Full wwPDB X-ray Structure Validation Report (i)

Oct 1, 2023 – 01:27 PM EDT

PDB ID	:	4LT8
Title	:	Crystal Structure of tRNA Proline (CGG) Bound to Codon CCC-G on the Ribosome
Authors	:	Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on	:	2013-07-23
Resolution	:	3.14 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 (i) 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 (i)) were used in the production of this report:

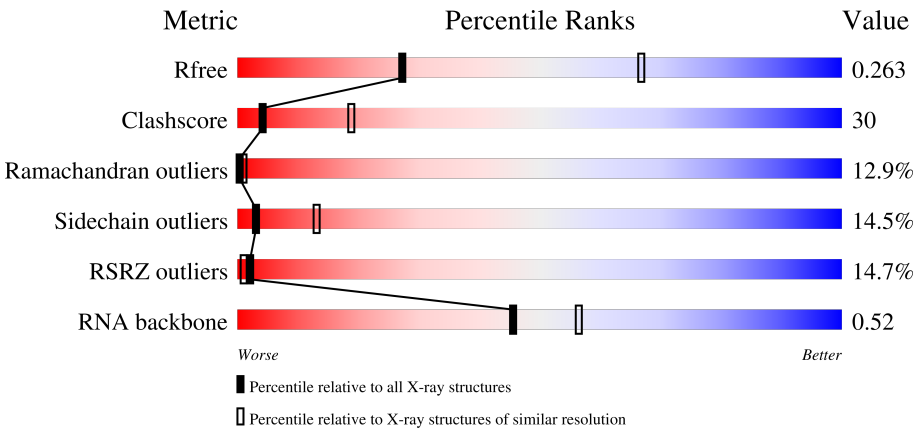
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	1.13
EDS	:	2.35.1
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Refmac	:	5.8.0158
CCP4	:	7.0.044 (Gargrove)
Ideal geometry (proteins)	:	Engh & 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 3.14 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	1626 (3.18-3.10)
Clashscore	141614	1735 (3.18-3.10)
Ramachandran outliers	138981	1677 (3.18-3.10)
Sidechain outliers	138945	1677 (3.18-3.10)
RSRZ outliers	127900	1588 (3.18-3.10)
RNA backbone	3102	1000 (3.46-2.82)

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	17% 50% 37% 10% ••
1	XA	1522	19% 50% 37% 11% ••
2	QB	256	17% 17% 58% 16% • 7%
2	XB	256	9% 17% 59% 16% • 7%

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Mol	Chain	Length	Quality of chain
3	QC	239	11% 22% 53% 10% 14%
3	XC	239	4% 22% 54% 9% 14%
4	QD	209	25% 25% 59% 13%
4	XD	209	13% 26% 60% 12%
5	QE	162	12% 30% 52% 12% 7%
5	XE	162	7% 30% 50% 13% 7%
6	QF	101	25% 59% 15%
6	XF	101	5% 22% 61% 16%
7	QG	156	15% 28% 62% 10%
7	XG	156	10% 29% 60% 10%
8	QH	138	7% 28% 59% 12%
8	XH	138	9% 26% 61% 12%
9	QI	128	47% 20% 66% 13%
9	XI	128	26% 20% 65% 14%
10	QJ	105	49% 18% 63% 12% 6%
10	XJ	105	41% 17% 64% 12% 6%
11	QK	129	11% 33% 48% 11% 8%
11	XK	129	19% 33% 48% 11% 8%
12	QL	132	21% 30% 49% 14% 5%
12	XL	132	10% 29% 49% 14% 5%
13	QM	126	36% 18% 55% 21%
13	XM	126	24% 22% 50% 21%
14	QN	61	44% 13% 62% 15% 8%
14	XN	61	25% 16% 59% 18% 5%
15	QO	89	10% 33% 55% 11%

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Mol	Chain	Length	Quality of chain
15	XO	89	11% 31% 56% 11% •
16	QP	88	16% 16% 64% 14% • 5%
16	XP	88	27% 18% 60% 15% • 5%
17	QQ	105	11% 37% 47% 11% 5%
17	XQ	105	22% 37% 47% 11% 5%
18	QR	88	2% 24% 43% 11% • 20%
18	XR	88	3% 22% 45% 11% • 20%
19	QS	93	56% 24% 41% 22% • 10%
19	XS	93	26% 25% 39% 23% • 10%
20	QT	106	31% 26% 47% 19% • 7%
20	XT	106	42% 25% 49% 19% • 7%
21	QU	27	89% 26% 48% 19% 7%
21	XU	27	52% 22% 52% 19% 7%
22	QV	77	17% 45% 43% 10% •
22	XV	77	10% 57% 34% 8% •
23	QY	17	18% 53% 24% 12% 12%
23	XY	17	18% 41% 29% 18% 12%
24	QX	25	8% 8% 16% 8% 68%
24	XX	25	8% 12% 12% • • 68%
25	RA	2916	12% 53% 35% 11% ••
25	YA	2916	8% 54% 34% 10% ••
26	RB	122	15% 49% 38% 11% •
26	YB	122	62% 26% 10% •
27	RD	276	3% 30% 51% 15% ••
27	YD	276	3% 29% 53% 15% ••

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Mol	Chain	Length	Quality of chain
28	RE	206	7% 23% 48% 24% 5%
28	YE	206	4% 24% 47% 24% 5%
29	RF	210	5% 36% 46% 13%
29	YF	210	4% 34% 49% 12%
30	RG	182	61% 23% 58% 16%
30	YG	182	32% 22% 59% 16%
31	RH	180	59% 23% 44% 19% 8% 6%
31	YH	180	7% 23% 44% 19% 8% 6%
32	RI	148	5% 47% 39% 11%
32	YI	148	7% 47% 36% 14%
33	RN	140	2% 18% 54% 26%
33	YN	140	% 18% 54% 26%
34	RO	122	2% 34% 55% 9%
34	YO	122	2% 34% 56% 9%
35	RP	150	24% 19% 51% 23% 8%
35	YP	150	11% 20% 50% 23% 7%
36	RQ	141	21% 31% 49% 17%
36	YQ	141	6% 30% 50% 17%
37	RR	118	8% 34% 47% 16%
37	YR	118	3% 35% 47% 16%
38	RS	112	18% 12% 62% 19% 5%
38	YS	112	3% 12% 62% 20%
39	RT	146	9% 21% 51% 19% 6%
39	YT	146	8% 23% 49% 19% 6%
40	RU	118	16% 35% 52% 11%

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Mol	Chain	Length	Quality of chain
40	YU	118	3% 31% 54% 13%
41	RV	101	3% 28% 51% 21%
41	YV	101	4% 27% 52% 21%
42	RW	113	3% 29% 50% 19%
42	YW	113	% 27% 52% 18%
43	RX	96	38% 44% 15%
43	YX	96	35% 46% 15%
44	RY	110	21% 17% 44% 28% 7%
44	YY	110	11% 19% 42% 28% 7%
45	RZ	206	16% 51% 26% 9% 11%
45	YZ	206	7% 44% 36% 7% 11%
46	R0	85	7% 66% 28%
46	Y0	85	5% 61% 32%
47	R1	98	6% 31% 47% 18%
47	Y1	98	9% 29% 49% 18%
48	R2	72	22% 54% 18%
48	Y2	72	4% 22% 54% 18%
49	R3	60	5% 33% 50% 15%
49	Y3	60	3% 33% 50% 13%
50	R4	71	48% 6% 44% 39% 11%
50	Y4	71	46% 7% 42% 39% 11%
51	R5	60	10% 22% 48% 22% 7%
51	Y5	60	12% 23% 47% 22% 7%
52	R6	54	72% 9% 44% 31% 6% 9%
52	Y6	54	70% 11% 43% 31% 6% 9%

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Mol	Chain	Length	Quality of chain
53	R7	49	8% 37% 55% 8%
53	Y7	49	6% 37% 55% 8%
54	R8	65	25% 23% 42% 28% 6%
54	Y8	65	17% 22% 43% 28% 6%
55	R9	37	100% 54% 43%
55	Y9	37	95% 54% 41% 5%
56	Z6	3	67% 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	RA	3002	-	-	-	X
57	MG	RA	3091	-	-	-	X
57	MG	RA	3221	-	-	-	X
57	MG	RA	3222	-	-	-	X
57	MG	YA	3120	-	-	-	X
57	MG	YA	3164	-	-	-	X
57	MG	YA	3207	-	-	-	X

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 291998 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 23 is a RNA chain called messenger RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
23	QY	15	323	144	58	106	15	0	0	0
23	XY	15	323	144	58	106	15	0	0	0

- Molecule 24 is a RNA chain called A-site ASL Pro.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
24	QX	8	170	76	31	55	8	0	0	0
24	XX	8	170	76	31	55	8	0	0	0

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 33 is a protein called 50S ribosomal protein L11.

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

- Molecule 34 is a protein called 50S ribosomal protein L13.

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

- Molecule 35 is a protein called 50S ribosomal protein L14.

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

- Molecule 36 is a protein called 50S ribosomal protein L15.

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

- Molecule 37 is a protein called 50S ribosomal protein L16.

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

- Molecule 38 is a protein called 50S ribosomal protein L17.

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

- Molecule 39 is a protein called 50S ribosomal protein L18.

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

- Molecule 40 is a protein called 50S ribosomal protein L19.

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

- Molecule 41 is a protein called 50S ribosomal protein L20.

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

- Molecule 42 is a protein called 50S ribosomal protein L21.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L22.

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

- Molecule 44 is a protein called 50S ribosomal protein L23.

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

- Molecule 45 is a protein called 50S ribosomal protein L24.

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

- Molecule 46 is a protein called 50S ribosomal protein L25.

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

- Molecule 47 is a protein called 50S ribosomal protein L27.

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

- Molecule 48 is a protein called 50S ribosomal protein L28.

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

- Molecule 49 is a protein called 50S ribosomal protein L29.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Mg		
57	QA	69	69	69	0	0
57	QF	1	1	1	0	0
57	QH	1	1	1	0	0
57	QM	1	1	1	0	0
57	QV	1	1	1	0	0

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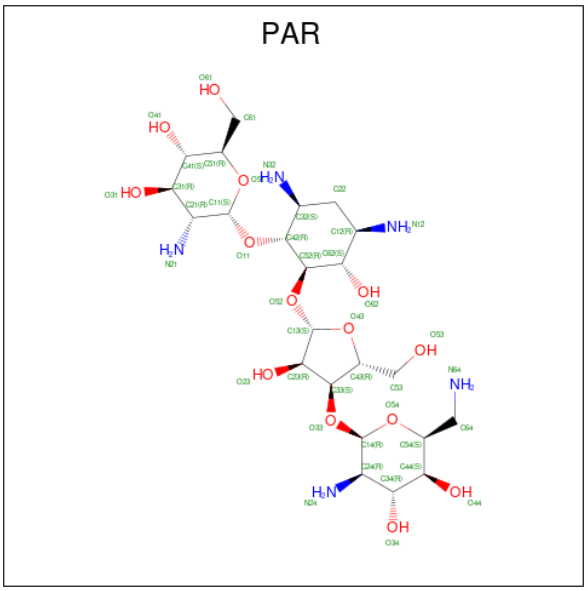
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	RA	240	Total 240	Mg 240	0	0
57	RB	2	Total 2	Mg 2	0	0
57	RD	1	Total 1	Mg 1	0	0
57	RE	2	Total 2	Mg 2	0	0
57	RF	1	Total 1	Mg 1	0	0
57	RP	1	Total 1	Mg 1	0	0
57	RR	2	Total 2	Mg 2	0	0
57	R0	1	Total 1	Mg 1	0	0
57	R5	1	Total 1	Mg 1	0	0
57	XA	74	Total 74	Mg 74	0	0
57	XV	2	Total 2	Mg 2	0	0
57	XX	1	Total 1	Mg 1	0	0
57	YA	265	Total 265	Mg 265	0	0
57	YB	3	Total 3	Mg 3	0	0
57	YE	2	Total 2	Mg 2	0	0
57	YP	1	Total 1	Mg 1	0	0
57	YQ	1	Total 1	Mg 1	0	0
57	Y0	1	Total 1	Mg 1	0	0
57	Y5	1	Total 1	Mg 1	0	0
57	Y7	1	Total 1	Mg 1	0	0

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



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

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

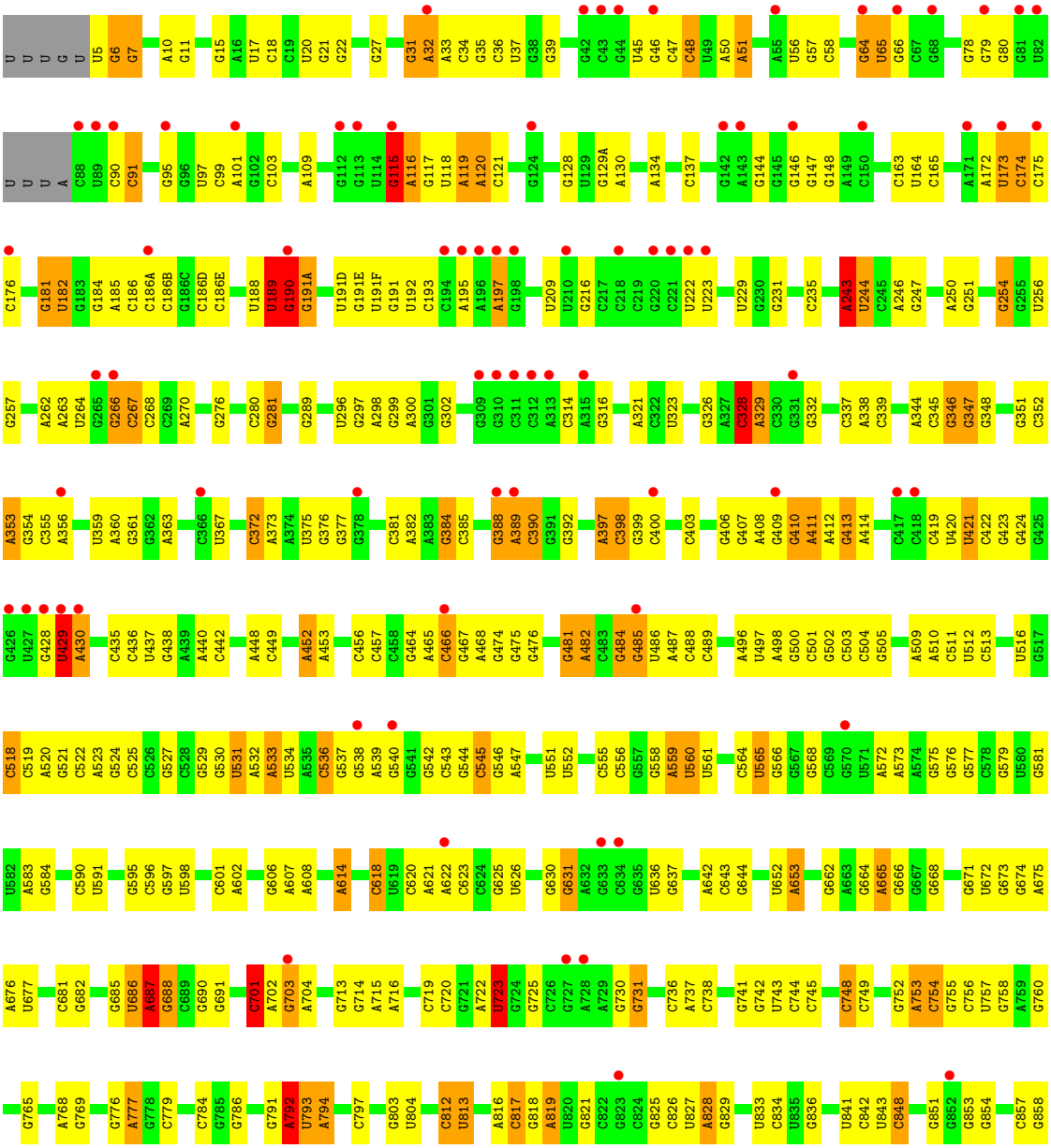
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
			Total	Zn		
59	QD	1	1	1	0	0
			Total	Zn		
59	QN	1	1	1	0	0
			Total	Zn		
59	XD	1	1	1	0	0
			Total	Zn		
59	XN	1	1	1	0	0

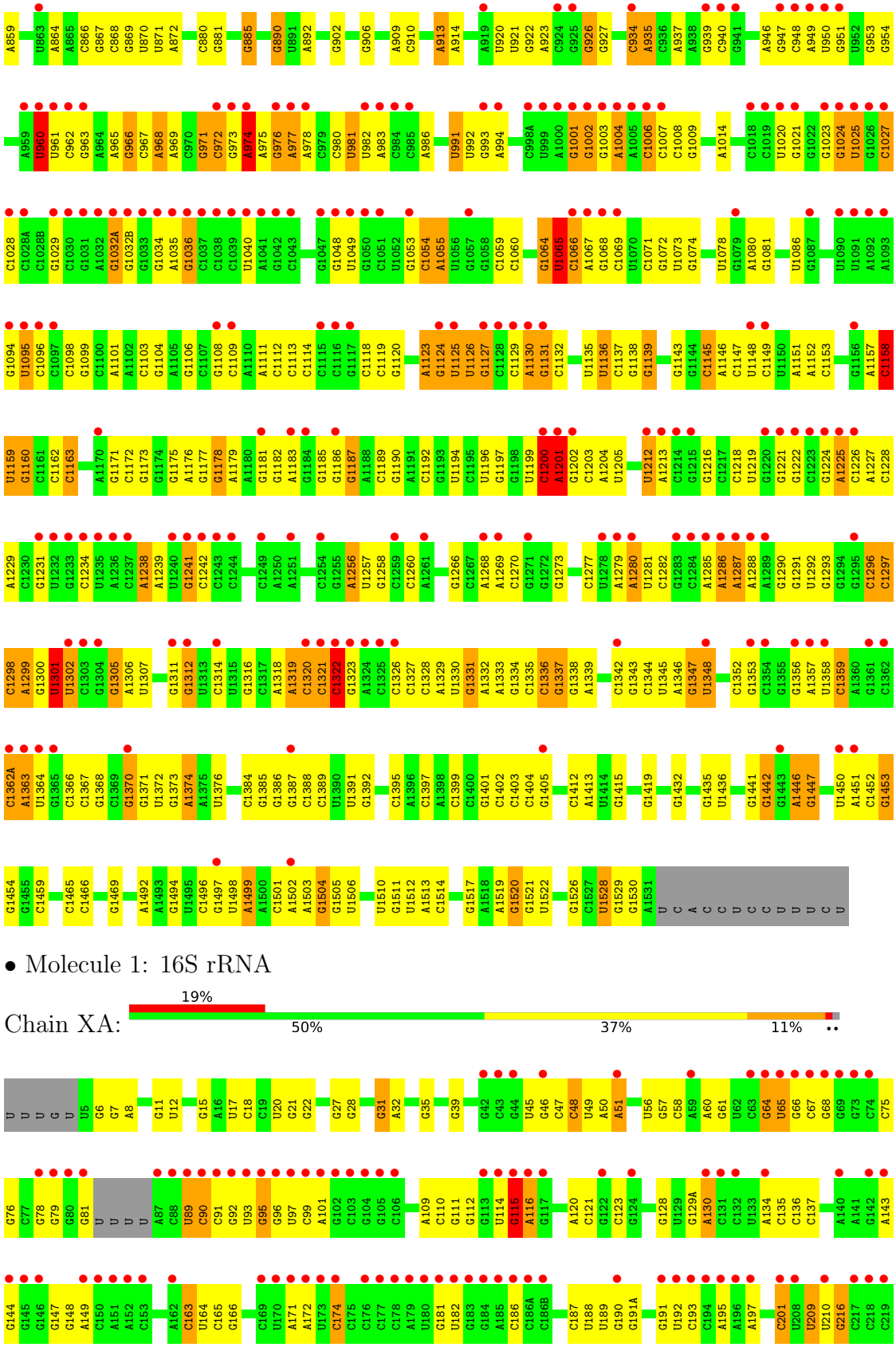
3 Residue-property plots (i)

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

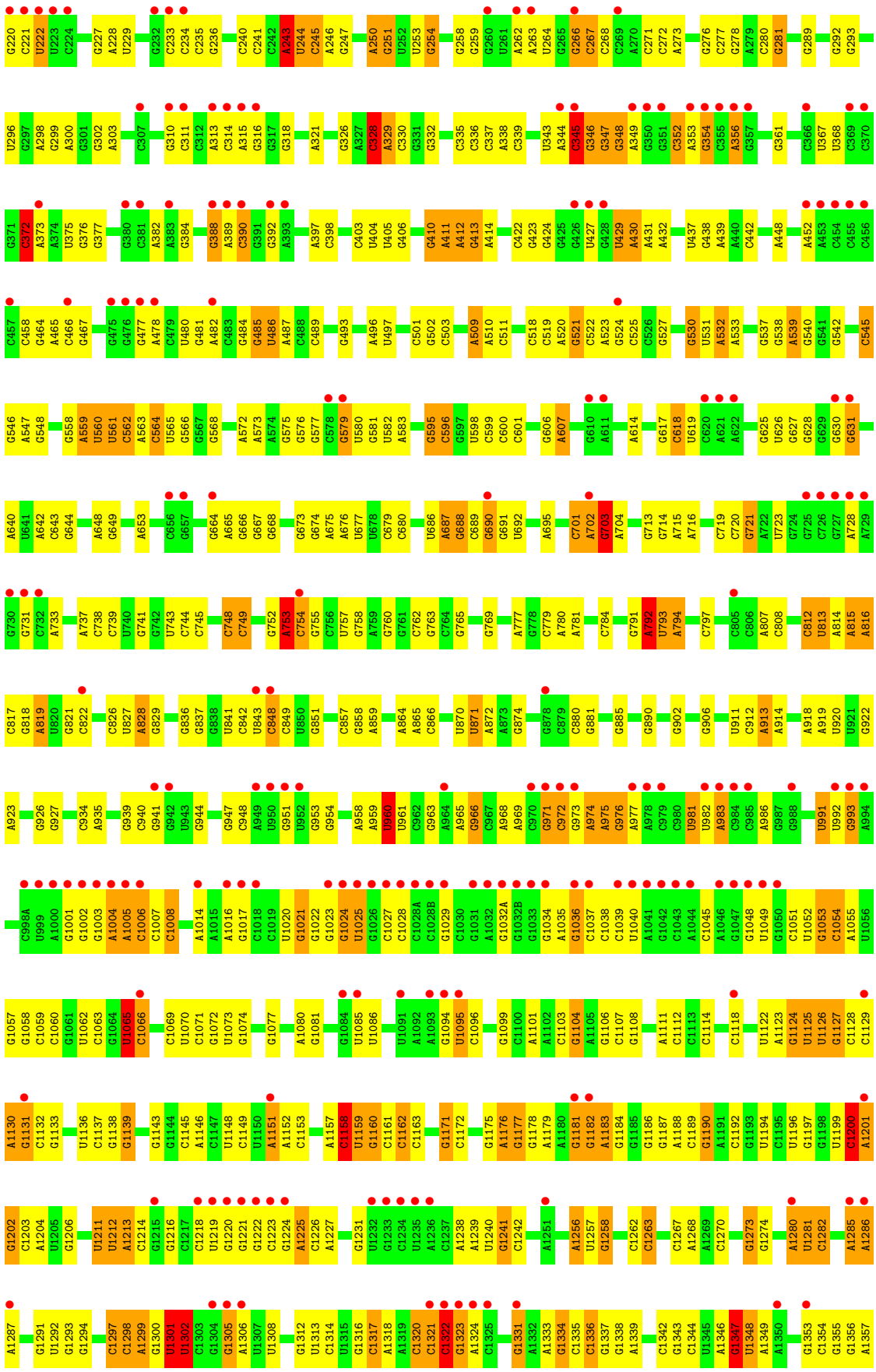
Chain QA: 17% 50% 37% 10%





• Molecule 1: 16S rRNA

Chain XA:


