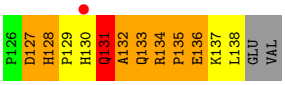


• Molecule 33: 50S ribosomal protein L13

Chain YN:

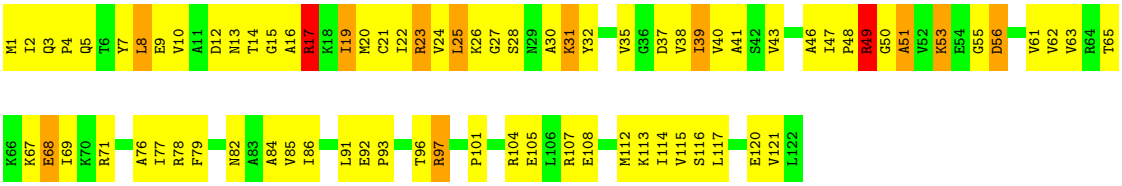






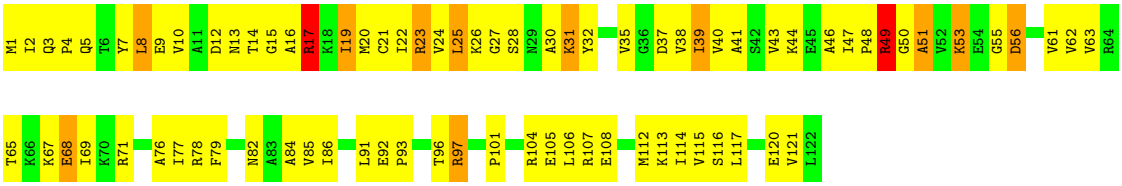
• Molecule 34: 50S ribosomal protein L14

Chain RO:



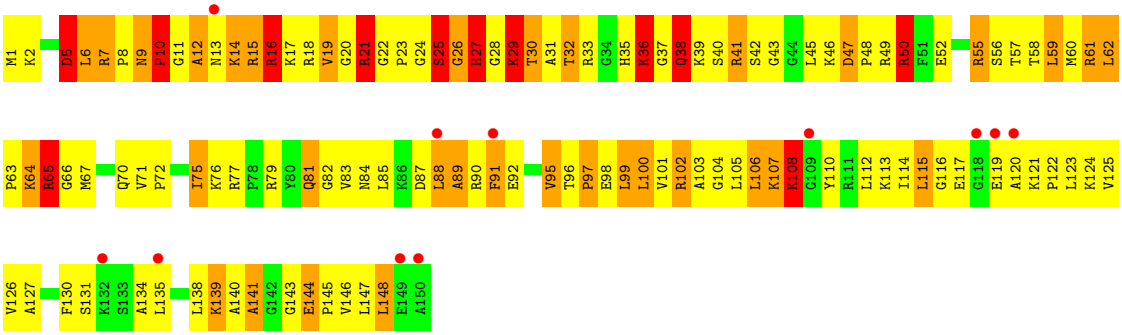
• Molecule 34: 50S ribosomal protein L14

Chain YO:



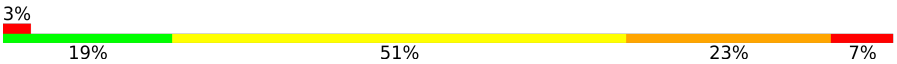
• Molecule 35: 50S ribosomal protein L15

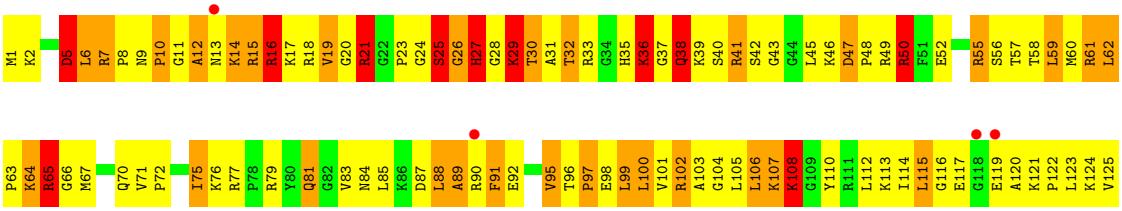
Chain RP:

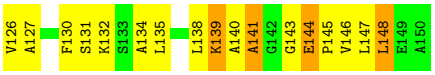


• Molecule 35: 50S ribosomal protein L15

Chain YP:

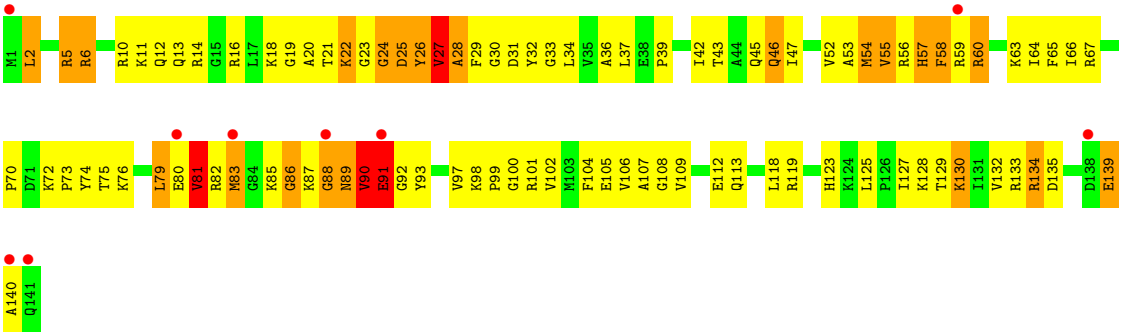






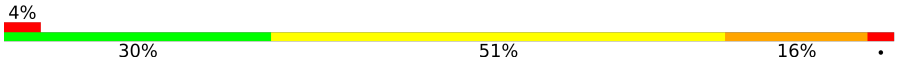
• Molecule 36: 50S ribosomal protein L16

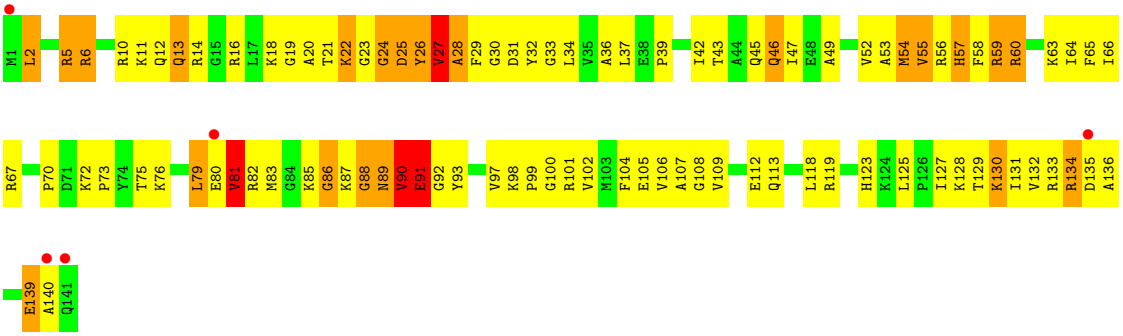
Chain RQ:



• Molecule 36: 50S ribosomal protein L16

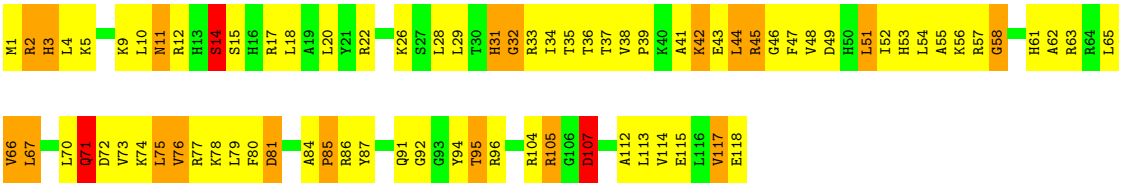
Chain YQ:





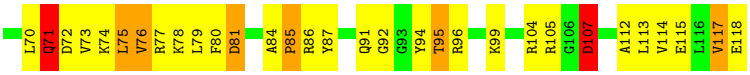
• Molecule 37: 50S ribosomal protein L17

Chain RR:



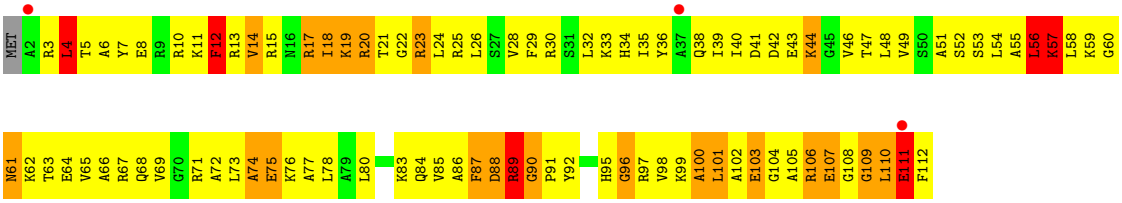
• Molecule 37: 50S ribosomal protein L17

Chain YR:



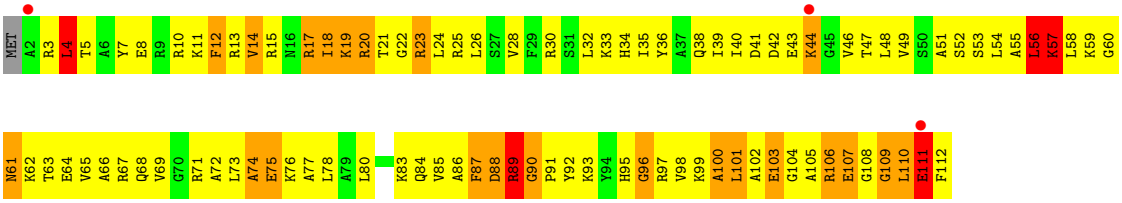
• Molecule 38: 50S ribosomal protein L18

Chain RS:



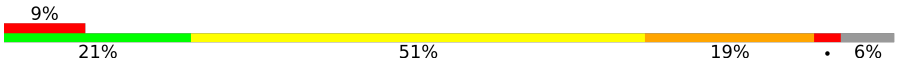
• Molecule 38: 50S ribosomal protein L18

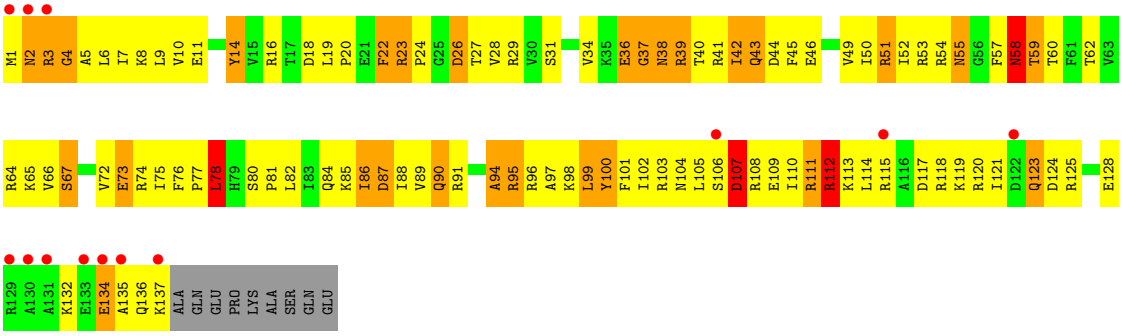
Chain YS:



• Molecule 39: 50S ribosomal protein L19

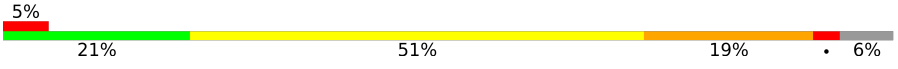
Chain RT:

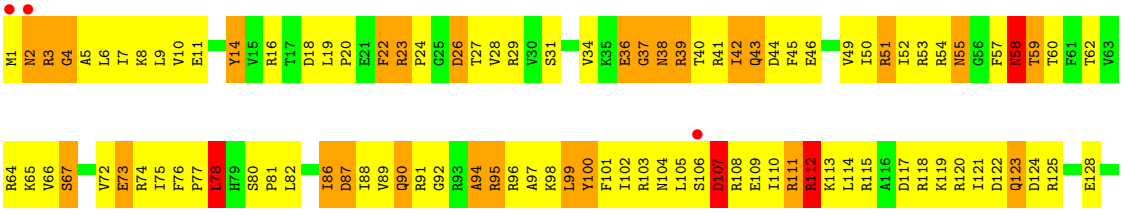


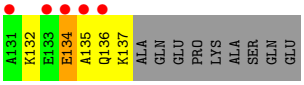


• Molecule 39: 50S ribosomal protein L19

Chain YT:

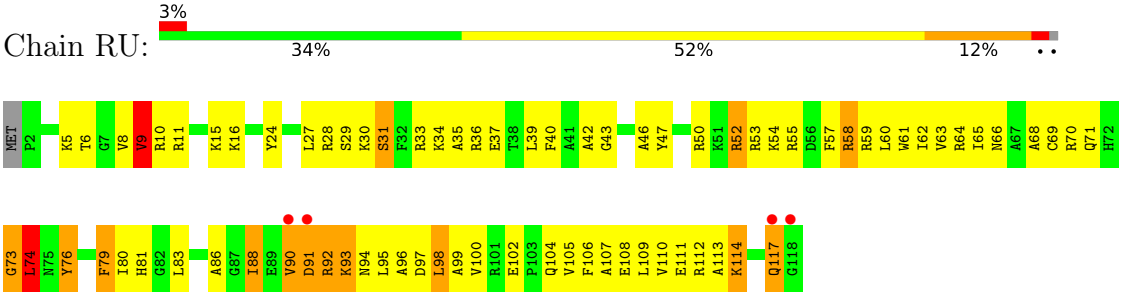






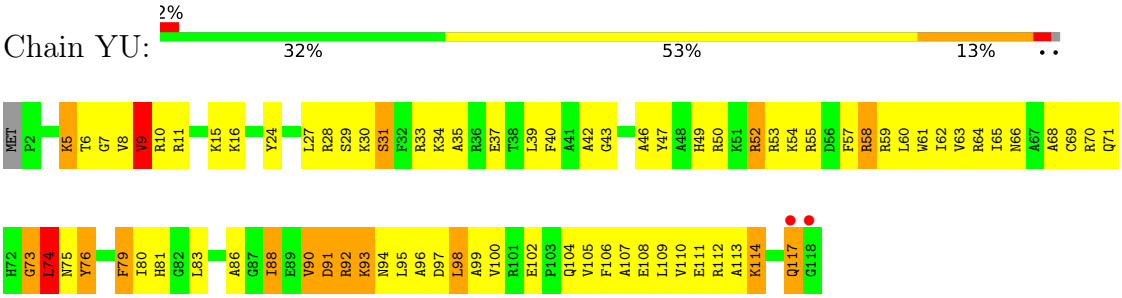
• Molecule 40: 50S ribosomal protein L20

Chain RU:



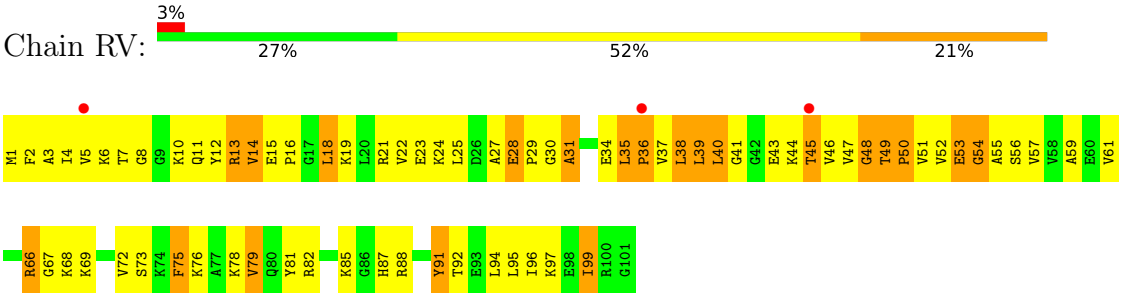
• Molecule 40: 50S ribosomal protein L20

Chain YU:



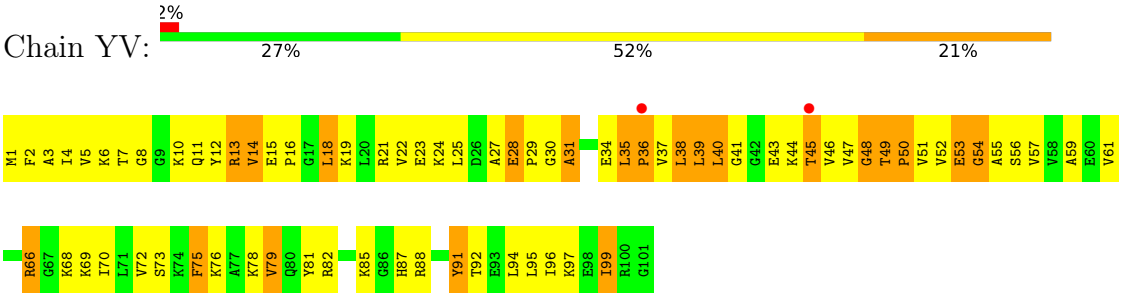
• Molecule 41: 50S ribosomal protein L21

Chain RV:



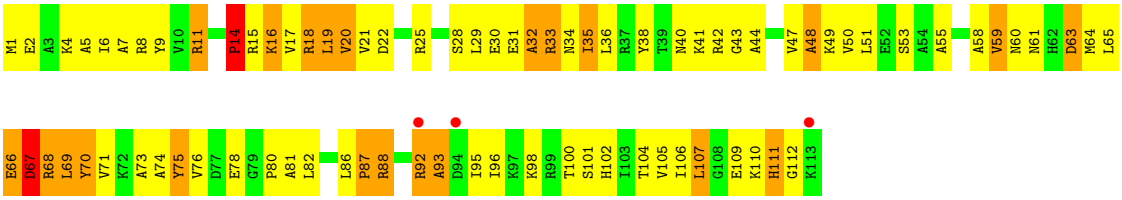
• Molecule 41: 50S ribosomal protein L21

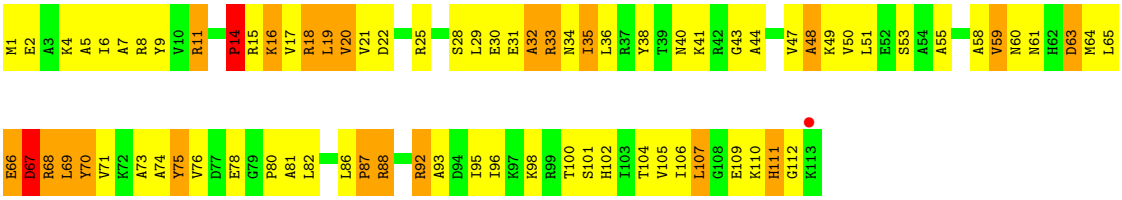
Chain YV:



• Molecule 42: 50S ribosomal protein L22

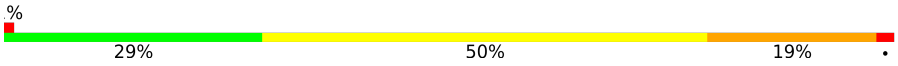
Chain RW:





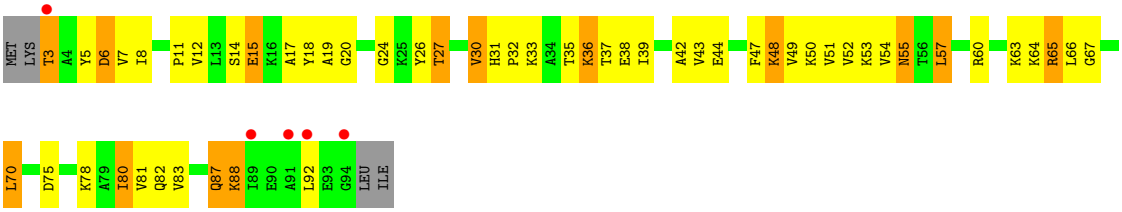
• Molecule 42: 50S ribosomal protein L22

Chain YW:



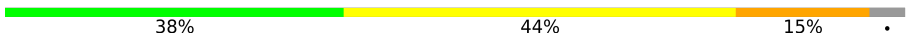
• Molecule 43: 50S ribosomal protein L23

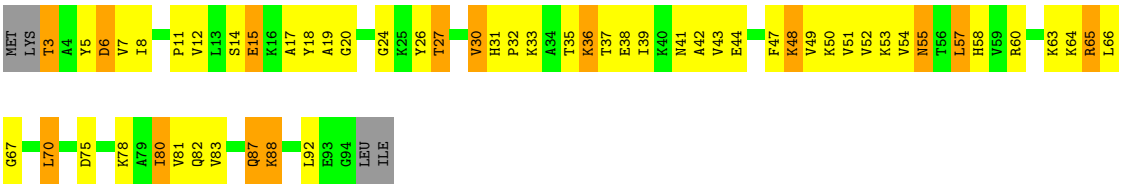
Chain RX:



• Molecule 43: 50S ribosomal protein L23

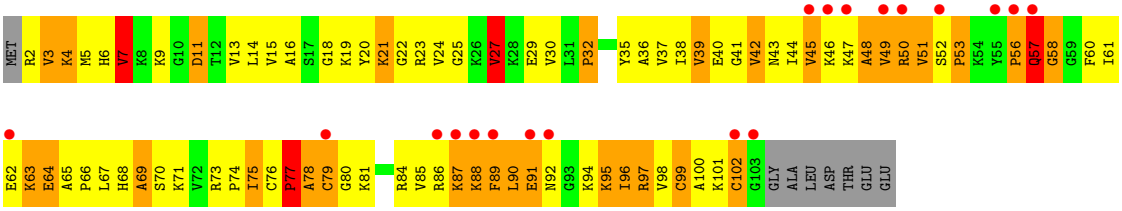
Chain YX:





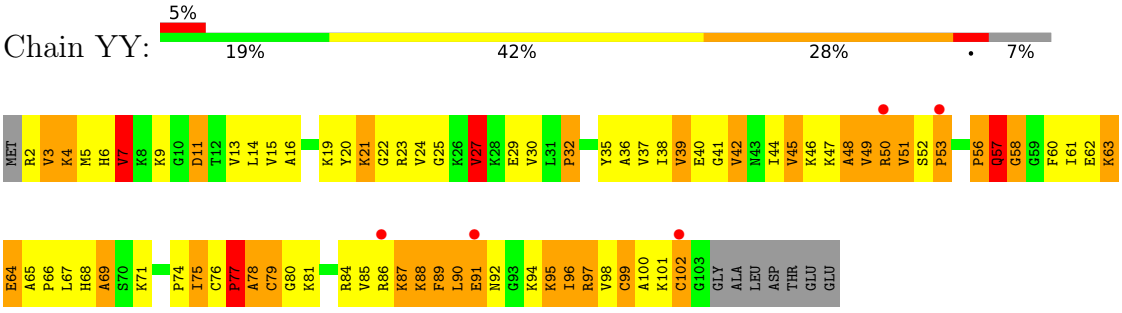
• Molecule 44: 50S ribosomal protein L24

Chain RY:



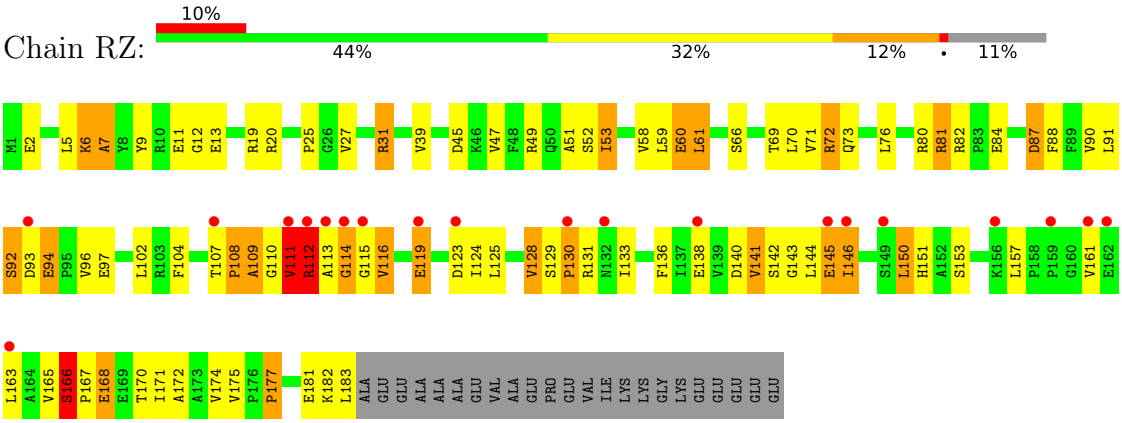
• Molecule 44: 50S ribosomal protein L24

Chain YY:



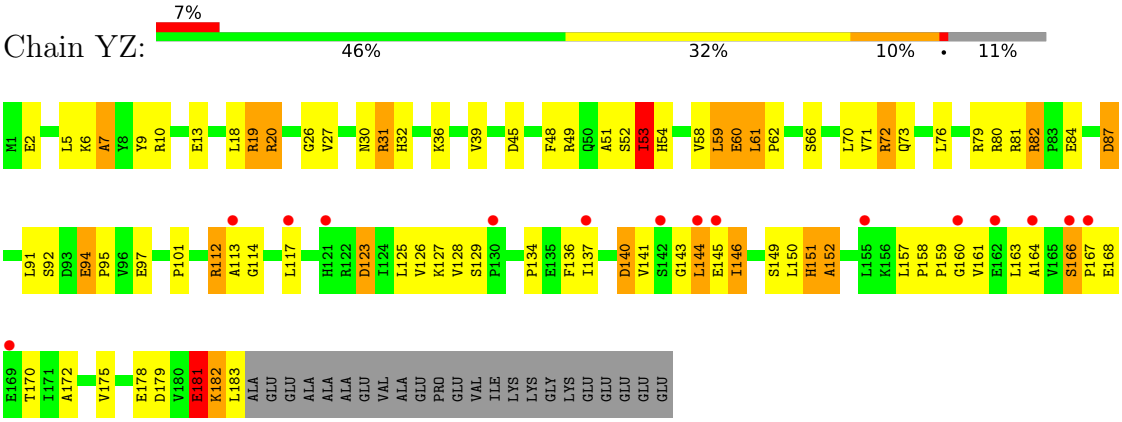
• Molecule 45: 50S ribosomal protein L25

Chain RZ:



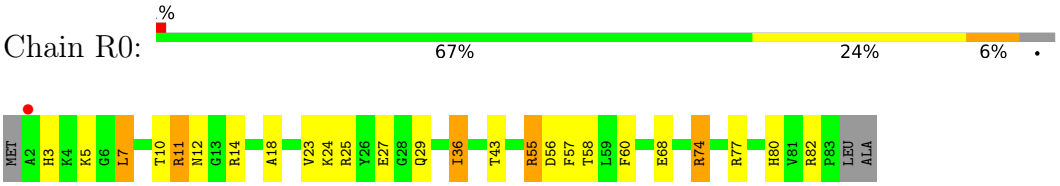
• Molecule 45: 50S ribosomal protein L25

Chain YZ:



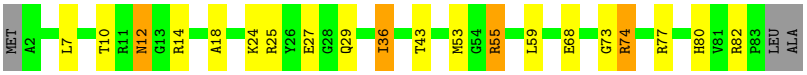
• Molecule 46: 50S ribosomal protein L27

Chain R0:

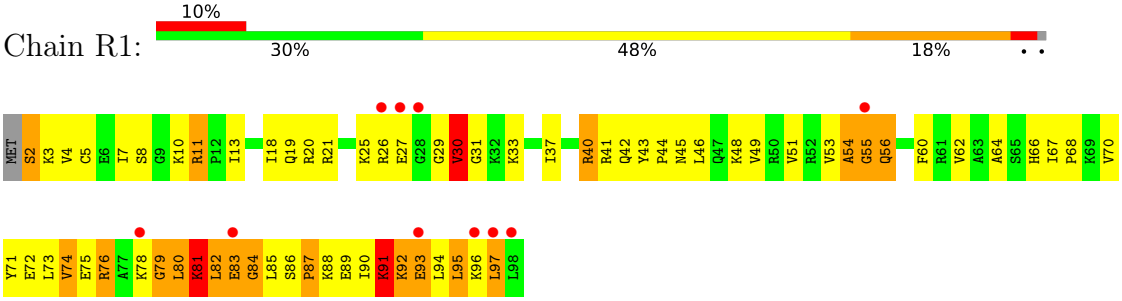


• Molecule 46: 50S ribosomal protein L27

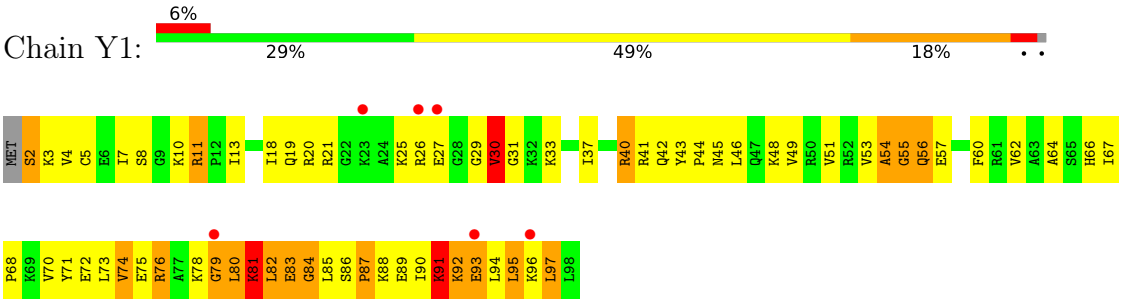
Chain Y0:



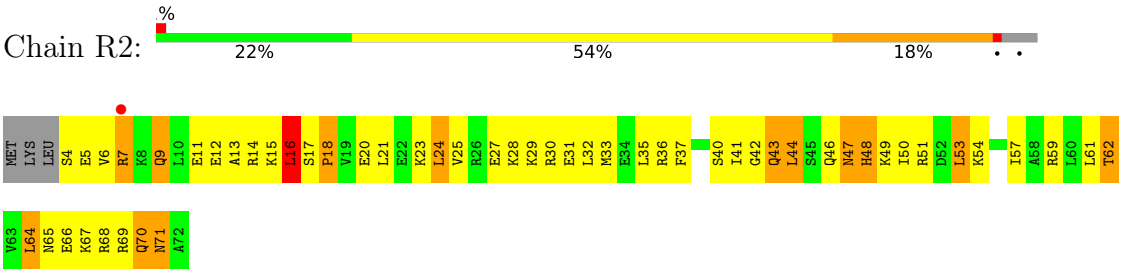
• Molecule 47: 50S ribosomal protein L28



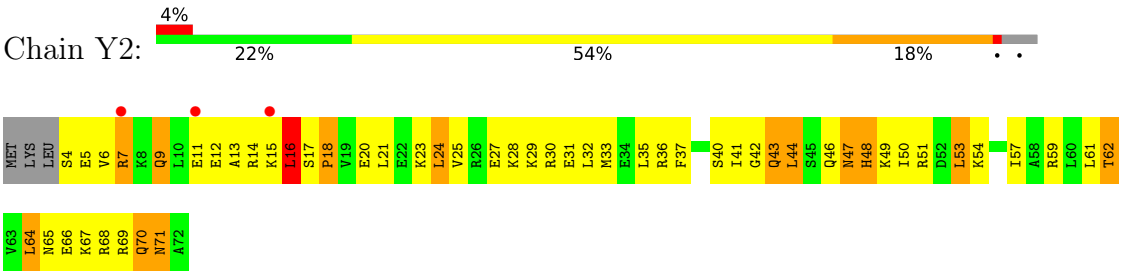
• Molecule 47: 50S ribosomal protein L28



• Molecule 48: 50S ribosomal protein L29



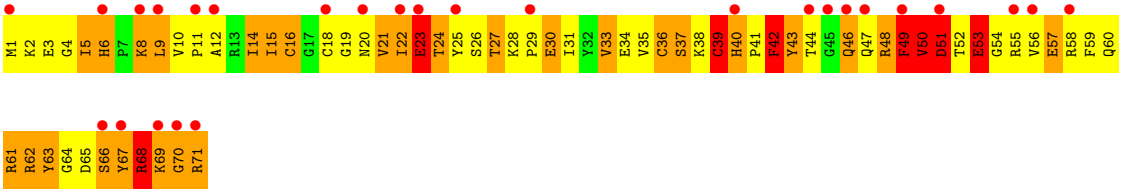
• Molecule 48: 50S ribosomal protein L29



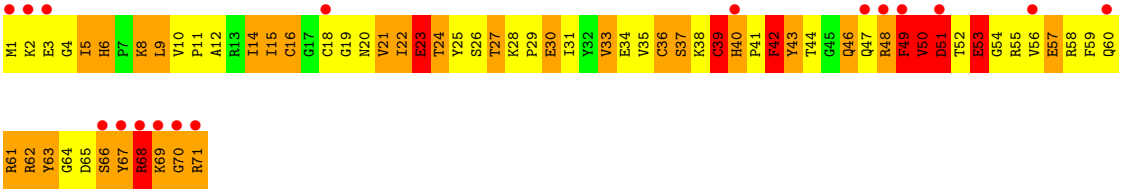
• Molecule 49: 50S ribosomal protein L30

• Molecule 49: 50S ribosomal protein L30

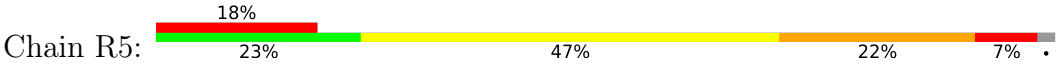
• Molecule 50: 50S ribosomal protein L31

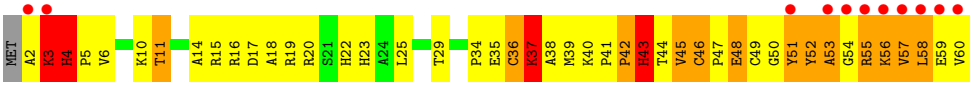


• Molecule 50: 50S ribosomal protein L31

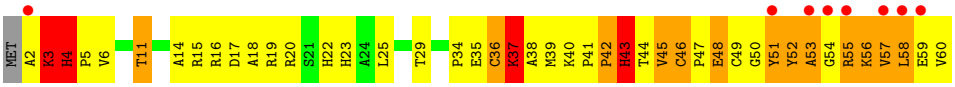


• Molecule 51: 50S ribosomal protein L32

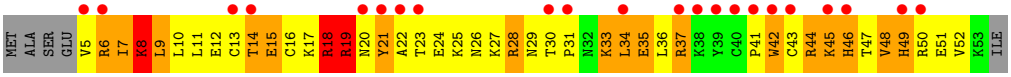




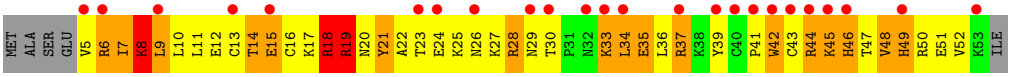
• Molecule 51: 50S ribosomal protein L32



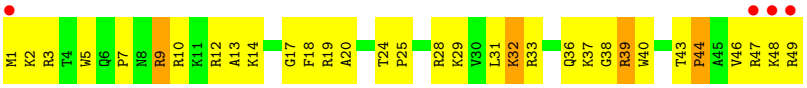
• Molecule 52: 50S ribosomal protein L33



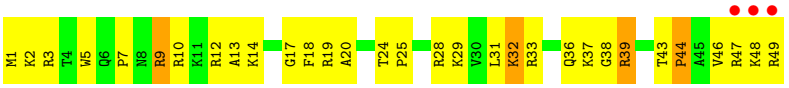
• Molecule 52: 50S ribosomal protein L33



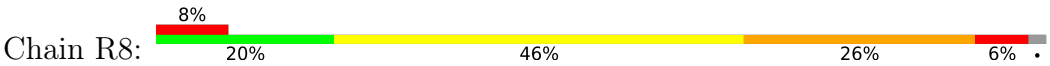
• Molecule 53: 50S ribosomal protein L34

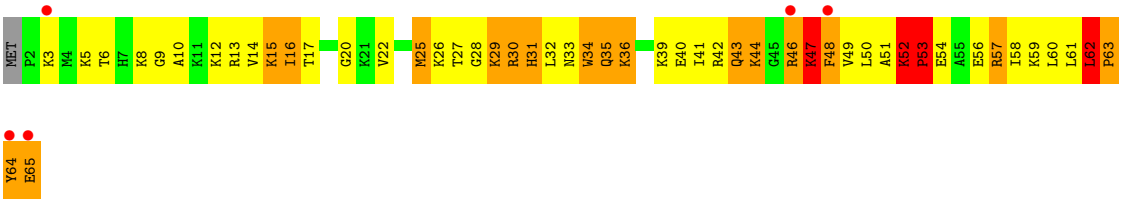


• Molecule 53: 50S ribosomal protein L34

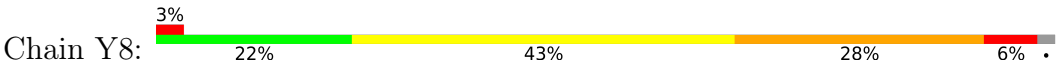


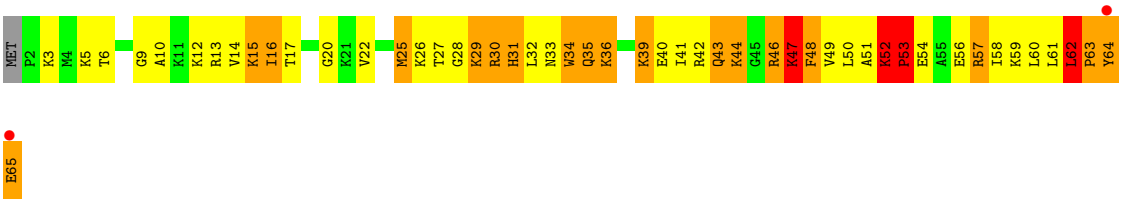
• Molecule 54: 50S ribosomal protein L35



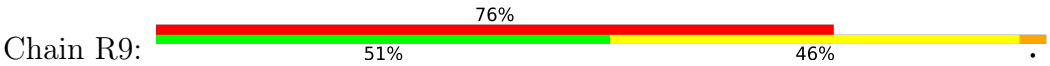


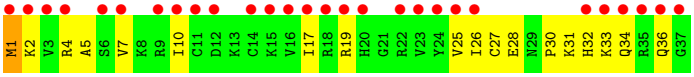
• Molecule 54: 50S ribosomal protein L35





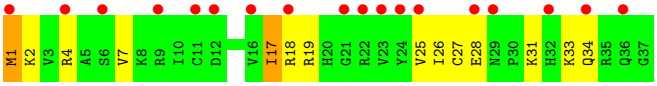
• Molecule 55: 50S ribosomal protein L36





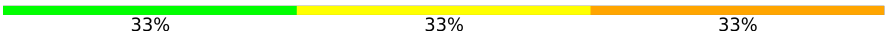
• Molecule 55: 50S ribosomal protein L36

Chain Y9:



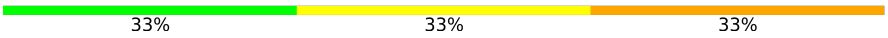
• Molecule 56: tRNA acceptor end mimic

Chain Z6:



• Molecule 56: tRNA acceptor end mimic

Chain Z8:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.20Å 450.23Å 621.74Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.97 – 3.22 34.97 – 3.18	Depositor EDS
% Data completeness (in resolution range)	98.5 (34.97-3.22) 98.6 (34.97-3.18)	Depositor EDS
R_{merge}	0.25	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.66 (at 3.18Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.229 , 0.260 0.229 , 0.260	Depositor DCC
R_{free} test set	45157 reflections (4.69%)	wwPDB-VP
Wilson B-factor (Å^2)	67.8	Xtriage
Anisotropy	0.089	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 74.9	EDS
L-test for twinning[2]	$< \|L\| > = 0.45$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	291957	wwPDB-VP
Average B, all atoms (Å^2)	91.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.57% of the height of the origin peak. No significant pseudotranslation is detected.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ 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, PPU, PAR, MG, ZN

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	0.31	0/36098	0.86	46/56341 (0.1%)
1	XA	0.34	1/36101 (0.0%)	0.89	66/56346 (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	0.36	0/1629	0.60	0/2195
4	QD	0.41	0/1733	0.68	1/2318 (0.0%)
4	XD	0.44	0/1733	0.68	1/2318 (0.0%)
5	QE	0.38	0/1171	0.66	0/1576
5	XE	0.38	0/1171	0.66	0/1576
6	QF	0.43	0/856	0.68	0/1154
6	XF	0.42	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	0.45	0/991	1.00	4/1327 (0.3%)
12	XL	0.46	0/991	1.00	4/1327 (0.3%)
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	0.67	0/992
16	QP	0.36	0/721	0.67	0/970
16	XP	0.36	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	0.37	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	QV	0.52	0/1836	0.99	5/2859 (0.2%)
22	XV	0.52	0/1836	0.99	6/2859 (0.2%)
23	QX	0.39	0/185	0.72	0/285
23	XX	0.86	1/185 (0.5%)	1.12	1/285 (0.4%)
24	QY	0.52	0/311	0.88	0/483
24	XY	0.53	0/311	0.89	0/483
25	RA	0.39	1/69521 (0.0%)	0.91	95/108529 (0.1%)
25	YA	0.44	3/69543 (0.0%)	0.94	121/108563 (0.1%)
26	RB	0.34	0/2878	0.89	3/4490 (0.1%)
26	YB	0.35	0/2878	0.89	0/4490
27	RD	0.59	2/2165 (0.1%)	0.90	4/2919 (0.1%)
27	YD	0.56	1/2165 (0.0%)	0.90	4/2919 (0.1%)
28	RE	0.52	0/1601	0.91	2/2160 (0.1%)
28	YE	0.52	0/1601	0.91	2/2160 (0.1%)
29	RF	0.50	0/1620	0.76	0/2194
29	YF	0.50	0/1620	0.76	0/2194
30	RG	0.40	0/1499	0.66	0/2016
30	YG	0.40	0/1499	0.66	0/2016
31	RH	0.45	0/1332	0.85	3/1802 (0.2%)
31	YH	0.45	0/1332	0.85	4/1802 (0.2%)
32	RI	0.29	0/1151	0.63	0/1558
32	YI	0.30	0/1151	0.63	0/1558
33	RN	0.46	0/1131	0.78	1/1525 (0.1%)
33	YN	0.46	0/1131	0.78	1/1525 (0.1%)
34	RO	0.53	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.94	3/1544 (0.2%)
35	YP	0.49	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.54	0/1143	0.90	3/1527 (0.2%)
36	YQ	0.54	0/1143	0.89	3/1527 (0.2%)
37	RR	0.45	0/982	0.80	1/1312 (0.1%)
37	YR	0.45	0/982	0.80	1/1312 (0.1%)
38	RS	0.46	0/892	0.82	1/1187 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	YS	0.45	0/892	0.82	1/1187 (0.1%)
39	RT	0.47	0/1155	0.73	2/1542 (0.1%)
39	YT	0.46	0/1155	0.73	2/1542 (0.1%)
40	RU	0.48	0/982	0.78	0/1306
40	YU	0.48	0/982	0.77	0/1306
41	RV	0.47	0/790	0.82	0/1057
41	YV	0.47	0/790	0.82	0/1057
42	RW	0.45	0/911	0.75	0/1220
42	YW	0.45	0/911	0.75	0/1220
43	RX	0.56	0/739	0.77	0/993
43	YX	0.56	0/739	0.77	0/993
44	RY	0.52	0/798	0.80	0/1064
44	YY	0.52	0/798	0.80	0/1064
45	RZ	0.32	0/1493	0.60	0/2026
45	YZ	0.33	0/1493	0.63	0/2026
46	R0	0.30	0/657	0.56	0/874
46	Y0	0.31	0/657	0.53	0/874
47	R1	0.49	0/770	0.85	1/1022 (0.1%)
47	Y1	0.49	0/770	0.85	1/1022 (0.1%)
48	R2	0.51	0/583	0.83	1/771 (0.1%)
48	Y2	0.50	0/583	0.83	1/771 (0.1%)
49	R3	0.47	0/474	0.72	0/635
49	Y3	0.43	0/474	0.71	0/635
50	R4	0.38	0/594	0.78	1/795 (0.1%)
50	Y4	0.38	0/594	0.78	1/795 (0.1%)
51	R5	0.51	0/473	0.74	0/639
51	Y5	0.51	0/473	0.74	0/639
52	R6	0.42	0/431	0.76	0/575
52	Y6	0.42	0/431	0.76	0/575
53	R7	0.56	0/438	0.76	0/575
53	Y7	0.56	0/438	0.76	0/575
54	R8	0.62	0/525	0.93	1/691 (0.1%)
54	Y8	0.62	0/525	0.93	1/691 (0.1%)
55	R9	0.35	0/310	0.59	0/407
55	Y9	0.37	0/310	0.61	0/407
56	Z6	0.79	0/40	1.79	1/60 (1.7%)
56	Z8	0.78	0/40	1.81	1/60 (1.7%)
All	All	0.41	9/316323 (0.0%)	0.87	408/472911 (0.1%)

All (9) bond length outliers are listed below:

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	RD	236	GLY	C-N	8.55	1.53	1.34
25	YA	1762	A	N9-C4	6.24	1.41	1.37
23	XX	8	A	C6-N6	6.10	1.38	1.33
25	RA	654(T)	C	C1'-N1	5.71	1.57	1.48
1	XA	518	C	N3-C4	-5.32	1.30	1.33
25	YA	676	A	N9-C4	-5.26	1.34	1.37
27	RD	241	PRO	N-CD	5.15	1.55	1.47
25	YA	654(T)	C	C1'-N1	5.14	1.56	1.48
27	YD	241	PRO	N-CD	5.01	1.54	1.47

All (408) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	QL	47	LYS	C-N-CD	-20.48	75.56	120.60
12	XL	47	LYS	C-N-CD	-20.46	75.59	120.60
1	XA	518	C	C5-C4-N4	15.43	131.00	120.20
1	XA	518	C	C6-N1-C1'	12.95	136.34	120.80
1	XA	518	C	C2-N1-C1'	-11.78	105.84	118.80
22	QV	17	C	C2-N1-C1'	11.77	131.75	118.80
22	XV	17	C	C2-N1-C1'	11.68	131.64	118.80
1	XA	518	C	N3-C4-N4	-11.57	109.90	118.00
25	YA	1929	G	C6-C5-N7	-11.06	123.77	130.40
25	YA	1929	G	C5-C6-O6	-10.55	122.27	128.60
25	YA	1929	G	C4-C5-N7	10.40	114.96	110.80
28	YE	21	VAL	C-N-CD	-10.12	98.35	120.60
28	RE	21	VAL	C-N-CD	-10.07	98.45	120.60
25	YA	945	A	O4'-C1'-N9	10.00	116.20	108.20
25	YA	1929	G	N1-C6-O6	9.87	125.82	119.90
25	RA	945	A	P-O3'-C3'	9.62	131.25	119.70
1	XA	1397	C	P-O3'-C3'	9.57	131.19	119.70
23	XX	7	U	P-O3'-C3'	9.54	131.15	119.70
1	QA	1322	C	C2-N1-C1'	9.46	129.20	118.80
25	YA	2506	U	N3-C2-O2	-9.21	115.75	122.20
12	QL	47	LYS	C-N-CA	8.81	159.00	122.00
12	XL	47	LYS	C-N-CA	8.78	158.87	122.00
22	QV	17	C	C6-N1-C1'	-8.74	110.32	120.80
36	YQ	81	VAL	CB-CA-C	-8.71	94.85	111.40
22	XV	17	C	C6-N1-C1'	-8.70	110.36	120.80
1	QA	960	U	N3-C2-O2	-8.65	116.15	122.20
36	RQ	81	VAL	CB-CA-C	-8.65	94.97	111.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	QA	372	C	C2-N1-C1'	8.63	128.29	118.80
25	YA	2506	U	N1-C2-O2	8.59	128.81	122.80
25	YA	196	A	N1-C6-N6	8.52	123.71	118.60
25	YA	1950	G	C4-N9-C1'	8.27	137.25	126.50
1	QA	1301	U	C2-N1-C1'	8.12	127.44	117.70
25	YA	761	A	N1-C6-N6	8.09	123.45	118.60
25	YA	1929	G	N9-C4-C5	-8.04	102.18	105.40
1	QA	1158	C	C2-N1-C1'	7.96	127.56	118.80
25	YA	528	A	C2-N3-C4	-7.94	106.63	110.60
25	RA	2506	U	N3-C2-O2	-7.87	116.69	122.20
47	R1	79	GLY	N-CA-C	-7.84	93.51	113.10
1	QA	960	U	N1-C2-O2	7.82	128.28	122.80
47	Y1	79	GLY	N-CA-C	-7.82	93.55	113.10
25	RA	2506	U	N1-C2-O2	7.78	128.25	122.80
25	YA	530	G	N3-C2-N2	7.59	125.21	119.90
25	YA	1929	G	N3-C4-N9	7.57	130.54	126.00
25	RA	1899	G	N3-C2-N2	7.56	125.19	119.90
25	YA	530	G	N1-C2-N2	-7.46	109.48	116.20
25	RA	1929	G	N1-C6-O6	7.44	124.36	119.90
1	QA	1322	C	N1-C2-O2	7.43	123.36	118.90
1	QA	1301	U	N1-C2-O2	7.43	128.00	122.80
22	XV	17	C	N1-C2-O2	7.42	123.35	118.90
25	YA	2681	C	P-O3'-C3'	7.42	128.60	119.70
1	QA	1322	C	C6-N1-C1'	-7.36	111.97	120.80
1	XA	328	C	C2-N1-C1'	7.34	126.87	118.80
35	RP	59	LEU	N-CA-C	-7.25	91.41	111.00
35	YP	59	LEU	N-CA-C	-7.25	91.42	111.00
25	RA	1899	G	N1-C2-N2	-7.25	109.68	116.20
25	YA	1950	G	O4'-C1'-N9	7.23	113.99	108.20
1	XA	1301	U	C2-N1-C1'	7.21	126.36	117.70
25	RA	1396	U	C2-N1-C1'	7.17	126.30	117.70
25	RA	2506	U	C2-N1-C1'	7.15	126.28	117.70
25	YA	528	A	N1-C2-N3	7.15	132.87	129.30
22	QV	17	C	N1-C2-O2	7.12	123.17	118.90
25	RA	2702	U	C2-N1-C1'	7.11	126.23	117.70
1	XA	518	C	N3-C4-C5	-7.08	119.07	121.90
36	YQ	81	VAL	N-CA-C	7.05	130.04	111.00
25	RA	2468	G	C4-N9-C1'	7.05	135.66	126.50
36	RQ	81	VAL	N-CA-C	7.05	130.03	111.00
25	YA	676	A	C2-N3-C4	-7.05	107.08	110.60
1	XA	254	G	O5'-P-OP1	-7.03	99.37	105.70
1	QA	1158	C	N1-C2-O2	6.99	123.09	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	YA	2031	A	O4'-C1'-N9	6.99	113.79	108.20
1	XA	328	C	N1-C2-O2	6.91	123.04	118.90
25	YA	945	A	C4-N9-C1'	6.86	138.66	126.30
1	QA	372	C	N1-C2-O2	6.86	123.02	118.90
25	RA	974(A)	C	C6-N1-C2	-6.86	117.56	120.30
25	RA	1899	G	N3-C4-N9	6.83	130.10	126.00
1	XA	1054	C	C2-N1-C1'	6.81	126.29	118.80
1	XA	372	C	C2-N1-C1'	6.79	126.27	118.80
25	RA	2053	G	C5-N7-C8	-6.76	100.92	104.30
56	Z8	74	C	N1-C2-O2	6.74	122.94	118.90
1	XA	1301	U	N1-C2-O2	6.72	127.51	122.80
26	RB	42	C	C2-N1-C1'	-6.71	111.42	118.80
1	XA	518	C	N1-C2-N3	6.70	123.89	119.20
1	XA	974	A	O4'-C1'-N9	6.69	113.56	108.20
56	Z6	74	C	N1-C2-O2	6.69	122.91	118.90
25	RA	2614	A	C6-N1-C2	-6.68	114.59	118.60
25	RA	1301	A	P-O3'-C3'	6.68	127.72	119.70
25	YA	1204	A	O4'-C1'-N9	6.65	113.52	108.20
1	QA	1301	U	N3-C2-O2	-6.64	117.55	122.20
25	YA	1950	G	C8-N9-C1'	-6.63	118.39	127.00
25	YA	2506	U	C2-N1-C1'	6.58	125.59	117.70
25	RA	1396	U	N1-C2-O2	6.57	127.40	122.80
1	XA	518	C	C6-N1-C2	-6.57	117.67	120.30
25	RA	1396	U	N3-C2-O2	-6.54	117.62	122.20
27	YD	131	LEU	CA-CB-CG	6.54	130.33	115.30
1	XA	1301	U	N3-C2-O2	-6.52	117.64	122.20
25	YA	1130	U	P-O3'-C3'	6.52	127.52	119.70
27	RD	131	LEU	CA-CB-CG	6.52	130.29	115.30
1	QA	372	C	C6-N1-C1'	-6.51	112.98	120.80
25	RA	1786	A	N7-C8-N9	6.49	117.04	113.80
25	RA	1980	G	P-O3'-C3'	6.49	127.48	119.70
25	YA	2420	C	O5'-P-OP1	-6.49	99.86	105.70
25	YA	1929	G	OP1-P-O3'	6.48	119.46	105.20
25	RA	1786	A	C5-N7-C8	-6.47	100.66	103.90
25	YA	945	A	C8-N9-C1'	-6.46	116.08	127.70
25	YA	265	A	O4'-C1'-N9	6.46	113.36	108.20
12	XL	48	PRO	CA-N-CD	-6.45	102.47	111.50
25	YA	205	G	P-O3'-C3'	6.43	127.41	119.70
25	YA	2702	U	C2-N1-C1'	6.43	125.41	117.70
12	QL	48	PRO	CA-N-CD	-6.41	102.52	111.50
25	YA	1929	G	C5-N7-C8	-6.36	101.12	104.30
25	YA	2430	A	C2-N3-C4	-6.36	107.42	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	242	G	P-O3'-C3'	6.35	127.32	119.70
1	QA	328	C	N1-C2-O2	6.34	122.71	118.90
1	XA	792	A	P-O3'-C3'	6.34	127.31	119.70
25	YA	783	A	C5-N7-C8	-6.34	100.73	103.90
1	XA	1336	C	N1-C2-O2	6.33	122.70	118.90
25	RA	1799	G	P-O3'-C3'	6.33	127.30	119.70
25	YA	761	A	C5-C6-N6	-6.30	118.66	123.70
4	QD	28	SER	C-N-CD	6.27	141.57	128.40
25	YA	1313	U	C2-N1-C1'	6.26	125.21	117.70
25	RA	1899	G	C6-C5-N7	-6.24	126.65	130.40
1	QA	792	A	P-O3'-C3'	6.23	127.18	119.70
25	RA	265	A	O4'-C1'-N9	6.22	113.17	108.20
25	YA	2051	A	C2-N3-C4	-6.21	107.49	110.60
25	YA	196	A	C6-C5-N7	-6.21	127.96	132.30
25	YA	2681	C	C6-N1-C2	-6.20	117.82	120.30
25	RA	1882	C	C2-N1-C1'	6.19	125.61	118.80
1	QA	1158	C	C6-N1-C2	-6.18	117.83	120.30
1	XA	328	C	C6-N1-C2	-6.16	117.83	120.30
25	RA	1929	G	C6-C5-N7	-6.15	126.71	130.40
26	RB	42	C	C6-N1-C1'	6.15	128.18	120.80
25	YA	242	G	P-O3'-C3'	6.14	127.07	119.70
25	YA	1210	A	N7-C8-N9	6.13	116.86	113.80
25	YA	1396	U	N1-C2-O2	6.13	127.09	122.80
1	XA	1065	U	P-O3'-C3'	6.12	127.04	119.70
25	YA	2481	G	P-O3'-C3'	6.09	127.01	119.70
25	YA	783	A	N7-C8-N9	6.09	116.84	113.80
25	YA	1396	U	C2-N1-C1'	6.07	124.99	117.70
25	RA	2702	U	C5-C6-N1	6.06	125.73	122.70
37	RR	9	LYS	N-CA-C	-6.04	94.68	111.00
1	XA	1158	C	C2-N1-C1'	6.04	125.44	118.80
25	YA	2610	C	OP2-P-O3'	6.03	118.48	105.20
37	YR	9	LYS	N-CA-C	-6.01	94.78	111.00
27	YD	240	ALA	C-N-CD	6.00	140.99	128.40
25	RA	2614	A	N1-C2-N3	5.98	132.29	129.30
1	XA	1200	C	P-O3'-C3'	5.98	126.88	119.70
25	YA	2682	U	OP1-P-OP2	-5.96	110.66	119.60
25	RA	1694	C	P-O3'-C3'	5.95	126.84	119.70
1	QA	328	C	C2-N1-C1'	5.95	125.34	118.80
25	RA	2468	G	O4'-C1'-N9	5.93	112.95	108.20
25	RA	205	G	P-O3'-C3'	5.93	126.82	119.70
25	RA	2468	G	C8-N9-C1'	-5.93	119.29	127.00
27	RD	240	ALA	C-N-CD	5.93	140.85	128.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	QV	17	C	C6-N1-C2	-5.92	117.93	120.30
1	QA	372	C	C5-C6-N1	5.88	123.94	121.00
31	YH	125	VAL	C-N-CD	-5.88	107.67	120.60
25	RA	2053	G	C8-N9-C1'	5.88	134.64	127.00
1	QA	254	G	O5'-P-OP1	-5.87	100.42	105.70
31	RH	125	VAL	C-N-CD	-5.87	107.68	120.60
1	QA	690	G	O4'-C1'-N9	5.87	112.89	108.20
1	QA	410	G	P-O3'-C3'	5.86	126.73	119.70
12	XL	119	LYS	N-CA-C	-5.86	95.19	111.00
25	YA	1210	A	C8-N9-C4	-5.85	103.46	105.80
12	QL	119	LYS	N-CA-C	-5.85	95.21	111.00
25	RA	1301	A	OP1-P-O3'	5.84	118.06	105.20
1	XA	1025	U	C5-C6-N1	5.84	125.62	122.70
25	RA	1130	U	P-O3'-C3'	5.84	126.71	119.70
28	RE	58	ARG	N-CA-C	-5.83	95.25	111.00
28	YE	58	ARG	N-CA-C	-5.83	95.26	111.00
1	XA	971	G	C4-N9-C1'	-5.82	118.94	126.50
25	RA	140	A	N7-C8-N9	5.82	116.71	113.80
25	YA	1950	G	N3-C4-N9	5.82	129.49	126.00
25	YA	2832	U	P-O3'-C3'	5.81	126.67	119.70
35	YP	26	GLY	N-CA-C	-5.81	98.57	113.10
25	RA	676	A	O4'-C1'-N9	5.81	112.84	108.20
25	YA	1496	A	N7-C8-N9	5.80	116.70	113.80
25	RA	2053	G	C8-N9-C4	-5.80	104.08	106.40
1	QA	1322	C	C5-C6-N1	5.79	123.89	121.00
35	RP	26	GLY	N-CA-C	-5.79	98.63	113.10
25	YA	1992	G	P-O3'-C3'	5.79	126.65	119.70
1	XA	1151	A	O4'-C1'-N9	5.79	112.83	108.20
1	XA	518	C	N1-C1'-C2'	5.78	121.52	114.00
25	YA	945	A	C6-C5-N7	-5.78	128.25	132.30
25	YA	945	A	N9-C1'-C2'	5.78	121.51	114.00
1	XA	960	U	N3-C2-O2	-5.78	118.16	122.20
1	QA	812	C	P-O3'-C3'	5.77	126.62	119.70
22	XV	17	C	C6-N1-C2	-5.76	118.00	120.30
48	Y2	16	LEU	N-CA-C	-5.75	95.47	111.00
1	XA	345	C	P-O3'-C3'	5.75	126.60	119.70
25	YA	196	A	C5-C6-N6	-5.75	119.10	123.70
1	QA	1065	U	P-O3'-C3'	5.74	126.59	119.70
25	YA	1950	G	N7-C8-N9	5.74	115.97	113.10
1	XA	1094	G	OP2-P-O3'	5.74	117.83	105.20
48	R2	16	LEU	N-CA-C	-5.74	95.51	111.00
1	XA	1054	C	N1-C2-O2	5.74	122.34	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	328	C	N3-C2-O2	-5.72	117.90	121.90
25	RA	783	A	N7-C8-N9	5.71	116.66	113.80
1	XA	410	G	P-O3'-C3'	5.71	126.56	119.70
1	XA	1054	C	C6-N1-C1'	-5.71	113.95	120.80
19	XS	6	LYS	N-CA-C	-5.71	95.59	111.00
25	YA	1786	A	N7-C8-N9	5.70	116.65	113.80
25	YA	2688	U	N3-C2-O2	-5.67	118.23	122.20
25	YA	2655	G	P-O3'-C3'	5.67	126.50	119.70
19	QS	6	LYS	N-CA-C	-5.67	95.70	111.00
25	YA	1950	G	N3-C4-C5	-5.67	125.77	128.60
25	RA	2490	G	C4-N9-C1'	5.66	133.86	126.50
25	RA	404	C	P-O3'-C3'	5.64	126.47	119.70
25	RA	1929	G	C5-C6-O6	-5.63	125.22	128.60
25	YA	2430	A	N1-C2-N3	5.62	132.11	129.30
25	YA	945	A	C1'-O4'-C4'	-5.62	105.40	109.90
1	QA	701	C	P-O3'-C3'	5.61	126.43	119.70
25	YA	1955	U	P-O3'-C3'	5.61	126.43	119.70
25	RA	28	A	N7-C8-N9	5.61	116.60	113.80
1	QA	1301	U	C6-N1-C1'	-5.60	113.36	121.20
25	RA	1786	A	C6-C5-N7	-5.60	128.38	132.30
1	QA	1200	C	P-O3'-C3'	5.59	126.41	119.70
25	YA	2712(A)	A	N7-C8-N9	5.58	116.59	113.80
25	RA	1543	A	O4'-C1'-N9	5.57	112.66	108.20
25	RA	1204	A	O4'-C1'-N9	5.57	112.65	108.20
25	YA	1359	A	C6-C5-N7	-5.57	128.40	132.30
33	RN	114	ARG	N-CA-C	-5.56	95.98	111.00
25	RA	1992	G	P-O3'-C3'	5.56	126.38	119.70
4	XD	14	ARG	C-N-CA	-5.56	107.80	121.70
1	XA	753	A	P-O3'-C3'	5.56	126.37	119.70
50	R4	39	CYS	N-CA-C	-5.56	96.00	111.00
25	YA	1359	A	N1-C6-N6	5.55	121.93	118.60
25	YA	859	G	P-O3'-C3'	5.54	126.35	119.70
25	YA	2439	A	P-O3'-C3'	5.54	126.35	119.70
25	RA	733	G	C5-N7-C8	-5.54	101.53	104.30
50	Y4	39	CYS	N-CA-C	-5.54	96.05	111.00
25	RA	1078	U	P-O3'-C3'	5.53	126.34	119.70
1	XA	372	C	C6-N1-C1'	-5.53	114.17	120.80
33	YN	114	ARG	N-CA-C	-5.52	96.09	111.00
25	YA	2610	C	P-O3'-C3'	5.52	126.33	119.70
1	XA	1053	G	C4-N9-C1'	-5.52	119.33	126.50
25	YA	856	C	C6-N1-C2	-5.52	118.09	120.30
25	YA	1021	A	C2-N3-C4	-5.51	107.84	110.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	YA	2779	U	C2-N1-C1'	5.51	124.31	117.70
25	YA	1078	U	P-O3'-C3'	5.50	126.30	119.70
22	QV	17	C	C5-C6-N1	5.50	123.75	121.00
1	QA	1336	C	C2-N1-C1'	5.49	124.84	118.80
1	QA	723	U	C2-N1-C1'	5.48	124.28	117.70
1	XA	913	A	P-O3'-C3'	5.48	126.28	119.70
1	QA	687	A	P-O3'-C3'	5.48	126.27	119.70
1	QA	1151	A	O4'-C1'-N9	5.48	112.58	108.20
25	RA	774	A	C2-N3-C4	-5.48	107.86	110.60
1	XA	1336	C	C2-N1-C1'	5.47	124.82	118.80
25	YA	530	G	N1-C6-O6	-5.47	116.62	119.90
25	YA	1786	A	C5-N7-C8	-5.47	101.16	103.90
25	RA	227	A	P-O3'-C3'	5.47	126.27	119.70
27	RD	251	GLY	N-CA-C	5.47	126.78	113.10
1	QA	1158	C	N3-C2-O2	-5.47	118.07	121.90
1	QA	1200	C	OP2-P-O3'	5.47	117.23	105.20
1	XA	243	A	P-O3'-C3'	5.46	126.25	119.70
25	YA	205	G	OP2-P-O3'	5.46	117.20	105.20
22	XV	17	C	C5-C6-N1	5.46	123.73	121.00
31	YH	127	GLU	N-CA-C	-5.45	96.28	111.00
31	RH	127	GLU	N-CA-C	-5.45	96.28	111.00
25	YA	1359	A	C5-C6-N6	-5.45	119.34	123.70
27	YD	251	GLY	N-CA-C	5.45	126.72	113.10
25	RA	2430	A	N1-C2-N3	5.44	132.02	129.30
35	RP	25	SER	N-CA-C	-5.44	96.31	111.00
25	YA	860	U	N3-C2-O2	-5.44	118.39	122.20
1	XA	812	C	P-O3'-C3'	5.44	126.22	119.70
1	XA	690	G	O4'-C1'-N9	5.43	112.55	108.20
25	YA	271(B)	G	P-O3'-C3'	5.43	126.22	119.70
25	YA	1078	U	OP2-P-O3'	5.43	117.15	105.20
25	RA	27	G	C4-N9-C1'	-5.43	119.44	126.50
25	YA	503	A	P-O3'-C3'	5.42	126.21	119.70
25	RA	828	U	N3-C2-O2	-5.42	118.41	122.20
25	YA	1396	U	N3-C2-O2	-5.42	118.41	122.20
35	YP	25	SER	N-CA-C	-5.42	96.37	111.00
25	RA	669	G	C4-N9-C1'	5.42	133.54	126.50
25	RA	1929	G	C4-C5-N7	5.41	112.96	110.80
25	RA	2832	U	P-O3'-C3'	5.40	126.19	119.70
1	QA	328	C	N3-C2-O2	-5.40	118.12	121.90
25	YA	1313	U	C5-C6-N1	5.39	125.39	122.70
25	RA	974(A)	C	P-O3'-C3'	5.38	126.16	119.70
25	RA	974(A)	C	N3-C2-O2	-5.38	118.13	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	YD	111	LEU	CA-CB-CG	5.38	127.67	115.30
25	YA	1799	G	P-O3'-C3'	5.38	126.15	119.70
25	RA	2726	U	C2-N1-C1'	5.38	124.15	117.70
25	RA	99	U	P-O3'-C3'	5.37	126.15	119.70
25	YA	2335	A	O4'-C1'-N9	5.37	112.49	108.20
25	RA	1929	G	OP1-P-O3'	5.37	117.01	105.20
1	XA	1336	C	N3-C2-O2	-5.37	118.14	121.90
25	RA	1241	A	O4'-C1'-N9	5.36	112.49	108.20
1	XA	1201	A	P-O3'-C3'	5.36	126.13	119.70
25	YA	372	G	O4'-C1'-N9	5.36	112.49	108.20
25	RA	383	U	N1-C2-O2	5.36	126.55	122.80
31	YH	100	GLY	N-CA-C	-5.36	99.71	113.10
25	YA	2712	U	N3-C2-O2	-5.35	118.45	122.20
25	RA	27	G	N3-C4-N9	-5.35	122.79	126.00
25	RA	1653	G	P-O3'-C3'	5.35	126.12	119.70
25	RA	2060	A	P-O3'-C3'	5.35	126.12	119.70
1	XA	723	U	C2-N1-C1'	5.34	124.11	117.70
27	RD	111	LEU	CA-CB-CG	5.34	127.59	115.30
25	RA	2712(A)	A	N7-C8-N9	5.34	116.47	113.80
25	YA	1929	G	N7-C8-N9	5.34	115.77	113.10
31	RH	100	GLY	N-CA-C	-5.33	99.76	113.10
25	YA	1022	G	P-O3'-C3'	5.33	126.09	119.70
1	XA	687	A	P-O3'-C3'	5.32	126.09	119.70
25	YA	1496	A	C8-N9-C4	-5.32	103.67	105.80
25	RA	383	U	N3-C2-O2	-5.31	118.48	122.20
25	RA	2849	U	O4'-C1'-N1	5.31	112.45	108.20
1	QA	974	A	O4'-C1'-N9	5.30	112.44	108.20
25	YA	676	A	C5-N7-C8	-5.30	101.25	103.90
25	RA	2439	A	P-O3'-C3'	5.29	126.05	119.70
25	YA	1970	A	O5'-P-OP2	-5.29	100.94	105.70
25	YA	761	A	C4-C5-N7	5.29	113.34	110.70
54	Y8	36	LYS	N-CA-C	-5.28	96.74	111.00
54	R8	36	LYS	N-CA-C	-5.27	96.77	111.00
25	RA	2420	C	O5'-P-OP1	-5.27	100.96	105.70
1	XA	960	U	N1-C2-O2	5.27	126.49	122.80
25	RA	2681	C	P-O3'-C3'	5.26	126.01	119.70
1	XA	346	G	O4'-C1'-N9	5.26	112.41	108.20
1	QA	449	C	C6-N1-C2	-5.25	118.20	120.30
25	RA	530	G	N3-C2-N2	5.25	123.58	119.90
25	YA	2307	G	C4-N9-C1'	5.25	133.32	126.50
25	RA	2776	A	P-O3'-C3'	5.23	125.97	119.70
38	RS	110	LEU	CA-CB-CG	5.23	127.32	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	1012	U	P-O3'-C3'	5.22	125.97	119.70
25	YA	1012	U	OP2-P-O3'	5.22	116.69	105.20
1	QA	1528	U	P-O3'-C3'	5.22	125.96	119.70
25	RA	2490	G	C6-C5-N7	-5.22	127.27	130.40
1	XA	992	U	P-O3'-C3'	5.22	125.96	119.70
36	YQ	5	ARG	N-CA-C	-5.22	96.91	111.00
25	YA	1950	G	C6-C5-N7	-5.21	127.27	130.40
1	XA	328	C	P-O3'-C3'	5.21	125.96	119.70
1	XA	971	G	C8-N9-C1'	5.20	133.76	127.00
19	XS	79	THR	N-CA-C	-5.20	96.96	111.00
36	RQ	5	ARG	N-CA-C	-5.20	96.97	111.00
1	QA	533	A	P-O3'-C3'	5.20	125.93	119.70
1	QA	1336	C	C6-N1-C2	-5.19	118.22	120.30
25	YA	102	G	P-O3'-C3'	5.18	125.92	119.70
1	QA	1065	U	OP2-P-O3'	5.18	116.60	105.20
1	XA	1498	U	P-O3'-C3'	5.18	125.92	119.70
38	YS	110	LEU	CA-CB-CG	5.18	127.22	115.30
1	QA	1158	C	C6-N1-C1'	-5.18	114.58	120.80
1	XA	960	U	P-O3'-C3'	5.18	125.92	119.70
25	YA	1528	A	O4'-C1'-N9	5.18	112.34	108.20
25	YA	1614	A	O4'-C1'-N9	5.17	112.34	108.20
1	QA	328	C	P-O3'-C3'	5.17	125.90	119.70
25	RA	2053	G	N7-C8-N9	5.17	115.68	113.10
1	XA	410	G	OP1-P-O3'	5.16	116.56	105.20
19	QS	79	THR	N-CA-C	-5.16	97.06	111.00
25	RA	270(Z)	U	O4'-C1'-N1	5.16	112.33	108.20
25	RA	528	A	C2-N3-C4	-5.16	108.02	110.60
25	YA	404	C	P-O3'-C3'	5.16	125.89	119.70
1	QA	913	A	P-O3'-C3'	5.15	125.88	119.70
25	YA	945	A	C5'-C4'-C3'	5.15	124.25	116.00
25	RA	1022	G	P-O3'-C3'	5.15	125.88	119.70
22	XV	17	C	N3-C2-O2	-5.14	118.31	121.90
25	YA	761	A	C5-N7-C8	-5.13	101.33	103.90
25	RA	1496	A	N7-C8-N9	5.13	116.36	113.80
25	RA	2712	U	P-O3'-C3'	5.13	125.85	119.70
25	RA	2702	U	N1-C2-O2	5.13	126.39	122.80
25	RA	345	A	P-O3'-C3'	5.12	125.85	119.70
25	YA	2447	G	C8-N9-C1'	5.12	133.65	127.00
1	XA	115	G	P-O3'-C3'	5.11	125.83	119.70
26	RB	44	G	C4-N9-C1'	-5.11	119.86	126.50
25	YA	1950	G	C8-N9-C4	-5.11	104.36	106.40
1	XA	1065	U	OP2-P-O3'	5.10	116.42	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	1503	A	P-O3'-C3'	5.10	125.82	119.70
25	RA	1558	A	P-O3'-C3'	5.10	125.82	119.70
25	YA	587	C	C2-N1-C1'	5.09	124.40	118.80
25	RA	2468	G	C6-C5-N7	-5.09	127.34	130.40
25	YA	1210	A	C5-N7-C8	-5.09	101.35	103.90
25	RA	2335	A	O4'-C1'-N9	5.09	112.27	108.20
1	XA	1336	C	C6-N1-C2	-5.09	118.27	120.30
25	YA	222	A	P-O3'-C3'	5.09	125.81	119.70
39	YT	123	GLN	N-CA-C	-5.08	97.27	111.00
25	YA	774	A	C2-N3-C4	-5.08	108.06	110.60
25	RA	1654	A	O5'-P-OP1	-5.08	101.13	105.70
25	YA	2655	G	OP2-P-O3'	5.08	116.37	105.20
25	YA	2702	U	C5-C6-N1	5.08	125.24	122.70
25	YA	2611	U	O5'-P-OP2	-5.08	101.13	105.70
25	RA	1899	G	N3-C4-C5	-5.07	126.06	128.60
25	RA	372	G	OP2-P-O3'	5.07	116.35	105.20
39	YT	59	THR	N-CA-C	-5.07	97.32	111.00
1	XA	1003	G	N9-C1'-C2'	-5.06	106.43	112.00
25	YA	1558	A	P-O3'-C3'	5.06	125.78	119.70
25	RA	2848	G	P-O3'-C3'	5.06	125.77	119.70
39	RT	123	GLN	N-CA-C	-5.06	97.34	111.00
1	QA	1027	C	OP1-P-O3'	5.06	116.33	105.20
25	YA	450	G	C5-C6-N1	-5.06	108.97	111.50
25	YA	828	U	C2-N1-C1'	5.06	123.77	117.70
39	RT	59	THR	N-CA-C	-5.05	97.36	111.00
1	XA	31	G	P-O3'-C3'	5.05	125.77	119.70
1	XA	701	C	P-O3'-C3'	5.05	125.77	119.70
1	XA	328	C	C5-C6-N1	5.05	123.53	121.00
25	YA	2751	G	P-O3'-C3'	5.05	125.76	119.70
25	YA	99	U	P-O3'-C3'	5.05	125.76	119.70
1	XA	971	G	O4'-C1'-N9	5.04	112.24	108.20
25	YA	783	A	C4-C5-N7	5.04	113.22	110.70
25	YA	395	U	O4'-C1'-N1	5.03	112.22	108.20
25	RA	2447	G	C8-N9-C1'	5.03	133.54	127.00
25	YA	2318	G	O4'-C1'-N9	5.03	112.22	108.20
1	XA	1302	U	C2-N1-C1'	5.02	123.72	117.70
1	QA	703	G	P-O3'-C3'	5.02	125.72	119.70
25	YA	1694	C	P-O3'-C3'	5.02	125.72	119.70
1	QA	754	C	C2-N1-C1'	5.01	124.31	118.80
31	YH	127	GLU	C-N-CD	-5.01	109.57	120.60
25	YA	2126	A	P-O3'-C3'	5.01	125.71	119.70
1	XA	1224	G	P-O3'-C3'	5.01	125.71	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	2702	U	C6-N1-C1'	-5.00	114.20	121.20
1	XA	518	C	C4-C5-C6	5.00	119.90	117.40
25	RA	140	A	C8-N9-C4	-5.00	103.80	105.80

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	492	0
1	XA	32249	0	16279	531	1
2	QB	1924	0	1975	287	0
2	XB	1924	0	1975	289	0
3	QC	1605	0	1668	207	0
3	XC	1605	0	1668	207	1
4	QD	1703	0	1764	253	0
4	XD	1703	0	1765	215	0
5	QE	1155	0	1213	136	0
5	XE	1155	0	1213	131	0
6	QF	843	0	857	94	0
6	XF	843	0	857	100	0
7	QG	1257	0	1296	145	0
7	XG	1257	0	1296	141	0
8	QH	1116	0	1175	140	0
8	XH	1116	0	1177	144	0
9	QI	1010	0	1037	141	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	100	1
11	XK	885	0	904	103	0
12	QL	975	0	1062	104	0
12	XL	975	0	1062	108	0
13	QM	964	0	1034	161	0
13	XM	964	0	1034	161	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
14	QN	492	0	530	98	0
14	XN	492	0	529	100	0
15	QO	734	0	771	75	0
15	XO	734	0	771	72	0
16	QP	705	0	725	112	0
16	XP	705	0	725	110	0
17	QQ	834	0	904	83	0
17	XQ	834	0	904	75	0
18	QR	574	0	644	66	0
18	XR	574	0	644	69	0
19	QS	674	0	699	113	0
19	XS	674	0	699	152	0
20	QT	763	0	860	105	0
20	XT	763	0	861	101	0
21	QU	217	0	234	26	0
21	XU	217	0	234	26	0
22	QV	1644	0	836	25	0
22	XV	1644	0	836	28	0
23	QX	167	0	87	12	0
23	XX	167	0	87	13	0
24	QY	303	0	154	11	0
24	XY	303	0	154	11	0
25	RA	62071	0	31285	855	0
25	YA	62091	0	31296	839	0
26	RB	2573	0	1306	58	0
26	YB	2573	0	1306	35	0
27	RD	2115	0	2195	317	0
27	YD	2115	0	2195	320	0
28	RE	1568	0	1634	271	0
28	YE	1568	0	1634	264	0
29	RF	1585	0	1632	177	0
29	YF	1585	0	1632	174	0
30	RG	1474	0	1535	205	0
30	YG	1474	0	1535	183	0
31	RH	1307	0	1382	226	0
31	YH	1307	0	1382	226	0
32	RI	1136	0	1223	69	1
32	YI	1136	0	1223	50	0
33	RN	1104	0	1180	194	0
33	YN	1104	0	1180	189	0
34	RO	933	0	996	122	0
34	YO	933	0	996	123	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
35	RP	1145	0	1227	245	0
35	YP	1145	0	1228	242	0
36	RQ	1122	0	1179	158	0
36	YQ	1122	0	1179	154	0
37	RR	968	0	1033	112	0
37	YR	968	0	1033	111	0
38	RS	882	0	943	160	0
38	YS	882	0	943	154	0
39	RT	1141	0	1202	150	0
39	YT	1141	0	1202	157	0
40	RU	964	0	1022	129	0
40	YU	964	0	1022	135	0
41	RV	779	0	852	129	0
41	YV	779	0	852	135	1
42	RW	900	0	964	98	0
42	YW	900	0	964	98	0
43	RX	725	0	778	67	0
43	YX	725	0	778	68	0
44	RY	785	0	878	168	0
44	YY	785	0	878	152	0
45	RZ	1461	0	1493	77	0
45	YZ	1461	0	1493	59	0
46	R0	648	0	672	27	0
46	Y0	648	0	672	20	0
47	R1	763	0	848	138	0
47	Y1	763	0	848	140	0
48	R2	581	0	629	81	0
48	Y2	581	0	629	76	0
49	R3	469	0	518	39	0
49	Y3	469	0	518	42	0
50	R4	581	0	574	155	0
50	Y4	581	0	574	188	0
51	R5	459	0	480	74	0
51	Y5	459	0	480	75	1
52	R6	424	0	450	92	0
52	Y6	424	0	450	88	0
53	R7	430	0	480	43	0
53	Y7	430	0	480	41	0
54	R8	517	0	582	103	0
54	Y8	517	0	582	103	0
55	R9	307	0	335	18	0
55	Y9	307	0	336	16	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
56	Z6	74	0	51	4	0
56	Z8	74	0	51	6	0
57	QA	66	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	2	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	R8	1	0	0	0	0
57	RA	241	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	XT	1	0	0	0	0
57	XV	1	0	0	0	0
57	XX	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	269	0	0	0	0
57	YB	3	0	0	0	0
57	YD	1	0	0	0	0
57	YE	2	0	0	0	0
57	YX	1	0	0	0	0
58	QA	42	0	45	1	0
58	XA	42	0	45	1	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	291957	0	198335	14232	3

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 29.