G220 C221 U222 U223 C224 G227 A228 U229 G232 C233 C234 C235 G236 C240 C241 C242 A243 U244 C245 A246 G247 A250 G251 U252 U253 G254 G258 G259 G260 U261 A262 A263 U264 G265 G266 C267 C268 C269 A270 C271 C272 A273 G276 C277 G278 A279 C280 G281 G289 G292 G293
U296 G297 A298 G299 A300 G301 G302 A303 C307 G310 C311 C312 A313 G314 A315 G316 G317 G318 A321 G326 A327 G328 A329 G330 G331 G332 C335 C336 C337 A338 G339 U343 A344 G345 G346 G347 G348 A349 G350 G351 C352 A353 G354 C355 A356 G357 G361 C366 U367 U368 G369 C370
G371 G372 A373 A374 U375 G376 G377 G380 C381 A382 A383 G384 G388 A389 C390 G391 G392 A393 A397 C398 C403 U404 U405 G406 G410 A411 A412 G413 A414 C422 G423 G424 G425 G426 U427 G428 U429 A430 A431 A432 U437 G438 A439 A440 C442 A448 A452 A453 C454 C455 C456
C457 C458 G464 A465 C466 G467 G475 G476 G477 A478 C479 U480 G481 A482 C483 G484 G485 U486 A487 C488 G489 G493 A496 U497 C501 G502 C503 A509 A510 C511 C518 C519 A520 G521 C522 A523 G524 C525 C526 G527 G530 U531 A532 A533 G537 G538 A539 G540 G541 G542 C545
G546 A547 G548 G558 A559 U560 U561 C562 A563 C564 U565 G566 G567 G568 A572 A573 A574 G575 G576 G577 C578 G579 U580 G581 U582 A583 G595 C596 G597 U598 C599 C600 C601 G606 A607 G610 A611 A614 G617 C618 U619 C620 A621 A622 G625 U626 G627 G628 G629 G630 G631
A640 U641 A642 G643 G644 A648 G649 A653 C656 G657 G664 A665 G666 G667 G668 G673 G674 A675 A676 U677 U678 C679 C680 U686 A687 G688 C689 G690 G691 U692 A695 C701 A702 G703 A704 G713 G714 A715 A716 C719 C720 G721 A722 U723 G724 G725 G726 G727 A728 A729
G730 G731 C732 A733 A737 C738 C739 U740 G741 G742 U743 C744 C745 C748 C749 G752 A753 C754 G755 C756 U757 G758 A759 G760 G761 C762 G763 C764 G765 G769 A777 G778 C779 A780 A781 C784 G791 A792 U793 A794 C797 C805 C806 A807 C808 C812 U813 A814 A815 A816
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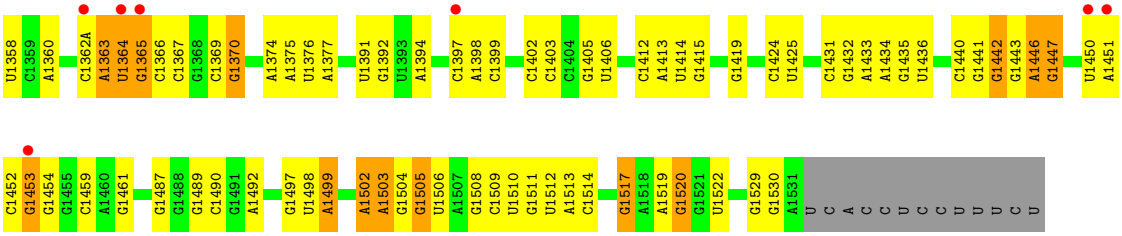
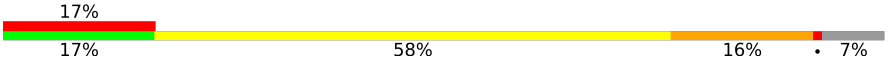
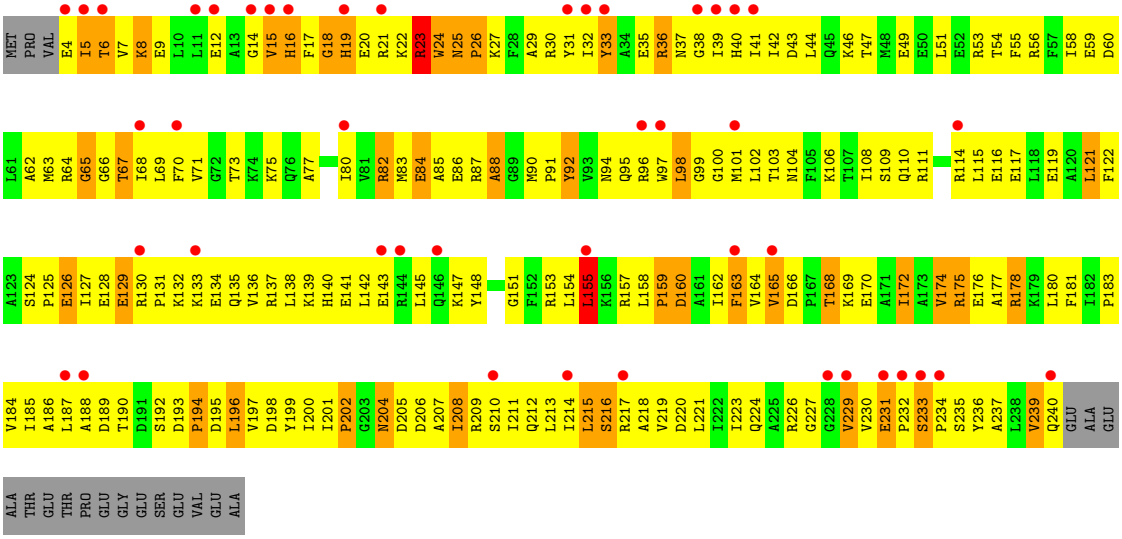
C998A U999 A1000 G1001 G1002 G1003 A1004 A1005 C1006 C1007 C1008 A1014 A1015 A1016 G1017 C1018 C1019 U1020 G1021 G1022 G1023 G1024 U1025 G1026 C1027 C1028 C1028A C1028B G1029 C1030 C1031 A1032 G1032A G1032B G1033 G1034 A1035 G1036 C1037 C1038 C1039 U1040 A1041 G1042 C1043 A1044 C1045 A1046 G1047 G1048 U1049 G1050 C1051 U1052 G1053 C1054 A1055 U1056
G1057 G1058 C1059 C1060 G1061 U1062 C1063 G1064 U1065 C1066 C1069 U1070 C1071 G1072 U1073 G1074 G1077 A1080 G1081 G1084 U1085 U1086 U1091 A1092 A1093 G1094 U1095 C1096 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 A1111 C1112 C1113 C1114 C1118 U1122 A1123 G1124 U1125 U1126 G1127 C1128 C1129
A1130 G1131 C1132 G1133 U1136 C1137 G1138 G1139 G1143 G1144 C1145 A1146 C1147 U1148 C1149 U1150 A1151 A1152 C1153 A1157 C1158 U1159 G1160 C1161 C1162 C1163 G1171 C1172 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182 A1183 G1184 G1185 G1186 G1187 A1188 C1189 G1190 A1191 C1192 G1193 U1194 C1195 U1196 G1197 G1198 U1199 C1200 A1201
G1202 C1203 A1204 U1205 G1206 U1211 U1212 A1213 C1214 G1215 G1216 C1217 C1218 U1219 G1220 G1221 G1222 C1223 G1224 A1225 C1226 A1227 G1231 U1232 G1233 C1234 U1235 A1236 C1237 A1238 A1239 U1240 G1241 C1242 A1251 A1256 U1257 G1258 C1262 C1263 C1267 A1268 A1269 C1270 G1273 G1274 A1280 U1281 C1282 A1285 A1286
A1287 G1291 U1292 G1293 G1294 C1297 C1298 A1299 G1300 U1301 U1302 C1303 C1304 G1305 A1306 U1307 U1308 G1312 U1313 C1314 U1315 G1316 C1317 A1318 A1319 C1320 C1321 C1322 G1323 A1324 C1325 G1331 A1332 A1333 G1334 C1335 C1336 G1337 G1338 A1339 C1342 G1343 C1344 U1345 A1346 G1347 U1348 A1349 A1350 G1353 C1354 G1355 G1356 A1357



- Molecule 2: 30S ribosomal protein S2

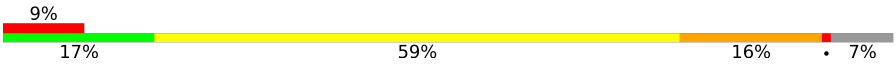
Chain QB:

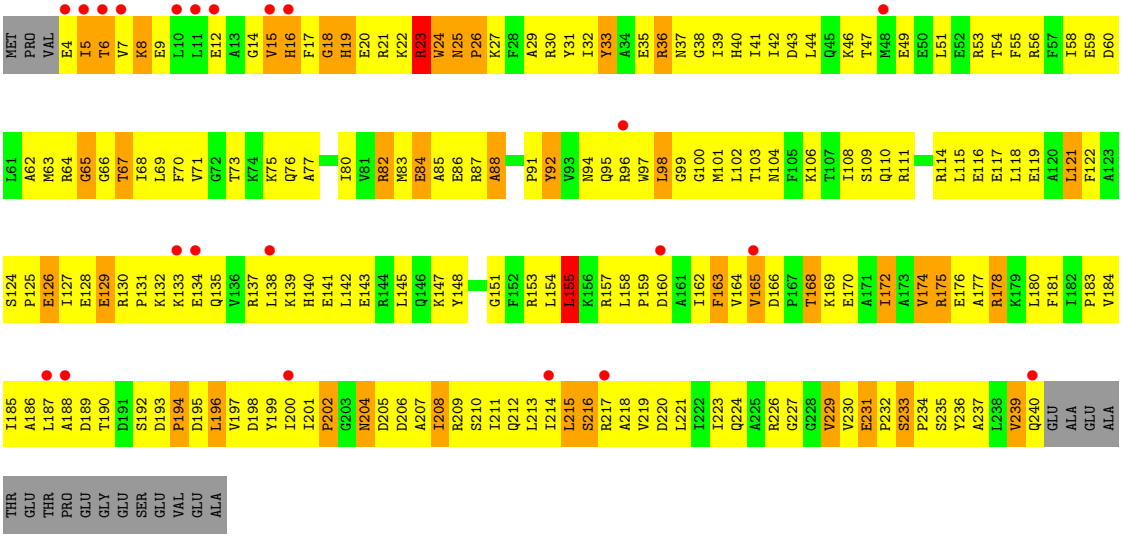




- Molecule 2: 30S ribosomal protein S2

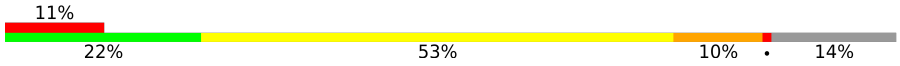
Chain XB:

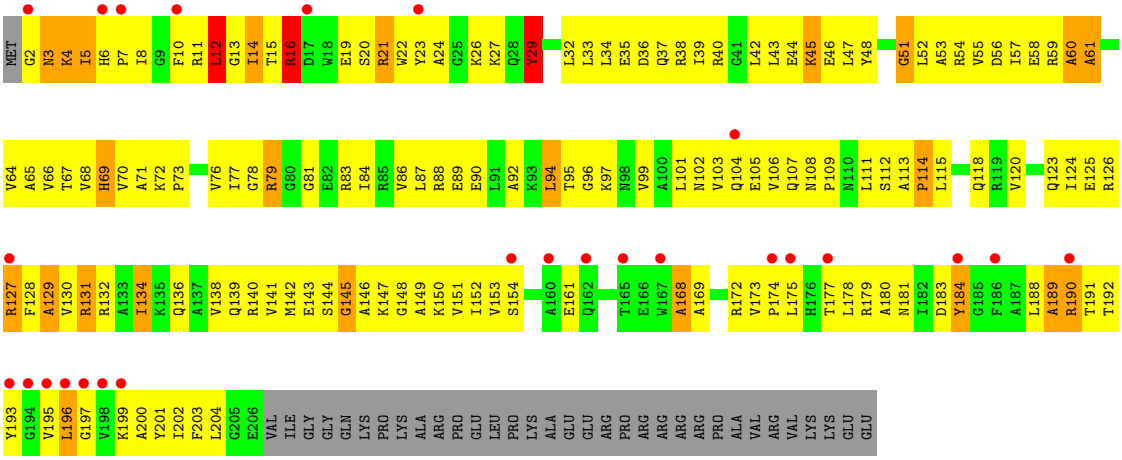




- Molecule 3: 30S ribosomal protein S3

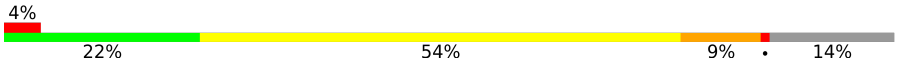
Chain QC:

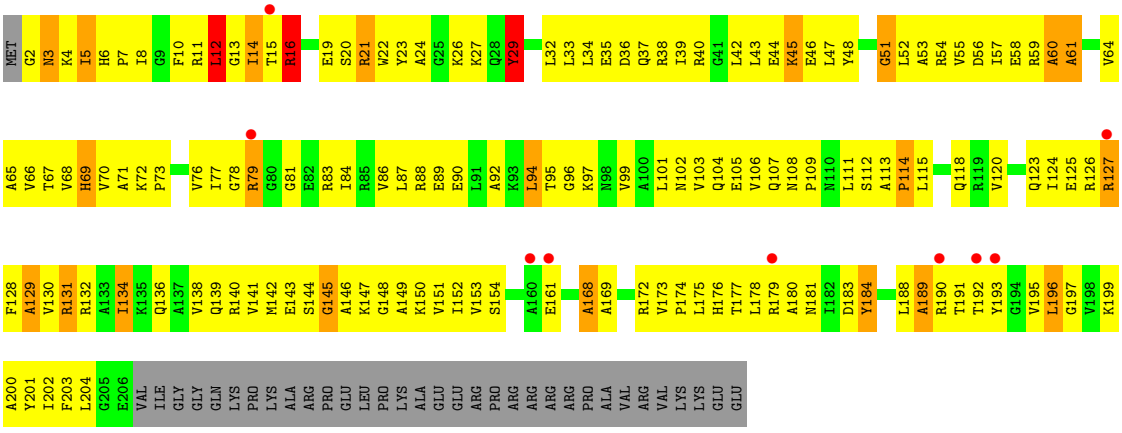




- Molecule 3: 30S ribosomal protein S3

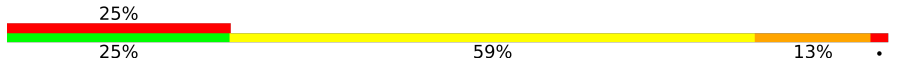
Chain XC:

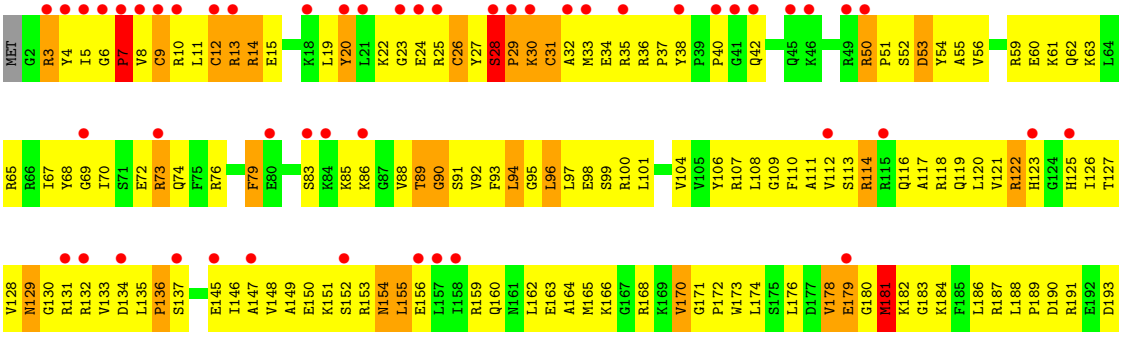


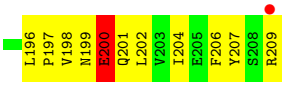


- Molecule 4: 30S ribosomal protein S4

Chain QD:

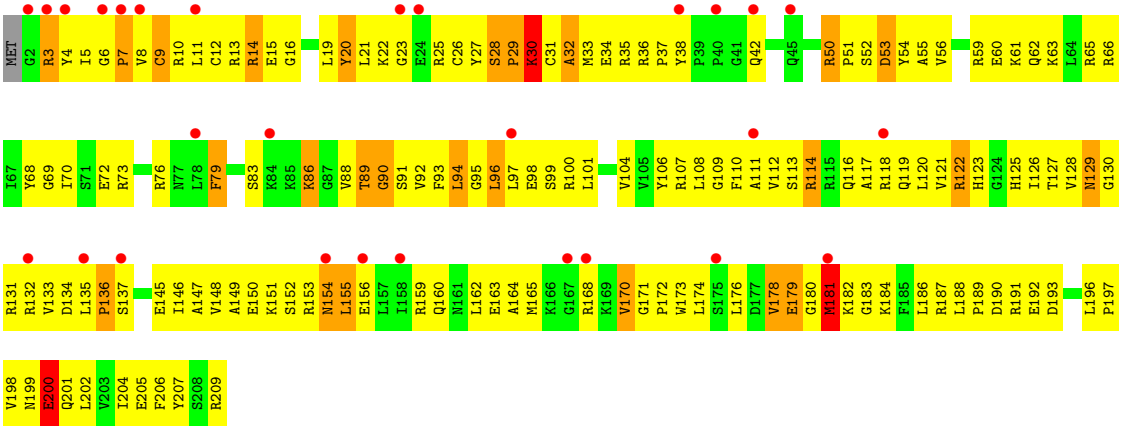






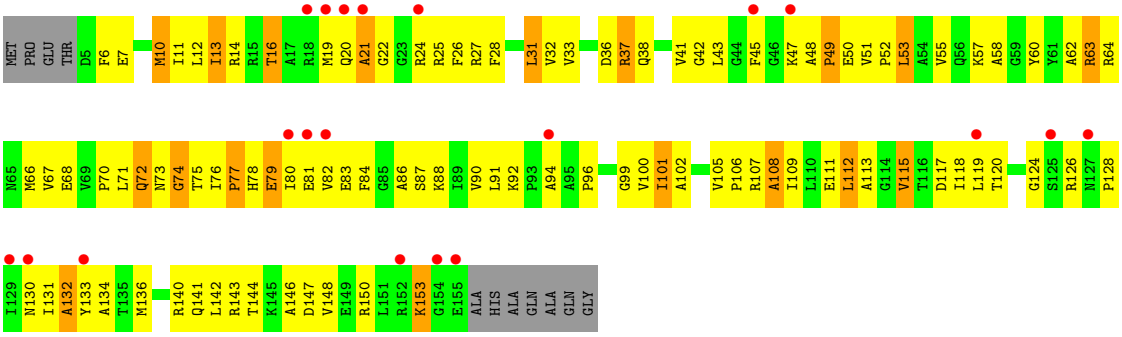
• Molecule 4: 30S ribosomal protein S4

Chain XD:



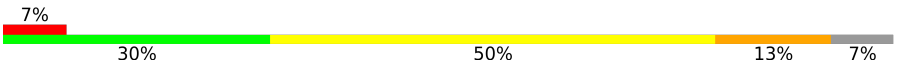
• Molecule 5: 30S ribosomal protein S5

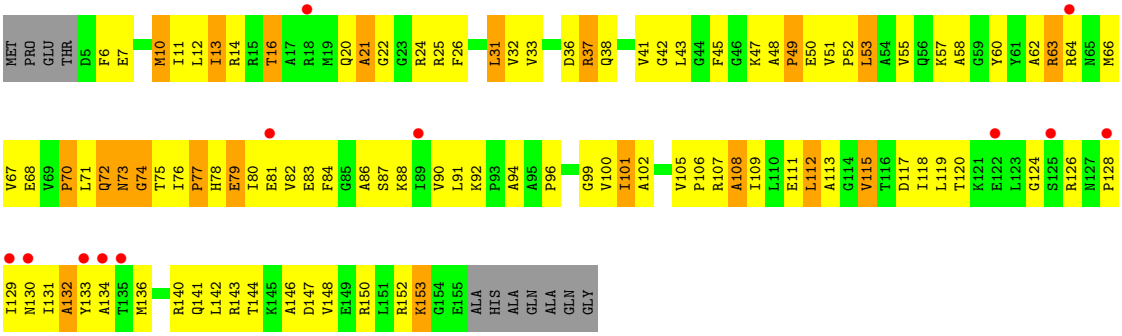
Chain QE:



• Molecule 5: 30S ribosomal protein S5

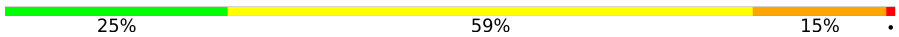
Chain XE:





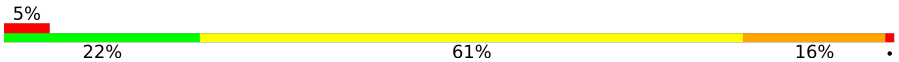
• Molecule 6: 30S ribosomal protein S6

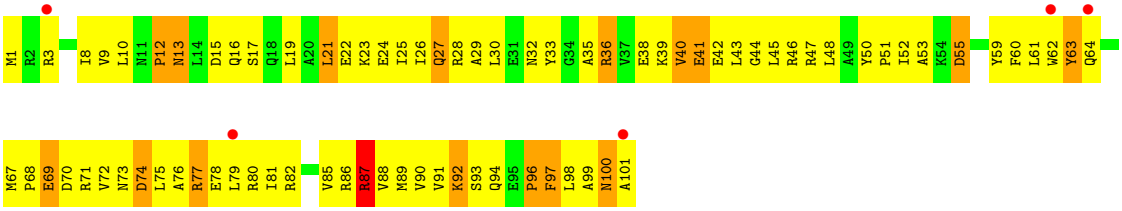
Chain QF:



• Molecule 6: 30S ribosomal protein S6

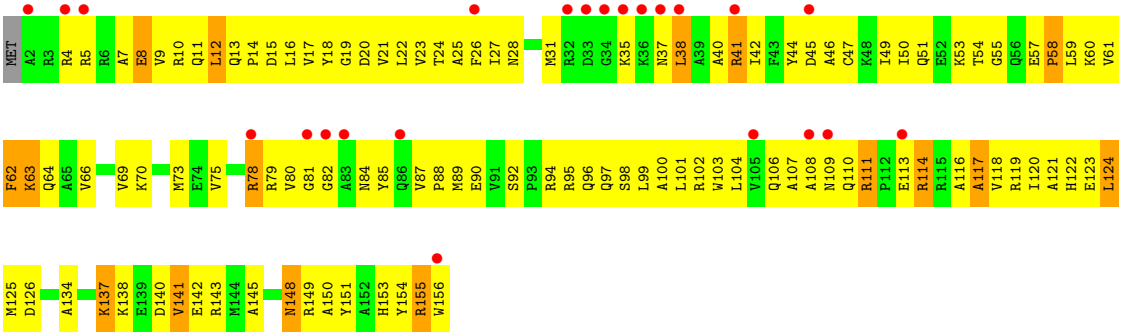
Chain XF:





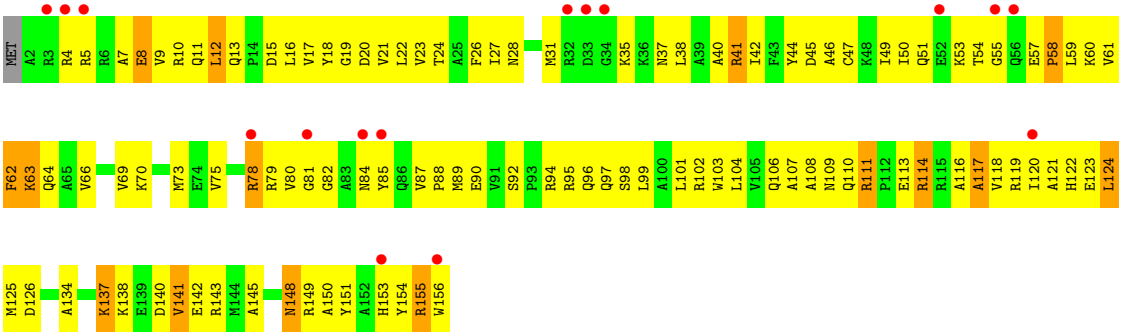
• Molecule 7: 30S ribosomal protein S7

Chain QG:



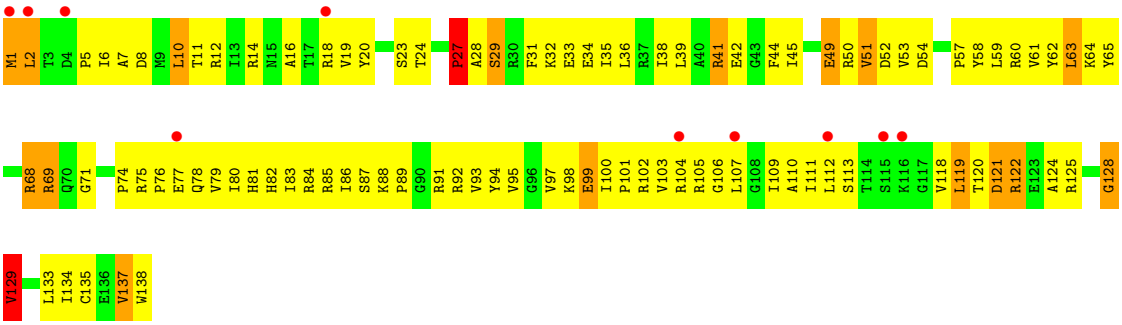
• Molecule 7: 30S ribosomal protein S7

Chain XG:



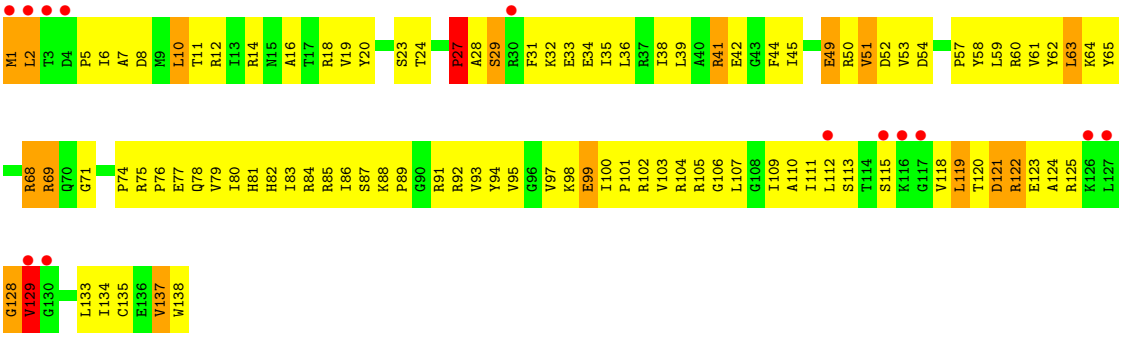
• Molecule 8: 30S ribosomal protein S8

Chain QH:



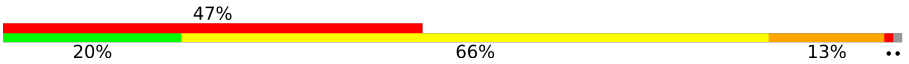
• Molecule 8: 30S ribosomal protein S8

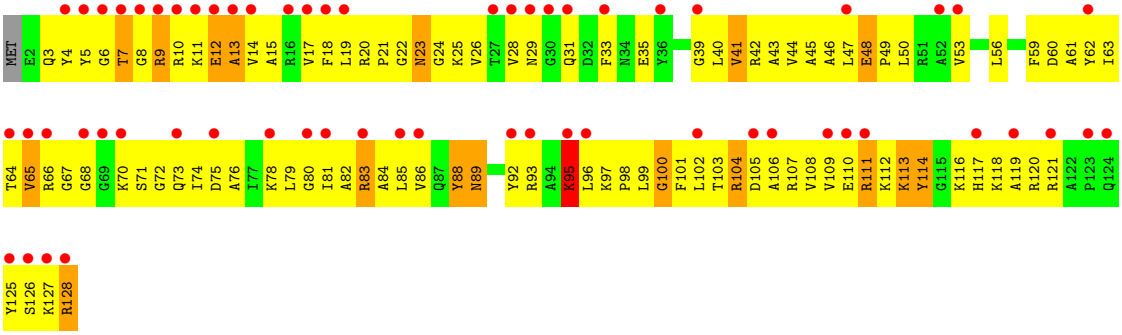
Chain XH:



• Molecule 9: 30S ribosomal protein S9

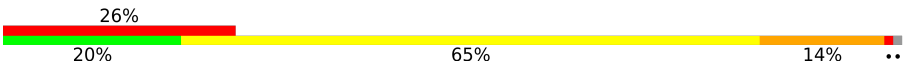
Chain QI:

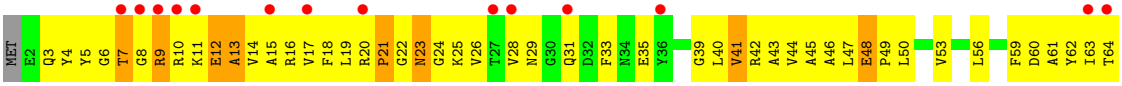


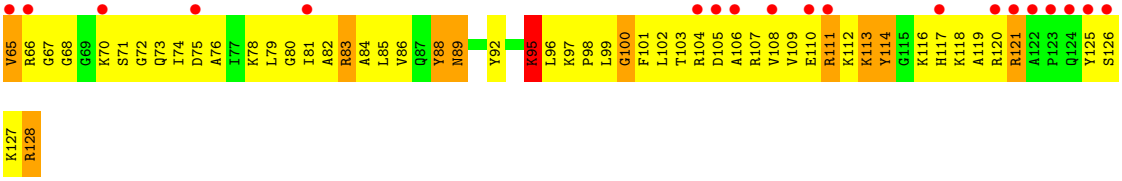


• Molecule 9: 30S ribosomal protein S9

Chain XI:

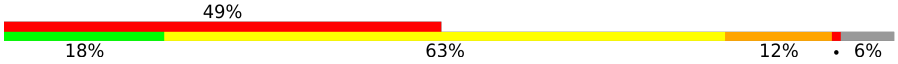


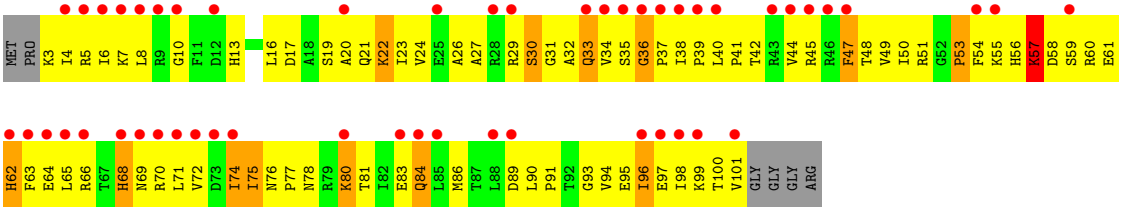




• Molecule 10: 30S ribosomal protein S10

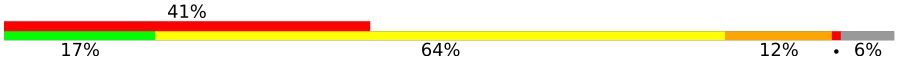
Chain QJ:

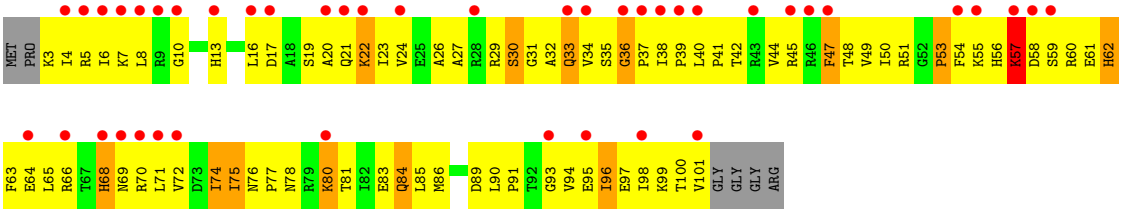




• Molecule 10: 30S ribosomal protein S10

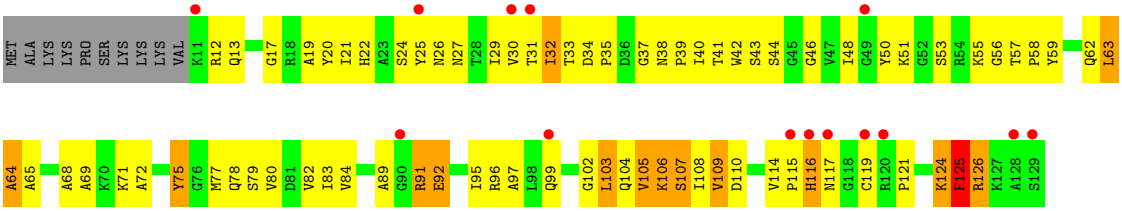
Chain XJ:





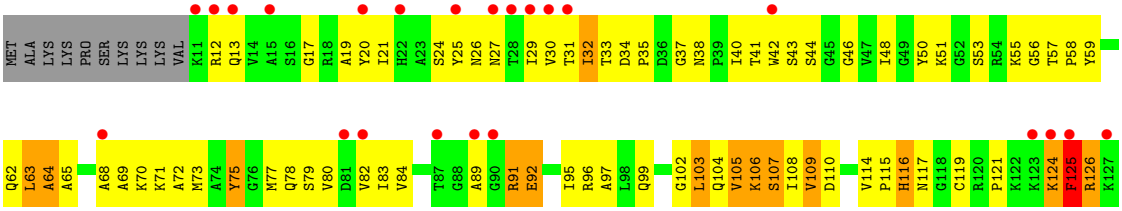
• Molecule 11: 30S ribosomal protein S11

Chain QK:



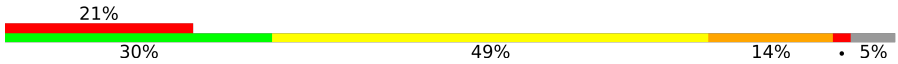
• Molecule 11: 30S ribosomal protein S11

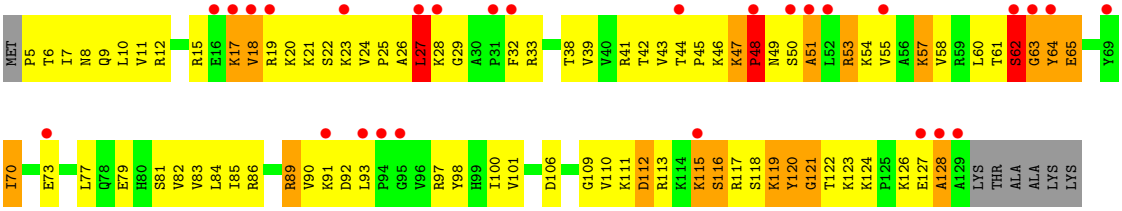
Chain XK:



• Molecule 12: 30S ribosomal protein S12

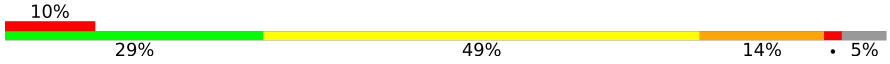
Chain QL:

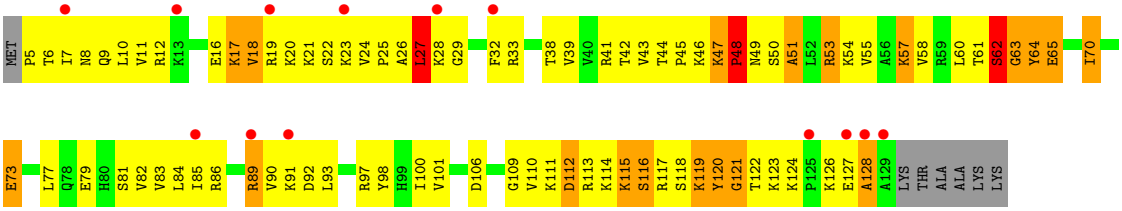




• Molecule 12: 30S ribosomal protein S12

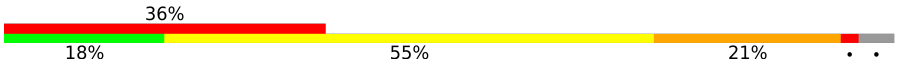
Chain XL:

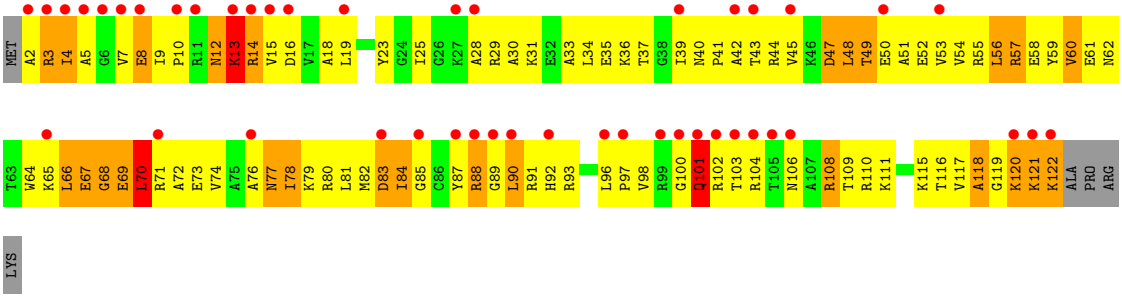




• Molecule 13: 30S ribosomal protein S13

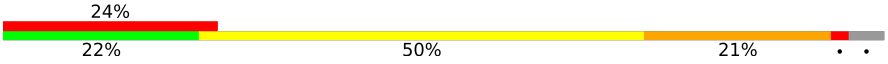
Chain QM:

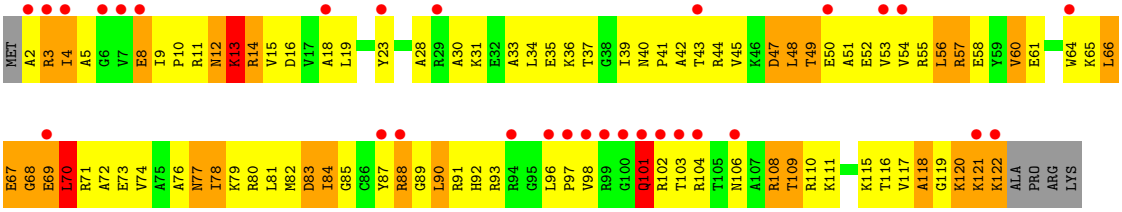




• Molecule 13: 30S ribosomal protein S13

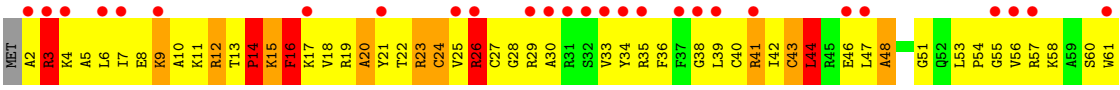
Chain XM:





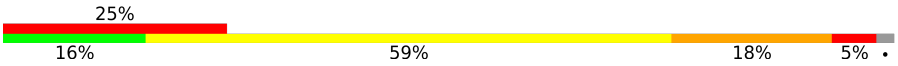
- Molecule 14: 30S ribosomal protein S14

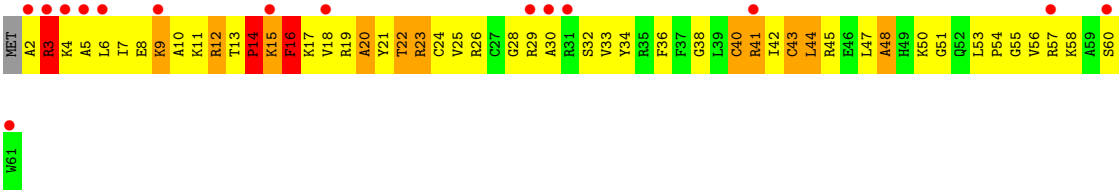
Chain QN:



- Molecule 14: 30S ribosomal protein S14

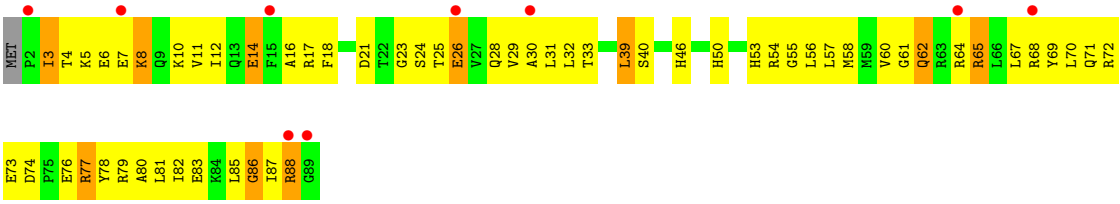
Chain XN:





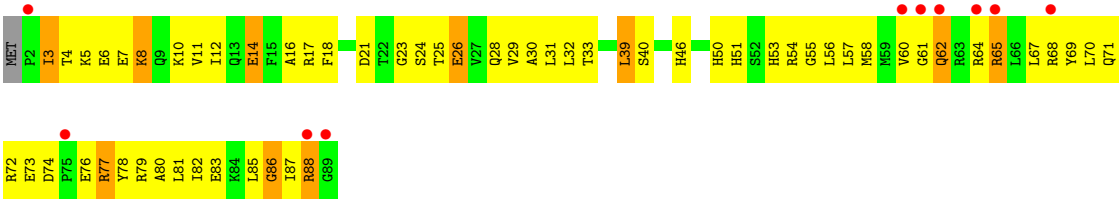
- Molecule 15: 30S ribosomal protein S15

Chain QO:



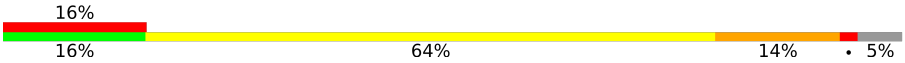
- Molecule 15: 30S ribosomal protein S15

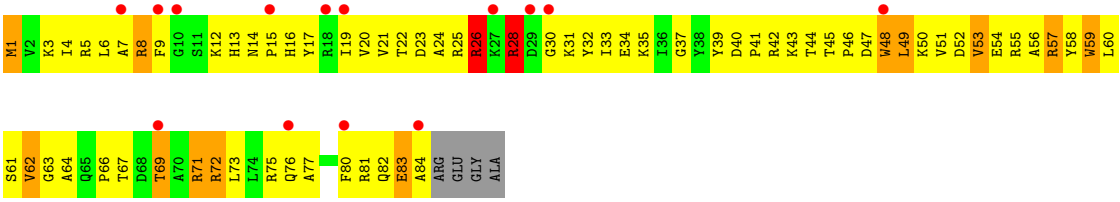
Chain XO:



- Molecule 16: 30S ribosomal protein S16

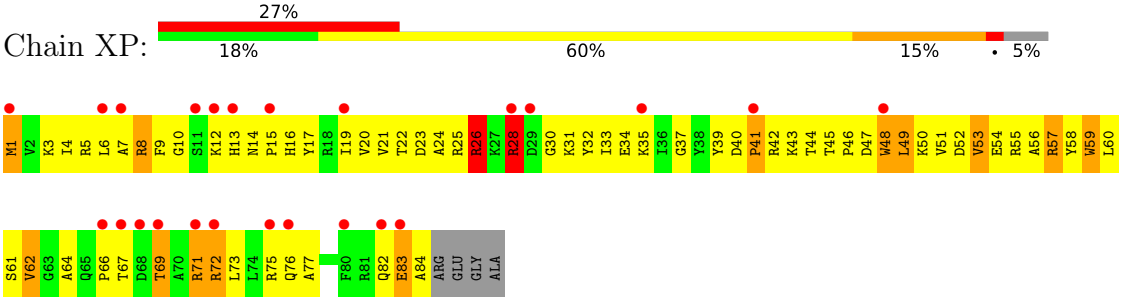
Chain QP:





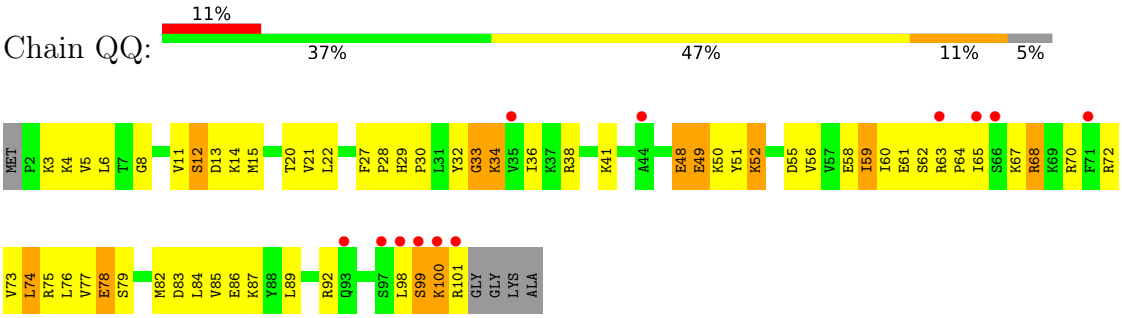
- Molecule 16: 30S ribosomal protein S16

Chain XP:



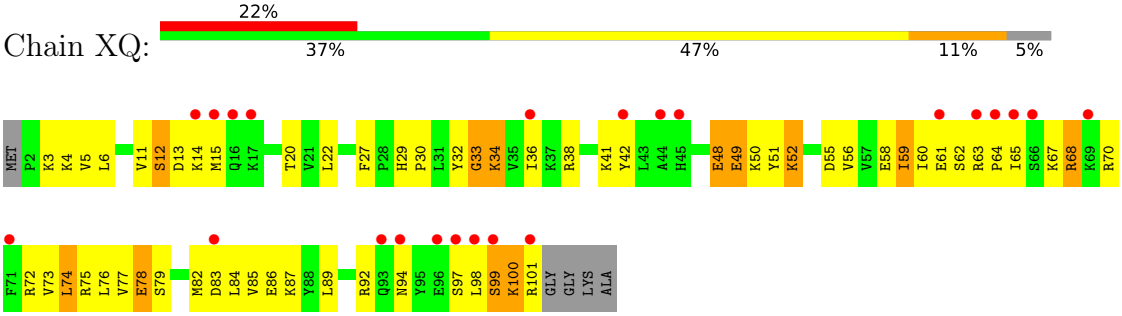
- Molecule 17: 30S ribosomal protein S17

Chain QQ:



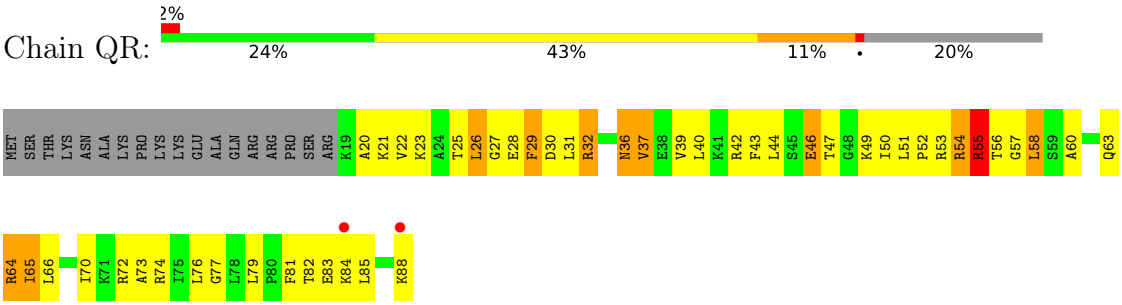
- Molecule 17: 30S ribosomal protein S17

Chain XQ:



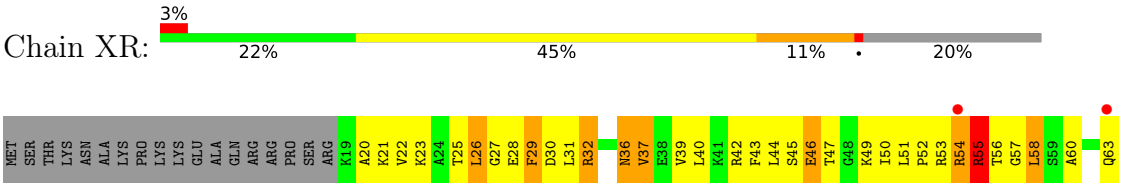
- Molecule 18: 30S ribosomal protein S18

Chain QR:



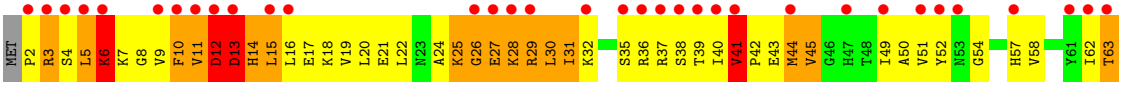
- Molecule 18: 30S ribosomal protein S18

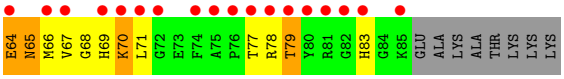
Chain XR:



• Molecule 19: 30S ribosomal protein S19

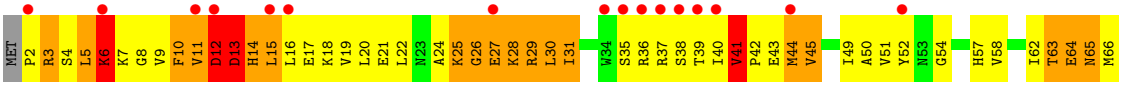
Chain QS:

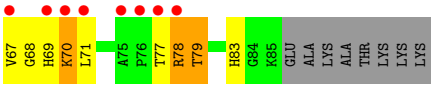




• Molecule 19: 30S ribosomal protein S19

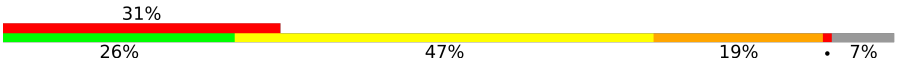
Chain XS:

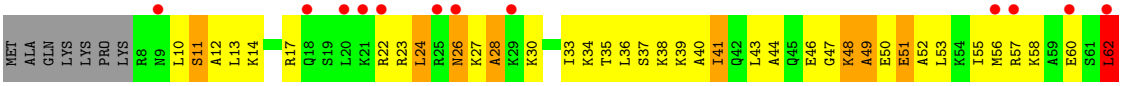


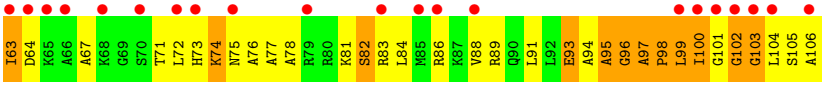


• Molecule 20: 30S ribosomal protein S20

Chain QT:

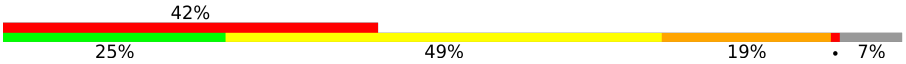


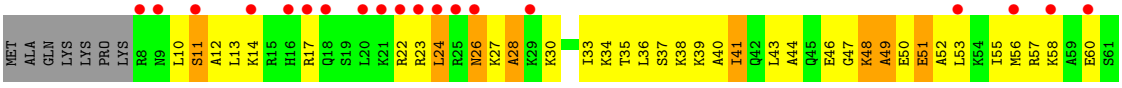


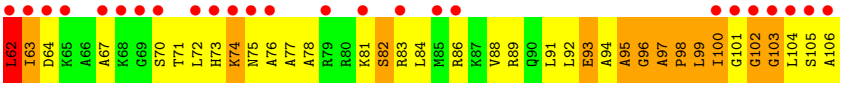


• Molecule 20: 30S ribosomal protein S20

Chain XT:

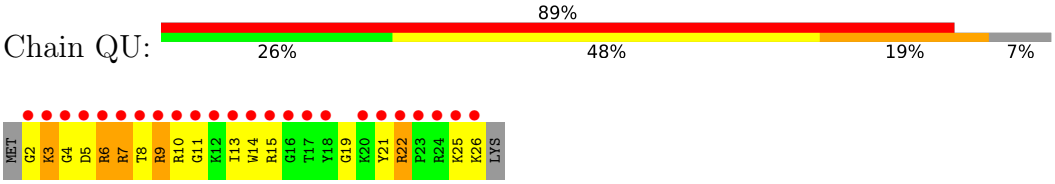






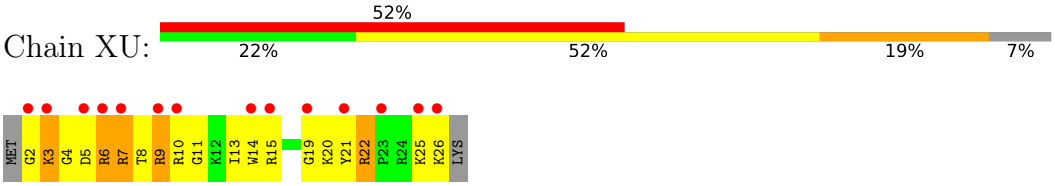
• Molecule 21: 30S ribosomal protein S21

Chain QU:



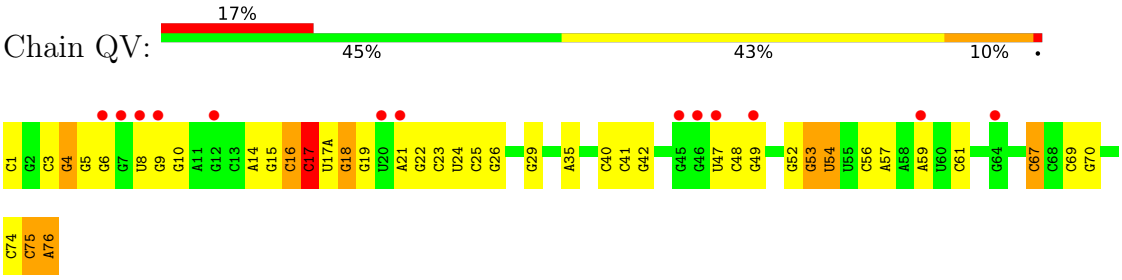
• Molecule 21: 30S ribosomal protein S21

Chain XU:



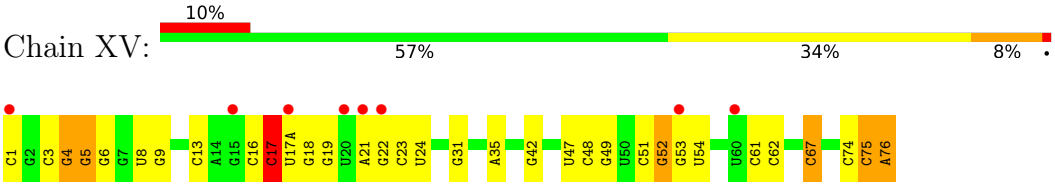
• Molecule 22: P-site tRNA fMet

Chain QV:



• Molecule 22: P-site tRNA fMet

Chain XV:

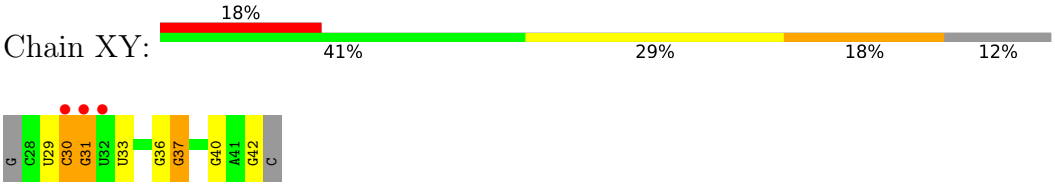


• Molecule 23: messenger RNA

Chain QY:

• Molecule 23: messenger RNA

Chain XY:



• Molecule 24: A-site ASL Pro

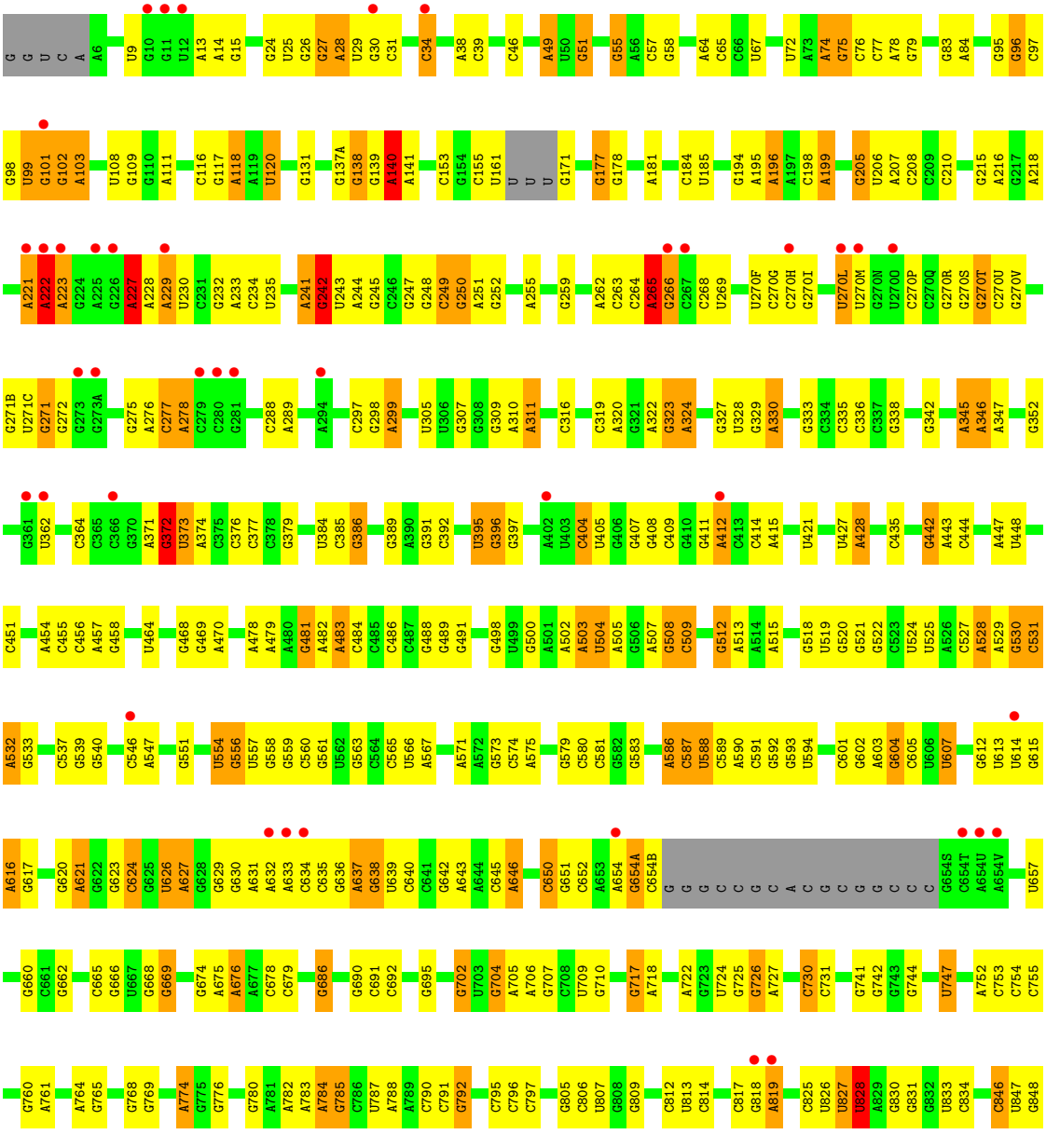
Chain QX:

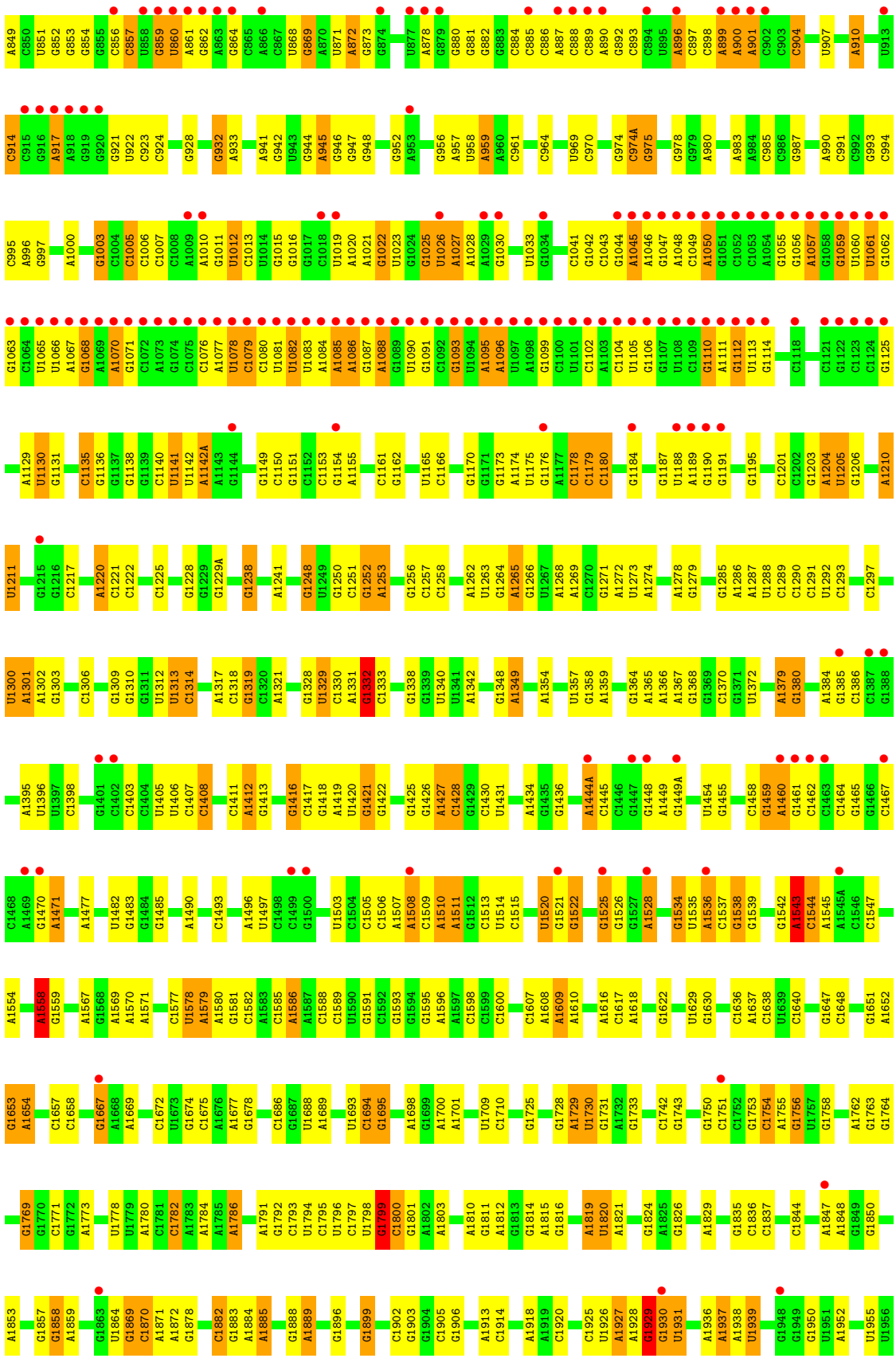
• Molecule 24: A-site ASL Pro

Chain XX:

• Molecule 25: 23S rRNA

Chain RA:

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C914 C915 G916 A917 A918 G919 G920 G921 U922 C923 C924 G928 G932 A933 A941 G942 U943 G944 A945 G946 G947 G948 G952 A953 G956 A957 U958 A959 A960 C961 C964 U969 C970 G974 C974A G975 G978 G979 A980 A983 A984 C985 C986 G987 A990 C991 C992 G993 C994
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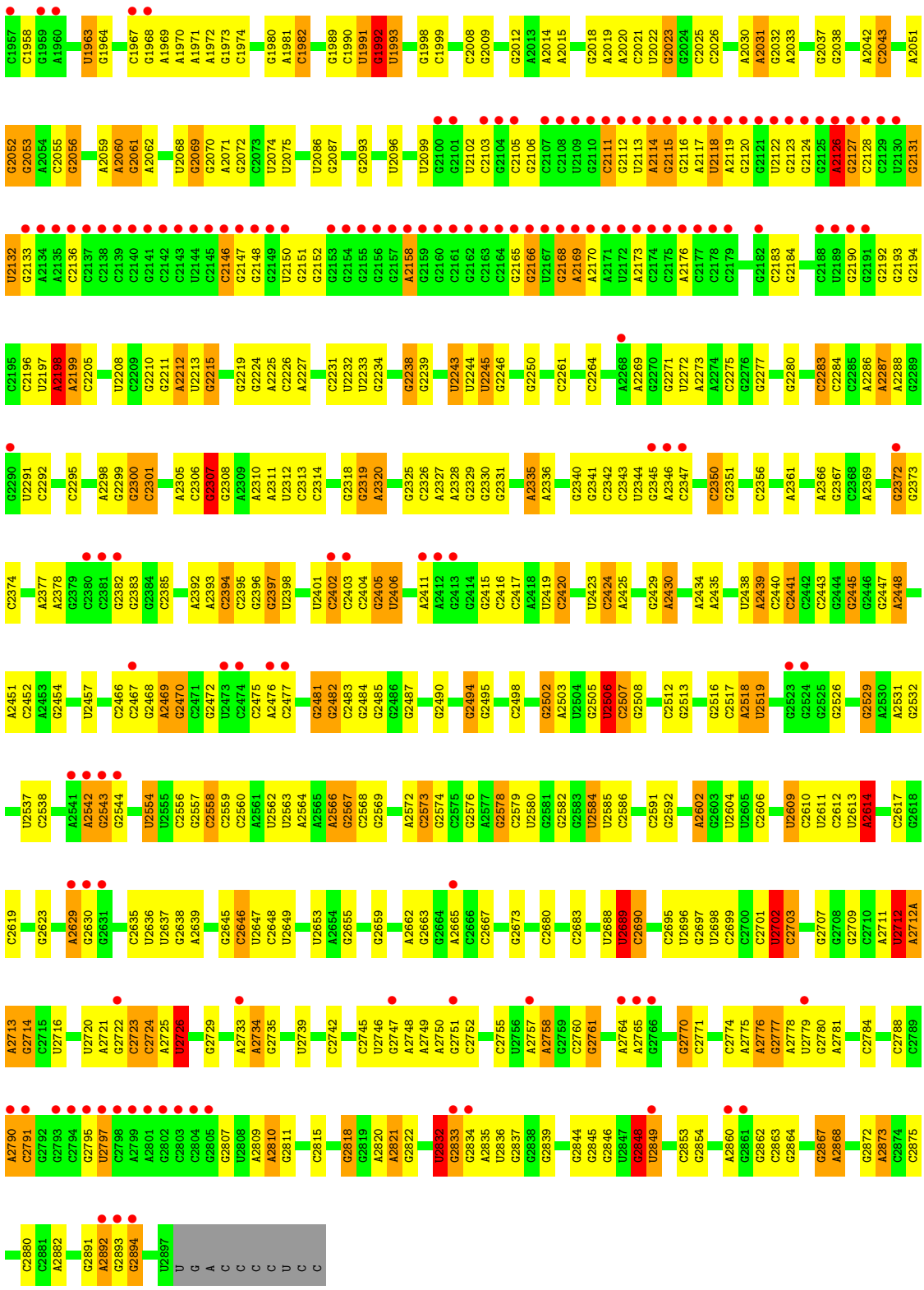

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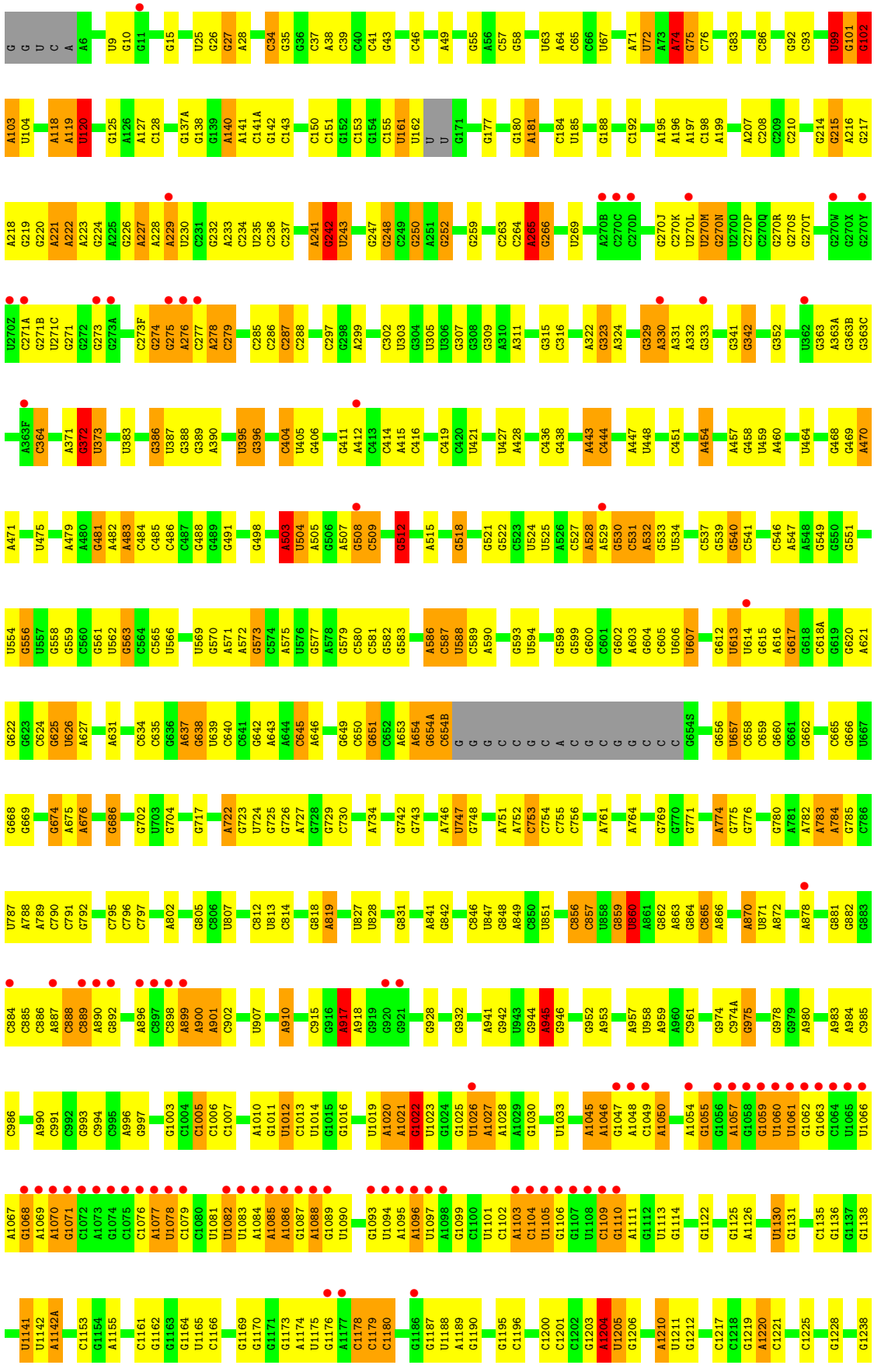
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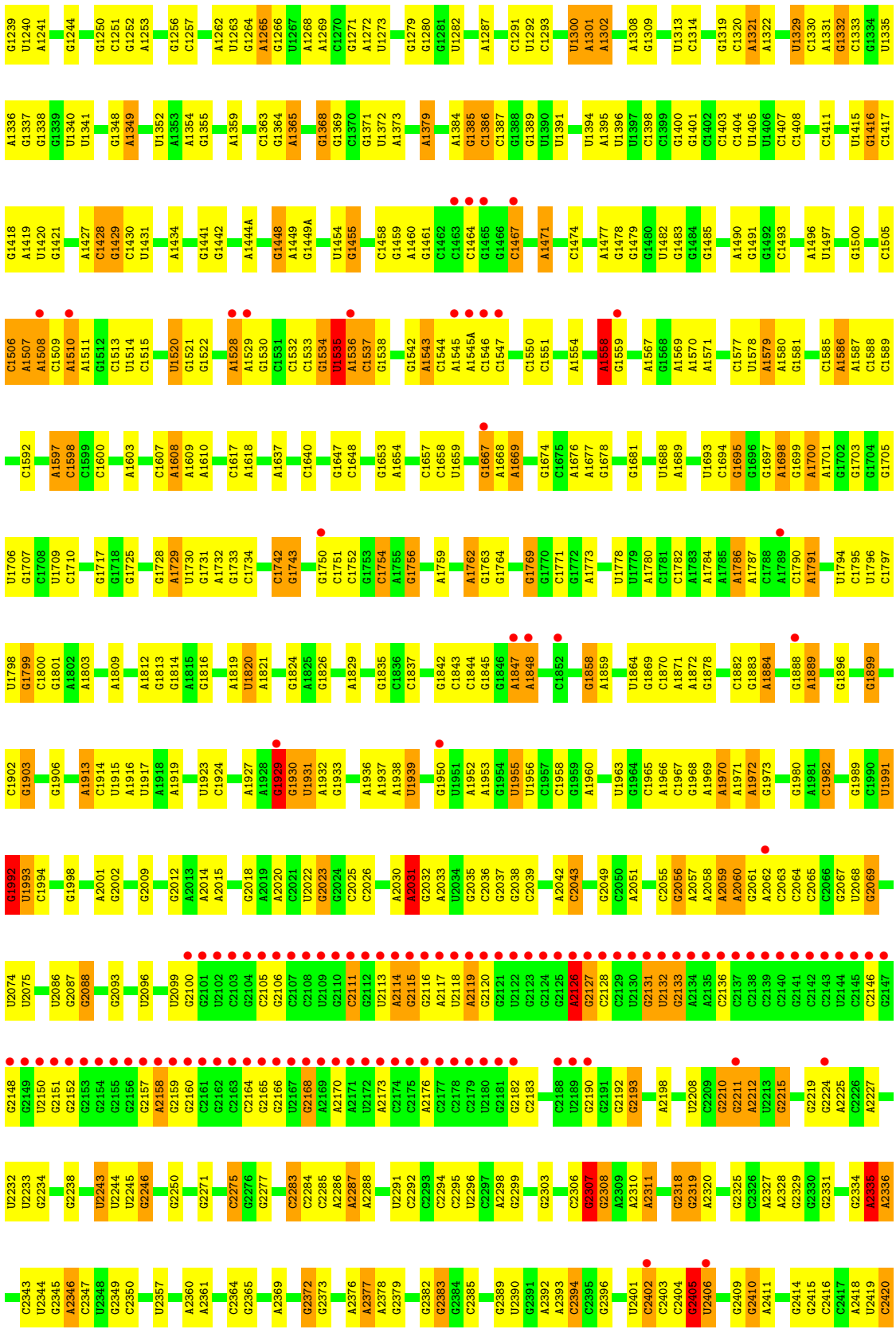
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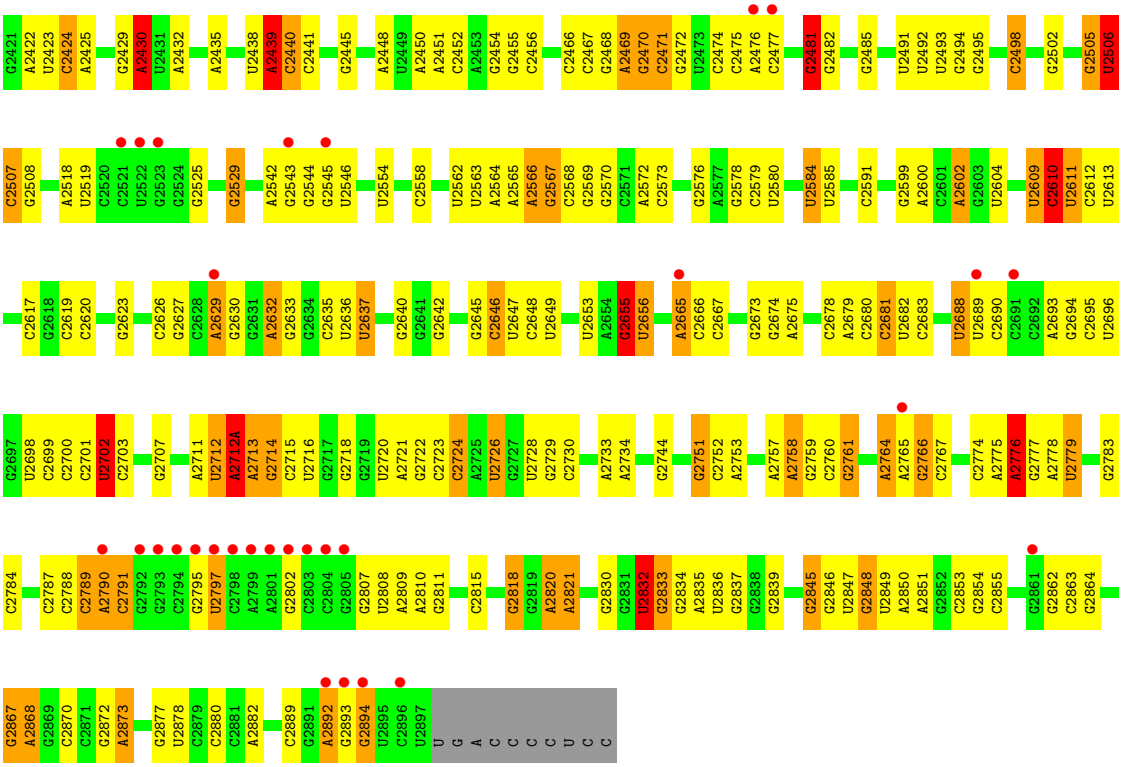