All (14232) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:32:SER:CB	14:XN:41:ARG:HB3	1.23	1.55
14:XN:32:SER:HB3	14:XN:41:ARG:CB	1.28	1.54
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.36	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.36	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.41
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.36
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.43	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.42	1.34
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.62	1.29
45:RZ:115:GLY:CA	45:RZ:175:VAL:O	1.83	1.26
47:R1:81:LYS:HE2	47:R1:81:LYS:N	1.50	1.26
4:XD:22:LYS:HG3	4:XD:26:CYS:SG	1.64	1.26
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
45:RZ:115:GLY:HA2	45:RZ:175:VAL:O	1.14	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
14:XN:40:CYS:SG	14:XN:43:CYS:N	2.11	1.23
36:RQ:59:ARG:O	36:RQ:60:ARG:HD2	1.38	1.22
14:XN:32:SER:CB	14:XN:41:ARG:CB	1.97	1.21
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.70	1.21
31:RH:127:GLU:HG2	31:RH:128:PRO:CD	1.69	1.20
31:YH:127:GLU:CB	31:YH:128:PRO:HD3	1.69	1.20
19:XS:68:GLY:HA3	50:Y4:68:ARG:CB	1.71	1.20
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
32:RI:53:ALA:O	32:RI:57:ARG:HG2	1.44	1.18
44:RY:95:LYS:HB3	44:RY:100:ALA:HA	1.20	1.17
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.17
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.17
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.16
44:YY:76:CYS:HB3	44:YY:96:ILE:HD13	1.17	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	1.16
31:RH:132:ARG:HB2	31:RH:132:ARG:HH11	1.10	1.16
14:XN:42:ILE:O	14:XN:43:CYS:O	1.65	1.15
35:RP:50:ARG:HH21	35:RP:50:ARG:HB3	1.13	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.14
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
47:R1:82:LEU:C	47:R1:82:LEU:HD12	1.66	1.13
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.29	1.12
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.12
35:YP:50:ARG:HH21	35:YP:50:ARG:HB3	1.13	1.12
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	1.11
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.32	1.11
19:XS:42:PRO:HD3	50:Y4:63:TYR:HE2	1.05	1.11
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.51	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.11
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.32	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.11
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.05	1.10
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.10
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.10
45:RZ:108:PRO:O	45:RZ:111:VAL:HG12	1.51	1.09
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	1.08
35:RP:19:VAL:HG22	35:RP:20:GLY:H	1.15	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.19	1.08
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.08
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
36:RQ:80:GLU:OE1	46:R0:7:LEU:HD22	1.49	1.08
45:RZ:108:PRO:O	45:RZ:111:VAL:CG1	2.01	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.06	1.08
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.69	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.34	1.07
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.07
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.29	1.07
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
35:YP:59:LEU:HA	35:YP:61:ARG:NH2	1.69	1.06
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.13	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	1.69	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
1:XA:973:G:O3'	14:XN:41:ARG:NH1	1.89	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.06	1.06
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.05
25:RA:2701:C:H3'	25:RA:2702:U:H5"	1.39	1.05
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.05
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	1.71	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.11	1.05
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	1.04
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.33	1.04
36:RQ:59:ARG:O	36:RQ:60:ARG:CD	2.05	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
32:RI:52:ARG:HB2	32:RI:56:LYS:HG2	1.33	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.04
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.03
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.57	1.03
1:XA:1286:A:H5"	21:XU:26:LYS:HD2	1.38	1.03
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	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
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.56	1.03
36:RQ:80:GLU:OE1	46:R0:7:LEU:CD2	2.07	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.16	1.03
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.59	1.02
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.72	1.02
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.02
19:XS:42:PRO:HD3	50:Y4:63:TYR:CE2	1.93	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
34:RO:53:LYS:HD2	34:RO:53:LYS:H	1.23	1.02
29:YF:46:ARG:HH11	29:YF:46:ARG:HG2	1.20	1.02
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.26	1.01
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.40	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
25:YA:2701:C:H3'	25:YA:2702:U:H5"	1.41	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
36:RQ:134:ARG:HH22	45:RZ:119:GLU:HG3	1.22	1.01
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.01
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.02	1.00
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.44	1.00
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.00
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.25	1.00
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.59	1.00
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
25:RA:270(T):G:H5"	47:R1:97:LEU:HD22	1.40	1.00
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	1.00
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.78	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.31	0.99
23:XX:5:C:H2'	23:XX:6:C:H6	1.27	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.99
35:RP:50:ARG:HH21	35:RP:50:ARG:CB	1.76	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.61	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.02	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
30:RG:13:GLU:O	30: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
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.98
36:RQ:79:LEU:O	36:RQ:79:LEU:HD22	1.64	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.45	0.98
47:R1:81:LYS:HA	47:R1:81:LYS:HZ3	0.83	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.97
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.97
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.97
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.64	0.97
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.30	0.97
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.45	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.45	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.77	0.97
32:RI:56:LYS:HG3	32:RI:57:ARG:H	1.27	0.97
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
36:YQ:79:LEU:O	36:YQ:79:LEU:HD22	1.64	0.97
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.97
36:RQ:79:LEU:O	36:RQ:79:LEU:HD13	1.63	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
25:YA:1496:A:H8	25:YA:1577:C:HO2'	1.04	0.97
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.96
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.96
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.46	0.96
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.96
23:XX:5:C:H2'	23:XX:6:C:C6	2.00	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.48	0.96
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.47	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	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
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
19:QS:69:HIS:CE1	50:R4:69:LYS:HE2	2.00	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.46	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
19:QS:68:GLY:HA3	50:R4:68:ARG:HG2	1.47	0.96
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.96
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.65	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.95
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.30	0.95
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
1:QA:1286:A:H5"	21:QU:26:LYS:HD2	1.48	0.95
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
45:RZ:109:ALA:O	45:RZ:112:ARG:HB2	1.66	0.95
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	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	1.15	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.43	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
1:XA:974:A:OP2	14:XN:41:ARG:HG2	1.66	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.31	0.95
4:XD:94:LEU:H	4:XD:94:LEU:HD12	1.28	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.48	0.95
35:YP:62:LEU:N	35:YP:62:LEU:HD22	1.82	0.95
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.95
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.31	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.95
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.55	0.95
19:XS:68:GLY:CA	50:Y4:68:ARG:CB	2.44	0.95
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.95
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.94
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.97	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
35:RP:62:LEU:N	35:RP:62:LEU:HD22	1.81	0.94
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.94
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
32:RI:52:ARG:CB	32:RI:56:LYS:HG2	1.97	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.30	0.94
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.94
47:R1:81:LYS:N	47:R1:81:LYS:CE	2.30	0.94
2:XB:8:LYS:HD3	2:XB:8:LYS:H	1.31	0.94
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.94
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.94
31:YH:77:LYS:HB3	31:YH:77:LYS:NZ	1.82	0.94
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.93
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.30	0.93
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.29	0.93
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.93
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ3	1.31	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
39:YT:11:GLU:CD	39:YT:11:GLU:H	1.71	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	0.93
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.50	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.51	0.93
36:RQ:59:ARG:O	36:RQ:60:ARG:CG	2.17	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
41:RV:99:ILE:HD13	41:RV:99:ILE:H	1.31	0.93
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.48	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
14:XN:43:CYS:O	14:XN:45:ARG:N	2.01	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
19:XS:64:GLU:OE2	50:Y4:55:ARG:NH2	2.02	0.92
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.05	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.85	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.35	0.92
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.52	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	0.92
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	2.05	0.92
47:R1:81:LYS:NZ	47:R1:81:LYS:CA	2.31	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:32:SER:CB	14:XN:41:ARG:HB2	2.00	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
14:XN:32:SER:OG	14:XN:41:ARG:HB2	1.70	0.92
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.00	0.91
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.49	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.91
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.91
47:R1:81:LYS:HA	47:R1:81:LYS:CE	2.01	0.91
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.91
19:XS:68:GLY:CA	50:Y4:68:ARG:HB2	1.96	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.91
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91
31:RH:77:LYS:HB3	31:RH:77:LYS:NZ	1.82	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
19:XS:68:GLY:O	50:Y4:68:ARG:HG2	1.70	0.91
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.49	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.91
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.19	0.91
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.51	0.91
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.91
1:QA:1223:C:H5"	1:QA:1224:G:H5"	1.53	0.91
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.91
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.91
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.91
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.34	0.90
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.90
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.90
38:RS:67:ARG:NH1	38:RS:67:ARG:HB2	1.85	0.90
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.36	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
22:XV:75:C:OP1	25:YA:2602:A:OP1	1.89	0.90
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.37	0.90
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
32:RI:56:LYS:HG3	32:RI:57:ARG:N	1.81	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
36:RQ:59:ARG:O	36:RQ:60:ARG:HG3	1.72	0.90
14:XN:22:THR:O	14:XN:23:ARG:CB	2.16	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
36:RQ:108:GLY:HA3	45:RZ:116:VAL:HG11	1.53	0.90
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.90
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.90
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:44:ASN:HD22	27:YD:44:ASN:H	1.19	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.36	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
13:QM:121:LYS:NZ	24:QY:40:G:OP1	2.04	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.36	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.05	0.89
32:RI:53:ALA:O	32:RI:57:ARG:CG	2.20	0.89
40:RU:92:ARG:HG2	40:RU:92:ARG:O	1.69	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
19:XS:67:VAL:HG11	50:Y4:59:PHE:O	1.71	0.89
54:Y8:59:LYS:HB2	54:Y8:59:LYS:NZ	1.87	0.89
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.36	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
51:R5:3:LYS:HA	51:R5:3:LYS:HE3	1.54	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.88	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.54	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.89
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.89
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.89
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.88
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
13:XM:80:ARG:NH2	50:Y4:70:GLY:HA3	1.87	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	0.88
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.07	0.88
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.74	0.88
32:RI:51:ILE:O	32:RI:55:ALA:N	2.07	0.88
45:RZ:110:GLY:N	45:RZ:111:VAL:HG12	1.88	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.88	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
13:XM:65:LYS:HE2	50:Y4:50:VAL:HG11	1.54	0.88
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.88
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.39	0.88
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.88
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.04	0.88
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.88
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.88
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.87
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
54:R8:59:LYS:HB2	54:R8:59:LYS:NZ	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
23:XX:2:U:O2'	23:XX:3:G:H5'	1.73	0.87
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.54	0.87
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.87
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.87
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.39	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.87
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.87
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.87
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.07	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
25:YA:620:G:H4'	25:YA:621:A:H5"	1.57	0.87
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.87
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.55	0.87
1:QA:1049:U:HO2'	14:QN:2:ALA:N	1.73	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.87	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.87
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.87
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.38	0.87
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.57	0.86
23:QX:6:C:O2'	23:QX:7:U:OP1	1.93	0.86
38:RS:106:ARG:HB2	38:RS:106:ARG:HH11	1.39	0.86
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.40	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.86
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.86
25:RA:774:A:H2	25:RA:787:U:HO2'	1.23	0.86
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.86
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.57	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.53	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
25:YA:259:G:H21	25:YA:621:A:H8	1.18	0.86
25:YA:888:C:H3'	25:YA:889:C:H4'	1.57	0.86
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.58	0.86
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:82:ILE:O	29:RF:82:ILE:HG13	1.73	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.40	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	1.77	0.86
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.86
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.86
23:QX:2:U:O2'	23:QX:3:G:H5'	1.74	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.86
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.57	0.86
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
1:QA:559:A:H4'	1:QA:560:U:H3'	1.58	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.39	0.85
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.76	0.85
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.58	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
24:XY:29:U:H2'	24:XY:30:C:C6	2.11	0.85
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.09	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.58	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.75	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.91	0.85
40:RU:64:ARG:HG2	40:RU:64:ARG:HH21	1.42	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.92	0.85
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
13:XM:121:LYS:NZ	24:XY:40:G:OP1	2.10	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
25:RA:1689:A:H62	25:RA:1698:A:H2	1.24	0.85
25:RA:2056:G:N2	51:R5:4:HIS:O	2.08	0.85
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.41	0.85
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.85
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.08	0.85
29:YF:82:ILE:O	29:YF:82:ILE:HG13	1.73	0.85
24:QY:29:U:H2'	24:QY:30:C:C6	2.11	0.84
25:RA:242:G:H5'	54:R8:62:LEU:HD22	1.58	0.84
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.84
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.40	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
28:YE:95:ILE:HD12	28:YE:95:ILE:H	1.42	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.60	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.59	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.75	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
25:RA:2068:U:H3	25:RA:2430:A:H2	1.22	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.59	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
14:XN:32:SER:OG	14:XN:41:ARG:CB	2.24	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.07	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.84
25:YA:242:G:H5'	54:Y8:62:LEU:HD22	1.59	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.10	0.83
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.83
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
25:RA:676:A:H8	25:RA:2069:G:H21	1.25	0.83
25:RA:1980:G:O2'	25:RA:1982:C:OP2	1.95	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.57	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.25	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	0.83
1:XA:411:A:H62	1:XA:413:G:H21	1.26	0.83
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.60	0.83
31:YH:13:LYS:HE2	31:YH:13:LYS:HA	1.61	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.93	0.83
31:RH:105:LEU:HD13	31:RH:105:LEU:H	1.43	0.83
47:R1:81:LYS:HZ3	47:R1:81:LYS:CA	1.80	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
14:XN:8:GLU:OE2	14:XN:11:LYS:HD2	1.78	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.61	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.60	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
44:RY:57:GLN:NE2	44:RY:58:GLY:H	1.76	0.83
14:XN:12:ARG:C	14:XN:14:PRO:HD2	1.98	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
36:YQ:80:GLU:OE1	46:Y0:7:LEU:HG	1.78	0.83
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.77	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.61	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.83
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.58	0.83
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.83
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.83
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.83
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.82
31:YH:105:LEU:HD13	31:YH:105:LEU:H	1.42	0.82
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.82
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.12	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.61	0.82
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.82
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.11	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
14:XN:44:LEU:HD12	14:XN:53:LEU:CD1	2.08	0.82
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.44	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.08	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.12	0.82
1:XA:971:G:N2	1:XA:1363:A:OP2	2.13	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
25:YA:1689:A:H62	25:YA:1698:A:H2	1.27	0.82
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.59	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
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.61	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.61	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.60	0.82
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.40	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.08	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
1:QA:677:U:H3	1:QA:713:G:H1	1.27	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.82
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.82
25:YA:676:A:H8	25:YA:2069:G:H21	1.28	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.80	0.82
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.82
50:Y4:71:ARG:HG3	50:Y4:71:ARG:NH1	1.90	0.82
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.81
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.44	0.81
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.81
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.81
19:XS:65:ASN:O	50:Y4:59:PHE:HE2	1.63	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.09	0.81
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.62	0.81
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.80	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
31:RH:132:ARG:HB2	31:RH:132:ARG:NH1	1.94	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
34:RO:53:LYS:HD2	34:RO:53:LYS:N	1.96	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.60	0.81
48:R2:16:LEU:O	48:R2:16:LEU:HG	1.78	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
23:QX:4:C:C2'	23:QX:5:C:H5'	2.11	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	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
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
1:QA:1139:G:N2	1:QA:1143:G:O6	2.14	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
10:XJ:63:PHE:HD1	14:XN:58:LYS:HA	1.43	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.46	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.81
13:XM:65:LYS:HB3	50:Y4:50:VAL:HG21	1.62	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.11	0.81
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.81
25:YA:518:G:H4'	42:YW:18:ARG:NH1	1.94	0.81
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.81
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.81
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
25:RA:141:A:H8	25:RA:1595:G:H21	1.28	0.80
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.80
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.80
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.46	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.95	0.80
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.80
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.15	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
1:QA:1502:A:H2	1:QA:1505:G:H1	1.26	0.80
31:RH:13:LYS:HE2	31:RH:13:LYS:HA	1.61	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
25:YA:2600:A:N7	27:YD:237:GLU:OE2	2.13	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
1:QA:1316:G:H22	1:QA:1319:A:H5"	1.45	0.80
13:QM:77:ASN:HA	50:R4:71:ARG:CZ	2.11	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.80	0.80
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.62	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.14	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.61	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.12	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.95	0.80
1:XA:1224:G:O2'	1:XA:1225:A:OP1	1.98	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
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.80
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.14	0.80
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.64	0.80
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.46	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.82	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.80
12:XL:48:PRO:HD2	12:XL:49:ASN:N	1.97	0.80
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.14	0.80
25:YA:1021:A:N6	25:YA:1141:U:O2	2.14	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.12	0.80
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.80
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	1.97	0.80
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.80
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.44	0.80
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.27	0.80
27:RD:34:VAL:O	27:RD:34:VAL:HG13	1.80	0.80
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.80
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.80
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.80
25:YA:1359:A:N6	25:YA:1372:U:O4	2.14	0.80
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.79
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.79
25:YA:270(T):G:H5"	47:Y1:97:LEU:HD22	1.63	0.79
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.79
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.79
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
45:RZ:108:PRO:O	45:RZ:111:VAL:HG11	1.80	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
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.46	0.79
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	2.15	0.79
27:YD:34:VAL:O	27:YD:34:VAL:HG13	1.81	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.02	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.62	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
26:RB:55:U:H4'	30:RG:28:VAL:HG21	1.64	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.96	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	2.18	0.79
25:YA:602:G:HO2'	25:YA:604:G:HO2'	1.29	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:48:PRO:HD2	12:QL:49:ASN:N	1.97	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	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
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.16	0.79
25:RA:2306:C:H3'	25:RA:2307:G:H5"	1.63	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
27:YD:17:THR:CG2	27:YD:205:VAL:H	1.96	0.79
28:YE:24:THR:HG21	28:YE:188:VAL:CG1	2.13	0.79
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
1:QA:1106:G:H5"	3:QC:172:ARG:HG2	1.64	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
54:R8:59:LYS:HB2	54:R8:59:LYS:HZ2	1.47	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.65	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.00	0.79
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	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
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.79
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.79
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.79
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.48	0.79
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.82	0.79
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.16	0.79
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:11:ARG:HB3	47:Y1:11:ARG:NH1	1.98	0.79
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.78
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.78
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.78
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.13	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.65	0.78
1:XA:664:G:H22	1:XA:741:G:H1	1.31	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
45:YZ:72:ARG:NH2	45:YZ:97:GLU:O	2.15	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
27:RD:54:ARG:HG3	27:RD:54:ARG:HH11	1.49	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.65	0.78
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.64	0.78
36:YQ:59:ARG:HD3	36:YQ:59:ARG:H	1.48	0.78
43:YX:70:LEU:HD23	43:YX:70:LEU:N	1.99	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.66	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
30:YG:128:ARG:HH21	30:YG:128:ARG:HG3	1.48	0.78
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.66	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.01	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.48	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.48	0.78
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
25:YA:265:A:N6	25:YA:427:U:O2'	2.17	0.78
29:YF:145:GLU:O	29:YF:145:GLU:HG3	1.81	0.78
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
36:RQ:80:GLU:CD	46:R0:7:LEU:HD22	2.04	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.66	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.77
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.17	0.77
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
30:RG:128:ARG:HH21	30:RG:128:ARG:HG3	1.48	0.77
35:RP:75:ILE:HD13	35:RP:75:ILE:N	2.00	0.77
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.77
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.77
35:RP:62:LEU:N	35:RP:62:LEU:CD2	2.46	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
19:XS:69:HIS:HD1	50:Y4:69:LYS:HE2	1.48	0.77
25:YA:2304:G:H1	25:YA:2312:U:H3	1.31	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.95	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
19:QS:68:GLY:CA	50:R4:68:ARG:HG2	2.14	0.77
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.16	0.77
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.67	0.77
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
45:RZ:110:GLY:HA2	45:RZ:111:VAL:O	1.82	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
25:YA:1479:G:N7	25:YA:1510:A:N6	2.32	0.77
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.85	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.50	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.49	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.33	0.77
27:YD:44:ASN:HD22	27:YD:44:ASN:N	1.79	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.04	0.77
54:Y8:59:LYS:CB	54:Y8:59:LYS:HZ3	1.96	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	1.99	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.77
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.77
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.77
1:QA:951:G:OP2	13:QM:102:ARG:NH2	2.18	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.15	0.77
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.77
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.85	0.77
14:XN:25:VAL:HG22	14:XN:38:GLY:O	1.84	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.18	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.15	0.77
48:Y2:47:ASN:H	48:Y2:47:ASN:HD22	1.33	0.77
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.76
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.76
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.76
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.76
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.76
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.49	0.76
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.76
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.76
36:YQ:59:ARG:H	36:YQ:59:ARG:CD	1.99	0.76
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.76
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.96	0.76
19:QS:68:GLY:HA3	50:R4:68:ARG:CG	2.14	0.76
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.15	0.76
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.76
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.51	0.76
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	2.00	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.84	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
25:RA:1019:U:H3	25:RA:1142(A):A:H62	1.33	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.01	0.76
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD2	1.67	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.00	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.21	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.50	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.49	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.00	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.50	0.76
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.15	0.76
25:YA:2298:A:H62	25:YA:2318:G:H8	1.30	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
1:XA:1139:G:N2	1:XA:1143:G:O6	2.19	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.97	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.66	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
55:R9:1:MET:HB3	55:R9:4:ARG:NH1	2.01	0.76
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.76
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
47:R1:56:GLN:NE2	47:R1:56:GLN:N	2.34	0.76
1:XA:1178:G:N2	1:XA:1181:G:N7	2.34	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	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
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
5:QE:53:LEU:H	5:QE:53:LEU:CD1	1.99	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
25:RA:242:G:H5"	54:R8:3:LYS:HE3	1.67	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.48	0.76
34:RO:104:ARG:HH11	34:RO:104:ARG:HG2	1.50	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.76
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.68	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
52:Y6:34:LEU:H	52:Y6:34:LEU:HD13	1.50	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
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.76
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.86	0.76
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.48	0.76
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.51	0.75
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.75
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.86	0.75
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.75
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.75
1:XA:8:A:N6	4:XD:205:GLU:O	2.19	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
25:YA:2068:U:H3	25:YA:2430:A:H2	1.30	0.75
28:YE:63:LEU:CD1	28:YE:65:GLY:H	1.99	0.75
35:YP:62:LEU:N	35:YP:62:LEU:CD2	2.46	0.75
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.75
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.14	0.75
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.16	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.69	0.75
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.52	0.75
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.49	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.66	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
54:Y8:59:LYS:HB2	54:Y8:59:LYS:HZ2	1.49	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.52	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
40:RU:52:ARG:HH11	40:RU:52:ARG:HG2	1.51	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.86	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.68	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
47:Y1:81:LYS:NZ	47:Y1:81:LYS:CA	2.30	0.75
55:Y9:1:MET:HB3	55:Y9:4:ARG:NH1	2.01	0.75
1:QA:448:A:OP2	1:QA:485:G:N2	2.18	0.75
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.19	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.16	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.69	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
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
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.05	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
12:QL:48:PRO:HD2	12:QL:49:ASN:H	1.52	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.86	0.75
45:RZ:109:ALA:HB3	45:RZ:145:GLU:HG2	1.69	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
47:Y1:56:GLN:NE2	47:Y1:56:GLN:N	2.34	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.75
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.19	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	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
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.01	0.75
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.52	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
25:RA:768:G:O2'	25:RA:1379:A:N6	2.19	0.75
28:RE:63:LEU:CD1	28:RE:65:GLY:H	1.99	0.75
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.75
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.22	0.75
35:YP:75:ILE:HD13	35:YP:75:ILE:N	2.00	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.75
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.75
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.75
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.75
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.51	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.75
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.75
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.75
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.75
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.75
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.74
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.74
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.17	0.74
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.87	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
13:XM:121:LYS:NZ	24:XY:39:C:O2'	2.20	0.74
25:YA:1899:G:H21	25:YA:1902:C:N4	1.85	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.74
25:RA:227:A:OP1	35:RP:76:LYS:HE3	1.87	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.01	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.87	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.20	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
1:XA:501:C:H2'	1:XA:502:G:H8	1.49	0.74
1:XA:1152:A:H5"	10:XJ:13:HIS:CD2	2.22	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
25:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.22	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.03	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
50:R4:71:ARG:HG3	50:R4:71:ARG:NH1	1.90	0.74
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.51	0.74
36:YQ:79:LEU:O	36:YQ:79:LEU:CD2	2.36	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.68	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
45:RZ:110:GLY:HA2	45:RZ:111:VAL:C	2.07	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.34	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.52	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.87	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
1:QA:1054:C:OP2	1:QA:1197:G:OP2	2.05	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.53	0.74
19:QS:69:HIS:CE1	50:R4:69:LYS:CE	2.70	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.70	0.74
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
23:XX:2:U:C2'	23:XX:3:G:H5'	2.17	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
39:YT:54:ARG:HG2	39:YT:54:ARG:HH11	1.52	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
23:QX:2:U:C2'	23:QX:3:G:H5'	2.17	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.88	0.74
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.69	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
49:Y3:29:ARG:HB2	49:Y3:29:ARG:HH11	1.52	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
25:RA:530:G:O2'	25:RA:532:A:N7	2.20	0.74
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.04	0.74
25:RA:2245:U:H5'	25:RA:2246:G:H5'	1.69	0.74
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.74
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.74
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.74
49:R3:29:ARG:HH11	49:R3:29:ARG:HB2	1.52	0.74
1:XA:939:G:H5"	7:XG:102:ARG:HH22	1.53	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.73
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.21	0.73
35:RP:50:ARG:HB3	35:RP:50:ARG:NH2	1.98	0.73
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.73
36:RQ:79:LEU:O	36:RQ:79:LEU:CD1	2.35	0.73
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.73
47:R1:76:ARG:HH11	47:R1:76:ARG:HG2	1.53	0.73
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.73
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.73
54:R8:59:LYS:CB	54:R8:59:LYS:HZ3	1.99	0.73
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.73
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.73
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.73
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.21	0.73
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.73
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.19	0.73
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.73
25:RA:265:A:N6	25:RA:427:U:O2'	2.21	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
26:RB:52:A:O2'	26:RB:53:A:N7	2.22	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
14:XN:44:LEU:CD1	14:XN:53:LEU:CD1	2.66	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.18	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.19	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
25:RA:2115:G:N2	25:RA:2165:G:N7	2.32	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.17	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:XN:32:SER:O	14:XN:41:ARG:N	2.22	0.73
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.73
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.53	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
40:RU:64:ARG:HH21	40:RU:64:ARG:CG	2.00	0.73
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.71	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.20	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.89	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.69	0.73
25:YA:2610:C:H4'	25:YA:2611:U:OP2	1.88	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.68	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.50	0.73
25:RA:2298:A:H62	25:RA:2318:G:H8	1.32	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
32:RI:53:ALA:C	32:RI:57:ARG:HG2	2.08	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.88	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.51	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
36:YQ:79:LEU:O	36:YQ:79:LEU:CD1	2.35	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.73
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:75:C:OP1	25:RA:2602:A:OP1	2.06	0.73
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
1:XA:1321:C:H5"	1:XA:1322:C:H5"	1.71	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	2.02	0.73
28:YE:203:LYS:O	28:YE:203:LYS:HD2	1.88	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
25:RA:2287:A:N6	25:RA:2344:U:H3	1.87	0.73
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.73
36:RQ:108:GLY:CA	45:RZ:116:VAL:HG11	2.17	0.73
40:RU:34:LYS:HE2	40:RU:34:LYS:HA	1.70	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
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.73
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.73
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.53	0.73
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.73
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.72
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.72
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
36:YQ:79:LEU:HD22	36:YQ:79:LEU:C	2.07	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.07	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.71	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.70	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.88	0.72
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.24	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.72
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.19	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	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
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
12:XL:48:PRO:HD2	12:XL:49:ASN:H	1.51	0.72
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.22	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
25:YA:583:G:H5"	40:YU:10:ARG:HH12	1.54	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
38:YS:26:LEU:O	38:YS:26:LEU:HD23	1.90	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
1:QA:1312:G:H5"	50:R4:67:TYR:OH	1.90	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.69	0.72
45:YZ:151:HIS:HB3	45:YZ:170:THR:HA	1.71	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.90	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.72	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.04	0.72
39:RT:54:ARG:HH11	39:RT:54:ARG:HG2	1.52	0.72
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.23	0.72
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
31:YH:132:ARG:HH11	31:YH:132:ARG:CB	1.97	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
25:RA:1543:A:O2'	25:RA:1544:C:H3'	1.88	0.72
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.19	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.90	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.22	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	1.38	0.72
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.70	0.72
29:YF:32:LEU:O	29:YF:32:LEU:HD12	1.90	0.72
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.72
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.54	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.72
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
1:XA:1106:G:H5"	3:XC:172:ARG:HG2	1.71	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.72
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.72
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.72	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
29:RF:32:LEU:HD12	29:RF:32:LEU:C	2.10	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.72
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.72
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.72
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.72
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.72
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.72
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.72
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:5:LEU:HD11	32:YI:19:VAL:HG12	1.70	0.72
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.37	0.72
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.53	0.72
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.10	0.72
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.71
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.71
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.22	0.71
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.71
38:RS:26:LEU:O	38:RS:26:LEU:HD23	1.90	0.71
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.71
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.71
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.89	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.71
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.89	0.71
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.91	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.71
45:RZ:111:VAL:HG13	45:RZ:112:ARG:N	2.04	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.90	0.71
1:QA:191:G:C4	20:QT:105:SER:HB3	2.25	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
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.55	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.71	0.71
23:XX:8:A:H5"	23:XX:8:A:H8	1.53	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:41:ILE:C	48:Y2:41:ILE:HD12	2.10	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.71
46:R0:10:THR:HG22	46:R0:12:ASN:H	1.53	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	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
25:YA:226:G:O2'	25:YA:227:A:O5'	2.07	0.71
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.19	0.71
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
23:QX:4:C:H2'	23:QX:5:C:H5'	1.72	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.71	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.89	0.71
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
1:XA:501:C:H2'	1:XA:502:G:C8	2.25	0.71
1:XA:974:A:OP2	14:XN:41:ARG:CG	2.39	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.39	0.71
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.73	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.71
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.22	0.71
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
1:XA:974:A:P	14:XN:41:ARG:HH11	2.13	0.71
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.22	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
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	2.07	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71
25:RA:83:G:N2	25:RA:103:A:OP2	2.23	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.19	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.05	0.71
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.89	0.71
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.52	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.70	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.70	0.71
33:RN:1:MET:CE	40:RU:95:LEU:HD21	2.21	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
19:XS:67:VAL:N	50:Y4:59:PHE:CZ	2.58	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.03	0.71
27:RD:263:ARG:HB2	27:RD:263:ARG:NH1	2.05	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.23	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.71
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.55	0.71
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.91	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
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71
48:Y2:7:ARG:HG3	48:Y2:7:ARG:HH11	1.55	0.71
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.71
25:RA:900:A:H3'	25:RA:901:A:H8	1.56	0.71
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.89	0.71
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.71
45:RZ:150:LEU:HD21	45:RZ:172:ALA:HB3	1.72	0.71
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.71
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.91	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.70
31:RH:132:ARG:HH11	31:RH:132:ARG:CB	1.97	0.70
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.70
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.70
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.70
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.71	0.70
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	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
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.03	0.70
31:YH:59:ARG:HH11	31:YH:59:ARG:HG3	1.56	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
25:RA:1187:G:H5"	41:RV:81:TYR:CE2	2.27	0.70
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.23	0.70
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.92	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
25:YA:2277:G:H5'	36:YQ:85:LYS:HG3	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.06	0.70
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.90	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
47:Y1:81:LYS:HE2	47:Y1:81:LYS:CA	2.13	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	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
25:YA:774:A:H2	25:YA:787:U:HO2'	1.39	0.70
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.92	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.05	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.70
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.24	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
25:RA:49:A:H5"	25:RA:50:U:H3'	1.74	0.70
25:RA:573:G:N1	25:RA:2031:A:OP2	2.16	0.70
26:RB:15:A:H5'	26:RB:16:G:C8	2.26	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.91	0.70
1:XA:64:G:N2	1:XA:68:G:O6	2.22	0.70
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.24	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
25:RA:1795:C:O2	27:RD:255:LYS:HE2	1.92	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.73	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.21	0.70
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.39	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
27:RD:65:ILE:HD13	27:RD:65:ILE:O	1.91	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
8:XH:49:GLU:HG3	8:XH:51: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
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.55	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.40	0.70
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.21	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.72	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.73	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
25:RA:2343:C:HO2'	25:RA:2373:G:HO2'	1.33	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
45:RZ:111:VAL:HG22	45:RZ:112:ARG:H	1.56	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.74	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.70
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.70
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.21	0.70
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.69
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.45	0.69
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.69
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.69
1:XA:973:G:H3'	1:XA:974:A:H5"	1.72	0.69
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.69
35:YP:64:LYS:C	35:YP:66:GLY:H	1.94	0.69
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.69
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.69
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.69
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	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
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.74	0.69
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69
25:RA:1509:C:H3'	25:RA:1510:A:H5"	1.74	0.69
32:RI:52:ARG:HA	32:RI:56:LYS:H	1.56	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.25	0.69
1:XA:991:U:O4	1:XA:1212:U:O2'	2.10	0.69
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.57	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.58	0.69
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.69
14:XN:6:LEU:O	14:XN:6:LEU:HD23	1.92	0.69
26:YB:15:A:H5'	26:YB:16:G:C8	2.27	0.69
26:YB:42:C:N4	30:YG:91:ARG:HH21	1.89	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.90	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.22	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
47:R1:74:VAL:HG12	47:R1:74:VAL:O	1.93	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
25:YA:2245:U:H5'	25:YA:2246:G:H5'	1.74	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
34:YO:8:LEU:HD22	34:YO:8:LEU:N	2.07	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.98	0.69
35:YP:61:ARG:H	35:YP:61:ARG:HD2	1.58	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.24	0.69
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
8:QH:6:ILE:HD12	8:QH:6:ILE:N	2.08	0.69
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.72	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
32:RI:55:ALA:O	32:RI:58:LEU:HB3	1.93	0.69
32:RI:57:ARG:O	32:RI:60:GLU:HB3	1.93	0.69
32:RI:93:THR:HG22	32:RI:119:PRO:HB3	1.74	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
25:YA:2758:A:C4	31:YH:67:LEU:HD21	2.28	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.06	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.75	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
41:RV:41:GLY:HA3	41:RV:46:VAL:HG11	1.74	0.69
47:R1:81:LYS:HE2	47:R1:81:LYS:CA	2.13	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
25:YA:2392:A:H2	25:YA:2424:C:H42	1.41	0.69
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:62:LEU:HD22	35:YP:62:LEU:H	1.53	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
45:YZ:95:PRO:HB2	45:YZ:127:LYS:HG2	1.74	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
25:RA:2114:A:N6	25:RA:2119:A:N7	2.41	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.75	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.73	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
14:XN:44:LEU:CD1	14:XN:53:LEU:HD13	2.23	0.69
23:XX:8:A:H8	23:XX:8:A:C5'	2.06	0.69
25:YA:1509:C:H3'	25:YA:1510:A:H5"	1.73	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	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
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
36:RQ:80:GLU:HG3	36:RQ:81:VAL:H	1.58	0.69
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.56	0.69
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.08	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
19:QS:69:HIS:ND1	50:R4:69:LYS:HE2	2.07	0.69
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.69
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.69
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.40	0.69
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.75	0.69
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.26	0.69
35:RP:61:ARG:HD2	35:RP:61:ARG:H	1.58	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.06	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
25:YA:1057:A:H62	25:YA:1086:A:H2'	1.57	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.69
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.08	0.68
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.06	0.68
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.68
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.68
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.68
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	0.68
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	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
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.68
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.68
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.76	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
1:XA:67:C:H2'	1:XA:68:G:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.68
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.68
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	1.92	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
4:QD:166:LYS:HD3	27:YD:134:ARG:NH1	2.07	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
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.74	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.68
1:XA:966:G:O2'	9:XI:127:LYS:O	2.10	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.06	0.68
38:YS:57:LYS:HD3	38:YS:57:LYS:H	1.58	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.68
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
25:RA:643:A:N1	25:RA:2369:A:O2'	2.26	0.68
25:RA:2502:G:H5"	25:RA:2503:A:H5"	1.75	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.74	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.05	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
32:YI:1:MET:HG3	32:YI:23:PRO:HB3	1.73	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
25:RA:2746:U:H5"	31:RH:138:LYS:HE2	1.75	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
50:R4:15:ILE:N	50:R4:15:ILE:HD13	2.09	0.68
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.08	0.68
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.68
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	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
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.26	0.68
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.27	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.94	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.08	0.68
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.68
1:XA:1128:C:H42	1:XA:1144:G:H1	1.42	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.91	0.68
28:YE:16:ARG:O	28:YE:16:ARG:HG3	1.92	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
36:YQ:80:GLU:HG3	36:YQ:81:VAL:H	1.58	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
14:QN:6:LEU:O	14:QN:6:LEU:HD23	1.93	0.68
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.39	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.23	0.68
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.59	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
17:XQ:59:ILE:HD13	17:XQ:59:ILE:N	2.09	0.68
25:YA:222:A:H3'	25:YA:421:U:H5'	1.75	0.68
25:YA:443:A:N7	29:YF:45:ARG:HD2	2.08	0.68
25:YA:1434:A:H61	25:YA:1558:A:N6	1.92	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.75	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.93	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.08	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
25:RA:307:G:H21	25:RA:330:A:H62	1.42	0.68
31:RH:88:LEU:H	31:RH:88:LEU:HD22	1.58	0.68
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.58	0.68
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.76	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
25:YA:67:U:H3	25:YA:74:A:H2	1.39	0.68
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	1.92	0.68
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.24	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.75	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
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:241:PRO:O	27:YD:243:GLY:N	2.27	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.59	0.68
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.68
1:QA:752:G:H1'	1:QA:754:C:H41	1.59	0.68
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.07	0.68
25:RA:583:G:H5"	40:RU:10:ARG:HH12	1.59	0.68
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.68
32:RI:5:LEU:HD11	32:RI:19:VAL:HG12	1.76	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.68
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
25:YA:1190:G:OP1	35:YP:30:THR:OG1	2.11	0.68
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.26	0.68
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.57	0.68
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.68
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.68
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.67
7:QG:8:GLU:CD	7:QG:8:GLU:H	1.97	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.93	0.67
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.67
1:XA:1152:A:H5"	10:XJ:13:HIS:HD2	1.59	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.77	0.67
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.67
1:QA:439:A:OP2	1:QA:493:G:N1	2.28	0.67
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.77	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67
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
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.67
36:RQ:80:GLU:OE1	46:R0:7:LEU:HD23	1.92	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.59	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.41	0.67
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	1.94	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.95	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.10	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
25:RA:2864:G:OP1	39:RT:119:LYS:HD2	1.94	0.67
26:RB:44:G:H1'	26:RB:47:C:H42	1.60	0.67
28:RE:13:ARG:HH11	28:RE:13:ARG:CB	2.07	0.67
31:RH:89:ILE:HG12	31:RH:89:ILE:O	1.93	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.76	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.24	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.59	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
35:YP:65:ARG:HH11	35:YP:65:ARG:CG	2.06	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.67
25:RA:259:G:H21	25:RA:621:A:H8	1.41	0.67
27:RD:135:PHE:CD2	27:RD:135:PHE:N	2.62	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.29	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.08	0.67
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.10	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.25	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.42	0.67
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
45:YZ:126:VAL:HG12	45:YZ:163:LEU:HA	1.76	0.67
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.10	0.67
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.27	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
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
25:RA:859:G:O2'	25:RA:860:U:O2	2.10	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.59	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.28	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.77	0.67
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.77	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
38:YS:67:ARG:HB2	38:YS:67:ARG:CZ	2.24	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.23	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.10	0.67
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
1:QA:346:G:H1'	1:QA:347:G:H5'	1.77	0.67
1:QA:939:G:H5"	7:QG:102:ARG:HH22	1.60	0.67
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	2.27	0.67
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.26	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.75	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.59	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
32:RI:51:ILE:HG23	32:RI:55:ALA:HB2	1.77	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.14	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
48:R2:47:ASN:H	48:R2:47:ASN:ND2	1.92	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.28	0.67
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.74	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
1:QA:1071:C:H5"	5:QE:49:PRO:HG2	1.75	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	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
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
25:RA:2364:C:OP1	46:R0:55:ARG:NH1	2.27	0.67
28:RE:16:ARG:O	28:RE:16:ARG:HG3	1.93	0.67
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.57	0.67
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
13:XM:7:VAL:HG22	50:Y4:34:GLU:OE1	1.95	0.67
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.13	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.59	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
49:Y3:29:ARG:HB2	49:Y3:29:ARG:NH1	2.10	0.67
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.25	0.67
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.30	0.67
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.67
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.77	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.67
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.67
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.67
45:RZ:115:GLY:HA3	45:RZ:175:VAL:O	1.89	0.67
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.67
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.60	0.67
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.28	0.67
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.67
1:QA:921:U:O2'	5:QE:19:MET:O	2.12	0.66
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.66
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.66
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.66
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.08	0.66
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.66
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.66
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.76	0.66
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.66
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.66
41:YV:53:GLU:HG2	41:YV:53:GLU:O	1.94	0.66
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.66
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.66
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.07	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.93	0.66
25:RA:957:A:H5'	36:RQ:76:LYS:HD2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.28	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.26	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
28:RE:36:ARG:HH11	28:RE:36:ARG:HB3	1.60	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
49:R3:29:ARG:HB2	49:R3:29:ARG:NH1	2.10	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.30	0.66
25:YA:2867:G:HO2'	25:YA:2868:A:H8	1.42	0.66
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.96	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.66
45:YZ:141:VAL:HG21	45:YZ:144:LEU:HB2	1.77	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.76	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.24	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
4:XD:14:ARG:O	4:XD:14:ARG:HD3	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
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
25:YA:2114:A:N6	25:YA:2119:A:N7	2.43	0.66
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.66
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.60	0.66
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	1.95	0.66
25:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2832:U:H4'	25:RA:2833:G:H5"	1.76	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.96	0.66
32:RI:62:LYS:HE3	32:RI:134:PRO:HG2	1.75	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.94	0.66
34:RO:86:ILE:H	34:RO:86:ILE:HD12	1.60	0.66
39:RT:11:GLU:CD	39:RT:11:GLU:N	2.47	0.66
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.66
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
19:XS:65:ASN:O	50:Y4:59:PHE:CE2	2.46	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
40:YU:88:ILE:HD13	40:YU:88:ILE:N	2.10	0.66
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.78	0.66
25:RA:2745:C:O2	31:RH:139:GLN:NE2	2.26	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.75	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.95	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.75	0.66
7:XG:69:VAL:HG12	7:XG:69:VAL:O	1.95	0.66
7:XG:141:VAL:HG12	7:XG:141:VAL:O	1.95	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.29	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.96	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
25:RA:518:G:H4'	42:RW:18:ARG:NH1	2.09	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.31	0.66
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.24	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
40:RU:88:ILE:HD13	40:RU:88:ILE:N	2.10	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
1:XA:1002:G:H1	1:XA:1038:C:H42	1.43	0.66
1:XA:1049:U:HO2'	14:XN:2:ALA:N	1.94	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
12:XL:48:PRO:CD	12:XL:49:ASN:N	2.57	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
25:YA:1210:A:H5'	25:YA:1210:A:H8	1.59	0.66
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.59	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.25	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
48:Y2:47:ASN:H	48:Y2:47:ASN:ND2	1.92	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
1:QA:27:G:H4'	4:QD:209:ARG:HG3	1.77	0.66
1:QA:1392:G:H21	1:QA:1502:A:H8	1.42	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.28	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	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
25:RA:2393:A:H4'	35:RP:61:ARG:O	1.95	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66
36:RQ:134:ARG:NH2	45:RZ:119:GLU:HG3	2.04	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
1:XA:67:C:O2'	1:XA:171:A:N3	2.28	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
25:YA:297:C:H5"	44:YY:85:VAL:HG21	1.77	0.66
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.31	0.66
27:YD:135:PHE:CD2	27:YD:135:PHE:N	2.62	0.66
28:YE:37:ARG:NE	28:YE:37:ARG:HA	2.11	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.25	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.08	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.96	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
50:Y4:71:ARG:HH11	50:Y4:71:ARG:CG	1.98	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.66
25:RA:84:A:N1	25:RA:98:G:O2'	2.26	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.26	0.66
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
25:YA:1291:C:H5'	25:YA:1536:A:H5'	1.77	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.77	0.66
47:Y1:11:ARG:HB3	47:Y1:11:ARG:HH11	1.61	0.66
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.10	0.66
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.66
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.66
19:QS:68:GLY:HA3	50:R4:68:ARG:CB	2.25	0.66
22:QV:56:C:O2'	30:RG:78:SER:HB2	1.96	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.29	0.66
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.66
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.66
1:XA:503:C:OP2	12:XL:116:SER:HB3	1.95	0.66
1:XA:1348:U:H3	1:XA:1374:A:H2	1.42	0.66
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.66
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
25:YA:1899:G:H21	25:YA:1902:C:H41	1.42	0.66
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.66
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.66
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.66
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.11	0.65
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
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.61	0.65
27:RD:237:GLU:N	27:RD:237:GLU:OE1	2.29	0.65
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.65
39:RT:22:PHE:CD2	39:RT:22:PHE:N	2.63	0.65
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.65
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.65
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.60	0.65
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.65
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.18	0.65
25:YA:1434:A:H61	25:YA:1558:A:H62	1.42	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.10	0.65
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.65
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.65
41:RV:53:GLU:HG2	41:RV:53:GLU:O	1.94	0.65
43:RX:65:ARG:HD3	43:RX:65:ARG:N	2.12	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.95	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
25:YA:2576:G:O2'	25:YA:2579:C:OP2	2.15	0.65
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.25	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.29	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	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
34:YO:86:ILE:H	34:YO:86:ILE:HD12	1.61	0.65
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.26	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
42:RW:25:ARG:NH1	42:RW:25:ARG:HB2	2.11	0.65
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.10	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
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
25:YA:860:U:H5	25:YA:917:A:C2	2.13	0.65
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.32	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.96	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.32	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.97	0.65
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.97	0.65
25:RA:1153:C:OP1	40:RU:76:TYR:OH	2.14	0.65
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.26	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
36:RQ:59:ARG:C	36:RQ:60:ARG:HG3	2.17	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
41:RV:43:GLU:OE2	41:RV:43:GLU:HA	1.95	0.65
45:RZ:114:GLY:HA3	45:RZ:177:PRO:HB3	1.78	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
9:XI:128:ARG:NH2	22:XV:35:A:OP1	2.27	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.09	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.97	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.60	0.65
25:RA:1068:G:O2'	25:RA:1096:A:N3	2.30	0.65
26:RB:40:U:O2'	26:RB:45:A:N6	2.28	0.65
27:RD:176:ARG:HH11	27:RD:176:ARG:HG2	1.60	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	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
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.79	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.65	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.29	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
25:RA:1542:G:O6	25:RA:1543:A:N6	2.30	0.65
26:RB:42:C:H41	30:RG:91:ARG:HH21	1.43	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.11	0.65
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.29	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.61	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
19:XS:64:GLU:HG3	50:Y4:55:ARG:HH12	1.61	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.59	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.78	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	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
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.27	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.12	0.65
25:RA:2287:A:H62	25:RA:2344:U:H3	1.43	0.65
47:R1:11:ARG:HB3	47:R1:11:ARG:HH11	1.61	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.14	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.97	0.65
13:XM:7:VAL:HG22	50:Y4:34:GLU:OE2	1.96	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.96	0.65
27:YD:176:ARG:HH11	27:YD:176:ARG:HG2	1.61	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
25:RA:297:C:H5"	44:RY:85:VAL:HG21	1.79	0.65
25:RA:1899:G:H21	25:RA:1902:C:N4	1.94	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.65
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
32:RI:31:LEU:HD21	32:RI:38:LEU:HG	1.78	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.78	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	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
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
39:YT:11:GLU:N	39:YT:11:GLU:OE1	2.27	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.60	0.65
25:RA:27:G:H22	25:RA:512:G:H2'	1.61	0.65
25:RA:242:G:H5'	54:R8:62:LEU:CD2	2.25	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.65
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.65
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:573:G:N1	25:YA:2031:A:OP2	2.25	0.65
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.12	0.65
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.78	0.65
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.65
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.79	0.65
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.65
4:QD:79:PHE:C	4:QD:79:PHE:HD2	2.00	0.64
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.64
25:RA:819:A:OP2	25:RA:1187:G:N2	2.26	0.64
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.13	0.64
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.64
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
19:XS:64:GLU:CB	50:Y4:60:GLN:NE2	2.60	0.64
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.26	0.64
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.60	0.64
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.63	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.01	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
24:QY:29:U:H2'	24:QY:30:C:H6	1.61	0.64
25:RA:630:G:N2	25:RA:633:A:OP2	2.30	0.64
25:RA:2635:C:H5"	28:RE:78:LEU:HA	1.79	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
31:RH:51:ARG:HH11	31:RH:51:ARG:HG3	1.62	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.64
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.60	0.64
1:XA:1226:C:O2'	13:XM:103:THR:O	2.12	0.64
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	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)
25:YA:551:G:H5'	25:YA:1220:A:H1'	1.78	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
41:YV:43:GLU:HA	41:YV:43:GLU:OE2	1.95	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.77	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.11	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
39:RT:11:GLU:N	39:RT:11:GLU:OE1	2.27	0.64
45:RZ:109:ALA:CB	45:RZ:145:GLU:HG2	2.27	0.64
1:XA:1502:A:H2	1:XA:1505:G:H1	1.44	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
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.32	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.79	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.27	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64
50:Y4:36:CYS:O	50:Y4:37:SER:O	2.14	0.64
50:Y4:37:SER:C	50:Y4:39:CYS:H	1.99	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
22:QV:6:G:H1	22:QV:67:C:H42	1.45	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.96	0.64
30:RG:83:ARG:HG3	30:RG:86:MET:HE1	1.78	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
54:R8:52:LYS:O	54:R8:52:LYS:HG3	1.97	0.64
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.32	0.64
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.64
25:YA:102:G:OP2	48:Y2:7:ARG:NH2	2.30	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.98	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.98	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	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
25:RA:674:G:C1’	29:RF:74:ARG:HD3	2.25	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
23:XX:8:A:H5”	23:XX:8:A:C8	2.32	0.64
25:YA:277:C:H3’	25:YA:278:A:C5’	2.27	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.96	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
1:QA:191:G:O2’	20:QT:101:GLY:O	2.16	0.64
1:QA:192:U:H4’	20:QT:102:GLY:O	1.98	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
54:R8:56:GLU:N	54:R8:56:GLU:OE1	2.30	0.64
1:XA:266:G:H5”	1:XA:267:C:C5	2.33	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.33	0.64
19:XS:64:GLU:CB	50:Y4:60:GLN:HE22	2.11	0.64
24:XY:29:U:H2’	24:XY:30:C:H6	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:746:A:C5	25:YA:2611:U:H5”	2.32	0.64
25:YA:1077:A:H5’	25:YA:1078:U:H5”	1.79	0.64
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.61	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.98	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
1:QA:642:A:N3	8:QH:113:SER:OG	2.28	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	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
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	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
25:RA:221:A:H4’	25:RA:222:A:O5’	1.98	0.64
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.31	0.64
25:RA:1798:U:H5”	27:RD:259:THR:HG22	1.80	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.64
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.27	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
4:XD:165:MET:HA	4:XD:165:MET:HE3	1.79	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.79	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.27	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.78	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.97	0.64
25:YA:704:G:H2’	25:YA:726:G:H22	1.62	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
1:QA:1318:A:H4’	19:QS:11:VAL:CG1	2.28	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	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
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	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
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.64
29:YF:46:ARG:HG2	29:YF:46:ARG:NH1	2.00	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.98	0.64
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.32	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.64
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.16	0.64
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.31	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:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
19:XS:68:GLY:CA	50:Y4:68:ARG:HB3	2.28	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.64
1:QA:719:C:O2'	18:QR:49:LYS:HB3	1.97	0.64
1:QA:1288:A:N3	1:QA:1352:C:O2'	2.30	0.64
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	0.64
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.64
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.64
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.64
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.64
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.64
25:RA:2392:A:H2	25:RA:2424:C:H42	1.46	0.64
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
32:RI:52:ARG:HH11	32:RI:52:ARG:HB3	1.62	0.64
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.98	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.63	0.64
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.80	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.64
13:XM:80:ARG:HB2	50:Y4:71:ARG:NH2	2.12	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
23:XX:3:G:C2'	23:XX:4:C:OP2	2.45	0.64
25:YA:227:A:OP1	35:YP:76:LYS:HE3	1.97	0.64
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.28	0.64
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.30	0.64
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.64
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.32	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	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
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.63
32:RI:1:MET:HG3	32:RI:23:PRO:HB3	1.79	0.63
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.63
34:RO:86:ILE:HD12	34:RO:86:ILE:N	2.13	0.63
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.80	0.63
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.63
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.63
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.63
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.63	0.63
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.13	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.98	0.63
27:YD:135:PHE:N	27:YD:135:PHE:HD2	1.96	0.63
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.14	0.63
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.63
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.63
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.63	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
45:RZ:150:LEU:HD23	45:RZ:171:ILE:HG13	1.78	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.12	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.33	0.63
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.12	0.63
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.62	0.63
27:RD:135:PHE:N	27:RD:135:PHE:HD2	1.96	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
45:RZ:80:ARG:HH21	45:RZ:82:ARG:HH12	1.46	0.63
2:XB:158:LEU:O	2:XB:158:LEU:HD12	1.97	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.64	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
25:YA:530:G:O2'	25:YA:532:A:N7	2.32	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.63
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.62	0.63
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.64	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
25:RA:1403:C:H5"	25:RA:1471:A:H1'	1.81	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.98	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.47	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.79	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	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
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.63	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.98	0.63
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.63
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.63
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.63
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ3	1.62	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.63	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
25:YA:330:A:HO2'	25:YA:331:A:H8	1.46	0.63
25:YA:2636:U:OP1	28:YE:79:ARG:HA	1.99	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
1:QA:420:U:H4'	1:QA:421:U:H5	1.63	0.63
1:QA:581:G:N2	1:QA:760:G:N7	2.45	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.11	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.81	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.28	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.32	0.63
1:XA:1071:C:H5"	5:XE:49:PRO:HG2	1.79	0.63
12:XL:48:PRO:CD	12:XL:49:ASN:H	2.10	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
25:YA:780:G:H21	25:YA:783:A:H62	1.47	0.63
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.29	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	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
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	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
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
25:RA:270(T):G:H5"	47:R1:97:LEU:CD2	2.23	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.80	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63
54:R8:48:PHE:N	54:R8:48:PHE:CD1	2.66	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
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.63
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
48:Y2:46:GLN:OE1	48:Y2:46:GLN:HA	1.98	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.81	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
25:RA:2466:C:OP1	55:R9:4:ARG:HB2	1.98	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
45:RZ:70:LEU:HB2	45:RZ:91:LEU:HD21	1.81	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.19	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
25:YA:518:G:C4'	42:YW:18:ARG:HH12	2.02	0.63
25:YA:1103:A:H5'	25:YA:1104:C:H5	1.63	0.63
25:YA:2335:A:O2'	25:YA:2336:A:O5'	2.16	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.63
33:YN:61:ARG:HA	33:YN:61:ARG:HE	1.63	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:HB3	1.62	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.96	0.63
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.63
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.63
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
29:RF:107:LYS:O	29:RF:108:LYS:C	2.36	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.63
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.63
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.98	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.63	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.63
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.80	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:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.63
25:YA:259:G:N2	25:YA:621:A:H8	1.93	0.63
33:YN:87:LEU:O	33:YN:87:LEU:HD23	1.99	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.63
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.33	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
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.62
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.62
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
25:RA:2112:G:O6	25:RA:2169:A:N6	2.31	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
35:RP:108:LYS:HD2	35:RP:108:LYS:H	1.64	0.62
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.62
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.81	0.62
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.79	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.62
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.33	0.62
25:YA:898:C:H2'	25:YA:899:A:H5'	1.81	0.62
25:YA:1818:U:H2'	27:YD:157:ARG:HG3	1.81	0.62
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.81	0.62
32:YI:129:THR:HA	32:YI:137:PRO:HA	1.81	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.25	0.62
39:YT:49:VAL:HG13	39:YT:49:VAL:O	1.99	0.62
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.62
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.62
45:YZ:80:ARG:HH21	45:YZ:82:ARG:HH12	1.47	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.62
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.62
38:RS:48:LEU:N	38:RS:48:LEU:HD12	2.14	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.62
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.64	0.62
25:YA:1187:G:H5"	41:YV:81:TYR:CE2	2.34	0.62
25:YA:2306:C:H3'	25:YA:2307:G:H5"	1.81	0.62
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.17	0.62
26:YB:77:U:OP1	45:YZ:19:ARG:NH2	2.32	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.62
39:YT:22:PHE:N	39:YT:22:PHE:HD2	1.97	0.62
40:YU:34:LYS:HA	40:YU:34:LYS:CE	2.29	0.62
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
25:RA:530:G:C2	25:RA:2022:U:OP1	2.52	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.50	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	0.62
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	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:112:LEU:O	8:XH:112:LEU:HD12	1.98	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
22:XV:6:G:H1	22:XV:67:C:H42	1.45	0.62
25:YA:2405:G:HO2'	25:YA:2406:U:P	2.23	0.62
30:YG:94:LEU:H	30:YG:94:LEU:HD23	1.64	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.62
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.14	0.62
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.34	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
25:RA:27:G:HO2'	25:RA:28:A:H8	1.46	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.80	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.64	0.62
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.34	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.11	0.62
26:YB:12:C:O2'	46:Y0:74:ARG:HG3	2.00	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
39:YT:96:ARG:HB2	39:YT:96:ARG:NH1	2.14	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.98	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.00	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	2.35	0.62
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	1.99	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.34	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62
30:RG:94:LEU:HD23	30:RG:94:LEU:N	2.14	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	2.00	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
4:XD:96:LEU:H	4:XD:96:LEU:CD2	2.11	0.62
10:XJ:29:ARG:HG2	10:XJ:29:ARG:O	2.00	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
25:YA:1688:U:O2	25:YA:1700:A:H5"	1.99	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.36	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.65	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
38:YS:48:LEU:HD12	38:YS:48:LEU:N	2.14	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
1:QA:973:G:H3'	1:QA:974:A:H5"	1.82	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.32	0.62
25:RA:1043:C:N3	25:RA:1112:G:N2	2.43	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.14	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
35:RP:65:ARG:HH11	35:RP:65:ARG:CG	2.06	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
1:XA:192:U:H4'	20:XT:102:GLY:O	2.00	0.62
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.27	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.29	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	2.00	0.62
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.82	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
1:QA:939:G:H5"	7:QG:102:ARG:NH2	2.15	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	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
25:RA:2405:G:O2'	25:RA:2406:U:OP2	2.17	0.62
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.81	0.62
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	1.99	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
19:XS:65:ASN:C	50:Y4:59:PHE:HE2	2.03	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
47:Y1:91:LYS:HA	47:Y1:91:LYS:HE3	1.82	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.65	0.62
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.81	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
25:RA:222:A:H3'	25:RA:421:U:H5'	1.81	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.31	0.62
48:R2:69:ARG:HB2	48:R2:69:ARG:CZ	2.30	0.62
52:R6:18:ARG:O	52:R6:18:ARG:HD2	2.00	0.62
1:XA:518:C:N4	12:XL:48:PRO:O	2.33	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.11	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	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
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
26:RB:15:A:H5'	26:RB:16:G:H8	1.65	0.62
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.80	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.35	0.62
25:YA:870:A:OP1	36:YQ:6:ARG:NH2	2.33	0.62
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.62
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
5:QE:148:VAL:HG21	8:QH:107:LEU:HD13	1.81	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.62
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	2.00	0.62
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.62
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.30	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.82	0.62
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
3:XC: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
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.62
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
25:YA:528:A:C2	25:YA:2042:A:H2'	2.35	0.62
25:YA:1062:G:H2'	25:YA:1063:G:H8	1.65	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.63	0.62
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.62
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.62
35:YP:50:ARG:CB	35:YP:50:ARG:NH2	2.58	0.62
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.62
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.62
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.61
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.25	0.61
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.61
30:RG:170:ARG:O	30:RG:174:GLU:HB2	1.99	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.61
14:XN:32:SER:O	14:XN:40:CYS:C	2.37	0.61
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.61
19:XS:65:ASN:CA	50:Y4:55:ARG:HH11	2.13	0.61
25:YA:414:C:O2	25:YA:1864:U:O2'	2.16	0.61
25:YA:1113:U:OP1	31:YH:2:SER:N	2.33	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1322:C:O2'	1:QA:1323:G:H5'	2.00	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.61
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.61	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
3:XC: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
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
35:YP:108:LYS:HD2	35:YP:108:LYS:H	1.64	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.01	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.27	0.61
25:RA:1332:G:H21	25:RA:1610:A:H8	1.47	0.61
25:RA:2438:U:O3'	25:RA:2439:A:H3'	2.00	0.61
25:RA:2667:C:H1'	31:RH:109:PHE:CD2	2.33	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
32:RI:51:ILE:HG23	32:RI:55:ALA:CB	2.30	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.64	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
1:QA:1330:U:OP1	13:QM:25:ILE:O	2.18	0.61
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	2.15	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
10:QJ:98:ILE:HD12	10:QJ:98:ILE:N	2.15	0.61
12:QL:48:PRO:CD	12:QL:49:ASN:H	2.10	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
25:RA:1026:U:H4'	25:RA:1027:A:OP1	2.00	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.30	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.83	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	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
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
25:YA:2585:U:H5	56:Z8:76:PPU:O2'	1.83	0.61
25:YA:2867:G:O2'	25:YA:2868:A:H8	1.83	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	1.99	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	2.00	0.61
40:YU:88:ILE:H	40:YU:88:ILE:CD1	2.05	0.61
41:YV:46:VAL:O	41:YV:46:VAL:HG13	2.01	0.61
43:YX:15:GLU:N	43:YX:15:GLU:OE1	2.34	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
1:QA:662:G:O2'	1:QA:836:G:OP1	2.19	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
23:QX:8:A:H8	23:QX:8:A:O5'	1.83	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
49:R3:29:ARG:HH11	49:R3:29:ARG:CB	2.13	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1364:U:O2'	1:XA:1365:G:OP1	2.19	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.01	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
25:YA:99:U:H1'	25:YA:102:G:C6	2.35	0.61
25:YA:2469:A:H2	25:YA:2481:G:H21	1.49	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.82	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.83	0.61
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.81	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.82	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61
1:XA:939:G:H5"	7:XG:102:ARG:NH2	2.15	0.61
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.16	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
25:YA:49:A:N7	25:YA:120:U:H5	1.99	0.61
25:YA:1543:A:O2'	25:YA:1544:C:H3'	2.00	0.61
25:YA:2832:U:H4'	25:YA:2833:G:H5"	1.83	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
28:YE:95:ILE:HD12	28:YE:95:ILE:N	2.15	0.61
29:YF:164:ARG:HH11	29:YF:164:ARG:HG2	1.65	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
44:YY:19:LYS:O	44:YY:19:LYS:HG3	2.01	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.35	0.61
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.34	0.61
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.34	0.61
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.82	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.65	0.61
41:RV:46:VAL:O	41:RV:46:VAL:HG13	2.01	0.61
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.01	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
1:XA:720:C:H5"	18:XR:52:PRO:HA	1.81	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	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
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.36	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
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
19:XS:42:PRO:CD	50:Y4:63:TYR:HE2	1.97	0.61
19:XS:68:GLY:N	50:Y4:59:PHE:CE1	2.69	0.61
19:XS:69:HIS:ND1	50:Y4:69:LYS:HE2	2.15	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.82	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.47	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.61
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.28	0.61
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.20	0.61
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.64	0.61
25:RA:1291:C:H5'	25:RA:1536:A:H5'	1.83	0.61
25:RA:2250:G:C6	36:RQ:82:ARG:HD2	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
1:XA:797:C:OP1	11:XK:124:LYS:HE2	2.00	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
5:XE:148:VAL:HG21	8:XH:107:LEU:HD13	1.83	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
25:YA:1024:G:OP2	25:YA:1025:G:H3'	2.00	0.61
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.10	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.14	0.61
34:YO:91:LEU:N	34:YO:91:LEU:HD22	2.16	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
1:QA:974:A:H1'	14:QN:31:ARG:HE	1.65	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
32:RI:51:ILE:HG22	32:RI:55:ALA:HB3	1.83	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	1.99	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	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
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
25:YA:1372:U:H2'	25:YA:1373:A:H5'	1.83	0.61
25:YA:2250:G:C5	36:YQ:82:ARG:HD2	2.36	0.61
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.01	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.30	0.61
32:YI:57:ARG:O	32:YI:60:GLU:HB3	2.01	0.61
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.30	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:70:LEU:HB2	45:YZ:91:LEU:HD21	1.83	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.61
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.49	0.61
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.61
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.82	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.61
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.83	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
4:XD:196:LEU:HD12	4:XD:196:LEU:N	2.15	0.61
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.61
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
13:XM:80:ARG:CZ	50:Y4:70:GLY:HA3	2.29	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.61
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.61
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.61
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.61
35:YP:27:HIS:ND1	35:YP:27:HIS:N	2.49	0.61
50:Y4:71:ARG:NH1	50:Y4:71:ARG:CG	2.61	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
25:RA:862:G:H2'	25:RA:863:A:O4'	2.01	0.60
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.34	0.60
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.01	0.60
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.60
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.60
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.60
41:RV:35:LEU:O	41:RV:35:LEU:HD23	2.01	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	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	1.82	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
25:YA:704:G:H2'	25:YA:726:G:N2	2.16	0.60
25:YA:918:A:N3	26:YB:80:U:O2'	2.31	0.60
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.60
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.60
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.60
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.60
4:QD:146:ILE:HD12	4:QD:146:ILE:H	1.66	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.22	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
25:RA:76:C:O2'	48:R2:62:THR:HG21	2.00	0.60
25:RA:111:A:O3'	48:R2:69:ARG:NH2	2.34	0.60
25:RA:2636:U:OP1	28:RE:79:ARG:HA	2.02	0.60
31:RH:44:VAL:HG22	31:RH:44:VAL:O	2.01	0.60
34:RO:91:LEU:HD22	34:RO:91:LEU:N	2.16	0.60
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.22	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
25:YA:1049:C:H2'	25:YA:1050:A:H5"	1.83	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
45:YZ:101:PRO:HA	45:YZ:123:ASP:HB3	1.82	0.60
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.99	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.35	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.65	0.60
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.60
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
1:XA:243:A:H4'	1:XA:244:U:O5'	2.02	0.60
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.36	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
25:YA:2053:G:H1	25:YA:2616:C:H42	1.49	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
27:YD:263:ARG:HH11	27:YD:263:ARG:CB	2.15	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.02	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.01	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.83	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	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
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	2.02	0.60
25:RA:1543:A:HO2'	25:RA:1544:C:P	2.24	0.60
27:RD:263:ARG:HH11	27:RD:263:ARG:CB	2.14	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.31	0.60
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:266:G:H5'	1:XA:268:C:H41	1.65	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.10	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	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
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
25:YA:1728:G:H3'	25:YA:1729:A:H5"	1.83	0.60
28:YE:37:ARG:NE	28:YE:37:ARG:CA	2.64	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.36	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
31:YH:44:VAL:HG22	31:YH:44:VAL:O	2.01	0.60
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.84	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.00	0.60
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.83	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.83	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
25:RA:323:G:H2'	29:RF:169:ASN:OD1	2.01	0.60
25:RA:1858:G:O2'	25:RA:1884:A:N6	2.35	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.80	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
32:RI:56:LYS:HE3	32:RI:57:ARG:N	2.17	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.81	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	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:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
1:QA:1152:A:H5"	10:QJ:13:HIS:CD2	2.36	0.60
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.65	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
25:RA:1003:G:O2'	25:RA:1010:A:N1	2.33	0.60
25:RA:2638:G:OP2	28:RE:82:ARG:NH2	2.34	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
33:RN:133:GLN:O	33:RN:134:ARG:HB3	1.99	0.60
44:RY:19:LYS:O	44:RY:19:LYS:HG3	2.01	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.83	0.60
1:XA:673:G:H2'	1:XA:674:G:C8	2.36	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
4:XD:146:ILE:HD12	4:XD:146:ILE:H	1.66	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
13:XM:77:ASN:HA	50:Y4:71:ARG:CZ	2.30	0.60
14:XN:44:LEU:HD12	14:XN:48:ALA:HB2	1.84	0.60
19:XS:9:VAL:HG12	50:Y4:66:SER:O	2.02	0.60
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.36	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
27:YD:166:GLN:HE21	27:YD:166:GLN:CA	2.14	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
41:YV:35:LEU:HD23	41:YV:35:LEU:O	2.01	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.84	0.60
1:QA:1321:C:H5"	1:QA:1322:C:H5"	1.84	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.33	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
45:RZ:163:LEU:H	45:RZ:163:LEU:HD12	1.67	0.60
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
9:XI:85:LEU:HD12	9:XI:85:LEU:O	2.02	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
25:YA:242:G:H5"	54:Y8:3:LYS:HE3	1.82	0.60
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.35	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.49	0.60
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.67	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.60
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.64	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.20	0.60
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.17	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.83	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.37	0.60
29:RF:46:ARG:HH11	29:RF:46:ARG:CG	2.04	0.60
29:RF:164:ARG:HH11	29:RF:164:ARG:HG2	1.66	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ2	1.66	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.02	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.34	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.01	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
41:YV:99:ILE:N	41:YV:99:ILE:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.31	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.16	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
28:RE:37:ARG:NE	28:RE:37:ARG:CA	2.64	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.25	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.84	0.60
1:XA:243:A:H4'	1:XA:244:U:H3'	1.84	0.60
1:XA:532:A:H2	1:XA:1206:G:H21	1.50	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.60
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:19:ARG:O	14:XN:20:ALA:C	2.40	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
19:XS:67:VAL:CG1	50:Y4:59:PHE:O	2.48	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.17	0.60
25:YA:483:A:H5'	44:YY:49:VAL:HG22	1.83	0.60
25:YA:860:U:H5	25:YA:917:A:H2	1.50	0.60
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.00	0.60
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.60
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.60
46:Y0:25:ARG:HD2	46:Y0:29:GLN:NE2	2.17	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
1:QA:1152:A:H5"	10:QJ:13:HIS:HD2	1.66	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.34	0.60
25:RA:1287:A:N7	37:RR:107:ASP:HB2	2.17	0.60
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.84	0.60
25:RA:2392:A:OP2	25:RA:2422:A:N6	2.35	0.60
25:RA:2777:G:OP2	25:RA:2781:A:O2'	2.19	0.60
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.60
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.60
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.60
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.60
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.60
45:RZ:157:LEU:HD23	45:RZ:161:VAL:HG12	1.83	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.60
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.60
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.60
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.60
1:QA:521:G:H4'	12:QL:73:GLU:HG3	1.84	0.59
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.59
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.66	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.59
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.59
37:RR:75:LEU:HD13	37:RR:75:LEU:C	2.22	0.59
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59
1:XA:411:A:N6	1:XA:413:G:H21	1.97	0.59
1:XA:1162:C:O2'	1:XA:1163:C:O5'	2.19	0.59
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.59
13:XM:7:VAL:HG22	50:Y4:34:GLU:CD	2.22	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.13	0.59
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.84	0.59
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.59
47:Y1:81:LYS:HA	47:Y1:81:LYS:HZ3	0.70	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
25:RA:2439:A:C8	25:RA:2439:A:H5'	2.37	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.84	0.59
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.18	0.59
33:RN:41:ASP:O	33:RN:48:MET:HE3	2.01	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.83	0.59
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.59
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.59
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.85	0.59
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.59
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.35	0.59
1:XA:502:G:OP1	12:XL:118:SER:N	2.32	0.59
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.17	0.59
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
25:YA:2467:C:H4'	36:YQ:123:HIS:CD2	2.37	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.03	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.59
1:QA:17:U:H2'	1:QA:18:C:C6	2.37	0.59
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.18	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.84	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.84	0.59
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.49	0.59
12:QL:48:PRO:CD	12:QL:49:ASN:N	2.57	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.37	0.59
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.67	0.59
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.84	0.59
25:RA:2416:C:H5"	35:RP:64:LYS:HE3	1.83	0.59
27:RD:166:GLN:CA	27:RD:166:GLN:HE21	2.14	0.59
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.39	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.33	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.68	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	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
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
19:XS:64:GLU:HB2	50:Y4:60:GLN:NE2	2.18	0.59
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.17	0.59
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.22	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.67	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.84	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
1:QA:715:A:H2'	1:QA:716:A:C8	2.38	0.59
1:QA:991:U:O4	1:QA:1212:U:O2'	2.14	0.59
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
25:RA:2790:A:H2'	25:RA:2791:C:H5"	1.84	0.59
26:RB:48:A:H2'	26:RB:49:C:C6	2.37	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59
31:RH:153:LYS:HA	31:RH:153:LYS:HZ2	1.67	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.01	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.27	0.59
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.83	0.59
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.83	0.59
27:YD:174:ILE:HD12	27:YD:174:ILE:N	2.16	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.34	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.59
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.37	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.67	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
25:YA:2131:G:N2	25:YA:2158:A:N7	2.50	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.84	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
45:YZ:128:VAL:HB	45:YZ:161:VAL:HG13	1.83	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.68	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.84	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.67	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
25:RA:49:A:H4'	25:RA:50:U:H5"	1.85	0.59
25:RA:878:A:N6	25:RA:899:A:O2'	2.36	0.59
25:RA:898:C:H2'	25:RA:899:A:H5'	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
32:RI:130:TYR:HB3	32:RI:136:VAL:HG13	1.83	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
1:XA:974:A:OP2	14:XN:41:ARG:HD3	2.03	0.59
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.68	0.59
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.37	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
25:YA:2723:C:H5"	37:YR:1:MET:HG2	1.84	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.83	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.35	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
32:RI:56:LYS:CG	32:RI:57:ARG:N	2.62	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
1:XA:521:G:H4'	12:XL:73:GLU:HG3	1.85	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	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
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
25:YA:566:U:OP1	35:YP:29:LYS:HE2	2.02	0.59
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.20	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.84	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.49	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
1:QA:7:G:H5'	1:QA:298:A:O4'	2.03	0.59
1:QA:1226:C:O2'	13:QM:103:THR:O	2.15	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	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
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	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
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
37:RR:79:LEU:HD23	37:RR:79:LEU:C	2.23	0.59
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.59
1:XA:842:C:O2'	1:XA:848:C:N4	2.35	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
14:XN:15:LYS:HD2	14:XN:16:PHE:CZ	2.37	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:27:G:H22	25:YA:512:G:H2'	1.68	0.59
25:YA:184:C:H2'	25:YA:185:U:C6	2.38	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.83	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
25:RA:330:A:H2	25:RA:1210:A:H2'	1.66	0.59
25:RA:2314:C:OP1	30:RG:91:ARG:NH1	2.35	0.59
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.33	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.59
40:RU:52:ARG:HG2	40:RU:52:ARG:NH1	2.18	0.59
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	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
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.23	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.85	0.59
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.36	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
1:QA:673:G:H2'	1:QA:674:G:C8	2.37	0.59
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.37	0.59
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.22	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ3	1.68	0.59
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.17	0.59
22:QV:53:G:H4'	22:QV:54:U:OP1	2.02	0.59
24:QY:39:C:O2'	24:QY:40:G:OP1	2.21	0.59
25:RA:49:A:N7	25:RA:120:U:H5	2.01	0.59
25:RA:507:A:H5"	25:RA:508:G:H5'	1.85	0.59
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.36	0.59
26:RB:40:U:O4	50:R4:2:LYS:N	2.34	0.59
27:RD:44:ASN:N	27:RD:44:ASN:ND2	2.42	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.59
32:RI:56:LYS:HE3	32:RI:57:ARG:CA	2.33	0.59
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
41:RV:1:MET:CE	41:RV:43:GLU:HG2	2.32	0.59
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.59
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	0.59
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.49	0.59
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.59
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.59
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.65	0.59
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.59
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.59
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.18	0.59
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.59
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.59
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.58
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.58
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.58
17:QQ:92:ARG:HG3	17:QQ:92:ARG:HH11	1.68	0.58
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.58
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.58
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.03	0.58
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
1:XA:974:A:OP2	14:XN:41:ARG:CD	2.51	0.58
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.58
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.58
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	0.58
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	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
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
19:XS:65:ASN:N	50:Y4:55:ARG:NH1	2.51	0.58
25:YA:138:G:N2	43:YX:44:GLU:OE2	2.22	0.58
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.15	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.32	0.58
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.68	0.58
37:YR:63:ARG:HH11	37:YR:63:ARG:HG3	1.68	0.58
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.58
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.85	0.58
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
25:RA:78:A:H2'	25:RA:79:G:H8	1.68	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.38	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.03	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
1:XA:837:G:H1	1:XA:849:C:H42	1.50	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
25:YA:1416:G:H2'	25:YA:1417:C:C6	2.38	0.58
25:YA:1846:G:H5'	25:YA:1847:A:OP2	2.02	0.58
25:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.17	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.03	0.58
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.66	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.58
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
25:RA:310:A:OP1	44:RY:18:GLY:N	2.24	0.58
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.84	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.20	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.71	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:65:LYS:CE	50:Y4:50:VAL:CG1	2.81	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
45:YZ:9:TYR:HE2	45:YZ:61:LEU:HD13	1.68	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.02	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.21	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.03	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
18:QR:36:ASN:O	18:QR:36:ASN:ND2	2.32	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.69	0.58
25:RA:2335:A:O2'	25:RA:2336:A:O5'	2.21	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.19	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.67	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.32	0.58
48:R2:69:ARG:NH1	48:R2:69:ARG:CB	2.67	0.58
51:R5:60:VAL:HG13	51:R5:60:VAL:OXT	2.03	0.58
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.68	0.58
1:XA:1048:G:OP1	14:XN:3:ARG:HB3	2.02	0.58
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.35	0.58
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.38	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	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
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.03	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.84	0.58
25:YA:2585:U:C5	56:Z8:76:PPU:O2'	2.56	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.16	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
25:RA:626:U:H5"	25:RA:627:A:H5'	1.86	0.58
25:RA:1678:G:N2	25:RA:1989:G:H22	2.01	0.58
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
42:RW:95:ILE:HD12	42:RW:95:ILE:O	2.04	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.38	0.58
1:XA:595:G:H1'	1:XA:596:C:H5	1.68	0.58
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.17	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.85	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	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
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
23:XX:8:A:C5'	23:XX:8:A:C8	2.85	0.58
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.27	0.58
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.36	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.84	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.68	0.58
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.20	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
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
48:R2:16:LEU:O	48:R2:16:LEU:CG	2.49	0.58
1:XA:1023:G:H3'	1:XA:1024:G:H5"	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
25:YA:278:A:H2'	25:YA:279:C:C6	2.38	0.58
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.22	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
25:RA:1301:A:H4'	25:RA:1302:A:OP1	2.02	0.58
25:RA:1728:G:H3'	25:RA:1729:A:H5"	1.85	0.58
25:RA:2723:C:H5"	37:RR:1:MET:HG2	1.84	0.58
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.38	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
32:RI:3:VAL:HG12	32:RI:38:LEU:HA	1.85	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
45:RZ:114:GLY:CA	45:RZ:177:PRO:HB3	2.34	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.04	0.58
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.39	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	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
25:YA:271(B):G:H5"	25:YA:271(B):G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.33	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.38	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.03	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.06	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.33	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
1:QA:1118:C:OP1	9:QI:9:ARG:HD3	2.03	0.58
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.67	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
25:RA:558:G:P	33:RN:111:PRO:HD2	2.44	0.58
25:RA:1818:U:H2'	27:RD:157:ARG:HG3	1.86	0.58
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.39	0.58
38:RS:67:ARG:HB2	38:RS:67:ARG:HH11	1.65	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.04	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.18	0.58
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.58
1:XA:745:C:OP1	1:XA:851:G:O2'	2.21	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
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
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.18	0.58
25:YA:643:A:N1	25:YA:2369:A:O2'	2.35	0.58
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.21	0.58
25:YA:2864:G:OP1	39:YT:119:LYS:HD2	2.04	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.03	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
48:Y2:69:ARG:NH1	48:Y2:69:ARG:CB	2.67	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.18	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
25:RA:227:A:O2'	25:RA:228:A:OP2	2.22	0.58
25:RA:1049:C:H2'	25:RA:1050:A:H5"	1.85	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.39	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.84	0.58
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
50:R4:38:LYS:C	50:R4:40:HIS:N	2.52	0.58
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.39	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
25:YA:890:A:HO2'	25:YA:892:G:H8	1.52	0.58
25:YA:2405:G:O2'	25:YA:2406:U:OP2	2.18	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
31:YH:4:ILE:HD13	31:YH:4:ILE:H	1.68	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
51:Y5:60:VAL:HG13	51:Y5:60:VAL:OXT	2.03	0.58
1:QA:184:G:H2'	1:QA:185:A:H8	1.68	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
25:RA:1264:G:H5'	51:R5:11:THR:HG21	1.84	0.58
25:RA:2068:U:N3	25:RA:2430:A:H2	1.98	0.58
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.34	0.58
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.58
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.58
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.04	0.58
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.04	0.58
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.58
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
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
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.58
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.58
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.58
25:YA:654:A:O2'	25:YA:654(A):G:N7	2.34	0.58
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.58
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.58
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.58
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.58
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
25:RA:25:U:H5"	42:RW:80:PRO:HD3	1.85	0.57
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.04	0.57
30:RG:53:LEU:C	30:RG:53:LEU:HD23	2.25	0.57
31:RH:4:ILE:HD13	31:RH:4:ILE:H	1.68	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.57
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.57
47:R1:81:LYS:HE2	47:R1:81:LYS:H	1.62	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
1:XA:538:G:H5"	12:XL:114:LYS:HB2	1.86	0.57
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.57
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.57
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.57
16:XP:76:GLN:O	16:XP:76:GLN:HG2	2.04	0.57
25:YA:141:A:H8	25:YA:1595:G:H21	1.52	0.57
25:YA:247:G:O6	54:Y8:12:LYS:NZ	2.18	0.57
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	2.02	0.57
25:YA:1329:U:H5"	25:YA:1330:C:H5	1.69	0.57
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.57
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.57
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.57
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.57
39:YT:82:LEU:HD12	39:YT:82:LEU:N	2.19	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.03	0.57
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.57
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HD23	1.85	0.57
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.18	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
45:RZ:144:LEU:HG	45:RZ:150:LEU:HD12	1.87	0.57
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.57
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.57
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.57
1:XA:250:A:H4'	1:XA:251:G:O5'	2.04	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
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.20	0.57
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.57
25:YA:2432:A:C8	47:Y1:33:LYS:HE2	2.39	0.57
25:YA:2600:A:H62	27:YD:237:GLU:HG2	1.69	0.57
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.85	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.04	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.70	0.57
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.69	0.57
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.57
25:RA:919:G:N2	25:RA:2269:A:OP2	2.34	0.57
25:RA:997:G:OP1	40:RU:93:LYS:HD3	2.05	0.57
25:RA:1342:A:OP1	43:RX:36:LYS:NZ	2.28	0.57
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	2.04	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.85	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.86	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.34	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
42:RW:1:MET:HA	42:RW:1:MET:HE3	1.86	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
1:XA:1095:U:H5'	1:XA:1109:C:O2	2.04	0.57
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.19	0.57
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.19	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.04	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
11:XK:21:ILE:HD12	11:XK:21:ILE:N	2.19	0.57
25:YA:309:G:N3	25:YA:329:G:O2'	2.36	0.57
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.36	0.57
25:YA:1042:G:H1	25:YA:1113:U:H3	1.52	0.57
26:YB:40:U:H3	26:YB:43:C:H5"	1.68	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.86	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.68	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.69	0.57
25:RA:1332:G:N2	25:RA:1609:A:O2'	2.38	0.57
25:RA:2795:G:H3'	25:RA:2797:U:H5'	1.86	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.20	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
37:RR:63:ARG:HH11	37:RR:63:ARG:HG3	1.68	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.18	0.57
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.52	0.57
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
22:XV:53:G:H4'	22:XV:54:U:OP1	2.02	0.57
24:XY:39:C:O2'	24:XY:40:G:OP1	2.21	0.57
25:YA:1543:A:O2'	25:YA:1544:C:O5'	2.19	0.57
25:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.50	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.36	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	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
13:QM:121:LYS:NZ	24:QY:39:C:O2'	2.38	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.86	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.86	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.69	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.86	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
25:YA:74:A:H4'	25:YA:75:G:O5'	2.05	0.57
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.03	0.57
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.85	0.57
28:YE:41:LYS:HE2	28:YE:41:LYS:HA	1.86	0.57
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.84	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.19	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
34:YO:71:ARG:HG3	34:YO:71:ARG:HH11	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.05	0.57
40:YU:52:ARG:HG2	40:YU:52:ARG:NH1	2.18	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
1:QA:428:G:O3'	4:QD:36:ARG:NH2	2.38	0.57
1:QA:516:U:O2'	1:QA:519:C:N3	2.35	0.57
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.21	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
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
25:RA:566:U:OP1	35:RP:29:LYS:HE2	2.05	0.57
25:RA:996:A:H4'	40:RU:92:ARG:HE	1.69	0.57
26:RB:43:C:O5'	30:RG:67:LYS:HE3	2.05	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.68	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.86	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:CB	2.17	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:HB2	1.69	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.05	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
30:YG:53:LEU:C	30:YG:53:LEU:HD23	2.25	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.69	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
25:RA:1303:G:H5"	25:RA:1643:G:H1'	1.87	0.57
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.22	0.57
27:RD:239:ARG:O	27:RD:240:ALA:HB2	2.05	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
1:XA:908:A:H2'	1:XA:909:A:C8	2.39	0.57
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.38	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.20	0.57
1:QA:45:U:H2'	1:QA:46:G:C8	2.40	0.57
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
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
25:RA:592:G:H1	25:RA:665:C:H42	1.51	0.57
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.20	0.57
25:RA:2681:C:O2'	25:RA:2682:U:OP2	2.21	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.85	0.57
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
32:RI:88:ILE:HG12	32:RI:122:GLU:H	1.70	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.04	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
19:XS:68:GLY:C	50:Y4:68:ARG:HG2	2.25	0.57
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.38	0.57
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	1.88	0.57
27:YD:34:VAL:O	27:YD:34:VAL:CG1	2.51	0.57
32:YI:85:GLU:OE1	32:YI:86:THR:OG1	2.20	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
44:YY:97:ARG:HG2	44:YY:97:ARG:O	2.05	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.04	0.57
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.38	0.57
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.68	0.57
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.39	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	2.05	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.40	0.57
25:RA:635:C:O2'	25:RA:639:U:OP1	2.21	0.57
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.38	0.57
25:RA:2655:G:N2	25:RA:2665:A:OP2	2.38	0.57
26:RB:57:A:H4'	30:RG:30:GLU:HG2	1.86	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.87	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
1:XA:246:A:N6	1:XA:281:G:H1'	2.20	0.57
1:XA:1095:U:P	1:XA:1108:G:H1	2.28	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.34	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
25:YA:1332:G:H21	25:YA:1610:A:H8	1.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.69	0.57
25:YA:2477:C:H2'	55:Y9:1:MET:HG3	1.86	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.86	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57
35:YP:64:LYS:C	35:YP:66:GLY:N	2.56	0.57
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.57
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.57
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.36	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.57
25:RA:1006:C:H1'	33:RN:106:MET:HE3	1.87	0.57
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.05	0.57
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.57
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.57
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.57
40:RU:79:PHE:CD2	40:RU:79:PHE:C	2.78	0.57
45:RZ:9:TYR:HE2	45:RZ:61:LEU:HD13	1.69	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.05	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	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
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
25:YA:31:C:O3'	25:YA:1238:G:H5"	2.05	0.57
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.37	0.57
25:YA:2761:G:H1'	31:YH:143:GLN:OE1	2.05	0.57
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.57
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.57
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.34	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.18	0.57
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.57
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.57
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.40	0.56
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.56
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	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
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.56
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	2.05	0.56
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.56
32:RI:54:GLN:O	32:RI:58:LEU:HB2	2.05	0.56
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.70	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.05	0.56
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.70	0.56
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.35	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
2:XB:178:ARG:HD2	8:XH:71:GLY:HA2	1.87	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
25:YA:888:C:H3'	25:YA:889:C:C4'	2.32	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.56
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	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
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.40	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.56
1:XA:666:G:H5'	1:XA:726:C:H1'	1.87	0.56
1:XA:1322:C:O2'	1:XA:1323:G:H5'	2.04	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
25:YA:83:G:O2'	25:YA:84:A:H8	1.88	0.56
25:YA:275:G:H21	25:YA:276:A:H62	1.51	0.56
25:YA:2466:C:OP1	55:Y9:4:ARG:HB2	2.05	0.56
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.04	0.56
45:YZ:125:LEU:HG	45:YZ:164:ALA:HB3	1.86	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.04	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.04	0.56
1:QA:713:G:H2'	1:QA:714:G:C8	2.40	0.56
1:QA:920:U:H2'	1:QA:921:U:C6	2.41	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	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:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	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
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.71	0.56
25:RA:620:G:H4'	25:RA:621:A:H5"	1.86	0.56
25:RA:1057:A:H62	25:RA:1086:A:H2'	1.70	0.56
25:RA:1279:G:C4'	37:RR:31:HIS:HD2	2.14	0.56
25:RA:2166:G:N2	25:RA:2168:G:OP1	2.38	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.23	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.53	0.56
29:RF:46:ARG:HG2	29:RF:46:ARG:NH1	2.00	0.56
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.35	0.56
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
52:R6:42:TRP:N	52:R6:42:TRP:CD1	2.73	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
1:XA:976:G:H5"	1:XA:1358:U:O2'	2.05	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.04	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.05	0.56
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.23	0.56
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.38	0.56
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.38	0.56
25:YA:2414:G:H21	35:YP:67:MET:HE1	1.69	0.56
25:YA:2795:G:H3'	25:YA:2797:U:H5'	1.86	0.56
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
28:YE:69:LYS:C	28:YE:71:GLY:H	2.08	0.56
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.87	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
32:YI:56:LYS:HE3	32:YI:57:ARG:HG2	1.87	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.52	0.56
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.05	0.56
40:YU:104:GLN:OE1	40:YU:104:GLN:N	2.35	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
55:Y9:2:LYS:HD2	55:Y9:33:LYS:O	2.05	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.86	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.05	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
26:RB:42:C:C6	30:RG:69:ALA:HB2	2.41	0.56
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.56
28:RE:183:LEU:HD12	28:RE:183:LEU:N	2.20	0.56
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.56
36:RQ:59:ARG:C	36:RQ:60:ARG:CG	2.74	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.87	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.56
45:RZ:108:PRO:C	45:RZ:110:GLY:H	2.09	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.21	0.56
50:R4:48:ARG:O	50:R4:50:VAL:N	2.38	0.56
50:R4:64:GLY:C	50:R4:66:SER:H	2.08	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.21	0.56
1:XA:437:U:H2'	1:XA:438:G:O4'	2.05	0.56
1:XA:1305:G:OP1	21:XU:2:GLY:HA2	2.06	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	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
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
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	2.33	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.53	0.56
25:YA:1021:A:H61	25:YA:1142(A):A:H61	1.52	0.56
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.21	0.56
25:YA:2492:U:H2'	25:YA:2493:U:C6	2.40	0.56
25:YA:2633:G:H1'	28:YE:62:PRO:HG2	1.86	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
32:YI:31:LEU:HD21	32:YI:38:LEU:HG	1.87	0.56
36:YQ:79:LEU:O	36:YQ:79:LEU:CG	2.52	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
1:QA:411:A:C5	1:QA:413:G:H1'	2.40	0.56
1:QA:954:G:H21	1:QA:1227:A:H62	1.52	0.56
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.21	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	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
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.41	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
25:RA:1486:A:H2'	25:RA:1487:G:H8	1.71	0.56
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.19	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.67	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
44:RY:97:ARG:O	44:RY:97:ARG:HG2	2.05	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.04	0.56
1:XA:345:C:O3'	39:YT:41:ARG:NH2	2.39	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
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	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
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.37	0.56
25:YA:1639:U:H2'	25:YA:1640:C:H5"	1.87	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.87	0.56
32:YI:73:GLU:HG3	32:YI:136:VAL:HG23	1.86	0.56
32:YI:77:LEU:HD11	32:YI:140:LEU:HD12	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
47:Y1:76:ARG:HG2	47:Y1:76:ARG:NH1	2.20	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.08	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
25:RA:263:C:H2'	25:RA:264:C:O4'	2.05	0.56
25:RA:1999:C:O2	25:RA:2687:U:O2'	2.22	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.88	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
28:RE:117:MET:O	28:RE:117:MET:HG3	2.06	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.40	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	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:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
19:XS:3:ARG:HB3	50:Y4:67:TYR:CD2	2.41	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
25:YA:84:A:N1	25:YA:98:G:O2'	2.27	0.56
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.39	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.54	0.56
35:YP:59:LEU:O	35:YP:59:LEU:HD23	2.06	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
1:QA:411:A:H62	1:QA:413:G:H21	1.53	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
13:QM:77:ASN:CA	50:R4:71:ARG:HH22	2.15	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
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
25:RA:2159:G:H2'	25:RA:2160:G:C8	2.41	0.56
26:RB:42:C:H41	30:RG:91:ARG:NH2	2.03	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.69	0.56
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.70	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.54	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.70	0.56
1:XA:328:C:H4'	1:XA:329:A:H5'	1.86	0.56
1:XA:701:C:H1'	1:XA:703:G:C4	2.41	0.56
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.36	0.56
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.35	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
25:YA:2401:U:H2'	25:YA:2402:C:H5"	1.87	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.87	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.23	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
44:YY:95:LYS:HE3	44:YY:95:LYS:O	2.06	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.29	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.61	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.56
25:YA:242:G:H5'	54:Y8:62:LEU:CD2	2.33	0.56
27:YD:239:ARG:O	27:YD:240:ALA:HB2	2.05	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.39	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.59	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.53	0.56
25:RA:2529:G:O6	55:R9:31:LYS:NZ	2.39	0.56
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.56
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.88	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:105:LEU:C	39:RT:107:ASP:H	2.08	0.56
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.56
1:XA:7:G:H5'	1:XA:298:A:O4'	2.06	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	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
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
25:YA:1012:U:H3	33:YN:25:ARG:HH11	1.53	0.56
25:YA:2364:C:OP1	46:Y0:55:ARG:NH1	2.39	0.56
25:YA:2722:G:H4'	37:YR:4:LEU:HB2	1.88	0.56
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.98	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
1:QA:457:C:H42	1:QA:475:G:H1	1.54	0.56
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	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
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.56
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.56
20:QT:74:LYS:C	20:QT:76:ALA:H	2.10	0.56
25:RA:479:A:N3	25:RA:481:G:H5"	2.21	0.56
25:RA:922:U:H2'	25:RA:923:C:C6	2.41	0.56
25:RA:1462:C:H4'	25:RA:2703:C:H5'	1.88	0.56
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.86	0.56
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.19	0.56
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.56
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.56
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.56
1:XA:35:G:N2	12:XL:118:SER:OG	2.38	0.56
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.05	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.89	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.56
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	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
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.70	0.56
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.41	0.56
25:YA:1364:G:N7	47:Y1:2:SER:N	2.54	0.56
25:YA:1550:C:H2'	25:YA:1551:C:H6	1.71	0.56
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.56
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.56
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.56
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	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
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
25:RA:1332:G:N2	25:RA:1609:A:HO2'	2.04	0.55
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.88	0.55
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.37	0.55
26:RB:55:U:H2'	26:RB:56:G:C8	2.41	0.55
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.55
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.72	0.55
32:RI:79:ILE:HB	32:RI:142:VAL:HA	1.88	0.55
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.55
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.86	0.55
1:XA:560:U:H4'	1:XA:561:U:H5"	1.88	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.55
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.05	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
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
25:YA:275:G:N2	25:YA:276:A:H62	2.03	0.55
25:YA:1543:A:HO2'	25:YA:1544:C:P	2.29	0.55
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.70	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.34	0.55
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.55
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.55
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.71	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.71	0.55
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.71	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.06	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.88	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.06	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.54	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.55
45:RZ:136:PHE:HE1	45:RZ:138:GLU:HB3	1.71	0.55
1:XA:974:A:H1'	14:XN:31:ARG:HE	1.71	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
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
19:XS:64:GLU:CG	50:Y4:55:ARG:HH12	2.18	0.55
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.55
33:YN:101:HIS:CD2	33:YN:101:HIS:C	2.79	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.11	0.55
42:YW:1:MET:C	42:YW:64:MET:HE1	2.27	0.55
42:YW:20:VAL:C	42:YW:22:ASP:N	2.60	0.55
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.36	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
1:QA:939:G:H5"	7:QG:102:ARG:HH12	1.71	0.55
1:QA:1095:U:H5"	1:QA:1109:C:O2	2.06	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
15:QO:65:ARG:HB2	15:QO:65:ARG:NH1	2.20	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:335:C:H4'	44:RY:73:ARG:CZ	2.36	0.55
25:RA:848:G:H2'	25:RA:849:A:C8	2.41	0.55
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.74	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
32:RI:55:ALA:O	32:RI:58:LEU:CB	2.55	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
44:RY:95:LYS:HB2	44:RY:95:LYS:NZ	2.21	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
1:XA:1130:A:N6	1:XA:1131:G:O6	2.39	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
10:XJ:26:ALA:HA	10:XJ:29: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
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
25:YA:263:C:H2'	25:YA:264:C:O4'	2.06	0.55
25:YA:900:A:H5'	25:YA:901:A:OP2	2.06	0.55
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.55	0.55
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.06	0.55
25:YA:2645:G:H3'	25:YA:2646:C:H5'	1.88	0.55
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.34	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.22	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.88	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.03	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.42	0.55
25:RA:593:G:H2'	25:RA:594:U:C6	2.42	0.55
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.25	0.55
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.28	0.55
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.88	0.55
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
28:RE:26:ILE:HD13	28:RE:26:ILE:C	2.26	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
1:XA:1151:A:H1'	10:XJ:39:PRO:CB	2.33	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.17	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
25:YA:483:A:H3'	25:YA:484:C:H6	1.71	0.55
25:YA:570:G:H2'	25:YA:2030:A:C5	2.42	0.55
25:YA:2068:U:N3	25:YA:2430:A:H2	2.03	0.55
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	2.06	0.55
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
1:QA:757:U:H2'	1:QA:758:G:O4'	2.07	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.06	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.27	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.89	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.21	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.21	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.21	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.55
25:YA:2656:U:H3	25:YA:2665:A:H2	1.52	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.48	0.55
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
52:Y6:42:TRP:N	52:Y6:42:TRP:CD1	2.73	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.71	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
25:RA:28:A:N6	25:RA:512:G:H1'	2.22	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.21	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
40:RU:104:GLN:OE1	40:RU:104:GLN:N	2.35	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
1:XA:626:U:H2'	1:XA:627:G:C8	2.41	0.55
1:XA:1054:C:OP2	1:XA:1197:G:OP2	2.24	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
4:XD:94:LEU:H	4:XD:94:LEU:CD1	2.08	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	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
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
25:YA:1203:G:H3'	25:YA:1204:A:H5"	1.89	0.55
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.42	0.55
25:YA:2502:G:H5"	25:YA:2503:A:H5"	1.87	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.88	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.07	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
13:QM:65:LYS:HZ1	50:R4:52:THR:CB	2.19	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.06	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
32:RI:51:ILE:CG2	32:RI:55:ALA:CB	2.85	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ2	1.69	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	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
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:N	11:XK:125:PHE:CD1	2.74	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
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.05	0.55
25:YA:185:U:H4'	25:YA:218:A:H4'	1.89	0.55
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.06	0.55
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.41	0.55
25:YA:2747:G:OP1	31:YH:138:LYS:NZ	2.39	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.69	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
29:YF:28:ILE:HD12	29:YF:28:ILE:O	2.06	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.06	0.55
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.06	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:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	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
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
25:RA:270(L):U:H2'	32:RI:50:ARG:HD2	1.89	0.55
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.06	0.55
25:RA:1863:G:HO2'	25:RA:2411:A:HO2'	1.50	0.55
25:RA:2074:U:H2'	25:RA:2075:U:C6	2.42	0.55
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.41	0.55
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.42	0.55
26:RB:33:G:O5'	30:RG:2:PRO:HG3	2.07	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55
33:RN:109:LYS:N	33:RN:109:LYS:HD2	2.22	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
38:RS:13:ARG:O	38:RS:13:ARG:HD2	2.06	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.72	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	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:126:SER:O	9:XI:128:ARG:N	2.35	0.55
9:XI:128:ARG:HH21	22:XV:35:A:P	2.30	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.60	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.72	0.55
25:YA:878:A:N6	25:YA:899:A:O2'	2.39	0.55
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.88	0.55
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.55	0.55
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2159:G:H2'	25:YA:2160:G:C8	2.42	0.55
25:YA:2790:A:H2'	25:YA:2791:C:H5"	1.89	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.27	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
34:YO:19:ILE:O	34:YO:19:ILE:HD13	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.55
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.07	0.55
39:YT:29:ARG:HH11	39:YT:29:ARG:HB2	1.72	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.88	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.42	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.06	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
25:RA:458:G:O2'	25:RA:469:G:O6	2.22	0.55
25:RA:947:G:H2'	25:RA:948:G:C8	2.42	0.55
25:RA:1210:A:H5"	25:RA:1210:A:H8	1.71	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
33:RN:101:HIS:CD2	33:RN:101:HIS:C	2.79	0.55
34:RO:1:MET:HE2	34:RO:67:LYS:HG2	1.89	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	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
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.55
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.07	0.55
25:YA:530:G:C5	25:YA:2022:U:H5"	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1826:G:O2'	27:YD:242:ARG:NH2	2.39	0.55
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.42	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.20	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.55
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
50:Y4:48:ARG:HH12	50:Y4:52:THR:HG22	1.71	0.55
50:Y4:51:ASP:OD1	50:Y4:51:ASP:O	2.25	0.55
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.55
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.55
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.55
9:QI:66:ARG:HG2	9:QI:66:ARG:NH1	2.22	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.89	0.55
25:RA:2150:U:H2'	25:RA:2151:G:C8	2.41	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
30:RG:135:LEU:HD12	30:RG:135:LEU:N	2.21	0.55
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.07	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.55
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.55
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.06	0.55
41:RV:99:ILE:N	41:RV:99:ILE:CD1	2.65	0.55
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
22:XV:68:C:H2'	22:XV:69:C:C6	2.42	0.55
25:YA:226:G:HO2'	25:YA:227:A:P	2.28	0.55
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.42	0.55
25:YA:1069:A:H4'	25:YA:1070:A:H5"	1.89	0.55
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.37	0.55
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.56	0.55
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.55
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.55
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.18	0.55
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.22	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.55
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.54	0.55
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
23:QX:6:C:HO2'	23:QX:7:U:P	2.28	0.54
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.42	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
35:RP:59:LEU:O	35:RP:59:LEU:HD23	2.06	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.54
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.43	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.39	0.54
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.54
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.54
42:RW:70:TYR:CD2	42:RW:70:TYR:N	2.75	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
45:RZ:115:GLY:O	45:RZ:116:VAL:HB	2.07	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.36	0.54
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.54
1:XA:337:C:H2'	1:XA:338:A:C8	2.41	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
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.54
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.72	0.54
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.06	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.54
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.54
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.54
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
1:QA:347:G:O2'	1:QA:348:G:OP2	2.20	0.54
2:QB:41:ILE:HD12	2:QB:41:ILE:N	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.08	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
25:RA:2469:A:H4'	25:RA:2469:A:OP1	2.06	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.54
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.90	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
53:R7:18:PHE:C	53:R7:18:PHE:CD2	2.81	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
9:XI:114:TYR:O	9:XI:114:TYR:CD2	2.58	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.06	0.54
25:YA:1929:G:H3'	25:YA:1929:G:H8	1.72	0.54
25:YA:2655:G:N2	25:YA:2665:A:OP2	2.40	0.54
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.54
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.63	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.45	0.54
40:YU:95:LEU:HD12	41:YV:11:GLN:HE21	1.72	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
1:QA:114:U:H2'	1:QA:115:G:C8	2.41	0.54
1:QA:745:C:OP1	1:QA:851:G:O2'	2.24	0.54
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.06	0.54
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.89	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.54
25:RA:2848:G:O2'	25:RA:2849:U:OP2	2.25	0.54
29:RF:62:ARG:HB3	29:RF:62:ARG:NH1	2.22	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.51	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.07	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.56	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
1:XA:136:C:H42	1:XA:227:G:H1	1.55	0.54
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.89	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
25:YA:747:U:C4	51:Y5:2:ALA:N	2.75	0.54
25:YA:1398:C:OP1	43:YX:53:LYS:NZ	2.40	0.54
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.54
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.22	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
44:YY:2:ARG:HG2	44:YY:2:ARG:NH1	2.22	0.54
44:YY:95:LYS:HB2	44:YY:95:LYS:NZ	2.21	0.54
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
1:QA:686:U:O4	1:QA:703:G:H1'	2.08	0.54
1:QA:1128:C:H42	1:QA:1144:G:H1	1.54	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.22	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.26	0.54
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.23	0.54
25:RA:2893:G:H5"	25:RA:2894:G:H5'	1.88	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.07	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.07	0.54
44:RY:95:LYS:HD3	44:RY:95:LYS:N	2.23	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
47:R1:91:LYS:HA	47:R1:91:LYS:CE	2.38	0.54
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.54	0.54
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.08	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.08	0.54
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.40	0.54
25:YA:2816:C:O3'	37:YR:99:LYS:NZ	2.41	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
34:YO:1:MET:HE2	34:YO:67:LYS:HG2	1.89	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54
1:QA:1095:U:P	1:QA:1108:G:H1	2.30	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.37	0.54
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	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
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
25:RA:298:G:P	44:RY:85:VAL:HG22	2.47	0.54
25:RA:530:G:N1	25:RA:2022:U:OP1	2.40	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
32:RI:13:GLY:HA3	32:RI:17:GLN:CD	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.87	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
1:XA:642:A:N3	8:XH:113:SER:OG	2.35	0.54
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.40	0.54
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.37	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	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
25:YA:1403:C:H5"	25:YA:1471:A:H1'	1.89	0.54
25:YA:2335:A:O2'	25:YA:2336:A:H2'	2.07	0.54
27:YD:25:THR:O	27:YD:25:THR:HG23	2.07	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.23	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.07	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.54
4:QD:33:MET:HE1	4:QD:37:PRO:HA	1.89	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
25:RA:27:G:N2	25:RA:512:G:H2'	2.23	0.54
25:RA:251:A:C5	25:RA:252:G:H1'	2.42	0.54
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.07	0.54
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.90	0.54
26:RB:13:A:O2'	26:RB:14:U:H3'	2.08	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.71	0.54
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.72	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.07	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.70	0.54
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.70	0.54
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.43	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
25:RA:2633:G:H1'	28:RE:62:PRO:HG2	1.90	0.54
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.11	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
32:RI:51:ILE:CG2	32:RI:55:ALA:HB3	2.37	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
41:RV:45:THR:HG22	41:RV:45:THR:O	2.08	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.38	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:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	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
25:YA:747:U:C4	25:YA:2613:U:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.22	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.39	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.72	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
38:YS:13:ARG:O	38:YS:13:ARG:HD2	2.07	0.54
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.19	0.54
1:QA:1297:C:H4'	1:QA:1298:C:H5'	1.90	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.41	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
25:RA:2475:C:H42	25:RA:2529:G:H22	1.56	0.54
26:RB:38:C:H42	26:RB:44:G:H1	1.56	0.54
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.90	0.54
32:RI:52:ARG:CA	32:RI:56:LYS:HG2	2.37	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
36:RQ:60:ARG:HH12	36:RQ:113:GLN:HE22	1.55	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.07	0.54
1:XA:271:C:H2'	1:XA:272:C:H6	1.73	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.22	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.89	0.54
25:YA:265:A:O2'	25:YA:266:G:H4'	2.08	0.54
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.43	0.54
25:YA:2419:U:OP1	52:Y6:23:THR:HG21	2.08	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
28:YE:134:ILE:C	28:YE:134:ILE:HD12	2.28	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.88	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
55:Y9:1:MET:HB3	55:Y9:4:ARG:CZ	2.37	0.54
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.24	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.37	0.54
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.54
4:QD:170:VAL:O	6:XF:21:LEU:CD2	2.53	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.22	0.54
25:RA:27:G:O2'	25:RA:28:A:H8	1.91	0.54
25:RA:517:C:O2'	42:RW:18:ARG:NH2	2.41	0.54
25:RA:1264:G:H3'	25:RA:1265:A:H5"	1.89	0.54
25:RA:2335:A:HO2'	25:RA:2336:A:P	2.31	0.54
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.54
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.54
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.54
28:RE:54:GLN:NE2	28:RE:54:GLN:N	2.55	0.54
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.64	0.54
32:RI:56:LYS:HE3	32:RI:57:ARG:HA	1.90	0.54
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.54
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.54
44:RY:87:LYS:NZ	44:RY:87:LYS:HB2	2.23	0.54
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
25:YA:221:A:H4'	25:YA:222:A:O5'	2.07	0.54
25:YA:2212:A:H1'	25:YA:2215:G:C4	2.43	0.54
25:YA:2667:C:H1'	31:YH:109:PHE:HD2	1.73	0.54
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.54
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.54
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.54
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.54
34:YO:49:ARG:HB3	34:YO:49:ARG:NH1	2.23	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.90	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
44:YY:87:LYS:HB2	44:YY:87:LYS:NZ	2.23	0.54
1:QA:1363:A:H4'	1:QA:1364:U:H5"	1.89	0.54
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
25:RA:969:U:H2'	25:RA:970:C:C6	2.43	0.54
25:RA:1348:G:H2'	25:RA:1349:A:H5"	1.90	0.54
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.54
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.54
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.41	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.54
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.54
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.54
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.54
25:YA:1061:U:H3'	25:YA:1062:G:H5"	1.89	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
28:YE:186:GLY:O	28:YE:188:VAL:N	2.41	0.54
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.54
37:YR:91:GLN:HG2	37:YR:91:GLN:O	2.08	0.54
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.56	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.54
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.61	0.54
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.53
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
22:QV:68:C:H2'	22:QV:69:C:C6	2.42	0.53
25:RA:184:C:H2'	25:RA:185:U:C6	2.43	0.53
25:RA:900:A:H3'	25:RA:901:A:C8	2.41	0.53
25:RA:1300:U:H4'	25:RA:1301:A:H5"	1.90	0.53
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.72	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.53
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.53
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
40:RU:47:TYR:C	40:RU:47:TYR:CD2	2.81	0.53
45:RZ:146:ILE:HG22	45:RZ:174:VAL:HG12	1.90	0.53
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.53
51:R5:60:VAL:OXT	51:R5:60:VAL:CG1	2.56	0.53
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.44	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
6:XF:89:MET:HG2	6:XF:89:MET:O	2.09	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.53
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
19:XS:68:GLY:H	50:Y4:59:PHE:HE1	1.51	0.53
25:YA:372:G:O2'	25:YA:373:U:P	2.67	0.53
25:YA:1348:G:H2'	25:YA:1349:A:H5"	1.90	0.53
25:YA:1639:U:C2'	25:YA:1640:C:H5"	2.38	0.53
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.53
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.07	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.06	0.53
36:YQ:80:GLU:CD	46:Y0:7:LEU:HG	2.29	0.53
39:YT:88:ILE:C	39:YT:88:ILE:HD12	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.53
41:YV:45:THR:HG22	41:YV:45:THR:O	2.08	0.53
47:Y1:91:LYS:HA	47:Y1:91:LYS:CE	2.37	0.53
48:Y2:47:ASN:ND2	48:Y2:47:ASN:N	2.54	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.38	0.53
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	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
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.43	0.53
25:RA:593:G:O3'	54:R8:61:LEU:HD22	2.08	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.38	0.53
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.28	0.53
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.74	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53
1:XA:452:A:H62	1:XA:480:U:H3	1.56	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.53
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.53
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.22	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
29:RF:53:THR:C	29:RF:55:GLY:H	2.11	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
30:RG:81:LYS:O	30:RG:82:LEU:CB	2.56	0.53
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
45:RZ:109:ALA:O	45:RZ:112:ARG:CB	2.50	0.53
46:R0:25:ARG:HD2	46:R0:29:GLN:NE2	2.24	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.08	0.53
1:XA:960:U:O2'	1:XA:1223:C:H5'	2.08	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
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.38	0.53
25:YA:1059:G:H3'	25:YA:1060:U:H5"	1.90	0.53
25:YA:1265:A:H8	25:YA:1265:A:OP1	1.91	0.53
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.41	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.53
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.53
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.27	0.53
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.91	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.31	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
1:QA:690:G:H2'	1:QA:691:G:O4'	2.09	0.53
1:QA:701:C:H1'	1:QA:703:G:C6	2.43	0.53
1:QA:939:G:H5"	7:QG:102:ARG:NH1	2.23	0.53
2:QB:75:LYS:HD3	2:QB:75:LYS:C	2.29	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
23:QX:6:C:O2'	23:QX:7:U:P	2.66	0.53
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.91	0.53
28:RE:134:ILE:C	28:RE:134:ILE:HD12	2.28	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.41	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.90	0.53
1:XA:1330:U:H4'	13:XM:23:TYR:CZ	2.43	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.73	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.91	0.53
48:Y2:16:LEU:O	48:Y2:16:LEU:CG	2.49	0.53
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.53
1:QA:522:C:H41	12:QL:53:ARG:NH2	2.06	0.53
1:QA:612:C:O2	1:QA:629:G:N2	2.41	0.53
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.48	0.53
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.44	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	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:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.43	0.53
25:RA:1262:A:N3	51:R5:10:LYS:HE3	2.23	0.53
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.43	0.53
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.81	0.53
27:RD:25:THR:O	27:RD:25:THR:HG23	2.07	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
32:RI:49:ALA:O	32:RI:52:ARG:HG3	2.08	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.27	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.26	0.53
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.08	0.53
29:YF:179:GLU:CD	29:YF:179:GLU:H	2.11	0.53
31:YH:59:ARG:HH11	31:YH:59:ARG:CG	2.20	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53
1:QA:119:A:H4'	1:QA:120:A:O5'	2.07	0.53
1:QA:411:A:C4	1:QA:413:G:H1'	2.44	0.53
1:QA:885:G:O2'	1:QA:914:A:N1	2.37	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.41	0.53
25:RA:2758:A:C5	31:RH:67:LEU:HD21	2.43	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
36:RQ:119:ARG:HG2	36:RQ:119:ARG:NH1	2.20	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
38:RS:25:ARG:HH11	38:RS:25:ARG:CB	2.22	0.53
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.90	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.65	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.08	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
14:XN:40:CYS:SG	14:XN:42:ILE:N	2.81	0.53
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:264:C:C2'	25:YA:265:A:H5"	2.38	0.53
25:YA:2287:A:H62	25:YA:2344:U:H3	1.57	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.08	0.53
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
50:Y4:49:PHE:N	50:Y4:49:PHE:CD1	2.76	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
1:QA:688:G:H2'	1:QA:689:C:H6	1.74	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	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
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.53
24:QY:39:C:HO2'	24:QY:40:G:P	2.31	0.53
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.57	0.53
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.56	0.53
25:RA:654:A:O2'	25:RA:654(A):G:N7	2.37	0.53
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.43	0.53
25:RA:2784:C:H5"	28:RE:41:LYS:NZ	2.24	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.39	0.53
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.91	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.40	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.91	0.53
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.89	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
25:YA:612:G:H2'	25:YA:613:U:O2	2.09	0.53
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.43	0.53
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.73	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.68	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
51:Y5:60:VAL:OXT	51:Y5:60:VAL:CG1	2.56	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
1:QA:606:G:H22	1:QA:631:G:H5'	1.72	0.53
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.44	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
25:RA:747:U:N3	51:R5:2:ALA:N	2.57	0.53
25:RA:1077:A:H5'	25:RA:1078:U:H5"	1.91	0.53
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.90	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.29	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53
32:RI:116:LEU:O	32:RI:118:LYS:N	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.90	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
1:XA:439:A:OP2	1:XA:493:G:N1	2.40	0.53
1:XA:765:G:N2	1:XA:813:U:OP2	2.38	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
25:YA:813:U:H2'	25:YA:814:C:C6	2.44	0.53
25:YA:1454:U:H5'	37:YR:63:ARG:NE	2.17	0.53
25:YA:1925:C:N3	25:YA:1929:G:O6	2.42	0.53
26:YB:52:A:N6	38:YS:33:LYS:HG3	2.24	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.71	0.53
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.24	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.08	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
47:Y1:20:ARG:HG2	47:Y1:20:ARG:NH1	2.24	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.28	0.53
1:QA:980:C:H5'	1:QA:981:U:OP2	2.09	0.53
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.44	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	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
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.53
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
25:RA:642:G:H21	25:RA:646:A:H2	1.57	0.53
25:RA:1204:A:H2	25:RA:1241:A:N1	2.07	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.53
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.08	0.53
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.53
32:RI:60:GLU:O	32:RI:64:GLU:N	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
46:R0:11:ARG:O	46:R0:14:ARG:NH2	2.41	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
1:XA:429:U:H1'	1:XA:430:A:H5"	1.91	0.53
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.49	0.53
1:XA:1453:G:H8	20:XT:39:LYS:HZ1	1.56	0.53
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.28	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
11:XK:125:PHE:HD1	11:XK:125:PHE:N	2.06	0.53
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	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
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
25:YA:862:G:H2'	25:YA:863:A:O4'	2.09	0.53
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.44	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.48	0.53
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.53
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.53
1:QA:243:A:H4'	1:QA:244:U:O5'	2.07	0.53
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.49	0.53
1:QA:1397:C:H1'	23:QX:8:A:N6	2.24	0.53
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.53
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.53
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.53
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	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
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.24	0.53
25:RA:1061:U:H3'	25:RA:1062:G:H5"	1.90	0.53
25:RA:2121:G:O6	25:RA:2176:A:N6	2.43	0.53
27:RD:34:VAL:O	27:RD:34:VAL:CG1	2.50	0.53
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.53
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.53
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.53
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.24	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.53
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
25:YA:26:G:H1'	25:YA:515:A:H61	1.74	0.53
25:YA:2250:G:C2	36:YQ:82:ARG:HB3	2.44	0.53
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.53
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.53
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.53
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.53
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
45:YZ:182:LYS:H	45:YZ:183:LEU:HG	1.73	0.53
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.91	0.53
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.52
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.52
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.52
25:RA:469:G:O6	53:R7:37:LYS:HE2	2.09	0.52
25:RA:1991:U:H2'	25:RA:1992:G:H5"	1.89	0.52
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.91	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.38	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.09	0.52
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.52
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.52
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.74	0.52
1:XA:737:A:H2'	1:XA:738:C:C6	2.45	0.52
2:XB:9:GLU:OE2	2:XB:9:GLU:N	2.42	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.52
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.52
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.72	0.52
25:YA:27:G:N2	25:YA:512:G:H2'	2.24	0.52
25:YA:768:G:O2'	25:YA:1379:A:N6	2.32	0.52
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	2.09	0.52
25:YA:1795:C:O2	27:YD:255:LYS:HE2	2.09	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.90	0.52
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.72	0.52
31:YH:44:VAL:O	31:YH:44:VAL:CG2	2.58	0.52
33:YN:109:LYS:HD2	33:YN:109:LYS:H	1.73	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.20	0.52
37:YR:56:LYS:C	37:YR:58:GLY:N	2.61	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.92	0.52
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.40	0.52
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.24	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
22:QV:4:G:HO2'	22:QV:5:G:H8	1.56	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.52
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
19:XS:68:GLY:HA2	50:Y4:68:ARG:HB3	1.91	0.52
25:YA:273(F):C:H2'	25:YA:274:G:H5"	1.91	0.52
25:YA:2723:C:OP1	37:YR:3:HIS:HD2	1.93	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.52
31:YH:89:ILE:O	31:YH:89:ILE:CG1	2.57	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
42:YW:8:ARG:HG3	42:YW:8:ARG:HH11	1.73	0.52
42:YW:25:ARG:HB2	42:YW:25:ARG:HH11	1.74	0.52
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.52
1:QA:964:A:N3	1:QA:969:A:O2'	2.40	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	1.91	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	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:QV:15:G:H22	22:QV:48:C:H42	1.58	0.52
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.36	0.52
25:RA:1028:A:N6	25:RA:1125:G:H2'	2.25	0.52
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
38:RS:89:ARG:HH11	38:RS:89:ARG:HG2	1.74	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
50:R4:49:PHE:N	50:R4:49:PHE:CD1	2.76	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
3:XC:173:VAL:HG12	3:XC:173:VAL:O	2.08	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	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)
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.24	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.11	0.52
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
50:Y4:15:ILE:HD13	50:Y4:15:ILE:H	1.73	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
1:QA:1321:C:H3'	1:QA:1322:C:H5"	1.91	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	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	2.58	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
25:RA:78:A:H2'	25:RA:79:G:C8	2.44	0.52
25:RA:1543:A:O2'	25:RA:1544:C:O5'	2.24	0.52
25:RA:2286:A:H2'	52:R6:31:PRO:HG2	1.90	0.52
26:RB:42:C:N4	30:RG:91:ARG:HH21	2.07	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
40:RU:88:ILE:H	40:RU:88:ILE:CD1	2.05	0.52
45:RZ:7:ALA:HB2	45:RZ:39:VAL:HG12	1.92	0.52
45:RZ:97:GLU:HB3	45:RZ:125:LEU:HD11	1.92	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.25	0.52
47:R1:20:ARG:HG2	47:R1:20:ARG:NH1	2.24	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.12	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
25:YA:558:G:P	33:YN:111:PRO:HD2	2.49	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.09	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.09	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
1:QA:164:U:H2'	1:QA:165:C:C6	2.45	0.52
1:QA:718:G:H5'	11:QK:117:ASN:OD1	2.10	0.52
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.44	0.52
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.44	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.20	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
25:RA:395:U:H2'	25:RA:396:G:N7	2.25	0.52
25:RA:483:A:H3'	25:RA:484:C:H6	1.74	0.52
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.45	0.52
25:RA:2304:G:H1	25:RA:2312:U:H3	1.58	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.91	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.19	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.61	0.52
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.07	0.52
1:XA:1346:A:H5"	9:XI:120:ARG:HH12	1.73	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
25:YA:1769:G:O2'	25:YA:1958:C:OP1	2.24	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
48:Y2:7:ARG:HG3	48:Y2:7:ARG:NH1	2.25	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
1:QA:65:U:H6	1:QA:65:U:H5"	1.75	0.52
1:QA:1238:A:H62	1:QA:1299:A:N6	2.08	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.08	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.91	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
25:RA:281:G:O2'	25:RA:282:A:O4'	2.24	0.52
25:RA:1006:C:H5'	33:RN:28:THR:HG23	1.92	0.52
25:RA:2331:G:O2'	46:R0:43:THR:HG22	2.10	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.92	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
33:RN:112:LEU:C	33:RN:112:LEU:HD23	2.30	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.10	0.52
1:XA:953:G:H2'	1:XA:954:G:O4'	2.10	0.52
1:XA:986:A:N3	19:XS:52:TYR:OH	2.42	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	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
23:XX:3:G:O2'	23:XX:4:C:OP2	2.28	0.52
25:YA:1087:G:C5	25:YA:1089:G:H1'	2.45	0.52
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.22	0.52
25:YA:1991:U:H2'	25:YA:1992:G:H5"	1.90	0.52
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.39	0.52
26:YB:80:U:H2'	26:YB:81:G:H21	1.74	0.52
27:YD:174:ILE:N	27:YD:174:ILE:CD1	2.73	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
31:YH:24:VAL:HG23	31:YH:24:VAL:O	2.09	0.52
33:YN:112:LEU:HD23	33:YN:112:LEU:C	2.30	0.52
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
36:YQ:81:VAL:C	36:YQ:82:ARG:CG	2.76	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
39:YT:42:ILE:HD12	39:YT:42:ILE:N	2.25	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
52:Y6:30:THR:O	52:Y6:30:THR:HG23	2.09	0.52
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.44	0.52
1:QA:1314:C:H5	19:QS:4:SER:HB2	1.75	0.52
1:QA:1348:U:C4	1:QA:1374:A:H2	2.28	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
25:RA:270(R):G:H2'	25:RA:270(S):G:H8	1.75	0.52
25:RA:2311:A:O2'	25:RA:2312:U:O4'	2.23	0.52
25:RA:2517:C:N3	25:RA:2542:A:N6	2.57	0.52
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.45	0.52
26:RB:50:G:OP1	38:RS:63:THR:HG23	2.10	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
35:RP:13:ASN:O	35:RP:14:LYS:C	2.48	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.62	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.91	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.45	0.52
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	2.10	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:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.52
25:YA:468:G:N7	53:Y7:39:ARG:NH2	2.53	0.52
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.42	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
46:Y0:10:THR:HG22	46:Y0:12:ASN:H	1.74	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.29	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.92	0.52
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
28:RE:179:GLU:HA	28:RE:179:GLU:OE1	2.10	0.52
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.52
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.52
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.52
55:R9:27:CYS:SG	55:R9:28:GLU:N	2.83	0.52
1:XA:567:G:H2'	1:XA:568:G:O4'	2.08	0.52
1:XA:976:G:N2	1:XA:1362(A):C:OP2	2.33	0.52
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.25	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
25:YA:769:G:H5'	25:YA:1379:A:N6	2.24	0.52
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.92	0.52
25:YA:2420:C:H41	54:Y8:30:ARG:HD2	1.74	0.52
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52
44:YY:9:LYS:HG2	44:YY:9:LYS:O	2.10	0.52
1:QA:620:C:H2'	1:QA:621:A:O4'	2.10	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.10	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	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	2.72	0.52
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.52
25:RA:270(R):G:H1'	47:R1:78:LYS:NZ	2.25	0.52
28:RE:54:GLN:NE2	28:RE:54:GLN:H	2.08	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.52
36:RQ:83:MET:HB2	46:R0:7:LEU:HD12	1.91	0.52
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.52
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	0.52
45:RZ:111:VAL:HG13	45:RZ:112:ARG:H	1.74	0.52
47:R1:76:ARG:HG2	47:R1:76:ARG:NH1	2.19	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	0.52
1:XA:45:U:H2'	1:XA:46:G:C8	2.44	0.52
1:XA:188:U:H2'	1:XA:189:U:H5"	1.92	0.52
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.10	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
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.08	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
25:YA:1858:G:H2'	25:YA:1883:G:H22	1.75	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.52
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.52
38:YS:67:ARG:HB2	38:YS:67:ARG:HH11	1.66	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
45:YZ:182:LYS:CB	45:YZ:183:LEU:HA	2.38	0.52
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.52
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	2.10	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.92	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.24	0.52
1:QA:1297:C:O2'	1:QA:1298:C:O5'	2.26	0.52
1:QA:1297:C:HO2'	1:QA:1298:C:C5'	2.23	0.52
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.45	0.52
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
25:RA:593:G:H2'	25:RA:594:U:H6	1.75	0.52
25:RA:639:U:H2'	25:RA:640:C:C6	2.44	0.52
25:RA:704:G:H1'	25:RA:727:A:N6	2.25	0.52
25:RA:864:G:H1'	25:RA:914:C:H42	1.74	0.52
25:RA:2198:A:HO2'	25:RA:2199:A:P	2.32	0.52
25:RA:2344:U:C2	52:R6:37:ARG:HD3	2.45	0.52
26:RB:45:A:H1'	30:RG:95:ARG:HH22	1.74	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.52
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.25	0.52
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.52
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.52
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.52
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.52
25:YA:102:G:H4'	25:YA:103:A:O5'	2.10	0.52
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.10	0.52
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.52
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.52
1:QA:115:G:H4'	1:QA:116:A:O5'	2.09	0.51
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.10	0.51
1:QA:1176:A:H2'	1:QA:1177:G:H5'	1.92	0.51
1:QA:1312:G:OP2	50:R4:67:TYR:HE1	1.93	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.51
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
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
25:RA:753:C:O5'	25:RA:753:C:H6	1.92	0.51
25:RA:2585:U:H5	56:Z6:76:PPU:HO2'	1.58	0.51
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.26	0.51
34:RO:2:ILE:HD12	34:RO:2:ILE:N	2.24	0.51
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.51
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.91	0.51
43:RX:47:PHE:N	43:RX:47:PHE:CD1	2.78	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.10	0.51
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	0.51
49:R3:49:LYS:O	49:R3:49:LYS:HG2	2.10	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.51
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.10	0.51
1:XA:1001:G:H2'	1:XA:1002:G:O4'	2.09	0.51
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.51
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
25:YA:64:A:C5	43:YX:66:LEU:HD13	2.44	0.51
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.91	0.51
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.74	0.51
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.51
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.51
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.51
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.51
1:QA:190:G:HO2'	1:QA:191(A):G:P	2.33	0.51
1:QA:281:G:HO2'	1:QA:282:A:H8	1.58	0.51
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.92	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.51
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.92	0.51
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.25	0.51
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.26	0.51
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.40	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.26	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.11	0.51
41:RV:75:PHE:C	41:RV:75:PHE:CD1	2.83	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.23	0.51
45:RZ:72:ARG:NH2	45:RZ:97:GLU:O	2.40	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.93	0.51
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	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
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
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
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	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	2.40	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.45	0.51
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.11	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.51
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.67	0.51
45:YZ:117:LEU:HD11	45:YZ:172:ALA:HB1	1.92	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
1:QA:9:G:OP1	5:QE:122:GLU:N	2.38	0.51
1:QA:266:G:O2'	1:QA:267:C:OP2	2.24	0.51
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.11	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
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
13:QM:77:ASN:HA	50:R4:71:ARG:NH1	2.24	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
25:RA:1693:U:H1'	27:RD:14:ARG:NH2	2.26	0.51
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.10	0.51
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.40	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
39:RT:42:ILE:HD12	39:RT:42:ILE:N	2.25	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
1:XA:1176:A:H2'	1:XA:1177:G:H5'	1.92	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
25:YA:330:A:O2'	25:YA:331:A:H8	1.93	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
41:YV:75:PHE:C	41:YV:75:PHE:CD1	2.83	0.51
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.31	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.90	0.51
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.21	0.51
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.45	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.25	0.51
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	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
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.10	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	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
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
25:RA:102:G:H4'	25:RA:103:A:O5'	2.10	0.51
25:RA:554:U:HO2'	25:RA:556:G:H8	1.59	0.51
25:RA:1578:U:H2'	25:RA:1579:A:H5'	1.92	0.51
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.10	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.75	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.10	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	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
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
12:XL:24:VAL:O	12:XL:24:VAL:CG1	2.58	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	2.10	0.51
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.77	0.51
25:YA:2115:G:N2	25:YA:2165:G:N7	2.52	0.51
25:YA:2577:A:H5"	25:YA:2578:G:H5'	1.92	0.51
25:YA:2875:C:H4'	39:YT:5:ALA:HB2	1.92	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.48	0.51
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.51
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.91	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.10	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
25:RA:95:G:HO2'	48:R2:48:HIS:CE1	2.23	0.51
25:RA:247:G:H4'	25:RA:386:G:C5	2.45	0.51
25:RA:252:G:OP2	35:RP:50:ARG:NH1	2.43	0.51
25:RA:568:U:H5'	25:RA:945:A:N1	2.26	0.51
26:RB:80:U:H2'	26:RB:81:G:H21	1.75	0.51
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
29:RF:127:GLU:OE1	29:RF:127:GLU:HA	2.07	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.40	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.20	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:87:PHE:O	38:RS:88:ASP:O	2.29	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
42:RW:20:VAL:C	42:RW:22:ASP:N	2.59	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.73	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
14:XN:44:LEU:O	14:XN:48:ALA:N	2.41	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.17	0.51
22:XV:68:C:H2'	22:XV:69:C:H6	1.76	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.09	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
1:QA:1392:G:N2	1:QA:1502:A:H8	2.08	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.51
25:RA:1006:C:H1'	33:RN:106:MET:CE	2.40	0.51
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.45	0.51
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.92	0.51
25:RA:2295:C:OP1	38:RS:10:ARG:HD2	2.11	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.79	0.51
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.51
28:RE:77:ILE:O	28:RE:78:LEU:C	2.48	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
1:XA:578:C:O2'	1:XA:728:A:N3	2.41	0.51
1:XA:626:U:H2'	1:XA:627:G:H8	1.74	0.51
1:XA:757:U:OP1	1:XA:822:C:O2'	2.26	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
22:XV:4:G:HO2'	22:XV:5:G:H8	1.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1026:U:H4'	25:YA:1027:A:OP1	2.10	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
39:YT:14:TYR:N	39:YT:14:TYR:CD1	2.77	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.62	0.51
1:QA:390:C:H2'	1:QA:391:G:C8	2.46	0.51
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.91	0.51
1:QA:960:U:O2	1:QA:960:U:H2'	2.11	0.51
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.24	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
25:RA:774:A:H2	25:RA:787:U:O2'	1.91	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.93	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.11	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
1:XA:31:G:O2'	1:XA:48:C:N4	2.43	0.51
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.46	0.51
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.45	0.51
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.26	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.93	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.76	0.51
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
22:XV:15:G:H22	22:XV:48:C:H42	1.57	0.51
25:YA:1310:G:OP2	53:Y7:9:ARG:NH1	2.43	0.51
25:YA:2524:G:H5'	25:YA:2525:G:OP2	2.11	0.51
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.45	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
37:YR:118:GLU:OXT	37:YR:118:GLU:HG3	2.11	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.91	0.51
43:YX:47:PHE:CD1	43:YX:47:PHE:N	2.78	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
1:QA:1301:U:H3'	1:QA:1302:U:H5'	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
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	0.51
25:RA:247:G:O6	54:R8:12:LYS:NZ	2.27	0.51
25:RA:1430:C:H2'	25:RA:1431:U:C6	2.46	0.51
25:RA:2415:G:H4'	35:RP:67:MET:N	2.26	0.51
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.10	0.51
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.93	0.51
30:RG:51:ARG:HH11	30:RG:51:ARG:HB3	1.76	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.10	0.51
1:XA:321:A:N6	1:XA:329:A:OP2	2.43	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	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
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
25:YA:1007:C:OP1	33:YN:35:ARG:NH1	2.43	0.51
25:YA:1530:G:O6	25:YA:1542:G:N2	2.44	0.51
25:YA:1799:G:H4'	25:YA:1800:C:O5'	2.10	0.51
25:YA:1803:A:O2'	27:YD:259:THR:HG21	2.11	0.51
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.10	0.51
27:YD:94:LEU:HD13	27:YD:94:LEU:C	2.31	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.11	0.51
34:YO:24:VAL:O	34:YO:24:VAL:HG13	2.11	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.41	0.51
43:YX:18:TYR:C	43:YX:20:GLY:N	2.64	0.51
43:YX:65:ARG:H	43:YX:65:ARG:CD	2.24	0.51
45:YZ:30:ASN:O	45:YZ:32:HIS:N	2.44	0.51
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
1:QA:323:U:H5'	20:QT:23:ARG:HB2	1.93	0.51
1:QA:429:U:H4'	1:QA:430:A:OP1	2.10	0.51
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
8:QH:10:LEU:N	8:QH:10:LEU:CD2	2.70	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.11	0.51
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	2.11	0.51
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.51
25:RA:195:A:H61	25:RA:198:C:H3'	1.76	0.51
25:RA:2286:A:OP1	52:R6:28:ARG:NE	2.43	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.08	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
32:RI:128:LEU:N	32:RI:138:ILE:O	2.44	0.51
38:RS:89:ARG:HD2	38:RS:89:ARG:O	2.11	0.51
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.11	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:376:G:H5"	16:XP:5:ARG:HD2	1.92	0.51
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.45	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
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	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:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
25:YA:994:C:O2	41:YV:10:LYS:HE2	2.11	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.08	0.51
30:YG:51:ARG:HH11	30:YG:51:ARG:HB3	1.76	0.51
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.26	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
36:YQ:58:PHE:HD1	36:YQ:58:PHE:O	1.94	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.51
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.51
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.51
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
1:QA:190:G:O2'	1:QA:191(A):G:OP2	2.28	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.11	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.46	0.51
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.10	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.51
25:RA:706:A:H2'	25:RA:707:G:O4'	2.11	0.51
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.40	0.51
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.51
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.51
1:XA:690:G:H2'	1:XA:691:G:O4'	2.10	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.51
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.51
25:YA:277:C:H3'	25:YA:278:A:H5'	1.92	0.51
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.92	0.51
25:YA:2283:C:H2'	25:YA:2284:C:O4'	2.11	0.51
26:YB:77:U:P	45:YZ:19:ARG:HH22	2.34	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.51
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.51
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.51
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.51
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.51
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.51
1:QA:543:C:OP1	4:QD:14:ARG:NE	2.44	0.50
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.26	0.50
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.50
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.50
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.50
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	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	2.13	0.50
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
25:RA:118:A:N3	25:RA:178:G:H1'	2.26	0.50
25:RA:392:C:H5"	25:RA:409:C:H5"	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1113:U:OP1	31:RH:2:SER:N	2.44	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.25	0.50
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.50
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.50
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.50
37:RR:1:MET:O	37:RR:2:ARG:CB	2.60	0.50
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.50
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.93	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
44:RY:2:ARG:HG2	44:RY:2:ARG:NH1	2.22	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.26	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.50
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	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
25:YA:248:G:H5'	25:YA:250:G:N7	2.26	0.50
25:YA:558:G:OP1	33:YN:111:PRO:HD2	2.12	0.50
25:YA:1020:A:N6	25:YA:1141:U:O2'	2.44	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.50
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.50
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.50
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.50
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.50
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.91	0.50
51:Y5:56:LYS:HD2	51:Y5:56:LYS:N	2.13	0.50
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.50
1:QA:411:A:N6	1:QA:413:G:H21	2.09	0.50
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.46	0.50
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.32	0.50
4:QD:166:LYS:HD3	27:YD:134:ARG:HH11	1.76	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.77	0.50
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:857:C:OP2	46:R0:77:ARG:NH2	2.44	0.50
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	2.11	0.50
25:RA:2306:C:H2'	25:RA:2307:G:H21	1.76	0.50
25:RA:2653:U:O2'	31:RH:110:SER:HB2	2.11	0.50
27:RD:94:LEU:HD13	27:RD:94:LEU:C	2.31	0.50
30:RG:92:VAL:O	30:RG:92:VAL:HG13	2.12	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.42	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.76	0.50
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.50
47:R1:91:LYS:HE3	47:R1:91:LYS:CA	2.40	0.50
51:R5:37:LYS:O	51:R5:37:LYS:HD2	2.12	0.50
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.75	0.50
1:XA:137:C:O2'	16:XP:61:SER:O	2.28	0.50
1:XA:236:G:H5"	17:XQ:42:TYR:OH	2.12	0.50
1:XA:579:G:H5'	1:XA:728:A:H1'	1.93	0.50
1:XA:950:U:H2'	1:XA:951:G:H8	1.76	0.50
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.46	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.50
5:XE:126:ARG:HH11	5:XE:126:ARG:CG	2.21	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.47	0.50
25:YA:1266:G:O4'	42:YW:15:ARG:NH2	2.38	0.50
25:YA:1681:G:O2'	25:YA:1762:A:O2'	2.22	0.50
25:YA:2159:G:H2'	25:YA:2160:G:H8	1.74	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
33:YN:78:TYR:N	33:YN:78:TYR:HD1	2.07	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
53:Y7:36:GLN:HG2	53:Y7:36:GLN:O	2.09	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:13:ARG:CB	4:QD:33:MET:CE	2.89	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
22:QV:68:C:H2'	22:QV:69:C:H6	1.76	0.50
25:RA:74:A:H4'	25:RA:75:G:O5'	2.11	0.50
25:RA:1021:A:H8	25:RA:1022:G:H5"	1.75	0.50
28:RE:37:ARG:HE	28:RE:37:ARG:H	1.59	0.50
29:RF:45:ARG:CG	29:RF:45:ARG:NH1	2.71	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	0.50
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.40	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.25	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
1:XA:244:U:H4'	1:XA:245:C:O5'	2.11	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
14:XN:8:GLU:C	14:XN:10:ALA:H	2.13	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
25:YA:848:G:H2'	25:YA:849:A:C8	2.46	0.50
25:YA:1939:U:OP1	25:YA:2604:U:O2'	2.25	0.50
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.38	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
34:YO:23:ARG:HH11	34:YO:23:ARG:HG2	1.76	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
1:QA:341:C:H2'	1:QA:342:C:C6	2.45	0.50
1:QA:1024:G:H4'	1:QA:1024:G:OP1	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.34	0.50
1:QA:1124:G:H5"	1:QA:1145:C:H41	1.75	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	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
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.14	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.76	0.50
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.26	0.50
25:RA:1728:G:H5'	25:RA:1729:A:OP2	2.12	0.50
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.46	0.50
29:RF:108:LYS:HA	29:RF:108:LYS:NZ	2.27	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.50
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.24	0.50
45:RZ:110:GLY:H	45:RZ:111:VAL:HG12	1.75	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
1:XA:1364:U:HO2'	1:XA:1365:G:P	2.34	0.50
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.93	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.42	0.50
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.11	0.50
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.11	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	2.24	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.24	0.50
14:QN:43:CYS:O	14:QN:46:GLU:N	2.43	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
25:RA:49:A:H5'	25:RA:51:G:O4'	2.11	0.50
25:RA:265:A:O2'	25:RA:266:G:H4'	2.11	0.50
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.93	0.50
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.31	0.50
25:RA:2437:U:H2'	25:RA:2438:U:C6	2.47	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.93	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
1:XA:565:U:H5"	1:XA:566:G:H2'	1.92	0.50
1:XA:662:G:H2'	1:XA:663:A:C8	2.46	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.75	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
31:YH:143:GLN:C	31:YH:143:GLN:HE21	2.15	0.50
32:YI:83:ALA:O	32:YI:85:GLU:N	2.44	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
38:YS:89:ARG:HD2	38:YS:89:ARG:O	2.11	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50
1:QA:565:U:H5"	1:QA:566:G:H2'	1.93	0.50
1:QA:1023:G:H3'	1:QA:1024:G:H5"	1.93	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	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:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
25:RA:177:G:H5'	25:RA:178:G:C8	2.47	0.50
25:RA:2015:A:N3	51:R5:2:ALA:N	2.60	0.50
25:RA:2151:G:H2'	25:RA:2152:G:H8	1.77	0.50
25:RA:2212:A:H1'	25:RA:2215:G:C4	2.46	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.89	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.45	0.50
31:RH:143:GLN:HE21	31:RH:143:GLN:C	2.15	0.50
33:RN:87:LEU:HD23	33:RN:87:LEU:C	2.32	0.50
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.94	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
44:RY:88:LYS:NZ	44:RY:88:LYS:HA	2.27	0.50
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.76	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
1:XA:1053:G:N7	1:XA:1200:C:H5"	2.27	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.93	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	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
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
25:YA:330:A:H2	25:YA:1210:A:HO2'	1.59	0.50
25:YA:517:C:O2'	42:YW:18:ARG:NH2	2.45	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
27:YD:233:HIS:CD2	27:YD:233:HIS:H	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.32	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.31	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
45:YZ:182:LYS:HB2	45:YZ:183:LEU:HA	1.92	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.11	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
1:QA:222:U:H2'	1:QA:223:U:H6	1.76	0.50
1:QA:836:G:C6	1:QA:851:G:C6	3.00	0.50
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	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	2.16	0.50
25:RA:1803:A:O2'	27:RD:259:THR:HG21	2.12	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
28:RE:176:ILE:HG22	28:RE:176:ILE:O	2.10	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
32:RI:82:ARG:HG2	32:RI:146:ALA:HB3	1.93	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.57	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.09	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
45:RZ:5:LEU:HD23	45:RZ:47:VAL:HG21	1.92	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
1:XA:234:C:H2'	1:XA:235:C:H6	1.75	0.50
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.24	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.50
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.74	0.50
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:66:A:O2'	26:YB:67:G:O5'	2.30	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.92	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.41	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
25:RA:589:C:H2'	25:RA:590:A:C8	2.46	0.50
25:RA:1937:A:N7	25:RA:1939:U:H2'	2.27	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
35:RP:6:LEU:N	35:RP:6:LEU:CD2	2.75	0.50
36:RQ:2:LEU:HD23	36:RQ:2:LEU:N	2.27	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
1:XA:518:C:H2'	1:XA:530:G:C4	2.47	0.50
1:XA:595:G:H1'	1:XA:596:C:C5	2.45	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
5:XE:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
9:XI:128:ARG:NH2	22:XV:35:A:P	2.85	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	2.12	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	2.12	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
32:YI:78:THR:HG22	32:YI:141:LYS:HD2	1.94	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
50:Y4:22:ILE:H	50:Y4:22:ILE:HD12	1.77	0.50
51:Y5:37:LYS:O	51:Y5:37:LYS:HD2	2.12	0.50
53:Y7:12:ARG:NH1	53:Y7:12:ARG:HG3	2.27	0.50
1:QA:210:U:O2'	1:QA:216:G:N7	2.45	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE2	2.47	0.50
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
22:QV:75:C:H2'	22:QV:76:A:O4'	2.12	0.50
25:RA:49:A:H61	25:RA:177:G:H2'	1.76	0.50
25:RA:2009:G:OP1	42:RW:41:LYS:HE2	2.11	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.50
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.93	0.50
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.50
36:RQ:80:GLU:HG3	36:RQ:81:VAL:N	2.27	0.50
44:RY:90:LEU:HD22	44:RY:90:LEU:H	1.73	0.50
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.12	0.50
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.50
53:R7:12:ARG:NH1	53:R7:12:ARG:HG3	2.27	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
55:R9:7:VAL:HG12	55:R9:25:VAL:HG21	1.94	0.50
1:XA:17:U:H2'	1:XA:18:C:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:679:C:H2'	1:XA:680:C:C6	2.47	0.50
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.10	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
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.50
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.50
25:YA:287:C:H2'	25:YA:288:C:C6	2.47	0.50
25:YA:484:C:H2'	25:YA:485:C:C6	2.47	0.50
25:YA:639:U:H2'	25:YA:640:C:C6	2.46	0.50
25:YA:1083:U:O2'	25:YA:1085:A:H5"	2.12	0.50
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.34	0.50
25:YA:2415:G:H4'	35:YP:67:MET:N	2.27	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.50
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.50
32:YI:94:ALA:H	32:YI:116:LEU:HD13	1.77	0.50
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.50
1:QA:1297:C:HO2'	1:QA:1298:C:P	2.35	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.49
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
25:RA:1257:C:O2'	29:RF:84:VAL:HG12	2.12	0.49
25:RA:1309:G:OP1	53:R7:9:ARG:HD3	2.12	0.49
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.49
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.49
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.49
1:XA:192:U:H2'	1:XA:193:C:C6	2.47	0.49
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.49
13:XM:65:LYS:HZ3	13:XM:69:GLU:HG2	1.76	0.49
25:YA:99:U:H4'	25:YA:101:G:C5'	2.42	0.49
28:YE:37:ARG:HE	28:YE:37:ARG:H	1.59	0.49
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.49
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.49
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.26	0.49
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.49
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.49
1:QA:173:U:H5"	1:QA:197:A:O4'	2.12	0.49
1:QA:537:G:H5"	12:QL:113:ARG:HH12	1.76	0.49
1:QA:618:C:N3	1:QA:622:A:N6	2.59	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
13:QM:77:ASN:CA	50:R4:71:ARG:NH2	2.59	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
25:RA:1140:C:H5"	33:RN:66:LYS:HZ1	1.77	0.49
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.51	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.49
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.55	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.49
45:RZ:129:SER:O	45:RZ:131:ARG:N	2.39	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.16	0.49
1:XA:96:G:H2'	1:XA:97:U:O4'	2.12	0.49
1:XA:753:A:H4'	1:XA:754:C:O5'	2.11	0.49
1:XA:1128:C:N3	1:XA:1144:G:N2	2.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.93	0.49
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
8:XH:91:ARG:HG2	8:XH:91:ARG:NH1	2.25	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.76	0.49
25:YA:2335:A:HO2'	25:YA:2336:A:P	2.35	0.49
26:YB:38:C:H42	26:YB:44:G:H1	1.60	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.77	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
33:YN:63:THR:HG22	33:YN:66:LYS:HZ1	1.76	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.12	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
36:YQ:136:ALA:HB1	45:YZ:52:SER:HB2	1.94	0.49
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.46	0.49
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.25	0.49
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.49
1:QA:296:U:H2'	1:QA:297:G:C8	2.47	0.49
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.47	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.43	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.45	0.49
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
25:RA:623:G:H2'	25:RA:624:C:C6	2.48	0.49
25:RA:2009:G:H1'	37:RR:107:ASP:O	2.12	0.49
25:RA:2553:G:N2	56:Z6:76:PPU:H2	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.50	0.49
32:RI:127:VAL:HA	32:RI:139:GLN:HA	1.94	0.49
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
45:RZ:129:SER:C	45:RZ:131:ARG:H	2.15	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
1:XA:191:G:O2'	20:XT:101:GLY:O	2.29	0.49
1:XA:1399:C:C2	1:XA:1502:A:N6	2.80	0.49
4:XD:196:LEU:C	4:XD:198:VAL:N	2.65	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.94	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
25:YA:153:C:P	47:Y1:88:LYS:HE2	2.52	0.49
25:YA:1364:G:C8	47:Y1:2:SER:N	2.80	0.49
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
44:YY:88:LYS:NZ	44:YY:88:LYS:HA	2.27	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.49
1:QA:811:C:H4'	1:QA:900:A:N6	2.27	0.49
1:QA:1235:U:O2'	1:QA:1305:G:O5'	2.30	0.49
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.49
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.94	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
25:RA:1224:G:OP2	41:RV:66:ARG:NH2	2.46	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.27	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.48	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
1:XA:518:C:N3	12:XL:49:ASN:HA	2.27	0.49
1:XA:1216:G:H5"	14:XN:5:ALA:CB	2.43	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.28	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.76	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	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
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
23:XX:3:G:H2'	23:XX:4:C:OP2	2.11	0.49
25:YA:1263:U:O2'	51:Y5:11:THR:HG23	2.13	0.49
25:YA:1542:G:O6	25:YA:1543:A:N6	2.45	0.49
25:YA:2224:G:H4'	25:YA:2226:C:C2	2.47	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.90	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
32:YI:127:VAL:HG22	32:YI:139:GLN:HB3	1.94	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
37:YR:18:LEU:HD13	37:YR:18:LEU:C	2.33	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.48	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.26	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:91:TYR:C	41:YV:91:TYR:HD1	2.16	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
1:QA:448:A:H2'	1:QA:449:C:O2	2.12	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.49
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.49
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.49
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.46	0.49
25:RA:504:U:H5"	25:RA:505:A:H5'	1.95	0.49
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.12	0.49
25:RA:2779:U:O2'	25:RA:2781:A:N7	2.45	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.45	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.93	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ2	1.75	0.49
37:RR:18:LEU:HD13	37:RR:18:LEU:C	2.33	0.49
41:RV:91:TYR:C	41:RV:91:TYR:HD1	2.16	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
25:YA:389:G:H22	35:YP:72:PRO:CG	2.25	0.49
25:YA:1264:G:H5'	51:Y5:11:THR:CG2	2.42	0.49
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.75	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.29	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.57	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	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
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.48	0.49
25:RA:1203:G:H3'	25:RA:1204:A:H5"	1.95	0.49
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.36	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.42	0.49
30:RG:35:GLU:CD	30:RG:35:GLU:C	2.71	0.49
31:RH:103:LEU:HD23	31:RH:103:LEU:H	1.77	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.92	0.49
1:XA:580:U:H2'	1:XA:581:G:O4'	2.13	0.49
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.48	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
25:YA:1257:C:O2'	29:YF:84:VAL:HG12	2.12	0.49
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.47	0.49
25:YA:2455:G:H2'	25:YA:2456:C:C6	2.48	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.28	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.49
55:Y9:7:VAL:HG12	55:Y9:25:VAL:HG21	1.94	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.28	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.13	0.49
6:QF:100:ASN:HD22	6:QF:100:ASN:HA	1.47	0.49
9:QI:110:GLU:O	9:QI:110:GLU:HG3	2.12	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.49
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.11	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
25:RA:99:U:H4'	25:RA:101:G:C5'	2.42	0.49
25:RA:1312:U:H5'	25:RA:1312:U:H6	1.78	0.49
25:RA:2839:G:H5'	37:RR:46:GLY:HA2	1.95	0.49
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.47	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.18	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
37:RR:71:GLN:HA	37:RR:71:GLN:HE21	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.28	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
45:RZ:166:SER:H	45:RZ:167:PRO:HA	1.77	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	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
25:YA:1026:U:H1'	25:YA:1027:A:O5'	2.13	0.49
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.94	0.49
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.49
41:YV:79:VAL:HG22	41:YV:79:VAL:O	2.12	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.76	0.49
50:Y4:1:MET:HG3	50:Y4:1:MET:O	2.12	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.61	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
1:QA:244:U:H4'	1:QA:245:C:O5'	2.12	0.49
1:QA:1494:G:N7	58:QA:1667:PAR:N32	2.61	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
15:QO:8:LYS:HB2	15:QO:8:LYS:HZ2	1.75	0.49
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:747:U:C4	25:RA:2613:U:C4	3.01	0.49
26:RB:11:C:H3'	26:RB:12:C:H6	1.76	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.25	0.49
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.43	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
44:RY:19:LYS:O	44:RY:19:LYS:CG	2.60	0.49
44:RY:95:LYS:N	44:RY:95:LYS:CD	2.76	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.60	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
1:XA:818:G:O2'	1:XA:819:A:H5"	2.13	0.49
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.13	0.49
1:XA:1301:U:H3'	1:XA:1302:U:H5'	1.94	0.49
1:XA:1453:G:H2'	20:XT:39:LYS:HZ1	1.77	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
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
10:XJ:63:PHE:CD1	14:XN:58:LYS:HA	2.35	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.12	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
22:XV:75:C:H2'	22:XV:76:A:O4'	2.12	0.49
25:YA:1138:G:H21	33:YN:106:MET:CE	2.25	0.49
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.78	0.49
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.48	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.49
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.48	0.49
1:QA:977:A:O2'	1:QA:981:U:N3	2.43	0.49
1:QA:1151:A:N3	10:QJ:39:PRO:HG3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1314:C:C5	19:QS:4:SER:HB2	2.48	0.49
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.47	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	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:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.76	0.49
25:RA:195:A:OP1	35:RP:46:LYS:HE2	2.12	0.49
25:RA:241:A:H4'	25:RA:242:G:OP1	2.13	0.49
25:RA:483:A:H3'	25:RA:484:C:C6	2.47	0.49
25:RA:662:G:H5"	35:RP:15:ARG:O	2.13	0.49
25:RA:1062:G:N3	25:RA:1077:A:N6	2.61	0.49
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.36	0.49
25:RA:2405:G:HO2'	25:RA:2406:U:P	2.35	0.49
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.28	0.49
25:RA:2721:A:H1'	25:RA:2873:A:O2'	2.12	0.49
26:RB:44:G:H1'	26:RB:47:C:N4	2.25	0.49
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.43	0.49
29:RF:45:ARG:NH1	29:RF:45:ARG:HG2	2.28	0.49
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.94	0.49
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.43	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.96	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
47:R1:19:GLN:HA	47:R1:19:GLN:OE1	2.12	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.49
1:XA:271:C:H2'	1:XA:272:C:C6	2.48	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	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	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
25:YA:372:G:O2'	25:YA:373:U:OP2	2.30	0.49
25:YA:1024:G:OP2	25:YA:1025:G:C3'	2.60	0.49
25:YA:1533:C:H42	25:YA:1538:G:H1	1.61	0.49
25:YA:2168:G:N2	25:YA:2170:A:N7	2.61	0.49
25:YA:2758:A:C5	31:YH:67:LEU:HD21	2.46	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
30:YG:115:ARG:HH11	30:YG:115:ARG:HG2	1.77	0.49
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.49
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.65	0.49
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
40:YU:64:ARG:CG	40:YU:64:ARG:NH2	2.70	0.49
41:YV:91:TYR:C	41:YV:91:TYR:CD1	2.87	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
52:Y6:37:ARG:HE	52:Y6:37:ARG:HA	1.77	0.49
1:QA:184:G:H2'	1:QA:185:A:C8	2.47	0.49
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.44	0.49
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	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:180:LEU:O	2:QB:181:PHE:HB2	2.13	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.49
13:QM:119:GLY:HA3	22:QV:29:G:OP1	2.13	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
25:RA:550:G:O2'	25:RA:1220:A:N3	2.40	0.49
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.46	0.49
25:RA:2845:G:H5"	39:RT:55:ASN:HA	1.94	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.49
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.27	0.49
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.95	0.49
34:RO:55:GLY:O	34:RO:56:ASP:C	2.50	0.49
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.49
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.49
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.42	0.49
38:RS:48:LEU:N	38:RS:48:LEU:CD1	2.76	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.49
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.49
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.49
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.49
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.49
47:R1:25:LYS:C	47:R1:27:GLU:H	2.16	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.49
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.49
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.49
52:R6:27:LYS:NZ	52:R6:27:LYS:CB	2.73	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.49
1:XA:539:A:H2'	1:XA:540:G:C8	2.47	0.49
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.13	0.49
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.46	0.49
1:XA:1238:A:N3	1:XA:1241:G:O2'	2.41	0.49
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.13	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.49
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.49
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
9:XI:79:LEU:O	9:XI:79:LEU:HD13	2.12	0.49
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
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
25:YA:83:G:H1	25:YA:102:G:H1'	1.78	0.49
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.13	0.49
25:YA:1204:A:H2	25:YA:1241:A:N1	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.49
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
37:YR:71:GLN:HE21	37:YR:71:GLN:HA	1.77	0.49
38:YS:48:LEU:N	38:YS:48:LEU:CD1	2.76	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.13	0.49
1:QA:737:A:H2'	1:QA:738:C:C6	2.48	0.48
1:QA:1151:A:H1'	10:QJ:39:PRO:CB	2.39	0.48
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.48
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.48
25:RA:288:C:H2'	25:RA:289:A:H8	1.78	0.48
25:RA:1436:G:H1'	25:RA:1477:A:O2'	2.13	0.48
25:RA:1454:U:H5'	37:RR:63:ARG:NE	2.24	0.48
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.30	0.48
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.12	0.48
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.48
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.48
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.48
41:RV:91:TYR:C	41:RV:91:TYR:CD1	2.87	0.48
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.48
1:XA:58:C:O2'	1:XA:388:G:N7	2.36	0.48
1:XA:272:C:H2'	1:XA:273:A:H8	1.78	0.48
1:XA:1008:C:H42	1:XA:1021:G:H1	1.60	0.48
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.13	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.48
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.48
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.42	0.48
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.48
7:XG:150:ALA:HA	11:XK:59:TYR:CD2	2.47	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.46	0.48
25:YA:1165:U:H2'	25:YA:1166:C:C6	2.48	0.48
25:YA:1407:C:H42	25:YA:1595:G:H1	1.61	0.48
25:YA:2749:A:H4'	31:YH:62:LYS:HB3	1.95	0.48
26:YB:42:C:N4	30:YG:91:ARG:NH2	2.60	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.48
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.48
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.13	0.48
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.48	0.48
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.48	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.48
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
25:RA:153:C:P	47:R1:88:LYS:HE2	2.52	0.48
25:RA:1210:A:H5"	25:RA:1210:A:C8	2.47	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.48
40:RU:81:HIS:CE1	40:RU:117:GLN:HG3	2.48	0.48
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.48
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.13	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.43	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.94	0.48
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
1:XA:347:G:O2'	1:XA:348:G:OP2	2.28	0.48
1:XA:980:C:H5'	1:XA:981:U:OP2	2.13	0.48
1:XA:1305:G:O2'	1:XA:1332:A:N6	2.46	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	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
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.48
25:YA:271(B):G:H5"	25:YA:271(B):G:C8	2.46	0.48
25:YA:307:G:H21	25:YA:330:A:H62	1.59	0.48
25:YA:1169:G:H1	25:YA:1180:C:H42	1.60	0.48
25:YA:1812:A:O2'	27:YD:45:ASN:HB2	2.12	0.48
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.48
30:YG:115:ARG:HG2	30:YG:115:ARG:NH1	2.26	0.48
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.40	0.48
34:YO:107:ARG:HA	34:YO:112:MET:HE1	1.94	0.48
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.48
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
1:QA:842:C:O2'	1:QA:848:C:N4	2.43	0.48
1:QA:1151:A:H2'	1:QA:1152:A:C8	2.48	0.48
1:QA:1346:A:C5	7:QG:10:ARG:NH1	2.81	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.96	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.42	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.48
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.48
22:QV:4:G:O2'	22:QV:5:G:H8	1.96	0.48
25:RA:709:U:H2'	25:RA:710:G:C8	2.49	0.48
25:RA:1079:C:H2'	25:RA:1080:C:O4'	2.13	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:115:ARG:HG2	30:RG:115:ARG:HH11	1.77	0.48
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.96	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
1:XA:714:G:H2'	1:XA:715:A:C8	2.49	0.48
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
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
25:YA:796:C:H2'	25:YA:797:C:C6	2.49	0.48
25:YA:900:A:H3'	25:YA:901:A:H8	1.78	0.48
25:YA:2630:G:O4'	25:YA:2894:G:H1'	2.14	0.48
27:YD:48:ARG:HG3	27:YD:48:ARG:HH11	1.78	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.12	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
36:YQ:80:GLU:OE1	46:Y0:7:LEU:CG	2.57	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
39:YT:58:ASN:HD22	39:YT:58:ASN:N	2.10	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.42	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
1:QA:97:U:H2'	1:QA:99:C:C6	2.49	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	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
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.78	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
25:RA:372:G:O2'	25:RA:373:U:P	2.72	0.48
25:RA:1069:A:H4'	25:RA:1070:A:H5"	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1414:G:O6	25:RA:1587:A:N6	2.45	0.48
25:RA:2776:A:OP1	25:RA:2776:A:H3'	2.13	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
32:RI:85:GLU:OE1	32:RI:86:THR:OG1	2.28	0.48
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.13	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.79	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.40	0.48
1:XA:718:G:H5'	11:XK:117:ASN:OD1	2.13	0.48
1:XA:881:G:P	12:XL:12:ARG:HH22	2.36	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
3:XC:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.27	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.13	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
9:XI:118:LYS:NZ	9:XI:118:LYS:CB	2.75	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
24:XY:40:G:O2'	24:XY:41:A:H5'	2.13	0.48
25:YA:415:A:H2'	25:YA:416:C:C6	2.49	0.48
25:YA:945:A:H4'	25:YA:946:G:OP1	2.13	0.48
25:YA:1533:C:H2'	25:YA:1534:G:N7	2.28	0.48
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.13	0.48
25:YA:2572:A:C8	28:YE:144:ARG:HB3	2.48	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
47:Y1:56:GLN:NE2	47:Y1:56:GLN:H	2.10	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.61	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
1:QA:738:C:H5"	6:QF:69:GLU:HB2	1.95	0.48
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.49	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.43	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.96	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
25:RA:363(B):G:H2'	25:RA:363(C):G:H8	1.78	0.48
25:RA:607:U:H3	25:RA:621:A:H2	1.59	0.48
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.14	0.48
26:RB:42:C:O2	30:RG:92:VAL:HA	2.13	0.48
26:RB:88:C:H2'	26:RB:89:G:O4'	2.13	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.73	0.48
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
43:RX:53:LYS:HZ2	43:RX:55:ASN:HD21	1.62	0.48
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.13	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
1:XA:339:C:H5	34:YO:97:ARG:HH12	1.62	0.48
1:XA:403:C:H4'	4:XD:122:ARG:NH2	2.28	0.48
1:XA:458:C:H2'	1:XA:464:G:H8	1.78	0.48
1:XA:779:C:H4'	11:XK:121:PRO:O	2.12	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:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.13	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.42	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.76	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.45	0.48
22:XV:4:G:O2'	22:XV:5:G:H8	1.96	0.48
25:YA:323:G:H2'	29:YF:169:ASN:OD1	2.14	0.48
25:YA:363:G:H2'	25:YA:363(A):A:H8	1.78	0.48
25:YA:535:C:O3'	40:YU:53:ARG:NH1	2.47	0.48
25:YA:1742:C:H5'	25:YA:1743:G:OP2	2.14	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
1:QA:792:A:O2'	1:QA:794:A:N7	2.45	0.48
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.27	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
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
25:RA:49:A:H5"	25:RA:51:G:H5'	1.96	0.48
25:RA:1068:G:N2	25:RA:1095:A:O2'	2.46	0.48
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.95	0.48
25:RA:2558:C:H2'	25:RA:2559:C:O4'	2.13	0.48
26:RB:32:C:H2'	26:RB:33:G:H5"	1.96	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
27:RD:65:ILE:HD13	27:RD:65:ILE:C	2.32	0.48
27:RD:198:ASN:C	27:RD:198:ASN:HD22	2.17	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.48
1:XA:89:U:O2'	1:XA:90:C:OP1	2.31	0.48
1:XA:662:G:O2'	1:XA:836:G:OP1	2.28	0.48
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.13	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
25:YA:242:G:O3'	54:Y8:6:THR:HG23	2.14	0.48
25:YA:1316:U:H2'	25:YA:1317:A:H8	1.78	0.48
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.14	0.48
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.34	0.48
25:YA:2331:G:O2'	25:YA:2336:A:N1	2.36	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.32	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.30	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.96	0.48
1:QA:579:G:H5'	1:QA:728:A:H1'	1.96	0.48
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.46	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.27	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.78	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
25:RA:384:U:H2'	25:RA:385:C:H6	1.79	0.48
25:RA:1138:G:H21	33:RN:106:MET:CE	2.26	0.48
25:RA:1688:U:O2	25:RA:1700:A:H5"	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.49	0.48
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.13	0.48
26:RB:56:G:P	30:RG:27:ASN:HD21	2.37	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.43	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
1:XA:518:C:C2	1:XA:529:G:C6	3.01	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.96	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
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.33	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
25:YA:576:U:H2'	25:YA:577:G:C8	2.49	0.48
25:YA:753:C:O5'	25:YA:753:C:H6	1.96	0.48
25:YA:1799:G:O2'	27:YD:270:ILE:HD11	2.13	0.48
25:YA:2635:C:H5"	28:YE:78:LEU:HA	1.95	0.48
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.49	0.48
25:YA:2784:C:H5"	28:YE:41:LYS:NZ	2.28	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
39:YT:96:ARG:NH1	39:YT:96:ARG:CB	2.77	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.43	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
9:QI:128:ARG:HD3	22:QV:32:C:OP2	2.13	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	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
25:RA:31:C:O2'	25:RA:1238:G:H5'	2.14	0.48
25:RA:2749:A:H4'	31:RH:62:LYS:HB3	1.95	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.96	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.52	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
47:R1:56:GLN:NE2	47:R1:56:GLN:H	2.10	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.13	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
1:XA:1225:A:H5"	1:XA:1226:C:OP2	2.14	0.48
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.96	0.48
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.79	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	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
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
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
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
25:YA:507:A:H5"	25:YA:508:G:H5'	1.96	0.48
25:YA:1011:G:OP1	40:YU:75:ASN:HB3	2.14	0.48
25:YA:1441:G:H2'	25:YA:1442:G:C8	2.49	0.48
25:YA:1535:U:H5"	25:YA:1537:C:C4	2.49	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.43	0.48
38:YS:56:LEU:C	38:YS:56:LEU:HD23	2.34	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.13	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.48
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.79	0.48
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.47	0.48
1:QA:784:C:H4'	25:RA:1837:C:OP1	2.13	0.48
1:QA:1396:A:H4'	1:QA:1397:C:C5'	2.44	0.48
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.48
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
25:RA:981:A:N1	25:RA:2027:G:O2'	2.39	0.48
25:RA:1019:U:O2'	25:RA:1021:A:H2	1.97	0.48
25:RA:2632:A:O2'	25:RA:2811:G:O2'	2.19	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
32:RI:133:HIS:HB2	32:RI:134:PRO:HD2	1.96	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.48
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.48
1:XA:664:G:N2	1:XA:741:G:H1	2.05	0.48
1:XA:1219:U:OP1	14:XN:19:ARG:NH2	2.39	0.48
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.14	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
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.13	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
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
22:XV:19:G:H4'	22:XV:20:U:OP2	2.14	0.48
25:YA:229:A:OP1	25:YA:229:A:H4'	2.12	0.48
25:YA:1771:C:HO2'	25:YA:1786:A:H8	1.59	0.48
25:YA:2655:G:O2'	25:YA:2656:U:OP2	2.31	0.48
25:YA:2846:G:OP2	39:YT:54:ARG:HB2	2.14	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.67	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
29:YF:45:ARG:HG2	29:YF:45:ARG:NH1	2.28	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.27	0.48
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.48
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.47	0.48
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
1:QA:1399:C:C2	1:QA:1502:A:N6	2.82	0.48
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.48
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.48
4:QD:163:GLU:C	4:QD:165:MET:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.94	0.48
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.48
7:QG:63:LYS:O	7:QG:63:LYS:HD2	2.13	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	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: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
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.48
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	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
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.44	0.48
24:QY:40:G:O2'	24:QY:41:A:H5'	2.13	0.48
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.49	0.48
25:RA:2410:G:C2	25:RA:2411:A:H1'	2.49	0.48
25:RA:2635:C:H5'	28:RE:77:ILE:HD13	1.96	0.48
28:RE:64:LYS:C	28:RE:66:HIS:N	2.68	0.48
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.14	0.48
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	1.95	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.26	0.48
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.48
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.48
1:XA:377:G:OP1	16:XP:5:ARG:NH1	2.47	0.48
1:XA:411:A:C4	1:XA:413:G:H1'	2.48	0.48
1:XA:560:U:O2'	1:XA:561:U:OP2	2.26	0.48
1:XA:965:A:H4'	1:XA:966:G:OP1	2.14	0.48
1:XA:1442:G:C5	1:XA:1446:A:C6	3.02	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	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
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
19:XS:36:ARG:HB3	19:XS:36:ARG:NH1	2.28	0.48
25:YA:298:G:P	44:YY:85:VAL:HG22	2.54	0.48
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1824:G:O3'	27:YD:249:PRO:HD3	2.14	0.48
25:YA:2168:G:H2'	25:YA:2168:G:N3	2.29	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.48	0.48
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	2.14	0.48
1:QA:608:A:H2'	1:QA:609:A:O4'	2.14	0.47
1:QA:953:G:H5'	1:QA:965:A:H61	1.79	0.47
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.47
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
7:QG:51:GLN:HA	7:QG:51:GLN:OE1	2.14	0.47
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	2.48	0.47
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.47
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.44	0.47
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.47
25:RA:1291:C:H2'	25:RA:1292:U:C6	2.49	0.47
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.95	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.66	0.47
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.77	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
36:RQ:42:ILE:HD12	36:RQ:42:ILE:N	2.29	0.47
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.27	0.47
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.47
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.47
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.47
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG22	1.95	0.47
45:RZ:104:PHE:HB3	45:RZ:141:VAL:CG1	2.44	0.47
1:XA:627:G:H2'	1:XA:628:G:H8	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1224:G:HO2'	1:XA:1225:A:P	2.32	0.47
1:XA:1321:C:H3'	1:XA:1322:C:H5"	1.96	0.47
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.82	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.47
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.47
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.47
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	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
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
25:YA:662:G:H5"	35:YP:15:ARG:O	2.14	0.47
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.47	0.47
25:YA:2102:U:H3	25:YA:2187:G:H1	1.63	0.47
25:YA:2469:A:O2'	36:YQ:56:ARG:HG2	2.14	0.47
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.49	0.47
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.96	0.47
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.47
31:YH:45:VAL:O	31:YH:45:VAL:HG13	2.14	0.47
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.52	0.47
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.47
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
36:YQ:60:ARG:NH2	36:YQ:60:ARG:HB2	2.28	0.47
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.47
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.47
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.47
45:YZ:181:GLU:HG2	45:YZ:183:LEU:HD11	1.95	0.47
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.47
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.47
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.47
1:QA:986:A:N3	19:QS:52:TYR:OH	2.47	0.47
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.47
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
7:QG:8:GLU:CD	7:QG:8:GLU:N	2.67	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47
23:QX:4:C:C3'	23:QX:5:C:H5'	2.41	0.47
25:RA:27:G:H1'	25:RA:513:A:H62	1.80	0.47
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.49	0.47
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.49	0.47
25:RA:2277:G:P	36:RQ:85:LYS:HB2	2.53	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.14	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.68	0.47
32:RI:57:ARG:O	32:RI:60:GLU:N	2.47	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.47
35:RP:75:ILE:H	35:RP:75:ILE:CD1	2.14	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.53	0.47
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47
44:RY:97:ARG:HG2	44:RY:97:ARG:NH1	2.28	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.13	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
1:XA:234:C:H2'	1:XA:235:C:C6	2.49	0.47
1:XA:926:G:H22	23:XX:1:A:P	2.38	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	2.00	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.10	0.47
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.47
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
13:XM:7:VAL:CG2	50:Y4:34:GLU:OE2	2.63	0.47
14:XN:26:ARG:NH1	14:XN:43:CYS:SG	2.86	0.47
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.47
25:YA:27:G:O2'	25:YA:28:A:C8	2.67	0.47
25:YA:498:G:N2	44:YY:47:LYS:HZ1	2.12	0.47
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.62	0.47
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.77	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.14	0.47
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.62	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.14	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.45	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
1:QA:339:C:H2'	1:QA:340:U:C6	2.49	0.47
1:QA:560:U:H5'	1:QA:566:G:N2	2.29	0.47
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.13	0.47
1:QA:1147:C:O2	9:QI:16:ARG:NH1	2.47	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.47
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.90	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
22:QV:19:G:H4'	22:QV:20:U:OP2	2.14	0.47
25:RA:1535:U:H2'	25:RA:1536:A:C8	2.49	0.47
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.47	0.47
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.54	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
32:RI:144:VAL:HG22	32:RI:145:VAL:H	1.79	0.47
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.97	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.28	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.61	0.47
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.15	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.29	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
50:R4:50:VAL:O	50:R4:50:VAL:CG1	2.63	0.47
1:XA:688:G:H2'	1:XA:689:C:H6	1.79	0.47
1:XA:738:C:H5"	6:XF:69:GLU:HB2	1.95	0.47
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.55	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
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: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:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.97	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
14:XN:6:LEU:HD22	14:XN:23:ARG:NH2	2.29	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.29	0.47
25:YA:340:A:H2'	25:YA:341:G:O4'	2.14	0.47
25:YA:594:U:H5'	54:Y8:61:LEU:HD21	1.97	0.47
25:YA:1061:U:H4'	25:YA:1070:A:H1'	1.96	0.47
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.49	0.47
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.14	0.47
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
42:YW:32:ALA:O	42:YW:33:ARG:C	2.52	0.47
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.95	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.17	0.47
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.47
55:Y9:27:CYS:SG	55:Y9:28:GLU:N	2.87	0.47
1:QA:309:G:O2'	1:QA:607:A:N1	2.45	0.47
1:QA:792:A:H1'	1:QA:793:U:OP2	2.14	0.47
1:QA:1256:A:P	3:QC:26:LYS:HZ3	2.37	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.47
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.29	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.97	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.34	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
25:RA:910:A:N3	25:RA:2264:C:O2'	2.40	0.47
25:RA:1359:A:C6	25:RA:1372:U:O4	2.68	0.47
25:RA:2723:C:OP1	37:RR:3:HIS:HD2	1.97	0.47
26:RB:33:G:H5"	26:RB:33:G:H8	1.80	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.79	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47
39:RT:96:ARG:NH1	39:RT:96:ARG:CB	2.77	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.83	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47
1:XA:135:C:H2'	1:XA:136:C:H5'	1.97	0.47
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.80	0.47
1:XA:791:G:H2'	1:XA:792:A:H5'	1.96	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.47
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.14	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.47
25:YA:669:G:H2'	25:YA:669:G:N3	2.27	0.47
25:YA:1336:A:H2'	25:YA:1337:G:C8	2.49	0.47
25:YA:2150:U:H2'	25:YA:2151:G:C8	2.50	0.47
25:YA:2770:G:H5"	25:YA:2771:C:OP2	2.14	0.47
25:YA:2804:C:H2'	25:YA:2805:G:O4'	2.15	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.43	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
35:YP:147:LEU:N	35:YP:147:LEU:HD22	2.29	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
1:QA:266:G:H5"	1:QA:267:C:C5	2.49	0.47
1:QA:362:G:N2	1:QA:365:U:OP2	2.47	0.47
1:QA:1277:C:O2'	1:QA:1279:A:H8	1.96	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:27:TYR:CZ	6:XF:15:ASP:OD2	2.65	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	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
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
25:RA:249:C:O2	54:R8:12:LYS:HE3	2.14	0.47
25:RA:864:G:C6	25:RA:865:C:N4	2.82	0.47
25:RA:1009:A:OP1	33:RN:37:LYS:NZ	2.47	0.47
25:RA:1041:C:H2'	25:RA:1042:G:H8	1.78	0.47
25:RA:1588:C:H2'	25:RA:1589:C:C6	2.49	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.14	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
45:RZ:111:VAL:HG22	45:RZ:112:ARG:N	2.26	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.15	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.47
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	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
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
25:YA:1654:A:OP2	37:YR:2:ARG:HD2	2.15	0.47
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.14	0.47
26:YB:74:U:H2'	26:YB:75:G:O4'	2.14	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.45	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
36:YQ:59:ARG:CD	36:YQ:59:ARG:N	2.72	0.47
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
41:YV:36:PRO:HA	41:YV:56:SER:HG	1.80	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.43	0.47
1:QA:686:U:HO2'	11:QK:42:TRP:HE1	1.62	0.47
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.44	0.47
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.78	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	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:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
25:RA:898:C:C2'	25:RA:899:A:H5'	2.44	0.47
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.14	0.47
25:RA:1264:G:H5'	51:R5:11:THR:CG2	2.44	0.47
25:RA:2284:C:C5	52:R6:27:LYS:HE2	2.50	0.47
25:RA:2432:A:C8	47:R1:33:LYS:HE2	2.49	0.47
26:RB:3:C:H2'	26:RB:4:C:C6	2.49	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.28	0.47
32:RI:13:GLY:HA3	32:RI:17:GLN:OE1	2.14	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.77	0.47
55:R9:1:MET:SD	55:R9:31:LYS:O	2.72	0.47
1:XA:27:G:C4'	4:XD:209:ARG:HG3	2.35	0.47
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.14	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.63	0.47
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.47
5:XE:13:ILE:HG22	5:XE:13:ILE:O	2.14	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
25:YA:428:A:H8	25:YA:428:A:OP2	1.97	0.47
25:YA:898:C:C2'	25:YA:899:A:H5'	2.44	0.47
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.80	0.47
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.13	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:60:ARG:NH1	45:YZ:114:GLY:H	2.13	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.47
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.35	0.47
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.80	0.47
1:QA:64:G:H4'	1:QA:65:U:O5'	2.15	0.47
1:QA:191(D):U:H2'	1:QA:191(E):G:C8	2.50	0.47
1:QA:313:A:H2'	1:QA:314:C:C6	2.50	0.47
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.50	0.47
1:QA:537:G:H5"	12:QL:113:ARG:NH1	2.30	0.47
1:QA:748:C:H1'	1:QA:749:C:H5	1.79	0.47
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.50	0.47
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.14	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.23	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:165:MET:HE3	4:QD:168:ARG:HD2	1.97	0.47
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.47
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.47
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
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
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.13	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
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:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
25:RA:588:U:H2'	25:RA:589:C:C6	2.50	0.47
25:RA:958:U:OP1	36:RQ:74:TYR:OH	2.25	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1364:G:N7	47:R1:2:SER:N	2.63	0.47
25:RA:1417:C:H2'	25:RA:1418:G:O4'	2.13	0.47
25:RA:1797:C:H2'	25:RA:1798:U:H5'	1.97	0.47
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.15	0.47
25:RA:2168:G:H2'	25:RA:2168:G:N3	2.30	0.47
25:RA:2275:C:O2	36:RQ:83:MET:HG3	2.14	0.47
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.48	0.47
26:RB:24:G:N7	26:RB:56:G:H2'	2.29	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.96	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.15	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
41:RV:2:PHE:CD1	41:RV:2:PHE:C	2.88	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.44	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.28	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
1:XA:323:U:H5'	20:XT:23:ARG:HB2	1.97	0.47
1:XA:521:G:O6	1:XA:529:G:C6	2.68	0.47
1:XA:947:G:O3'	13:XM:109:THR:OG1	2.32	0.47
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.78	0.47
1:XA:1095:U:OP2	1:XA:1108:G:N1	2.34	0.47
1:XA:1127:G:H21	1:XA:1147:C:H41	1.62	0.47
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.96	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	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
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
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.13	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
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:32:ILE:HD12	11:XK:72:ALA:CB	2.36	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
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.47
14:XN:41:ARG:NE	14:XN:42:ILE:HG13	2.29	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
19:XS:64:GLU:HB3	50:Y4:60:GLN:NE2	2.28	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.80	0.47
25:YA:528:A:H2	25:YA:2043:C:C5'	2.27	0.47
25:YA:686:G:N2	25:YA:788:A:H61	2.13	0.47
25:YA:928:G:O2'	49:Y3:43:ILE:HD11	2.15	0.47
25:YA:1093:G:H4'	31:YH:170:ARG:NH2	2.29	0.47
25:YA:2009:G:H1'	37:YR:107:ASP:O	2.14	0.47
25:YA:2286:A:H8	52:Y6:37:ARG:HH11	1.63	0.47
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.50	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.77	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.07	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
36:YQ:80:GLU:HG3	36:YQ:81:VAL:N	2.27	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.47
40:YU:104:GLN:H	40:YU:104:GLN:CD	2.16	0.47
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.14	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
50:Y4:50:VAL:CG1	50:Y4:50:VAL:O	2.62	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.47
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
25:RA:2122:U:H2'	25:RA:2123:G:H8	1.79	0.47
25:RA:2250:G:C4	36:RQ:82:ARG:HG3	2.50	0.47
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.15	0.47
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.14	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
28:RE:17:ASP:N	28:RE:17:ASP:OD2	2.46	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.96	0.47
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.97	0.47
1:XA:310:G:H4'	16:XP:31:LYS:HD3	1.97	0.47
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.61	0.47
1:XA:1446:A:HO2'	1:XA:1447:G:P	2.38	0.47
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
4:XD:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.35	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.28	0.47
25:YA:223:A:N1	25:YA:407:G:O2'	2.40	0.47
25:YA:507:A:C5'	25:YA:508:G:H5'	2.44	0.47
25:YA:589:C:H2'	25:YA:590:A:C8	2.50	0.47
25:YA:606:U:H4'	25:YA:658:C:H4'	1.97	0.47
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.29	0.47
25:YA:1093:G:OP1	31:YH:170:ARG:HD2	2.15	0.47
25:YA:1427:A:H4'	25:YA:1428:C:O5'	2.14	0.47
25:YA:2024:G:H2'	25:YA:2025:C:C6	2.50	0.47
25:YA:2790:A:O2'	25:YA:2893:G:N3	2.47	0.47
26:YB:80:U:O2'	26:YB:81:G:H5'	2.15	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
45:YZ:134:PRO:HG2	45:YZ:161:VAL:HG21	1.96	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.15	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
1:QA:457:C:H2'	1:QA:458:C:H6	1.80	0.47
1:QA:560:U:H4'	1:QA:561:U:O5'	2.15	0.47
1:QA:792:A:H4'	1:QA:793:U:O5'	2.15	0.47
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.47	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.47
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.49	0.47
25:RA:2032:G:H21	28:RE:146:THR:HG23	1.79	0.47
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.47
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.14	0.47
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.47
32:RI:94:ALA:HB1	32:RI:114:LEU:HD23	1.96	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.47
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.47
1:XA:328:C:H4'	1:XA:329:A:C5'	2.45	0.47
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.15	0.47
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.32	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.47
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.47
25:YA:2032:G:H21	28:YE:146:THR:HG23	1.80	0.47
25:YA:2783:G:H2'	25:YA:2784:C:C6	2.50	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.15	0.47
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.79	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.15	0.47
32:YI:62:LYS:HE3	32:YI:134:PRO:HG2	1.96	0.47
32:YI:133:HIS:HB2	32:YI:134:PRO:HD2	1.97	0.47
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.47
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.47
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.47
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.48	0.47
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HD23	1.96	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.47
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.47
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.47
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	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
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.47
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	2.14	0.47
25:RA:2250:G:C5	36:RQ:82:ARG:HD2	2.49	0.47
25:RA:2283:C:OP1	52:R6:5:VAL:HG13	2.15	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.47
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.47
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.47
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.15	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.47
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.47
55:R9:19:ARG:NH2	55:R9:26:ILE:HD11	2.29	0.47
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.46	0.47
1:XA:939:G:H2'	1:XA:940:C:C6	2.50	0.47
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.83	0.47
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.47
25:YA:83:G:O2'	25:YA:84:A:C8	2.67	0.47
25:YA:247:G:H4'	25:YA:386:G:C5	2.50	0.47
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.15	0.47
25:YA:1056:G:O2'	25:YA:1086:A:O2'	2.30	0.47
25:YA:1071:G:H8	25:YA:1071:G:O5'	1.98	0.47
25:YA:2012:G:H4'	42:YW:96:ILE:HD11	1.96	0.47
25:YA:2545:G:H2'	25:YA:2546:U:O4'	2.15	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.47
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
32:YI:64:GLU:HG3	32:YI:67:ARG:NH2	2.30	0.47
33:YN:35:ARG:HG3	33:YN:35:ARG:O	2.15	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.47
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.47
1:QA:1344:C:HO2'	1:QA:1348:U:HO2'	1.62	0.46
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
5:QE:101:ILE:CD1	5:QE:119:LEU:HD23	2.36	0.46
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46
15:QO:82:ILE:O	15:QO:86:GLY:N	2.49	0.46
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
20:QT:26:ASN:N	20:QT:26:ASN:ND2	2.62	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.46
25:RA:592:G:H1	25:RA:665:C:N4	2.12	0.46
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.49	0.46
25:RA:1826:G:OP1	27:RD:224:ALA:N	2.39	0.46
25:RA:2517:C:C2	25:RA:2542:A:N6	2.82	0.46
25:RA:2867:G:HO2'	25:RA:2868:A:P	2.38	0.46
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.46
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.15	0.46
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.46
48:R2:7:ARG:HG3	48:R2:7:ARG:NH1	2.25	0.46
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.30	0.46
1:XA:93:U:H2'	1:XA:95:G:O4'	2.15	0.46
1:XA:703:G:O2'	1:XA:704:A:OP2	2.30	0.46
1:XA:901:A:C5	1:XA:902:G:H1'	2.50	0.46
1:XA:1202:G:H1'	14:XN:29:ARG:HD2	1.96	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.46
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.46
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	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