- Molecule 26: 5S rRNA

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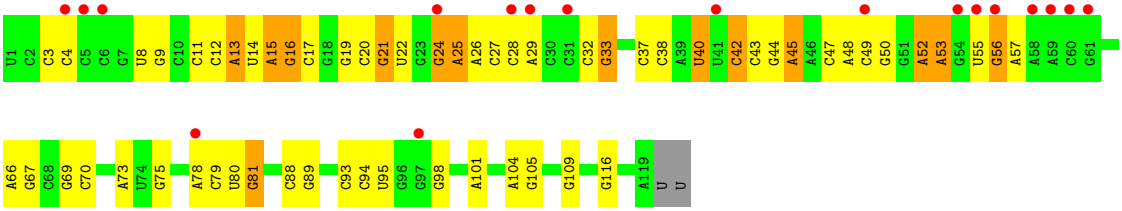

- Molecule 26: 5S rRNA

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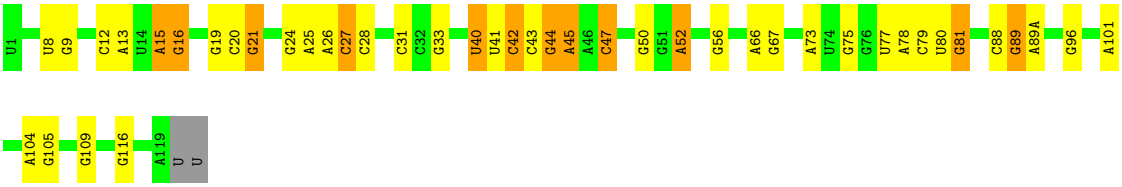
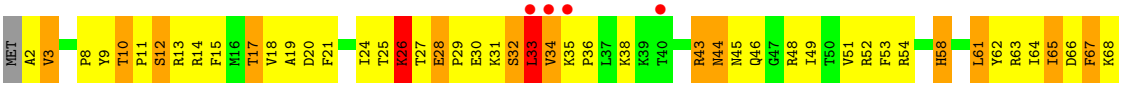
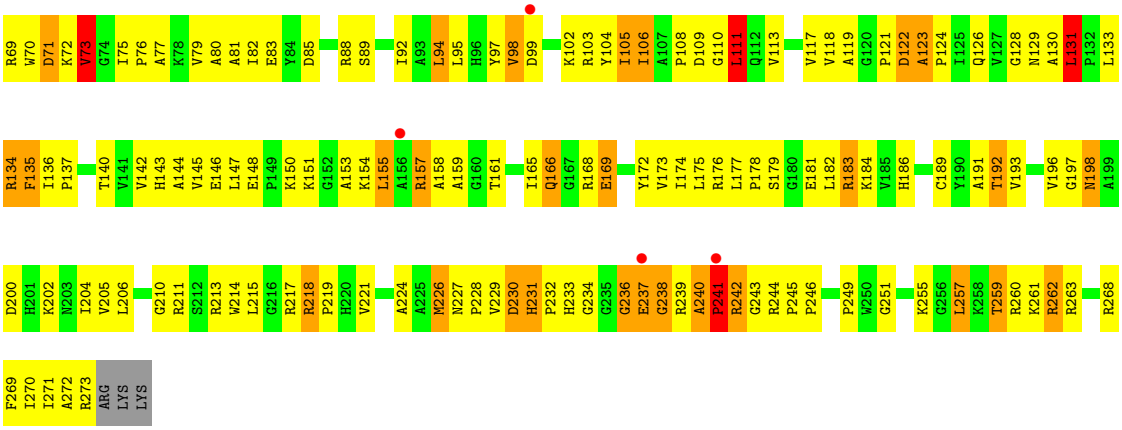


- Molecule 27: 50S ribosomal protein L2

Chain RD:





• Molecule 27: 50S ribosomal protein L2

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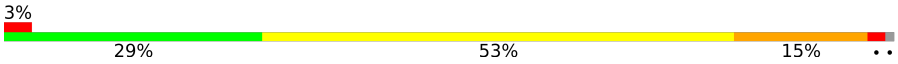

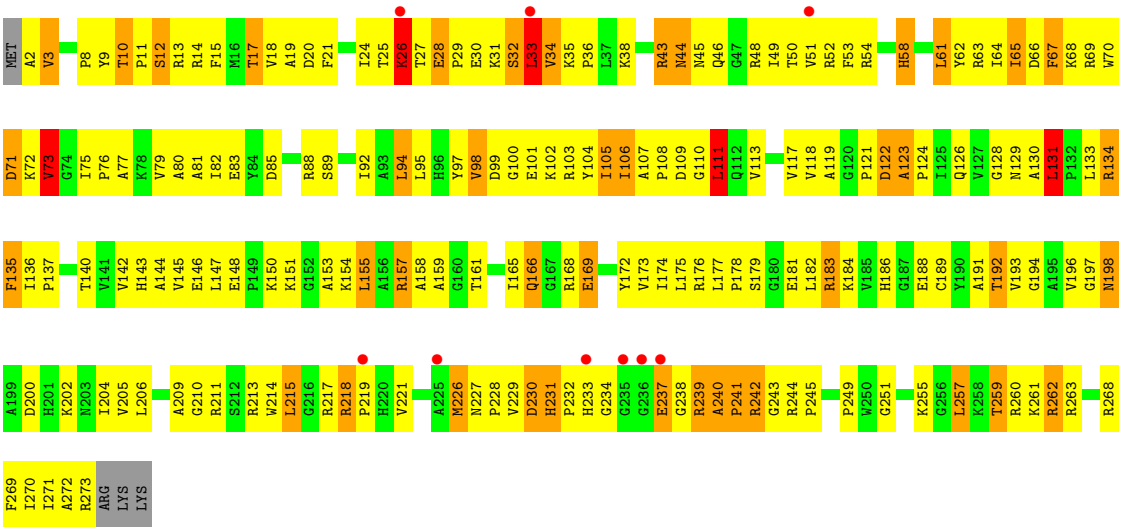

• Molecule 28: 50S ribosomal protein L3

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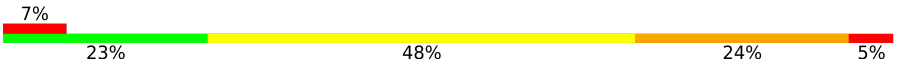

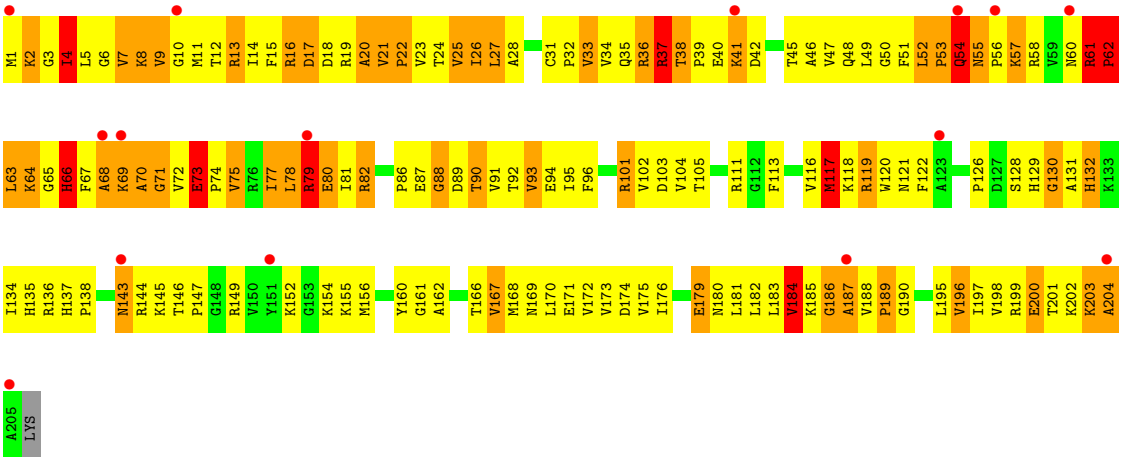

• Molecule 28: 50S ribosomal protein L3

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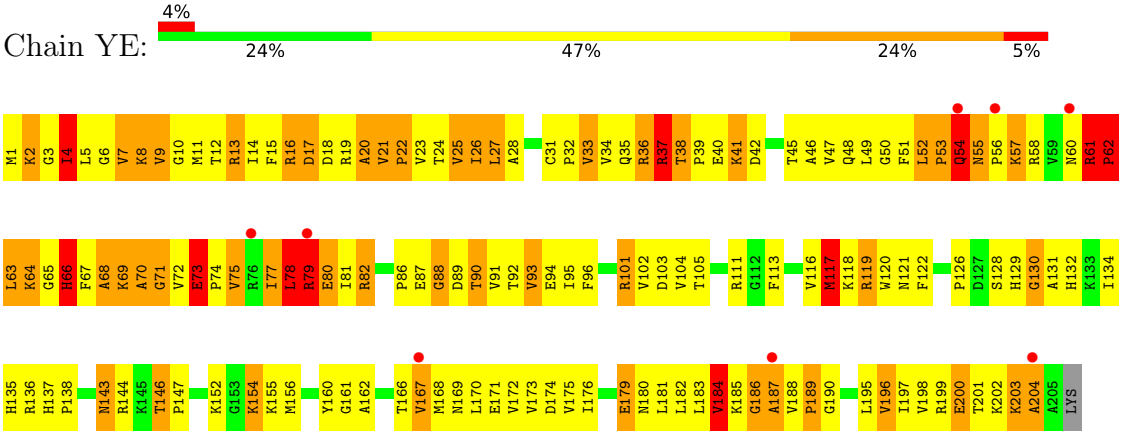

• Molecule 29: 50S ribosomal protein L4

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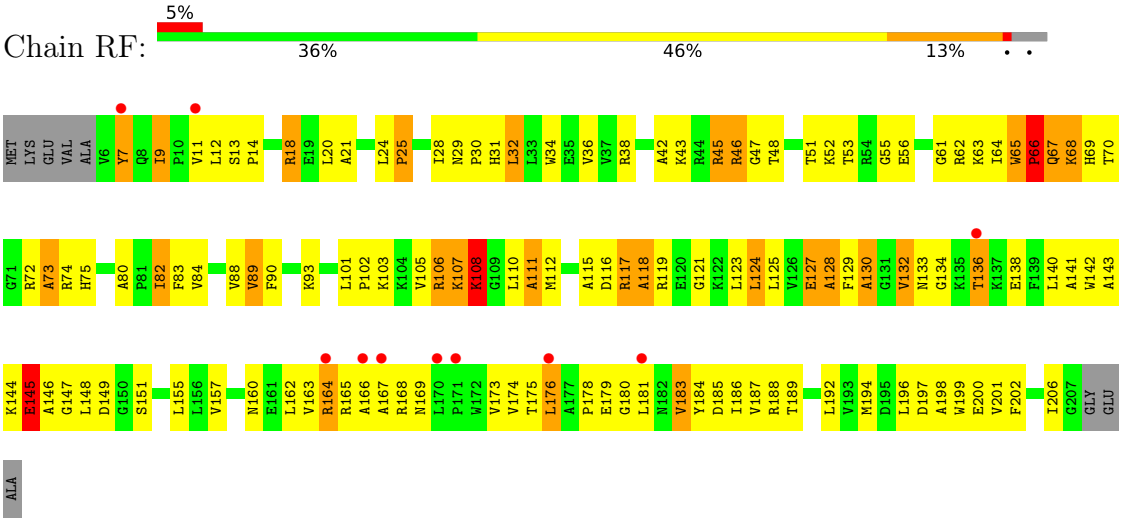

• Molecule 29: 50S ribosomal protein L4

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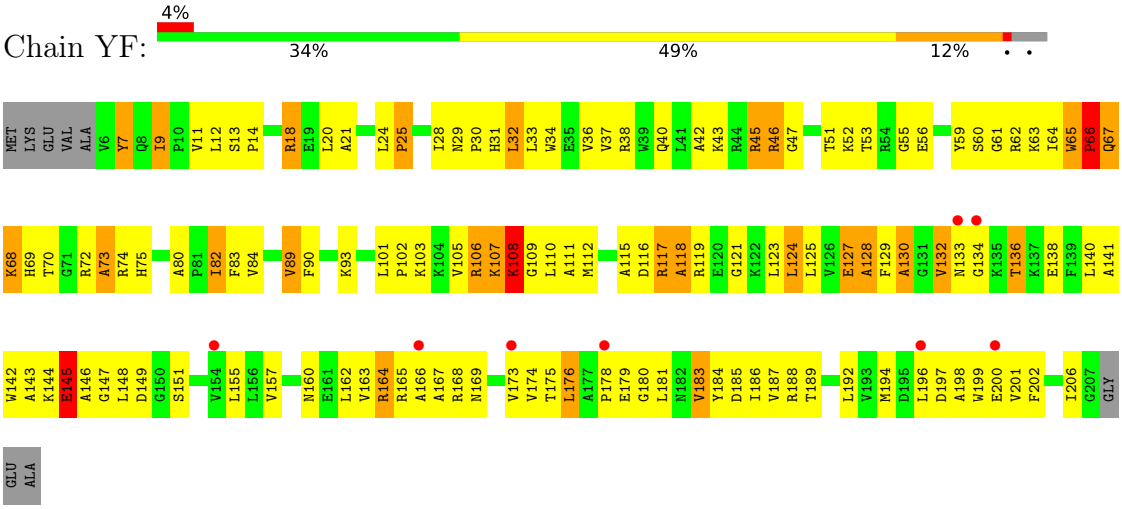

• Molecule 30: 50S ribosomal protein L5

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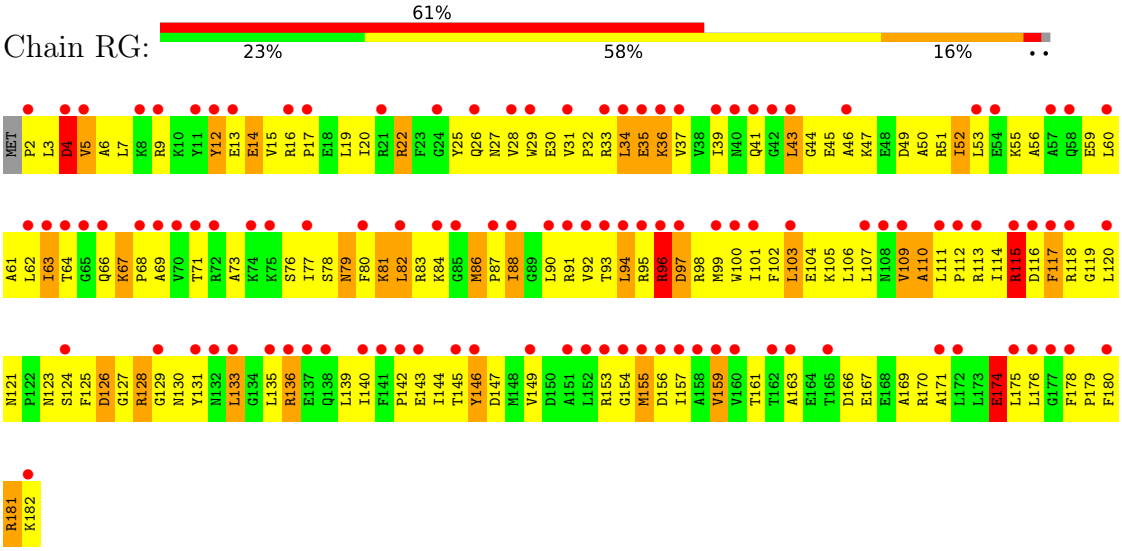

• Molecule 30: 50S ribosomal protein L5

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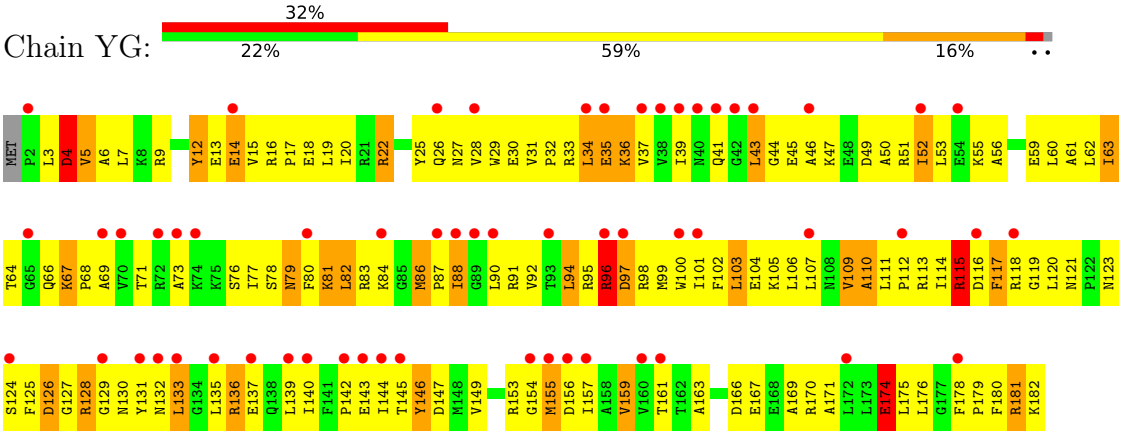

• Molecule 31: 50S ribosomal protein L6

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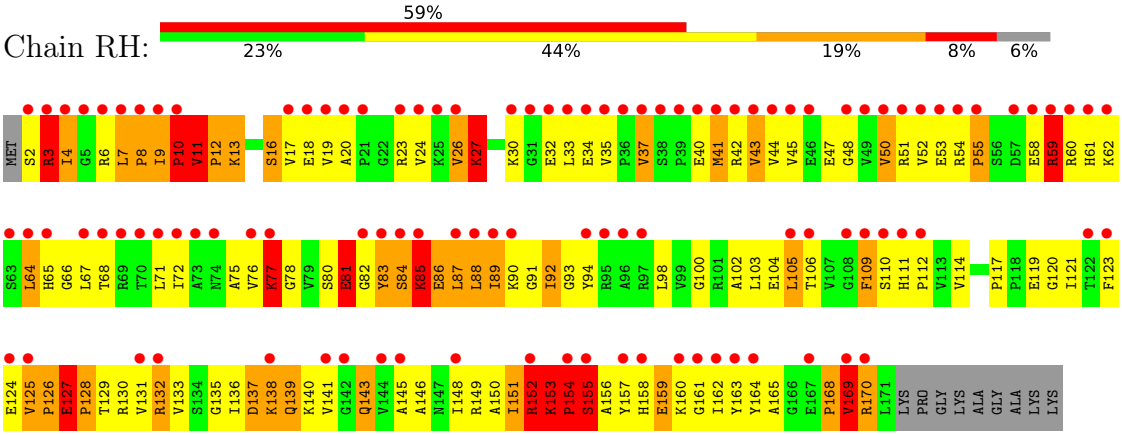
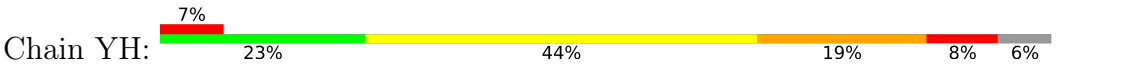
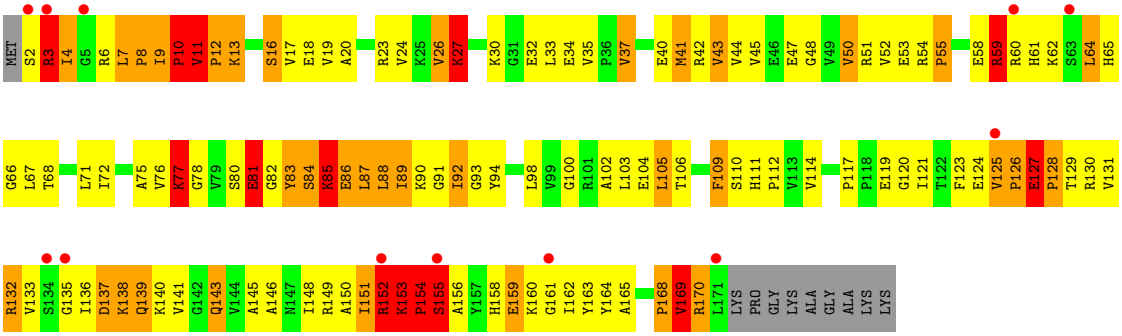


• Molecule 31: 50S ribosomal protein L6

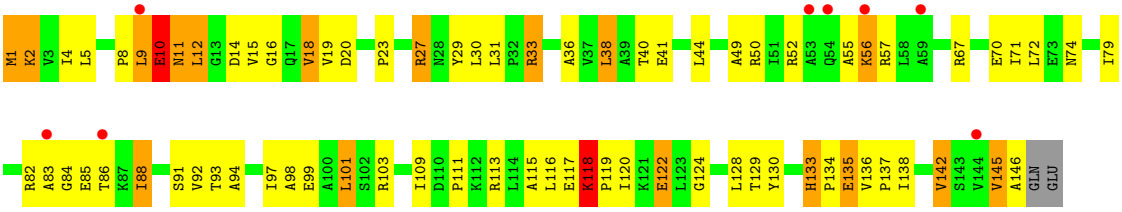
Chain YH:





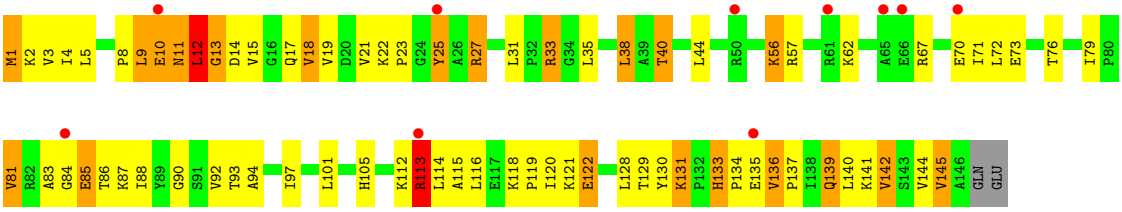
• Molecule 32: 50S ribosomal protein L9

Chain RI:



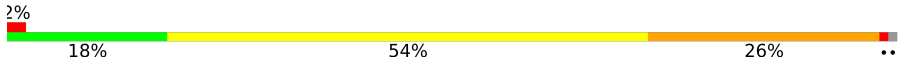
• Molecule 32: 50S ribosomal protein L9

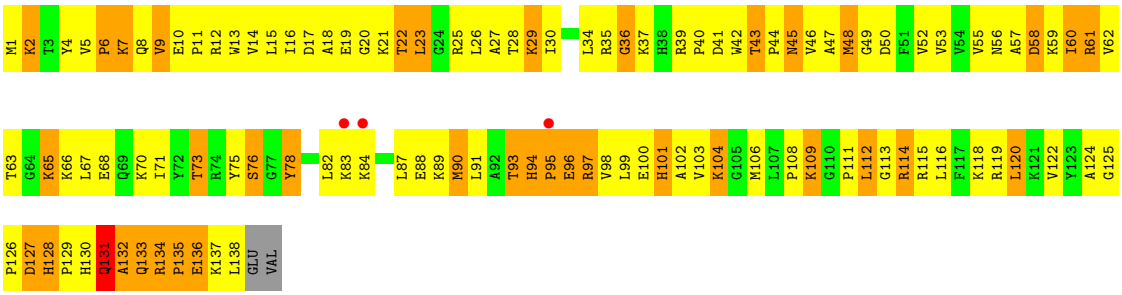
Chain YI:



• Molecule 33: 50S ribosomal protein L11

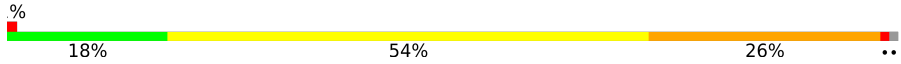
Chain RN:

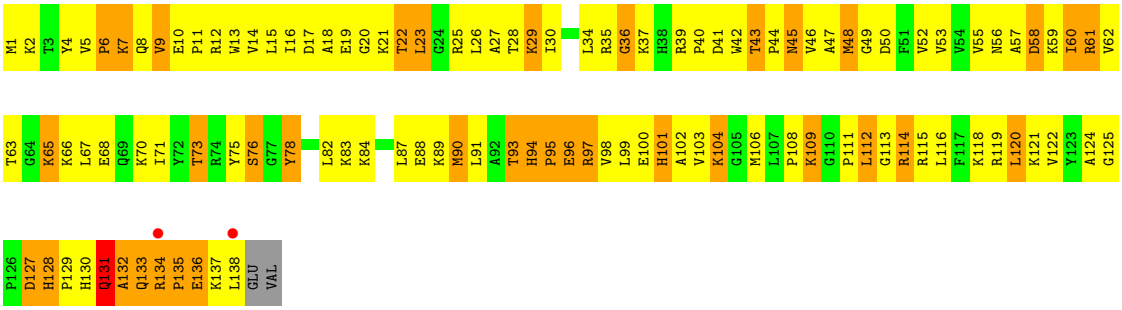




• Molecule 33: 50S ribosomal protein L11

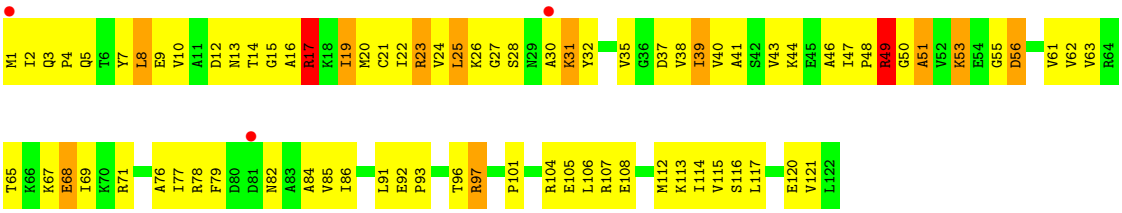
Chain YN:





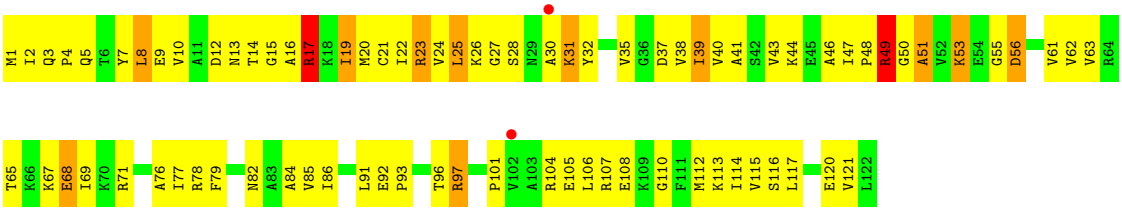
- Molecule 34: 50S ribosomal protein L13

Chain RO:



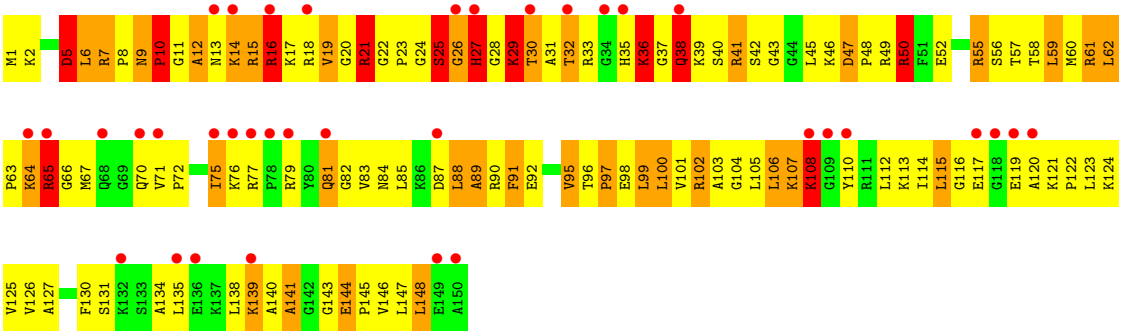
- Molecule 34: 50S ribosomal protein L13

Chain YO:



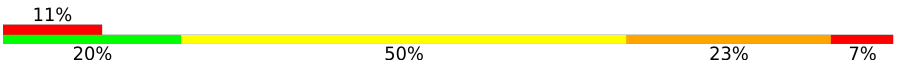
- Molecule 35: 50S ribosomal protein L14

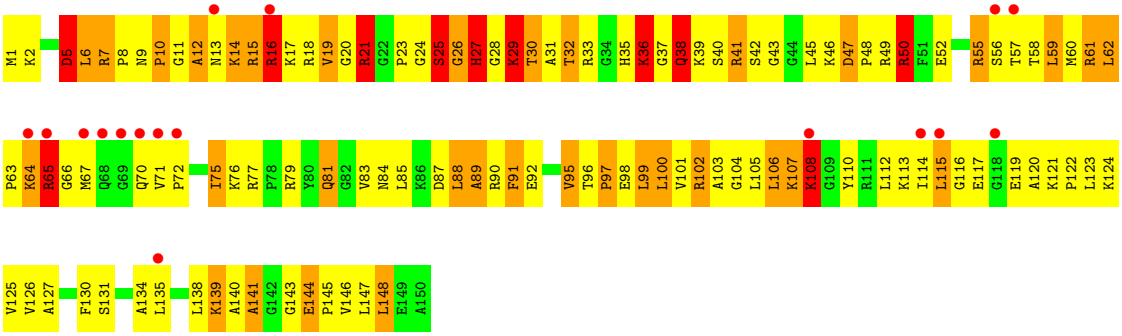
Chain RP:



- Molecule 35: 50S ribosomal protein L14

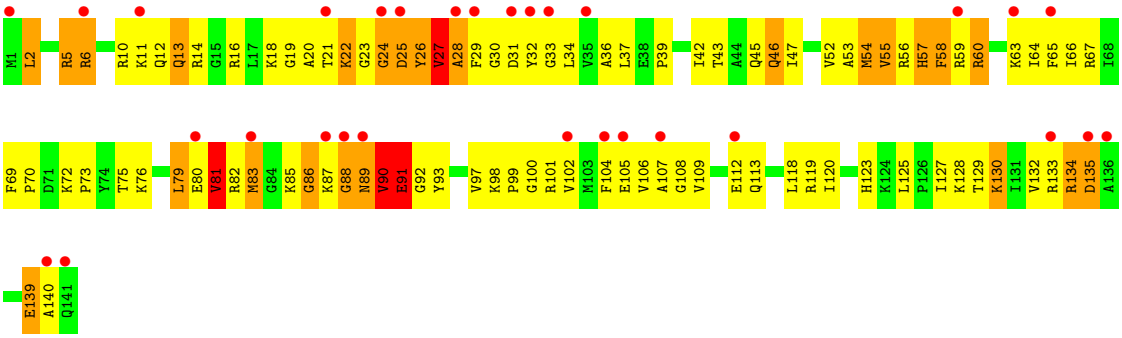
Chain YP:





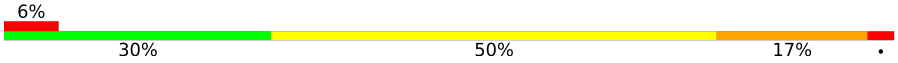
- Molecule 36: 50S ribosomal protein L15

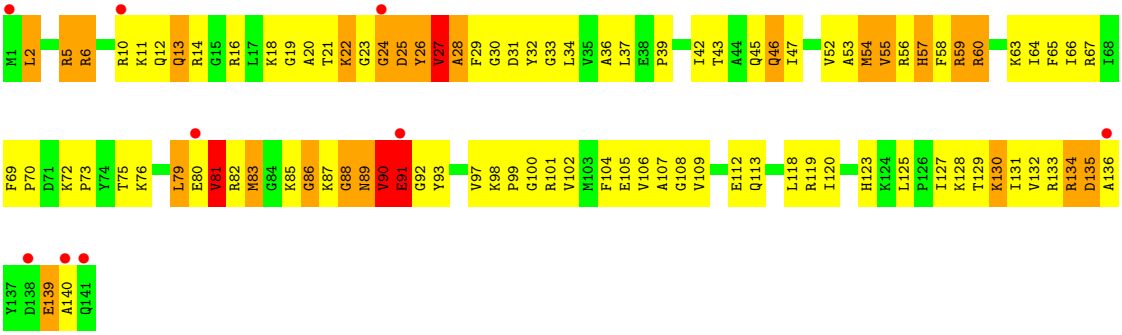
Chain RQ:



- Molecule 36: 50S ribosomal protein L15

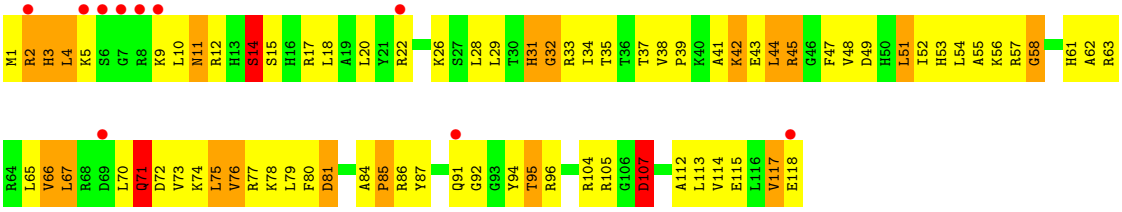
Chain YQ:





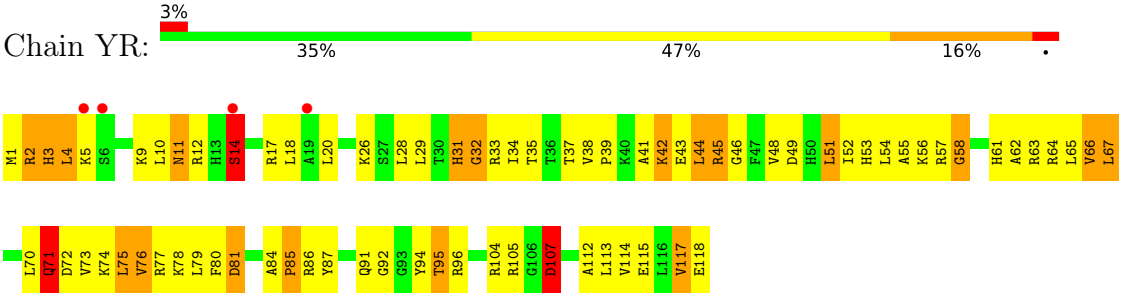
- Molecule 37: 50S ribosomal protein L16

Chain RR:



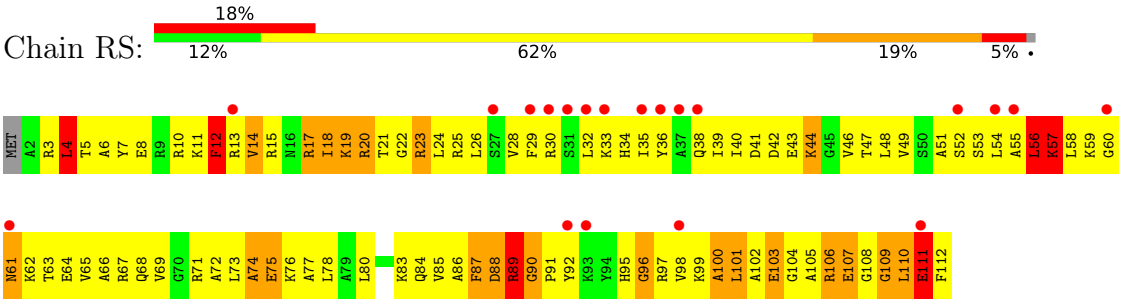
- Molecule 37: 50S ribosomal protein L16

Chain YR:



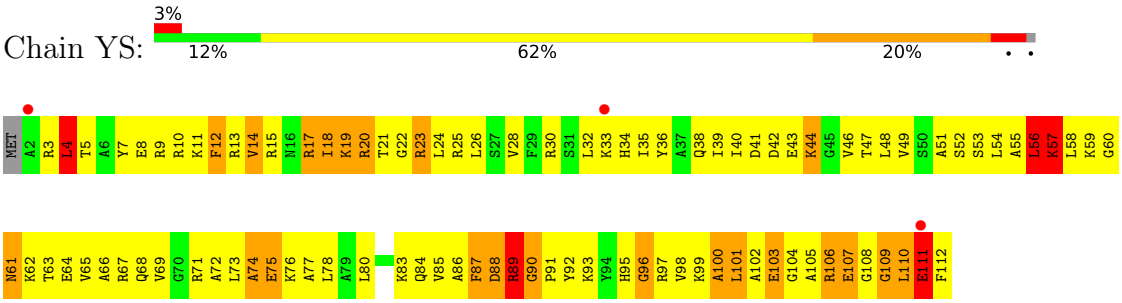
- Molecule 38: 50S ribosomal protein L17

Chain RS:



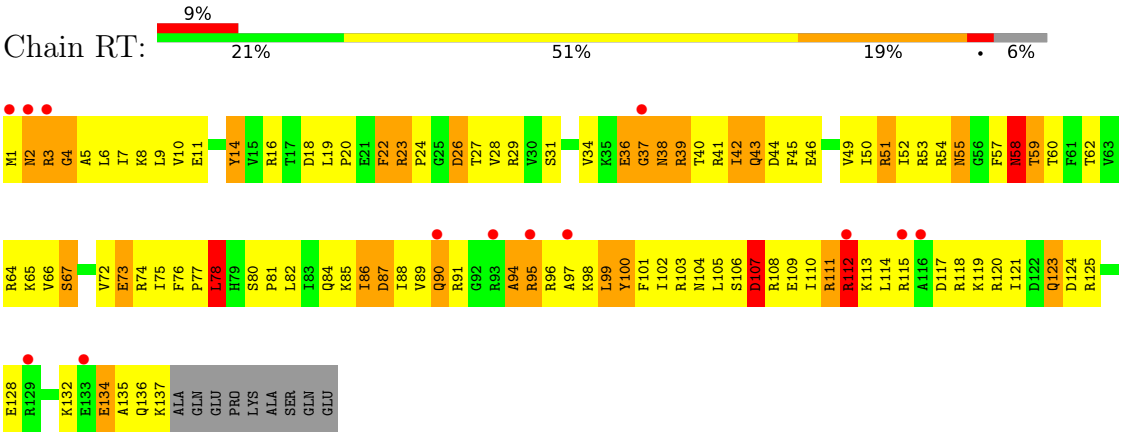
- Molecule 38: 50S ribosomal protein L17

Chain YS:



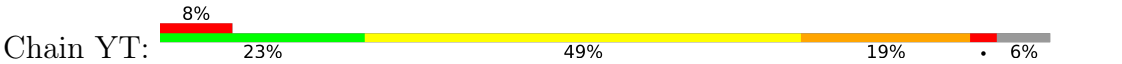
- Molecule 39: 50S ribosomal protein L18

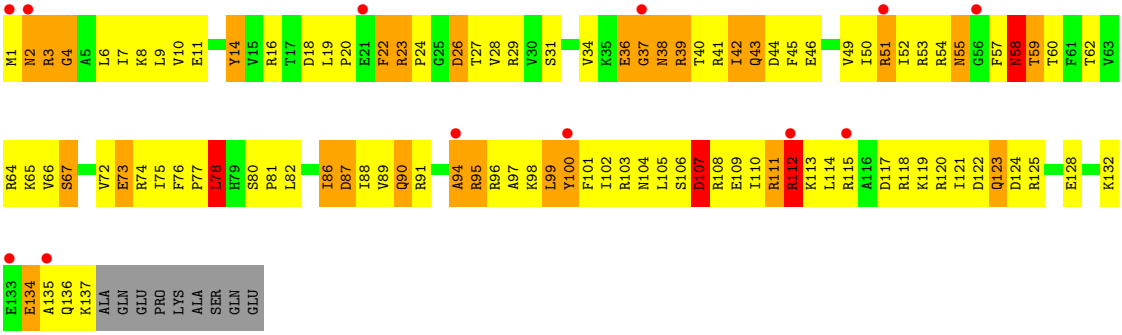
Chain RT:



- Molecule 39: 50S ribosomal protein L18

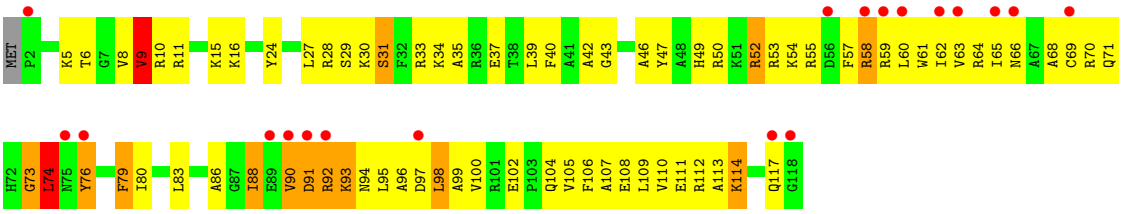
Chain YT:





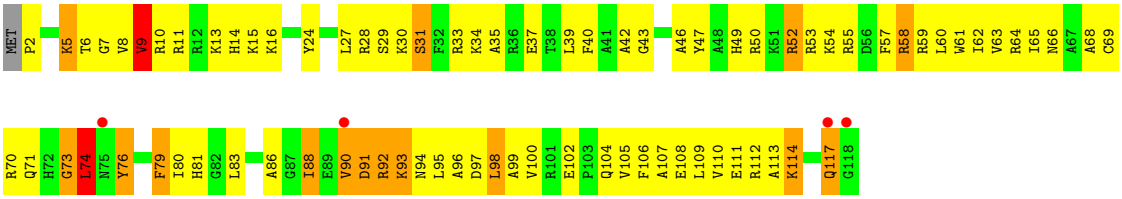
- Molecule 40: 50S ribosomal protein L19

Chain RU:



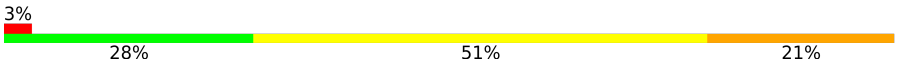
- Molecule 40: 50S ribosomal protein L19

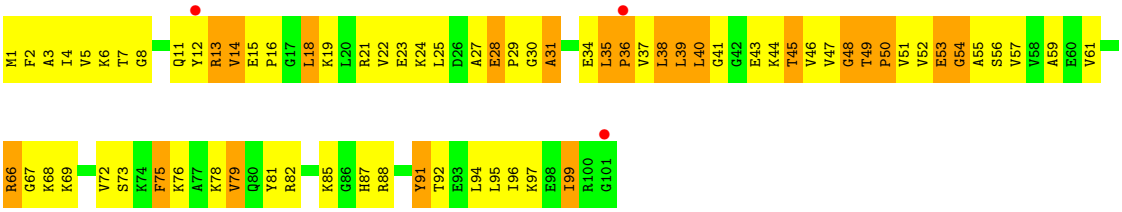
Chain YU:



- Molecule 41: 50S ribosomal protein L20

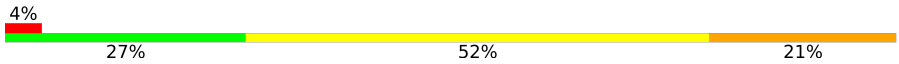
Chain RV:

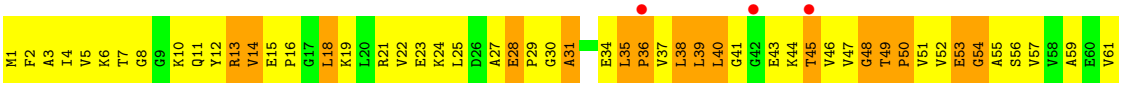


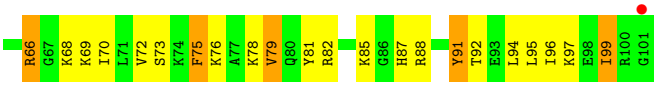


- Molecule 41: 50S ribosomal protein L20

Chain YV:

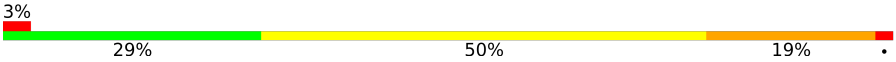


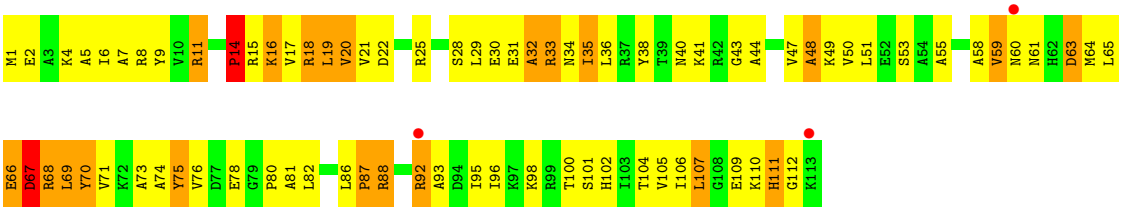




• Molecule 42: 50S ribosomal protein L21

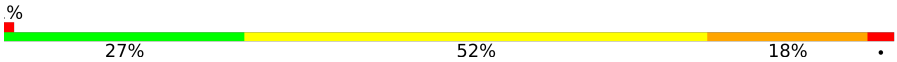
Chain RW:

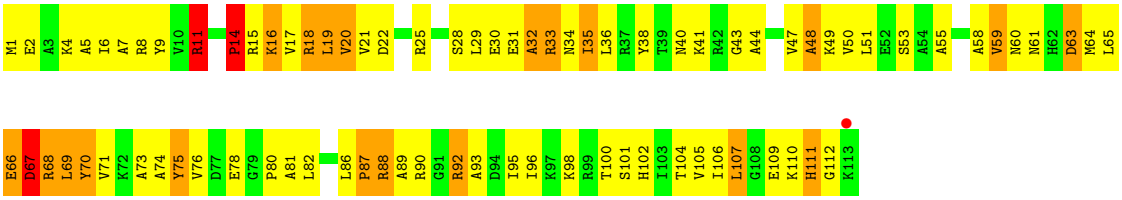




• Molecule 42: 50S ribosomal protein L21

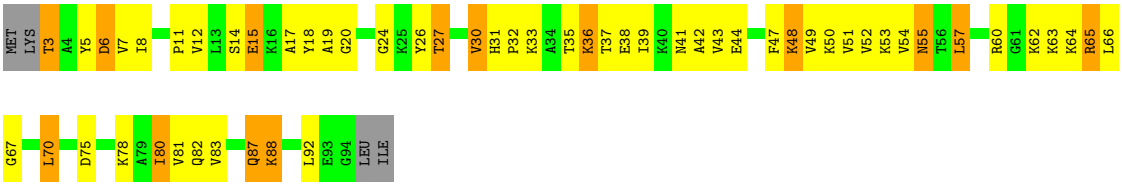
Chain YW:





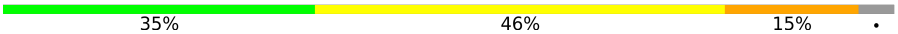
• Molecule 43: 50S ribosomal protein L22

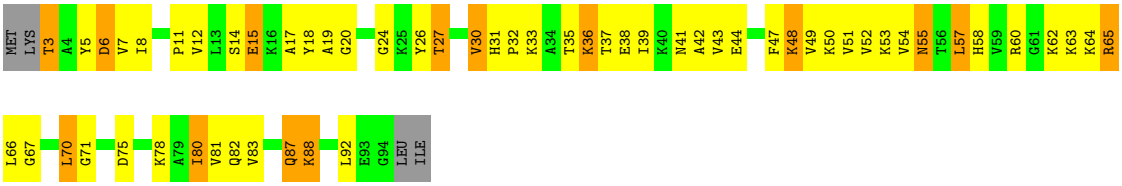
Chain RX:



• Molecule 43: 50S ribosomal protein L22

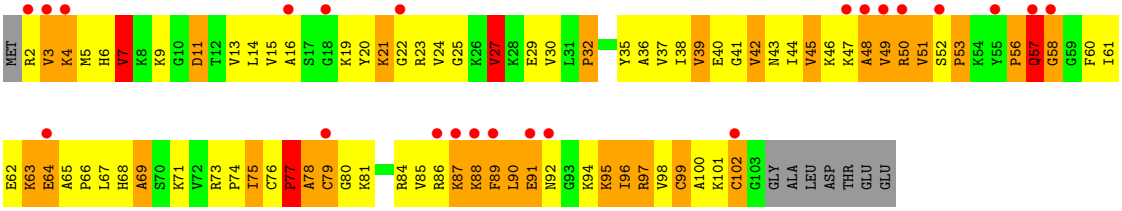
Chain YX:





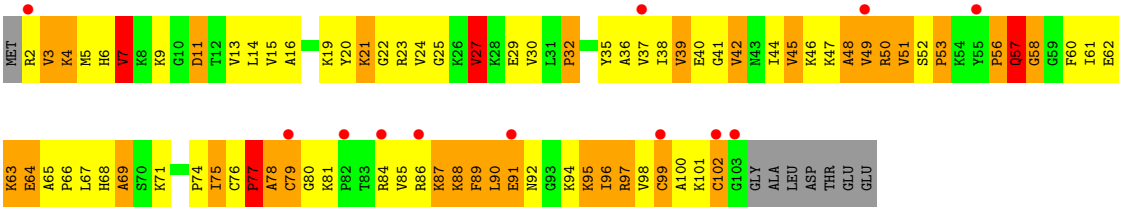
• Molecule 44: 50S ribosomal protein L23

Chain RY:



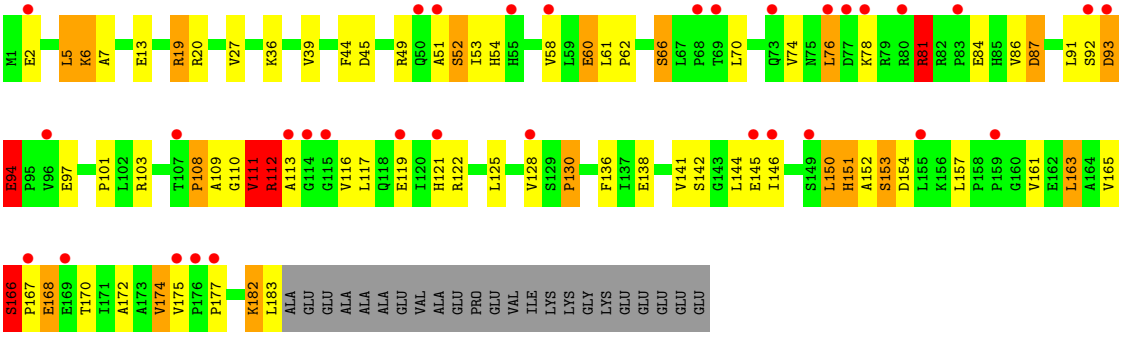
• Molecule 44: 50S ribosomal protein L23

Chain YY:



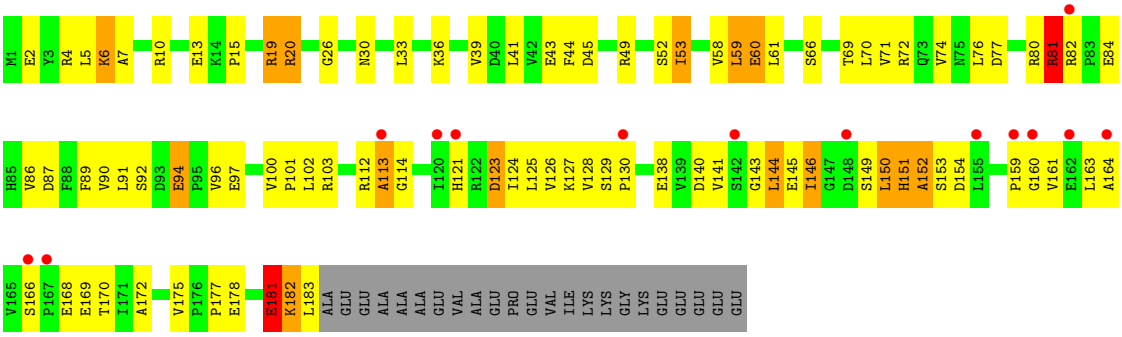
• Molecule 45: 50S ribosomal protein L24

Chain RZ:



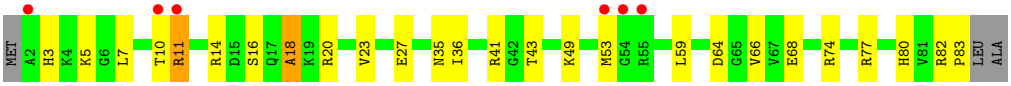
• Molecule 45: 50S ribosomal protein L24

Chain YZ:



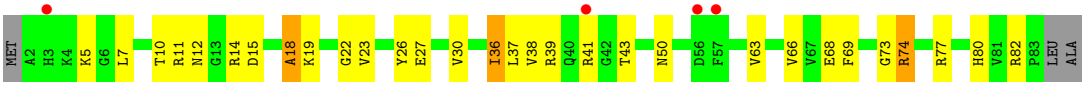
• Molecule 46: 50S ribosomal protein L25

Chain R0:



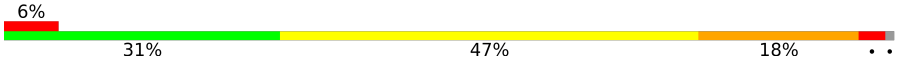
- Molecule 46: 50S ribosomal protein L25

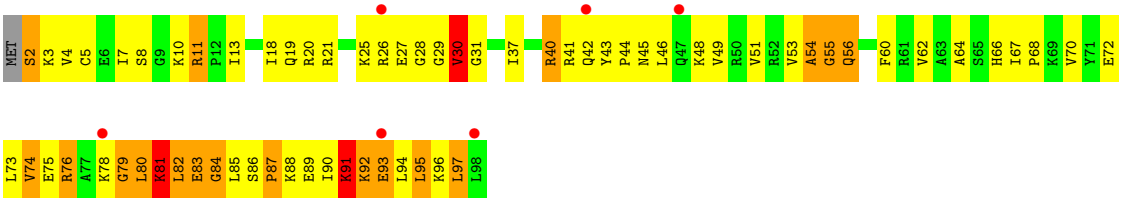
Chain Y0:



- Molecule 47: 50S ribosomal protein L27

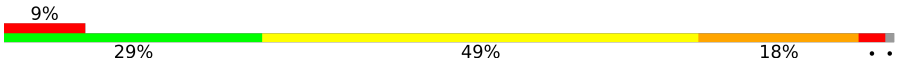
Chain R1:

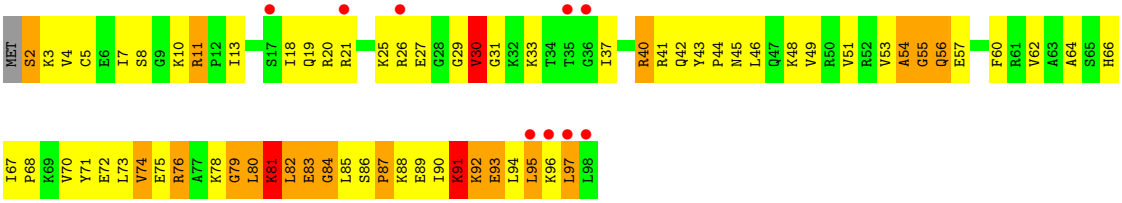




- Molecule 47: 50S ribosomal protein L27

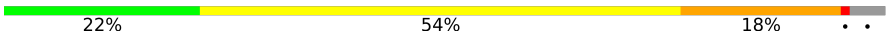
Chain Y1:

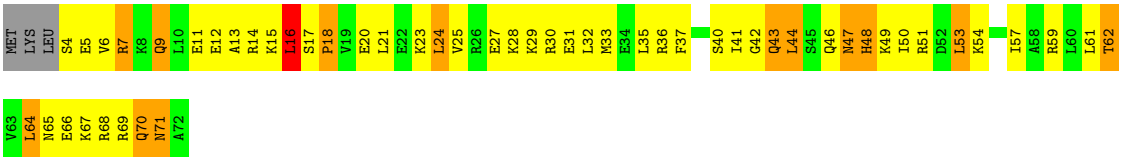




- Molecule 48: 50S ribosomal protein L28

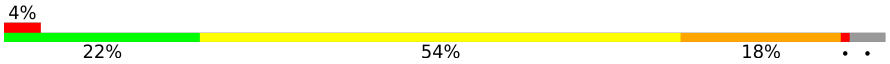
Chain R2:

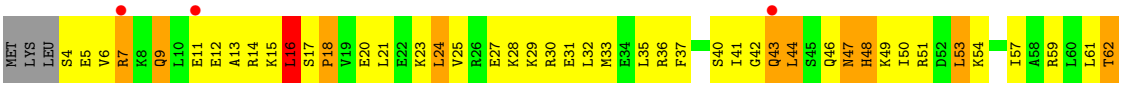




- Molecule 48: 50S ribosomal protein L28

Chain Y2:





• Molecule 49: 50S ribosomal protein L29

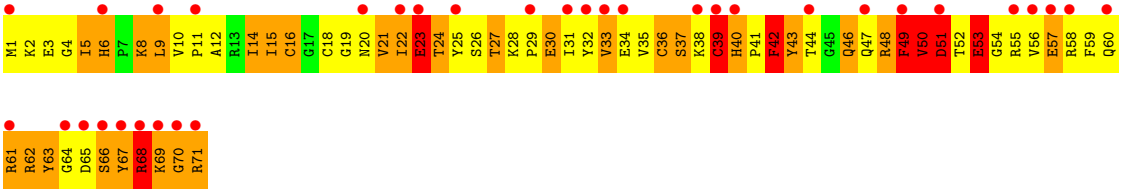
Chain R3:

• Molecule 49: 50S ribosomal protein L29

Chain Y3:

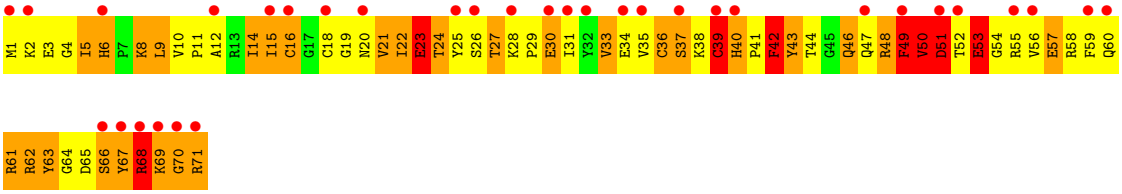
• Molecule 50: 50S ribosomal protein L30

Chain R4:



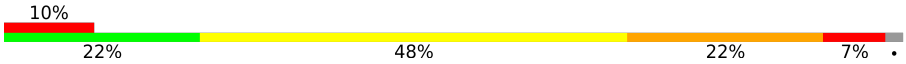
• Molecule 50: 50S ribosomal protein L30

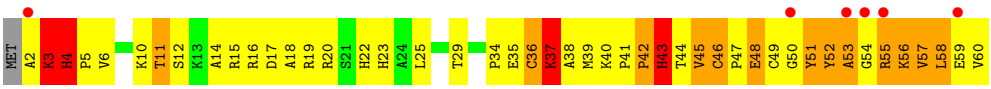
Chain Y4:



• Molecule 51: 50S ribosomal protein L32

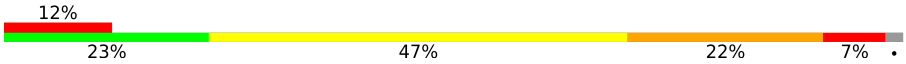
Chain R5:

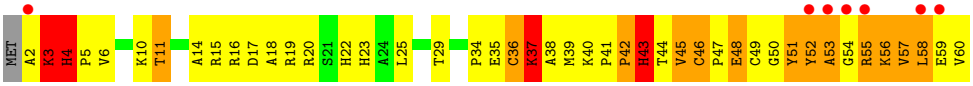




• Molecule 51: 50S ribosomal protein L32

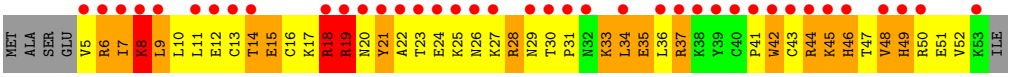
Chain Y5:





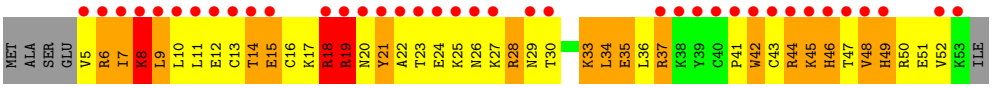
• Molecule 52: 50S ribosomal protein L33

Chain R6:



• Molecule 52: 50S ribosomal protein L33

Chain Y6:

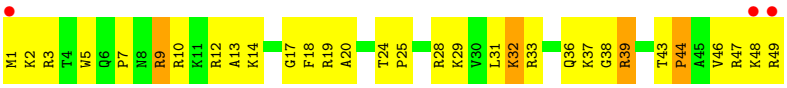


• Molecule 53: 50S ribosomal protein L34

Chain R7:

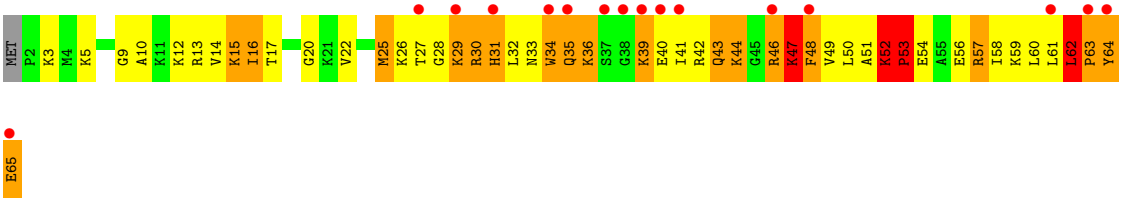
• Molecule 53: 50S ribosomal protein L34

Chain Y7:



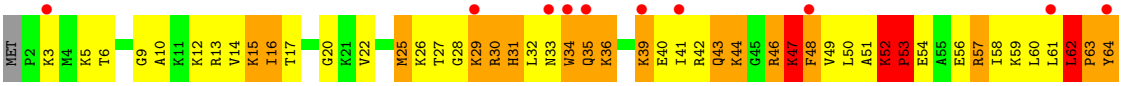
• Molecule 54: 50S ribosomal protein L35

Chain R8:



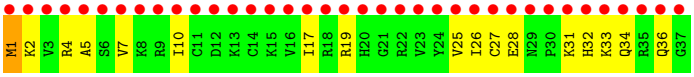
• Molecule 54: 50S ribosomal protein L35

Chain Y8:



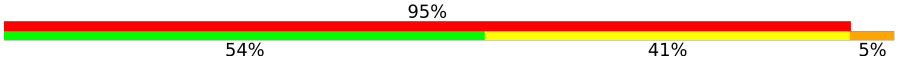
• Molecule 55: 50S ribosomal protein L36

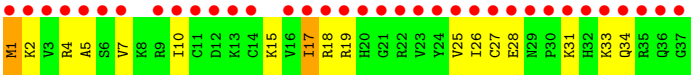
Chain R9:



• Molecule 55: 50S ribosomal protein L36

Chain Y9:



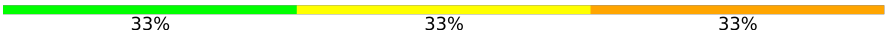


• Molecule 56: tRNA acceptor end mimic

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	209.21Å 448.45Å 619.86Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	189.60 – 3.14 189.60 – 3.09	Depositor EDS
% Data completeness (in resolution range)	99.6 (189.60-3.14) 99.5 (189.60-3.09)	Depositor EDS
R_{merge}	0.27	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.51 (at 3.07Å)	Xtriage
Refinement program	PHENIX 1.8.2_1309	Depositor
R, R_{free}	0.230 , 0.262 0.231 , 0.263	Depositor DCC
R_{free} test set	49008 reflections (4.68%)	wwPDB-VP
Wilson B-factor (Å^2)	54.4	Xtriage
Anisotropy	0.278	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.29 , 65.6	EDS
L-test for twinning[2]	$< \|L\| > = 0.44$, $< L^2 > = 0.27$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.79	EDS
Total number of atoms	291998	wwPDB-VP
Average B, all atoms (Å^2)	69.0	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: ZN, 1MG, PPU, PAR, MG

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
1	QA	0.37	0/36098	0.89	48/56341 (0.1%)
1	XA	0.37	0/36101	0.89	50/56346 (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	0.43	0/856	0.68	0/1154
7	QG	0.37	0/1276	0.61	0/1709
7	XG	0.37	0/1276	0.60	0/1709
8	QH	0.40	0/1136	0.69	0/1527
8	XH	0.40	0/1136	0.69	0/1527
9	QI	0.36	0/1029	0.67	0/1379
9	XI	0.36	0/1029	0.67	0/1379
10	QJ	0.35	0/814	0.61	0/1095
10	XJ	0.36	0/814	0.61	0/1095
11	QK	0.40	0/900	0.67	0/1213
11	XK	0.40	0/900	0.67	0/1213
12	QL	0.45	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	0.35	0/974	0.66	0/1303
14	QN	0.42	0/501	0.68	0/664
14	XN	0.52	0/501	0.67	0/664
15	QO	0.39	0/745	0.67	0/992
15	XO	0.39	0/745	0.67	0/992
16	QP	0.36	0/721	0.67	0/970
16	XP	0.37	0/721	0.67	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	QQ	0.37	0/847	0.68	0/1131
17	XQ	0.37	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	0.70	0/1007
20	XT	0.34	0/765	0.69	0/1007
21	QU	0.37	0/221	0.63	0/288
21	XU	0.37	0/221	0.63	0/288
22	QV	0.39	1/1836 (0.1%)	0.81	3/2859 (0.1%)
22	XV	0.42	1/1836 (0.1%)	0.84	4/2859 (0.1%)
23	QY	0.24	0/333	0.81	0/517
23	XY	0.24	0/333	0.74	0/517
24	QX	0.65	0/189	1.41	5/292 (1.7%)
24	XX	0.39	0/189	1.08	2/292 (0.7%)
25	RA	0.39	0/69521	0.88	70/108529 (0.1%)
25	YA	0.43	1/69543 (0.0%)	0.92	116/108563 (0.1%)
26	RB	0.32	0/2878	0.84	0/4490
26	YB	0.36	0/2878	0.88	1/4490 (0.0%)
27	RD	0.60	2/2165 (0.1%)	0.90	4/2919 (0.1%)
27	YD	0.56	0/2165	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	0.28	0/1151	0.56	0/1558
32	YI	0.27	0/1151	0.58	0/1558
33	RN	0.46	0/1131	0.78	1/1525 (0.1%)
33	YN	0.46	0/1131	0.78	1/1525 (0.1%)
34	RO	0.54	0/943	0.71	0/1269
34	YO	0.53	0/943	0.71	0/1269
35	RP	0.50	0/1162	0.95	3/1544 (0.2%)
35	YP	0.50	0/1162	0.95	3/1544 (0.2%)
36	RQ	0.54	0/1143	0.91	3/1527 (0.2%)
36	YQ	0.54	0/1143	0.89	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	0.83	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	0.27	0/1493	0.52	0/2026
45	YZ	0.28	0/1493	0.54	0/2026
46	R0	0.30	0/657	0.54	0/874
46	Y0	0.34	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	1.81	1/60 (1.7%)
56	Z8	0.77	0/40	1.81	1/60 (1.7%)
All	All	0.41	5/316375 (0.0%)	0.86	364/472993 (0.1%)

All (5) 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)
22	QV	1	C	OP3-P	-10.56	1.48	1.61
22	XV	1	C	OP3-P	-10.53	1.48	1.61
27	RD	236	GLY	C-N	8.57	1.53	1.34
25	YA	774	A	N9-C4	-5.56	1.34	1.37
27	RD	241	PRO	N-CD	5.19	1.55	1.47