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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
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
25:YA:618(A):C:OP2	29:YF:103:LYS:HE2	2.15	0.46
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.15	0.46
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.46
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.46
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.16	0.46
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.80	0.46
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.31	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.98	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.97	0.46
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.46
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.13	0.46
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.16	0.46
1:QA:128:G:O2'	17:QQ:3:LYS:NZ	2.48	0.46
1:QA:243:A:H4'	1:QA:244:U:H3'	1.97	0.46
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	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
25:RA:140:A:C8	25:RA:1408:C:O2'	2.66	0.46
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.15	0.46
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.15	0.46
25:RA:2529:G:H5"	25:RA:2530:A:H5"	1.97	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
27:RD:183:ARG:CG	27:RD:183:ARG:NH1	2.69	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.48	0.46
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.46
31:RH:4:ILE:H	31:RH:4:ILE:CD1	2.25	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:78:LYS:O	37:RR:78:LYS:HG2	2.15	0.46
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.46
41:RV:30:GLY:O	41:RV:31:ALA:O	2.34	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
1:XA:143:A:H2	1:XA:220:G:H1	1.63	0.46
1:XA:262:A:H2'	1:XA:263:A:C8	2.50	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.15	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	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:O	4:XD:137:SER:N	2.48	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
13:XM:119:GLY:HA3	22:XV:29:G:OP1	2.15	0.46
14:XN:36:PHE:CD1	14:XN:36:PHE:C	2.88	0.46
25:YA:588:U:C2	29:YF:90:PHE:CE1	3.03	0.46
25:YA:1217:C:OP1	40:YU:15:LYS:NZ	2.42	0.46
25:YA:2277:G:OP1	36:YQ:85:LYS:HB2	2.16	0.46
32:YI:49:ALA:HA	32:YI:52:ARG:HG2	1.97	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.16	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.79	0.46
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.46
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.46
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.15	0.46
47:Y1:76:ARG:H	47:Y1:76:ARG:CD	2.28	0.46
1:QA:753:A:H4'	1:QA:754:C:O5'	2.15	0.46
1:QA:1053:G:N7	1:QA:1200:C:H5"	2.31	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.33	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.46
25:RA:297:C:H5"	44:RY:85:VAL:CG2	2.44	0.46
25:RA:1252:G:N7	40:RU:36:ARG:NH1	2.63	0.46
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.81	0.46
25:RA:1833:U:O2'	25:RA:1969:A:N1	2.39	0.46
25:RA:2032:G:H21	28:RE:146:THR:CG2	2.28	0.46
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.50	0.46
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.80	0.46
25:RA:2734:A:N6	25:RA:2770:G:O2'	2.49	0.46
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.46
28:RE:47:VAL:O	28:RE:48:GLN:C	2.51	0.46
28:RE:188:VAL:O	28:RE:188:VAL:HG13	2.15	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.46
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.78	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
37:RR:85:PRO:C	37:RR:87:TYR:H	2.18	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.48	0.46
43:RX:12:VAL:O	43:RX:12:VAL:HG13	2.15	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
1:XA:564:C:H5'	17:XQ:32:TYR:CE2	2.50	0.46
1:XA:826:C:H2'	1:XA:827:U:O2	2.15	0.46
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.45	0.46
1:XA:1314:C:H5	19:XS:4:SER:HB2	1.80	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.79	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	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
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.46
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.30	0.46
25:YA:784:A:C5	27:YD:229:VAL:HG21	2.50	0.46
25:YA:860:U:C5	25:YA:917:A:H2	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.50	0.46
25:YA:2506:U:H2'	25:YA:2506:U:O2	2.16	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.46
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.46
27:YD:198:ASN:C	27:YD:198:ASN:ND2	2.69	0.46
29:YF:46:ARG:CG	29:YF:46:ARG:NH1	2.71	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.80	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
31:YH:94:TYR:N	31:YH:94:TYR:CD1	2.82	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.98	0.46
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.46
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.46
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.98	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.46
1:QA:97:U:H2'	1:QA:99:C:H6	1.80	0.46
1:QA:1118:C:OP1	9:QI:104:ARG:NH1	2.44	0.46
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.29	0.46
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.32	0.46
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.48	0.46
3:QC:95:THR:CG2	3:QC:97:LYS:HZ3	2.28	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	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	2.31	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
25:RA:57:C:H2'	25:RA:58:G:O4'	2.16	0.46
25:RA:1263:U:H2'	25:RA:1264:G:C8	2.51	0.46
25:RA:1797:C:C2'	25:RA:1798:U:H5'	2.46	0.46
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.16	0.46
25:RA:2335:A:O2'	25:RA:2336:A:H2'	2.14	0.46
25:RA:2712:U:H1'	25:RA:2712(A):A:C8	2.50	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.15	0.46
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.97	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.30	0.46
37:RR:29:LEU:N	37:RR:29:LEU:CD1	2.79	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.97	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.97	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.16	0.46
44:RY:35:TYR:CD1	44:RY:35:TYR:O	2.69	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
1:XA:36:C:O2'	1:XA:501:C:OP1	2.33	0.46
1:XA:1090:U:H2'	1:XA:1091:U:C6	2.51	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
2:XB:136:VAL:O	2:XB:140:HIS:N	2.43	0.46
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.36	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
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	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
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
25:YA:264:C:O2'	25:YA:265:A:H5"	2.15	0.46
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.81	0.46
25:YA:2439:A:C8	25:YA:2439:A:H5'	2.51	0.46
25:YA:2636:U:OP1	28:YE:79:ARG:HG3	2.15	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46
28:YE:54:GLN:HE21	28:YE:54:GLN:CA	2.27	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.50	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.63	0.46
33:YN:96:GLU:O	33:YN:99:LEU:N	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
35:YP:144:GLU:OE1	35:YP:144:GLU:N	2.48	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
45:YZ:140:ASP:OD2	45:YZ:140:ASP:N	2.42	0.46
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
55:Y9:19:ARG:NH2	55:Y9:26:ILE:HD11	2.31	0.46
1:QA:308:C:H2'	1:QA:309:G:H8	1.80	0.46
1:QA:374:A:C6	1:QA:375:U:C4	3.03	0.46
1:QA:475:G:H2'	1:QA:476:G:C8	2.51	0.46
1:QA:1113:C:H2'	1:QA:1114:C:H6	1.81	0.46
1:QA:1127:G:H2'	1:QA:1128:C:C6	2.51	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
25:RA:185:U:H4'	25:RA:218:A:H4'	1.96	0.46
25:RA:675:A:H4'	29:RF:67:GLN:OE1	2.16	0.46
25:RA:859:G:O2'	25:RA:860:U:P	2.73	0.46
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.15	0.46
25:RA:2250:G:C2	36:RQ:82:ARG:HB3	2.50	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.15	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.16	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.46	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
1:XA:28:G:O2'	1:XA:296:U:OP1	2.34	0.46
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.33	0.46
1:XA:658:G:H2'	1:XA:659:U:H6	1.80	0.46
1:XA:814:A:O2'	1:XA:815:A:H3'	2.15	0.46
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.79	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
25:YA:755:C:H2'	25:YA:756:C:C6	2.51	0.46
25:YA:1210:A:H5'	25:YA:1210:A:C8	2.46	0.46
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.50	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.58	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
35:YP:23:PRO:HG2	35:YP:23:PRO:O	2.15	0.46
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.79	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.15	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
46:Y0:24:LYS:O	46:Y0:25:ARG:HD3	2.16	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.54	0.46
1:QA:64:G:H5'	1:QA:65:U:H5'	1.98	0.46
1:QA:538:G:OP1	12:QL:113:ARG:HD2	2.14	0.46
1:QA:838:G:C5	1:QA:842:C:H1'	2.50	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.19	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	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
25:RA:155:C:H5'	25:RA:161:U:OP2	2.15	0.46
25:RA:571:A:N6	25:RA:2499:C:O3'	2.49	0.46
25:RA:947:G:H2'	25:RA:948:G:H8	1.80	0.46
25:RA:1046:A:H3'	25:RA:1046:A:N3	2.31	0.46
25:RA:2283:C:H2'	25:RA:2284:C:O4'	2.15	0.46
25:RA:2760:C:H2'	25:RA:2761:G:H5"	1.96	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.46
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
1:XA:1118:C:OP1	9:XI:9:ARG:HD3	2.16	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
24:XY:40:G:H2'	24:XY:41:A:C8	2.51	0.46
25:YA:1543:A:O2'	25:YA:1544:C:P	2.73	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
27:YD:48:ARG:HG3	27:YD:48:ARG:NH1	2.31	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:53:GLU:OE1	31:YH:53:GLU:HA	2.16	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.97	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.97	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.50	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
1:QA:397:A:H5'	1:QA:398:C:OP1	2.16	0.46
1:QA:999:U:H2'	1:QA:1000:A:C8	2.50	0.46
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.16	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
4:QD:187:ARG:HH11	4:QD:187:ARG:HG2	1.81	0.46
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.81	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
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.15	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
25:RA:1297:C:H2'	25:RA:1298:C:H6	1.80	0.46
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.81	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
27:RD:136:ILE:HD12	27:RD:136:ILE:N	2.30	0.46
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.46	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
30:RG:88:ILE:O	30:RG:88:ILE:CD1	2.54	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
35:RP:6:LEU:N	35:RP:6:LEU:HD22	2.31	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
39:RT:58:ASN:HD22	39:RT:58:ASN:N	2.10	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:35:THR:O	43:RX:35:THR:HG23	2.16	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
45:RZ:69:THR:HB	45:RZ:88:PHE:HB3	1.98	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.29	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
1:XA:985:C:H2'	1:XA:986:A:C8	2.50	0.46
1:XA:1126:U:H5	1:XA:1127:G:C4	2.33	0.46
1:XA:1151:A:H2'	1:XA:1152:A:C8	2.51	0.46
1:XA:1405:G:OP2	58:XA:1673:PAR:O34	2.24	0.46
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.50	0.46
1:XA:1446:A:H5"	39:YT:122:ASP:OD1	2.16	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
8:XH:49:GLU:HG3	8:XH:49:GLU:O	2.14	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	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
19:XS:69:HIS:ND1	50:Y4:69:LYS:CE	2.78	0.46
25:YA:1005:C:O2'	33:YN:28:THR:HG21	2.16	0.46
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	2.15	0.46
25:YA:1667:G:H2'	25:YA:1991:U:O4	2.15	0.46
26:YB:40:U:O2'	26:YB:45:A:N6	2.41	0.46
26:YB:48:A:H2'	26:YB:49:C:C6	2.50	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.46
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
36:YQ:87:LYS:O	36:YQ:87:LYS:HG2	2.15	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.16	0.46
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
1:QA:34:C:H2'	1:QA:35:G:C8	2.51	0.46
1:QA:192:U:H2'	1:QA:193:C:C6	2.51	0.46
1:QA:219:C:H2'	1:QA:220:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:376:G:H5”	16:QP:5:ARG:HD2	1.98	0.46
1:QA:946:A:H2’	1:QA:947:G:C8	2.50	0.46
1:QA:1135:U:H4’	1:QA:1136:U:H5	1.81	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	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
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.68	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
19:QS:42:PRO:CG	50:R4:63:TYR:HE2	2.28	0.46
22:QV:49:G:O6	22:QV:65:C:N4	2.49	0.46
24:QY:40:G:H2’	24:QY:41:A:C8	2.51	0.46
25:RA:956:G:H2’	25:RA:957:A:H2’	1.98	0.46
25:RA:2292:C:P	38:RS:17:ARG:HH22	2.38	0.46
25:RA:2563:U:H1’	25:RA:2566:A:N6	2.31	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
30:RG:52:ILE:HG22	30:RG:52:ILE:O	2.15	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.97	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.98	0.46
34:RO:86:ILE:H	34:RO:86:ILE:CD1	2.28	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.46
1:XA:192:U:H2’	1:XA:193:C:H6	1.81	0.46
1:XA:986:A:H1’	19:XS:54:GLY:O	2.16	0.46
1:XA:1222:G:P	19:XS:77:THR:HG21	2.56	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
25:YA:389:G:H1	35:YP:70:GLN:HB3	1.80	0.46
25:YA:593:G:H2'	25:YA:594:U:C6	2.50	0.46
25:YA:947:G:N3	25:YA:984:A:H2	2.14	0.46
25:YA:975:G:H1'	25:YA:990:A:C2	2.51	0.46
25:YA:1022:G:O2'	25:YA:1023:U:OP2	2.22	0.46
25:YA:1264:G:H3'	25:YA:1265:A:H5"	1.98	0.46
25:YA:1543:A:HO2'	25:YA:1544:C:H3'	1.78	0.46
25:YA:1798:U:H5"	27:YD:259:THR:HG22	1.98	0.46
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.15	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.42	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
32:YI:97:ILE:HD12	32:YI:140:LEU:HD11	1.98	0.46
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.39	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.50	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.46
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.46
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.46
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	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
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
24:QY:39:C:O2'	24:QY:40:G:P	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:311:A:C6	25:RA:328:U:C4	3.03	0.46
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.50	0.46
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.31	0.46
25:RA:1826:G:H4'	27:RD:242:ARG:NH2	2.25	0.46
25:RA:2123:G:H2'	25:RA:2124:G:H8	1.81	0.46
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.51	0.46
25:RA:2577:A:H5"	25:RA:2578:G:H5'	1.97	0.46
26:RB:28:C:OP2	38:RS:33:LYS:HE3	2.16	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.33	0.46
46:R0:24:LYS:O	46:R0:25:ARG:HD3	2.15	0.46
1:XA:530:G:O2'	1:XA:531:U:P	2.74	0.46
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.16	0.46
1:XA:1392:G:H21	1:XA:1502:A:H8	1.62	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.46
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.46
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	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
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.46
25:YA:860:U:C5	25:YA:917:A:C2	3.01	0.46
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.16	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.46
45:YZ:80:ARG:NH2	45:YZ:82:ARG:HH12	2.12	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.43	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
1:QA:37:U:O2'	1:QA:500:G:H4'	2.16	0.46
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.16	0.46
1:QA:643:C:H2'	1:QA:644:G:H8	1.81	0.46
1:QA:1407:C:O2'	25:RA:1912:A:N1	2.47	0.46
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.46
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	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
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
20:QT:93:GLU:HG2	20:QT:93:GLU:O	2.15	0.46
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.46
25:RA:586:A:N1	25:RA:809:G:O2'	2.38	0.46
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.51	0.46
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.51	0.46
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.15	0.46
25:RA:2215:G:H2'	25:RA:2216:G:H8	1.80	0.46
25:RA:2401:U:H2'	25:RA:2402:C:H5"	1.98	0.46
25:RA:2630:G:O4'	25:RA:2894:G:H1'	2.15	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.31	0.46
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.46
28:RE:47:VAL:O	28:RE:47:VAL:HG23	2.16	0.46
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.98	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.17	0.46
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.46
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.35	0.46
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.46
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1206:G:C6	1:XA:1207:G:C5	3.04	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	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
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.46
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.46
16:XP:40:ASP:O	16:XP:42:ARG:N	2.50	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
25:YA:286:C:H2'	25:YA:287:C:C6	2.51	0.46
25:YA:2179:C:H2'	25:YA:2180:U:C6	2.51	0.46
25:YA:2537:U:H2'	25:YA:2538:C:C6	2.50	0.46
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.46
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.46
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46
44:YY:35:TYR:CD1	44:YY:35:TYR:O	2.69	0.46
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
51:Y5:43:HIS:ND1	51:Y5:43:HIS:N	2.63	0.46
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.46
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.33	0.45
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.22	0.45
1:QA:1238:A:H62	1:QA:1299:A:H61	1.63	0.45
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.45
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.45
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.45
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.81	0.45
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.45
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.45
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.45
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.45
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.31	0.45
25:RA:389:G:H22	35:RP:72:PRO:CG	2.28	0.45
25:RA:828:U:H4'	25:RA:831:G:N1	2.30	0.45
25:RA:1154:G:H8	25:RA:1154:G:O5'	1.99	0.45
25:RA:1534:G:N3	25:RA:1534:G:H2'	2.31	0.45
25:RA:1930:G:H2'	25:RA:1968:G:N1	2.30	0.45
25:RA:2061:G:OP2	25:RA:2502:G:H5'	2.16	0.45
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.45
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.45
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.45
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.45
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.40	0.45
32:RI:128:LEU:O	32:RI:138:ILE:N	2.28	0.45
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.45
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.51	0.45
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.80	0.45
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.45
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.45
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.45
55:R9:25:VAL:HG11	55:R9:34:GLN:HE21	1.79	0.45
1:XA:736:C:H2'	1:XA:737:A:C8	2.51	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	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:100:ASN:HD22	6:XF:100:ASN:HA	1.48	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
10:XJ:29:ARG:HG2	10:XJ:29:ARG:HH11	1.81	0.45
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.45
10:XJ:95:GLU:OE2	10:XJ:95:GLU:HA	2.16	0.45
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.45
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.45
14:XN:43:CYS:HB3	14:XN:44:LEU:H	1.66	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.45
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.45
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.45
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.45
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.45
25:YA:792:G:H5"	25:YA:793:A:H5'	1.97	0.45
25:YA:1102:C:H2'	25:YA:1103:A:H5"	1.97	0.45
25:YA:1465:G:H5'	25:YA:1528:A:H1'	1.97	0.45
25:YA:1906:G:H1	25:YA:1924:C:H42	1.63	0.45
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.49	0.45
25:YA:2492:U:H2'	25:YA:2493:U:H6	1.81	0.45
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.45
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.50	0.45
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.45
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.47	0.45
31:YH:51:ARG:HG3	31:YH:51:ARG:NH1	2.30	0.45
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.45
32:YI:77:LEU:HD23	32:YI:101:LEU:HG	1.98	0.45
34:YO:86:ILE:H	34:YO:86:ILE:CD1	2.28	0.45
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.47	0.45
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.45
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.98	0.45
55:Y9:1:MET:SD	55:Y9:31:LYS:O	2.74	0.45
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.16	0.45
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.98	0.45
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.32	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.51	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
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	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
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.45
25:RA:605:C:O2	25:RA:657:U:O2'	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.50	0.45
27:RD:198:ASN:C	27:RD:198:ASN:ND2	2.69	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
31:RH:89:ILE:H	31:RH:89:ILE:HD13	1.81	0.45
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.64	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.99	0.45
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.16	0.45
1:XA:190:G:O6	1:XA:264:U:H5"	2.16	0.45
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.51	0.45
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.51	0.45
1:XA:1004:A:O2'	1:XA:1037:C:O2	2.34	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	1.99	0.45
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.50	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.29	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.34	0.45
13:XM:80:ARG:CB	50:Y4:71:ARG:NH2	2.79	0.45
25:YA:2635:C:OP1	28:YE:78:LEU:HD12	2.17	0.45
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.51	0.45
27:YD:241:PRO:O	27:YD:242:ARG:C	2.53	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.84	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.36	0.45
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.46	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.79	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.64	0.45
55:Y9:25:VAL:HG11	55:Y9:34:GLN:HE21	1.81	0.45
1:QA:1234:C:H4'	1:QA:1364:U:H1'	1.97	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
2:QB:96:ARG:HD2	2:QB:96:ARG:N	2.20	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.80	0.45
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	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
25:RA:669:G:H2'	25:RA:669:G:N3	2.31	0.45
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.81	0.45
25:RA:1799:G:O2'	27:RD:270:ILE:HD11	2.16	0.45
25:RA:1999:C:H4'	25:RA:2723:C:O2	2.17	0.45
25:RA:2053:G:O6	25:RA:2614:A:H2	1.99	0.45
26:RB:24:G:H5"	26:RB:25:A:OP1	2.16	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
32:RI:11:ASN:O	32:RI:12:LEU:HB2	2.16	0.45
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.99	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.36	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
54:R8:48:PHE:N	54:R8:48:PHE:HD1	2.14	0.45
1:XA:731:G:H5'	1:XA:766:A:H4'	1.98	0.45
1:XA:939:G:H5"	7:XG:102:ARG:HH12	1.81	0.45
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.15	0.45
1:XA:1330:U:H5"	1:XA:1331:G:OP2	2.17	0.45
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.51	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	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
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:108:U:H2'	25:YA:109:G:H8	1.82	0.45
25:YA:747:U:N3	51:Y5:2:ALA:N	2.64	0.45
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.51	0.45
25:YA:2287:A:N6	25:YA:2344:U:H3	2.14	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.85	0.45
32:YI:53:ALA:O	32:YI:57:ARG:HG3	2.16	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.81	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.19	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.16	0.45
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
1:QA:222:U:H2'	1:QA:223:U:C6	2.52	0.45
1:QA:355:C:H1'	1:QA:388:G:H2'	1.98	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
3:QC:34:LEU:HD23	3:QC:34:LEU:C	2.37	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:150:GLU:C	4:QD:152:SER:H	2.20	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
25:RA:229:A:OP1	25:RA:229:A:H4'	2.14	0.45
25:RA:553:U:H2'	25:RA:554:U:O4'	2.16	0.45
25:RA:1534:G:N2	25:RA:1537:C:O2	2.50	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
27:RD:166:GLN:CA	27:RD:166:GLN:NE2	2.78	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.97	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.84	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.97	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.35	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
1:XA:522:C:H41	12:XL:53:ARG:NH2	2.14	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
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.30	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.31	0.45
25:YA:848:G:O6	25:YA:929:G:H2'	2.16	0.45
26:YB:28:C:OP1	38:YS:36:TYR:OH	2.29	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.99	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.65	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.99	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
45:YZ:94:GLU:HB2	45:YZ:129:SER:HA	1.98	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.81	0.45
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.16	0.45
1:QA:714:G:H2'	1:QA:715:A:C8	2.52	0.45
1:QA:1213:A:N6	1:QA:1215:G:N3	2.65	0.45
1:QA:1370:G:O3'	9:QI:12:GLU:HG3	2.17	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
4:QD:13:ARG:CB	4:QD:33:MET:HE2	2.47	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
25:RA:483:A:C5'	44:RY:49:VAL:HG13	2.46	0.45
25:RA:551:G:H5'	25:RA:1220:A:H1'	1.98	0.45
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.16	0.45
25:RA:1902:C:H5'	27:RD:246:PRO:HD3	1.97	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.98	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.53	0.45
46:R0:56:ASP:OD2	46:R0:58:THR:OG1	2.20	0.45
1:XA:163:C:H2'	1:XA:164:U:C6	2.51	0.45
1:XA:524:G:H2'	1:XA:525:C:C6	2.52	0.45
1:XA:1112:C:N3	3:XC:178:LEU:HD23	2.31	0.45
1:XA:1162:C:O2'	1:XA:1163:C:O4'	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.32	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.86	0.45
2:XB:240:GLN:HG2	2:XB:240:GLN:O	2.16	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.81	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	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:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.97	0.45
25:YA:2331:G:H4'	46:Y0:43:THR:H	1.82	0.45
25:YA:2745:C:O2	31:YH:139:GLN:NE2	2.41	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
32:YI:5:LEU:H	32:YI:5:LEU:HD12	1.81	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.34	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
1:QA:410:G:H2'	1:QA:429:U:C4	2.52	0.45
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.97	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.99	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.98	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
25:RA:345:A:H2'	25:RA:347:A:H62	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.82	0.45
25:RA:620:G:H4'	25:RA:621:A:C5'	2.46	0.45
25:RA:1187:G:H5"	41:RV:81:TYR:HE2	1.80	0.45
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.52	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
36:RQ:93:TYR:CD1	36:RQ:93:TYR:N	2.85	0.45
40:RU:53:ARG:C	40:RU:55:ARG:H	2.19	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	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
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
25:YA:1048:A:P	25:YA:1110:G:H22	2.39	0.45
25:YA:2322:A:H2'	25:YA:2323:G:O4'	2.17	0.45
25:YA:2414:G:H21	35:YP:67:MET:CE	2.29	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
31:YH:7:LEU:C	31:YH:7:LEU:HD12	2.37	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.74	0.45
37:YR:29:LEU:N	37:YR:29:LEU:CD1	2.79	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
42:YW:21:VAL:HG12	42:YW:21:VAL:O	2.17	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.45
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:652:U:H1'	1:QA:653:A:H2	1.79	0.45
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.50	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.97	0.45
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.82	0.45
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.45
25:RA:246:C:N4	54:R8:8:LYS:HG3	2.32	0.45
25:RA:2638:G:P	28:RE:82:ARG:NH2	2.90	0.45
25:RA:2665:A:H2'	25:RA:2666:C:O4'	2.16	0.45
25:RA:2870:C:H2'	25:RA:2871:C:O4'	2.17	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
33:RN:35:ARG:HG3	33:RN:35:ARG:O	2.16	0.45
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
45:RZ:52:SER:O	45:RZ:53:ILE:HG13	2.17	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.98	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
1:XA:243:A:N6	1:XA:281:G:O2'	2.50	0.45
1:XA:474:G:H2'	1:XA:475:G:H8	1.81	0.45
1:XA:652:U:H1'	1:XA:653:A:C2	2.52	0.45
1:XA:926:G:C6	1:XA:1505:G:C6	3.05	0.45
1:XA:1182:G:H4'	1:XA:1183:A:H5"	1.99	0.45
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.32	0.45
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.82	0.45
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.52	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.45	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
25:YA:70:G:H21	25:YA:71:A:N6	2.14	0.45
25:YA:997:G:OP1	40:YU:93:LYS:HD3	2.16	0.45
25:YA:1020:A:N1	25:YA:1141:U:H2'	2.32	0.45
25:YA:1998:G:OP2	28:YE:136:ARG:NH2	2.44	0.45
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.30	0.45
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.17	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.82	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.19	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
45:YZ:48:PHE:HE2	45:YZ:71:VAL:HG11	1.82	0.45
45:YZ:73:GLN:HB3	45:YZ:87:ASP:OD1	2.17	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
1:QA:377:G:P	16:QP:5:ARG:HH11	2.40	0.45
1:QA:1127:G:H21	1:QA:1147:C:H41	1.65	0.45
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.85	0.45
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.82	0.45
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.16	0.45
17:QQ:41:LYS:HZ3	17:QQ:92:ARG:HH22	1.60	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.17	0.45
23:QX:5:C:H2'	23:QX:6:C:C6	2.51	0.45
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.35	0.45
25:RA:1204:A:H1'	25:RA:1206:G:C4	2.51	0.45
25:RA:2126:A:H1'	25:RA:2127:G:OP2	2.17	0.45
25:RA:2576:G:O2'	25:RA:2579:C:OP2	2.28	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.52	0.45
26:RB:54:G:H21	30:RG:29:TRP:HZ2	1.63	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
29:RF:119:ARG:HH11	29:RF:119:ARG:CG	2.29	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.16	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.43	0.45
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.45
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
35:RP:88:LEU:C	35:RP:88:LEU:HD23	2.37	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.47	0.45
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.48	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.45
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.39	0.45
47:R1:80:LEU:CB	47:R1:81:LYS:HE2	2.44	0.45
47:R1:82:LEU:HD13	47:R1:83:GLU:C	2.36	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.64	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
1:XA:166:G:H2'	1:XA:167:G:H8	1.82	0.45
1:XA:222:U:H2'	1:XA:223:U:C6	2.52	0.45
1:XA:345:C:H5"	1:XA:346:G:C5	2.51	0.45
1:XA:356:A:N3	1:XA:368:U:O2'	2.37	0.45
1:XA:1090:U:H2'	1:XA:1091:U:H6	1.81	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.17	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.21	0.45
25:YA:1425:G:H2'	25:YA:1426:G:C8	2.52	0.45
25:YA:1826:G:C4'	27:YD:242:ARG:HH21	2.23	0.45
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.31	0.45
25:YA:2252:G:H2'	25:YA:2253:G:O4'	2.17	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
35:YP:45:LEU:CD1	35:YP:45:LEU:N	2.79	0.45
35:YP:88:LEU:C	35:YP:88:LEU:HD23	2.37	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.99	0.45
39:YT:57:PHE:O	39:YT:58:ASN:C	2.53	0.45
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.16	0.45
54:Y8:52:LYS:O	54:Y8:52:LYS:CG	2.64	0.45
1:QA:437:U:H2'	1:QA:438:G:O4'	2.16	0.45
1:QA:475:G:H2'	1:QA:476:G:H8	1.82	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:1067:A:N1	1:QA:1108:G:O2'	2.40	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.46	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.98	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:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	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
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.45
25:RA:601:C:O2	25:RA:605:C:H4'	2.17	0.45
25:RA:1021:A:H3'	25:RA:1022:G:H5"	1.98	0.45
25:RA:1169:G:H1	25:RA:1180:C:H42	1.65	0.45
25:RA:2351:G:HO2'	25:RA:2352:A:H8	1.63	0.45
25:RA:2518:A:H4'	25:RA:2519:U:OP1	2.15	0.45
26:RB:15:A:H1'	26:RB:109:G:N9	2.32	0.45
26:RB:83:G:H1	26:RB:93:C:H42	1.63	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
32:RI:52:ARG:O	32:RI:56:LYS:HG3	2.16	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.98	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.45
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.45
1:XA:60:A:OP1	1:XA:111:G:N2	2.49	0.45
1:XA:148:G:H2'	1:XA:149:A:H8	1.82	0.45
1:XA:1074:G:H4'	2:XB:104:ASN:HB2	1.98	0.45
1:XA:1251:A:H2'	1:XA:1252:A:C8	2.51	0.45
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.81	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
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
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.45
13:XM:108:ARG:O	13:XM:111:LYS:N	2.47	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.55	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
25:YA:503:A:H4'	25:YA:504:U:C5'	2.47	0.45
25:YA:2489:G:O6	25:YA:2490:G:O6	2.34	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
28:YE:18:ASP:O	28:YE:19:ARG:C	2.55	0.45
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.45
33:YN:5:VAL:O	33:YN:5:VAL:HG13	2.16	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
34:YO:53:LYS:N	34:YO:53:LYS:CD	2.69	0.45
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
38:YS:89:ARG:O	38:YS:90:GLY:C	2.54	0.45
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
1:QA:35:G:N2	12:QL:118:SER:OG	2.48	0.45
1:QA:1222:G:OP1	19:QS:77:THR:HG21	2.17	0.45
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.46	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.45
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.45
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.45
25:RA:1220:A:H5'	25:RA:1221:C:OP2	2.15	0.45
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.52	0.45
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	1.99	0.45
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.97	0.45
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.45
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.45
28:RE:36:ARG:HH11	28:RE:36:ARG:CB	2.28	0.45
28:RE:77:ILE:O	28:RE:78:LEU:O	2.34	0.45
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.45
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.70	0.45
36:RQ:119:ARG:HH11	36:RQ:119:ARG:CG	2.25	0.45
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.45
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.45
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.45
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.82	0.45
45:RZ:140:ASP:O	45:RZ:142:SER:N	2.50	0.45
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.45
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
1:XA:1053:G:O6	1:XA:1199:U:H2'	2.16	0.45
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.32	0.45
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.50	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	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:HD21	5:XE:14:ARG:HB3	1.98	0.45
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.45
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.45
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.45
10:XJ:63:PHE:HB3	14:XN:57:ARG:O	2.17	0.45
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.45
24:XY:39:C:O2'	24:XY:40:G:P	2.74	0.45
25:YA:389:G:OP2	47:Y1:26:ARG:HB3	2.16	0.45
25:YA:392:C:H5"	25:YA:409:C:H5"	1.99	0.45
25:YA:1508:A:O2'	25:YA:1509:C:O4'	2.32	0.45
25:YA:1728:G:H8	25:YA:1732:A:H62	1.64	0.45
25:YA:1929:G:C3'	25:YA:1929:G:C8	3.00	0.45
25:YA:2335:A:O2'	25:YA:2336:A:H8	2.00	0.45
25:YA:2469:A:H5"	25:YA:2470:G:H8	1.80	0.45
25:YA:2776:A:OP1	25:YA:2776:A:H3'	2.17	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.45
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.45
36:YQ:58:PHE:O	36:YQ:58:PHE:CD1	2.70	0.45
36:YQ:93:TYR:CD1	36:YQ:93:TYR:N	2.85	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.45
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.45
45:YZ:152:ALA:HB2	45:YZ:168:GLU:HA	1.99	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.99	0.45
1:QA:539:A:H2'	1:QA:540:G:C8	2.52	0.44
1:QA:625:G:H2'	1:QA:626:U:H6	1.81	0.44
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.44
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.44
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.44
25:RA:868:U:H2'	25:RA:869:G:O4'	2.17	0.44
25:RA:1190:G:H5'	35:RP:32:THR:HA	2.00	0.44
25:RA:1310:G:OP2	53:R7:9:ARG:NH1	2.50	0.44
25:RA:2477:C:H2'	55:R9:1:MET:CG	2.47	0.44
25:RA:2847:U:OP1	39:RT:98:LYS:HD3	2.17	0.44
27:RD:44:ASN:HB2	27:RD:49:ILE:HA	1.93	0.44
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.44
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.44
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.44
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.44
37:RR:10:LEU:O	37:RR:11:ASN:C	2.54	0.44
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.48	0.44
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.18	0.44
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.44
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.44
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.52	0.44
1:XA:1080:A:H5"	5:XE:16:THR:HG21	1.99	0.44
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.44
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.44
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.44
13:XM:110:ARG:HH11	13:XM:110:ARG:HG3	1.82	0.44
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.44
25:YA:2289:G:N2	25:YA:2344:U:O2	2.50	0.44
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.44
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.44
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.44
46:Y0:14:ARG:HE	46:Y0:14:ARG:HB2	1.63	0.44
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.44
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.44
1:QA:328:C:H4'	1:QA:329:A:H5'	1.99	0.44
1:QA:501:C:H2'	1:QA:502:G:C8	2.51	0.44
1:QA:529:G:O6	12:QL:49:ASN:HA	2.16	0.44
1:QA:668:G:O2'	15:QO:46:HIS:HB3	2.16	0.44
1:QA:757:U:O2'	1:QA:879:C:O2	2.34	0.44
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.17	0.44
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	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
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
13:QM:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
20:QT:84:LEU:C	20:QT:84:LEU:HD13	2.36	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
25:RA:704:G:HO2'	25:RA:705:A:P	2.40	0.44
25:RA:784:A:C5	27:RD:229:VAL:HG21	2.52	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.83	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
27:RD:176:ARG:HH11	27:RD:176:ARG:CG	2.30	0.44
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
29:RF:7:TYR:N	29:RF:7:TYR:CD1	2.85	0.44
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.44
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.44
34:RO:19:ILE:HD13	34:RO:19:ILE:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
42:RW:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.44
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.44
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.99	0.44
48:R2:41:ILE:HD12	48:R2:41:ILE:O	2.16	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
1:XA:678:U:H2'	1:XA:679:C:C6	2.53	0.44
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.40	0.44
1:XA:1499:A:H1'	1:XA:1520:G:H5'	2.00	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:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.44
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.86	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.86	0.44
15:XO:83:GLU:C	15:XO:85:LEU:N	2.71	0.44
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.41	0.44
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.44
25:YA:415:A:H2'	25:YA:416:C:H6	1.82	0.44
25:YA:704:G:H1'	25:YA:727:A:N6	2.32	0.44
25:YA:1575:C:H2'	25:YA:1576:U:C6	2.52	0.44
25:YA:1759:A:H1'	25:YA:2711:A:C2	2.53	0.44
25:YA:2267:A:H5"	25:YA:2268:A:H5'	1.99	0.44
25:YA:2283:C:P	52:Y6:5:VAL:HG13	2.57	0.44
25:YA:2376:A:H2'	25:YA:2377:A:O4'	2.17	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.52	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.33	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
32:YI:29:TYR:O	32:YI:33:ARG:HB2	2.17	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
45:YZ:166:SER:H	45:YZ:167:PRO:HA	1.81	0.44
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
1:QA:857:C:H2'	1:QA:858:G:O4'	2.17	0.44
1:QA:939:G:H1	1:QA:1344:C:H42	1.65	0.44
1:QA:976:G:H5"	1:QA:1358:U:O2'	2.17	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.54	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	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:48:LYS:HB3	20:QT:51:GLU:CG	2.47	0.44
25:RA:27:G:O2'	25:RA:28:A:O5'	2.35	0.44
25:RA:194:G:H2'	25:RA:195:A:O4'	2.17	0.44
25:RA:459:U:H2'	25:RA:460:A:H8	1.82	0.44
25:RA:1614:A:H62	42:RW:93:ALA:HB2	1.82	0.44
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.52	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	1.99	0.44
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.81	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
39:RT:49:VAL:O	39:RT:49:VAL:CG1	2.64	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
42:RW:88:ARG:HH11	42:RW:88:ARG:HG2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.81	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
1:XA:164:U:H2'	1:XA:165:C:C6	2.53	0.44
1:XA:562:C:N4	12:XL:16:GLU:OE1	2.50	0.44
1:XA:1026:G:N7	1:XA:1036:G:N2	2.65	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
4:XD:94:LEU:O	4:XD:98:GLU:N	2.50	0.44
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.93	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	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
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:61:GLU:CG	14:XN:58:LYS:HE2	2.47	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
16:XP:72:ARG:HD3	16:XP:72:ARG:O	2.18	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.44
25:YA:956:G:N2	25:YA:960:A:OP2	2.48	0.44
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.52	0.44
25:YA:1464:C:HO2'	25:YA:1528:A:H8	1.59	0.44
25:YA:1695:G:H1'	27:YD:8:PRO:O	2.16	0.44
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.18	0.44
25:YA:2145:C:H2'	25:YA:2147:G:N2	2.33	0.44
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.52	0.44
25:YA:2283:C:OP1	52:Y6:5:VAL:HG13	2.18	0.44
25:YA:2308:G:H22	25:YA:2311:A:H2	1.65	0.44
25:YA:2355:C:H4'	46:Y0:36:ILE:HD11	1.99	0.44
25:YA:2547:U:H2'	25:YA:2548:G:C8	2.53	0.44
25:YA:2723:C:O3'	37:YR:1:MET:HE2	2.17	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.15	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:281:G:H8	1:QA:281:G:OP2	2.00	0.44
1:QA:407:G:O2'	4:QD:116:GLN:HG3	2.18	0.44
1:QA:793:U:O2	1:QA:1516:G:H4'	2.17	0.44
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.52	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	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
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	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
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	3.01	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
25:RA:923:C:H2'	25:RA:924:C:C6	2.53	0.44
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.53	0.44
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.17	0.44
25:RA:2481:G:O2'	25:RA:2482:G:P	2.75	0.44
25:RA:2527:C:H5"	55:R9:30:PRO:HB2	1.99	0.44
25:RA:2667:C:O2	31:RH:109:PHE:HB3	2.17	0.44
27:RD:155:LEU:N	27:RD:155:LEU:HD12	2.32	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
35:RP:45:LEU:N	35:RP:45:LEU:HD12	2.32	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
43:RX:87:GLN:HE21	43:RX:87:GLN:HB2	1.55	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
46:R0:74:ARG:HD3	46:R0:74:ARG:C	2.38	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.56	0.44
1:XA:651:C:H2'	1:XA:652:U:C6	2.53	0.44
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.17	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
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
8:XH:1:MET:H3	8:XH:1:MET:CE	2.31	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
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
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
25:YA:27:G:O2'	25:YA:28:A:H8	1.99	0.44
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.18	0.44
25:YA:987:G:O2'	25:YA:1000:A:N3	2.46	0.44
25:YA:1790:C:H5"	25:YA:1791:A:OP1	2.17	0.44
25:YA:1929:G:H3'	25:YA:1929:G:C8	2.51	0.44
25:YA:2295:C:OP1	38:YS:10:ARG:HD2	2.17	0.44
26:YB:16:G:H2'	26:YB:17:C:H6	1.81	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
32:YI:144:VAL:HG13	32:YI:145:VAL:HG13	1.98	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.25	0.44
35:YP:6:LEU:N	35:YP:6:LEU:HD22	2.31	0.44
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
35:YP:45:LEU:N	35:YP:45:LEU:HD12	2.32	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
45:YZ:137:ILE:HD11	45:YZ:158:PRO:HG3	1.98	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.19	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
1:QA:519:C:H2'	1:QA:520:A:O4'	2.17	0.44
1:QA:580:U:H2'	1:QA:581:G:O4'	2.18	0.44
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.18	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	1.99	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.83	0.44
25:RA:1239:G:H2'	25:RA:1240:U:O4'	2.17	0.44
25:RA:1316:U:H2'	25:RA:1317:A:C8	2.53	0.44
25:RA:2134:A:H62	25:RA:2157:G:H1'	1.83	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.44
29:RF:174:VAL:CG1	29:RF:174:VAL:O	2.65	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
1:XA:908:A:H2'	1:XA:909:A:H8	1.83	0.44
1:XA:946:A:H2'	1:XA:947:G:C8	2.53	0.44
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.81	0.44
1:XA:1352:C:OP1	21:XU:3:LYS:NZ	2.45	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	0.44
19:XS:65:ASN:N	50:Y4:55:ARG:HH11	2.15	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
22:XV:35:A:C2	23:XX:3:G:C2	3.05	0.44
25:YA:99:U:H4'	25:YA:101:G:H5'	2.00	0.44
25:YA:173:G:H2'	25:YA:174:C:C6	2.52	0.44
25:YA:451:C:H4'	29:YF:52:LYS:HZ1	1.82	0.44
25:YA:1140:C:P	33:YN:66:LYS:HZ3	2.40	0.44
25:YA:2619:C:H1'	28:YE:156:MET:HE1	1.99	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
29:YF:24:LEU:HD12	29:YF:24:LEU:N	2.33	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:60:ARG:HB2	36:YQ:60:ARG:HH21	1.82	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
46:Y0:53:MET:HB3	46:Y0:59:LEU:HD23	1.98	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
1:QA:403:C:H4'	4:QD:122:ARG:NH2	2.33	0.44
1:QA:457:C:N4	1:QA:475:G:H1	2.16	0.44
1:QA:986:A:H1'	19:QS:54:GLY:O	2.17	0.44
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.39	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.37	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.17	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.70	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.17	0.44
25:RA:298:G:O2'	25:RA:322:A:N1	2.43	0.44
25:RA:337:C:O3'	44:RY:4:LYS:HG3	2.17	0.44
25:RA:838:C:H2'	25:RA:839:U:H6	1.83	0.44
25:RA:942:G:O2'	25:RA:1189:A:N3	2.39	0.44
25:RA:1113:U:H2'	25:RA:1114:G:H8	1.82	0.44
25:RA:1263:U:O2'	51:R5:11:THR:HG23	2.17	0.44
25:RA:1401:G:H2'	25:RA:1402:C:O4'	2.18	0.44
25:RA:1899:G:O2'	25:RA:1900:A:H5"	2.17	0.44
25:RA:2181:G:H2'	25:RA:2182:G:H8	1.83	0.44
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
32:RI:83:ALA:HA	32:RI:88:ILE:HA	1.99	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.72	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.33	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.16	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:35:LEU:HD22	41:RV:35:LEU:N	2.23	0.44
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
1:XA:266:G:H5"	1:XA:267:C:H5	1.79	0.44
1:XA:632:A:C8	1:XA:633:G:C8	3.06	0.44
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.18	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.99	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	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
25:YA:594:U:H5'	54:Y8:61:LEU:CD2	2.48	0.44
25:YA:1309:G:OP1	53:Y7:9:ARG:HD3	2.17	0.44
25:YA:1365:A:OP2	47:Y1:3:LYS:HB2	2.17	0.44
25:YA:2032:G:H21	28:YE:146:THR:CG2	2.30	0.44
25:YA:2377:A:H4'	38:YS:111:GLU:O	2.17	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.53	0.44
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.44
46:Y0:25:ARG:HD2	46:Y0:29:GLN:HE22	1.81	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
52:Y6:19:ARG:HD2	52:Y6:19:ARG:HA	1.77	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
1:QA:983:A:N1	1:QA:1222:G:N2	2.63	0.44
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.50	0.44
1:QA:1225:A:OP1	13:QM:102:ARG:HA	2.17	0.44
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.17	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.82	0.44
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
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
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
25:RA:1061:U:H5'	25:RA:1070:A:O2'	2.18	0.44
25:RA:1327:C:O3'	37:RR:105:ARG:NH2	2.50	0.44
25:RA:1871:A:H2'	25:RA:1872:A:C8	2.53	0.44
25:RA:2359:C:H2'	25:RA:2360:A:O4'	2.18	0.44
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.49	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
30:RG:67:LYS:HD2	30:RG:67:LYS:N	2.33	0.44
32:RI:53:ALA:O	32:RI:57:ARG:CD	2.64	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
37:RR:79:LEU:HD23	37:RR:79:LEU:O	2.16	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.98	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
1:XA:606:G:H1	1:XA:631:G:H5"	1.82	0.44
1:XA:713:G:H2'	1:XA:714:G:C8	2.53	0.44
1:XA:836:G:C6	1:XA:851:G:C6	3.06	0.44
1:XA:985:C:H2'	1:XA:986:A:H8	1.82	0.44
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.33	0.44
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.50	0.44
1:XA:1187:G:P	9:XI:113:LYS:NZ	2.91	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	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
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.65	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
16:XP:50:LYS:HD3	16:XP:50:LYS:O	2.17	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:1101:U:H2'	25:YA:1102:C:H6	1.82	0.44
25:YA:1149:G:H2'	25:YA:1150:C:C6	2.53	0.44
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.52	0.44
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.52	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.79	0.44
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
40:YU:79:PHE:CE2	40:YU:83:LEU:CD1	3.00	0.44
40:YU:97:ASP:HA	40:YU:100:VAL:CG2	2.47	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	0.44
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
1:QA:939:G:H5"	7:QG:102:ARG:CZ	2.47	0.44
1:QA:1287:A:H2'	1:QA:1288:A:C8	2.53	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.18	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.44
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.47	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
25:RA:363(B):G:H2'	25:RA:363(C):G:C8	2.53	0.44
25:RA:458:G:O2'	53:R7:39:ARG:HD3	2.18	0.44
25:RA:1258:C:O4'	29:RF:84:VAL:HG11	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1329:U:H5”	25:RA:1330:C:H5	1.82	0.44
25:RA:2102:U:H2’	25:RA:2103:C:C6	2.52	0.44
25:RA:2183:C:H2’	25:RA:2184:G:H8	1.82	0.44
25:RA:2355:C:H4’	46:R0:36:ILE:HD11	2.00	0.44
25:RA:2439:A:O2’	25:RA:2440:C:OP2	2.28	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
28:RE:199:ARG:HH11	28:RE:199:ARG:HG3	1.82	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.83	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	1.99	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.21	0.44
39:RT:114:LEU:HD23	39:RT:114:LEU:HA	1.74	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
1:XA:129(A):G:N2	1:XA:191(A):G:C5	2.86	0.44
1:XA:189:U:C2	17:XQ:72:ARG:NH1	2.86	0.44
1:XA:1347:G:N7	9:XI:11:LYS:NZ	2.66	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
10:XJ:53:PRO:C	14:XN:41:ARG:NH2	2.71	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.44
25:YA:414:C:H2’	25:YA:415:A:C8	2.52	0.44
25:YA:922:U:H2’	25:YA:923:C:C6	2.52	0.44
25:YA:1279:G:C4’	37:YR:31:HIS:HD2	2.23	0.44
25:YA:1550:C:H2’	25:YA:1551:C:C6	2.53	0.44
25:YA:2567:G:H2’	25:YA:2568:C:H6	1.82	0.44
26:YB:44:G:H1’	26:YB:47:C:N4	2.33	0.44
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
30:YG:16:ARG:NH2	30:YG:31:VAL:CG1	2.75	0.44
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
32:YI:33:ARG:HB3	32:YI:35:LEU:HG	2.00	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
37:YR:41:ALA:C	37:YR:43:GLU:H	2.21	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
42:YW:67:ASP:OD2	42:YW:67:ASP:N	2.50	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
1:QA:1080:A:H5"	5:QE:16:THR:HG21	2.00	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.17	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:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	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:QV:58:A:O2'	22:QV:60:U:OP2	2.16	0.44
25:RA:38:A:N3	29:RF:48:THR:OG1	2.45	0.44
25:RA:451:C:H4'	29:RF:52:LYS:NZ	2.33	0.44
25:RA:629:G:H5'	25:RA:650:C:O2'	2.18	0.44
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.82	0.44
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.53	0.44
25:RA:2636:U:OP2	28:RE:79:ARG:NH1	2.51	0.44
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
27:RD:44:ASN:H	27:RD:44:ASN:ND2	1.97	0.44
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.44
27:RD:206:LEU:HD23	27:RD:206:LEU:HA	1.49	0.44
28:RE:13:ARG:HH11	28:RE:13:ARG:HB3	1.82	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
29:RF:24:LEU:HD12	29:RF:24:LEU:N	2.33	0.44
31:RH:109:PHE:C	31:RH:111:HIS:H	2.21	0.44
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.44
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.44
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.44
34:RO:63:VAL:O	34:RO:63:VAL:HG23	2.18	0.44
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.53	0.44
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.00	0.44
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.44
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.44
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.44
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.44
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.44
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.18	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
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.44
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.44
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.44
17:XQ:41:LYS:HZ3	17:XQ:92:ARG:HH22	1.61	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
25:YA:1316:U:H2'	25:YA:1317:A:C8	2.52	0.44
25:YA:2478:A:OP1	55:Y9:31:LYS:HD3	2.18	0.44
25:YA:2839:G:H21	37:YR:92:GLY:HA3	1.83	0.44
26:YB:40:U:N3	26:YB:43:C:H5"	2.33	0.44
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.44
28:YE:48:GLN:HE21	28:YE:48:GLN:HB3	1.55	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
31:YH:109:PHE:C	31:YH:111:HIS:H	2.21	0.44
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.44
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.44
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.44
42:YW:88:ARG:HH11	42:YW:88:ARG:HG2	1.82	0.44
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.44
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.82	0.44
1:QA:56:U:H4'	32:YI:82:ARG:HH12	1.83	0.43
1:QA:966:G:O2'	9:QI:127:LYS:O	2.34	0.43
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.32	0.43
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.39	0.43
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	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:136:VAL:O	2:QB:140:HIS:N	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	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
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
25:RA:222:A:HO2'	25:RA:223:A:P	2.40	0.43
25:RA:1660:C:H2'	25:RA:1661:G:H8	1.82	0.43
25:RA:1693:U:H1'	27:RD:14:ARG:HH22	1.82	0.43
25:RA:2437:U:H2'	25:RA:2438:U:H6	1.82	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.97	0.43
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.48	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.43
39:RT:99:LEU:CD1	39:RT:99:LEU:O	2.65	0.43
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.43
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.43
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.83	0.43
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.43
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.43
1:XA:501:C:H1'	1:XA:549:C:H1'	2.00	0.43
1:XA:546:G:P	4:XD:72:GLU:HB3	2.57	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.43
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.43
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.43
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43
14:XN:17:LYS:HG3	14:XN:18:VAL:N	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.43
25:YA:49:A:H5"	25:YA:51:G:H5'	2.00	0.43
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.33	0.43
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.53	0.43
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.00	0.43
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.43
27:YD:213:ARG:HD2	27:YD:213:ARG:HA	1.60	0.43
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.43
32:YI:81:VAL:HG21	32:YI:88:ILE:HD12	1.99	0.43
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.43
34:YO:91:LEU:N	34:YO:91:LEU:CD2	2.80	0.43
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.43
35:YP:70:GLN:N	35:YP:70:GLN:OE1	2.51	0.43
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.43
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.43
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.43
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.43
1:QA:116:A:H61	1:QA:313:A:H1'	1.83	0.43
1:QA:458:C:H2'	1:QA:464:G:H8	1.83	0.43
1:QA:546:G:P	4:QD:72:GLU:HB3	2.58	0.43
1:QA:701:C:H4'	1:QA:702:A:H5"	2.00	0.43
1:QA:1205:U:H1'	3:QC:195:VAL:HG23	1.99	0.43
1:QA:1297:C:O2'	1:QA:1298:C:P	2.76	0.43
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.17	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.43
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.18	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.43
20:QT:101:GLY:C	20:QT:103:GLY:H	2.21	0.43
25:RA:492:A:H2'	25:RA:493:G:O4'	2.18	0.43
25:RA:1444(A):A:O2'	25:RA:1460:A:N3	2.50	0.43
25:RA:1486:A:H2'	25:RA:1487:G:C8	2.52	0.43
25:RA:1799:G:H5'	25:RA:1819:A:H61	1.83	0.43
25:RA:2010:G:H5"	42:RW:42:ARG:HB2	2.00	0.43
25:RA:2420:C:H6	25:RA:2420:C:O5'	2.00	0.43
25:RA:2645:G:C3'	25:RA:2646:C:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:24:G:O6	26:RB:56:G:O2'	2.32	0.43
26:RB:57:A:C4	30:RG:29:TRP:CB	3.02	0.43
26:RB:65:C:H41	26:RB:108:C:H2'	1.83	0.43
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43
29:RF:144:LYS:C	29:RF:146:ALA:H	2.20	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.99	0.43
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.66	0.43
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.43
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.43
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.43
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.33	0.43
1:XA:1032(A):G:H2'	1:XA:1032(B):G:C8	2.53	0.43
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.36	0.43
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.18	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:20:GLN:O	5:XE:21:ALA:C	2.57	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
10:XJ:96:ILE:HD13	10:XJ:96:ILE:H	1.83	0.43
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.00	0.43
19:XS:68:GLY:CA	50:Y4:68:ARG:CG	2.97	0.43
25:YA:92:G:H2'	25:YA:93:C:C6	2.53	0.43
25:YA:127:A:H5"	25:YA:128:C:C6	2.54	0.43
25:YA:588:U:H2'	25:YA:589:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.53	0.43
25:YA:1424:G:H2'	25:YA:1425:G:O4'	2.18	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
32:YI:79:ILE:HG21	32:YI:142:VAL:HG12	2.00	0.43
33:YN:87:LEU:C	33:YN:87:LEU:CD2	2.87	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.43
39:YT:49:VAL:O	39:YT:49:VAL:CG1	2.64	0.43
39:YT:114:LEU:HA	39:YT:114:LEU:HD23	1.74	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.43
45:YZ:166:SER:HB2	45:YZ:167:PRO:C	2.39	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
1:QA:181:G:O2'	1:QA:182:U:O5'	2.35	0.43
1:QA:192:U:H4'	20:QT:103:GLY:HA2	2.00	0.43
1:QA:555:C:H2'	1:QA:556:C:C6	2.53	0.43
1:QA:909:A:H2'	1:QA:910:C:O4'	2.18	0.43
1:QA:1223:C:P	19:QS:78:ARG:HH12	2.41	0.43
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.52	0.43
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.83	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.01	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
24:QY:39:C:H4'	24:QY:40:G:OP1	2.18	0.43
25:RA:67:U:H3	25:RA:74:A:H2	1.63	0.43
25:RA:746:A:C5	25:RA:2611:U:H5"	2.52	0.43
25:RA:826:U:H2'	25:RA:828:U:O4'	2.19	0.43
25:RA:1012:U:O2'	25:RA:1013:C:OP2	2.28	0.43
25:RA:1050:A:H8	25:RA:2751:G:HO2'	1.66	0.43
25:RA:1083:U:O2'	25:RA:1085:A:H5"	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1278:A:O3'	37:RR:34:ILE:HG23	2.18	0.43
25:RA:1578:U:C2'	25:RA:1579:A:H5'	2.47	0.43
25:RA:1771:C:O2'	25:RA:1786:A:H8	2.02	0.43
25:RA:2336:A:H61	46:R0:43:THR:CG2	2.31	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.01	0.43
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.17	0.43
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.84	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
31:RH:136:ILE:HD12	31:RH:136:ILE:N	2.31	0.43
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.51	0.43
32:RI:79:ILE:HG21	32:RI:142:VAL:HG12	1.99	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
37:RR:81:ASP:N	37:RR:81:ASP:OD2	2.50	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.43
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.28	0.43
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:49:PHE:N	50:R4:49:PHE:HD1	2.16	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.71	0.43
1:XA:769:G:H4'	1:XA:1513:A:H4'	2.01	0.43
1:XA:963:G:H1	1:XA:972:C:H42	1.66	0.43
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.35	0.43
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:60:LYS:O	7:XG:61:VAL:C	2.57	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	2.00	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.85	0.43
13:XM:65:LYS:HE3	50:Y4:50:VAL:CG1	2.48	0.43
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.43
25:YA:220:G:O2'	25:YA:233:A:N3	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:540:G:H5'	25:YA:541:C:OP2	2.17	0.43
25:YA:636:G:OP1	35:YP:132:LYS:HB2	2.17	0.43
25:YA:1872:A:H5'	25:YA:1878:G:OP2	2.18	0.43
25:YA:2845:G:H5"	39:YT:55:ASN:HA	2.00	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.30	0.43
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.43
30:YG:31:VAL:O	30:YG:31:VAL:HG13	2.18	0.43
31:YH:136:ILE:HD12	31:YH:136:ILE:N	2.31	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.43
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.19	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.18	0.43
41:YV:1:MET:HE1	41:YV:43:GLU:HG2	2.00	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.37	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.19	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
53:Y7:19:ARG:HG2	53:Y7:19:ARG:NH1	2.33	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.67	0.43
1:QA:501:C:H2'	1:QA:502:G:H8	1.83	0.43
1:QA:1296:C:H3'	1:QA:1297:C:C6	2.53	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	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
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.82	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.81	0.43
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.19	0.43
12:QL:91:LYS:HE2	12:QL:91:LYS:HB2	1.76	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
25:RA:1204:A:H1'	25:RA:1206:G:C8	2.52	0.43
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.52	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.19	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.31	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	2.01	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.53	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.19	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
44:RY:81:LYS:HZ2	44:RY:98:VAL:HB	1.83	0.43
45:RZ:107:THR:OG1	45:RZ:111:VAL:HB	2.19	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
1:XA:148:G:H1	1:XA:174:C:H42	1.66	0.43
1:XA:910:C:H5"	12:XL:97:ARG:HH22	1.84	0.43
1:XA:1446:A:N3	39:YT:118:ARG:HD2	2.33	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
3:XC:27:LYS:HB3	3:XC:27:LYS:NZ	2.34	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
22:XV:54:U:C4	22:XV:55:U:C4	3.06	0.43
25:YA:957:A:N1	25:YA:2458:G:H4'	2.33	0.43
25:YA:1250:G:OP2	35:YP:21:ARG:HD3	2.17	0.43
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.18	0.43
25:YA:1783:A:H5'	25:YA:2608:G:H4'	2.01	0.43
25:YA:2024:G:H2'	25:YA:2025:C:H6	1.84	0.43
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.34	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	1.99	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
33:YN:131:GLN:HE21	33:YN:131:GLN:HB3	1.57	0.43
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.47	0.43
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43
1:QA:246:A:N6	1:QA:281:G:H1'	2.33	0.43
1:QA:520:A:N1	1:QA:536:C:H1'	2.33	0.43
1:QA:676:A:H1'	11:QK:115:PRO:HB3	1.99	0.43
1:QA:833:U:H2'	1:QA:834:C:C6	2.53	0.43
1:QA:855:G:OP2	1:QA:871:U:N3	2.36	0.43
1:QA:1211:U:H5'	1:QA:1212:U:OP1	2.17	0.43
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
3:QC:27:LYS:NZ	3:QC:27:LYS:HB3	2.34	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	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
9:QI:41:VAL:HG12	9:QI:41:VAL:O	2.18	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
22:QV:4:G:C6	22:QV:70:G:N1	2.87	0.43
22:QV:15:G:N2	22:QV:48:C:H42	2.17	0.43
25:RA:389:G:H22	35:RP:72:PRO:CD	2.32	0.43
25:RA:690:G:H2'	25:RA:691:C:C6	2.54	0.43
25:RA:952:G:P	36:RQ:16:ARG:HH12	2.41	0.43
25:RA:1020:A:N1	25:RA:1141:U:O2'	2.49	0.43
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.34	0.43
25:RA:1782:C:H1'	25:RA:2609:U:H5"	2.00	0.43
25:RA:1889:A:N1	25:RA:2234:G:H1'	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2114:A:N6	25:RA:2119:A:H62	2.16	0.43
25:RA:2599:G:OP2	27:RD:236:GLY:HA2	2.19	0.43
25:RA:2816:C:H2'	25:RA:2817:G:H8	1.82	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.19	0.43
33:RN:103:VAL:O	33:RN:104:LYS:C	2.57	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
1:XA:250:A:H5'	1:XA:252:U:O4'	2.19	0.43
1:XA:537:G:H5"	12:XL:113:ARG:NH1	2.33	0.43
1:XA:600:C:H2'	1:XA:601:C:H6	1.84	0.43
1:XA:1387:G:H2'	1:XA:1388:C:C6	2.53	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
7:XG:78:ARG:HH11	7:XG:78:ARG:CG	2.31	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.19	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
22:XV:49:G:O6	22:XV:65:C:N4	2.49	0.43
25:YA:500:G:N2	25:YA:502:A:H3'	2.33	0.43
25:YA:1478:G:O2'	25:YA:1479:G:H5'	2.18	0.43
25:YA:2126:A:H4'	25:YA:2127:G:O5'	2.18	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
32:YI:75:LEU:HB3	32:YI:105:HIS:CD2	2.54	0.43
34:YO:63:VAL:O	34:YO:63:VAL:HG23	2.17	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
41:YV:35:LEU:HD22	41:YV:35:LEU:N	2.23	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:70:LEU:HD23	43:YX:70:LEU:H	1.78	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
1:QA:756:C:H2'	1:QA:757:U:O4'	2.18	0.43
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.83	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	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
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
22:QV:54:U:C4	22:QV:55:U:C4	3.06	0.43
25:RA:222:A:H5"	25:RA:421:U:OP1	2.19	0.43
25:RA:234:C:H2'	25:RA:235:U:C6	2.53	0.43
25:RA:278:A:H61	25:RA:362:U:H3	1.66	0.43
25:RA:298:G:OP2	44:RY:85:VAL:HG22	2.18	0.43
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.18	0.43
25:RA:948:G:H2'	25:RA:949:C:C6	2.54	0.43
25:RA:1204:A:H1'	25:RA:1206:G:N9	2.34	0.43
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.54	0.43
25:RA:2811:G:H8	25:RA:2811:G:OP2	2.01	0.43
26:RB:42:C:O4'	30:RG:69:ALA:HB2	2.19	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.50	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.43
55:R9:7:VAL:HG21	55:R9:36:GLN:HB2	2.00	0.43
1:XA:346:G:N2	1:XA:347:G:C6	2.86	0.43
1:XA:686:U:O4	1:XA:703:G:O2'	2.37	0.43
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.18	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.53	0.43
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	2.19	0.43
25:YA:2420:C:OP1	54:Y8:34:TRP:HB2	2.18	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.49	0.43
28:YE:143:ASN:N	28:YE:143:ASN:ND2	2.65	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
33:YN:118:LYS:C	33:YN:120:LEU:H	2.20	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.19	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
2:QB:33:TYR:C	2:QB:33:TYR:CD1	2.92	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.48	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
10:QJ:16:LEU:HD13	10:QJ:16:LEU:C	2.38	0.43
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
25:RA:51:G:H8	25:RA:51:G:OP2	2.01	0.43
25:RA:588:U:C2	29:RF:90:PHE:CE1	3.06	0.43
25:RA:994:C:O2	41:RV:10:LYS:HE2	2.18	0.43
25:RA:1090:U:H3	25:RA:1102:C:H1'	1.83	0.43
25:RA:1497:U:H5"	25:RA:1498:C:H5	1.84	0.43
25:RA:2349:G:OP2	54:R8:42:ARG:HD3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:55:U:C4'	30:RG:28:VAL:HG21	2.44	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
32:RI:96:ASP:N	32:RI:96:ASP:OD2	2.50	0.43
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.33	0.43
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.43
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.01	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
1:XA:501:C:O3'	12:XL:118:SER:HB2	2.19	0.43
1:XA:618:C:N3	1:XA:622:A:N6	2.63	0.43
1:XA:741:G:H2'	1:XA:742:G:O4'	2.19	0.43
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.34	0.43
1:XA:953:G:H5'	1:XA:965:A:H61	1.83	0.43
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.82	0.43
1:XA:1446:A:C2	39:YT:118:ARG:HD2	2.53	0.43
1:XA:1486:G:H2'	1:XA:1487:G:O4'	2.19	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.69	0.43
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.43
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	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
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.81	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	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
25:YA:952:G:P	36:YQ:16:ARG:HH12	2.41	0.43
25:YA:1543:A:C2	25:YA:1545:A:C4	3.06	0.43
25:YA:1557:C:OP2	25:YA:1558:A:O2'	2.34	0.43
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.19	0.43
25:YA:2657:A:H1'	25:YA:2665:A:N6	2.34	0.43
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.81	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.83	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
39:YT:64:ARG:HH11	39:YT:64:ARG:HG2	1.84	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
45:YZ:18:LEU:H	45:YZ:18:LEU:HD12	1.83	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
50:Y4:15:ILE:N	50:Y4:15:ILE:CD1	2.78	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
1:QA:56:U:H2'	1:QA:57:G:C8	2.54	0.43
1:QA:953:G:H2'	1:QA:954:G:O4'	2.19	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.43
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
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
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
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
25:RA:242:G:O3'	54:R8:6:THR:HG23	2.19	0.43
25:RA:537:C:O2	33:RN:45:ASN:ND2	2.51	0.43
25:RA:1027:A:N6	25:RA:1126:A:C4	2.87	0.43
25:RA:1161:C:O2'	41:RV:8:GLY:HA2	2.18	0.43
25:RA:1645:G:H5"	25:RA:1646:C:H5'	2.01	0.43
25:RA:2377:A:H2	38:RS:18:ILE:HD11	1.83	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
28:RE:203:LYS:HD2	28:RE:203:LYS:C	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
32:RI:14:ASP:O	32:RI:16:GLY:N	2.52	0.43
32:RI:74:ASN:OD1	32:RI:74:ASN:N	2.50	0.43
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.66	0.43
33:RN:1:MET:HG3	33:RN:1:MET:O	2.19	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
35:RP:18:ARG:O	35:RP:19:VAL:CB	2.52	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.38	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.18	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.82	0.43
45:RZ:141:VAL:HA	45:RZ:144:LEU:HD23	2.01	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.87	0.43
53:R7:19:ARG:HG2	53:R7:19:ARG:NH1	2.33	0.43
1:XA:5:U:O2'	1:XA:6:G:N3	2.52	0.43
1:XA:698:G:C6	1:XA:699:C:C4	3.07	0.43
1:XA:737:A:H2'	1:XA:738:C:H6	1.84	0.43
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.34	0.43
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.33	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	2.38	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.43
25:YA:524:U:H2'	25:YA:525:U:C6	2.53	0.43
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.54	0.43
25:YA:2645:G:C3'	25:YA:2646:C:H5'	2.47	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.56	0.43
1:QA:310:G:H4'	16:QP:31:LYS:HD3	2.01	0.43
1:QA:452:A:O2'	1:QA:453:A:O4'	2.35	0.43
1:QA:1285:A:H4'	1:QA:1286:A:O5'	2.19	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.21	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.43
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.23	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.19	0.43
25:RA:99:U:H4'	25:RA:101:G:O5'	2.19	0.43
25:RA:270:A:N1	25:RA:366:C:H4'	2.33	0.43
25:RA:345:A:O2'	25:RA:347:A:N7	2.51	0.43
25:RA:825:C:H2'	25:RA:826:U:O4'	2.19	0.43
25:RA:890:A:O2'	25:RA:892:G:H8	2.02	0.43
25:RA:1084:A:N1	25:RA:1085:A:N6	2.64	0.43
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.18	0.43
25:RA:1819:A:H5"	27:RD:158:ALA:CB	2.48	0.43
25:RA:2629:A:O2'	25:RA:2630:G:H5"	2.19	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.56	0.43
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.43
29:RF:183:VAL:O	29:RF:184:TYR:C	2.57	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.43
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:28:SER:O	42:RW:30:GLU:N	2.50	0.43
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.43
45:RZ:6:LYS:HE3	45:RZ:6:LYS:HB2	1.87	0.43
45:RZ:146:ILE:HG22	45:RZ:174:VAL:C	2.39	0.43
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
54:R8:28:GLY:O	54:R8:29:LYS:O	2.36	0.43
1:XA:971:G:C5	1:XA:1365:G:H5'	2.54	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	2.30	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
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.43
25:YA:185:U:H2'	25:YA:186:G:C8	2.53	0.43
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.52	0.43
25:YA:1085:A:O2'	25:YA:1086:A:OP1	2.32	0.43
25:YA:2760:C:H2'	25:YA:2761:G:H5"	2.01	0.43
26:YB:91:C:H5"	45:YZ:79:ARG:NH1	2.34	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.24	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.66	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
1:QA:109:A:C6	1:QA:326:G:C6	3.07	0.43
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.19	0.43
1:QA:1055:A:N7	1:QA:1200:C:N4	2.67	0.43
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.19	0.43
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.43
6:QF:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.43
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.43
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.43
22:QV:43:A:H2'	22:QV:44:A:C8	2.54	0.43
25:RA:1059:G:H3'	25:RA:1060:U:H5"	2.00	0.43
25:RA:2123:G:H2'	25:RA:2124:G:C8	2.54	0.43
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.76	0.43
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.43
28:RE:48:GLN:HE21	28:RE:48:GLN:HB3	1.55	0.43
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.43
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.43
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.43
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.43
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.43
33:RN:7:LYS:HD2	33:RN:7:LYS:N	2.29	0.43
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.86	0.43
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.66	0.43
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.49	0.43
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.43
46:R0:5:LYS:HE2	46:R0:5:LYS:HB3	1.79	0.43
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.19	0.43
1:XA:376:G:OP2	16:XP:67:THR:HG21	2.18	0.43
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.49	0.43
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.49	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.43
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.43
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.43
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	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
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
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
25:YA:252:G:OP2	35:YP:50:ARG:NH1	2.52	0.43
25:YA:265:A:H2'	25:YA:266:G:O4'	2.19	0.43
25:YA:307:G:H21	25:YA:330:A:N6	2.15	0.43
25:YA:819:A:C4	25:YA:1189:A:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1930:G:O2'	25:YA:1931:U:O5'	2.36	0.43
25:YA:2309:A:H2'	25:YA:2310:A:O4'	2.18	0.43
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.18	0.43
25:YA:2870:C:C5'	37:YR:65:LEU:HD21	2.48	0.43
26:YB:15:A:H1'	26:YB:109:G:C8	2.54	0.43
26:YB:16:G:N2	26:YB:69:G:H1'	2.34	0.43
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.43
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.43
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.28	0.43
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.43
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.43
37:YR:94:TYR:N	37:YR:94:TYR:CD2	2.87	0.43
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.39	0.43
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.43
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.43
1:QA:514:C:H2'	1:QA:515:G:C8	2.53	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.02	0.42
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.42
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.84	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
25:RA:1188:U:O2'	25:RA:1189:A:H5'	2.18	0.42
25:RA:1889:A:O2'	25:RA:2087:G:H5'	2.18	0.42
25:RA:2031:A:N3	25:RA:2455:G:O2'	2.42	0.42
25:RA:2056:G:H2'	25:RA:2056:G:N3	2.33	0.42
26:RB:57:A:N9	30:RG:29:TRP:HB2	2.34	0.42
27:RD:17:THR:HG21	27:RD:204:ILE:HA	1.99	0.42
27:RD:134:ARG:H	27:RD:134:ARG:HG3	1.55	0.42
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.42
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.42
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.42
33:RN:15:LEU:C	33:RN:15:LEU:HD13	2.39	0.42
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.18	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.42
45:RZ:153:SER:HB2	45:RZ:167:PRO:HB3	2.01	0.42
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.42
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.19	0.42
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.42
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.42
51:R5:3:LYS:HA	51:R5:3:LYS:CE	2.36	0.42
1:XA:369:C:OP2	1:XA:388:G:N2	2.51	0.42
1:XA:411:A:C6	1:XA:429:U:C4	3.07	0.42
1:XA:431:A:H2'	1:XA:432:A:O4'	2.18	0.42
1:XA:1314:C:C5	19:XS:4:SER:HB2	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
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.42
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.42
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.42
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.42
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.42
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	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:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.47	0.42
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.42
22:XV:4:G:C6	22:XV:70:G:N1	2.86	0.42
22:XV:53:G:HO2'	22:XV:54:U:H6	1.66	0.42
25:YA:483:A:C5'	44:YY:49:VAL:HG13	2.49	0.42
25:YA:855:G:C6	25:YA:856:C:C4	3.06	0.42
25:YA:1678:G:N2	25:YA:1989:G:H22	2.17	0.42
25:YA:2126:A:H1'	25:YA:2127:G:OP2	2.19	0.42
25:YA:2210:G:H2'	25:YA:2210:G:N3	2.33	0.42
26:YB:15:A:H5'	26:YB:16:G:H8	1.76	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.19	0.42
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.49	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.34	0.42
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.42
32:YI:13:GLY:HA3	32:YI:17:GLN:OE1	2.19	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.42
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.42
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.42
1:QA:191(D):U:H2'	1:QA:191(E):G:H8	1.83	0.42
1:QA:292:G:C5	1:QA:293:G:H1'	2.53	0.42
1:QA:308:C:H2'	1:QA:309:G:C8	2.54	0.42
1:QA:399:G:H2'	1:QA:400:C:C6	2.54	0.42
1:QA:452:A:C6	1:QA:453:A:C6	3.07	0.42
1:QA:950:U:H3'	13:QM:102:ARG:NH2	2.34	0.42
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.50	0.42
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.23	0.42
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.42
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.42
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
22:QV:53:G:HO2'	22:QV:54:U:H6	1.66	0.42
25:RA:207:A:H2'	25:RA:208:C:O4'	2.19	0.42
25:RA:507:A:C5'	25:RA:508:G:H5'	2.48	0.42
25:RA:749:C:O2	25:RA:1618:A:H2'	2.18	0.42
25:RA:900:A:H5'	25:RA:901:A:OP2	2.19	0.42
25:RA:2781:A:H5"	25:RA:2782:G:H5'	2.00	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.79	0.42
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
40:RU:91:ASP:O	40:RU:95:LEU:N	2.43	0.42
1:XA:430:A:OP1	4:XD:9:CYS:N	2.48	0.42
1:XA:923:A:OP1	5:XE:21:ALA:HB2	2.19	0.42
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.18	0.42
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.20	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.26	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.71	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.42
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.82	0.42
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
25:YA:83:G:N2	25:YA:103:A:OP2	2.44	0.42
25:YA:412:A:N7	25:YA:2411:A:H2	2.17	0.42
25:YA:618:G:H2'	25:YA:618(A):C:O4'	2.19	0.42
25:YA:1111:A:O2'	25:YA:1112:G:H4'	2.20	0.42
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.54	0.42
25:YA:1209:G:H21	25:YA:1210:A:H62	1.67	0.42
25:YA:1359:A:C6	25:YA:1372:U:O4	2.72	0.42
25:YA:1799:G:OP1	27:YD:260:ARG:HB2	2.19	0.42
25:YA:2308:G:N2	25:YA:2311:A:H2	2.16	0.42
25:YA:2687:U:C4	25:YA:2688:U:C5	3.07	0.42
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
32:YI:93:THR:HG22	32:YI:119:PRO:HB3	2.01	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.52	0.42
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.42
48:Y2:27:GLU:H	48:Y2:27:GLU:CD	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
1:QA:191:G:N9	20:QT:105:SER:HB3	2.33	0.42
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.19	0.42
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.25	0.42
1:QA:1163:C:H42	1:QA:1173:G:H1	1.67	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.19	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.42
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
22:QV:1:C:O2'	22:QV:2:G:H5'	2.19	0.42
25:RA:328:U:H4'	44:RY:68:HIS:CG	2.54	0.42
25:RA:1335:U:OP2	43:RX:65:ARG:NH2	2.53	0.42
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.54	0.42
25:RA:1786:A:C2	25:RA:2606:C:H1'	2.54	0.42
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.82	0.42
25:RA:2481:G:HO2'	25:RA:2482:G:P	2.42	0.42
26:RB:52:A:H62	38:RS:33:LYS:HG3	1.84	0.42
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.48	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.47	0.42
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.19	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.32	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.67	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:8:ARG:HG3	42:RW:8:ARG:NH1	2.34	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
1:XA:303:A:H2'	1:XA:304:U:O4'	2.19	0.42
1:XA:347:G:O2'	1:XA:348:G:H5"	2.20	0.42
1:XA:486:U:H2'	1:XA:487:A:C8	2.54	0.42
1:XA:665:A:N3	1:XA:732:C:H2'	2.34	0.42
1:XA:1224:G:O2'	1:XA:1225:A:P	2.76	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	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
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	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
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
25:YA:322:A:OP2	29:YF:169:ASN:HB2	2.19	0.42
25:YA:554:U:H2'	25:YA:556:G:C8	2.54	0.42
25:YA:699:A:H2'	25:YA:700:G:O4'	2.19	0.42
25:YA:1006:C:H5'	33:YN:28:THR:HG23	1.99	0.42
25:YA:1607:C:H4'	25:YA:1608:A:O5'	2.19	0.42
25:YA:1869:G:H5'	25:YA:1870:C:OP2	2.19	0.42
25:YA:2728:U:H2'	25:YA:2729:G:C8	2.53	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
28:YE:203:LYS:HD2	28:YE:203:LYS:C	2.39	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.01	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
35:YP:119:GLU:HA	35:YP:119:GLU:OE1	2.18	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	2.01	0.42
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
1:QA:372:C:HO2'	1:QA:373:A:P	2.41	0.42
1:QA:430:A:P	4:QD:9:CYS:H	2.42	0.42
1:QA:743:U:H2'	1:QA:744:C:C6	2.54	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.73	0.42
4:QD:24:GLU:O	4:QD:28:SER:OG	2.21	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.35	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.57	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
25:RA:262:A:H2'	25:RA:263:C:O4'	2.20	0.42
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.53	0.42
25:RA:612:G:H2'	25:RA:613:U:O2	2.19	0.42
25:RA:817:C:O2'	25:RA:839:U:H5"	2.19	0.42
25:RA:1021:A:H61	25:RA:1142(A):A:H61	1.67	0.42
25:RA:1359:A:N6	25:RA:1372:U:C4	2.87	0.42
26:RB:24:G:H2'	26:RB:56:G:N7	2.34	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.39	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.50	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
31:RH:89:ILE:CD1	31:RH:89:ILE:H	2.32	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
1:XA:389:A:C6	1:XA:390:C:H1'	2.54	0.42
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.35	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.85	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
11:XK:17:GLY:CA	11:XK:77:MET:HE3	2.45	0.42
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
25:YA:1385:G:H1'	25:YA:1386:C:C6	2.54	0.42
25:YA:1705:G:C6	25:YA:1706:U:C4	3.07	0.42
25:YA:2712:U:H1'	25:YA:2712(A):A:N7	2.35	0.42
26:YB:116:G:H4'	38:YS:54:LEU:HD13	2.01	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.73	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	2.01	0.42
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.39	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.54	0.42
1:QA:190:G:O2'	1:QA:191(A):G:P	2.76	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	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
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	3.02	0.42
25:RA:250:G:C6	25:RA:251:A:C6	3.07	0.42
25:RA:264:C:C2'	25:RA:265:A:H5"	2.49	0.42
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.84	0.42
25:RA:753:C:H2'	25:RA:754:C:H6	1.83	0.42
25:RA:2356:C:H2'	25:RA:2357:U:O4'	2.19	0.42
26:RB:45:A:H2'	26:RB:46:A:O4'	2.19	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.46	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
45:RZ:111:VAL:CG1	45:RZ:112:ARG:N	2.73	0.42
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.18	0.42
1:XA:302:G:C6	1:XA:303:A:C5	3.07	0.42
1:XA:392:G:P	16:XP:12:LYS:HG3	2.60	0.42
1:XA:658:G:H2'	1:XA:659:U:C6	2.53	0.42
1:XA:703:G:O2'	1:XA:704:A:P	2.78	0.42
1:XA:762:C:H2'	1:XA:763:G:H8	1.84	0.42
1:XA:910:C:H5"	12:XL:97:ARG:NH2	2.35	0.42
1:XA:1396:A:O4'	1:XA:1398:A:H1'	2.19	0.42
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.19	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.19	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
14:XN:9:LYS:HG2	14:XN:9:LYS:O	2.19	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
22:XV:15:G:N2	22:XV:48:C:H42	2.17	0.42
24:XY:36:G:C2	24:XY:37:1MG:C4	3.07	0.42
24:XY:39:C:H4'	24:XY:40:G:OP1	2.18	0.42
25:YA:565:C:H2'	25:YA:566:U:O4'	2.19	0.42
25:YA:890:A:O2'	25:YA:892:G:H8	2.02	0.42
25:YA:1086:A:H3'	25:YA:1086:A:N3	2.35	0.42
25:YA:1109:C:H2'	25:YA:1110:G:O4'	2.20	0.42
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.55	0.42
25:YA:1952:A:C6	25:YA:1953:A:N1	2.87	0.42
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.54	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.47	0.42
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.50	0.42
32:YI:87:LYS:HA	32:YI:122:GLU:HA	2.02	0.42
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
35:YP:81:GLN:HE21	35:YP:81:GLN:HB2	1.59	0.42
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.42
36:YQ:60:ARG:H	45:YZ:179:ASP:HA	1.84	0.42
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.42
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
39:YT:96:ARG:HB2	39:YT:96:ARG:CZ	2.49	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.37	0.42
1:QA:347:G:O2'	1:QA:348:G:P	2.78	0.42
1:QA:736:C:H2'	1:QA:737:A:C8	2.54	0.42
1:QA:1221:G:OP1	19:QS:36:ARG:HD3	2.19	0.42
1:QA:1384:C:H2'	1:QA:1385:G:H8	1.84	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.39	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
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	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
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
24:QY:36:G:C2	24:QY:37:1MG:C4	3.07	0.42
25:RA:483:A:C4'	44:RY:49:VAL:HA	2.41	0.42
25:RA:724:U:H2'	25:RA:725:G:O4'	2.20	0.42
25:RA:1250:G:OP2	35:RP:21:ARG:HD3	2.20	0.42
25:RA:1257:C:H5'	29:RF:75:HIS:CE1	2.54	0.42
25:RA:1266:G:O2'	25:RA:2012:G:O6	2.30	0.42
25:RA:2067:G:O2'	25:RA:2069:G:H5"	2.20	0.42
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.55	0.42
25:RA:2745:C:H1'	31:RH:143:GLN:HG2	2.02	0.42
26:RB:45:A:OP2	30:RG:96:ARG:HD2	2.20	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.02	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.00	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.80	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.01	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.76	0.42
1:XA:130:A:C8	17:XQ:63:ARG:HG3	2.54	0.42
1:XA:181:G:HO2'	1:XA:182:U:P	2.43	0.42
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.54	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
25:YA:49:A:N7	25:YA:120:U:C5	2.85	0.42
25:YA:70:G:H21	25:YA:71:A:H62	1.67	0.42
25:YA:1341:U:OP2	25:YA:1394:U:O2'	2.28	0.42
25:YA:1489:U:O2'	25:YA:1490:A:H8	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1586:A:H3'	25:YA:1587:A:H8	1.85	0.42
25:YA:2406:U:N3	35:YP:72:PRO:HB2	2.34	0.42
25:YA:2544:G:H8	25:YA:2544:G:O5'	2.02	0.42
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.76	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.01	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.02	0.42
28:YE:176:ILE:HD12	28:YE:176:ILE:N	2.35	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.19	0.42
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.53	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.38	0.42
32:YI:4:ILE:N	32:YI:37:VAL:O	2.52	0.42
32:YI:99:GLU:HG2	32:YI:103:ARG:HH21	1.85	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.20	0.42
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
41:YV:55:ALA:O	41:YV:56:SER:OG	2.31	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.20	0.42
1:QA:881:G:P	12:QL:12:ARG:HH22	2.43	0.42
1:QA:1049:U:O2'	14:QN:2:ALA:N	2.45	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
2:QB:204:ASN:HD22	2:QB:204:ASN:C	2.22	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:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.34	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	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
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:76:LEU:N	18:QR:76:LEU:HD22	2.35	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
22:QV:17:C:H2'	22:QV:17:C:O2	2.20	0.42
25:RA:39:C:H2'	25:RA:40:C:C6	2.55	0.42
25:RA:460:A:H2'	25:RA:461:C:O4'	2.20	0.42
25:RA:1682:G:OP2	25:RA:1699:G:N2	2.50	0.42
25:RA:2419:U:OP1	52:R6:23:THR:HG21	2.20	0.42
25:RA:2564:A:OP1	25:RA:2648:C:H4'	2.20	0.42
25:RA:2630:G:N3	25:RA:2894:G:N2	2.68	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.01	0.42
32:RI:93:THR:N	32:RI:96:ASP:OD1	2.35	0.42
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.00	0.42
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
45:RZ:53:ILE:HG22	45:RZ:71:VAL:HG13	2.00	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.20	0.42
1:XA:89:U:H2'	1:XA:90:C:C6	2.55	0.42
1:XA:115:G:H4'	1:XA:116:A:O5'	2.20	0.42
1:XA:674:G:H2'	1:XA:675:A:H8	1.84	0.42
1:XA:958:A:C6	1:XA:959:A:C6	3.08	0.42
1:XA:1036:G:C8	1:XA:1037:C:C4	3.08	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
19:XS:66:MET:O	19:XS:66:MET:HG3	2.19	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
22:XV:43:A:H2'	22:XV:44:A:C8	2.54	0.42
25:YA:141:A:C8	25:YA:1408:C:H1'	2.55	0.42
25:YA:270(S):G:H1'	47:Y1:78:LYS:HD2	2.02	0.42
25:YA:583:G:H5"	40:YU:10:ARG:NH1	2.30	0.42
25:YA:2414:G:N2	35:YP:67:MET:HE1	2.34	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.00	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.85	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.01	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.01	0.42
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.57	0.42
45:YZ:7:ALA:O	45:YZ:62:PRO:HD3	2.18	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
1:QA:45:U:H2'	1:QA:46:G:H8	1.79	0.42
1:QA:359:U:OP1	32:YI:87:LYS:HD3	2.20	0.42
1:QA:573:A:N3	1:QA:883:C:O2'	2.51	0.42
1:QA:828:A:H2'	1:QA:829:G:O4'	2.19	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	2.73	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.92	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42
25:RA:738:G:C6	25:RA:739:G:C2	3.08	0.42
25:RA:845:G:H8	25:RA:845:G:OP2	2.02	0.42
25:RA:1131:G:C8	25:RA:2025:C:H4'	2.54	0.42
25:RA:1818:U:C2'	27:RD:157:ARG:HG3	2.49	0.42
25:RA:1928:A:C2'	25:RA:1929:G:H5'	2.50	0.42
25:RA:1998:G:OP2	28:RE:136:ARG:NH2	2.49	0.42
25:RA:2811:G:P	28:RE:61:ARG:HG3	2.58	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
27:RD:196:VAL:O	27:RD:196:VAL:CG1	2.68	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.19	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.01	0.42
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
30:RG:51:ARG:NH1	30:RG:51:ARG:CB	2.83	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.26	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
35:RP:107:LYS:O	35:RP:108:LYS:C	2.57	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.02	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.02	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
55:R9:2:LYS:HD2	55:R9:2:LYS:HA	1.93	0.42
1:XA:509:A:H2'	1:XA:510:A:C8	2.55	0.42
1:XA:518:C:C4	1:XA:529:G:N7	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:662:G:H2'	1:XA:663:A:H8	1.84	0.42
1:XA:752:G:HO2'	1:XA:753:A:P	2.42	0.42
1:XA:911:U:H2'	1:XA:912:C:C6	2.55	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	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	2.22	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
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
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
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.34	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
19:XS:58:VAL:O	19:XS:58:VAL:HG23	2.20	0.42
25:YA:559:G:N2	40:YU:49:HIS:CE1	2.88	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
27:YD:263:ARG:NH1	27:YD:263:ARG:CB	2.75	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.19	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.01	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.42
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.42
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.42
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.29	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.48	0.42
49:Y3:7:LYS:O	49:Y3:7:LYS:HG2	2.19	0.42
55:Y9:17:ILE:CG2	55:Y9:18:ARG:N	2.82	0.42
1:QA:720:C:H5"	18:QR:52:PRO:HA	2.02	0.42
1:QA:1316:G:N2	1:QA:1319:A:H5"	2.25	0.42
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.34	0.42
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
25:RA:412:A:N7	25:RA:2411:A:H2	2.18	0.42
25:RA:1265:A:OP1	25:RA:1265:A:H8	2.03	0.42
25:RA:1862:G:O2'	25:RA:1863:G:H5'	2.20	0.42
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.55	0.42
25:RA:2462:U:H2'	25:RA:2463:C:C6	2.54	0.42
25:RA:2646:C:H2'	25:RA:2647:U:O4'	2.19	0.42
26:RB:12:C:O2'	46:R0:74:ARG:HG3	2.20	0.42
26:RB:14:U:H5'	26:RB:71:C:O4'	2.20	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.42
28:RE:176:ILE:HD12	28:RE:176:ILE:N	2.35	0.42
29:RF:61:GLY:O	29:RF:62:ARG:C	2.58	0.42
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.49	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.24	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:69:THR:HG22	45:RZ:90:VAL:HG22	2.01	0.42
45:RZ:111:VAL:CG2	45:RZ:112:ARG:H	2.26	0.42
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.42
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.42
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.42
1:XA:33:A:H2'	1:XA:34:C:C6	2.54	0.42
1:XA:56:U:H2'	1:XA:57:G:C8	2.54	0.42
1:XA:312:C:H2'	1:XA:313:A:H8	1.85	0.42
1:XA:390:C:H2'	1:XA:391:G:C8	2.55	0.42
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.49	0.42
1:XA:939:G:H5"	7:XG:102:ARG:NH1	2.35	0.42
1:XA:1223:C:P	19:XS:78:ARG:HH12	2.41	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
5:XE:153:LYS:HD3	5:XE:153:LYS:C	2.41	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
8:XH:4:ASP:HA	8:XH:5:PRO:HD3	1.85	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
13:XM:12:ASN:N	13:XM:12:ASN:ND2	2.68	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
19:XS:68:GLY:HA2	50:Y4:68:ARG:CB	2.40	0.42
25:YA:83:G:N1	25:YA:102:G:H1'	2.35	0.42
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.34	0.42
25:YA:464:U:H4'	53:Y7:5:TRP:CZ3	2.54	0.42
25:YA:1055:G:H1	25:YA:1104:C:H42	1.68	0.42
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.20	0.42
25:YA:1328:G:H2'	25:YA:1330:C:C5	2.55	0.42
25:YA:1717:G:H1	25:YA:1742:C:H42	1.67	0.42
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.43	0.42
25:YA:2356:C:H2'	25:YA:2357:U:O4'	2.20	0.42
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.35	0.42
25:YA:2612:C:C4	25:YA:2613:U:H5	2.37	0.42
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.19	0.42
25:YA:2867:G:O2'	25:YA:2868:A:P	2.78	0.42
27:YD:196:VAL:O	27:YD:196:VAL:CG1	2.68	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.83	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.20	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
31:YH:105:LEU:CD1	31:YH:105:LEU:N	2.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.42
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.42
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.84	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
40:YU:27:LEU:C	40:YU:29:SER:N	2.74	0.42
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.42
42:YW:96:ILE:O	42:YW:96:ILE:CG2	2.68	0.42
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.42
44:YY:90:LEU:HB2	44:YY:91:GLU:H	1.53	0.42
45:YZ:7:ALA:HB2	45:YZ:39:VAL:HG12	2.01	0.42
45:YZ:128:VAL:HG22	45:YZ:129:SER:N	2.35	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.01	0.42
1:QA:62:U:O2'	1:QA:379:C:O2	2.34	0.42
1:QA:590:C:OP1	8:QH:29:SER:HA	2.20	0.42
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.19	0.42
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.20	0.42
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.19	0.42
1:QA:1316:G:H5"	14:QN:17:LYS:CE	2.50	0.42
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	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
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
8:QH:74:PRO:O	8:QH:75:ARG:C	2.58	0.42
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.42
13:QM:88:ARG:HD2	13:QM:88:ARG:O	2.19	0.42
14:QN:9:LYS:O	14:QN:9:LYS:HG2	2.19	0.42
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
23:QX:4:C:H2'	23:QX:4:C:O2	2.20	0.42
25:RA:935:C:H2'	25:RA:936:C:C6	2.55	0.42
25:RA:1637:A:H4'	25:RA:2711:A:O2'	2.20	0.42
25:RA:1655:A:O3'	28:RE:115:GLY:HA3	2.19	0.42
25:RA:2151:G:H2'	25:RA:2152:G:C8	2.54	0.42
25:RA:2238:G:H2'	25:RA:2238:G:N3	2.35	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
32:RI:93:THR:O	32:RI:97:ILE:HG12	2.20	0.42
33:RN:27:ALA:O	33:RN:28:THR:C	2.57	0.42
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.92	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
36:RQ:83:MET:SD	46:R0:7:LEU:HD12	2.60	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.20	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.72	0.42
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.42
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.42
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.42
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.42
45:RZ:27:VAL:HG12	45:RZ:87:ASP:HB3	2.02	0.42
45:RZ:110:GLY:CA	45:RZ:111:VAL:C	2.85	0.42
47:R1:76:ARG:H	47:R1:76:ARG:CD	2.29	0.42
48:R2:41:ILE:C	48:R2:41:ILE:CD1	2.81	0.42
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
1:XA:10:A:O2'	1:XA:507:C:O2'	2.36	0.42
1:XA:87:A:H2'	1:XA:88:C:O4'	2.19	0.42
1:XA:96:G:C6	1:XA:97:U:C2	3.08	0.42
1:XA:201:C:H42	1:XA:216:G:H1	1.67	0.42
1:XA:542:G:H5'	4:XD:41:GLY:HA3	2.01	0.42
1:XA:1128:C:N4	1:XA:1144:G:H1	2.13	0.42
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.20	0.42
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
25:YA:270(M):U:H1'	25:YA:270(N):G:C6	2.55	0.42
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.62	0.42
25:YA:1332:G:N2	25:YA:1609:A:O2'	2.53	0.42
25:YA:1396:U:H2'	25:YA:1396:U:O2	2.20	0.42
25:YA:1858:G:H2'	25:YA:1883:G:N2	2.34	0.42
25:YA:2277:G:P	36:YQ:85:LYS:HB2	2.60	0.42
25:YA:2335:A:HO2'	25:YA:2336:A:C5'	2.29	0.42
25:YA:2476:A:H2'	25:YA:2477:C:C6	2.55	0.42
25:YA:2584:U:H2'	25:YA:2585:U:C6	2.55	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.42
32:YI:74:ASN:CG	32:YI:75:LEU:H	2.24	0.42
33:YN:42:TRP:HA	33:YN:48:MET:HE3	2.02	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
34:YO:2:ILE:N	34:YO:2:ILE:CD1	2.82	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.42
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.42
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.42
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.42
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.42
37:YR:28:LEU:HD13	37:YR:28:LEU:C	2.40	0.42
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
39:YT:105:LEU:O	39:YT:105:LEU:HG	2.18	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42
45:YZ:141:VAL:CG2	45:YZ:144:LEU:HB2	2.48	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.42
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.19	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.41
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.41
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.41
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.41
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.41
22:QV:23:C:H2'	22:QV:24:U:C6	2.55	0.41
25:RA:451:C:H4'	29:RF:52:LYS:HZ2	1.85	0.41
25:RA:806:C:OP2	35:RP:41:ARG:NE	2.53	0.41
25:RA:1607:C:H5"	25:RA:1608:A:H5'	2.02	0.41
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.55	0.41
25:RA:2828:C:O2'	25:RA:2829:C:H5'	2.20	0.41
28:RE:94:GLU:C	28:RE:96:PHE:N	2.73	0.41
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.41
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.41
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.41
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.41
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.20	0.41
33:RN:131:GLN:HE21	33:RN:131:GLN:HB3	1.57	0.41
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.41
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.49	0.41
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.41
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.41
47:R1:81:LYS:N	47:R1:81:LYS:CD	2.83	0.41
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.41
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
9:XI:127:LYS:CE	22:XV:34:C:OP2	2.68	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
14:XN:3:ARG:CG	14:XN:4:LYS:N	2.83	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.41
21:XU:2:GLY:C	21:XU:4:GLY:H	2.24	0.41
25:YA:140:A:C8	25:YA:1408:C:O2'	2.73	0.41
25:YA:638:G:C5	25:YA:651:G:C2	3.09	0.41
25:YA:1422:G:C6	25:YA:1423:G:C5	3.07	0.41
25:YA:1750:G:O2'	25:YA:2860:A:N1	2.42	0.41
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.20	0.41
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.41
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.02	0.41
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.41
33:YN:1:MET:O	33:YN:1:MET:HG3	2.19	0.41
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.41
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.41
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.27	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.41
1:QA:149:A:H4'	1:QA:1450:U:C4	2.55	0.41
1:QA:382:A:H2'	1:QA:383:A:C8	2.56	0.41
1:QA:881:G:H2'	1:QA:882:C:O4'	2.19	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	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
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
4:QD:13:ARG:NH2	4:QD:36:ARG:CZ	2.83	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	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
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
25:RA:515:A:H1'	25:RA:581:C:H1'	2.02	0.41
25:RA:704:G:O2'	25:RA:705:A:P	2.78	0.41
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.41
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.41
30:RG:60:LEU:HD23	30:RG:60:LEU:C	2.41	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.56	0.41
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
1:XA:407:G:H2'	1:XA:408:A:C8	2.55	0.41
1:XA:743:U:H2'	1:XA:744:C:C6	2.55	0.41
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.84	0.41
1:XA:1200:C:H4'	1:XA:1201:A:C5'	2.49	0.41
1:XA:1239:A:H62	1:XA:1299:A:N6	2.18	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.02	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
22:XV:17:C:O2	22:XV:17:C:H2'	2.20	0.41
25:YA:1085:A:HO2'	25:YA:1086:A:P	2.42	0.41
25:YA:1509:C:H2'	25:YA:1510:A:H4'	2.02	0.41
25:YA:1697:G:O2'	25:YA:1978:A:OP1	2.29	0.41
25:YA:2629:A:O2'	25:YA:2630:G:H5"	2.19	0.41
25:YA:2655:G:O2'	25:YA:2656:U:P	2.78	0.41
25:YA:2724:C:OP1	28:YE:118:LYS:NZ	2.43	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.02	0.41
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.41
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.03	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.02	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
42:YW:8:ARG:HG3	42:YW:8:ARG:NH1	2.34	0.41
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.41
42:YW:25:ARG:NH1	42:YW:25:ARG:CB	2.79	0.41
43:YX:57:LEU:HD12	43:YX:57:LEU:H	1.85	0.41
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.41
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.41
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.17	0.41
1:QA:224:C:H2'	1:QA:225:C:C6	2.55	0.41
1:QA:358:U:H2'	1:QA:359:U:H6	1.85	0.41
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.20	0.41
1:QA:1226:C:H2'	13:QM:103:THR:HB	2.02	0.41
1:QA:1388:C:H2'	1:QA:1389:C:C6	2.55	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.49	0.41
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.01	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
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.41
25:RA:83:G:HO2'	25:RA:84:A:H8	1.57	0.41
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.27	0.41
25:RA:686:G:N2	25:RA:788:A:H61	2.18	0.41
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.35	0.41
25:RA:760:G:H2'	25:RA:761:A:O4'	2.21	0.41
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.35	0.41
25:RA:2543:G:N3	25:RA:2765:A:H2'	2.35	0.41
25:RA:2784:C:H4'	28:RE:41:LYS:O	2.21	0.41
27:RD:13:ARG:HG2	27:RD:13:ARG:O	2.20	0.41
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.81	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.35	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
31:RH:105:LEU:CD1	31:RH:105:LEU:N	2.81	0.41
32:RI:27:ARG:HB3	47:R1:71:TYR:CE1	2.54	0.41
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.41
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
45:RZ:19:ARG:HD3	45:RZ:25:PRO:HD2	2.02	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
1:XA:160:A:H2'	1:XA:161:A:O4'	2.20	0.41
1:XA:792:A:H4'	1:XA:793:U:O5'	2.20	0.41
1:XA:950:U:H2'	1:XA:951:G:C8	2.54	0.41
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.02	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
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.19	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:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
7:XG:141:VAL:O	7:XG:141:VAL:CG1	2.65	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.84	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
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:82:MET:C	17:XQ:84:LEU:N	2.72	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
25:YA:99:U:O2'	25:YA:101:G:P	2.78	0.41
25:YA:479:A:N3	25:YA:481:G:H5"	2.35	0.41
25:YA:581:C:H2'	25:YA:582:G:H8	1.86	0.41
25:YA:1278:A:O3'	37:YR:34:ILE:HG23	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.20	0.41
25:YA:1888:G:H5'	25:YA:1889:A:OP1	2.20	0.41
25:YA:2096:U:H3	25:YA:2193:G:H1	1.68	0.41
25:YA:2306:C:H2'	25:YA:2307:G:N2	2.34	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
27:YD:215:LEU:H	27:YD:215:LEU:HG	1.59	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.26	0.41
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.01	0.41
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.41
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.41
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.41
1:QA:337:C:H2'	1:QA:338:A:C8	2.56	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
5:QE:31:LEU:HD22	5:QE:31:LEU:HA	1.86	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	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
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.84	0.41
25:RA:569:U:O2'	25:RA:983:A:N1	2.43	0.41
25:RA:863:A:O2'	25:RA:864:G:H5'	2.20	0.41
25:RA:870:A:OP1	36:RQ:6:ARG:NH2	2.53	0.41
25:RA:1086:A:H3'	25:RA:1086:A:N3	2.35	0.41
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.55	0.41
25:RA:2466:C:H5'	55:R9:5:ALA:HB3	2.01	0.41
25:RA:2648:C:H2'	25:RA:2649:U:H6	1.84	0.41
25:RA:2836:U:C4	25:RA:2883:A:N6	2.88	0.41
27:RD:269:PHE:CD2	27:RD:269:PHE:N	2.88	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.24	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.51	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
37:RR:28:LEU:HD13	37:RR:28:LEU:C	2.40	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.68	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.82	0.41
42:RW:19:LEU:HA	42:RW:19:LEU:HD12	1.79	0.41
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.21	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
1:XA:1508:G:H2'	1:XA:1509:C:C6	2.55	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	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
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
25:YA:161:U:H3'	25:YA:162:U:C5'	2.50	0.41
25:YA:372:G:H5"	47:Y1:66:HIS:CD2	2.55	0.41
25:YA:503:A:H4'	25:YA:504:U:H5'	2.02	0.41
25:YA:716:A:C2	25:YA:717:G:H1'	2.56	0.41
25:YA:1252:G:O4'	40:YU:33:ARG:HD3	2.21	0.41
25:YA:2095:C:H2'	25:YA:2096:U:O4'	2.20	0.41
25:YA:2483:C:H2'	36:YQ:49:ALA:HB1	2.01	0.41
26:YB:16:G:C6	26:YB:69:G:C2	3.08	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.47	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
30:YG:51:ARG:NH1	30:YG:51:ARG:CB	2.83	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
1:QA:547:A:H4'	1:QA:548:G:O5'	2.20	0.41
1:QA:625:G:H2'	1:QA:626:U:C6	2.54	0.41
1:QA:643:C:H2'	1:QA:644:G:C8	2.56	0.41
1:QA:730:G:C5	1:QA:731:G:H1'	2.56	0.41
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.89	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	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	2.34	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.85	0.41
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.32	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
25:RA:140:A:H8	25:RA:1408:C:O2'	2.01	0.41
25:RA:686:G:O6	53:R7:12:ARG:HG3	2.21	0.41
25:RA:1101:U:H2'	25:RA:1102:C:H6	1.86	0.41
25:RA:2287:A:H2	25:RA:2346:A:N1	2.18	0.41
26:RB:37:C:O2	38:RS:95:HIS:NE2	2.49	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.02	0.41
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
54:R8:26:LYS:HA	54:R8:26:LYS:HD3	1.86	0.41
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.21	0.41
1:XA:404:U:H2'	1:XA:405:U:C6	2.56	0.41
1:XA:719:C:C2	18:XR:50:ILE:HD13	2.56	0.41
1:XA:1250:A:C2	1:XA:1370:G:H1'	2.56	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:46:GLU:C	3:XC:48:TYR:H	2.24	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.33	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.88	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
7:XG:103:TRP:O	7:XG:104:LEU:C	2.58	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
13:XM:12:ASN:N	13:XM:12:ASN:HD22	2.18	0.41
14:XN:15:LYS:HD3	14:XN:15:LYS:HA	1.86	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
25:YA:142:G:H1'	43:YX:37:THR:CG2	2.51	0.41
25:YA:625:G:OP1	54:Y8:64:TYR:HD1	2.04	0.41
25:YA:952:G:C6	25:YA:953:A:N7	2.89	0.41
25:YA:1184:G:OP1	49:Y3:29:ARG:NH1	2.53	0.41
25:YA:2227:A:H5"	27:YD:263:ARG:NH1	2.36	0.41
25:YA:2729:G:C1'	28:YE:187:ALA:HB2	2.41	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
27:YD:269:PHE:CD2	27:YD:269:PHE:N	2.88	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.41
32:YI:48:GLU:HA	32:YI:51:ILE:HD12	2.02	0.41
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.41
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.49	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
44:YY:95:LYS:H	44:YY:95:LYS:CD	2.33	0.41
49:Y3:37:LEU:HD23	49:Y3:37:LEU:N	2.35	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.41
1:QA:487:A:H2'	1:QA:488:C:O4'	2.20	0.41
1:QA:1223:C:P	1:QA:1224:G:H2'	2.60	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.47	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
6:QF:92:LYS:NZ	6:QF:92:LYS:CB	2.84	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:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
25:RA:275:G:H3'	25:RA:276:A:H5"	2.02	0.41
25:RA:1278:A:OP1	37:RR:36:THR:HG22	2.20	0.41
25:RA:1412:A:H2'	25:RA:1413:G:O4'	2.20	0.41
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.43	0.41
25:RA:2420:C:H41	54:R8:30:ARG:HD2	1.86	0.41
25:RA:2469:A:H5"	25:RA:2470:G:C8	2.56	0.41
25:RA:2528:U:H2'	25:RA:2530:A:O5'	2.21	0.41
25:RA:2779:U:O2'	25:RA:2781:A:C5	2.67	0.41
26:RB:8:U:H3	26:RB:112:G:H1	1.67	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
37:RR:1:MET:SD	37:RR:1:MET:N	2.75	0.41
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
41:RV:61:VAL:CG2	41:RV:61:VAL:O	2.68	0.41
42:RW:29:LEU:HD23	42:RW:29:LEU:C	2.41	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:143:GLY:C	45:RZ:144:LEU:HD22	2.41	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.82	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.35	0.41
1:XA:346:G:O2'	1:XA:347:G:H5'	2.21	0.41
1:XA:528:C:H41	12:XL:49:ASN:CG	2.22	0.41
1:XA:581:G:N2	1:XA:760:G:N7	2.68	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
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	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:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
25:YA:34:C:N4	25:YA:447:A:H61	2.19	0.41
25:YA:184:C:H2'	25:YA:185:U:H6	1.85	0.41
25:YA:195:A:OP1	35:YP:46:LYS:HE2	2.21	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.03	0.41
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
44:YY:95:LYS:HB2	44:YY:95:LYS:HZ1	1.86	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.82	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.50	0.41
1:QA:49:U:C2	1:QA:361:G:N2	2.88	0.41
1:QA:271:C:H2'	1:QA:272:C:C6	2.56	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	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
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
22:QV:16:C:O2'	22:QV:17:C:OP1	2.39	0.41
22:QV:21:A:N6	22:QV:46:G:H2'	2.36	0.41
25:RA:270(S):G:O2'	25:RA:270(T):G:H5'	2.20	0.41
25:RA:327:G:N2	44:RY:70:SER:OG	2.53	0.41
25:RA:1728:G:H3'	25:RA:1729:A:C5'	2.51	0.41
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.21	0.41
25:RA:2684:U:O2'	34:RO:68:GLU:HG3	2.21	0.41
25:RA:2758:A:C2	25:RA:2759:G:H1'	2.56	0.41
26:RB:3:C:H2'	26:RB:4:C:H6	1.85	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
32:RI:112:LYS:H	32:RI:112:LYS:HG2	1.58	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
35:RP:55:ARG:HG2	35:RP:55:ARG:NH2	2.36	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.36	0.41
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.41
42:RW:96:ILE:O	42:RW:96:ILE:CG2	2.68	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.20	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.50	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
1:XA:201:C:N4	1:XA:209:U:O2	2.54	0.41
1:XA:560:U:H4'	1:XA:561:U:C5'	2.50	0.41
1:XA:820:U:H4'	1:XA:821:G:OP2	2.21	0.41
1:XA:1054:C:HO2'	1:XA:1055:A:P	2.42	0.41
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.20	0.41
1:XA:1153:C:P	10:XJ:13:HIS:HE2	2.44	0.41
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.55	0.41
1:XA:1312:G:N7	19:XS:2:PRO:HD2	2.36	0.41
1:XA:1374:A:H2'	1:XA:1375:A:O4'	2.20	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
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	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
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
25:YA:57:C:H2'	25:YA:58:G:O4'	2.21	0.41
25:YA:142:G:H2'	25:YA:143:C:C6	2.55	0.41
25:YA:278:A:O2'	25:YA:279:C:O4'	2.30	0.41
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.55	0.41
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.55	0.41
25:YA:2815:C:HO2'	51:Y5:43:HIS:CE1	2.39	0.41
25:YA:2847:U:OP1	39:YT:98:LYS:HD3	2.21	0.41
26:YB:40:U:H1'	26:YB:45:A:H61	1.85	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
31:YH:59:ARG:CG	31:YH:59:ARG:NH1	2.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:YO:31:LYS:HA	34:YO:31:LYS:HD3	1.92	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
36:YQ:60:ARG:HB3	45:YZ:179:ASP:HB2	2.01	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
41:YV:22:VAL:CG1	41:YV:23:GLU:H	2.32	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.20	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
1:QA:299:G:H2'	1:QA:300:A:C8	2.56	0.41
1:QA:390:C:O3'	16:QP:28:ARG:NH2	2.53	0.41
1:QA:484:G:H4'	1:QA:485:G:O5'	2.20	0.41
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.54	0.41
1:QA:1065:U:P	1:QA:1190:G:H22	2.44	0.41
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.55	0.41
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.52	0.41
1:QA:1221:G:O3'	19:QS:77:THR:HG21	2.21	0.41
1:QA:1305:G:HO2'	1:QA:1306:A:P	2.44	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
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:68:GLU:O	5:QE:68:GLU:CG	2.68	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.59	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.56	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
25:RA:270(D):C:H2'	25:RA:270(E):G:C8	2.55	0.41
25:RA:687:C:H4'	53:R7:3:ARG:O	2.21	0.41
25:RA:704:G:C2'	25:RA:726:G:H22	2.33	0.41
25:RA:1278:A:H2'	25:RA:1279:G:C8	2.56	0.41
25:RA:1421:G:C2	25:RA:1422:G:C8	3.09	0.41
25:RA:1750:G:O2'	25:RA:2860:A:N1	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1791:A:N6	25:RA:1828:G:O2'	2.52	0.41
25:RA:2064:C:H2'	25:RA:2065:C:C6	2.56	0.41
25:RA:2683:C:OP1	39:RT:53:ARG:NH2	2.45	0.41
25:RA:2692:C:H2'	25:RA:2693:A:O4'	2.20	0.41
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.41
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.41
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
30:RG:47:LYS:HB2	30:RG:47:LYS:HE3	1.80	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
41:RV:67:GLY:O	41:RV:68:LYS:C	2.59	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
44:RY:43:ASN:O	44:RY:43:ASN:OD1	2.39	0.41
45:RZ:11:GLU:HG3	45:RZ:12:GLY:N	2.36	0.41
45:RZ:96:VAL:N	45:RZ:128:VAL:O	2.44	0.41
45:RZ:109:ALA:C	45:RZ:111:VAL:HG12	2.41	0.41
47:R1:18:ILE:O	47:R1:18:ILE:HG22	2.21	0.41
48:R2:18:PRO:C	48:R2:20:GLU:N	2.73	0.41
1:XA:191(D):U:H2'	1:XA:191(E):G:C8	2.55	0.41
1:XA:537:G:H2'	1:XA:538:G:C8	2.55	0.41
1:XA:591:U:H2'	1:XA:592:G:H8	1.84	0.41
1:XA:1025:U:O2'	1:XA:1026:G:H8	2.03	0.41
1:XA:1054:C:O2'	1:XA:1055:A:O5'	2.36	0.41
1:XA:1364:U:O2'	1:XA:1365:G:P	2.78	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	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
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	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
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
25:YA:25:U:H5"	42:YW:80:PRO:HD3	2.02	0.41
25:YA:26:G:C6	25:YA:27:G:N1	2.88	0.41
25:YA:49:A:H61	25:YA:177:G:H2'	1.85	0.41
25:YA:654(S):G:H2'	25:YA:654(T):C:C6	2.56	0.41
25:YA:754:C:H2'	25:YA:755:C:C6	2.56	0.41
25:YA:1120:G:H2'	25:YA:1121:C:C6	2.56	0.41
25:YA:1128:A:N7	25:YA:2518:A:N6	2.68	0.41
25:YA:2040:C:H2'	25:YA:2041:U:C6	2.56	0.41
25:YA:2164:C:H2'	25:YA:2165:G:O4'	2.21	0.41
25:YA:2642:G:H5"	33:YN:78:TYR:CD2	2.56	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
27:YD:134:ARG:H	27:YD:134:ARG:HG3	1.55	0.41
28:YE:11:MET:HE3	28:YE:186:GLY:HA2	2.03	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
32:YI:124:GLY:H	32:YI:142:VAL:HG23	1.85	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.50	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.21	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
45:YZ:20:ARG:O	45:YZ:20:ARG:HD3	2.21	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.36	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.20	0.41
52:Y6:27:LYS:NZ	52:Y6:27:LYS:CB	2.73	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41
1:QA:244:U:H4'	1:QA:245:C:C5'	2.51	0.41
1:QA:335:C:O2'	1:QA:1433:A:N3	2.49	0.41
1:QA:686:U:O2'	11:QK:42:TRP:NE1	2.54	0.41
1:QA:950:U:H2'	1:QA:951:G:C8	2.56	0.41
1:QA:1305:G:O2'	1:QA:1306:A:H8	2.04	0.41
2:QB:37:ASN:C	2:QB:39:ILE:N	2.73	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	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
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:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	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:60:ILE:HG23	17:QQ:60:ILE:O	2.21	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	2.60	0.41
25:RA:336:C:H5"	44:RY:6:HIS:CD2	2.56	0.41
25:RA:459:U:H5"	53:R7:40:TRP:CD2	2.56	0.41
25:RA:467:G:OP1	53:R7:33:ARG:NH1	2.54	0.41
25:RA:745:G:O2'	25:RA:750:A:N6	2.53	0.41
25:RA:859:G:O2'	25:RA:860:U:O5'	2.39	0.41
25:RA:1024:G:O5'	25:RA:1024:G:H8	2.04	0.41
25:RA:1111:A:O2'	25:RA:1112:G:H4'	2.20	0.41
25:RA:1162:G:H1'	41:RV:23:GLU:OE2	2.20	0.41
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.24	0.41
25:RA:2018:G:H2'	25:RA:2019:A:O4'	2.20	0.41
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.35	0.41
26:RB:40:U:H1'	26:RB:45:A:N6	2.36	0.41
26:RB:57:A:C4	30:RG:29:TRP:HB2	2.56	0.41
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.83	0.41
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.41
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.41
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.41
28:RE:9:VAL:HB	28:RE:10:GLY:H	1.71	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.03	0.41
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.41
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.36	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
37:RR:94:TYR:N	37:RR:94:TYR:CD2	2.87	0.41
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.21	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.41
39:RT:84:GLN:HG2	39:RT:85:LYS:N	2.36	0.41
40:RU:27:LEU:C	40:RU:29:SER:N	2.74	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
44:RY:86:ARG:HD2	44:RY:86:ARG:HA	1.91	0.41
45:RZ:5:LEU:O	45:RZ:6:LYS:HB2	2.21	0.41
45:RZ:73:GLN:HB3	45:RZ:87:ASP:OD1	2.21	0.41
45:RZ:130:PRO:HA	45:RZ:133:ILE:HD11	2.02	0.41
45:RZ:151:HIS:HB3	45:RZ:170:THR:HG22	2.02	0.41
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.41
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
54:R8:3:LYS:HE2	54:R8:3:LYS:HB3	1.82	0.41
1:XA:130:A:H1'	1:XA:264:U:C4'	2.51	0.41
1:XA:181:G:O2'	1:XA:182:U:H6	2.04	0.41
1:XA:677:U:H3	1:XA:713:G:H1	1.69	0.41
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.56	0.41
1:XA:1360:A:OP1	1:XA:1360:A:H8	2.04	0.41
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:37:ASN:C	2:XB:39:ILE:N	2.73	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
4:XD:15:GLU:N	4:XD:15:GLU:OE1	2.54	0.41
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	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:C	8:XH:35:ILE:H	2.25	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:10:ARG:CG	9:XI:105:ASP:HB2	2.51	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	1.86	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
22:XV:23:C:H2'	22:XV:24:U:C6	2.55	0.41
25:YA:597:U:H2'	25:YA:598:G:C8	2.55	0.41
25:YA:709:U:H2'	25:YA:710:G:C8	2.56	0.41
25:YA:1199:U:H2'	25:YA:1200:C:C6	2.56	0.41
25:YA:1204:A:H1'	25:YA:1206:G:N9	2.36	0.41
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	2.02	0.41
25:YA:1674:G:N2	25:YA:1677:A:N1	2.62	0.41
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.54	0.41
25:YA:2477:C:H2'	55:Y9:1:MET:CG	2.49	0.41
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.21	0.41
25:YA:2711:A:H5"	25:YA:2712:U:H5'	2.03	0.41
25:YA:2832:U:H1'	25:YA:2834:G:C4	2.56	0.41
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	2.03	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.41
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.41
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
32:YI:75:LEU:HB3	32:YI:105:HIS:NE2	2.36	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
35:YP:12:ALA:C	35:YP:14:LYS:N	2.73	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.56	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.99	0.41
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.24	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
45:YZ:10:ARG:HH21	45:YZ:26:GLY:H	1.69	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.56	0.41
52:Y6:6:ARG:HA	52:Y6:6:ARG:NE	2.36	0.41
55:Y9:2:LYS:HD2	55:Y9:2:LYS:HA	1.96	0.41
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.55	0.41
1:QA:189:U:H3	17:QQ:63:ARG:HB3	1.86	0.41
1:QA:624:C:O3'	16:QP:10:GLY:HA2	2.21	0.41
1:QA:922:G:O2'	1:QA:1398:A:N1	2.47	0.41
1:QA:957:U:H2'	1:QA:959:A:OP2	2.20	0.41
1:QA:1232:U:OP1	9:QI:124:GLN:NE2	2.45	0.41
1:QA:1301:U:O3'	13:QM:21:TYR:OH	2.34	0.41
1:QA:1330:U:H4'	13:QM:23:TYR:CZ	2.56	0.41
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.41
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.41
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.41
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.41
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.41
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.41
25:RA:38:A:H2'	25:RA:39:C:C6	2.56	0.41
25:RA:58:G:O2'	25:RA:73:A:N1	2.45	0.41
25:RA:695:G:H4'	25:RA:1380:G:H5'	2.03	0.41
25:RA:704:G:H2'	25:RA:726:G:H22	1.86	0.41
25:RA:1064:C:C2	25:RA:1065:U:H1'	2.56	0.41
25:RA:1430:C:H2'	25:RA:1431:U:H6	1.86	0.41
25:RA:1791:A:H3'	25:RA:1792:G:H8	1.86	0.41
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.56	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.41
33:RN:137:LYS:HA	33:RN:137:LYS:HD2	1.89	0.41
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.41
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.94	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.41
38:RS:106:ARG:HB2	38:RS:106:ARG:CZ	2.49	0.41
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
1:XA:88:C:H3'	1:XA:89:U:C6	2.56	0.41
1:XA:109:A:C6	1:XA:326:G:C6	3.08	0.41
1:XA:713:G:H21	1:XA:777:A:H1'	1.85	0.41
1:XA:735:C:H5'	18:XR:71:LYS:HD3	2.03	0.41
1:XA:963:G:H21	10:XJ:55:LYS:CD	2.33	0.41
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.86	0.41
1:XA:1161:C:O2'	1:XA:1162:C:H5'	2.20	0.41
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.21	0.41
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.41
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.34	0.41
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.41
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.41
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.41
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.41
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.41
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.41
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.41
25:YA:43:G:H2'	25:YA:44:A:O4'	2.21	0.41
25:YA:67:U:N3	25:YA:74:A:H2	2.14	0.41
25:YA:483:A:H3'	25:YA:484:C:C6	2.53	0.41
25:YA:1666:G:H2'	25:YA:1667:G:H1'	2.02	0.41
25:YA:2564:A:OP1	25:YA:2648:C:H4'	2.20	0.41
25:YA:2639:A:H2'	25:YA:2640:G:O4'	2.20	0.41
25:YA:2756:U:OP2	55:Y9:19:ARG:NH2	2.54	0.41
27:YD:68:LYS:O	27:YD:68:LYS:HG3	2.20	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:62:ARG:HB3	29:YF:62:ARG:CZ	2.51	0.41
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.41
30:YG:18:GLU:HA	30:YG:18:GLU:OE2	2.21	0.41
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.41
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.21	0.41
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.21	0.41
39:YT:10:VAL:O	39:YT:11:GLU:C	2.59	0.41
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.41
40:YU:5:LYS:C	40:YU:7:GLY:N	2.74	0.41
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.41
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.41
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.32	0.41
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.41
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.54	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.89	0.40
1:QA:300:A:O2'	1:QA:564:C:N3	2.46	0.40
1:QA:1004:A:H1'	1:QA:1036:G:C2	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1224:G:O2'	19:QS:78:ARG:NH2	2.50	0.40
1:QA:1451:A:H2'	1:QA:1451:A:N3	2.35	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	0.40
4:QD:14:ARG:HA	4:QD:14:ARG:HD3	1.89	0.40
4:QD:29:PRO:HD2	4:QD:30:LYS:HE2	2.03	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
4:QD:166:LYS:HG3	27:YD:135:PHE:CZ	2.52	0.40
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.40
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.40
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.40
17:QQ:63:ARG:HA	17:QQ:64:PRO:HD3	1.94	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.02	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
25:RA:288:C:H2'	25:RA:289:A:C8	2.55	0.40
25:RA:634:C:H2'	25:RA:635:C:C6	2.56	0.40
25:RA:1228:G:OP2	40:RU:16:LYS:NZ	2.32	0.40
25:RA:2365:G:H4'	46:R0:60:PHE:CZ	2.56	0.40
25:RA:2749:A:H3'	25:RA:2750:A:H2'	2.01	0.40
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.35	0.40
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.40
32:RI:46:ALA:O	32:RI:50:ARG:HB2	2.21	0.40
32:RI:124:GLY:N	32:RI:142:VAL:HG23	2.37	0.40
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.22	0.40
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.40
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.40
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.40
48:R2:32:LEU:O	48:R2:32:LEU:HD23	2.21	0.40
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.57	0.40
53:R7:5:TRP:HE1	53:R7:7:PRO:HG3	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:346:G:O2'	1:XA:347:G:O4'	2.40	0.40
1:XA:523:A:N6	12:XL:92:ASP:HB2	2.31	0.40
1:XA:530:G:O2'	24:XY:35:G:H4'	2.21	0.40
1:XA:738:C:OP2	6:XF:92:LYS:NZ	2.52	0.40
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.36	0.40
1:XA:1336:C:O2'	1:XA:1337:G:C4	2.73	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.40
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.20	0.40
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.40
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.40
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.40
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.40
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.40
12:XL:10:LEU:HD13	17:XQ:32:TYR:HE2	1.84	0.40
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	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
13:XM:80:ARG:HH22	50:Y4:70:GLY:HA3	1.77	0.40
14:XN:43:CYS:C	14:XN:45:ARG:N	2.73	0.40
14:XN:47:LEU:O	14:XN:50:LYS:N	2.52	0.40
14:XN:48:ALA:O	14:XN:51:GLY:N	2.53	0.40
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.89	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.40
22:XV:21:A:N6	22:XV:46:G:H2'	2.36	0.40
25:YA:565:C:OP1	41:YV:82:ARG:NH2	2.53	0.40
25:YA:780:G:N2	25:YA:783:A:H62	2.17	0.40
25:YA:1728:G:H5'	25:YA:1729:A:OP2	2.21	0.40
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.21	0.40
25:YA:1771:C:O2'	25:YA:1786:A:H8	2.04	0.40
25:YA:2579:C:H2'	25:YA:2580:U:O4'	2.21	0.40
25:YA:2715:C:H2'	25:YA:2716:U:H6	1.86	0.40
25:YA:2867:G:O2'	25:YA:2868:A:O5'	2.38	0.40
25:YA:2870:C:H2'	25:YA:2871:C:O4'	2.19	0.40
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.40
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.40
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.40
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.40
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.40
33:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.87	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40
34:YO:86:ILE:N	34:YO:86:ILE:CD1	2.83	0.40
34:YO:106:LEU:HD23	34:YO:106:LEU:HA	1.89	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.40
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.87	0.40
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.40
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.40
41:YV:24:LYS:CA	41:YV:92:THR:HG23	2.39	0.40
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.85	0.40
45:YZ:27:VAL:HG12	45:YZ:87:ASP:HB3	2.02	0.40
46:Y0:24:LYS:HA	46:Y0:24:LYS:HD3	1.81	0.40
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.40
47:Y1:94:LEU:HD23	47:Y1:94:LEU:HA	1.82	0.40
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.40
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.36	0.40
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.47	0.40
1:QA:695:A:H2'	1:QA:696:A:C8	2.57	0.40
1:QA:1418:A:H2	25:RA:1948:G:N3	2.20	0.40
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.86	0.40
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.40
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	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
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
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.40
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.40
7:QG:140:ASP:C	7:QG:142:GLU:N	2.68	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.21	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
12:QL:11:VAL:HG21	17:QQ:34:LYS:HD3	2.03	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
25:RA:328:U:H4'	44:RY:68:HIS:NE2	2.35	0.40
25:RA:583:G:H5"	40:RU:10:ARG:NH1	2.32	0.40
25:RA:2320:A:H2'	25:RA:2320:A:N3	2.35	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.40
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.21	0.40
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.36	0.40
55:R9:10:ILE:HD12	55:R9:32:HIS:CG	2.56	0.40
1:XA:95:G:H2'	1:XA:96:G:C8	2.56	0.40
1:XA:974:A:P	14:XN:41:ARG:NH1	2.83	0.40
1:XA:1187:G:OP1	9:XI:113:LYS:NZ	2.54	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.21	0.40
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	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:75:THR:CG2	5:XE:76:ILE:N	2.80	0.40
9:XI:56:LEU:HB3	9:XI:57:GLY:H	1.66	0.40
10:XJ:22:LYS:HZ1	10:XJ:23:ILE:HG12	1.86	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
13:XM:56:LEU:HD13	13:XM:60:VAL:CG2	2.51	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.21	0.40
14:XN:44:LEU:HD12	14:XN:53:LEU:HD12	1.94	0.40
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.22	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.35	0.40
25:YA:1206:G:C6	25:YA:1207:C:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1678:G:H8	25:YA:1678:G:OP2	2.04	0.40
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.44	0.40
25:YA:2302:G:C6	25:YA:2315:G:C6	3.10	0.40
25:YA:2416:C:H5"	35:YP:64:LYS:HE3	2.04	0.40
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.56	0.40
25:YA:2680:C:O2'	25:YA:2681:C:H5'	2.21	0.40
26:YB:75:G:H5"	45:YZ:36:LYS:HE2	2.03	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.51	0.40
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.40
32:YI:21:VAL:HG21	32:YI:25:TYR:HD1	1.87	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
35:YP:85:LEU:HA	35:YP:85:LEU:HD23	1.92	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.40
40:YU:30:LYS:HA	40:YU:30:LYS:HD3	1.84	0.40
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.37	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.21	0.40
1:QA:940:C:H2'	1:QA:941:G:C8	2.57	0.40
1:QA:1347:G:H22	1:QA:1374:A:P	2.41	0.40
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.40
3:QC:113:ALA:HB3	3:QC:114:PRO:CD	2.43	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.40
8:QH:100:ILE:HA	8:QH:101:PRO:HD3	1.85	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
25:RA:265:A:H2'	25:RA:266:G:O4'	2.20	0.40
25:RA:861:A:H2'	25:RA:862:G:O4'	2.21	0.40
25:RA:2052:G:C6	25:RA:2053:G:N7	2.89	0.40
25:RA:2342:C:O2	25:RA:2374:C:H4'	2.21	0.40
25:RA:2431:U:H2'	25:RA:2433:A:OP2	2.21	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.40
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.85	0.40
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:66:ILE:O	36:RQ:67:ARG:HB2	2.22	0.40
37:RR:14:SER:HB2	37:RR:15:SER:H	1.72	0.40
38:RS:42:ASP:O	38:RS:43:GLU:CB	2.62	0.40
38:RS:52:SER:HB2	38:RS:55:ALA:HB3	2.03	0.40
38:RS:62:LYS:HD3	38:RS:97:ARG:CZ	2.52	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
46:R0:25:ARG:HD2	46:R0:29:GLN:HE22	1.86	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
50:R4:26:SER:O	50:R4:27:THR:O	2.40	0.40
54:R8:32:LEU:HD23	54:R8:32:LEU:HA	1.94	0.40
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.84	0.40
1:XA:130:A:O2'	1:XA:264:U:H5'	2.20	0.40
1:XA:453:A:C6	1:XA:454:C:C4	3.09	0.40
1:XA:474:G:H5'	16:XP:81:ARG:HG3	2.02	0.40
1:XA:730:G:C5	1:XA:731:G:H1'	2.56	0.40
1:XA:881:G:P	12:XL:12:ARG:NH2	2.95	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.52	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	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:48:ALA:C	5:XE:50:GLU:H	2.24	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:40:ASN:HA	13:XM:41:PRO:HD3	1.84	0.40
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	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:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:XV:16:C:O2'	22:XV:17:C:OP1	2.39	0.40
25:YA:389:G:H22	35:YP:72:PRO:CD	2.34	0.40
25:YA:656:G:H2'	25:YA:657:U:O4'	2.21	0.40
25:YA:851:U:H1'	49:Y3:46:ASN:HD21	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1371:G:O2'	25:YA:1372:U:H5	2.05	0.40
25:YA:1399:C:H2'	25:YA:1400:G:H8	1.86	0.40
25:YA:1588:C:H2'	25:YA:1589:C:C6	2.56	0.40
25:YA:1889:A:N1	25:YA:2234:G:H1'	2.37	0.40
25:YA:1906:G:H1	25:YA:1924:C:N4	2.19	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.23	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.81	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
38:YS:24:LEU:HD22	38:YS:24:LEU:N	2.37	0.40
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.68	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
41:YV:70:ILE:O	41:YV:70:ILE:HG22	2.21	0.40
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.52	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.57	0.40
50:Y4:49:PHE:N	50:Y4:49:PHE:HD1	2.17	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
1:QA:452:A:O2'	1:QA:453:A:O5'	2.39	0.40
1:QA:1329:A:H5"	13:QM:29:ARG:HG3	2.02	0.40
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	2.03	0.40
2:QB:5:ILE:CG2	2:QB:224:GLN:HG2	2.51	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.52	0.40
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.40
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
4:QD:11:LEU:O	4:QD:12:CYS:C	2.60	0.40
4:QD:166:LYS:CG	27:YD:135:PHE:CZ	3.04	0.40
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	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	2.89	0.40
13:QM:122:LYS:HE2	13:QM:122:LYS:O	2.21	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.40
19:QS:39:THR:O	19:QS:40:ILE:HB	2.20	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
25:RA:1022:G:C6	25:RA:1140:C:C4	3.09	0.40
25:RA:1403:C:H5"	25:RA:1471:A:C1'	2.49	0.40
25:RA:2295:C:P	38:RS:10:ARG:HD2	2.61	0.40
25:RA:2369:A:H2'	25:RA:2370:G:C8	2.56	0.40
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.21	0.40
27:RD:228:PRO:HD3	27:RD:234:GLY:O	2.21	0.40
28:RE:5:LEU:O	28:RE:28:ALA:HA	2.22	0.40
28:RE:92:THR:HB	28:RE:93:VAL:H	1.57	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
34:RO:13:ASN:HD21	34:RO:97:ARG:HB3	1.87	0.40
37:RR:34:ILE:HG22	37:RR:35:THR:N	2.35	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
38:RS:20:ARG:HE	38:RS:21:THR:HA	1.87	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
42:RW:88:ARG:HA	42:RW:88:ARG:HD2	1.92	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
52:R6:24:GLU:HB3	52:R6:25:LYS:H	1.56	0.40
52:R6:36:LEU:CD1	52:R6:50:ARG:NH1	2.82	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
1:XA:623:C:O5'	1:XA:623:C:H6	2.05	0.40
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.81	0.40
1:XA:1223:C:H5"	1:XA:1224:G:H5'	2.02	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	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
8:XH:74:PRO:O	8:XH:75:ARG:C	2.59	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
16:XP:39:TYR:CD2	16:XP:41:PRO:HD3	2.56	0.40
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.42	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
19:XS:29:ARG:HG2	19:XS:29:ARG:NH1	2.37	0.40
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.40
25:YA:466:A:N3	25:YA:683:C:H1'	2.37	0.40
25:YA:724:U:H2'	25:YA:725:G:O4'	2.22	0.40
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.57	0.40
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.57	0.40
25:YA:2215:G:H2'	25:YA:2216:G:H8	1.86	0.40
25:YA:2298:A:H2'	25:YA:2299:G:O4'	2.21	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.44	0.40
38:YS:99:LYS:HE2	38:YS:103:GLU:OE2	2.20	0.40
39:YT:26:ASP:HB3	39:YT:92:GLY:H	1.86	0.40
41:YV:61:VAL:CG2	41:YV:61:VAL:O	2.68	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40
45:YZ:112:ARG:O	45:YZ:114:GLY:N	2.53	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
54:Y8:32:LEU:HD23	54:Y8:32:LEU:HA	1.94	0.40
54:Y8:39:LYS:HD2	54:Y8:39:LYS:O	2.22	0.40
1:QA:267:C:OP2	17:QQ:67:LYS:HD2	2.21	0.40
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.56	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
2:QB:114:ARG:O	2:QB:118:LEU:HG	2.21	0.40
3:QC:59:ARG:HH12	3:QC:97:LYS:CE	2.33	0.40
3:QC:70:VAL:CG1	3:QC:71:ALA:H	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:129:ASN:CA	4:QD:145:GLU:HB2	2.51	0.40
5:QE:31:LEU:HD13	5:QE:43:LEU:HD11	2.04	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
8:QH:105:ARG:O	8:QH:107:LEU:N	2.47	0.40
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.40
13:QM:4:ILE:O	13:QM:5:ALA:C	2.60	0.40
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40
13:QM:84:ILE:HD12	13:QM:84:ILE:HA	1.90	0.40
15:QO:77:ARG:CA	15:QO:80:ALA:HB3	2.52	0.40
16:QP:39:TYR:CD2	16:QP:41:PRO:HD3	2.56	0.40
17:QQ:8:GLY:HA3	17:QQ:21:VAL:HG12	2.03	0.40
17:QQ:83:ASP:O	17:QQ:87:LYS:HG2	2.21	0.40
19:QS:10:PHE:CD2	19:QS:11:VAL:N	2.90	0.40
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.40
25:RA:513:A:H5'	25:RA:1216:G:O2'	2.20	0.40
25:RA:1085:A:O2'	25:RA:1086:A:P	2.80	0.40
25:RA:1520:U:H2'	25:RA:1521:G:O4'	2.22	0.40
25:RA:1688:U:O2	25:RA:1700:A:H8	2.05	0.40
25:RA:1790:C:H5"	25:RA:1791:A:OP1	2.21	0.40
25:RA:1853:A:H2'	25:RA:1854:A:C8	2.56	0.40
25:RA:2298:A:H2'	25:RA:2299:G:O4'	2.21	0.40
25:RA:2707:G:H2'	25:RA:2708:G:C8	2.57	0.40
26:RB:15:A:H1'	26:RB:109:G:C4	2.56	0.40
27:RD:72:LYS:HG3	27:RD:97:TYR:CE2	2.56	0.40
27:RD:92:ILE:CD1	27:RD:104:TYR:CD2	3.05	0.40
27:RD:185:VAL:HG12	27:RD:186:HIS:N	2.37	0.40
29:RF:33:LEU:O	29:RF:37:VAL:HG23	2.21	0.40
29:RF:64:ILE:HD12	29:RF:64:ILE:HA	1.89	0.40
30:RG:114:ILE:HG22	30:RG:117:PHE:HB2	2.01	0.40
31:RH:52:VAL:HG21	31:RH:68:THR:HG22	2.03	0.40
33:RN:63:THR:HG22	33:RN:66:LYS:HZ1	1.86	0.40
33:RN:75:TYR:O	33:RN:76:SER:O	2.40	0.40
34:RO:97:ARG:H	34:RO:117:LEU:CD2	2.24	0.40
35:RP:2:LYS:O	35:RP:5:ASP:CB	2.70	0.40
37:RR:18:LEU:HD11	37:RR:22:ARG:NE	2.36	0.40
38:RS:24:LEU:HD22	38:RS:24:LEU:N	2.37	0.40
38:RS:83:LYS:CE	38:RS:109:GLY:HA2	2.47	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:89:ARG:HG2	38:RS:89:ARG:NH1	2.36	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
40:RU:15:LYS:O	40:RU:16:LYS:C	2.60	0.40
40:RU:62:ILE:HG23	40:RU:76:TYR:CE1	2.57	0.40
46:R0:36:ILE:HD13	46:R0:36:ILE:O	2.22	0.40
52:R6:7:ILE:CG1	52:R6:8:LYS:N	2.75	0.40
52:R6:36:LEU:HD23	52:R6:36:LEU:N	2.37	0.40
52:R6:37:ARG:O	52:R6:48:VAL:O	2.39	0.40
1:XA:430:A:H4'	4:XD:7:PRO:HG3	2.04	0.40
1:XA:828:A:H2'	1:XA:829:G:O4'	2.22	0.40
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.22	0.40
2:XB:201:ILE:HG21	2:XB:214:ILE:HG21	2.02	0.40
3:XC:33:LEU:HD11	14:XN:53:LEU:HD23	2.04	0.40
7:XG:46:ALA:O	7:XG:49:ILE:HB	2.21	0.40
8:XH:41:ARG:CG	8:XH:41:ARG:NH1	2.76	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
10:XJ:65:LEU:HA	14:XN:55:GLY:O	2.21	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.52	0.40
13:XM:88:ARG:HG2	13:XM:98:VAL:CG1	2.52	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
17:XQ:36:ILE:O	17:XQ:36:ILE:HG13	2.21	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
22:XV:74:C:H2'	22:XV:75:C:H5'	2.03	0.40
25:YA:572:A:H5"	25:YA:573:G:OP2	2.21	0.40
25:YA:995:C:C4	40:YU:57:PHE:CZ	3.10	0.40
25:YA:1042:G:N2	25:YA:1113:U:O2	2.33	0.40
25:YA:1085:A:O2'	25:YA:1086:A:P	2.80	0.40
25:YA:1174:A:H2'	25:YA:1174:A:N3	2.37	0.40
25:YA:2347:C:OP1	52:Y6:39:TYR:CE2	2.75	0.40
25:YA:2469:A:H5"	25:YA:2470:G:C8	2.56	0.40
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.21	0.40
25:YA:2636:U:H2'	25:YA:2637:U:C6	2.57	0.40
26:YB:27:C:H5'	26:YB:28:C:OP2	2.21	0.40
26:YB:57:A:H1'	30:YG:29:TRP:HB2	2.04	0.40
28:YE:154:LYS:HD3	28:YE:154:LYS:C	2.42	0.40
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
31:YH:101:ARG:O	31:YH:117:PRO:HG3	2.21	0.40
33:YN:133:GLN:C	33:YN:134:ARG:HG2	2.41	0.40
34:YO:31:LYS:C	34:YO:32:TYR:CD2	2.95	0.40
35:YP:2:LYS:O	35:YP:5:ASP:CB	2.70	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
37:YR:22:ARG:O	37:YR:26:LYS:HG3	2.21	0.40
41:YV:35:LEU:C	41:YV:37:VAL:N	2.75	0.40
41:YV:95:LEU:HD13	41:YV:95:LEU:C	2.42	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
50:Y4:51:ASP:O	50:Y4:51:ASP:CG	2.60	0.40

All (3) 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)
41:YV:51:VAL:N	51:Y5:60:VAL:O[4_445]	2.16	0.04
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.17	0.03
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4_555]	2.19	0.01

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	1
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	1
3	QC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	0	3
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0	3
4	QD	206/209 (99%)	136 (66%)	50 (24%)	20 (10%)	0	3
4	XD	206/209 (99%)	135 (66%)	49 (24%)	22 (11%)	0	2
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	3
5	XE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	2
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	3
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	1	3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	QG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	0 3
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	1 3
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0 2
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0 2
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0 1
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0 1
10	QJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	0 3
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0 3
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1 6
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1 6
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0 2
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0 2
13	QM	119/126 (94%)	71 (60%)	28 (24%)	20 (17%)	0 0
13	XM	119/126 (94%)	71 (60%)	26 (22%)	22 (18%)	0 0
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0 0
14	XN	58/61 (95%)	32 (55%)	14 (24%)	12 (21%)	0 0
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1 7
15	XO	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1 7
16	QP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0 1
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0 1
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1 5
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1 5
18	QR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0 2
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0 2
19	QS	82/93 (88%)	47 (57%)	17 (21%)	18 (22%)	0 0
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0 0
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0 0
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0 0
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0 0
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0 0
27	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1 7

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1 7
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0 0
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0 0
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0 3
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0 3
30	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0 2
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0 2
31	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0 0
31	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0 0
32	RI	144/148 (97%)	101 (70%)	26 (18%)	17 (12%)	0 2
32	YI	144/148 (97%)	103 (72%)	24 (17%)	17 (12%)	0 2
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0 1
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0 1
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1 6
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1 6
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0 0
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0 0
36	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0 3
36	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0 3
37	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0 2
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0 2
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0 0
38	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0 0
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0 1
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0 1
40	RU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1 6
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1 6
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0 3
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0 3
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0 1
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2 13
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2 13
44	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0 0
44	YY	100/110 (91%)	57 (57%)	17 (17%)	26 (26%)	0 0
45	RZ	181/206 (88%)	118 (65%)	39 (22%)	24 (13%)	0 1
45	YZ	181/206 (88%)	130 (72%)	34 (19%)	17 (9%)	0 3
46	R0	80/85 (94%)	69 (86%)	8 (10%)	3 (4%)	3 21
46	Y0	80/85 (94%)	70 (88%)	9 (11%)	1 (1%)	12 46
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0 2
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0 2
48	R2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0 1
48	Y2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0 1
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2 14
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2 14
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0 0
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0 0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0 0
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0 0
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0 0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0 0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1 9
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1 9
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0 0
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0 0
55	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100 100
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100 100
All	All	11470/12128 (95%)	7647 (67%)	2334 (20%)	1489 (13%)	0 1

All (1489) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL

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Mol	Chain	Res	Type
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	48	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU
13	QM	70	LEU
13	QM	83	ASP

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Mol	Chain	Res	Type
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
14	QN	24	CYS
14	QN	44	LEU
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
27	RD	26	LYS
27	RD	28	GLU
27	RD	123	ALA
27	RD	231	HIS
28	RE	4	ILE
28	RE	7	VAL
28	RE	9	VAL
28	RE	22	PRO
28	RE	54	GLN

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

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

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

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Mol	Chain	Res	Type
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	112	ARG
47	R1	30	VAL
47	R1	54	ALA
47	R1	81	LYS
47	R1	82	LEU
47	R1	95	LEU
48	R2	16	LEU
48	R2	43	GLN
48	R2	47	ASN
48	R2	48	HIS
48	R2	71	ASN
49	R3	3	ARG
50	R4	5	ILE
50	R4	14	ILE
50	R4	16	CYS
50	R4	22	ILE
50	R4	23	GLU
50	R4	36	CYS
50	R4	37	SER
50	R4	40	HIS
50	R4	42	PHE
50	R4	43	TYR
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	62	ARG
50	R4	66	SER
50	R4	68	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU

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Mol	Chain	Res	Type
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA
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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Mol	Chain	Res	Type
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	48	PRO
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
21	XU	7	ARG

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

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

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Mol	Chain	Res	Type
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP
41	YV	28	GLU
41	YV	31	ALA
41	YV	45	THR
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL

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Mol	Chain	Res	Type
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	53	PRO
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	146	ILE
45	YZ	152	ALA
45	YZ	159	PRO
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	22	ILE
50	Y4	23	GLU
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL

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Mol	Chain	Res	Type
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO
4	QD	20	TYR
4	QD	164	ALA
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA

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Mol	Chain	Res	Type
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
8	QH	128	GLY
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP

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Mol	Chain	Res	Type
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	20	ALA
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA
30	RG	115	ARG
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG

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Mol	Chain	Res	Type
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	9	LEU
32	RI	11	ASN
32	RI	13	GLY
32	RI	117	GLU
32	RI	145	VAL
33	RN	23	LEU
33	RN	76	SER
34	RO	51	ALA
34	RO	56	ASP
34	RO	68	GLU
35	RP	6	LEU
35	RP	11	GLY
35	RP	12	ALA
35	RP	16	ARG
36	RQ	13	GLN
36	RQ	24	GLY
36	RQ	28	ALA
36	RQ	57	HIS
37	RR	11	ASN
38	RS	87	PHE
38	RS	96	GLY
38	RS	100	ALA
38	RS	109	GLY
38	RS	111	GLU
39	RT	4	GLY
39	RT	36	GLU
39	RT	43	GLN
39	RT	67	SER
39	RT	124	ASP
40	RU	9	VAL
40	RU	28	ARG
40	RU	73	GLY
40	RU	90	VAL
42	RW	63	ASP
42	RW	66	GLU
43	RX	67	GLY
44	RY	4	LYS
44	RY	41	GLY

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Mol	Chain	Res	Type
44	RY	56	PRO
44	RY	57	GLN
44	RY	99	CYS
45	RZ	7	ALA
45	RZ	59	LEU
45	RZ	111	VAL
45	RZ	130	PRO
45	RZ	177	PRO
47	R1	45	ASN
47	R1	55	GLY
47	R1	84	GLY
48	R2	24	LEU
48	R2	44	LEU
48	R2	70	GLN
50	R4	9	LEU
50	R4	24	THR
51	R5	43	HIS
51	R5	55	ARG
53	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS

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Mol	Chain	Res	Type
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	67	GLU
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
14	XN	40	CYS
15	XO	77	ARG
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA

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Mol	Chain	Res	Type
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG
28	YE	53	PRO
28	YE	61	ARG
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO

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Mol	Chain	Res	Type
32	YI	13	GLY
32	YI	72	LEU
32	YI	84	GLY
33	YN	23	LEU
33	YN	76	SER
34	YO	51	ALA
34	YO	56	ASP
34	YO	68	GLU
35	YP	6	LEU
35	YP	11	GLY
35	YP	12	ALA
35	YP	16	ARG
36	YQ	13	GLN
36	YQ	24	GLY
36	YQ	28	ALA
37	YR	11	ASN
38	YS	61	ASN
38	YS	87	PHE
38	YS	96	GLY
38	YS	100	ALA
38	YS	109	GLY
38	YS	111	GLU
39	YT	4	GLY
39	YT	36	GLU
39	YT	43	GLN
39	YT	67	SER
39	YT	124	ASP
40	YU	9	VAL
40	YU	28	ARG
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS
44	YY	41	GLY
44	YY	56	PRO
44	YY	57	GLN
44	YY	99	CYS
45	YZ	31	ARG
45	YZ	59	LEU
46	Y0	18	ALA

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Mol	Chain	Res	Type
47	Y1	45	ASN
47	Y1	55	GLY
47	Y1	84	GLY
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	70	GLN
50	Y4	9	LEU
50	Y4	24	THR
51	Y5	43	HIS
51	Y5	55	ARG
53	Y7	39	ARG
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY
4	QD	26	CYS
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
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

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Mol	Chain	Res	Type
19	QS	6	LYS
19	QS	27	GLU
19	QS	64	GLU
20	QT	82	SER
20	QT	98	PRO
27	RD	111	LEU
27	RD	242	ARG
27	RD	262	ARG
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS
30	RG	5	VAL
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	72	LEU
32	RI	118	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	132	ALA
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA

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Mol	Chain	Res	Type
38	RS	75	GLU
39	RT	78	LEU
39	RT	112	ARG
40	RU	46	ALA
40	RU	58	ARG
40	RU	93	LYS
41	RV	54	GLY
42	RW	68	ARG
42	RW	93	ALA
43	RX	48	LYS
43	RX	87	GLN
44	RY	21	LYS
44	RY	39	VAL
44	RY	42	VAL
44	RY	69	ALA
44	RY	91	GLU
44	RY	102	CYS
45	RZ	13	GLU
45	RZ	92	SER
45	RZ	108	PRO
45	RZ	166	SER
45	RZ	181	GLU
46	R0	18	ALA
47	R1	74	VAL
47	R1	91	LYS
47	R1	93	GLU
50	R4	27	THR
50	R4	46	GLN
52	R6	18	ARG
53	R7	32	LYS
54	R8	46	ARG
54	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG

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Mol	Chain	Res	Type
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
8	XH	128	GLY
9	XI	12	GLU
9	XI	13	ALA
10	XJ	57	LYS
12	XL	51	ALA
12	XL	123	LYS
13	XM	12	ASN
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	48	ALA
15	XO	14	GLU
15	XO	23	GLY
16	XP	8	ARG
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	12	SER
27	YD	111	LEU
27	YD	239	ARG
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	71	GLY
28	YE	82	ARG
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	5	VAL
30	YG	115	ARG
30	YG	128	ARG

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Mol	Chain	Res	Type
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU
31	YH	152	ARG
32	YI	11	ASN
32	YI	115	ALA
32	YI	118	LYS
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	57	HIS
36	YQ	88	GLY
36	YQ	91	GLU
37	YR	42	LYS
37	YR	45	ARG
37	YR	71	GLN
37	YR	107	ASP
38	YS	19	LYS
38	YS	74	ALA
38	YS	75	GLU
39	YT	78	LEU
39	YT	112	ARG
40	YU	46	ALA
40	YU	58	ARG
40	YU	93	LYS
41	YV	54	GLY
42	YW	68	ARG
42	YW	93	ALA
43	YX	48	LYS
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	91	GLU
44	YY	102	CYS

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Mol	Chain	Res	Type
45	YZ	7	ALA
45	YZ	13	GLU
45	YZ	51	ALA
45	YZ	166	SER
45	YZ	181	GLU
47	Y1	74	VAL
47	Y1	91	LYS
47	Y1	93	GLU
50	Y4	27	THR
50	Y4	46	GLN
52	Y6	18	ARG
53	Y7	32	LYS
54	Y8	46	ARG
54	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	109	ASN
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG
14	QN	48	ALA
15	QO	86	GLY
16	QP	26	ARG

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Mol	Chain	Res	Type
16	QP	28	ARG
16	QP	48	TRP
19	QS	28	LYS
19	QS	44	MET
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER
27	RD	73	VAL
27	RD	238	GLY
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	136	THR
29	RF	145	GLU
30	RG	12	TYR
30	RG	117	PHE
30	RG	146	TYR
31	RH	13	LYS
31	RH	109	PHE
31	RH	159	GLU
32	RI	15	VAL
33	RN	96	GLU
33	RN	127	ASP
34	RO	17	ARG
34	RO	97	ARG
35	RP	29	LYS
35	RP	47	ASP
35	RP	139	LYS
39	RT	37	GLY
39	RT	95	ARG
40	RU	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	81	ARG
45	RZ	141	VAL
45	RZ	146	ILE
46	R0	3	HIS
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	45	VAL

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Mol	Chain	Res	Type
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG
2	XB	19	HIS
2	XB	131	PRO
2	XB	160	ASP
3	XC	168	ALA
4	XD	151	LYS
5	XE	70	PRO
5	XE	72	GLN
5	XE	124	GLY
6	XF	13	ASN
6	XF	40	VAL
6	XF	42	GLU
7	XG	35	LYS
7	XG	41	ARG
7	XG	116	ALA
7	XG	117	ALA
8	XH	27	PRO
8	XH	29	SER
8	XH	49	GLU
10	XJ	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	22	THR
15	XO	86	GLY
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
19	XS	64	GLU
20	XT	40	ALA
20	XT	51	GLU

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Mol	Chain	Res	Type
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO
29	YF	43	LYS
29	YF	130	ALA
29	YF	136	THR
29	YF	145	GLU
30	YG	12	TYR
30	YG	117	PHE
30	YG	146	TYR
31	YH	13	LYS
31	YH	109	PHE
31	YH	159	GLU
32	YI	102	SER
32	YI	122	GLU
33	YN	96	GLU
33	YN	127	ASP
33	YN	132	ALA
34	YO	17	ARG
34	YO	97	ARG
35	YP	29	LYS
35	YP	47	ASP
35	YP	139	LYS
39	YT	37	GLY
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU

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Mol	Chain	Res	Type
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	88	TYR
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
11	QK	105	VAL
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
27	RD	33	LEU
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU
31	RH	77	LYS
31	RH	170	ARG
33	RN	29	LYS
33	RN	104	LYS
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO

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Mol	Chain	Res	Type
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
44	RY	7	VAL
45	RZ	31	ARG
45	RZ	51	ALA
45	RZ	53	ILE
45	RZ	109	ALA
45	RZ	116	VAL
46	R0	57	PHE
49	R3	13	ILE
50	R4	30	GLU
51	R5	42	PRO
52	R6	35	GLU
54	R8	64	TYR
2	XB	23	ARG
2	XB	25	ASN
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
10	XJ	75	ILE
11	XK	64	ALA

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Mol	Chain	Res	Type
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
32	YI	9	LEU
32	YI	12	LEU
32	YI	18	VAL
32	YI	113	ARG
33	YN	29	LYS
33	YN	104	LYS
33	YN	128	HIS
34	YO	25	LEU
35	YP	50	ARG
35	YP	97	PRO
35	YP	108	LYS
37	YR	85	PRO
40	YU	91	ASP
42	YW	32	ALA
43	YX	19	ALA
44	YY	7	VAL
45	YZ	53	ILE
45	YZ	92	SER
49	Y3	13	ILE
50	Y4	30	GLU
50	Y4	33	VAL
50	Y4	70	GLY
51	Y5	42	PRO
52	Y6	35	GLU
53	Y7	44	PRO
54	Y8	57	ARG
54	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL

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Mol	Chain	Res	Type
11	QK	106	LYS
13	QM	48	LEU
14	QN	20	ALA
16	QP	57	ARG
27	RD	178	PRO
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
32	RI	18	VAL
32	RI	80	PRO
32	RI	122	GLU
39	RT	38	ASN
42	RW	11	ARG
42	RW	33	ARG
43	RX	19	ALA
45	RZ	61	LEU
45	RZ	168	GLU
50	R4	33	VAL
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
53	R7	44	PRO
3	XC	51	GLY
5	XE	115	VAL
6	XF	32	ASN
10	XJ	85	LEU
11	XK	106	LYS
13	XM	13	LYS
13	XM	48	LEU
13	XM	109	THR
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
27	YD	241	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL
32	YI	15	VAL
39	YT	38	ASN

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Mol	Chain	Res	Type
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
45	YZ	157	LEU
45	YZ	160	GLY
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
2	QB	239	VAL
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
18	QR	37	VAL
20	QT	63	ILE
28	RE	86	PRO
28	RE	184	VAL
36	RQ	86	GLY
37	RR	32	GLY
41	RV	36	PRO
42	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
28	YE	86	PRO
28	YE	184	VAL
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
45	YZ	61	LEU
2	QB	227	GLY
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL

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Mol	Chain	Res	Type
15	QO	18	PHE
16	QP	53	VAL
27	RD	241	PRO
32	RI	71	ILE
32	RI	84	GLY
44	RY	27	VAL
44	RY	32	PRO
45	RZ	165	VAL
51	R5	46	CYS
2	XB	227	GLY
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
30	YG	52	ILE
44	YY	27	VAL
44	YY	32	PRO
45	YZ	143	GLY
51	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	51	VAL
45	RZ	114	GLY
51	R5	34	PRO
3	XC	134	ILE
13	XM	84	ILE
27	YD	34	VAL
34	YO	114	ILE
44	YY	51	VAL
51	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
28	RE	52	LEU
28	RE	55	ASN
32	RI	110	ASP
34	RO	27	GLY
49	R3	40	THR

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Mol	Chain	Res	Type
9	XI	21	PRO
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
32	YI	71	ILE
34	YO	27	GLY
49	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
16	QP	41	PRO
20	QT	97	ALA
5	XE	129	ILE
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
48	R2	18	PRO
48	Y2	18	PRO

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	QB	205/220 (93%)	181 (88%)	24 (12%)	5 23
2	XB	205/220 (93%)	181 (88%)	24 (12%)	5 23
3	QC	159/188 (85%)	143 (90%)	16 (10%)	7 29
3	XC	159/188 (85%)	143 (90%)	16 (10%)	7 29
4	QD	180/181 (99%)	160 (89%)	20 (11%)	6 25
4	XD	180/181 (99%)	165 (92%)	15 (8%)	11 40
5	QE	116/123 (94%)	108 (93%)	8 (7%)	15 48
5	XE	116/123 (94%)	107 (92%)	9 (8%)	12 42
6	QF	90/90 (100%)	76 (84%)	14 (16%)	2 11
6	XF	90/90 (100%)	76 (84%)	14 (16%)	2 11
7	QG	126/127 (99%)	114 (90%)	12 (10%)	8 31

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
7	XG	126/127 (99%)	115 (91%)	11 (9%)	10 36
8	QH	119/119 (100%)	106 (89%)	13 (11%)	6 25
8	XH	119/119 (100%)	106 (89%)	13 (11%)	6 25
9	QI	98/99 (99%)	87 (89%)	11 (11%)	6 24
9	XI	98/99 (99%)	87 (89%)	11 (11%)	6 24
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	9 34
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	9 34
11	QK	90/99 (91%)	81 (90%)	9 (10%)	7 29
11	XK	90/99 (91%)	81 (90%)	9 (10%)	7 29
12	QL	104/109 (95%)	90 (86%)	14 (14%)	4 17
12	XL	104/109 (95%)	90 (86%)	14 (14%)	4 17
13	QM	97/101 (96%)	81 (84%)	16 (16%)	2 10
13	XM	97/101 (96%)	81 (84%)	16 (16%)	2 10
14	QN	49/50 (98%)	40 (82%)	9 (18%)	1 8
14	XN	49/50 (98%)	44 (90%)	5 (10%)	7 29
15	QO	79/80 (99%)	73 (92%)	6 (8%)	13 44
15	XO	79/80 (99%)	73 (92%)	6 (8%)	13 44
16	QP	72/74 (97%)	63 (88%)	9 (12%)	4 20
16	XP	72/74 (97%)	63 (88%)	9 (12%)	4 20
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	18 52
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	18 52
18	QR	61/77 (79%)	54 (88%)	7 (12%)	5 23
18	XR	61/77 (79%)	54 (88%)	7 (12%)	5 23
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3 13
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3 13
20	QT	76/82 (93%)	68 (90%)	8 (10%)	7 27
20	XT	76/82 (93%)	68 (90%)	8 (10%)	7 27
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24 59
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24 59
27	RD	214/218 (98%)	177 (83%)	37 (17%)	2 9
27	YD	214/218 (98%)	177 (83%)	37 (17%)	2 9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
28	RE	165/166 (99%)	127 (77%)	38 (23%)	1 3
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1 3
29	RF	161/166 (97%)	140 (87%)	21 (13%)	4 18
29	YF	161/166 (97%)	140 (87%)	21 (13%)	4 18
30	RG	155/156 (99%)	130 (84%)	25 (16%)	2 11
30	YG	155/156 (99%)	130 (84%)	25 (16%)	2 11
31	RH	142/148 (96%)	114 (80%)	28 (20%)	1 6
31	YH	142/148 (96%)	114 (80%)	28 (20%)	1 6
32	RI	122/124 (98%)	94 (77%)	28 (23%)	1 3
32	YI	122/124 (98%)	93 (76%)	29 (24%)	0 3
33	RN	117/119 (98%)	98 (84%)	19 (16%)	2 11
33	YN	117/119 (98%)	98 (84%)	19 (16%)	2 11
34	RO	100/100 (100%)	90 (90%)	10 (10%)	7 29
34	YO	100/100 (100%)	90 (90%)	10 (10%)	7 29
35	RP	116/116 (100%)	89 (77%)	27 (23%)	1 3
35	YP	116/116 (100%)	89 (77%)	27 (23%)	1 3
36	RQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
36	YQ	111/111 (100%)	93 (84%)	18 (16%)	2 11
37	RR	101/101 (100%)	84 (83%)	17 (17%)	2 10
37	YR	101/101 (100%)	84 (83%)	17 (17%)	2 10
38	RS	87/88 (99%)	74 (85%)	13 (15%)	3 13
38	YS	87/88 (99%)	74 (85%)	13 (15%)	3 13
39	RT	120/127 (94%)	97 (81%)	23 (19%)	1 7
39	YT	120/127 (94%)	97 (81%)	23 (19%)	1 7
40	RU	93/94 (99%)	80 (86%)	13 (14%)	3 15
40	YU	93/94 (99%)	80 (86%)	13 (14%)	3 15
41	RV	82/82 (100%)	71 (87%)	11 (13%)	4 17
41	YV	82/82 (100%)	71 (87%)	11 (13%)	4 17
42	RW	92/92 (100%)	77 (84%)	15 (16%)	2 10
42	YW	92/92 (100%)	77 (84%)	15 (16%)	2 10
43	RX	74/78 (95%)	63 (85%)	11 (15%)	3 13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
43	YX	74/78 (95%)	63 (85%)	11 (15%)	3 13
44	RY	85/91 (93%)	70 (82%)	15 (18%)	2 9
44	YY	85/91 (93%)	70 (82%)	15 (18%)	2 9
45	RZ	162/179 (90%)	140 (86%)	22 (14%)	3 16
45	YZ	162/179 (90%)	140 (86%)	22 (14%)	3 16
46	R0	65/67 (97%)	60 (92%)	5 (8%)	13 43
46	Y0	65/67 (97%)	61 (94%)	4 (6%)	18 52
47	R1	82/83 (99%)	67 (82%)	15 (18%)	1 8
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	1 8
48	R2	64/67 (96%)	57 (89%)	7 (11%)	6 25
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	6 25
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1 5
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1 5
50	R4	63/63 (100%)	44 (70%)	19 (30%)	0 1
50	Y4	63/63 (100%)	44 (70%)	19 (30%)	0 1
51	R5	51/52 (98%)	39 (76%)	12 (24%)	1 3
51	Y5	51/52 (98%)	39 (76%)	12 (24%)	1 3
52	R6	48/52 (92%)	38 (79%)	10 (21%)	1 5
52	Y6	48/52 (92%)	38 (79%)	10 (21%)	1 5
53	R7	42/42 (100%)	39 (93%)	3 (7%)	14 46
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	14 46
54	R8	54/55 (98%)	39 (72%)	15 (28%)	0 1
54	Y8	54/55 (98%)	39 (72%)	15 (28%)	0 1
55	R9	34/34 (100%)	32 (94%)	2 (6%)	19 54
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	19 54
All	All	9702/10066 (96%)	8287 (85%)	1415 (15%)	3 14

All (1415) 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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Mol	Chain	Res	Type
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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Mol	Chain	Res	Type
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	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
7	QG	84	ASN

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Mol	Chain	Res	Type
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
11	QK	63	LEU

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Mol	Chain	Res	Type
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
11	QK	116	HIS
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	27	LEU
12	QL	41	ARG
12	QL	53	ARG
12	QL	57	LYS
12	QL	60	LEU
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	89	ARG
12	QL	112	ASP
12	QL	120	TYR
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG
13	QM	90	LEU
13	QM	101	GLN
13	QM	115	LYS
13	QM	116	THR
13	QM	122	LYS
14	QN	3	ARG
14	QN	12	ARG
14	QN	14	PRO
14	QN	16	PHE
14	QN	26	ARG
14	QN	29	ARG

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Mol	Chain	Res	Type
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
19	QS	63	THR
19	QS	65	ASN
19	QS	83	HIS

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Mol	Chain	Res	Type
20	QT	11	SER
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	62	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
21	QU	6	ARG
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	61	LEU
27	RD	65	ILE
27	RD	67	PHE
27	RD	71	ASP
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL
27	RD	183	ARG
27	RD	192	THR
27	RD	198	ASN
27	RD	200	ASP
27	RD	215	LEU
27	RD	217	ARG
27	RD	218	ARG
27	RD	226	MET
27	RD	230	ASP
27	RD	237	GLU
27	RD	257	LEU

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Mol	Chain	Res	Type
27	RD	259	THR
27	RD	261	LYS
27	RD	262	ARG
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	13	ARG
28	RE	16	ARG
28	RE	17	ASP
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	37	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	54	GLN
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	78	LEU
28	RE	79	ARG
28	RE	80	GLU
28	RE	101	ARG
28	RE	113	PHE
28	RE	117	MET
28	RE	119	ARG
28	RE	143	ASN
28	RE	146	THR
28	RE	154	LYS
28	RE	167	VAL
28	RE	179	GLU
28	RE	184	VAL
28	RE	196	VAL
28	RE	200	GLU
28	RE	202	LYS
28	RE	203	LYS

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Mol	Chain	Res	Type
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	117	ARG
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	164	ARG
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	33	ARG
30	RG	34	LEU
30	RG	35	GLU
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR
30	RG	88	ILE
30	RG	94	LEU
30	RG	96	ARG
30	RG	97	ASP
30	RG	103	LEU
30	RG	115	ARG
30	RG	118	ARG
30	RG	133	LEU
30	RG	147	ASP
30	RG	155	MET

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Mol	Chain	Res	Type
30	RG	156	ASP
30	RG	159	VAL
30	RG	167	GLU
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	85	LYS
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	132	ARG
31	RH	139	GLN
31	RH	143	GLN
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	158	HIS
31	RH	169	VAL
32	RI	1	MET
32	RI	2	LYS
32	RI	7	GLU
32	RI	27	ARG
32	RI	33	ARG
32	RI	38	LEU
32	RI	40	THR
32	RI	44	LEU
32	RI	52	ARG
32	RI	56	LYS

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Mol	Chain	Res	Type
32	RI	57	ARG
32	RI	67	ARG
32	RI	70	GLU
32	RI	85	GLU
32	RI	86	THR
32	RI	88	ILE
32	RI	92	VAL
32	RI	96	ASP
32	RI	105	HIS
32	RI	113	ARG
32	RI	118	LYS
32	RI	128	LEU
32	RI	131	LYS
32	RI	134	PRO
32	RI	135	GLU
32	RI	138	ILE
32	RI	139	GLN
32	RI	142	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	101	HIS
33	RN	109	LYS
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	17	ARG
34	RO	19	ILE
34	RO	23	ARG

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Mol	Chain	Res	Type
34	RO	31	LYS
34	RO	39	ILE
34	RO	49	ARG
34	RO	53	LYS
34	RO	65	THR
35	RP	5	ASP
35	RP	9	ASN
35	RP	10	PRO
35	RP	16	ARG
35	RP	21	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	30	THR
35	RP	32	THR
35	RP	36	LYS
35	RP	38	GLN
35	RP	41	ARG
35	RP	50	ARG
35	RP	55	ARG
35	RP	61	ARG
35	RP	62	LEU
35	RP	64	LYS
35	RP	65	ARG
35	RP	75	ILE
35	RP	81	GLN
35	RP	88	LEU
35	RP	91	PHE
35	RP	99	LEU
35	RP	100	LEU
35	RP	108	LYS
35	RP	144	GLU
35	RP	146	VAL
36	RQ	2	LEU
36	RQ	25	ASP
36	RQ	26	TYR
36	RQ	27	VAL
36	RQ	45	GLN
36	RQ	46	GLN
36	RQ	54	MET
36	RQ	55	VAL
36	RQ	58	PHE
36	RQ	60	ARG

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Mol	Chain	Res	Type
36	RQ	79	LEU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU
36	RQ	130	LYS
36	RQ	135	ASP
36	RQ	139	GLU
37	RR	14	SER
37	RR	31	HIS
37	RR	37	THR
37	RR	44	LEU
37	RR	51	LEU
37	RR	57	ARG
37	RR	66	VAL
37	RR	67	LEU
37	RR	71	GLN
37	RR	75	LEU
37	RR	76	VAL
37	RR	81	ASP
37	RR	95	THR
37	RR	104	ARG
37	RR	105	ARG
37	RR	107	ASP
37	RR	113	LEU
38	RS	4	LEU
38	RS	12	PHE
38	RS	17	ARG
38	RS	18	ILE
38	RS	20	ARG
38	RS	44	LYS
38	RS	56	LEU
38	RS	57	LYS
38	RS	89	ARG
38	RS	101	LEU
38	RS	103	GLU
38	RS	106	ARG
38	RS	111	GLU
39	RT	2	ASN
39	RT	14	TYR
39	RT	22	PHE
39	RT	23	ARG

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Mol	Chain	Res	Type
39	RT	26	ASP
39	RT	27	THR
39	RT	42	ILE
39	RT	51	ARG
39	RT	58	ASN
39	RT	65	LYS
39	RT	73	GLU
39	RT	78	LEU
39	RT	86	ILE
39	RT	87	ASP
39	RT	99	LEU
39	RT	100	TYR
39	RT	104	ASN
39	RT	107	ASP
39	RT	111	ARG
39	RT	112	ARG
39	RT	115	ARG
39	RT	128	GLU
39	RT	134	GLU
40	RU	5	LYS
40	RU	9	VAL
40	RU	31	SER
40	RU	52	ARG
40	RU	74	LEU
40	RU	76	TYR
40	RU	79	PHE
40	RU	88	ILE
40	RU	92	ARG
40	RU	98	LEU
40	RU	108	GLU
40	RU	114	LYS
40	RU	117	GLN
41	RV	13	ARG
41	RV	14	VAL
41	RV	18	LEU
41	RV	35	LEU
41	RV	38	LEU
41	RV	39	LEU
41	RV	40	LEU
41	RV	66	ARG
41	RV	75	PHE
41	RV	91	TYR

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Mol	Chain	Res	Type
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO
42	RW	16	LYS
42	RW	18	ARG
42	RW	19	LEU
42	RW	20	VAL
42	RW	63	ASP
42	RW	67	ASP
42	RW	69	LEU
42	RW	70	TYR
42	RW	87	PRO
42	RW	88	ARG
42	RW	92	ARG
42	RW	107	LEU
42	RW	109	GLU
43	RX	3	THR
43	RX	6	ASP
43	RX	15	GLU
43	RX	27	THR
43	RX	30	VAL
43	RX	55	ASN
43	RX	57	LEU
43	RX	65	ARG
43	RX	70	LEU
43	RX	80	ILE
43	RX	88	LYS
44	RY	7	VAL
44	RY	11	ASP
44	RY	27	VAL
44	RY	45	VAL
44	RY	57	GLN
44	RY	64	GLU
44	RY	75	ILE
44	RY	77	PRO
44	RY	79	CYS
44	RY	87	LYS
44	RY	88	LYS
44	RY	89	PHE
44	RY	90	LEU
44	RY	95	LYS
44	RY	97	ARG

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Mol	Chain	Res	Type
45	RZ	2	GLU
45	RZ	20	ARG
45	RZ	31	ARG
45	RZ	60	GLU
45	RZ	72	ARG
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	87	ASP
45	RZ	92	SER
45	RZ	93	ASP
45	RZ	94	GLU
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	119	GLU
45	RZ	123	ASP
45	RZ	128	VAL
45	RZ	145	GLU
45	RZ	150	LEU
45	RZ	166	SER
45	RZ	168	GLU
45	RZ	182	LYS
45	RZ	183	LEU
46	R0	7	LEU
46	R0	11	ARG
46	R0	36	ILE
46	R0	55	ARG
46	R0	74	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	21	ARG
47	R1	30	VAL
47	R1	40	ARG
47	R1	41	ARG
47	R1	56	GLN
47	R1	76	ARG
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	92	LYS
47	R1	97	LEU

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Mol	Chain	Res	Type
48	R2	7	ARG
48	R2	9	GLN
48	R2	16	LEU
48	R2	24	LEU
48	R2	53	LEU
48	R2	62	THR
48	R2	64	LEU
49	R3	4	LEU
49	R3	8	LEU
49	R3	9	VAL
49	R3	10	LYS
49	R3	17	LYS
49	R3	30	ARG
49	R3	31	LEU
49	R3	32	GLN
49	R3	37	LEU
49	R3	40	THR
49	R3	44	ARG
50	R4	6	HIS
50	R4	15	ILE
50	R4	18	CYS
50	R4	21	VAL
50	R4	23	GLU
50	R4	39	CYS
50	R4	42	PHE
50	R4	48	ARG
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	57	GLU
50	R4	61	ARG
50	R4	62	ARG
50	R4	63	TYR
50	R4	67	TYR
50	R4	68	ARG
50	R4	71	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	6	VAL
51	R5	11	THR
51	R5	19	ARG

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Mol	Chain	Res	Type
51	R5	25	LEU
51	R5	36	CYS
51	R5	37	LYS
51	R5	43	HIS
51	R5	52	TYR
51	R5	56	LYS
51	R5	58	LEU
52	R6	6	ARG
52	R6	8	LYS
52	R6	18	ARG
52	R6	19	ARG
52	R6	28	ARG
52	R6	34	LEU
52	R6	37	ARG
52	R6	42	TRP
52	R6	44	ARG
52	R6	46	HIS
53	R7	1	MET
53	R7	9	ARG
53	R7	43	THR
54	R8	15	LYS
54	R8	16	ILE
54	R8	30	ARG
54	R8	35	GLN
54	R8	39	LYS
54	R8	43	GLN
54	R8	44	LYS
54	R8	47	LYS
54	R8	48	PHE
54	R8	49	VAL
54	R8	52	LYS
54	R8	53	PRO
54	R8	62	LEU
54	R8	63	PRO
54	R8	65	GLU
55	R9	1	MET
55	R9	17	ILE
2	XB	5	ILE
2	XB	8	LYS
2	XB	16	HIS
2	XB	23	ARG
2	XB	24	TRP

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Mol	Chain	Res	Type
2	XB	33	TYR
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
2	XB	73	THR
2	XB	82	ARG
2	XB	92	TYR
2	XB	94	ASN
2	XB	121	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	165	VAL
2	XB	168	THR
2	XB	172	ILE
2	XB	174	VAL
2	XB	178	ARG
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG
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

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Mol	Chain	Res	Type
4	XD	86	LYS
4	XD	94	LEU
4	XD	96	LEU
4	XD	114	ARG
4	XD	122	ARG
4	XD	131	ARG
4	XD	181	MET
4	XD	200	GLU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	53	LEU
5	XE	73	ASN
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	27	GLN
6	XF	36	ARG
6	XF	55	ASP
6	XF	63	TYR
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

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Mol	Chain	Res	Type
8	XH	1	MET
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
8	XH	63	LEU
8	XH	69	ARG
8	XH	81	HIS
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	121	ARG
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

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Mol	Chain	Res	Type
12	XL	20	LYS
12	XL	27	LEU
12	XL	41	ARG
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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Mol	Chain	Res	Type
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	24	LEU
20	XT	26	ASN
20	XT	41	ILE
20	XT	62	LEU
20	XT	73	HIS
20	XT	75	ASN
20	XT	93	GLU
21	XU	6	ARG
27	YD	10	THR
27	YD	17	THR

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Mol	Chain	Res	Type
27	YD	26	LYS
27	YD	33	LEU
27	YD	43	ARG
27	YD	44	ASN
27	YD	61	LEU
27	YD	65	ILE
27	YD	67	PHE
27	YD	71	ASP
27	YD	73	VAL
27	YD	94	LEU
27	YD	98	VAL
27	YD	105	ILE
27	YD	106	ILE
27	YD	131	LEU
27	YD	134	ARG
27	YD	135	PHE
27	YD	155	LEU
27	YD	157	ARG
27	YD	166	GLN
27	YD	173	VAL
27	YD	183	ARG
27	YD	192	THR
27	YD	198	ASN
27	YD	200	ASP
27	YD	215	LEU
27	YD	217	ARG
27	YD	218	ARG
27	YD	226	MET
27	YD	230	ASP
27	YD	237	GLU
27	YD	257	LEU
27	YD	259	THR
27	YD	261	LYS
27	YD	262	ARG
27	YD	271	ILE
28	YE	2	LYS
28	YE	4	ILE
28	YE	13	ARG
28	YE	16	ARG
28	YE	17	ASP
28	YE	25	VAL
28	YE	26	ILE

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Mol	Chain	Res	Type
28	YE	27	LEU
28	YE	33	VAL
28	YE	36	ARG
28	YE	37	ARG
28	YE	38	THR
28	YE	41	LYS
28	YE	45	THR
28	YE	54	GLN
28	YE	61	ARG
28	YE	62	PRO
28	YE	66	HIS
28	YE	73	GLU
28	YE	75	VAL
28	YE	77	ILE
28	YE	78	LEU
28	YE	79	ARG
28	YE	80	GLU
28	YE	101	ARG
28	YE	113	PHE
28	YE	117	MET
28	YE	119	ARG
28	YE	143	ASN
28	YE	146	THR
28	YE	154	LYS
28	YE	167	VAL
28	YE	179	GLU
28	YE	184	VAL
28	YE	196	VAL
28	YE	200	GLU
28	YE	202	LYS
28	YE	203	LYS
29	YF	7	TYR
29	YF	9	ILE
29	YF	25	PRO
29	YF	32	LEU
29	YF	45	ARG
29	YF	46	ARG
29	YF	65	TRP
29	YF	66	PRO
29	YF	67	GLN
29	YF	70	THR
29	YF	82	ILE

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Mol	Chain	Res	Type
29	YF	106	ARG
29	YF	108	LYS
29	YF	117	ARG
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	164	ARG
29	YF	181	LEU
29	YF	183	VAL
29	YF	206	ILE
30	YG	4	ASP
30	YG	22	ARG
30	YG	26	GLN
30	YG	33	ARG
30	YG	34	LEU
30	YG	35	GLU
30	YG	43	LEU
30	YG	45	GLU
30	YG	63	ILE
30	YG	67	LYS
30	YG	71	THR
30	YG	88	ILE
30	YG	94	LEU
30	YG	96	ARG
30	YG	97	ASP
30	YG	103	LEU
30	YG	115	ARG
30	YG	118	ARG
30	YG	133	LEU
30	YG	147	ASP
30	YG	155	MET
30	YG	156	ASP
30	YG	159	VAL
30	YG	167	GLU
30	YG	174	GLU
31	YH	3	ARG
31	YH	4	ILE
31	YH	9	ILE
31	YH	10	PRO
31	YH	11	VAL
31	YH	16	SER
31	YH	27	LYS

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Mol	Chain	Res	Type
31	YH	32	GLU
31	YH	37	VAL
31	YH	41	MET
31	YH	43	VAL
31	YH	59	ARG
31	YH	64	LEU
31	YH	77	LYS
31	YH	81	GLU
31	YH	85	LYS
31	YH	88	LEU
31	YH	89	ILE
31	YH	105	LEU
31	YH	132	ARG
31	YH	139	GLN
31	YH	143	GLN
31	YH	152	ARG
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	158	HIS
31	YH	169	VAL
32	YI	1	MET
32	YI	2	LYS
32	YI	9	LEU
32	YI	12	LEU
32	YI	25	TYR
32	YI	27	ARG
32	YI	33	ARG
32	YI	38	LEU
32	YI	40	THR
32	YI	56	LYS
32	YI	67	ARG
32	YI	70	GLU
32	YI	81	VAL
32	YI	85	GLU
32	YI	86	THR
32	YI	88	ILE
32	YI	96	ASP
32	YI	101	LEU
32	YI	105	HIS
32	YI	113	ARG
32	YI	128	LEU

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Mol	Chain	Res	Type
32	YI	131	LYS
32	YI	134	PRO
32	YI	135	GLU
32	YI	138	ILE
32	YI	139	GLN
32	YI	140	LEU
32	YI	142	VAL
32	YI	145	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	101	HIS
33	YN	109	LYS
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	17	ARG
34	YO	19	ILE
34	YO	23	ARG
34	YO	31	LYS
34	YO	39	ILE
34	YO	49	ARG
34	YO	53	LYS
34	YO	65	THR
35	YP	5	ASP
35	YP	9	ASN
35	YP	10	PRO
35	YP	16	ARG
35	YP	21	ARG

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Mol	Chain	Res	Type
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	36	LYS
35	YP	38	GLN
35	YP	41	ARG
35	YP	50	ARG
35	YP	55	ARG
35	YP	61	ARG
35	YP	62	LEU
35	YP	64	LYS
35	YP	65	ARG
35	YP	75	ILE
35	YP	81	GLN
35	YP	88	LEU
35	YP	91	PHE
35	YP	99	LEU
35	YP	100	LEU
35	YP	108	LYS
35	YP	144	GLU
35	YP	146	VAL
36	YQ	2	LEU
36	YQ	25	ASP
36	YQ	26	TYR
36	YQ	27	VAL
36	YQ	45	GLN
36	YQ	46	GLN
36	YQ	54	MET
36	YQ	55	VAL
36	YQ	59	ARG
36	YQ	60	ARG
36	YQ	79	LEU
36	YQ	83	MET
36	YQ	89	ASN
36	YQ	90	VAL
36	YQ	91	GLU
36	YQ	130	LYS
36	YQ	135	ASP
36	YQ	139	GLU
37	YR	14	SER
37	YR	31	HIS

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Mol	Chain	Res	Type
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	57	ARG
37	YR	66	VAL
37	YR	67	LEU
37	YR	71	GLN
37	YR	75	LEU
37	YR	76	VAL
37	YR	81	ASP
37	YR	95	THR
37	YR	104	ARG
37	YR	105	ARG
37	YR	107	ASP
37	YR	113	LEU
38	YS	4	LEU
38	YS	12	PHE
38	YS	17	ARG
38	YS	18	ILE
38	YS	20	ARG
38	YS	44	LYS
38	YS	56	LEU
38	YS	57	LYS
38	YS	89	ARG
38	YS	101	LEU
38	YS	103	GLU
38	YS	106	ARG
38	YS	111	GLU
39	YT	2	ASN
39	YT	14	TYR
39	YT	22	PHE
39	YT	23	ARG
39	YT	26	ASP
39	YT	27	THR
39	YT	42	ILE
39	YT	51	ARG
39	YT	58	ASN
39	YT	65	LYS
39	YT	73	GLU
39	YT	78	LEU
39	YT	86	ILE
39	YT	87	ASP

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Mol	Chain	Res	Type
39	YT	99	LEU
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG
39	YT	115	ARG
39	YT	128	GLU
39	YT	134	GLU
40	YU	5	LYS
40	YU	9	VAL
40	YU	31	SER
40	YU	52	ARG
40	YU	74	LEU
40	YU	76	TYR
40	YU	79	PHE
40	YU	88	ILE
40	YU	92	ARG
40	YU	98	LEU
40	YU	108	GLU
40	YU	114	LYS
40	YU	117	GLN
41	YV	13	ARG
41	YV	14	VAL
41	YV	18	LEU
41	YV	35	LEU
41	YV	38	LEU
41	YV	39	LEU
41	YV	40	LEU
41	YV	66	ARG
41	YV	75	PHE
41	YV	91	TYR
41	YV	99	ILE
42	YW	11	ARG
42	YW	14	PRO
42	YW	16	LYS
42	YW	18	ARG
42	YW	19	LEU
42	YW	20	VAL
42	YW	63	ASP
42	YW	67	ASP
42	YW	69	LEU

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Mol	Chain	Res	Type
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	107	LEU
42	YW	109	GLU
43	YX	3	THR
43	YX	6	ASP
43	YX	15	GLU
43	YX	27	THR
43	YX	30	VAL
43	YX	55	ASN
43	YX	57	LEU
43	YX	65	ARG
43	YX	70	LEU
43	YX	80	ILE
43	YX	88	LYS
44	YY	7	VAL
44	YY	11	ASP
44	YY	27	VAL
44	YY	45	VAL
44	YY	57	GLN
44	YY	64	GLU
44	YY	75	ILE
44	YY	77	PRO
44	YY	79	CYS
44	YY	87	LYS
44	YY	88	LYS
44	YY	89	PHE
44	YY	90	LEU
44	YY	95	LYS
44	YY	97	ARG
45	YZ	2	GLU
45	YZ	19	ARG
45	YZ	20	ARG
45	YZ	31	ARG
45	YZ	53	ILE
45	YZ	60	GLU
45	YZ	72	ARG
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	82	ARG

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Mol	Chain	Res	Type
45	YZ	87	ASP
45	YZ	94	GLU
45	YZ	112	ARG
45	YZ	123	ASP
45	YZ	136	PHE
45	YZ	140	ASP
45	YZ	144	LEU
45	YZ	150	LEU
45	YZ	151	HIS
45	YZ	178	GLU
45	YZ	181	GLU
45	YZ	182	LYS
46	Y0	12	ASN
46	Y0	36	ILE
46	Y0	55	ARG
46	Y0	74	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	40	ARG
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	76	ARG
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	92	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	53	LEU
48	Y2	62	THR
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	10	LYS

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Mol	Chain	Res	Type
49	Y3	17	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	67	TYR
50	Y4	68	ARG
50	Y4	71	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	43	HIS
51	Y5	52	TYR
51	Y5	56	LYS
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	18	ARG
52	Y6	19	ARG

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Mol	Chain	Res	Type
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	46	HIS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	43	THR
54	Y8	15	LYS
54	Y8	16	ILE
54	Y8	30	ARG
54	Y8	35	GLN
54	Y8	39	LYS
54	Y8	43	GLN
54	Y8	44	LYS
54	Y8	47	LYS
54	Y8	48	PHE
54	Y8	49	VAL
54	Y8	52	LYS
54	Y8	53	PRO
54	Y8	62	LEU
54	Y8	63	PRO
54	Y8	65	GLU
55	Y9	1	MET
55	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (102) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	95	GLN
2	QB	135	GLN
2	QB	204	ASN
2	QB	212	GLN
3	QC	181	ASN
5	QE	72	GLN
5	QE	78	HIS
6	QF	64	GLN
6	QF	100	ASN
7	QG	28	ASN
7	QG	37	ASN
7	QG	86	GLN

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Mol	Chain	Res	Type
7	QG	148	ASN
9	QI	89	ASN
10	QJ	78	ASN
11	QK	117	ASN
12	QL	9	GLN
13	QM	40	ASN
13	QM	101	GLN
19	QS	65	ASN
20	QT	26	ASN
27	RD	44	ASN
27	RD	143	HIS
27	RD	166	GLN
27	RD	198	ASN
28	RE	48	GLN
31	RH	143	GLN
31	RH	147	ASN
33	RN	56	ASN
33	RN	101	HIS
33	RN	131	GLN
34	RO	5	GLN
34	RO	82	ASN
35	RP	81	GLN
35	RP	84	ASN
36	RQ	123	HIS
37	RR	3	HIS
39	RT	55	ASN
39	RT	58	ASN
40	RU	94	ASN
41	RV	11	GLN
42	RW	61	ASN
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
45	RZ	54	HIS
46	R0	29	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
2	XB	95	GLN
2	XB	135	GLN

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Mol	Chain	Res	Type
2	XB	204	ASN
2	XB	212	GLN
3	XC	181	ASN
5	XE	72	GLN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	37	ASN
7	XG	86	GLN
7	XG	148	ASN
9	XI	89	ASN
10	XJ	78	ASN
11	XK	117	ASN
12	XL	9	GLN
13	XM	101	GLN
19	XS	65	ASN
20	XT	26	ASN
27	YD	44	ASN
27	YD	143	HIS
27	YD	166	GLN
27	YD	198	ASN
28	YE	48	GLN
28	YE	135	HIS
31	YH	143	GLN
31	YH	147	ASN
33	YN	56	ASN
33	YN	101	HIS
33	YN	131	GLN
34	YO	5	GLN
34	YO	82	ASN
35	YP	81	GLN
35	YP	84	ASN
37	YR	3	HIS
39	YT	55	ASN
39	YT	58	ASN
40	YU	94	ASN
41	YV	11	GLN
42	YW	61	ASN
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN

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Mol	Chain	Res	Type
45	YZ	54	HIS
47	Y1	56	GLN
48	Y2	9	GLN
49	Y3	19	GLN
49	Y3	32	GLN
50	Y4	60	GLN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	296 (19%)	46 (3%)
1	XA	1499/1522 (98%)	294 (19%)	52 (3%)
22	QV	76/77 (98%)	30 (39%)	1 (1%)
22	XV	76/77 (98%)	30 (39%)	1 (1%)
23	QX	7/25 (28%)	5 (71%)	1 (14%)
23	XX	7/25 (28%)	5 (71%)	0
24	QY	13/18 (72%)	5 (38%)	1 (7%)
24	XY	13/18 (72%)	5 (38%)	1 (7%)
25	RA	2879/2916 (98%)	623 (21%)	73 (2%)
25	YA	2880/2916 (98%)	626 (21%)	70 (2%)
26	RB	119/122 (97%)	25 (21%)	2 (1%)
26	YB	119/122 (97%)	30 (25%)	1 (0%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9189/9366 (98%)	1974 (21%)	249 (2%)

All (1974) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	8	A
1	QA	9	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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Mol	Chain	Res	Type
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	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	137	C
1	QA	144	G
1	QA	147	G
1	QA	163	C
1	QA	173	U
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	267	C
1	QA	281	G
1	QA	289	G
1	QA	314	C
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	343	U

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Mol	Chain	Res	Type
1	QA	344	A
1	QA	347	G
1	QA	348	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	373	A
1	QA	384	G
1	QA	388	G
1	QA	389	A
1	QA	390	C
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	414	A
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	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	498	A
1	QA	505	G
1	QA	509	A

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Mol	Chain	Res	Type
1	QA	510	A
1	QA	511	C
1	QA	517	G
1	QA	518	C
1	QA	521	G
1	QA	527	G
1	QA	531	U
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	545	C
1	QA	547	A
1	QA	559	A
1	QA	561	U
1	QA	566	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	577	G
1	QA	579	G
1	QA	596	C
1	QA	614	A
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	731	G
1	QA	748	C
1	QA	749	C
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	776	G
1	QA	777	A

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Mol	Chain	Res	Type
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	813	U
1	QA	817	C
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	870	U
1	QA	871	U
1	QA	872	A
1	QA	884	U
1	QA	885	G
1	QA	889	A
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	975	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	981	U
1	QA	982	U
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G

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Mol	Chain	Res	Type
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
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1040	U
1	QA	1050	G
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	1145	C
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	1176	A

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Mol	Chain	Res	Type
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
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A
1	QA	1238	A
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	1319	A
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

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Mol	Chain	Res	Type
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1364	U
1	QA	1365	G
1	QA	1370	G
1	QA	1397	C
1	QA	1398	A
1	QA	1401	G
1	QA	1406	U
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1451	A
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	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	QV	3	C
22	QV	4	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	14	A
22	QV	16	C
22	QV	17	C
22	QV	17(A)	U
22	QV	18	G

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Mol	Chain	Res	Type
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	25	C
22	QV	31	G
22	QV	37	A
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	50	U
22	QV	51	C
22	QV	52	G
22	QV	54	U
22	QV	59	A
22	QV	63	G
22	QV	67	C
22	QV	72	A
22	QV	75	C
22	QV	76	A
23	QX	3	G
23	QX	4	C
23	QX	5	C
23	QX	7	U
23	QX	8	A
24	QY	31	G
24	QY	33	U
24	QY	36	G
24	QY	39	C
24	QY	40	G
25	RA	9	U
25	RA	11	G
25	RA	15	G
25	RA	28	A
25	RA	34	C
25	RA	35	G
25	RA	46	C
25	RA	51	G
25	RA	55	G
25	RA	72	U
25	RA	74	A
25	RA	75	G

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Mol	Chain	Res	Type
25	RA	84	A
25	RA	95	G
25	RA	96	G
25	RA	99	U
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	118	A
25	RA	120	U
25	RA	131	G
25	RA	138	G
25	RA	161	U
25	RA	177	G
25	RA	181	A
25	RA	196	A
25	RA	199	A
25	RA	205	G
25	RA	206	U
25	RA	214	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	224	G
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	249	C
25	RA	250	G
25	RA	252	G
25	RA	265	A
25	RA	266	G
25	RA	267	C
25	RA	268	C
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G

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Mol	Chain	Res	Type
25	RA	270(P)	C
25	RA	271(C)	U
25	RA	271	G
25	RA	275	G
25	RA	276	A
25	RA	277	C
25	RA	278	A
25	RA	299	A
25	RA	306	U
25	RA	311	A
25	RA	316	C
25	RA	323	G
25	RA	324	A
25	RA	327	G
25	RA	329	G
25	RA	330	A
25	RA	332	A
25	RA	333	G
25	RA	335	C
25	RA	342	G
25	RA	343	C
25	RA	346	A
25	RA	352	G
25	RA	361	G
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	386	G
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	421	U
25	RA	428	A
25	RA	441	U
25	RA	444	C
25	RA	448	U
25	RA	454	A
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	470	A

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Mol	Chain	Res	Type
25	RA	481	G
25	RA	494	G
25	RA	504	U
25	RA	505	A
25	RA	509	C
25	RA	512	G
25	RA	513	A
25	RA	518	G
25	RA	527	C
25	RA	529	A
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	547	A
25	RA	549	G
25	RA	556	G
25	RA	563	G
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	588	U
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	609(A)	G
25	RA	614	U
25	RA	615	G
25	RA	617	G
25	RA	621	A
25	RA	627	A
25	RA	637	A
25	RA	638	G
25	RA	645	C
25	RA	646	A
25	RA	650	C
25	RA	651	G
25	RA	652	C
25	RA	654	A
25	RA	654(A)	G

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Mol	Chain	Res	Type
25	RA	654(B)	C
25	RA	668	G
25	RA	686	G
25	RA	702	G
25	RA	705	A
25	RA	717	G
25	RA	722	A
25	RA	730	C
25	RA	747	U
25	RA	753	C
25	RA	764	A
25	RA	765	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	790	C
25	RA	791	C
25	RA	792	G
25	RA	800	A
25	RA	805	G
25	RA	812	C
25	RA	819	A
25	RA	827	U
25	RA	828	U
25	RA	847	U
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	869	G
25	RA	880	G
25	RA	881	G
25	RA	882	G
25	RA	884	C
25	RA	885	C
25	RA	886	C
25	RA	888	C
25	RA	889	C
25	RA	893	C

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Mol	Chain	Res	Type
25	RA	896	A
25	RA	897	C
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	904	C
25	RA	906	G
25	RA	907	U
25	RA	910	A
25	RA	917	A
25	RA	932	G
25	RA	938	G
25	RA	941	A
25	RA	945	A
25	RA	946	G
25	RA	959	A
25	RA	961	C
25	RA	974	G
25	RA	974(A)	C
25	RA	975	G
25	RA	983	A
25	RA	990	A
25	RA	991	C
25	RA	996	A
25	RA	1003	G
25	RA	1005	C
25	RA	1010	A
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1020	A
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1050	A

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Mol	Chain	Res	Type
25	RA	1054	A
25	RA	1055	G
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1070	A
25	RA	1071	G
25	RA	1076	C
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1093	G
25	RA	1095	A
25	RA	1096	A
25	RA	1099	G
25	RA	1103	A
25	RA	1104	C
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1122	G
25	RA	1129	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1151	G
25	RA	1155	A
25	RA	1170	G

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Mol	Chain	Res	Type
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1180	C
25	RA	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1210	A
25	RA	1211	U
25	RA	1212	G
25	RA	1220	A
25	RA	1221	C
25	RA	1238	G
25	RA	1252	G
25	RA	1253	A
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1273	U
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1303	G
25	RA	1306	C
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1321	A
25	RA	1329	U
25	RA	1349	A
25	RA	1365	A
25	RA	1368	G
25	RA	1370	C
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G

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Mol	Chain	Res	Type
25	RA	1386	C
25	RA	1395	A
25	RA	1407	C
25	RA	1408	C
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1428	C
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1493	C
25	RA	1497	U
25	RA	1505	C
25	RA	1506	C
25	RA	1507	A
25	RA	1508	A
25	RA	1510	A
25	RA	1511	A
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1525	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1538	G
25	RA	1543	A

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Mol	Chain	Res	Type
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G
25	RA	1569	A
25	RA	1578	U
25	RA	1579	A
25	RA	1580	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1591	G
25	RA	1598	C
25	RA	1608	A
25	RA	1609	A
25	RA	1610	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1640	C
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1668	A
25	RA	1674	G
25	RA	1694	C
25	RA	1695	G
25	RA	1699	G
25	RA	1700	A
25	RA	1701	A
25	RA	1725	G
25	RA	1729	A
25	RA	1731	G
25	RA	1733	G
25	RA	1742	C
25	RA	1743	G
25	RA	1754	C
25	RA	1756	G
25	RA	1758	G

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Mol	Chain	Res	Type
25	RA	1763	G
25	RA	1764	G
25	RA	1773	A
25	RA	1780	A
25	RA	1782	C
25	RA	1787	A
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1803	A
25	RA	1811	G
25	RA	1816	G
25	RA	1820	U
25	RA	1829	A
25	RA	1835	G
25	RA	1839	G
25	RA	1847	A
25	RA	1848	A
25	RA	1850	G
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1882	C
25	RA	1885	A
25	RA	1889	A
25	RA	1896	G
25	RA	1903	G
25	RA	1905	C
25	RA	1906	G
25	RA	1913	A
25	RA	1924	C
25	RA	1926	U
25	RA	1927	A
25	RA	1930	G
25	RA	1931	U
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1940	U

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Mol	Chain	Res	Type
25	RA	1947	C
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1967	C
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1981	A
25	RA	1982	C
25	RA	1991	U
25	RA	1992	G
25	RA	1993	U
25	RA	2023	G
25	RA	2031	A
25	RA	2033	A
25	RA	2043	C
25	RA	2055	C
25	RA	2056	G
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G
25	RA	2099	U
25	RA	2108	C
25	RA	2111	C
25	RA	2113	U
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2120	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2131	G
25	RA	2132	U
25	RA	2133	G
25	RA	2136	C
25	RA	2146	C

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Mol	Chain	Res	Type
25	RA	2147	G
25	RA	2148	G
25	RA	2157	G
25	RA	2158	A
25	RA	2166	G
25	RA	2168	G
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2198	A
25	RA	2199	A
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2215	G
25	RA	2225	A
25	RA	2239	G
25	RA	2243	U
25	RA	2246	G
25	RA	2275	C
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A
25	RA	2294	C
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2319	G
25	RA	2320	A
25	RA	2325	G
25	RA	2326	C
25	RA	2342	C
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2372	G
25	RA	2377	A
25	RA	2382	G
25	RA	2383	G
25	RA	2385	C

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Mol	Chain	Res	Type
25	RA	2388	A
25	RA	2394	C
25	RA	2397	G
25	RA	2398	U
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2426	A
25	RA	2429	G
25	RA	2430	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2448	A
25	RA	2450	A
25	RA	2469	A
25	RA	2470	G
25	RA	2474	C
25	RA	2476	A
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2494	G
25	RA	2502	G
25	RA	2505	G
25	RA	2506	U
25	RA	2507	C
25	RA	2519	U
25	RA	2529	G
25	RA	2542	A
25	RA	2543	G
25	RA	2554	U
25	RA	2566	A
25	RA	2567	G
25	RA	2569	G
25	RA	2573	C
25	RA	2582	G
25	RA	2585	U

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Mol	Chain	Res	Type
25	RA	2586	C
25	RA	2602	A
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2623	G
25	RA	2629	A
25	RA	2632	A
25	RA	2638	G
25	RA	2646	C
25	RA	2655	G
25	RA	2665	A
25	RA	2673	G
25	RA	2675	A
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2702	U
25	RA	2703	C
25	RA	2707	G
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2748	A
25	RA	2752	C
25	RA	2754	U
25	RA	2758	A
25	RA	2761	G
25	RA	2764	A
25	RA	2765	A
25	RA	2770	G
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G

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Mol	Chain	Res	Type
25	RA	2789	C
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2799	A
25	RA	2807	G
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2823	A
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2846	G
25	RA	2849	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2873	A
25	RA	2880	C
25	RA	2891	G
25	RA	2892	A
25	RA	2894	G
26	RB	8	U
26	RB	9	G
26	RB	12	C
26	RB	13	A
26	RB	15	A
26	RB	16	G
26	RB	19	G
26	RB	21	G
26	RB	25	A
26	RB	27	C
26	RB	32	C
26	RB	33	G
26	RB	41	U
26	RB	42	C
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	57	A

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Mol	Chain	Res	Type
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	105	G
26	RB	109	G
26	RB	112	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	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	116	A
1	XA	120	A
1	XA	121	C
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	189	U
1	XA	190	G
1	XA	195	A

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Mol	Chain	Res	Type
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	222	U
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	289	G
1	XA	305	G
1	XA	316	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	344	A
1	XA	345	C
1	XA	346	G
1	XA	347	G
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	373	A
1	XA	382	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

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Mol	Chain	Res	Type
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	440	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	498	A
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	519	C
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	536	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	562	C
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

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Mol	Chain	Res	Type
1	XA	607	A
1	XA	623	C
1	XA	630	G
1	XA	631	G
1	XA	653	A
1	XA	665	A
1	XA	685	G
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	718	G
1	XA	723	U
1	XA	731	G
1	XA	742	G
1	XA	749	C
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	774	G
1	XA	777	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	902	G
1	XA	914	A
1	XA	927	G

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Mol	Chain	Res	Type
1	XA	934	C
1	XA	935	A
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	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1021	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	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

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Mol	Chain	Res	Type
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1170	A
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1187	G
1	XA	1188	A
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	1263	C
1	XA	1270	C
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C

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Mol	Chain	Res	Type
1	XA	1286	A
1	XA	1287	A
1	XA	1296	C
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	1324	A
1	XA	1331	G
1	XA	1334	G
1	XA	1335	C
1	XA	1336	C
1	XA	1338	G
1	XA	1347	G
1	XA	1348	U
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1364	U
1	XA	1365	G
1	XA	1398	A
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1451	A
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

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Mol	Chain	Res	Type
1	XA	1504	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	3	C
22	XV	4	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	14	A
22	XV	16	C
22	XV	17	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	22	G
22	XV	25	C
22	XV	31	G
22	XV	37	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	50	U
22	XV	51	C
22	XV	52	G
22	XV	54	U
22	XV	59	A
22	XV	63	G
22	XV	67	C
22	XV	72	A
22	XV	75	C
22	XV	76	A
23	XX	3	G
23	XX	4	C
23	XX	5	C
23	XX	7	U
23	XX	8	A
24	XY	31	G

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Mol	Chain	Res	Type
24	XY	33	U
24	XY	36	G
24	XY	39	C
24	XY	40	G
25	YA	9	U
25	YA	15	G
25	YA	27	G
25	YA	34	C
25	YA	46	C
25	YA	49	A
25	YA	55	G
25	YA	71	A
25	YA	72	U
25	YA	74	A
25	YA	75	G
25	YA	83	G
25	YA	84	A
25	YA	96	G
25	YA	97	C
25	YA	99	U
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	118	A
25	YA	119	A
25	YA	120	U
25	YA	161	U
25	YA	162	U
25	YA	181	A
25	YA	188	G
25	YA	196	A
25	YA	199	A
25	YA	205	G
25	YA	206	U
25	YA	214	G
25	YA	215	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	224	G
25	YA	227	A

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Mol	Chain	Res	Type
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	242	G
25	YA	243	U
25	YA	248	G
25	YA	249	C
25	YA	250	G
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	267	C
25	YA	268	C
25	YA	270(L)	U
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(P)	C
25	YA	271(A)	C
25	YA	271(B)	G
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	275	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	285	C
25	YA	287	C
25	YA	299	A
25	YA	311	A
25	YA	315	G
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	342	G
25	YA	345	A
25	YA	352	G
25	YA	363	G
25	YA	364	C

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Mol	Chain	Res	Type
25	YA	371	A
25	YA	372	G
25	YA	373	U
25	YA	386	G
25	YA	387	U
25	YA	396	G
25	YA	405	U
25	YA	406	G
25	YA	411	G
25	YA	421	U
25	YA	428	A
25	YA	443	A
25	YA	444	C
25	YA	448	U
25	YA	454	A
25	YA	455	C
25	YA	457	A
25	YA	470	A
25	YA	481	G
25	YA	483	A
25	YA	503	A
25	YA	504	U
25	YA	505	A
25	YA	509	C
25	YA	512	G
25	YA	518	G
25	YA	529	A
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	537	C
25	YA	539	G
25	YA	540	G
25	YA	546	C
25	YA	547	A
25	YA	549	G
25	YA	556	G
25	YA	563	G
25	YA	573	G
25	YA	574	C
25	YA	575	A
25	YA	586	A

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Mol	Chain	Res	Type
25	YA	588	U
25	YA	603	A
25	YA	607	U
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
25	YA	618	G
25	YA	621	A
25	YA	622	G
25	YA	624	C
25	YA	625	G
25	YA	626	U
25	YA	627	A
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	657	U
25	YA	669	G
25	YA	670	A
25	YA	686	G
25	YA	702	G
25	YA	708	C
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	747	U
25	YA	752	A
25	YA	753	C
25	YA	764	A
25	YA	775	G
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	791	C

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Mol	Chain	Res	Type
25	YA	792	G
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	845	G
25	YA	847	U
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	866	A
25	YA	870	A
25	YA	880	G
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	893	C
25	YA	896	A
25	YA	897	C
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	902	C
25	YA	905	U
25	YA	907	U
25	YA	910	A
25	YA	915	C
25	YA	917	A
25	YA	918	A
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	959	A
25	YA	961	C

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Mol	Chain	Res	Type
25	YA	965	C
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	983	A
25	YA	989	G
25	YA	990	A
25	YA	991	C
25	YA	996	A
25	YA	1003	G
25	YA	1005	C
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1015	G
25	YA	1020	A
25	YA	1022	G
25	YA	1023	U
25	YA	1025	G
25	YA	1026	U
25	YA	1027	A
25	YA	1033	U
25	YA	1045	A
25	YA	1046	A
25	YA	1050	A
25	YA	1054	A
25	YA	1055	G
25	YA	1057	A
25	YA	1059	G
25	YA	1060	U
25	YA	1061	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1070	A
25	YA	1071	G
25	YA	1076	C
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1082	U
25	YA	1083	U

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Mol	Chain	Res	Type
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1087	G
25	YA	1088	A
25	YA	1090	U
25	YA	1093	G
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1099	G
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1122	G
25	YA	1130	U
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U
25	YA	1142(A)	A
25	YA	1151	G
25	YA	1155	A
25	YA	1170	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1178	C
25	YA	1179	C
25	YA	1180	C
25	YA	1195	G
25	YA	1204	A
25	YA	1205	U
25	YA	1211	U
25	YA	1220	A
25	YA	1221	C
25	YA	1238	G
25	YA	1244	G
25	YA	1252	G

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Mol	Chain	Res	Type
25	YA	1253	A
25	YA	1256	G
25	YA	1265	A
25	YA	1269	A
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1300	U
25	YA	1301	A
25	YA	1302	A
25	YA	1304	C
25	YA	1321	A
25	YA	1329	U
25	YA	1349	A
25	YA	1352	U
25	YA	1356	G
25	YA	1365	A
25	YA	1368	G
25	YA	1379	A
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1389	G
25	YA	1391	U
25	YA	1395	A
25	YA	1402	C
25	YA	1407	C
25	YA	1408	C
25	YA	1411	C
25	YA	1416	G
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1455	G
25	YA	1458	C
25	YA	1459	G
25	YA	1460	A

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Mol	Chain	Res	Type
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1482	U
25	YA	1483	G
25	YA	1485	G
25	YA	1487	G
25	YA	1493	C
25	YA	1495	A
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1513	C
25	YA	1514	U
25	YA	1520	U
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1540	G
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1547	C
25	YA	1554	A
25	YA	1558	A
25	YA	1559	G
25	YA	1569	A
25	YA	1578	U
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1592	C
25	YA	1598	C
25	YA	1608	A
25	YA	1609	A
25	YA	1617	C

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Mol	Chain	Res	Type
25	YA	1618	A
25	YA	1640	C
25	YA	1648	C
25	YA	1654	A
25	YA	1667	G
25	YA	1674	G
25	YA	1695	G
25	YA	1699	G
25	YA	1700	A
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1731	G
25	YA	1733	G
25	YA	1734	C
25	YA	1742	C
25	YA	1743	G
25	YA	1750	G
25	YA	1754	C
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G
25	YA	1773	A
25	YA	1780	A
25	YA	1787	A
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C
25	YA	1801	G
25	YA	1811	G
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1835	G
25	YA	1836	C
25	YA	1847	A
25	YA	1848	A
25	YA	1858	G
25	YA	1869	G
25	YA	1872	A

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Mol	Chain	Res	Type
25	YA	1878	G
25	YA	1882	C
25	YA	1885	A
25	YA	1889	A
25	YA	1903	G
25	YA	1906	G
25	YA	1913	A
25	YA	1923	U
25	YA	1927	A
25	YA	1930	G
25	YA	1931	U
25	YA	1936	A
25	YA	1939	U
25	YA	1941	C
25	YA	1955	U
25	YA	1956	U
25	YA	1960	A
25	YA	1963	U
25	YA	1967	C
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1982	C
25	YA	1991	U
25	YA	1993	U
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2063	C
25	YA	2069	G
25	YA	2088	G
25	YA	2093	G
25	YA	2099	U

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Mol	Chain	Res	Type
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G
25	YA	2116	G
25	YA	2117	A
25	YA	2119	A
25	YA	2120	G
25	YA	2126	A
25	YA	2127	G
25	YA	2128	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2136	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2168	G
25	YA	2173	A
25	YA	2176	A
25	YA	2190	G
25	YA	2192	G
25	YA	2198	A
25	YA	2199	A
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A
25	YA	2238	G
25	YA	2239	G
25	YA	2243	U
25	YA	2246	G
25	YA	2275	C
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2294	C

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Mol	Chain	Res	Type
25	YA	2307	G
25	YA	2308	G
25	YA	2311	A
25	YA	2319	G
25	YA	2320	A
25	YA	2325	G
25	YA	2326	C
25	YA	2334	G
25	YA	2336	A
25	YA	2345	G
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2357	U
25	YA	2382	G
25	YA	2383	G
25	YA	2385	C
25	YA	2394	C
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2410	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2426	A
25	YA	2429	G
25	YA	2430	A
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2448	A
25	YA	2450	A
25	YA	2469	A
25	YA	2470	G
25	YA	2475	C
25	YA	2476	A
25	YA	2481	G
25	YA	2482	G
25	YA	2483	C
25	YA	2484	G

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Mol	Chain	Res	Type
25	YA	2494	G
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C
25	YA	2519	U
25	YA	2524	G
25	YA	2525	G
25	YA	2529	G
25	YA	2542	A
25	YA	2543	G
25	YA	2546	U
25	YA	2554	U
25	YA	2558	C
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2582	G
25	YA	2585	U
25	YA	2602	A
25	YA	2609	U
25	YA	2611	U
25	YA	2612	C
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2641	G
25	YA	2646	C
25	YA	2655	G
25	YA	2656	U
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2682	U
25	YA	2689	U
25	YA	2690	C
25	YA	2702	U
25	YA	2703	C
25	YA	2707	G
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A

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Mol	Chain	Res	Type
25	YA	2714	G
25	YA	2718	G
25	YA	2724	C
25	YA	2726	U
25	YA	2730	C
25	YA	2733	A
25	YA	2734	A
25	YA	2744	G
25	YA	2748	A
25	YA	2752	C
25	YA	2758	A
25	YA	2761	G
25	YA	2765	A
25	YA	2766	G
25	YA	2770	G
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2789	C
25	YA	2790	A
25	YA	2791	C
25	YA	2797	U
25	YA	2799	A
25	YA	2807	G
25	YA	2808	U
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2830	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2847	U
25	YA	2848	G
25	YA	2849	U
25	YA	2867	G
25	YA	2868	A
25	YA	2872	G
25	YA	2874	C
25	YA	2880	C
25	YA	2892	A
25	YA	2894	G

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Mol	Chain	Res	Type
26	YB	2	C
26	YB	8	U
26	YB	9	G
26	YB	13	A
26	YB	15	A
26	YB	16	G
26	YB	19	G
26	YB	21	G
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	27	C
26	YB	32	C
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	52	A
26	YB	53	A
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	82	G
26	YB	88	C
26	YB	89	G
26	YB	101	A
26	YB	105	G
26	YB	109	G

All (249) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
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

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Mol	Chain	Res	Type
1	QA	244	U
1	QA	250	A
1	QA	266	G
1	QA	328	C
1	QA	372	C
1	QA	410	G
1	QA	412	A
1	QA	428	G
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	913	A
1	QA	934	C
1	QA	960	U
1	QA	965	A
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	QV	53	G
23	QX	6	C
24	QY	39	C
25	RA	27	G

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Mol	Chain	Res	Type
25	RA	74	A
25	RA	99	U
25	RA	102	G
25	RA	196	A
25	RA	205	G
25	RA	221	A
25	RA	222	A
25	RA	227	A
25	RA	229	A
25	RA	241	A
25	RA	242	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	277	C
25	RA	345	A
25	RA	372	G
25	RA	404	C
25	RA	503	A
25	RA	512	G
25	RA	587	C
25	RA	637	A
25	RA	653	A
25	RA	704	G
25	RA	752	A
25	RA	774	A
25	RA	846	C
25	RA	856	C
25	RA	859	G
25	RA	945	A
25	RA	974(A)	C
25	RA	1012	U
25	RA	1022	G
25	RA	1026	U
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1130	U
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1301	A
25	RA	1312	U

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Mol	Chain	Res	Type
25	RA	1427	A
25	RA	1460	A
25	RA	1543	A
25	RA	1558	A
25	RA	1653	G
25	RA	1694	C
25	RA	1698	A
25	RA	1799	G
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1936	A
25	RA	1980	G
25	RA	1992	G
25	RA	2060	A
25	RA	2126	A
25	RA	2198	A
25	RA	2405	G
25	RA	2439	A
25	RA	2481	G
25	RA	2518	A
25	RA	2566	A
25	RA	2610	C
25	RA	2689	U
25	RA	2712	U
25	RA	2726	U
25	RA	2776	A
25	RA	2832	U
25	RA	2848	G
25	RA	2867	G
26	RB	24	G
26	RB	66	A
1	XA	5	U
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

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Mol	Chain	Res	Type
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	532	A
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	819	A
1	XA	913	A
1	XA	960	U
1	XA	965	A
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	1224	G
1	XA	1285	A
1	XA	1297	C
1	XA	1301	U
1	XA	1347	G
1	XA	1364	U
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A

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Mol	Chain	Res	Type
22	XV	53	G
24	XY	39	C
25	YA	71	A
25	YA	74	A
25	YA	99	U
25	YA	102	G
25	YA	196	A
25	YA	205	G
25	YA	221	A
25	YA	222	A
25	YA	226	G
25	YA	227	A
25	YA	229	A
25	YA	241	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	372	G
25	YA	404	C
25	YA	503	A
25	YA	587	C
25	YA	637	A
25	YA	653	A
25	YA	669	G
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	859	G
25	YA	896	A
25	YA	945	A
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1130	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A

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Mol	Chain	Res	Type
25	YA	1427	A
25	YA	1460	A
25	YA	1543	A
25	YA	1558	A
25	YA	1653	G
25	YA	1694	C
25	YA	1698	A
25	YA	1799	G
25	YA	1819	A
25	YA	1929	G
25	YA	1930	G
25	YA	1955	U
25	YA	1992	G
25	YA	2110	G
25	YA	2126	A
25	YA	2405	G
25	YA	2439	A
25	YA	2481	G
25	YA	2518	A
25	YA	2566	A
25	YA	2610	C
25	YA	2655	G
25	YA	2681	C
25	YA	2689	U
25	YA	2712	U
25	YA	2726	U
25	YA	2751	G
25	YA	2776	A
25	YA	2832	U
25	YA	2867	G
26	YB	66	A

5.4 Non-standard residues in protein, DNA, RNA chains (i)

4 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
56	PPU	Z6	76	56,25	32,40,41	2.56	6 (18%)	33,57,60	2.15	5 (15%)
56	PPU	Z8	76	56,25	32,40,41	2.55	6 (18%)	33,57,60	2.15	5 (15%)
24	1MG	QY	37	24	18,26,27	2.28	2 (11%)	19,39,42	1.53	3 (15%)
24	1MG	XY	37	24	18,26,27	2.30	2 (11%)	19,39,42	1.53	2 (10%)

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	56,25	-	2/21/43/44	0/4/4/4
56	PPU	Z8	76	56,25	-	2/21/43/44	0/4/4/4
24	1MG	QY	37	24	-	0/3/25/26	0/3/3/3
24	1MG	XY	37	24	-	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	9.24	1.41	1.23
24	XY	37	1MG	C2-N2	7.91	1.48	1.34
24	QY	37	1MG	C2-N2	7.79	1.48	1.34
56	Z6	76	PPU	C9-N6	-5.96	1.31	1.45
56	Z8	76	PPU	C9-N6	-5.94	1.32	1.45
56	Z6	76	PPU	C-N3'	5.71	1.46	1.34
56	Z8	76	PPU	C-N3'	5.69	1.46	1.34
56	Z6	76	PPU	C10-N6	-5.60	1.32	1.45
56	Z8	76	PPU	C10-N6	-5.60	1.32	1.45
24	XY	37	1MG	C4-N3	4.94	1.49	1.37
24	QY	37	1MG	C4-N3	4.93	1.49	1.37
56	Z6	76	PPU	O4'-C1'	2.73	1.44	1.41
56	Z8	76	PPU	O4'-C1'	2.70	1.44	1.41
56	Z8	76	PPU	C4-N3	-2.08	1.32	1.35
56	Z6	76	PPU	C4-N3	-2.04	1.32	1.35

All (15) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	Z6	76	PPU	C3'-N3'-C	-8.62	110.21	123.21
56	Z8	76	PPU	C3'-N3'-C	-8.61	110.23	123.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	Z8	76	PPU	N3-C2-N1	-4.67	121.37	128.68
56	Z6	76	PPU	N3-C2-N1	-4.64	121.42	128.68
24	XY	37	1MG	C8-N7-C5	4.16	110.91	102.99
24	QY	37	1MG	C8-N7-C5	4.09	110.79	102.99
56	Z6	76	PPU	CA-C-N3'	4.03	121.74	116.15
56	Z8	76	PPU	CA-C-N3'	4.00	121.71	116.15
24	QY	37	1MG	C2-N1-C6	3.71	123.96	120.95
24	XY	37	1MG	C2-N1-C6	3.65	123.91	120.95
56	Z6	76	PPU	CM-OC-CZ	-3.41	110.11	117.51
56	Z8	76	PPU	CM-OC-CZ	-3.36	110.22	117.51
56	Z6	76	PPU	C4-C5-N7	-3.30	105.96	109.40
56	Z8	76	PPU	C4-C5-N7	-3.28	105.98	109.40
24	QY	37	1MG	C5-C6-N1	2.00	116.91	113.90

There are no chirality outliers.

All (4) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	Z6	76	PPU	O-C-CA-N
56	Z8	76	PPU	O-C-CA-N
56	Z6	76	PPU	N3'-C-CA-N
56	Z8	76	PPU	N3'-C-CA-N

There are no ring outliers.

4 monomers are involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	Z6	76	PPU	4	0
56	Z8	76	PPU	6	0
24	QY	37	1MG	1	0
24	XY	37	1MG	1	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 687 ligands modelled in this entry, 685 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	1667	-	45,45,45	1.48	7 (15%)	64,67,67	1.38	8 (12%)
58	PAR	XA	1673	-	45,45,45	1.50	6 (13%)	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	1667	-	-	8/18/94/94	0/4/4/4
58	PAR	XA	1673	-	-	6/18/94/94	0/4/4/4

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1667	PAR	C64-C54	5.16	1.59	1.52
58	XA	1673	PAR	C64-C54	4.92	1.58	1.52
58	QA	1667	PAR	C52-C42	3.10	1.58	1.52
58	XA	1673	PAR	C52-C42	2.99	1.58	1.52
58	XA	1673	PAR	O54-C14	2.90	1.49	1.41
58	QA	1667	PAR	O54-C14	2.87	1.49	1.41
58	XA	1673	PAR	C11-C21	2.85	1.57	1.52
58	XA	1673	PAR	O51-C11	2.65	1.48	1.41
58	QA	1667	PAR	O51-C11	2.31	1.47	1.41
58	XA	1673	PAR	C14-C24	2.28	1.56	1.52
58	QA	1667	PAR	C11-C21	2.25	1.56	1.52
58	QA	1667	PAR	C31-C21	2.19	1.56	1.53
58	QA	1667	PAR	C14-C24	2.10	1.56	1.52

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	XA	1673	PAR	O33-C14-C24	4.69	116.30	108.22

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	XA	1673	PAR	C14-O54-C54	4.30	122.14	113.69
58	QA	1667	PAR	O52-C13-C23	3.85	115.94	107.96
58	QA	1667	PAR	C14-O54-C54	3.82	121.19	113.69
58	QA	1667	PAR	O33-C14-C24	3.75	114.68	108.22
58	XA	1673	PAR	O52-C13-C23	3.44	115.10	107.96
58	QA	1667	PAR	O11-C42-C32	-3.12	101.73	109.18
58	QA	1667	PAR	O11-C42-C52	3.12	115.41	107.48
58	QA	1667	PAR	O54-C54-C64	2.98	111.55	106.01
58	XA	1673	PAR	O54-C54-C64	2.86	111.33	106.01
58	XA	1673	PAR	C11-O51-C51	2.59	118.76	113.69
58	QA	1667	PAR	O54-C54-C44	-2.15	105.80	109.69
58	QA	1667	PAR	C22-C32-C42	2.05	114.72	109.53

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	QA	1667	PAR	C44-C54-C64-N64
58	QA	1667	PAR	O54-C54-C64-N64
58	QA	1667	PAR	O51-C51-C61-O61
58	XA	1673	PAR	O51-C51-C61-O61
58	QA	1667	PAR	C41-C51-C61-O61
58	XA	1673	PAR	C41-C51-C61-O61
58	XA	1673	PAR	C33-C43-C53-O53
58	QA	1667	PAR	O43-C13-O52-C52
58	XA	1673	PAR	O43-C13-O52-C52
58	XA	1673	PAR	O43-C43-C53-O53
58	QA	1667	PAR	C23-C13-O52-C52
58	XA	1673	PAR	C23-C13-O52-C52
58	QA	1667	PAR	C23-C33-O33-C14
58	QA	1667	PAR	C43-C33-O33-C14

There are no ring outliers.

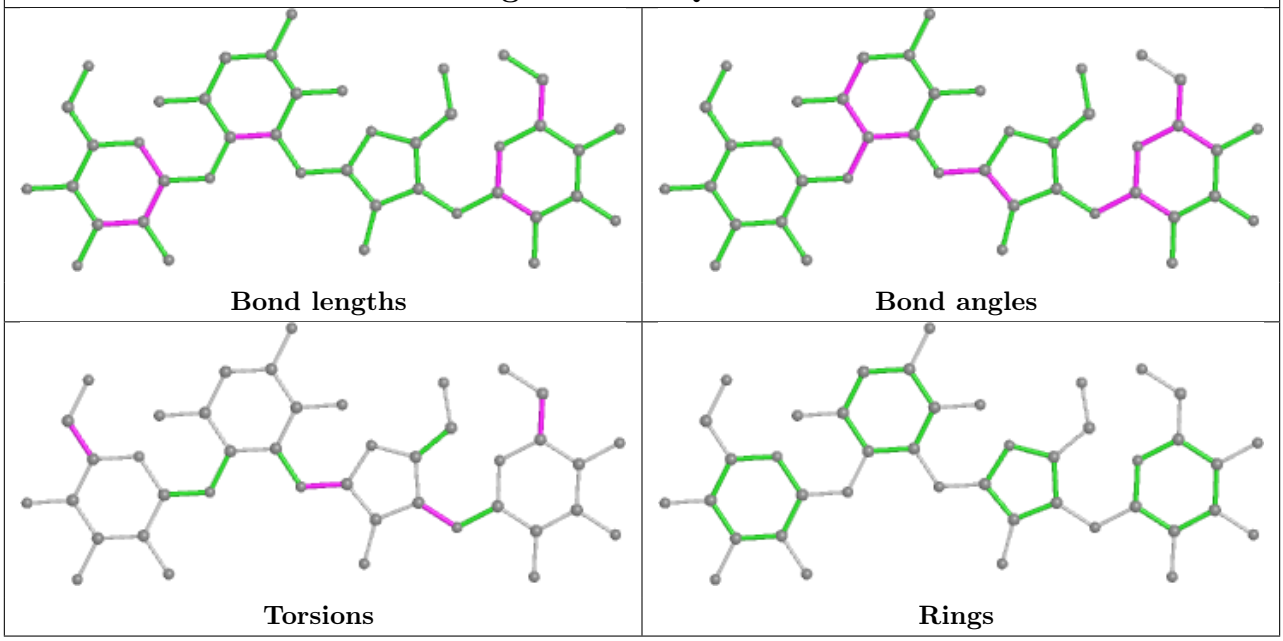
2 monomers are involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	QA	1667	PAR	1	0
58	XA	1673	PAR	1	0

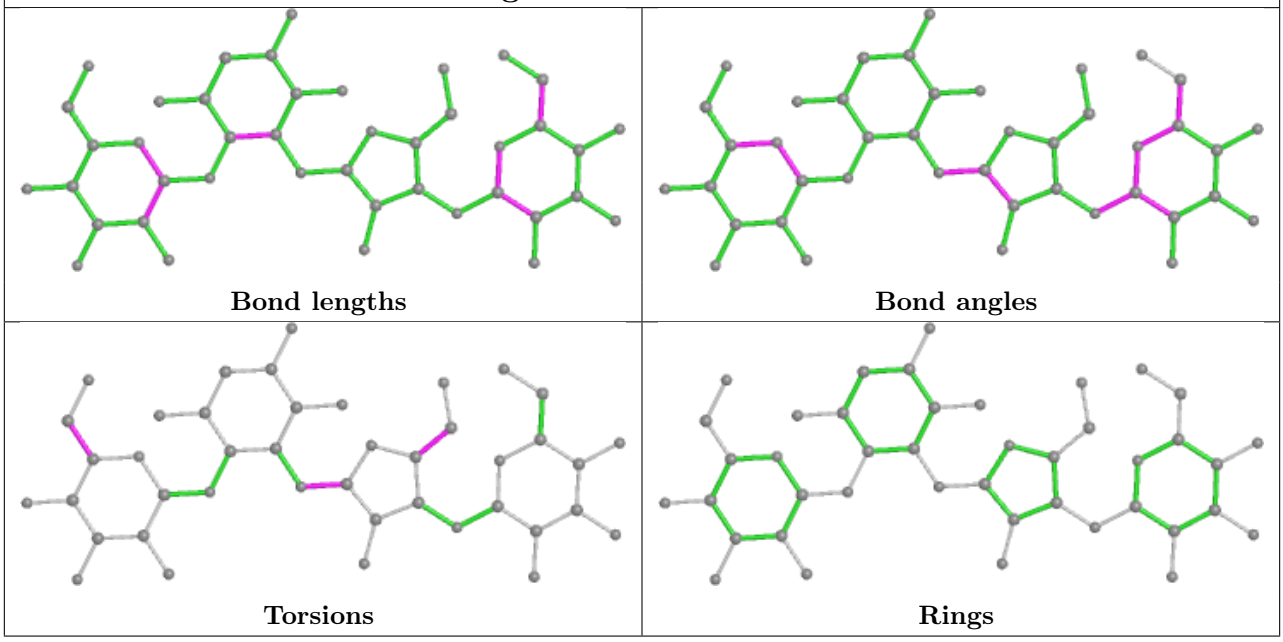
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In

addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 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.

Ligand PAR QA 1667



Ligand PAR XA 1673



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^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	QA	1500/1522 (98%)	0.18	48 (3%) 47 33	49, 89, 176, 309	0
1	XA	1500/1522 (98%)	0.13	44 (2%) 51 37	41, 81, 178, 324	0
2	QB	237/256 (92%)	0.56	19 (8%) 12 7	88, 147, 217, 264	0
2	XB	237/256 (92%)	0.39	12 (5%) 28 17	70, 122, 194, 242	0
3	QC	205/239 (85%)	0.64	18 (8%) 10 6	81, 126, 182, 248	0
3	XC	205/239 (85%)	0.14	4 (1%) 65 52	56, 100, 159, 208	0
4	QD	208/209 (99%)	0.26	8 (3%) 40 27	53, 96, 150, 208	0
4	XD	208/209 (99%)	0.34	9 (4%) 35 23	45, 95, 147, 226	0
5	QE	151/162 (93%)	0.48	10 (6%) 18 11	54, 107, 156, 244	0
5	XE	151/162 (93%)	0.06	3 (1%) 65 52	47, 84, 134, 167	0
6	QF	101/101 (100%)	0.22	1 (0%) 82 73	45, 90, 129, 174	0
6	XF	101/101 (100%)	0.17	2 (1%) 65 52	48, 87, 125, 178	0
7	QG	155/156 (99%)	0.39	14 (9%) 9 5	66, 115, 166, 229	0
7	XG	155/156 (99%)	0.22	11 (7%) 16 10	68, 107, 155, 214	0
8	QH	138/138 (100%)	0.27	7 (5%) 28 17	55, 103, 153, 176	0
8	XH	138/138 (100%)	0.01	2 (1%) 75 64	53, 90, 130, 158	0
9	QI	127/128 (99%)	0.86	15 (11%) 4 3	71, 131, 193, 226	0
9	XI	127/128 (99%)	0.72	10 (7%) 12 7	58, 121, 176, 214	0
10	QJ	99/105 (94%)	1.65	31 (31%) 0 0	81, 161, 235, 275	0
10	XJ	99/105 (94%)	0.93	13 (13%) 3 2	59, 128, 180, 212	0
11	QK	119/129 (92%)	0.63	11 (9%) 9 5	56, 95, 161, 209	0
11	XK	119/129 (92%)	0.30	4 (3%) 45 31	47, 86, 151, 204	0
12	QL	125/132 (94%)	0.44	6 (4%) 30 19	56, 93, 157, 241	0
12	XL	125/132 (94%)	0.19	7 (5%) 24 14	33, 70, 130, 235	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	QM	121/126 (96%)	0.66	11 (9%) 9 5	59, 130, 190, 293	0
13	XM	121/126 (96%)	0.35	8 (6%) 18 11	63, 114, 165, 262	0
14	QN	60/61 (98%)	1.07	10 (16%) 1 1	72, 123, 164, 178	0
14	XN	60/61 (98%)	0.48	2 (3%) 46 32	59, 92, 132, 161	0
15	QO	88/89 (98%)	0.31	6 (6%) 17 10	56, 98, 153, 188	0
15	XO	88/89 (98%)	0.41	7 (7%) 12 7	46, 84, 134, 150	0
16	QP	84/88 (95%)	0.32	0 100 100	48, 87, 135, 191	0
16	XP	84/88 (95%)	0.23	3 (3%) 42 29	59, 97, 142, 225	0
17	QQ	100/105 (95%)	0.50	3 (3%) 50 36	60, 100, 144, 205	0
17	XQ	100/105 (95%)	0.31	5 (5%) 28 17	60, 100, 146, 175	0
18	QR	70/88 (79%)	0.33	2 (2%) 51 37	44, 94, 144, 177	0
18	XR	70/88 (79%)	0.11	2 (2%) 51 37	50, 88, 136, 179	0
19	QS	84/93 (90%)	0.89	13 (15%) 2 1	94, 142, 188, 229	0
19	XS	84/93 (90%)	0.52	5 (5%) 21 13	74, 117, 173, 225	0
20	QT	99/106 (93%)	0.48	6 (6%) 21 12	66, 105, 159, 206	0
20	XT	99/106 (93%)	0.33	5 (5%) 28 17	60, 108, 168, 201	0
21	QU	25/27 (92%)	2.35	11 (44%) 0 0	76, 114, 154, 186	0
21	XU	25/27 (92%)	1.37	7 (28%) 0 0	59, 101, 140, 155	0
22	QV	77/77 (100%)	0.54	7 (9%) 9 5	49, 107, 178, 226	0
22	XV	77/77 (100%)	0.31	1 (1%) 77 66	43, 92, 154, 198	0
23	QX	8/25 (32%)	0.92	0 100 100	66, 95, 136, 155	0
23	XX	8/25 (32%)	0.72	1 (12%) 3 2	56, 74, 96, 136	0
24	QY	13/18 (72%)	2.07	4 (30%) 0 0	103, 170, 239, 259	0
24	XY	13/18 (72%)	1.96	6 (46%) 0 0	71, 145, 218, 228	0
25	RA	2882/2916 (98%)	0.23	175 (6%) 21 12	37, 67, 225, 362	0
25	YA	2883/2916 (98%)	0.09	129 (4%) 33 21	28, 58, 202, 336	0
26	RB	120/122 (98%)	0.16	1 (0%) 86 79	70, 97, 127, 172	0
26	YB	120/122 (98%)	0.05	1 (0%) 86 79	57, 84, 112, 160	0
27	RD	272/276 (98%)	-0.00	3 (1%) 80 70	30, 64, 103, 185	0
27	YD	272/276 (98%)	-0.18	2 (0%) 87 82	21, 55, 91, 213	0
28	RE	205/206 (99%)	0.13	6 (2%) 51 37	37, 75, 150, 272	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	YE	205/206 (99%)	0.08	3 (1%) 73 62	33, 73, 141, 240	0
29	RF	202/210 (96%)	-0.02	2 (0%) 82 73	35, 81, 142, 186	0
29	YF	202/210 (96%)	-0.17	1 (0%) 91 86	19, 62, 127, 157	0
30	RG	181/182 (99%)	1.76	71 (39%) 0 0	79, 152, 236, 277	0
30	YG	181/182 (99%)	0.49	14 (7%) 13 7	59, 103, 159, 224	0
31	RH	170/180 (94%)	1.41	46 (27%) 0 0	89, 159, 219, 257	0
31	YH	170/180 (94%)	0.36	9 (5%) 26 15	50, 97, 137, 194	0
32	RI	146/148 (98%)	0.69	18 (12%) 4 2	53, 122, 189, 282	0
32	YI	146/148 (98%)	0.16	6 (4%) 37 25	48, 107, 166, 198	0
33	RN	138/140 (98%)	0.29	7 (5%) 28 17	52, 90, 138, 201	0
33	YN	138/140 (98%)	-0.08	1 (0%) 87 82	45, 73, 129, 177	0
34	RO	122/122 (100%)	-0.00	0 100 100	39, 77, 111, 136	0
34	YO	122/122 (100%)	-0.16	0 100 100	36, 67, 96, 125	0
35	RP	150/150 (100%)	0.43	11 (7%) 15 9	34, 88, 161, 221	0
35	YP	150/150 (100%)	0.18	4 (2%) 54 40	24, 73, 137, 220	0
36	RQ	141/141 (100%)	0.27	9 (6%) 19 11	45, 87, 138, 207	0
36	YQ	141/141 (100%)	0.08	5 (3%) 44 29	35, 69, 135, 176	0
37	RR	118/118 (100%)	-0.10	0 100 100	40, 70, 105, 146	0
37	YR	118/118 (100%)	-0.14	0 100 100	39, 69, 108, 143	0
38	RS	111/112 (99%)	0.22	3 (2%) 54 40	61, 98, 149, 192	0
38	YS	111/112 (99%)	0.07	3 (2%) 54 40	51, 87, 133, 188	0
39	RT	137/146 (93%)	0.42	13 (9%) 8 5	46, 85, 188, 243	0
39	YT	137/146 (93%)	0.16	8 (5%) 23 13	47, 77, 174, 265	0
40	RU	117/118 (99%)	0.21	4 (3%) 45 31	36, 76, 134, 205	0
40	YU	117/118 (99%)	-0.12	2 (1%) 70 58	26, 59, 118, 220	0
41	RV	101/101 (100%)	0.22	3 (2%) 50 36	42, 96, 169, 265	0
41	YV	101/101 (100%)	-0.06	2 (1%) 65 52	38, 85, 145, 208	0
42	RW	113/113 (100%)	0.09	3 (2%) 54 40	39, 63, 114, 239	0
42	YW	113/113 (100%)	0.03	1 (0%) 84 76	35, 60, 116, 221	0
43	RX	92/96 (95%)	0.24	5 (5%) 25 15	49, 75, 117, 147	0
43	YX	92/96 (95%)	-0.00	0 100 100	38, 61, 99, 127	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	RY	102/110 (92%)	0.97	19 (18%) 1 0	63, 121, 197, 242	0
44	YY	102/110 (92%)	0.27	5 (4%) 29 18	46, 89, 170, 226	0
45	RZ	183/206 (88%)	0.65	20 (10%) 5 4	66, 122, 199, 239	0
45	YZ	183/206 (88%)	0.52	15 (8%) 11 7	54, 112, 199, 258	0
46	R0	82/85 (96%)	0.14	1 (1%) 79 68	52, 75, 101, 157	0
46	Y0	82/85 (96%)	-0.09	0 100 100	43, 71, 90, 104	0
47	R1	97/98 (98%)	0.60	10 (10%) 6 4	44, 76, 158, 289	0
47	Y1	97/98 (98%)	0.37	6 (6%) 20 12	36, 65, 174, 221	0
48	R2	69/72 (95%)	0.19	1 (1%) 75 64	53, 99, 158, 195	0
48	Y2	69/72 (95%)	0.15	3 (4%) 35 23	32, 74, 158, 183	0
49	R3	59/60 (98%)	0.51	7 (11%) 4 3	51, 87, 139, 197	0
49	Y3	59/60 (98%)	0.16	3 (5%) 28 17	49, 74, 125, 182	0
50	R4	71/71 (100%)	1.85	27 (38%) 0 0	126, 200, 274, 317	0
50	Y4	71/71 (100%)	1.09	17 (23%) 0 0	88, 160, 235, 285	0
51	R5	59/60 (98%)	0.98	11 (18%) 1 0	39, 79, 219, 237	0
51	Y5	59/60 (98%)	0.46	8 (13%) 3 2	32, 77, 222, 240	0
52	R6	49/54 (90%)	2.06	22 (44%) 0 0	93, 153, 224, 237	0
52	Y6	49/54 (90%)	2.02	24 (48%) 0 0	83, 146, 203, 230	0
53	R7	49/49 (100%)	0.11	4 (8%) 11 7	36, 52, 107, 191	0
53	Y7	49/49 (100%)	0.00	3 (6%) 21 12	29, 41, 104, 206	0
54	R8	64/65 (98%)	0.56	5 (7%) 13 7	48, 73, 141, 217	0
54	Y8	64/65 (98%)	0.37	2 (3%) 49 34	36, 66, 121, 208	0
55	R9	37/37 (100%)	3.30	28 (75%) 0 0	86, 127, 178, 254	0
55	Y9	37/37 (100%)	2.03	18 (48%) 0 0	72, 109, 161, 206	0
56	Z6	2/3 (66%)	0.57	0 100 100	57, 57, 57, 66	0
56	Z8	2/3 (66%)	0.10	0 100 100	47, 47, 47, 55	0
All	All	20871/21494 (97%)	0.29	1264 (6%) 21 12	19, 84, 183, 362	0

All (1264) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	RA	1096	A	16.4
25	RA	2116	G	13.7

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Mol	Chain	Res	Type	RSRZ
25	YA	2125	G	13.2
12	QL	129	ALA	12.7
7	QG	81	GLY	12.6
11	QK	129	SER	12.3
25	YA	2801	A	12.3
25	RA	1065	U	12.1
11	XK	129	SER	12.1
25	RA	1099	G	11.9
25	RA	1100	C	11.6
25	RA	2799	A	11.2
25	RA	2170	A	11.1
25	RA	1097	U	11.0
25	RA	1066	U	11.0
25	RA	1058	G	10.9
25	RA	1098	A	10.8
25	YA	2799	A	10.8
25	RA	1068	G	10.7
25	YA	1536	A	10.5
25	RA	2801	A	10.4
40	RU	118	GLY	10.3
25	RA	1070	A	10.1
25	YA	2116	G	9.8
25	YA	1096	A	9.7
12	QL	128	ALA	9.6
25	RA	1093	G	9.5
32	RI	59	ALA	9.5
55	R9	1	MET	9.4
49	R3	60	GLU	9.3
25	RA	1059	G	9.3
51	R5	60	VAL	9.2
25	RA	1069	A	9.1
25	YA	2117	A	8.9
18	QR	88	LYS	8.8
24	XY	32	U	8.7
25	RA	890	A	8.5
51	R5	59	GLU	8.4
51	R5	54	GLY	8.4
50	R4	49	PHE	8.3
7	QG	82	GLY	8.2
25	RA	2114	A	8.1
30	RG	182	LYS	8.1
1	QA	1032	A	8.1

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Mol	Chain	Res	Type	RSRZ
25	YA	2894	G	8.0
25	RA	1084	A	8.0
11	QK	11	LYS	8.0
25	YA	2795	G	8.0
24	QY	32	U	7.9
25	YA	2798	C	7.9
25	RA	1057	A	7.8
25	RA	1067	A	7.8
1	XA	1032	A	7.8
25	YA	2136	C	7.8
28	YE	204	ALA	7.7
25	RA	1074	G	7.7
25	YA	2126	A	7.7
11	XK	11	LYS	7.6
22	QV	47	U	7.5
7	XG	81	GLY	7.5
25	RA	889	C	7.3
25	RA	1094	U	7.3
25	RA	1083	U	7.3
52	Y6	44	ARG	7.3
12	QL	127	GLU	7.3
25	RA	2156	G	7.2
28	YE	205	ALA	7.2
25	RA	2798	C	7.2
2	QB	4	GLU	7.1
21	QU	26	LYS	7.1
25	RA	1060	U	7.0
1	QA	1032(B)	G	7.0
12	XL	129	ALA	6.9
25	YA	1058	G	6.9
35	RP	150	ALA	6.9
25	RA	1536	A	6.8
31	RH	43	VAL	6.8
1	QA	1032(A)	G	6.8
25	RA	2125	G	6.8
25	RA	2138	C	6.7
25	RA	2133	G	6.7
10	QJ	89	ASP	6.6
30	RG	72	ARG	6.6
55	R9	34	GLN	6.6
30	RG	85	GLY	6.5
51	Y5	54	GLY	6.5

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Mol	Chain	Res	Type	RSRZ
44	RY	89	PHE	6.5
44	RY	102	CYS	6.5
25	RA	2137	C	6.4
25	RA	2894	G	6.4
22	XV	47	U	6.4
18	XR	88	LYS	6.3
25	RA	1087	G	6.3
1	QA	1029	G	6.3
25	RA	654	A	6.3
25	RA	1092	C	6.3
25	YA	1060	U	6.2
52	R6	46	HIS	6.2
25	RA	1103	A	6.2
50	R4	40	HIS	6.2
30	RG	154	GLY	6.2
30	RG	58	GLN	6.2
25	RA	2173	A	6.2
25	RA	1082	U	6.2
25	RA	1534	G	6.1
13	QM	121	LYS	6.1
25	RA	2175	C	6.0
52	Y6	43	CYS	6.0
55	R9	24	TYR	6.0
25	RA	2169	A	5.9
25	YA	2123	G	5.9
10	QJ	83	GLU	5.9
10	QJ	4	ILE	5.9
13	QM	7	VAL	5.8
25	RA	2804	C	5.8
25	YA	2135	A	5.8
50	Y4	67	TYR	5.8
1	XA	210	U	5.8
25	YA	654(A)	G	5.7
50	R4	11	PRO	5.7
21	XU	26	LYS	5.7
30	RG	108	ASN	5.7
1	XA	87	A	5.7
25	RA	1102	C	5.7
55	R9	25	VAL	5.7
1	XA	1032(A)	G	5.7
1	XA	1451	A	5.7
52	R6	43	CYS	5.7

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Mol	Chain	Res	Type	RSRZ
25	YA	654	A	5.7
47	R1	97	LEU	5.7
9	XI	8	GLY	5.6
25	RA	1088	A	5.6
25	YA	2169	A	5.6
46	R0	2	ALA	5.6
25	RA	1064	C	5.6
25	YA	1097	U	5.6
30	RG	87	PRO	5.6
40	YU	118	GLY	5.5
55	Y9	1	MET	5.5
55	R9	11	CYS	5.5
1	QA	1451	A	5.5
10	QJ	88	LEU	5.5
10	QJ	28	ARG	5.5
10	QJ	10	GLY	5.5
25	RA	2805	G	5.5
30	RG	9	ARG	5.5
55	R9	36	GLN	5.5
25	RA	1095	A	5.4
49	Y3	60	GLU	5.4
10	XJ	98	ILE	5.4
35	RP	149	GLU	5.4
28	RE	204	ALA	5.4
50	Y4	70	GLY	5.4
25	YA	2122	U	5.4
25	RA	2155	G	5.3
25	RA	1061	U	5.3
25	YA	2793	G	5.3
32	RI	61	ARG	5.3
47	R1	98	LEU	5.3
14	XN	2	ALA	5.3
25	YA	2133	G	5.3
25	YA	2151	G	5.3
25	YA	1508	A	5.2
51	R5	55	ARG	5.2
55	R9	14	CYS	5.2
31	RH	52	VAL	5.2
25	YA	2112	G	5.2
24	QY	33	U	5.2
14	QN	2	ALA	5.2
51	R5	53	ALA	5.2

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Mol	Chain	Res	Type	RSRZ
25	YA	1075	C	5.2
32	RI	58	LEU	5.2
2	QB	240	GLN	5.2
42	YW	113	LYS	5.1
10	XJ	5	ARG	5.1
25	RA	1101	U	5.1
25	RA	2797	U	5.1
25	RA	2795	G	5.1
10	QJ	72	VAL	5.1
11	QK	128	ALA	5.1
25	RA	2154	G	5.1
25	YA	277	C	5.1
25	RA	2115	G	5.1
3	QC	107	GLN	5.1
50	Y4	71	ARG	5.1
45	RZ	114	GLY	5.1
10	QJ	33	GLN	5.1
55	R9	19	ARG	5.0
25	RA	2157	G	5.0
21	QU	25	LYS	5.0
25	RA	1072	C	5.0
25	RA	2792	G	5.0
25	YA	2797	U	4.9
10	XJ	33	GLN	4.9
9	QI	124	GLN	4.9
25	YA	1059	G	4.9
25	YA	1534	G	4.9
40	YU	117	GLN	4.9
50	Y4	40	HIS	4.9
50	R4	45	GLY	4.9
50	R4	70	GLY	4.9
25	RA	2168	G	4.9
25	RA	2119	A	4.9
20	QT	9	ASN	4.9
25	RA	2174	C	4.9
25	YA	2893	G	4.9
31	RH	55	PRO	4.9
45	YZ	167	PRO	4.9
25	RA	1063	G	4.8
45	YZ	166	SER	4.8
44	RY	103	GLY	4.8
25	RA	1071	G	4.8

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Mol	Chain	Res	Type	RSRZ
25	RA	2793	G	4.8
36	RQ	141	GLN	4.8
50	R4	23	GLU	4.8
45	RZ	93	ASP	4.8
25	YA	1095	A	4.8
25	YA	889	C	4.8
31	YH	3	ARG	4.8
21	QU	23	PRO	4.8
1	XA	81	G	4.8
52	R6	13	CYS	4.8
31	RH	141	VAL	4.8
25	RA	2117	A	4.8
25	YA	2175	C	4.7
10	QJ	34	VAL	4.7
20	QT	102	GLY	4.7
25	RA	1176	G	4.7
25	YA	2156	G	4.7
31	RH	89	ILE	4.7
21	QU	18	TYR	4.7
32	RI	65	ALA	4.7
1	QA	1021	G	4.6
52	R6	6	ARG	4.6
25	RA	2136	C	4.6
1	QA	1026	G	4.6
41	YV	36	PRO	4.6
41	RV	36	PRO	4.6
25	YA	1082	U	4.6
9	QI	110	GLU	4.6
40	RU	117	GLN	4.6
27	RD	26	LYS	4.6
5	XE	155	GLU	4.6
17	QQ	101	ARG	4.6
39	YT	135	ALA	4.6
21	QU	24	ARG	4.5
25	YA	2114	A	4.5
9	QI	27	THR	4.5
10	XJ	6	ILE	4.5
10	XJ	4	ILE	4.5
9	QI	53	VAL	4.5
30	RG	46	ALA	4.5
39	RT	130	ALA	4.5
25	RA	2132	U	4.5

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Mol	Chain	Res	Type	RSRZ
53	Y7	48	LYS	4.5
7	XG	84	ASN	4.5
3	QC	193	TYR	4.4
25	YA	2132	U	4.4
25	RA	1053	C	4.4
25	RA	1075	C	4.4
11	QK	12	ARG	4.4
2	XB	231	GLU	4.4
25	RA	1508	A	4.4
25	YA	2170	A	4.4
25	YA	2131	G	4.4
3	QC	194	GLY	4.4
25	YA	890	A	4.3
25	YA	2804	C	4.3
25	YA	1066	U	4.3
13	XM	7	VAL	4.3
55	Y9	12	ASP	4.3
25	RA	2126	A	4.3
31	RH	132	ARG	4.3
55	R9	15	LYS	4.3
25	RA	2802	G	4.3
13	QM	120	LYS	4.3
28	RE	205	ALA	4.3
30	RG	57	ALA	4.3
25	YA	2119	A	4.3
10	QJ	29	ARG	4.3
7	XG	85	TYR	4.2
9	QI	127	LYS	4.2
52	Y6	5	VAL	4.2
25	RA	1085	A	4.2
52	R6	41	PRO	4.2
25	RA	2171	A	4.2
2	QB	231	GLU	4.2
25	RA	2176	A	4.2
31	RH	18	GLU	4.2
1	XA	1026	G	4.2
41	RV	45	THR	4.2
25	RA	654(A)	G	4.2
50	R4	67	TYR	4.2
45	RZ	107	THR	4.2
30	RG	143	GLU	4.2
25	YA	1084	A	4.1

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Mol	Chain	Res	Type	RSRZ
55	R9	35	ARG	4.1
25	YA	2121	G	4.1
52	R6	50	ARG	4.1
49	Y3	59	VAL	4.1
41	YV	45	THR	4.1
30	RG	54	GLU	4.1
44	YY	50	ARG	4.1
8	QH	1	MET	4.1
25	YA	1510	A	4.1
51	Y5	55	ARG	4.1
45	RZ	159	PRO	4.1
2	QB	6	THR	4.0
39	YT	106	SER	4.0
55	Y9	29	ASN	4.0
7	QG	77	SER	4.0
11	QK	13	GLN	4.0
50	R4	1	MET	4.0
25	YA	1061	U	4.0
25	YA	2141	G	4.0
6	QF	101	ALA	4.0
20	XT	106	ALA	4.0
51	Y5	58	LEU	4.0
10	QJ	74	ILE	4.0
55	R9	12	ASP	4.0
1	XA	1032(B)	G	4.0
25	YA	2805	G	4.0
25	YA	2139	C	4.0
44	RY	50	ARG	4.0
25	RA	1054	A	4.0
13	QM	8	GLU	4.0
21	QU	5	ASP	3.9
30	RG	155	MET	3.9
52	Y6	29	ASN	3.9
52	Y6	30	THR	3.9
50	R4	71	ARG	3.9
1	QA	1450	U	3.9
35	YP	13	ASN	3.9
52	Y6	45	LYS	3.9
9	QI	128	ARG	3.9
49	R3	2	PRO	3.9
7	QG	86	GLN	3.9
54	R8	64	TYR	3.9

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Mol	Chain	Res	Type	RSRZ
5	XE	154	GLY	3.9
1	XA	80	G	3.9
25	RA	2833	G	3.9
19	QS	6	LYS	3.9
50	R4	47	GLN	3.9
25	YA	2152	G	3.9
52	Y6	37	ARG	3.9
10	QJ	6	ILE	3.9
16	XP	83	GLU	3.9
31	RH	131	VAL	3.8
50	R4	66	SER	3.8
32	RI	62	LYS	3.8
25	YA	1069	A	3.8
25	YA	2167	U	3.8
31	RH	56	SER	3.8
44	RY	91	GLU	3.8
39	RT	129	ARG	3.8
21	XU	23	PRO	3.8
25	RA	2135	A	3.8
52	Y6	23	THR	3.8
43	RX	92	LEU	3.8
25	RA	1080	C	3.8
20	QT	104	LEU	3.8
7	QG	84	ASN	3.8
30	RG	2	PRO	3.8
3	QC	105	GLU	3.8
12	XL	127	GLU	3.8
25	RA	1079	C	3.8
50	R4	44	THR	3.8
52	R6	5	VAL	3.8
50	Y4	49	PHE	3.8
25	YA	2802	G	3.8
25	RA	1077	A	3.8
45	YZ	142	SER	3.8
1	XA	64	G	3.8
19	QS	2	PRO	3.8
39	RT	106	SER	3.7
20	XT	9	ASN	3.7
1	XA	89	U	3.7
25	RA	1081	U	3.7
10	QJ	62	HIS	3.7
45	RZ	162	GLU	3.7

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Mol	Chain	Res	Type	RSRZ
45	YZ	162	GLU	3.7
55	R9	2	LYS	3.7
55	R9	23	VAL	3.7
50	Y4	69	LYS	3.7
14	QN	61	TRP	3.7
25	YA	11	G	3.7
1	QA	1027	C	3.7
25	RA	1052	C	3.7
1	QA	1020	U	3.7
24	XY	33	U	3.7
2	QB	139	LYS	3.7
52	Y6	32	ASN	3.7
1	XA	631	G	3.6
25	RA	1055	G	3.6
12	XL	128	ALA	3.6
30	RG	12	TYR	3.6
53	Y7	49	ARG	3.6
51	R5	2	ALA	3.6
32	RI	66	GLU	3.6
52	R6	40	CYS	3.6
55	R9	10	ILE	3.6
25	RA	1091	G	3.6
31	RH	88	LEU	3.6
1	XA	1043	C	3.6
30	RG	13	GLU	3.6
52	Y6	42	TRP	3.6
39	RT	2	ASN	3.6
25	YA	2140	C	3.6
32	YI	65	ALA	3.6
1	QA	1033	G	3.6
25	RA	653	A	3.6
25	RA	1089	G	3.6
25	YA	276	A	3.6
52	R6	42	TRP	3.6
25	RA	2112	G	3.6
21	XU	25	LYS	3.6
39	RT	137	LYS	3.6
52	R6	45	LYS	3.6
9	XI	110	GLU	3.6
30	RG	100	TRP	3.6
31	RH	25	LYS	3.6
31	RH	99	VAL	3.6

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Mol	Chain	Res	Type	RSRZ
32	RI	9	LEU	3.6
3	QC	109	PRO	3.5
10	QJ	25	GLU	3.5
25	RA	1049	C	3.5
36	YQ	80	GLU	3.5
52	R6	14	THR	3.5
24	XY	31	G	3.5
30	RG	152	LEU	3.5
25	YA	270(L)	U	3.5
52	Y6	49	HIS	3.5
55	Y9	32	HIS	3.5
25	YA	2803	C	3.5
45	RZ	112	ARG	3.5
45	RZ	163	LEU	3.5
30	RG	80	PHE	3.5
1	XA	630	G	3.5
25	YA	2792	G	3.5
9	XI	31	GLN	3.5
14	XN	41	ARG	3.5
55	R9	20	HIS	3.5
2	XB	38	GLY	3.5
25	RA	11	G	3.5
1	QA	1129	C	3.5
54	Y8	64	TYR	3.5
25	RA	878	A	3.5
2	QB	79	ASP	3.5
21	QU	22	ARG	3.5
14	QN	17	LYS	3.5
19	QS	85	LYS	3.5
10	XJ	99	LYS	3.5
25	YA	2176	A	3.5
32	YI	107	VAL	3.5
39	RT	135	ALA	3.5
21	QU	19	GLY	3.4
12	XL	19	ARG	3.4
14	QN	25	VAL	3.4
27	YD	26	LYS	3.4
45	RZ	113	ALA	3.4
40	RU	91	ASP	3.4
32	RI	10	GLU	3.4
3	QC	72	LYS	3.4
38	YS	2	ALA	3.4

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Mol	Chain	Res	Type	RSRZ
2	QB	19	HIS	3.4
3	QC	196	LEU	3.4
28	RE	38	THR	3.4
51	Y5	53	ALA	3.4
25	RA	1078	U	3.4
25	RA	2163	C	3.4
55	R9	6	SER	3.4
25	RA	1026	U	3.4
25	RA	2807	G	3.4
20	QT	103	GLY	3.4
44	RY	47	LYS	3.4
3	QC	160	ALA	3.4
35	RP	13	ASN	3.4
44	RY	55	TYR	3.4
31	RH	24	VAL	3.3
1	QA	1031	G	3.3
32	RI	83	ALA	3.3
13	QM	42	ALA	3.3
25	YA	2127	G	3.3
33	RN	9	VAL	3.3
51	R5	57	VAL	3.3
55	Y9	25	VAL	3.3
50	Y4	60	GLN	3.3
25	RA	1113	U	3.3
52	Y6	53	LYS	3.3
25	RA	1510	A	3.3
10	QJ	70	ARG	3.3
12	QL	19	ARG	3.3
39	RT	3	ARG	3.3
39	RT	133	GLU	3.3
1	QA	81	G	3.3
9	QI	95	LYS	3.3
49	R3	59	VAL	3.3
38	RS	37	ALA	3.3
31	RH	5	GLY	3.3
1	QA	1124	G	3.3
25	RA	899	A	3.3
52	R6	22	ALA	3.3
25	RA	2164	C	3.3
32	RI	54	GLN	3.3
39	YT	134	GLU	3.3
5	QE	154	GLY	3.3

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Mol	Chain	Res	Type	RSRZ
1	XA	1025	U	3.3
25	RA	888	C	3.3
25	YA	2137	C	3.3
55	R9	16	VAL	3.3
24	QY	31	G	3.3
25	RA	2172	U	3.3
25	RA	2794	C	3.3
20	QT	44	ALA	3.2
30	RG	28	VAL	3.2
11	XK	12	ARG	3.2
25	YA	2892	A	3.2
31	RH	87	LEU	3.2
52	R6	23	THR	3.2
1	QA	1043	C	3.2
1	XA	90	C	3.2
39	RT	134	GLU	3.2
33	RN	8	GLN	3.2
10	QJ	87	THR	3.2
25	RA	1086	A	3.2
25	YA	2174	C	3.2
21	XU	19	GLY	3.2
25	RA	2141	G	3.2
25	YA	1074	G	3.2
55	R9	4	ARG	3.2
25	YA	2188	C	3.2
50	Y4	66	SER	3.2
13	QM	122	LYS	3.2
30	RG	137	GLU	3.2
7	QG	83	ALA	3.2
2	XB	4	GLU	3.2
30	YG	89	GLY	3.2
4	XD	24	GLU	3.2
36	RQ	80	GLU	3.2
36	RQ	140	ALA	3.2
25	YA	2154	G	3.2
1	QA	994	A	3.2
50	R4	29	PRO	3.2
4	QD	86	LYS	3.2
39	RT	131	ALA	3.2
19	XS	27	GLU	3.2
1	XA	77	C	3.1
19	QS	27	GLU	3.1

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Mol	Chain	Res	Type	RSRZ
52	R6	20	ASN	3.1
25	YA	2173	A	3.1
1	QA	208	U	3.1
3	XC	71	ALA	3.1
10	QJ	98	ILE	3.1
25	YA	1444(A)	A	3.1
53	R7	48	LYS	3.1
35	RP	118	GLY	3.1
2	XB	96	ARG	3.1
32	RI	113	ARG	3.1
47	Y1	27	GLU	3.1
25	RA	2162	G	3.1
51	Y5	51	TYR	3.1
39	YT	1	MET	3.1
45	RZ	156	LYS	3.1
7	XG	78	ARG	3.1
17	XQ	36	ILE	3.1
25	RA	2896	C	3.1
43	RX	89	ILE	3.1
51	Y5	59	GLU	3.1
10	XJ	59	SER	3.1
25	RA	2167	U	3.1
30	RG	138	GLN	3.1
31	YH	161	GLY	3.1
10	XJ	97	GLU	3.1
47	Y1	93	GLU	3.1
1	XA	1129	C	3.1
25	RA	2803	C	3.1
32	YI	113	ARG	3.1
11	QK	117	ASN	3.0
31	RH	2	SER	3.0
25	YA	2118	U	3.0
31	RH	50	VAL	3.0
25	RA	10	G	3.0
25	YA	2124	G	3.0
25	YA	2833	G	3.0
50	Y4	68	ARG	3.0
25	RA	1177	A	3.0
25	RA	2895	U	3.0
30	YG	152	LEU	3.0
25	RA	1073	A	3.0
25	RA	2128	C	3.0

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Mol	Chain	Res	Type	RSRZ
2	XB	156	LYS	3.0
33	RN	10	GLU	3.0
55	Y9	22	ARG	3.0
25	YA	2794	C	3.0
9	XI	98	PRO	3.0
31	RH	45	VAL	3.0
31	RH	41	MET	3.0
1	XA	344	A	3.0
25	YA	2157	G	3.0
50	Y4	3	GLU	3.0
13	XM	122	LYS	3.0
52	R6	37	ARG	3.0
3	QC	197	GLY	3.0
13	QM	75	ALA	3.0
32	YI	117	GLU	3.0
50	R4	22	ILE	3.0
25	RA	270(O)	U	3.0
52	R6	49	HIS	3.0
55	Y9	16	VAL	3.0
25	YA	2790	A	3.0
7	QG	156	TRP	3.0
44	YY	86	ARG	3.0
11	QK	25	TYR	3.0
30	RG	158	ALA	3.0
31	RH	58	GLU	3.0
10	QJ	9	ARG	3.0
12	XL	28	LYS	3.0
22	QV	9	G	3.0
45	RZ	146	ILE	3.0
45	YZ	113	ALA	3.0
30	RG	40	ASN	3.0
36	YQ	1	MET	3.0
36	YQ	141	GLN	3.0
1	XA	1450	U	3.0
25	YA	899	A	3.0
47	R1	93	GLU	3.0
3	QC	6	HIS	3.0
55	Y9	21	GLY	2.9
55	R9	17	ILE	2.9
25	YA	1026	U	2.9
25	YA	2172	U	2.9
1	XA	1028(B)	C	2.9

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Mol	Chain	Res	Type	RSRZ
25	RA	2139	C	2.9
52	Y6	26	ASN	2.9
25	YA	2171	A	2.9
31	YH	58	GLU	2.9
4	XD	26	CYS	2.9
30	RG	107	LEU	2.9
55	Y9	23	VAL	2.9
25	YA	2115	G	2.9
2	QB	143	GLU	2.9
45	RZ	145	GLU	2.9
44	RY	88	LYS	2.9
25	YA	1177	A	2.9
49	R3	58	VAL	2.9
35	RP	91	PHE	2.9
31	RH	51	ARG	2.9
25	RA	2121	G	2.9
30	RG	17	PRO	2.9
30	YG	87	PRO	2.9
1	QA	998(A)	C	2.9
31	RH	32	GLU	2.9
19	QS	67	VAL	2.9
9	QI	93	ARG	2.9
4	QD	12	CYS	2.9
24	XY	41	A	2.9
1	QA	1278	U	2.9
13	QM	6	GLY	2.9
30	RG	148	MET	2.9
36	RQ	59	ARG	2.9
21	QU	21	TYR	2.9
36	YQ	140	ALA	2.9
31	RH	21	PRO	2.9
1	XA	1027	C	2.9
10	XJ	73	ASP	2.9
25	RA	2140	C	2.9
44	RY	92	ASN	2.9
30	RG	65	GLY	2.9
30	YG	88	ILE	2.9
3	XC	105	GLU	2.9
26	YB	88	C	2.9
36	RQ	91	GLU	2.9
1	QA	485	G	2.9
1	XA	78	G	2.9

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Mol	Chain	Res	Type	RSRZ
31	RH	31	GLY	2.9
9	XI	7	THR	2.9
25	YA	878	A	2.9
25	YA	1057	A	2.9
45	RZ	111	VAL	2.9
55	Y9	36	GLN	2.9
30	RG	4	ASP	2.9
31	YH	155	SER	2.9
1	XA	208	U	2.9
25	YA	2130	U	2.9
30	RG	29	TRP	2.9
25	RA	2134	A	2.9
15	XO	75	PRO	2.9
55	Y9	34	GLN	2.8
2	XB	232	PRO	2.8
3	QC	91	LEU	2.8
25	RA	2165	G	2.8
25	RA	2166	G	2.8
14	QN	8	GLU	2.8
30	RG	30	GLU	2.8
18	XR	22	VAL	2.8
5	QE	94	ALA	2.8
2	XB	6	THR	2.8
25	RA	34	C	2.8
25	YA	2896	C	2.8
8	QH	116	LYS	2.8
47	Y1	96	LYS	2.8
52	R6	21	TYR	2.8
13	XM	121	LYS	2.8
25	RA	2152	G	2.8
1	QA	1128	C	2.8
25	YA	1100	C	2.8
25	YA	2178	C	2.8
32	RI	55	ALA	2.8
2	XB	240	GLN	2.8
6	XF	57	GLN	2.8
50	R4	46	GLN	2.8
19	QS	82	GLY	2.8
45	YZ	160	GLY	2.8
25	YA	2155	G	2.8
30	RG	27	ASN	2.8
15	QO	75	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
31	RH	161	GLY	2.8
48	Y2	11	GLU	2.8
2	QB	33	TYR	2.8
39	RT	1	MET	2.8
7	XG	82	GLY	2.8
45	YZ	130	PRO	2.8
44	RY	86	ARG	2.8
55	R9	26	ILE	2.8
3	QC	60	ALA	2.8
25	YA	2129	C	2.8
25	YA	1869	G	2.8
25	YA	2153	G	2.8
52	R6	39	TYR	2.8
14	QN	60	SER	2.8
14	QN	38	GLY	2.8
35	RP	109	GLY	2.8
13	XM	120	LYS	2.8
25	RA	1539	G	2.7
3	XC	193	TYR	2.7
25	RA	2629	A	2.7
31	RH	49	VAL	2.7
9	XI	105	ASP	2.7
3	QC	94	LEU	2.7
25	YA	1099	G	2.7
2	QB	193	ASP	2.7
10	XJ	28	ARG	2.7
25	RA	277	C	2.7
50	Y4	56	VAL	2.7
25	RA	2149	G	2.7
1	XA	162	A	2.7
44	YY	102	CYS	2.7
30	RG	151	ALA	2.7
31	RH	125	VAL	2.7
52	Y6	41	PRO	2.7
10	QJ	90	LEU	2.7
39	RT	122	ASP	2.7
54	R8	46	ARG	2.7
30	RG	99	MET	2.7
6	XF	101	ALA	2.7
10	XJ	34	VAL	2.7
5	QE	13	ILE	2.7
30	RG	167	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
30	YG	72	ARG	2.7
25	RA	2123	G	2.7
1	QA	1025	U	2.7
31	RH	42	ARG	2.7
47	R1	96	LYS	2.7
50	R4	56	VAL	2.7
10	QJ	8	LEU	2.7
45	RZ	115	GLY	2.7
51	R5	56	LYS	2.7
1	QA	928	G	2.7
22	QV	46	G	2.7
25	RA	1114	G	2.7
7	XG	156	TRP	2.7
45	YZ	164	ALA	2.7
47	R1	83	GLU	2.7
31	RH	4	ILE	2.7
30	RG	175	LEU	2.7
36	RQ	88	GLY	2.7
31	RH	124	GLU	2.7
50	Y4	18	CYS	2.7
10	QJ	100	THR	2.7
52	R6	30	THR	2.7
32	RI	144	VAL	2.7
40	RU	90	VAL	2.7
25	YA	1083	U	2.7
25	YA	546	C	2.7
25	YA	1509	C	2.7
13	XM	8	GLU	2.7
55	R9	3	VAL	2.7
30	RG	53	LEU	2.6
52	Y6	40	CYS	2.6
38	YS	111	GLU	2.6
25	YA	892	G	2.6
29	RF	15	SER	2.6
30	RG	180	PHE	2.6
35	YP	118	GLY	2.6
30	RG	164	GLU	2.6
10	QJ	39	PRO	2.6
25	RA	1847	A	2.6
1	XA	88	C	2.6
25	YA	2162	G	2.6
30	RG	26	GLN	2.6

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Mol	Chain	Res	Type	RSRZ
30	RG	165	THR	2.6
25	YA	362	U	2.6
25	YA	1067	A	2.6
1	QA	1001	G	2.6
1	QA	873	A	2.6
31	RH	104	GLU	2.6
53	R7	1	MET	2.6
3	QC	98	ASN	2.6
30	RG	41	GLN	2.6
36	RQ	138	ASP	2.6
8	XH	116	LYS	2.6
7	QG	76	ARG	2.6
1	XA	1031	G	2.6
30	YG	137	GLU	2.6
1	QA	466	C	2.6
25	RA	2145	C	2.6
44	YY	53	PRO	2.6
15	XO	89	GLY	2.6
31	RH	44	VAL	2.6
2	QB	146	GLN	2.6
30	RG	66	GLN	2.6
31	RH	63	SER	2.6
55	R9	33	LYS	2.6
10	QJ	37	PRO	2.6
22	QV	1	C	2.6
31	RH	35	VAL	2.6
30	RG	88	ILE	2.6
8	QH	28	ALA	2.6
1	QA	1117	G	2.6
25	RA	1056	G	2.6
25	RA	1112	G	2.6
9	QI	85	LEU	2.6
19	QS	80	TYR	2.6
31	RH	81	GLU	2.6
35	RP	88	LEU	2.6
49	R3	3	ARG	2.6
1	QA	1036	G	2.6
25	RA	887	A	2.6
1	QA	82	U	2.6
28	RE	69	LYS	2.6
7	XG	80	VAL	2.6
21	QU	9	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
52	Y6	6	ARG	2.6
30	RG	43	LEU	2.6
30	RG	171	ALA	2.5
5	QE	155	GLU	2.5
35	YP	119	GLU	2.5
3	QC	190	ARG	2.5
25	RA	1166	C	2.5
31	RH	3	ARG	2.5
51	Y5	57	VAL	2.5
52	Y6	34	LEU	2.5
30	RG	74	LYS	2.5
21	XU	22	ARG	2.5
25	RA	1045	A	2.5
30	RG	97	ASP	2.5
7	XG	154	TYR	2.5
17	QQ	54	GLY	2.5
45	YZ	144	LEU	2.5
30	RG	156	ASP	2.5
7	QG	5	ARG	2.5
25	RA	896	A	2.5
25	YA	278	A	2.5
25	YA	1092	C	2.5
52	Y6	39	TYR	2.5
54	R8	65	GLU	2.5
8	XH	130	GLY	2.5
47	Y1	23	LYS	2.5
30	RG	118	ARG	2.5
55	Y9	28	GLU	2.5
31	RH	61	HIS	2.5
42	RW	113	LYS	2.5
2	XB	217	ARG	2.5
1	XA	79	G	2.5
5	QE	80	ILE	2.5
25	RA	1483	G	2.5
25	YA	2168	G	2.5
30	YG	54	GLU	2.5
30	RG	149	VAL	2.5
52	R6	34	LEU	2.5
50	R4	20	ASN	2.5
23	XX	8	A	2.5
25	YA	1076	C	2.5
4	QD	36	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
13	XM	119	GLY	2.5
32	RI	101	LEU	2.5
25	RA	1062	G	2.5
19	QS	52	TYR	2.5
31	RH	100	GLY	2.5
25	RA	546	C	2.5
54	R8	3	LYS	2.5
10	QJ	26	ALA	2.5
25	RA	879	G	2.5
31	RH	48	GLY	2.5
30	RG	102	PHE	2.5
4	QD	33	MET	2.5
5	QE	81	GLU	2.5
18	QR	22	VAL	2.5
45	YZ	155	LEU	2.5
50	R4	25	TYR	2.5
33	RN	133	GLN	2.5
30	RG	153	ARG	2.5
42	RW	92	ARG	2.5
1	XA	91	C	2.4
25	YA	1531	C	2.4
2	XB	229	VAL	2.4
15	XO	81	LEU	2.4
17	XQ	37	LYS	2.4
25	YA	887	A	2.4
29	RF	196	LEU	2.4
21	QU	17	THR	2.4
30	RG	132	ASN	2.4
2	QB	21	ARG	2.4
50	R4	51	ASP	2.4
28	RE	1	MET	2.4
25	RA	2131	G	2.4
20	XT	44	ALA	2.4
15	XO	88	ARG	2.4
30	RG	150	ASP	2.4
51	R5	58	LEU	2.4
30	RG	61	ALA	2.4
31	RH	123	PHE	2.4
1	XA	998	G	2.4
1	XA	998(A)	C	2.4
3	QC	63	ASN	2.4
1	XA	1042	G	2.4

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Mol	Chain	Res	Type	RSRZ
24	XY	40	G	2.4
25	YA	1093	G	2.4
30	RG	145	THR	2.4
45	RZ	119	GLU	2.4
50	Y4	47	GLN	2.4
54	Y8	65	GLU	2.4
25	YA	2629	A	2.4
2	QB	31	TYR	2.4
44	RY	46	LYS	2.4
53	R7	47	ARG	2.4
4	XD	38	TYR	2.4
33	RN	84	LYS	2.4
38	RS	2	ALA	2.4
39	YT	133	GLU	2.4
22	QV	20	U	2.4
25	YA	1098	A	2.4
30	YG	25	TYR	2.4
30	YG	182	LYS	2.4
50	R4	69	LYS	2.4
1	QA	1283	G	2.4
1	XA	993	G	2.4
33	RN	7	LYS	2.4
50	Y4	2	LYS	2.4
1	QA	1257	U	2.4
9	XI	2	GLU	2.4
25	RA	1509	C	2.4
30	RG	136	ARG	2.4
44	RY	79	CYS	2.4
19	QS	4	SER	2.4
25	RA	1360	A	2.4
31	RH	33	LEU	2.4
28	RE	41	LYS	2.4
36	RQ	1	MET	2.4
54	R8	48	PHE	2.4
21	XU	21	TYR	2.4
35	RP	119	GLU	2.4
1	QA	1389	C	2.4
8	QH	113	SER	2.4
9	XI	95	LYS	2.4
35	RP	135	LEU	2.4
52	Y6	33	LYS	2.4
50	Y4	1	MET	2.4

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Mol	Chain	Res	Type	RSRZ
9	QI	36	TYR	2.4
25	RA	2127	G	2.4
52	Y6	46	HIS	2.4
7	QG	75	VAL	2.4
1	QA	1028(B)	C	2.4
10	QJ	45	ARG	2.4
1	QA	1286	A	2.4
28	YE	69	LYS	2.4
45	YZ	137	ILE	2.4
2	QB	195	ASP	2.4
11	QK	110	ASP	2.4
1	QA	1086	U	2.4
19	QS	44	MET	2.4
25	RA	2147	G	2.4
47	R1	28	GLY	2.4
30	RG	8	LYS	2.4
35	RP	120	ALA	2.4
45	YZ	121	HIS	2.4
55	R9	32	HIS	2.4
5	QE	34	VAL	2.3
25	YA	2189	U	2.3
1	XA	96	G	2.3
50	R4	18	CYS	2.3
1	QA	1321	C	2.3
32	RI	56	LYS	2.3
15	QO	26	GLU	2.3
19	QS	16	LEU	2.3
55	R9	22	ARG	2.3
33	YN	130	HIS	2.3
44	RY	45	VAL	2.3
25	RA	1109	C	2.3
45	RZ	138	GLU	2.3
10	QJ	85	LEU	2.3
51	Y5	2	ALA	2.3
11	QK	19	ALA	2.3
13	QM	100	GLY	2.3
3	QC	108	ASN	2.3
39	YT	2	ASN	2.3
4	QD	32	ALA	2.3
1	QA	998	G	2.3
25	YA	1044	G	2.3
25	YA	2165	G	2.3

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Mol	Chain	Res	Type	RSRZ
4	XD	33	MET	2.3
38	RS	111	GLU	2.3
12	XL	27	LEU	2.3
45	RZ	161	VAL	2.3
7	QG	4	ARG	2.3
11	QK	16	SER	2.3
19	XS	17	GLU	2.3
31	RH	39	PRO	2.3
2	QB	132	LYS	2.3
25	RA	2129	C	2.3
1	QA	570	G	2.3
1	XA	1029	G	2.3
25	RA	2893	G	2.3
50	R4	12	ALA	2.3
7	QG	6	ARG	2.3
2	QB	16	HIS	2.3
25	RA	2146	C	2.3
44	RY	57	GLN	2.3
44	RY	49	VAL	2.3
1	QA	1009	G	2.3
1	XA	928	G	2.3
4	XD	23	GLY	2.3
47	Y1	26	ARG	2.3
25	RA	2124	G	2.3
4	XD	133	VAL	2.3
5	QE	45	PHE	2.3
45	YZ	145	GLU	2.3
1	QA	1446	A	2.3
25	RA	229	A	2.3
32	YI	55	ALA	2.3
51	R5	51	TYR	2.3
45	RZ	132	ASN	2.3
10	QJ	22	LYS	2.3
25	RA	2733	A	2.3
49	R3	47	VAL	2.3
1	QA	1042	G	2.2
7	XG	146	GLU	2.2
1	XA	843	U	2.2
9	XI	85	LEU	2.2
15	XO	77	ARG	2.2
31	RH	54	ARG	2.2
31	RH	129	THR	2.2

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Mol	Chain	Res	Type	RSRZ
1	XA	1137	C	2.2
10	XJ	74	ILE	2.2
30	RG	75	LYS	2.2
31	RH	30	LYS	2.2
7	XG	86	GLN	2.2
47	R1	27	GLU	2.2
25	RA	1460	A	2.2
39	RT	115	ARG	2.2
55	Y9	4	ARG	2.2
1	XA	1453	G	2.2
55	Y9	11	CYS	2.2
30	RG	112	PRO	2.2
30	YG	2	PRO	2.2
5	XE	83	GLU	2.2
9	QI	125	TYR	2.2
25	YA	885	C	2.2
9	XI	66	ARG	2.2
52	Y6	9	LEU	2.2
15	XO	21	ASP	2.2
25	RA	2158	A	2.2
8	QH	131	GLY	2.2
14	QN	35	ARG	2.2
31	YH	75	ALA	2.2
12	QL	126	LYS	2.2
5	QE	14	ARG	2.2
25	RA	2118	U	2.2
52	Y6	13	CYS	2.2
25	YA	1068	G	2.2
11	XK	117	ASN	2.2
15	QO	30	ALA	2.2
30	RG	73	ALA	2.2
25	RA	362	U	2.2
25	YA	653	A	2.2
33	RN	138	LEU	2.2
32	RI	21	VAL	2.2
22	QV	48	C	2.2
25	RA	1147	C	2.2
25	RA	2153	G	2.2
30	YG	154	GLY	2.2
15	QO	2	PRO	2.2
43	RX	91	ALA	2.2
49	R3	39	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
50	Y4	51	ASP	2.2
30	RG	93	THR	2.2
4	XD	168	ARG	2.2
36	RQ	83	MET	2.2
55	R9	7	VAL	2.2
11	QK	90	GLY	2.2
15	XO	20	GLY	2.2
55	R9	37	GLY	2.2
30	RG	131	TYR	2.2
24	XY	30	C	2.2
36	YQ	135	ASP	2.2
24	QY	40	G	2.2
7	XG	77	SER	2.2
25	YA	1065	U	2.2
47	R1	55	GLY	2.2
25	RA	1490	A	2.2
4	QD	35	ARG	2.2
31	YH	160	LYS	2.2
50	R4	8	LYS	2.2
2	QB	83	MET	2.2
19	XS	11	VAL	2.2
25	YA	654(B)	C	2.2
43	RX	3	THR	2.2
1	QA	1047	G	2.2
20	QT	105	SER	2.2
30	RG	11	TYR	2.2
50	R4	55	ARG	2.2
52	R6	38	LYS	2.2
10	QJ	21	GLN	2.2
7	QG	52	GLU	2.2
30	RG	20	ILE	2.2
25	RA	279	C	2.2
55	Y9	24	TYR	2.2
1	QA	927	G	2.2
1	QA	1053	G	2.2
15	QO	15	PHE	2.2
10	QJ	101	VAL	2.2
8	QH	114	THR	2.2
15	QO	89	GLY	2.2
25	YA	1088	A	2.2
38	YS	44	LYS	2.2
47	Y1	79	GLY	2.2

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Mol	Chain	Res	Type	RSRZ
55	R9	18	ARG	2.2
52	R6	31	PRO	2.1
2	QB	217	ARG	2.1
7	QG	78	ARG	2.1
30	RG	113	ARG	2.1
42	RW	94	ASP	2.1
55	R9	9	ARG	2.1
55	Y9	9	ARG	2.1
25	RA	1044	G	2.1
9	QI	92	TYR	2.1
25	RA	2790	A	2.1
31	YH	87	LEU	2.1
17	XQ	99	SER	2.1
1	XA	1125	U	2.1
30	YG	116	ASP	2.1
12	XL	64	TYR	2.1
25	RA	2110	G	2.1
44	RY	87	LYS	2.1
44	RY	52	SER	2.1
25	RA	2142	C	2.1
14	QN	4	LYS	2.1
30	RG	33	ARG	2.1
1	XA	1283	G	2.1
10	QJ	35	SER	2.1
25	RA	1046	A	2.1
30	RG	62	LEU	2.1
43	RX	94	GLY	2.1
45	RZ	130	PRO	2.1
1	XA	1278	U	2.1
21	XU	9	ARG	2.1
25	RA	2113	U	2.1
39	YT	131	ALA	2.1
2	XB	230	VAL	2.1
19	XS	67	VAL	2.1
39	YT	136	GLN	2.1
49	Y3	47	VAL	2.1
52	Y6	24	GLU	2.1
9	QI	8	GLY	2.1
19	QS	3	ARG	2.1
19	XS	6	LYS	2.1
3	XC	62	ASP	2.1
22	QV	21	A	2.1

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Mol	Chain	Res	Type	RSRZ
1	QA	1322	C	2.1
41	RV	5	VAL	2.1
4	XD	31	CYS	2.1
29	YF	137	LYS	2.1
31	RH	95	ARG	2.1
48	Y2	7	ARG	2.1
32	RI	146	ALA	2.1
45	YZ	169	GLU	2.1
32	RI	97	ILE	2.1
1	QA	1156	G	2.1
10	QJ	5	ARG	2.1
13	XM	37	THR	2.1
27	YD	44	ASN	2.1
31	YH	59	ARG	2.1
17	XQ	101	ARG	2.1
20	XT	8	ARG	2.1
51	R5	3	LYS	2.1
25	YA	229	A	2.1
25	YA	1528	A	2.1
13	QM	10	PRO	2.1
44	RY	62	GLU	2.1
44	YY	91	GLU	2.1
16	XP	81	ARG	2.1
17	QQ	100	LYS	2.1
31	YH	16	SER	2.1
27	RD	171	ASP	2.1
13	QM	43	THR	2.1
1	QA	439	A	2.1
1	XA	1046	A	2.1
53	R7	49	ARG	2.1
1	XA	1448	C	2.1
27	RD	38	LYS	2.1
25	RA	1090	U	2.1
25	RA	2150	U	2.1
32	YI	66	GLU	2.1
19	QS	11	VAL	2.1
4	XD	44	GLY	2.1
9	QI	102	LEU	2.1
45	YZ	117	LEU	2.1
25	YA	1079	C	2.1
50	R4	6	HIS	2.1
25	YA	275	G	2.0

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Mol	Chain	Res	Type	RSRZ
25	YA	1176	G	2.0
9	QI	52	ALA	2.0
25	YA	1094	U	2.0
30	RG	77	ILE	2.0
13	XM	24	GLY	2.0
50	R4	9	LEU	2.0
53	Y7	47	ARG	2.0
25	YA	2145	C	2.0
52	Y6	15	GLU	2.0
25	YA	270(O)	U	2.0
14	QN	3	ARG	2.0
30	RG	91	ARG	2.0
30	YG	150	ASP	2.0
30	YG	164	GLU	2.0
45	RZ	149	SER	2.0
4	QD	38	TYR	2.0
3	QC	202	ILE	2.0
35	YP	90	ARG	2.0
44	RY	56	PRO	2.0
48	R2	7	ARG	2.0
55	Y9	18	ARG	2.0
12	QL	64	TYR	2.0
48	Y2	15	LYS	2.0
25	YA	1070	A	2.0
2	QB	131	PRO	2.0
4	QD	161	ASN	2.0
25	RA	2161	C	2.0
5	QE	83	GLU	2.0
16	XP	82	GLN	2.0
2	XB	233	SER	2.0
8	QH	4	ASP	2.0
10	XJ	72	VAL	2.0
17	XQ	17	LYS	2.0
35	RP	132	LYS	2.0
45	RZ	123	ASP	2.0
47	R1	78	LYS	2.0
50	R4	58	ARG	2.0
55	Y9	6	SER	2.0
25	RA	1111	A	2.0
25	RA	1528	A	2.0
26	RB	88	C	2.0
20	XT	104	LEU	2.0

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Mol	Chain	Res	Type	RSRZ
47	R1	26	ARG	2.0
50	Y4	48	ARG	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^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
24	1MG	QY	37	24/25	0.93	0.17	98,98,98,98	0
24	1MG	XY	37	24/25	0.93	0.16	79,79,79,79	0
56	PPU	Z6	76	37/38	0.94	0.26	57,57,57,57	0
56	PPU	Z8	76	37/38	0.94	0.25	45,45,45,45	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^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3121	1/1	0.36	0.43	76,76,76,76	0
57	MG	YA	3162	1/1	0.37	0.27	71,71,71,71	0
57	MG	RA	3192	1/1	0.45	0.28	81,81,81,81	0
57	MG	XA	1629	1/1	0.47	0.17	62,62,62,62	0
57	MG	XT	201	1/1	0.49	0.34	77,77,77,77	0
57	MG	QA	1662	1/1	0.52	0.33	119,119,119,119	0
57	MG	YA	3167	1/1	0.52	0.36	61,61,61,61	0
57	MG	RA	3090	1/1	0.55	0.56	71,71,71,71	0
57	MG	RA	3083	1/1	0.57	0.41	40,40,40,40	0
57	MG	YA	3206	1/1	0.58	0.30	56,56,56,56	0
57	MG	YA	3128	1/1	0.59	0.55	62,62,62,62	0
57	MG	YA	3072	1/1	0.59	0.40	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3210	1/1	0.59	0.26	60,60,60,60	0
57	MG	QA	1658	1/1	0.60	0.26	58,58,58,58	0
57	MG	YA	3131	1/1	0.60	0.20	25,25,25,25	0
57	MG	RA	3198	1/1	0.60	0.18	56,56,56,56	0
57	MG	RA	3166	1/1	0.61	0.15	44,44,44,44	0
57	MG	YA	3140	1/1	0.61	0.30	81,81,81,81	0
57	MG	RA	3134	1/1	0.63	0.31	36,36,36,36	0
57	MG	XA	1662	1/1	0.63	0.60	61,61,61,61	0
57	MG	YA	3228	1/1	0.64	0.29	36,36,36,36	0
57	MG	RA	3222	1/1	0.65	0.32	67,67,67,67	0
57	MG	RA	3178	1/1	0.66	0.40	48,48,48,48	0
57	MG	RA	3193	1/1	0.67	0.42	73,73,73,73	0
57	MG	RA	3221	1/1	0.68	0.43	65,65,65,65	0
57	MG	RA	3199	1/1	0.69	0.20	58,58,58,58	0
57	MG	YA	3231	1/1	0.69	0.19	45,45,45,45	0
57	MG	YA	3268	1/1	0.69	0.65	72,72,72,72	0
57	MG	YB	201	1/1	0.69	0.36	71,71,71,71	0
57	MG	XA	1646	1/1	0.70	0.18	55,55,55,55	0
57	MG	RA	3227	1/1	0.70	0.31	55,55,55,55	0
57	MG	RA	3229	1/1	0.71	0.36	80,80,80,80	0
57	MG	YA	3106	1/1	0.71	0.26	28,28,28,28	0
57	MG	YA	3179	1/1	0.71	0.14	44,44,44,44	0
57	MG	RA	3210	1/1	0.72	0.40	76,76,76,76	0
57	MG	RA	3203	1/1	0.72	0.21	73,73,73,73	0
57	MG	RA	3223	1/1	0.73	0.27	98,98,98,98	0
57	MG	RA	3220	1/1	0.73	0.26	72,72,72,72	0
57	MG	YA	3209	1/1	0.74	0.32	71,71,71,71	0
57	MG	YA	3243	1/1	0.74	0.22	46,46,46,46	0
57	MG	XA	1670	1/1	0.74	0.13	52,52,52,52	0
57	MG	YA	3172	1/1	0.74	0.15	65,65,65,65	0
57	MG	RA	3216	1/1	0.75	0.27	47,47,47,47	0
57	MG	QA	1629	1/1	0.76	0.57	49,49,49,49	0
57	MG	RA	3215	1/1	0.76	0.21	50,50,50,50	0
57	MG	YA	3223	1/1	0.76	0.38	67,67,67,67	0
57	MG	YA	3045	1/1	0.76	0.31	20,20,20,20	0
57	MG	RA	3138	1/1	0.76	0.27	59,59,59,59	0
57	MG	XA	1651	1/1	0.76	0.23	55,55,55,55	0
57	MG	XA	1657	1/1	0.76	0.55	56,56,56,56	0
57	MG	RA	3194	1/1	0.76	0.42	40,40,40,40	0
57	MG	YA	3166	1/1	0.77	0.26	44,44,44,44	0
57	MG	QA	1655	1/1	0.77	0.23	62,62,62,62	0
57	MG	RA	3181	1/1	0.77	0.21	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3230	1/1	0.77	0.30	47,47,47,47	0
57	MG	RA	3172	1/1	0.78	0.22	51,51,51,51	0
57	MG	XA	1631	1/1	0.78	0.18	50,50,50,50	0
57	MG	RA	3157	1/1	0.79	0.44	69,69,69,69	0
57	MG	YA	3085	1/1	0.79	0.27	35,35,35,35	0
57	MG	YA	3156	1/1	0.79	0.30	50,50,50,50	0
57	MG	YA	3239	1/1	0.79	0.48	74,74,74,74	0
57	MG	RA	3176	1/1	0.79	0.22	57,57,57,57	0
57	MG	RA	3118	1/1	0.79	0.26	40,40,40,40	0
57	MG	RA	3167	1/1	0.79	0.20	51,51,51,51	0
57	MG	XA	1638	1/1	0.80	0.18	50,50,50,50	0
57	MG	RA	3174	1/1	0.80	0.27	39,39,39,39	0
57	MG	RA	3224	1/1	0.80	0.20	59,59,59,59	0
57	MG	RA	3218	1/1	0.80	0.34	66,66,66,66	0
57	MG	RA	3228	1/1	0.80	0.23	52,52,52,52	0
57	MG	QA	1633	1/1	0.80	0.39	73,73,73,73	0
57	MG	RA	3141	1/1	0.80	0.34	61,61,61,61	0
57	MG	QA	1631	1/1	0.80	0.17	53,53,53,53	0
59	ZN	XN	101	1/1	0.80	0.23	97,97,97,97	0
57	MG	XA	1649	1/1	0.81	0.16	61,61,61,61	0
57	MG	RA	3217	1/1	0.81	0.13	74,74,74,74	0
57	MG	RA	3116	1/1	0.81	0.18	77,77,77,77	0
57	MG	RA	3175	1/1	0.81	0.28	58,58,58,58	0
57	MG	QA	1665	1/1	0.81	0.17	50,50,50,50	0
57	MG	YA	3246	1/1	0.81	0.31	44,44,44,44	0
57	MG	YA	3247	1/1	0.81	0.78	64,64,64,64	0
57	MG	YA	3253	1/1	0.81	0.85	57,57,57,57	0
57	MG	RA	3212	1/1	0.81	0.23	64,64,64,64	0
57	MG	RA	3177	1/1	0.81	0.22	45,45,45,45	0
59	ZN	R9	101	1/1	0.81	0.21	179,179,179,179	0
57	MG	RA	3161	1/1	0.81	0.27	34,34,34,34	0
57	MG	RD	301	1/1	0.82	0.25	64,64,64,64	0
57	MG	XA	1664	1/1	0.82	0.37	61,61,61,61	0
57	MG	RA	3074	1/1	0.82	0.10	51,51,51,51	0
57	MG	XM	201	1/1	0.82	0.14	79,79,79,79	0
57	MG	YA	3208	1/1	0.82	0.16	39,39,39,39	0
57	MG	YA	3153	1/1	0.83	0.75	67,67,67,67	0
57	MG	RA	3154	1/1	0.83	0.23	31,31,31,31	0
57	MG	RA	3125	1/1	0.83	0.27	41,41,41,41	0
57	MG	YA	3126	1/1	0.83	0.31	38,38,38,38	0
57	MG	XA	1641	1/1	0.83	0.30	39,39,39,39	0
57	MG	QA	1626	1/1	0.83	0.17	64,64,64,64	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	ZN	QN	100	1/1	0.83	0.13	100,100,100,100	0
57	MG	RA	3209	1/1	0.83	0.20	67,67,67,67	0
57	MG	YA	3145	1/1	0.83	0.39	40,40,40,40	0
57	MG	QA	1638	1/1	0.84	0.28	47,47,47,47	0
57	MG	QA	1616	1/1	0.84	0.18	66,66,66,66	0
57	MG	RA	3163	1/1	0.84	0.59	45,45,45,45	0
57	MG	RA	3149	1/1	0.84	0.24	53,53,53,53	0
57	MG	RA	3137	1/1	0.84	0.28	31,31,31,31	0
57	MG	YA	3086	1/1	0.84	0.23	45,45,45,45	0
57	MG	YA	3217	1/1	0.84	0.24	70,70,70,70	0
57	MG	YA	3174	1/1	0.85	0.12	64,64,64,64	0
57	MG	XA	1667	1/1	0.85	0.29	50,50,50,50	0
57	MG	YA	3187	1/1	0.85	0.20	36,36,36,36	0
57	MG	YA	3200	1/1	0.85	0.41	76,76,76,76	0
57	MG	RA	3183	1/1	0.85	0.16	49,49,49,49	0
57	MG	RE	302	1/1	0.85	0.28	43,43,43,43	0
57	MG	RA	3054	1/1	0.85	0.17	30,30,30,30	0
57	MG	YA	3016	1/1	0.85	0.24	29,29,29,29	0
57	MG	XA	1630	1/1	0.85	0.32	38,38,38,38	0
57	MG	XA	1647	1/1	0.85	0.24	58,58,58,58	0
57	MG	YA	3225	1/1	0.85	0.17	36,36,36,36	0
57	MG	YA	3135	1/1	0.85	0.13	45,45,45,45	0
57	MG	RA	3173	1/1	0.86	0.09	47,47,47,47	0
57	MG	QA	1609	1/1	0.86	0.19	62,62,62,62	0
57	MG	QA	1644	1/1	0.86	0.36	54,54,54,54	0
57	MG	YA	3134	1/1	0.86	0.53	28,28,28,28	0
57	MG	RA	3150	1/1	0.86	0.21	47,47,47,47	0
57	MG	RA	3007	1/1	0.86	0.24	34,34,34,34	0
57	MG	YA	3064	1/1	0.86	0.27	25,25,25,25	0
57	MG	XA	1625	1/1	0.86	0.12	32,32,32,32	0
57	MG	XA	1628	1/1	0.86	0.25	29,29,29,29	0
57	MG	YA	3213	1/1	0.86	0.13	35,35,35,35	0
57	MG	RA	3213	1/1	0.86	0.19	40,40,40,40	0
57	MG	RA	3214	1/1	0.86	0.28	47,47,47,47	0
59	ZN	XD	301	1/1	0.86	0.30	52,52,52,52	0
57	MG	RA	3124	1/1	0.86	0.53	59,59,59,59	0
57	MG	RA	3025	1/1	0.87	0.20	18,18,18,18	0
57	MG	QA	1625	1/1	0.87	0.33	53,53,53,53	0
57	MG	QA	1666	1/1	0.87	0.22	52,52,52,52	0
57	MG	RA	3180	1/1	0.87	0.17	34,34,34,34	0
57	MG	QH	201	1/1	0.87	0.15	81,81,81,81	0
57	MG	QA	1656	1/1	0.87	0.29	65,65,65,65	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3100	1/1	0.87	0.20	26,26,26,26	0
57	MG	RA	3140	1/1	0.87	0.76	45,45,45,45	0
57	MG	YA	3264	1/1	0.87	0.47	52,52,52,52	0
57	MG	YA	3154	1/1	0.87	0.26	36,36,36,36	0
57	MG	RA	3113	1/1	0.87	0.21	27,27,27,27	0
57	MG	XA	1619	1/1	0.87	0.30	33,33,33,33	0
57	MG	YA	3221	1/1	0.87	0.54	65,65,65,65	0
57	MG	RA	3115	1/1	0.87	0.17	25,25,25,25	0
57	MG	RA	3009	1/1	0.87	0.22	77,77,77,77	0
57	MG	QA	1663	1/1	0.88	0.11	95,95,95,95	0
57	MG	RA	3226	1/1	0.88	0.22	44,44,44,44	0
57	MG	YA	3146	1/1	0.88	0.45	48,48,48,48	0
57	MG	RA	3158	1/1	0.88	0.16	41,41,41,41	0
57	MG	RA	3160	1/1	0.88	0.22	53,53,53,53	0
57	MG	QA	1637	1/1	0.88	0.29	72,72,72,72	0
57	MG	RA	3234	1/1	0.88	0.49	44,44,44,44	0
57	MG	RA	3235	1/1	0.88	0.57	57,57,57,57	0
57	MG	QA	1620	1/1	0.88	0.58	52,52,52,52	0
57	MG	YA	3241	1/1	0.88	0.34	56,56,56,56	0
57	MG	RA	3129	1/1	0.88	0.16	71,71,71,71	0
57	MG	RA	3206	1/1	0.88	0.24	76,76,76,76	0
57	MG	YA	3176	1/1	0.88	0.16	47,47,47,47	0
57	MG	YA	3249	1/1	0.88	0.34	74,74,74,74	0
57	MG	QA	1618	1/1	0.88	0.46	45,45,45,45	0
57	MG	YA	3256	1/1	0.88	0.32	32,32,32,32	0
57	MG	YA	3182	1/1	0.88	0.42	64,64,64,64	0
57	MG	YA	3127	1/1	0.88	0.32	45,45,45,45	0
57	MG	XA	1665	1/1	0.88	0.17	53,53,53,53	0
57	MG	XA	1666	1/1	0.88	0.17	54,54,54,54	0
57	MG	RA	3171	1/1	0.88	0.24	56,56,56,56	0
57	MG	QA	1653	1/1	0.88	0.18	53,53,53,53	0
57	MG	YA	3138	1/1	0.88	0.24	33,33,33,33	0
59	ZN	Y9	101	1/1	0.88	0.25	166,166,166,166	0
57	MG	YA	3096	1/1	0.89	0.40	33,33,33,33	0
57	MG	YA	3101	1/1	0.89	0.39	32,32,32,32	0
57	MG	YA	3235	1/1	0.89	0.36	69,69,69,69	0
57	MG	YA	3236	1/1	0.89	0.11	43,43,43,43	0
57	MG	YA	3186	1/1	0.89	0.24	43,43,43,43	0
57	MG	QA	1632	1/1	0.89	0.10	58,58,58,58	0
57	MG	YA	3188	1/1	0.89	0.12	47,47,47,47	0
57	MG	YA	3194	1/1	0.89	0.17	40,40,40,40	0
57	MG	YA	3149	1/1	0.89	0.20	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3152	1/1	0.89	0.46	41,41,41,41	0
57	MG	YA	3118	1/1	0.89	0.28	27,27,27,27	0
57	MG	RR	201	1/1	0.89	0.33	34,34,34,34	0
57	MG	RA	3184	1/1	0.89	0.17	41,41,41,41	0
57	MG	YA	3211	1/1	0.89	0.25	32,32,32,32	0
57	MG	RA	3102	1/1	0.89	0.16	34,34,34,34	0
57	MG	YX	101	1/1	0.89	0.16	109,109,109,109	0
57	MG	Y7	101	1/1	0.89	0.43	48,48,48,48	0
57	MG	RA	3164	1/1	0.89	0.10	32,32,32,32	0
57	MG	QA	1651	1/1	0.89	0.32	57,57,57,57	0
57	MG	YA	3075	1/1	0.89	0.11	23,23,23,23	0
57	MG	XA	1668	1/1	0.89	0.65	68,68,68,68	0
57	MG	QA	1613	1/1	0.89	0.46	39,39,39,39	0
57	MG	RA	3133	1/1	0.90	0.31	73,73,73,73	0
57	MG	XA	1608	1/1	0.90	0.14	57,57,57,57	0
57	MG	YA	3180	1/1	0.90	0.16	44,44,44,44	0
57	MG	XA	1612	1/1	0.90	0.17	31,31,31,31	0
57	MG	QV	102	1/1	0.90	0.27	30,30,30,30	0
57	MG	RA	3147	1/1	0.90	0.25	45,45,45,45	0
57	MG	YA	3157	1/1	0.90	0.35	48,48,48,48	0
57	MG	YA	3189	1/1	0.90	0.12	57,57,57,57	0
57	MG	YA	3117	1/1	0.90	0.44	73,73,73,73	0
57	MG	YA	3198	1/1	0.90	0.20	57,57,57,57	0
58	PAR	QA	1667	42/42	0.90	0.25	75,75,75,75	0
57	MG	RA	3008	1/1	0.90	0.41	46,46,46,46	0
57	MG	YA	3204	1/1	0.90	0.29	60,60,60,60	0
57	MG	RA	3095	1/1	0.90	0.47	37,37,37,37	0
57	MG	XA	1650	1/1	0.90	0.27	39,39,39,39	0
57	MG	YA	3147	1/1	0.90	0.33	54,54,54,54	0
57	MG	XA	1636	1/1	0.91	0.38	46,46,46,46	0
57	MG	YA	3232	1/1	0.91	0.17	50,50,50,50	0
57	MG	YA	3233	1/1	0.91	0.38	55,55,55,55	0
57	MG	RA	3211	1/1	0.91	0.23	50,50,50,50	0
57	MG	YA	3191	1/1	0.91	0.20	34,34,34,34	0
57	MG	RA	3170	1/1	0.91	0.38	46,46,46,46	0
57	MG	XA	1669	1/1	0.91	0.12	75,75,75,75	0
57	MG	YA	3155	1/1	0.91	0.17	33,33,33,33	0
57	MG	YA	3201	1/1	0.91	0.88	49,49,49,49	0
57	MG	YA	3203	1/1	0.91	0.21	28,28,28,28	0
57	MG	YA	3248	1/1	0.91	0.52	38,38,38,38	0
57	MG	RA	3073	1/1	0.91	0.27	35,35,35,35	0
57	MG	RA	3196	1/1	0.91	0.09	62,62,62,62	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3043	1/1	0.91	0.28	43,43,43,43	0
57	MG	XX	101	1/1	0.91	0.20	79,79,79,79	0
57	MG	RA	3048	1/1	0.91	0.25	30,30,30,30	0
57	MG	YA	3039	1/1	0.91	0.32	43,43,43,43	0
57	MG	RA	3051	1/1	0.91	0.35	26,26,26,26	0
57	MG	XA	1654	1/1	0.91	0.31	60,60,60,60	0
57	MG	YA	3065	1/1	0.91	0.42	52,52,52,52	0
57	MG	RA	3010	1/1	0.91	0.58	56,56,56,56	0
57	MG	YA	3224	1/1	0.91	0.20	51,51,51,51	0
57	MG	RA	3188	1/1	0.91	0.32	41,41,41,41	0
57	MG	RA	3142	1/1	0.91	0.20	60,60,60,60	0
57	MG	XA	1633	1/1	0.91	0.20	50,50,50,50	0
57	MG	RA	3136	1/1	0.92	0.30	33,33,33,33	0
57	MG	YA	3205	1/1	0.92	0.08	48,48,48,48	0
57	MG	RA	3187	1/1	0.92	0.22	63,63,63,63	0
57	MG	RA	3035	1/1	0.92	0.28	24,24,24,24	0
57	MG	RA	3191	1/1	0.92	0.39	51,51,51,51	0
57	MG	QA	1619	1/1	0.92	0.40	45,45,45,45	0
57	MG	XA	1640	1/1	0.92	0.55	39,39,39,39	0
57	MG	YA	3049	1/1	0.92	0.41	30,30,30,30	0
57	MG	YA	3052	1/1	0.92	0.61	68,68,68,68	0
57	MG	YA	3218	1/1	0.92	0.37	63,63,63,63	0
57	MG	YA	3057	1/1	0.92	0.21	10,10,10,10	0
57	MG	RA	3044	1/1	0.92	0.44	43,43,43,43	0
57	MG	YA	3158	1/1	0.92	0.22	40,40,40,40	0
57	MG	YA	3160	1/1	0.92	0.18	47,47,47,47	0
57	MG	RA	3236	1/1	0.92	0.36	44,44,44,44	0
57	MG	YA	3165	1/1	0.92	0.32	46,46,46,46	0
57	MG	RA	3004	1/1	0.92	0.42	34,34,34,34	0
57	MG	RE	301	1/1	0.92	0.17	31,31,31,31	0
57	MG	YA	3168	1/1	0.92	0.55	57,57,57,57	0
57	MG	RA	3195	1/1	0.92	0.20	48,48,48,48	0
57	MG	YA	3173	1/1	0.92	0.79	52,52,52,52	0
57	MG	RP	201	1/1	0.92	0.46	41,41,41,41	0
57	MG	YA	3175	1/1	0.92	0.11	49,49,49,49	0
57	MG	RA	3005	1/1	0.92	0.46	38,38,38,38	0
57	MG	YA	3245	1/1	0.92	0.35	60,60,60,60	0
57	MG	XA	1655	1/1	0.92	0.24	44,44,44,44	0
57	MG	XA	1656	1/1	0.92	0.42	48,48,48,48	0
57	MG	YA	3181	1/1	0.92	0.17	60,60,60,60	0
57	MG	R8	101	1/1	0.92	0.28	33,33,33,33	0
57	MG	YA	3251	1/1	0.92	0.38	60,60,60,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3184	1/1	0.92	0.31	67,67,67,67	0
57	MG	XA	1607	1/1	0.92	0.23	49,49,49,49	0
57	MG	XA	1663	1/1	0.92	0.34	55,55,55,55	0
57	MG	QA	1650	1/1	0.92	0.34	72,72,72,72	0
57	MG	RA	3057	1/1	0.92	0.43	44,44,44,44	0
57	MG	XA	1618	1/1	0.92	0.46	41,41,41,41	0
57	MG	YA	3193	1/1	0.92	0.43	39,39,39,39	0
57	MG	RA	3109	1/1	0.92	0.30	43,43,43,43	0
57	MG	YA	3195	1/1	0.92	0.22	32,32,32,32	0
57	MG	RA	3204	1/1	0.92	0.37	68,68,68,68	0
57	MG	RA	3111	1/1	0.92	0.28	45,45,45,45	0
57	MG	RA	3208	1/1	0.92	0.13	31,31,31,31	0
57	MG	XA	1672	1/1	0.92	0.30	44,44,44,44	0
57	MG	YA	3129	1/1	0.93	0.37	35,35,35,35	0
57	MG	RA	3067	1/1	0.93	0.29	44,44,44,44	0
57	MG	XA	1606	1/1	0.93	0.34	35,35,35,35	0
57	MG	RA	3069	1/1	0.93	0.45	40,40,40,40	0
57	MG	RA	3189	1/1	0.93	0.14	45,45,45,45	0
57	MG	RA	3169	1/1	0.93	0.21	51,51,51,51	0
57	MG	XA	1614	1/1	0.93	0.22	38,38,38,38	0
57	MG	RA	3070	1/1	0.93	0.43	32,32,32,32	0
57	MG	RA	3219	1/1	0.93	0.18	49,49,49,49	0
57	MG	XA	1624	1/1	0.93	0.45	47,47,47,47	0
57	MG	QM	201	1/1	0.93	0.10	81,81,81,81	0
57	MG	QA	1659	1/1	0.93	0.29	84,84,84,84	0
57	MG	RA	3122	1/1	0.93	0.22	61,61,61,61	0
57	MG	YA	3005	1/1	0.93	0.21	20,20,20,20	0
57	MG	QA	1661	1/1	0.93	0.32	56,56,56,56	0
57	MG	YA	3021	1/1	0.93	0.37	22,22,22,22	0
57	MG	YA	3024	1/1	0.93	0.34	21,21,21,21	0
57	MG	RA	3153	1/1	0.93	0.27	50,50,50,50	0
57	MG	RA	3089	1/1	0.93	0.53	35,35,35,35	0
57	MG	XA	1634	1/1	0.93	0.22	33,33,33,33	0
57	MG	XA	1635	1/1	0.93	0.43	40,40,40,40	0
57	MG	YA	3053	1/1	0.93	0.30	27,27,27,27	0
57	MG	RA	3200	1/1	0.93	0.42	43,43,43,43	0
57	MG	YA	3238	1/1	0.93	0.43	62,62,62,62	0
57	MG	YA	3169	1/1	0.93	0.23	43,43,43,43	0
57	MG	YA	3061	1/1	0.93	0.38	19,19,19,19	0
57	MG	RA	3202	1/1	0.93	0.46	52,52,52,52	0
57	MG	QA	1636	1/1	0.93	0.20	46,46,46,46	0
57	MG	YA	3071	1/1	0.93	0.11	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3231	1/1	0.93	0.55	27,27,27,27	0
57	MG	XA	1642	1/1	0.93	0.37	41,41,41,41	0
57	MG	YA	3080	1/1	0.93	0.25	33,33,33,33	0
57	MG	RA	3132	1/1	0.93	0.11	40,40,40,40	0
57	MG	RA	3179	1/1	0.93	0.17	32,32,32,32	0
57	MG	QA	1646	1/1	0.93	0.10	52,52,52,52	0
57	MG	QA	1617	1/1	0.93	0.26	40,40,40,40	0
57	MG	QA	1657	1/1	0.93	0.33	55,55,55,55	0
57	MG	XA	1653	1/1	0.93	0.21	66,66,66,66	0
57	MG	YB	202	1/1	0.93	0.35	50,50,50,50	0
57	MG	YE	301	1/1	0.93	0.20	21,21,21,21	0
57	MG	QA	1605	1/1	0.93	0.57	32,32,32,32	0
57	MG	RF	301	1/1	0.93	0.23	50,50,50,50	0
57	MG	YA	3124	1/1	0.93	0.27	35,35,35,35	0
57	MG	YA	3125	1/1	0.93	0.32	33,33,33,33	0
57	MG	RA	3185	1/1	0.93	0.17	44,44,44,44	0
57	MG	YA	3197	1/1	0.93	0.48	47,47,47,47	0
57	MG	RP	202	1/1	0.93	0.19	157,157,157,157	0
57	MG	RA	3186	1/1	0.93	0.09	27,27,27,27	0
57	MG	RA	3026	1/1	0.94	0.38	18,18,18,18	0
57	MG	RA	3182	1/1	0.94	0.19	33,33,33,33	0
57	MG	YA	3114	1/1	0.94	0.19	39,39,39,39	0
57	MG	RA	3117	1/1	0.94	0.16	35,35,35,35	0
57	MG	R5	101	1/1	0.94	0.21	38,38,38,38	0
57	MG	QA	1604	1/1	0.94	0.36	36,36,36,36	0
57	MG	XA	1658	1/1	0.94	0.40	51,51,51,51	0
57	MG	XA	1605	1/1	0.94	0.38	37,37,37,37	0
57	MG	YA	3202	1/1	0.94	0.13	55,55,55,55	0
57	MG	RA	3119	1/1	0.94	0.41	66,66,66,66	0
57	MG	QA	1611	1/1	0.94	0.26	27,27,27,27	0
57	MG	QF	201	1/1	0.94	0.41	68,68,68,68	0
57	MG	RA	3162	1/1	0.94	0.27	61,61,61,61	0
57	MG	RA	3045	1/1	0.94	0.12	28,28,28,28	0
57	MG	RA	3190	1/1	0.94	0.31	48,48,48,48	0
57	MG	RA	3084	1/1	0.94	0.19	45,45,45,45	0
57	MG	XA	1620	1/1	0.94	0.26	33,33,33,33	0
57	MG	XA	1671	1/1	0.94	0.19	52,52,52,52	0
57	MG	YA	3215	1/1	0.94	0.41	66,66,66,66	0
57	MG	XA	1621	1/1	0.94	0.56	48,48,48,48	0
57	MG	XA	1623	1/1	0.94	0.12	34,34,34,34	0
57	MG	YA	3219	1/1	0.94	0.10	37,37,37,37	0
57	MG	YA	3220	1/1	0.94	0.12	38,38,38,38	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3165	1/1	0.94	0.21	61,61,61,61	0
57	MG	YA	3148	1/1	0.94	0.13	33,33,33,33	0
57	MG	RA	3087	1/1	0.94	0.41	35,35,35,35	0
57	MG	RA	3046	1/1	0.94	0.43	26,26,26,26	0
57	MG	YA	3226	1/1	0.94	0.13	41,41,41,41	0
57	MG	YA	3227	1/1	0.94	0.38	27,27,27,27	0
57	MG	YA	3014	1/1	0.94	0.39	22,22,22,22	0
57	MG	YA	3229	1/1	0.94	0.35	33,33,33,33	0
57	MG	QA	1606	1/1	0.94	0.20	35,35,35,35	0
57	MG	RA	3049	1/1	0.94	0.48	38,38,38,38	0
57	MG	RA	3099	1/1	0.94	0.12	37,37,37,37	0
57	MG	YA	3034	1/1	0.94	0.41	19,19,19,19	0
57	MG	YA	3037	1/1	0.94	0.36	26,26,26,26	0
57	MG	YA	3159	1/1	0.94	0.16	25,25,25,25	0
57	MG	QA	1647	1/1	0.94	0.65	50,50,50,50	0
57	MG	YA	3161	1/1	0.94	0.33	36,36,36,36	0
57	MG	QA	1607	1/1	0.94	0.11	61,61,61,61	0
57	MG	YA	3163	1/1	0.94	0.10	47,47,47,47	0
57	MG	YA	3244	1/1	0.94	0.20	71,71,71,71	0
57	MG	RA	3012	1/1	0.94	0.35	28,28,28,28	0
57	MG	RA	3110	1/1	0.94	0.30	32,32,32,32	0
57	MG	RA	3144	1/1	0.94	0.40	45,45,45,45	0
57	MG	XA	1639	1/1	0.94	0.15	49,49,49,49	0
57	MG	RA	3239	1/1	0.94	0.53	37,37,37,37	0
57	MG	YA	3062	1/1	0.94	0.14	30,30,30,30	0
57	MG	YA	3252	1/1	0.94	0.50	70,70,70,70	0
57	MG	YA	3063	1/1	0.94	0.29	23,23,23,23	0
57	MG	RA	3241	1/1	0.94	0.20	34,34,34,34	0
57	MG	YA	3261	1/1	0.94	0.33	29,29,29,29	0
57	MG	RB	201	1/1	0.94	0.11	76,76,76,76	0
57	MG	YA	3066	1/1	0.94	0.13	23,23,23,23	0
57	MG	YA	3177	1/1	0.94	0.22	40,40,40,40	0
57	MG	XA	1643	1/1	0.94	0.31	45,45,45,45	0
57	MG	RB	202	1/1	0.94	0.08	63,63,63,63	0
57	MG	RA	3061	1/1	0.94	0.15	68,68,68,68	0
57	MG	Y5	101	1/1	0.94	0.19	35,35,35,35	0
57	MG	YA	3076	1/1	0.94	0.21	29,29,29,29	0
57	MG	XA	1648	1/1	0.94	0.37	40,40,40,40	0
58	PAR	XA	1673	42/42	0.94	0.22	64,64,64,64	0
57	MG	YA	3185	1/1	0.94	0.23	40,40,40,40	0
57	MG	YA	3083	1/1	0.94	0.22	24,24,24,24	0
57	MG	RA	3063	1/1	0.94	0.51	31,31,31,31	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3001	1/1	0.94	0.49	42,42,42,42	0
57	MG	RA	3152	1/1	0.94	0.13	56,56,56,56	0
57	MG	YA	3132	1/1	0.95	0.16	41,41,41,41	0
57	MG	YA	3018	1/1	0.95	0.43	30,30,30,30	0
57	MG	YA	3019	1/1	0.95	0.34	21,21,21,21	0
57	MG	YA	3136	1/1	0.95	0.07	30,30,30,30	0
57	MG	RA	3108	1/1	0.95	0.12	29,29,29,29	0
57	MG	YA	3207	1/1	0.95	0.42	61,61,61,61	0
57	MG	QA	1623	1/1	0.95	0.29	54,54,54,54	0
57	MG	YA	3141	1/1	0.95	0.43	41,41,41,41	0
57	MG	YA	3142	1/1	0.95	0.36	54,54,54,54	0
57	MG	YA	3144	1/1	0.95	0.13	54,54,54,54	0
57	MG	YA	3029	1/1	0.95	0.32	20,20,20,20	0
57	MG	YA	3214	1/1	0.95	0.16	49,49,49,49	0
57	MG	RA	3068	1/1	0.95	0.27	30,30,30,30	0
57	MG	YA	3036	1/1	0.95	0.21	19,19,19,19	0
57	MG	RA	3039	1/1	0.95	0.26	30,30,30,30	0
57	MG	QA	1652	1/1	0.95	0.36	38,38,38,38	0
57	MG	YA	3041	1/1	0.95	0.30	17,17,17,17	0
57	MG	RA	3072	1/1	0.95	0.23	34,34,34,34	0
57	MG	XA	1645	1/1	0.95	0.36	49,49,49,49	0
57	MG	RA	3151	1/1	0.95	0.28	54,54,54,54	0
57	MG	QA	1630	1/1	0.95	0.15	52,52,52,52	0
57	MG	YA	3054	1/1	0.95	0.29	26,26,26,26	0
57	MG	RU	201	1/1	0.95	0.23	90,90,90,90	0
57	MG	R0	101	1/1	0.95	0.27	37,37,37,37	0
57	MG	QA	1639	1/1	0.95	0.33	35,35,35,35	0
57	MG	RA	3079	1/1	0.95	0.52	39,39,39,39	0
57	MG	XA	1603	1/1	0.95	0.24	32,32,32,32	0
57	MG	QA	1640	1/1	0.95	0.14	44,44,44,44	0
57	MG	RA	3121	1/1	0.95	0.37	50,50,50,50	0
57	MG	YA	3234	1/1	0.95	0.20	52,52,52,52	0
57	MG	QA	1601	1/1	0.95	0.26	44,44,44,44	0
57	MG	RA	3123	1/1	0.95	0.35	53,53,53,53	0
57	MG	QA	1603	1/1	0.95	0.67	36,36,36,36	0
57	MG	XA	1661	1/1	0.95	0.11	67,67,67,67	0
57	MG	YA	3240	1/1	0.95	0.17	60,60,60,60	0
57	MG	YA	3077	1/1	0.95	0.47	26,26,26,26	0
57	MG	RA	3014	1/1	0.95	0.21	25,25,25,25	0
57	MG	RA	3126	1/1	0.95	0.23	53,53,53,53	0
57	MG	YA	3084	1/1	0.95	0.41	25,25,25,25	0
57	MG	RA	3023	1/1	0.95	0.19	26,26,26,26	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3131	1/1	0.95	0.53	46,46,46,46	0
57	MG	YA	3089	1/1	0.95	0.46	30,30,30,30	0
57	MG	QA	1627	1/1	0.95	0.14	38,38,38,38	0
57	MG	YA	3250	1/1	0.95	0.57	45,45,45,45	0
57	MG	RA	3058	1/1	0.95	0.32	19,19,19,19	0
57	MG	YA	3103	1/1	0.95	0.30	32,32,32,32	0
57	MG	YA	3183	1/1	0.95	0.14	45,45,45,45	0
57	MG	YA	3254	1/1	0.95	0.47	32,32,32,32	0
57	MG	QA	1628	1/1	0.95	0.14	44,44,44,44	0
57	MG	YA	3108	1/1	0.95	0.42	34,34,34,34	0
57	MG	YA	3262	1/1	0.95	0.39	35,35,35,35	0
57	MG	RA	3135	1/1	0.95	0.18	38,38,38,38	0
57	MG	YA	3116	1/1	0.95	0.20	42,42,42,42	0
57	MG	YA	3269	1/1	0.95	0.59	52,52,52,52	0
57	MG	XA	1626	1/1	0.95	0.29	40,40,40,40	0
57	MG	RA	3232	1/1	0.95	0.48	33,33,33,33	0
57	MG	YB	203	1/1	0.95	0.08	47,47,47,47	0
57	MG	YA	3190	1/1	0.95	0.54	53,53,53,53	0
57	MG	YE	302	1/1	0.95	0.31	35,35,35,35	0
57	MG	RA	3233	1/1	0.95	0.28	57,57,57,57	0
57	MG	YA	3192	1/1	0.95	0.09	38,38,38,38	0
57	MG	RA	3101	1/1	0.95	0.33	38,38,38,38	0
57	MG	RA	3201	1/1	0.95	0.25	49,49,49,49	0
57	MG	RA	3033	1/1	0.95	0.39	34,34,34,34	0
57	MG	YA	3196	1/1	0.95	0.28	45,45,45,45	0
57	MG	YA	3004	1/1	0.95	0.28	11,11,11,11	0
57	MG	RA	3105	1/1	0.95	0.27	30,30,30,30	0
57	MG	RA	3106	1/1	0.95	0.25	47,47,47,47	0
57	MG	RA	3205	1/1	0.95	0.29	38,38,38,38	0
57	MG	RA	3017	1/1	0.96	0.20	29,29,29,29	0
57	MG	YA	3139	1/1	0.96	0.19	35,35,35,35	0
57	MG	YA	3040	1/1	0.96	0.29	19,19,19,19	0
57	MG	RA	3019	1/1	0.96	0.31	26,26,26,26	0
57	MG	YA	3043	1/1	0.96	0.43	17,17,17,17	0
57	MG	YA	3143	1/1	0.96	0.24	35,35,35,35	0
57	MG	YA	3044	1/1	0.96	0.24	15,15,15,15	0
57	MG	RA	3022	1/1	0.96	0.50	25,25,25,25	0
57	MG	RA	3197	1/1	0.96	0.38	37,37,37,37	0
57	MG	XA	1610	1/1	0.96	0.31	32,32,32,32	0
57	MG	RA	3006	1/1	0.96	0.53	30,30,30,30	0
57	MG	RA	3080	1/1	0.96	0.20	36,36,36,36	0
57	MG	YA	3150	1/1	0.96	0.22	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3151	1/1	0.96	0.07	60,60,60,60	0
57	MG	XA	1615	1/1	0.96	0.39	33,33,33,33	0
57	MG	YA	3060	1/1	0.96	0.27	25,25,25,25	0
57	MG	XA	1617	1/1	0.96	0.20	36,36,36,36	0
57	MG	QA	1664	1/1	0.96	0.07	118,118,118,118	0
57	MG	XA	1659	1/1	0.96	0.44	71,71,71,71	0
57	MG	XA	1660	1/1	0.96	0.13	26,26,26,26	0
57	MG	RA	3053	1/1	0.96	0.13	19,19,19,19	0
57	MG	RA	3143	1/1	0.96	0.36	37,37,37,37	0
57	MG	YA	3067	1/1	0.96	0.48	33,33,33,33	0
57	MG	YA	3070	1/1	0.96	0.26	33,33,33,33	0
57	MG	QA	1660	1/1	0.96	0.36	59,59,59,59	0
57	MG	RA	3145	1/1	0.96	0.20	53,53,53,53	0
57	MG	YA	3164	1/1	0.96	0.22	39,39,39,39	0
57	MG	QA	1635	1/1	0.96	0.20	47,47,47,47	0
57	MG	RA	3034	1/1	0.96	0.52	29,29,29,29	0
57	MG	YA	3237	1/1	0.96	0.35	59,59,59,59	0
57	MG	RA	3240	1/1	0.96	0.50	34,34,34,34	0
57	MG	XA	1627	1/1	0.96	0.27	48,48,48,48	0
57	MG	RA	3091	1/1	0.96	0.36	28,28,28,28	0
57	MG	YA	3170	1/1	0.96	0.07	39,39,39,39	0
57	MG	YA	3171	1/1	0.96	0.20	49,49,49,49	0
57	MG	RA	3092	1/1	0.96	0.41	27,27,27,27	0
57	MG	RA	3003	1/1	0.96	0.44	28,28,28,28	0
57	MG	RA	3038	1/1	0.96	0.27	26,26,26,26	0
57	MG	YA	3087	1/1	0.96	0.33	27,27,27,27	0
57	MG	XA	1632	1/1	0.96	0.42	40,40,40,40	0
57	MG	YA	3095	1/1	0.96	0.40	24,24,24,24	0
57	MG	QA	1634	1/1	0.96	0.48	39,39,39,39	0
57	MG	YA	3097	1/1	0.96	0.33	36,36,36,36	0
57	MG	RA	3155	1/1	0.96	0.39	45,45,45,45	0
57	MG	YA	3102	1/1	0.96	0.34	26,26,26,26	0
57	MG	YA	3001	1/1	0.96	0.46	21,21,21,21	0
57	MG	RA	3156	1/1	0.96	0.17	47,47,47,47	0
57	MG	RA	3040	1/1	0.96	0.40	22,22,22,22	0
57	MG	YA	3007	1/1	0.96	0.19	21,21,21,21	0
57	MG	YA	3008	1/1	0.96	0.32	20,20,20,20	0
57	MG	YA	3266	1/1	0.96	0.22	37,37,37,37	0
57	MG	YA	3267	1/1	0.96	0.34	40,40,40,40	0
57	MG	YA	3013	1/1	0.96	0.45	20,20,20,20	0
57	MG	RA	3127	1/1	0.96	0.16	34,34,34,34	0
57	MG	RA	3013	1/1	0.96	0.28	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3123	1/1	0.96	0.19	22,22,22,22	0
57	MG	YA	3017	1/1	0.96	0.22	25,25,25,25	0
57	MG	RA	3130	1/1	0.96	0.35	43,43,43,43	0
57	MG	RA	3103	1/1	0.96	0.24	28,28,28,28	0
57	MG	YA	3020	1/1	0.96	0.54	18,18,18,18	0
57	MG	QA	1641	1/1	0.96	0.38	45,45,45,45	0
57	MG	RA	3071	1/1	0.96	0.31	51,51,51,51	0
57	MG	XA	1644	1/1	0.96	0.16	54,54,54,54	0
57	MG	YA	3199	1/1	0.96	0.18	45,45,45,45	0
59	ZN	QD	301	1/1	0.96	0.30	54,54,54,54	0
57	MG	YA	3032	1/1	0.96	0.38	22,22,22,22	0
57	MG	XA	1601	1/1	0.96	0.50	32,32,32,32	0
57	MG	RA	3107	1/1	0.96	0.36	45,45,45,45	0
57	MG	XA	1604	1/1	0.96	0.65	40,40,40,40	0
57	MG	YA	3137	1/1	0.96	0.20	30,30,30,30	0
57	MG	RA	3047	1/1	0.97	0.41	19,19,19,19	0
57	MG	RA	3104	1/1	0.97	0.35	29,29,29,29	0
57	MG	QA	1648	1/1	0.97	0.12	60,60,60,60	0
57	MG	XA	1609	1/1	0.97	0.40	44,44,44,44	0
57	MG	QA	1610	1/1	0.97	0.26	33,33,33,33	0
57	MG	RA	3077	1/1	0.97	0.43	42,42,42,42	0
57	MG	YA	3094	1/1	0.97	0.31	27,27,27,27	0
57	MG	XA	1613	1/1	0.97	0.08	36,36,36,36	0
57	MG	YA	3023	1/1	0.97	0.31	21,21,21,21	0
57	MG	XA	1652	1/1	0.97	0.18	105,105,105,105	0
57	MG	YA	3100	1/1	0.97	0.45	20,20,20,20	0
57	MG	YA	3028	1/1	0.97	0.17	17,17,17,17	0
57	MG	RA	3078	1/1	0.97	0.40	46,46,46,46	0
57	MG	YA	3031	1/1	0.97	0.41	24,24,24,24	0
57	MG	RA	3027	1/1	0.97	0.24	27,27,27,27	0
57	MG	YA	3107	1/1	0.97	0.15	30,30,30,30	0
57	MG	RA	3168	1/1	0.97	0.43	45,45,45,45	0
57	MG	YA	3112	1/1	0.97	0.15	36,36,36,36	0
57	MG	RA	3029	1/1	0.97	0.29	32,32,32,32	0
57	MG	YA	3115	1/1	0.97	0.34	31,31,31,31	0
57	MG	RA	3139	1/1	0.97	0.29	54,54,54,54	0
57	MG	QV	101	1/1	0.97	0.24	36,36,36,36	0
57	MG	RA	3237	1/1	0.97	0.33	51,51,51,51	0
57	MG	YA	3119	1/1	0.97	0.41	36,36,36,36	0
57	MG	XA	1622	1/1	0.97	0.13	37,37,37,37	0
57	MG	YA	3042	1/1	0.97	0.32	19,19,19,19	0
57	MG	RA	3238	1/1	0.97	0.19	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3056	1/1	0.97	0.40	28,28,28,28	0
57	MG	RA	3114	1/1	0.97	0.33	31,31,31,31	0
57	MG	YA	3046	1/1	0.97	0.33	27,27,27,27	0
57	MG	YA	3047	1/1	0.97	0.34	23,23,23,23	0
57	MG	YA	3048	1/1	0.97	0.28	26,26,26,26	0
57	MG	YA	3130	1/1	0.97	0.19	40,40,40,40	0
57	MG	RA	3086	1/1	0.97	0.32	45,45,45,45	0
57	MG	YA	3050	1/1	0.97	0.38	27,27,27,27	0
57	MG	YA	3133	1/1	0.97	0.10	37,37,37,37	0
57	MG	RA	3011	1/1	0.97	0.23	31,31,31,31	0
57	MG	YA	3258	1/1	0.97	0.26	28,28,28,28	0
57	MG	QA	1608	1/1	0.97	0.08	41,41,41,41	0
57	MG	RA	3146	1/1	0.97	0.10	31,31,31,31	0
57	MG	YA	3263	1/1	0.97	0.38	31,31,31,31	0
57	MG	QA	1642	1/1	0.97	0.15	55,55,55,55	0
57	MG	YA	3265	1/1	0.97	0.52	39,39,39,39	0
57	MG	RA	3148	1/1	0.97	0.27	52,52,52,52	0
57	MG	QA	1643	1/1	0.97	0.28	46,46,46,46	0
57	MG	RA	3065	1/1	0.97	0.34	36,36,36,36	0
57	MG	RA	3094	1/1	0.97	0.46	34,34,34,34	0
57	MG	QA	1621	1/1	0.97	0.10	36,36,36,36	0
57	MG	RA	3096	1/1	0.97	0.31	25,25,25,25	0
57	MG	XV	101	1/1	0.97	0.20	31,31,31,31	0
57	MG	RA	3097	1/1	0.97	0.28	26,26,26,26	0
57	MG	QA	1645	1/1	0.97	0.15	43,43,43,43	0
57	MG	YA	3002	1/1	0.97	0.32	16,16,16,16	0
57	MG	RA	3021	1/1	0.97	0.38	27,27,27,27	0
57	MG	YA	3073	1/1	0.97	0.20	28,28,28,28	0
57	MG	RA	3128	1/1	0.97	0.12	39,39,39,39	0
57	MG	QA	1602	1/1	0.97	0.39	37,37,37,37	0
57	MG	RA	3159	1/1	0.97	0.12	38,38,38,38	0
57	MG	YA	3212	1/1	0.97	0.24	62,62,62,62	0
57	MG	YA	3078	1/1	0.97	0.20	27,27,27,27	0
57	MG	QA	1624	1/1	0.97	0.33	41,41,41,41	0
57	MG	YA	3082	1/1	0.97	0.40	23,23,23,23	0
57	MG	YA	3216	1/1	0.97	0.26	57,57,57,57	0
57	MG	RA	3028	1/1	0.98	0.35	28,28,28,28	0
57	MG	YA	3122	1/1	0.98	0.32	41,41,41,41	0
57	MG	RA	3081	1/1	0.98	0.57	46,46,46,46	0
57	MG	RA	3230	1/1	0.98	0.31	22,22,22,22	0
57	MG	RA	3060	1/1	0.98	0.18	31,31,31,31	0
57	MG	YA	3178	1/1	0.98	0.30	44,44,44,44	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3002	1/1	0.98	0.67	37,37,37,37	0
57	MG	YA	3068	1/1	0.98	0.17	35,35,35,35	0
57	MG	YA	3069	1/1	0.98	0.47	42,42,42,42	0
57	MG	RA	3062	1/1	0.98	0.50	18,18,18,18	0
57	MG	YA	3025	1/1	0.98	0.20	13,13,13,13	0
57	MG	RA	3030	1/1	0.98	0.31	31,31,31,31	0
57	MG	RA	3112	1/1	0.98	0.21	44,44,44,44	0
57	MG	YA	3074	1/1	0.98	0.34	35,35,35,35	0
57	MG	YA	3030	1/1	0.98	0.48	30,30,30,30	0
57	MG	XA	1637	1/1	0.98	0.49	53,53,53,53	0
57	MG	QA	1622	1/1	0.98	0.17	46,46,46,46	0
57	MG	RA	3066	1/1	0.98	0.35	28,28,28,28	0
57	MG	XA	1611	1/1	0.98	0.35	28,28,28,28	0
57	MG	YA	3081	1/1	0.98	0.43	28,28,28,28	0
57	MG	QA	1654	1/1	0.98	0.10	77,77,77,77	0
57	MG	YA	3038	1/1	0.98	0.16	17,17,17,17	0
57	MG	RA	3024	1/1	0.98	0.18	25,25,25,25	0
57	MG	RA	3036	1/1	0.98	0.26	23,23,23,23	0
57	MG	RA	3050	1/1	0.98	0.34	25,25,25,25	0
57	MG	XA	1616	1/1	0.98	0.30	25,25,25,25	0
57	MG	YA	3088	1/1	0.98	0.43	35,35,35,35	0
57	MG	YA	3255	1/1	0.98	0.55	33,33,33,33	0
57	MG	RA	3037	1/1	0.98	0.25	16,16,16,16	0
57	MG	YA	3090	1/1	0.98	0.28	11,11,11,11	0
57	MG	YA	3091	1/1	0.98	0.42	27,27,27,27	0
57	MG	YA	3092	1/1	0.98	0.34	44,44,44,44	0
57	MG	YA	3093	1/1	0.98	0.21	37,37,37,37	0
57	MG	RA	3120	1/1	0.98	0.54	39,39,39,39	0
57	MG	RA	3052	1/1	0.98	0.32	18,18,18,18	0
57	MG	RA	3098	1/1	0.98	0.42	25,25,25,25	0
57	MG	QA	1612	1/1	0.98	0.33	32,32,32,32	0
57	MG	YA	3098	1/1	0.98	0.25	34,34,34,34	0
57	MG	RA	3018	1/1	0.98	0.27	23,23,23,23	0
57	MG	YA	3006	1/1	0.98	0.43	11,11,11,11	0
57	MG	RA	3075	1/1	0.98	0.17	21,21,21,21	0
57	MG	YA	3051	1/1	0.98	0.31	20,20,20,20	0
57	MG	YD	301	1/1	0.98	0.18	32,32,32,32	0
57	MG	YA	3104	1/1	0.98	0.16	31,31,31,31	0
57	MG	RA	3076	1/1	0.98	0.34	37,37,37,37	0
57	MG	YA	3009	1/1	0.98	0.55	28,28,28,28	0
57	MG	RA	3055	1/1	0.98	0.54	27,27,27,27	0
57	MG	YA	3110	1/1	0.98	0.37	29,29,29,29	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3055	1/1	0.98	0.24	52,52,52,52	0
57	MG	RA	3225	1/1	0.98	0.13	59,59,59,59	0
57	MG	YA	3058	1/1	0.98	0.52	24,24,24,24	0
57	MG	YA	3222	1/1	0.98	0.28	56,56,56,56	0
57	MG	YA	3059	1/1	0.98	0.32	13,13,13,13	0
57	MG	YA	3015	1/1	0.98	0.59	18,18,18,18	0
57	MG	QA	1615	1/1	0.98	0.29	47,47,47,47	0
57	MG	RA	3042	1/1	0.98	0.26	26,26,26,26	0
57	MG	RA	3085	1/1	0.99	0.40	32,32,32,32	0
57	MG	YA	3033	1/1	0.99	0.43	30,30,30,30	0
57	MG	YA	3010	1/1	0.99	0.27	17,17,17,17	0
57	MG	YA	3120	1/1	0.99	0.39	52,52,52,52	0
57	MG	YA	3035	1/1	0.99	0.33	18,18,18,18	0
57	MG	YA	3011	1/1	0.99	0.47	27,27,27,27	0
57	MG	YA	3012	1/1	0.99	0.45	8,8,8,8	0
57	MG	YA	3257	1/1	0.99	0.25	12,12,12,12	0
57	MG	RA	3064	1/1	0.99	0.26	34,34,34,34	0
57	MG	YA	3259	1/1	0.99	0.51	28,28,28,28	0
57	MG	YA	3260	1/1	0.99	0.33	26,26,26,26	0
57	MG	RA	3032	1/1	0.99	0.40	21,21,21,21	0
57	MG	RA	3088	1/1	0.99	0.35	30,30,30,30	0
57	MG	RA	3016	1/1	0.99	0.33	16,16,16,16	0
57	MG	RA	3041	1/1	0.99	0.28	23,23,23,23	0
57	MG	QA	1614	1/1	0.99	0.44	38,38,38,38	0
57	MG	RA	3059	1/1	0.99	0.32	19,19,19,19	0
57	MG	RA	3093	1/1	0.99	0.38	32,32,32,32	0
57	MG	YA	3099	1/1	0.99	0.24	28,28,28,28	0
57	MG	QA	1649	1/1	0.99	0.22	49,49,49,49	0
57	MG	YA	3022	1/1	0.99	0.28	34,34,34,34	0
57	MG	RA	3207	1/1	0.99	0.08	93,93,93,93	0
57	MG	YA	3003	1/1	0.99	0.27	18,18,18,18	0
57	MG	RA	3015	1/1	0.99	0.39	22,22,22,22	0
57	MG	YA	3105	1/1	0.99	0.34	24,24,24,24	0
57	MG	YA	3026	1/1	0.99	0.43	12,12,12,12	0
57	MG	YA	3027	1/1	0.99	0.19	21,21,21,21	0
57	MG	YA	3079	1/1	0.99	0.43	25,25,25,25	0
57	MG	YA	3109	1/1	0.99	0.35	27,27,27,27	0
57	MG	YA	3242	1/1	0.99	0.09	55,55,55,55	0
57	MG	RA	3082	1/1	0.99	0.57	39,39,39,39	0
57	MG	YA	3111	1/1	0.99	0.17	28,28,28,28	0
57	MG	RA	3020	1/1	0.99	0.48	20,20,20,20	0
57	MG	YA	3113	1/1	0.99	0.07	35,35,35,35	0

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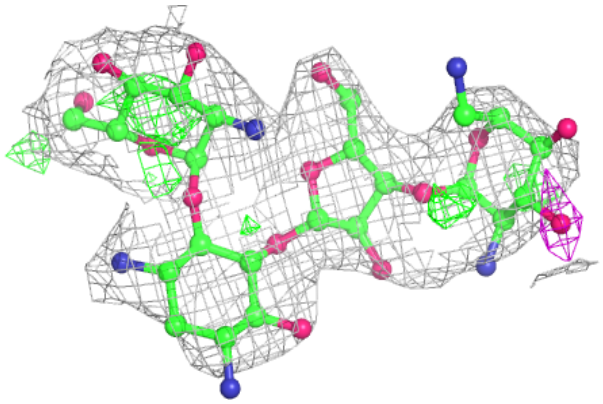
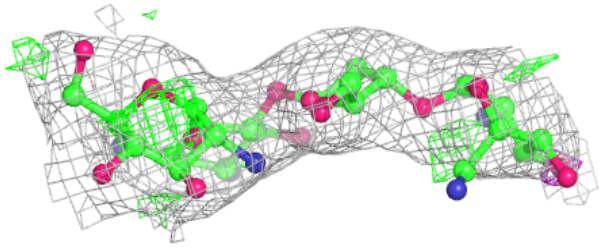
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1602	1/1	0.99	0.28	26,26,26,26	0
57	MG	YA	3056	1/1	0.99	0.22	20,20,20,20	0
57	MG	RA	3031	1/1	0.99	0.34	35,35,35,35	0

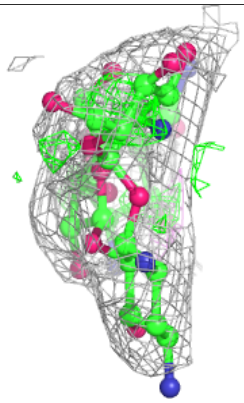
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around PAR QA 1667:

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

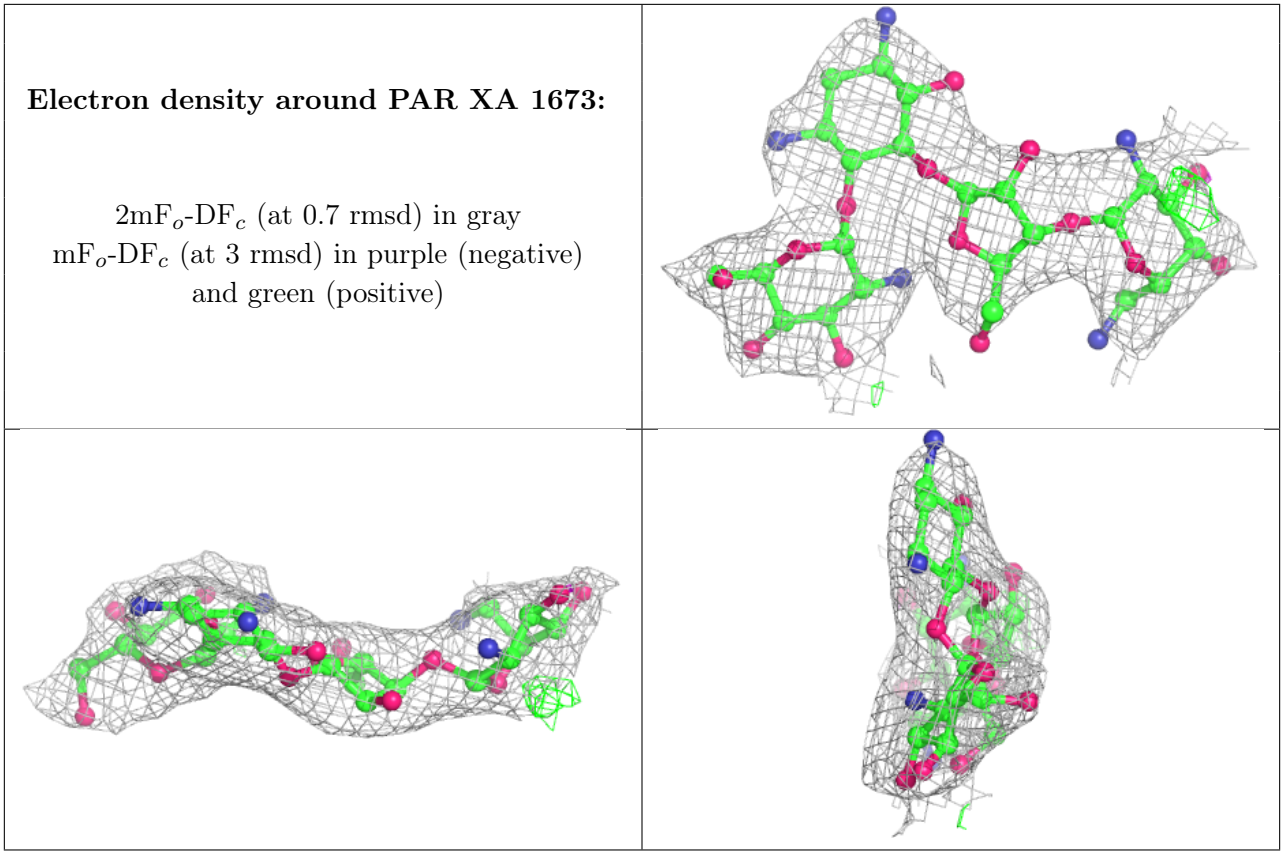






Electron density around PAR XA 1673:

$2mF_o$-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.