All (364) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	XL	47	LYS	C-N-CD	-20.45	75.61	120.60
12	QL	47	LYS	C-N-CD	-20.44	75.62	120.60
25	YA	2506	U	N3-C2-O2	-10.56	114.81	122.20
28	YE	21	VAL	C-N-CD	-10.11	98.35	120.60
28	RE	21	VAL	C-N-CD	-10.09	98.41	120.60
1	XA	254	G	O5'-P-OP1	-9.84	96.84	105.70
25	RA	2506	U	N3-C2-O2	-9.83	115.32	122.20
25	YA	528	A	N1-C2-N3	8.94	133.77	129.30
12	QL	47	LYS	C-N-CA	8.82	159.05	122.00
12	XL	47	LYS	C-N-CA	8.79	158.91	122.00
25	RA	2506	U	N1-C2-O2	8.71	128.90	122.80
36	YQ	81	VAL	CB-CA-C	-8.70	94.88	111.40
25	YA	528	A	C2-N3-C4	-8.67	106.27	110.60
36	RQ	81	VAL	CB-CA-C	-8.63	94.99	111.40
25	YA	1899	G	N3-C2-N2	8.52	125.86	119.90
25	YA	1929	G	C4-C5-N7	8.43	114.17	110.80
1	QA	1158	C	C2-N1-C1'	8.27	127.89	118.80
1	QA	254	G	O5'-P-OP1	-8.26	98.27	105.70
25	YA	1899	G	N1-C2-N2	-8.24	108.79	116.20
25	RA	2614	A	C6-N1-C2	-8.11	113.73	118.60
1	QA	1301	U	C2-N1-C1'	8.09	127.41	117.70
25	RA	1786	A	N7-C8-N9	8.09	117.84	113.80
1	QA	1158	C	N1-C2-O2	7.96	123.68	118.90
25	YA	2506	U	N1-C2-O2	7.95	128.36	122.80
47	R1	79	GLY	N-CA-C	-7.82	93.55	113.10
47	Y1	79	GLY	N-CA-C	-7.80	93.60	113.10
25	YA	1396	U	N1-C2-O2	7.72	128.20	122.80
1	XA	1301	U	C2-N1-C1'	7.71	126.95	117.70
25	YA	761	A	N1-C6-N6	7.67	123.20	118.60
1	XA	960	U	N1-C2-O2	7.64	128.15	122.80
25	YA	265	A	O4'-C1'-N9	7.55	114.24	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	960	U	C2-N1-C1'	7.45	126.64	117.70
25	RA	774	A	C2-N3-C4	-7.40	106.90	110.60
1	XA	328	C	C2-N1-C1'	7.36	126.90	118.80
25	YA	774	A	C2-N3-C4	-7.36	106.92	110.60
1	QA	1301	U	N1-C2-O2	7.34	127.94	122.80
35	RP	59	LEU	N-CA-C	-7.27	91.36	111.00
35	YP	59	LEU	N-CA-C	-7.27	91.36	111.00
25	RA	1396	U	C2-N1-C1'	7.27	126.42	117.70
1	QA	372	C	C2-N1-C1'	7.26	126.78	118.80
22	XV	17	C	C2-N1-C1'	7.24	126.76	118.80
25	YA	1929	G	C5-C6-O6	-7.22	124.27	128.60
1	QA	372	C	N1-C2-O2	7.18	123.21	118.90
25	YA	1396	U	N3-C2-O2	-7.16	117.19	122.20
24	QX	7	G	N7-C8-N9	7.10	116.65	113.10
25	YA	2712(A)	A	N7-C8-N9	7.08	117.34	113.80
25	RA	1396	U	N1-C2-O2	7.08	127.76	122.80
1	XA	1158	C	C2-N1-C1'	7.08	126.58	118.80
25	YA	1950	G	C4-N9-C1'	7.06	135.68	126.50
36	YQ	81	VAL	N-CA-C	7.04	130.01	111.00
25	YA	654	A	C8-N9-C4	-7.03	102.99	105.80
25	RA	1396	U	N3-C2-O2	-7.02	117.28	122.20
36	RQ	81	VAL	N-CA-C	7.01	129.93	111.00
1	XA	960	U	N3-C2-O2	-6.95	117.33	122.20
22	XV	17	C	N1-C2-O2	6.93	123.06	118.90
25	RA	1786	A	C5-N7-C8	-6.91	100.44	103.90
22	QV	17	C	C2-N1-C1'	6.84	126.32	118.80
24	XX	3	G	P-O3'-C3'	6.83	127.90	119.70
25	RA	676	A	O4'-C1'-N9	6.83	113.66	108.20
1	XA	1065	U	P-O3'-C3'	6.81	127.87	119.70
25	YA	1130	U	P-O3'-C3'	6.81	127.87	119.70
25	YA	654(B)	C	C6-N1-C2	-6.77	117.59	120.30
56	Z6	74	C	N1-C2-O2	6.74	122.94	118.90
56	Z8	74	C	N1-C2-O2	6.74	122.94	118.90
1	XA	1301	U	N1-C2-O2	6.74	127.52	122.80
25	RA	2614	A	N1-C2-N3	6.70	132.65	129.30
1	XA	372	C	C2-N1-C1'	6.67	126.14	118.80
1	QA	1322	C	C2-N1-C1'	6.65	126.11	118.80
25	RA	1130	U	P-O3'-C3'	6.65	127.68	119.70
25	RA	205	G	P-O3'-C3'	6.60	127.62	119.70
1	XA	328	C	N1-C2-O2	6.59	122.85	118.90
1	QA	1301	U	N3-C2-O2	-6.56	117.61	122.20
27	YD	131	LEU	CA-CB-CG	6.55	130.36	115.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	RD	131	LEU	CA-CB-CG	6.52	130.31	115.30
25	YA	676	A	C2-N3-C4	-6.50	107.35	110.60
25	RA	2506	U	C2-N1-C1'	6.49	125.49	117.70
25	YA	1396	U	C2-N1-C1'	6.48	125.47	117.70
25	YA	774	A	N3-C4-C5	6.47	131.33	126.80
25	RA	1899	G	N3-C2-N2	6.46	124.42	119.90
25	RA	242	G	P-O3'-C3'	6.44	127.42	119.70
1	XA	1200	C	C5-C6-N1	6.43	124.22	121.00
12	XL	48	PRO	CA-N-CD	-6.42	102.51	111.50
12	QL	48	PRO	CA-N-CD	-6.42	102.52	111.50
25	YA	1313	U	C2-N1-C1'	6.41	125.39	117.70
25	YA	1021	A	C2-N3-C4	-6.41	107.40	110.60
25	YA	1950	G	O4'-C1'-N9	6.40	113.32	108.20
25	YA	74	A	P-O3'-C3'	6.37	127.35	119.70
25	YA	2031	A	O4'-C1'-N9	6.36	113.29	108.20
25	YA	654(A)	G	O5'-P-OP2	-6.36	99.98	105.70
25	RA	1543	A	O4'-C1'-N9	6.36	113.29	108.20
25	YA	2430	A	N1-C2-N3	6.35	132.48	129.30
25	RA	2060	A	P-O3'-C3'	6.35	127.32	119.70
25	YA	676	A	C5-N7-C8	-6.32	100.74	103.90
1	XA	1200	C	C2-N3-C4	6.27	123.04	119.90
1	QA	1158	C	N3-C2-O2	-6.27	117.51	121.90
1	XA	792	A	P-O3'-C3'	6.26	127.22	119.70
25	YA	1786	A	N7-C8-N9	6.26	116.93	113.80
1	QA	974	A	O4'-C1'-N9	6.26	113.20	108.20
25	YA	1929	G	C6-C5-N7	-6.24	126.66	130.40
1	QA	328	C	N1-C2-O2	6.24	122.64	118.90
25	YA	1929	G	OP1-P-O3'	6.24	118.92	105.20
4	QD	28	SER	C-N-CD	6.23	141.49	128.40
25	RA	2702	U	C2-N1-C1'	6.23	125.17	117.70
25	RA	2053	G	C5-N7-C8	-6.22	101.19	104.30
25	YA	1929	G	N9-C4-C5	-6.22	102.91	105.40
25	RA	205	G	OP2-P-O3'	6.21	118.87	105.20
1	XA	1200	C	P-O3'-C3'	6.19	127.12	119.70
1	XA	1301	U	N3-C2-O2	-6.18	117.88	122.20
25	RA	1899	G	N1-C2-N2	-6.15	110.67	116.20
1	XA	539	A	O5'-P-OP1	-6.13	100.19	105.70
25	YA	1332	G	C6-C5-N7	-6.12	126.73	130.40
1	XA	1065	U	OP2-P-O3'	6.08	118.58	105.20
1	QA	792	A	P-O3'-C3'	6.06	126.97	119.70
37	RR	9	LYS	N-CA-C	-6.04	94.69	111.00
22	XV	17	C	N3-C2-O2	-6.04	117.67	121.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	QA	1200	C	P-O3'-C3'	6.02	126.92	119.70
37	YR	9	LYS	N-CA-C	-6.01	94.76	111.00
25	YA	1313	U	C5-C6-N1	6.01	125.71	122.70
27	YD	240	ALA	C-N-CD	6.01	141.03	128.40
22	QV	17	C	N1-C2-O2	5.98	122.49	118.90
25	YA	242	G	P-O3'-C3'	5.97	126.86	119.70
25	YA	774	A	N3-C4-N9	-5.96	122.64	127.40
1	XA	792	A	N1-C6-N6	5.95	122.17	118.60
1	XA	971	G	O4'-C1'-N9	5.95	112.96	108.20
1	XA	372	C	C6-N1-C1'	-5.94	113.67	120.80
1	QA	812	C	P-O3'-C3'	5.94	126.83	119.70
27	RD	240	ALA	C-N-CD	5.93	140.86	128.40
1	XA	328	C	C6-N1-C2	-5.93	117.93	120.30
1	QA	372	C	C6-N1-C1'	-5.92	113.69	120.80
25	YA	783	A	N7-C8-N9	5.92	116.76	113.80
25	RA	2702	U	C5-C6-N1	5.91	125.65	122.70
25	YA	1786	A	C5-N7-C8	-5.90	100.95	103.90
31	RH	125	VAL	C-N-CD	-5.89	107.64	120.60
31	YH	125	VAL	C-N-CD	-5.89	107.64	120.60
25	YA	530	G	N1-C6-O6	-5.89	116.37	119.90
1	QA	190	G	P-O3'-C3'	5.88	126.76	119.70
25	YA	761	A	C5-C6-N6	-5.88	119.00	123.70
12	XL	119	LYS	N-CA-C	-5.87	95.15	111.00
25	YA	783	A	C5-N7-C8	-5.83	100.98	103.90
25	YA	1992	G	P-O3'-C3'	5.83	126.70	119.70
25	YA	2702	U	C2-N1-C1'	5.83	124.70	117.70
12	QL	119	LYS	N-CA-C	-5.83	95.26	111.00
28	RE	58	ARG	N-CA-C	-5.82	95.28	111.00
28	YE	58	ARG	N-CA-C	-5.82	95.29	111.00
25	RA	1929	G	OP1-P-O3'	5.82	118.00	105.20
25	RA	1786	A	C8-N9-C4	-5.82	103.47	105.80
35	YP	26	GLY	N-CA-C	-5.81	98.57	113.10
25	YA	676	A	O4'-C1'-N9	5.78	112.83	108.20
35	RP	26	GLY	N-CA-C	-5.78	98.66	113.10
25	YA	1929	G	N1-C6-O6	5.77	123.36	119.90
48	Y2	16	LEU	N-CA-C	-5.77	95.42	111.00
48	R2	16	LEU	N-CA-C	-5.75	95.47	111.00
1	QA	1301	U	C6-N1-C1'	-5.75	113.15	121.20
25	YA	1204	A	O4'-C1'-N9	5.74	112.79	108.20
1	XA	1302	U	C2-N1-C1'	5.73	124.58	117.70
1	QA	190	G	OP2-P-O3'	5.72	117.78	105.20
19	XS	6	LYS	N-CA-C	-5.72	95.56	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RA	1950	G	O4'-C1'-N9	5.71	112.77	108.20
25	RA	774	A	N3-C4-N9	-5.71	122.83	127.40
1	XA	372	C	N1-C2-O2	5.70	122.32	118.90
1	QA	1158	C	C6-N1-C1'	-5.70	113.97	120.80
1	XA	913	A	P-O3'-C3'	5.69	126.53	119.70
25	YA	2430	A	C2-N3-C4	-5.69	107.76	110.60
25	RA	1694	C	P-O3'-C3'	5.68	126.52	119.70
25	YA	860	U	N3-C2-O2	-5.68	118.22	122.20
25	YA	1970	A	O5'-P-OP2	-5.68	100.59	105.70
25	YA	2832	U	P-O3'-C3'	5.67	126.51	119.70
25	YA	1528	A	N7-C8-N9	5.67	116.63	113.80
19	QS	6	LYS	N-CA-C	-5.66	95.71	111.00
25	YA	1950	G	C8-N9-C1'	-5.64	119.66	127.00
25	RA	140	A	N7-C8-N9	5.64	116.62	113.80
25	YA	530	G	N3-C2-N2	5.64	123.85	119.90
25	YA	783	A	C8-N9-C4	-5.63	103.55	105.80
25	RA	530	G	O4'-C1'-N9	5.62	112.69	108.20
25	RA	1899	G	C6-C5-N7	-5.62	127.03	130.40
1	QA	913	A	P-O3'-C3'	5.60	126.42	119.70
25	YA	120	U	N3-C2-O2	-5.59	118.29	122.20
25	YA	654	A	N7-C8-N9	5.59	116.60	113.80
1	XA	1054	C	C2-N1-C1'	5.57	124.93	118.80
1	XA	1503	A	P-O3'-C3'	5.57	126.38	119.70
25	RA	828	U	N3-C2-O2	-5.56	118.31	122.20
50	R4	39	CYS	N-CA-C	-5.56	95.99	111.00
25	YA	2688	U	N3-C2-O2	-5.56	118.31	122.20
33	RN	114	ARG	N-CA-C	-5.55	96.00	111.00
50	Y4	39	CYS	N-CA-C	-5.55	96.01	111.00
24	QX	6	C	P-O3'-C3'	5.55	126.36	119.70
25	YA	1950	G	N3-C2-N2	5.55	123.78	119.90
4	XD	14	ARG	C-N-CA	-5.55	107.83	121.70
25	RA	372	G	OP2-P-O3'	5.54	117.40	105.20
25	YA	1332	G	C4-C5-N7	5.54	113.02	110.80
25	RA	1654	A	O5'-P-OP1	-5.54	100.72	105.70
1	QA	328	C	P-O3'-C3'	5.53	126.34	119.70
1	QA	1065	U	P-O3'-C3'	5.53	126.33	119.70
25	YA	2335	A	O4'-C1'-N9	5.53	112.62	108.20
1	XA	115	G	P-O3'-C3'	5.53	126.33	119.70
1	QA	533	A	P-O3'-C3'	5.52	126.32	119.70
25	RA	2420	C	O5'-P-OP1	-5.51	100.74	105.70
25	YA	2584	U	N3-C2-O2	-5.51	118.34	122.20
33	YN	114	ARG	N-CA-C	-5.51	96.13	111.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	XA	328	C	N3-C2-O2	-5.50	118.05	121.90
25	YA	1314	C	C2-N1-C1'	5.50	124.85	118.80
1	XA	410	G	P-O3'-C3'	5.49	126.29	119.70
25	RA	2848	G	P-O3'-C3'	5.48	126.28	119.70
25	YA	99	U	P-O3'-C3'	5.48	126.28	119.70
25	YA	1955	U	P-O3'-C3'	5.48	126.27	119.70
1	XA	1158	C	N1-C2-O2	5.48	122.19	118.90
25	YA	74	A	C2-N3-C4	-5.48	107.86	110.60
1	XA	792	A	C6-C5-N7	-5.47	128.47	132.30
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
31	YH	127	GLU	N-CA-C	-5.47	96.24	111.00
31	RH	127	GLU	N-CA-C	-5.46	96.25	111.00
25	RA	2053	G	C8-N9-C1'	5.46	134.10	127.00
25	YA	654(B)	C	C5-C6-N1	5.46	123.73	121.00
27	YD	251	GLY	N-CA-C	5.45	126.73	113.10
25	YA	2439	A	P-O3'-C3'	5.45	126.24	119.70
1	QA	1027	C	OP1-P-O3'	5.45	117.18	105.20
24	XX	3	G	OP2-P-O3'	5.44	117.17	105.20
25	YA	945	A	C6-C5-N7	-5.44	128.49	132.30
35	RP	25	SER	N-CA-C	-5.44	96.31	111.00
24	QX	7	G	C5-N7-C8	-5.44	101.58	104.30
25	RA	2335	A	O4'-C1'-N9	5.44	112.55	108.20
25	YA	1558	A	P-O3'-C3'	5.44	126.22	119.70
1	QA	687	A	P-O3'-C3'	5.43	126.22	119.70
1	QA	1158	C	C6-N1-C2	-5.43	118.13	120.30
25	RA	372	G	C4-N9-C1'	-5.43	119.44	126.50
25	YA	140	A	N7-C8-N9	5.43	116.51	113.80
25	YA	674	G	N9-C4-C5	-5.42	103.23	105.40
1	XA	687	A	P-O3'-C3'	5.42	126.21	119.70
1	XA	753	A	P-O3'-C3'	5.42	126.20	119.70
25	RA	1313	U	C2-N1-C1'	5.41	124.19	117.70
25	YA	2655	G	P-O3'-C3'	5.41	126.20	119.70
35	YP	25	SER	N-CA-C	-5.41	96.38	111.00
1	QA	372	C	C5-C6-N1	5.41	123.70	121.00
1	XA	703	G	C4-N9-C1'	5.40	133.53	126.50
25	YA	503	A	P-O3'-C3'	5.38	126.15	119.70
25	YA	2681	C	P-O3'-C3'	5.38	126.15	119.70
25	YA	860	U	C4-C5-C6	5.38	122.92	119.70
25	RA	2832	U	P-O3'-C3'	5.37	126.14	119.70
27	YD	111	LEU	CA-CB-CG	5.37	127.65	115.30
31	YH	100	GLY	N-CA-C	-5.36	99.69	113.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	XV	17	C	C6-N1-C2	-5.36	118.16	120.30
25	YA	1936	A	N9-C4-C5	-5.36	103.66	105.80
25	RA	1799	G	P-O3'-C3'	5.36	126.13	119.70
25	YA	654	A	N9-C4-C5	5.34	107.94	105.80
25	RA	1332	G	C2-N3-C4	-5.34	109.23	111.90
25	RA	2584	U	C2-N1-C1'	5.34	124.11	117.70
25	RA	1786	A	C6-C5-N7	-5.34	128.56	132.30
25	RA	774	A	N3-C4-C5	5.33	130.53	126.80
27	RD	111	LEU	CA-CB-CG	5.33	127.57	115.30
31	RH	100	GLY	N-CA-C	-5.33	99.78	113.10
25	RA	140	A	C8-N9-C4	-5.33	103.67	105.80
25	RA	1899	G	N3-C4-N9	5.32	129.19	126.00
1	XA	1336	C	C6-N1-C2	-5.31	118.17	120.30
1	XA	812	C	P-O3'-C3'	5.31	126.07	119.70
25	YA	512	G	O4'-C1'-N9	5.31	112.45	108.20
54	Y8	36	LYS	N-CA-C	-5.31	96.67	111.00
25	YA	2318	G	O4'-C1'-N9	5.30	112.44	108.20
25	RA	2198	A	P-O3'-C3'	5.30	126.06	119.70
25	RA	1653	G	P-O3'-C3'	5.30	126.06	119.70
25	YA	945	A	C4-C5-N7	5.30	113.35	110.70
54	R8	36	LYS	N-CA-C	-5.29	96.73	111.00
25	YA	859	G	P-O3'-C3'	5.28	126.04	119.70
25	YA	2610	C	P-O3'-C3'	5.28	126.04	119.70
1	XA	690	G	O4'-C1'-N9	5.28	112.43	108.20
25	YA	2439	A	C8-N9-C4	-5.28	103.69	105.80
25	RA	404	C	P-O3'-C3'	5.28	126.04	119.70
25	YA	2307	G	O4'-C1'-N9	5.28	112.42	108.20
1	QA	328	C	C2-N1-C1'	5.28	124.61	118.80
1	XA	243	A	P-O3'-C3'	5.28	126.03	119.70
25	RA	372	G	O4'-C1'-N9	5.26	112.41	108.20
25	YA	1950	G	N7-C8-N9	5.26	115.73	113.10
25	YA	917	A	C2-N3-C4	-5.26	107.97	110.60
1	QA	353	A	OP2-P-O3'	5.25	116.75	105.20
25	YA	1950	G	C6-C5-N7	-5.25	127.25	130.40
1	QA	1528	U	P-O3'-C3'	5.24	125.99	119.70
25	RA	2689	U	P-O3'-C3'	5.24	125.99	119.70
1	XA	345	C	P-O3'-C3'	5.24	125.99	119.70
38	RS	110	LEU	CA-CB-CG	5.24	127.35	115.30
25	YA	372	G	O4'-C1'-N9	5.22	112.38	108.20
25	YA	945	A	N1-C6-N6	5.22	121.73	118.60
36	YQ	5	ARG	N-CA-C	-5.22	96.90	111.00
25	YA	2506	U	C2-N1-C1'	5.22	123.96	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	QA	115	G	P-O3'-C3'	5.22	125.96	119.70
1	QA	1201	A	P-O3'-C3'	5.21	125.96	119.70
25	YA	383	U	O4'-C1'-N1	5.21	112.37	108.20
1	XA	1347	G	OP2-P-O3'	5.21	116.66	105.20
1	QA	429	U	OP1-P-O3'	5.20	116.65	105.20
1	QA	890	G	O4'-C1'-N9	5.20	112.36	108.20
1	QA	960	U	C2-N1-C1'	5.20	123.94	117.70
25	RA	1992	G	P-O3'-C3'	5.20	125.94	119.70
19	XS	79	THR	N-CA-C	-5.19	96.98	111.00
36	RQ	5	ARG	N-CA-C	-5.19	96.99	111.00
38	YS	110	LEU	CA-CB-CG	5.18	127.22	115.30
25	YA	1022	G	P-O3'-C3'	5.18	125.91	119.70
1	QA	243	A	P-O3'-C3'	5.18	125.91	119.70
25	RA	2447	G	C8-N9-C1'	5.18	133.73	127.00
24	QX	7	G	C6-N1-C2	5.17	128.20	125.10
1	XA	1301	U	C6-N1-C1'	-5.17	113.96	121.20
25	RA	1558	A	P-O3'-C3'	5.17	125.90	119.70
25	YA	2751	G	C8-N9-C4	-5.17	104.33	106.40
19	QS	79	THR	N-CA-C	-5.16	97.07	111.00
25	YA	2712(A)	A	C8-N9-C4	-5.15	103.74	105.80
25	YA	2726	U	O4'-C1'-N1	5.15	112.32	108.20
25	RA	2712	U	C2-N1-C1'	5.14	123.87	117.70
25	YA	860	U	C2-N1-C1'	5.14	123.87	117.70
25	YA	1012	U	OP2-P-O3'	5.14	116.51	105.20
25	YA	404	C	P-O3'-C3'	5.13	125.86	119.70
1	QA	723	U	C2-N1-C1'	5.12	123.85	117.70
1	QA	1200	C	OP2-P-O3'	5.12	116.47	105.20
25	YA	676	A	N7-C8-N9	5.12	116.36	113.80
1	QA	1027	C	P-O3'-C3'	5.12	125.85	119.70
1	QA	1065	U	OP2-P-O3'	5.12	116.46	105.20
25	YA	2481	G	P-O3'-C3'	5.12	125.84	119.70
25	YA	1899	G	C6-C5-N7	-5.11	127.33	130.40
1	XA	1336	C	C2-N1-C1'	5.11	124.42	118.80
1	QA	1374	A	N1-C2-N3	5.11	131.85	129.30
25	RA	1925	C	N1-C2-O2	-5.11	115.84	118.90
25	RA	1914	C	C2-N1-C1'	5.10	124.41	118.80
1	XA	1158	C	C6-N1-C2	-5.10	118.26	120.30
25	YA	2420	C	O5'-P-OP1	-5.09	101.12	105.70
39	YT	123	GLN	N-CA-C	-5.09	97.25	111.00
1	QA	449	C	N3-C2-O2	-5.09	118.34	121.90
26	YB	81	G	O4'-C1'-N9	5.08	112.26	108.20
25	RA	265	A	O4'-C1'-N9	5.08	112.26	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	YA	1535	U	C2-N1-C1'	5.07	123.79	117.70
25	YA	102	G	P-O3'-C3'	5.07	125.79	119.70
25	YA	856	C	C6-N1-C2	-5.07	118.27	120.30
25	YA	1005	C	N1-C2-O2	5.07	121.94	118.90
25	YA	2776	A	P-O3'-C3'	5.07	125.78	119.70
25	RA	2490	G	C4-N9-C1'	5.07	133.09	126.50
39	RT	123	GLN	N-CA-C	-5.07	97.32	111.00
25	YA	2751	G	N7-C8-N9	5.06	115.63	113.10
1	QA	1322	C	C6-N1-C1'	-5.06	114.73	120.80
1	XA	328	C	P-O3'-C3'	5.06	125.77	119.70
1	XA	1322	C	C2-N1-C1'	5.06	124.36	118.80
39	YT	59	THR	N-CA-C	-5.05	97.35	111.00
25	RA	2726	U	C2-N1-C1'	5.05	123.76	117.70
39	RT	59	THR	N-CA-C	-5.05	97.36	111.00
25	YA	2405	G	P-O3'-C3'	5.04	125.75	119.70
25	RA	1528	A	O4'-C1'-N9	5.04	112.23	108.20
25	YA	120	U	C4-C5-C6	5.04	122.72	119.70
25	YA	1929	G	C5-N7-C8	-5.04	101.78	104.30
25	YA	2126	A	P-O3'-C3'	5.04	125.75	119.70
25	YA	1528	A	O4'-C1'-N9	5.04	112.23	108.20
25	YA	2640	G	C8-N9-C4	-5.04	104.39	106.40
1	QA	189	U	P-O3'-C3'	5.03	125.74	119.70
25	RA	2307	G	O4'-C1'-N9	5.03	112.23	108.20
1	XA	960	U	C5-C6-N1	5.03	125.22	122.70
1	XA	530	G	P-O3'-C3'	5.03	125.73	119.70
25	RA	846	C	P-O3'-C3'	5.02	125.73	119.70
1	XA	1054	C	C6-N1-C1'	-5.02	114.77	120.80
1	QA	701	C	OP2-P-O3'	5.02	116.24	105.20
22	QV	17	C	C6-N1-C1'	-5.01	114.78	120.80
25	RA	2126	A	P-O3'-C3'	5.01	125.72	119.70
25	YA	654	A	C4-C5-C6	5.01	119.51	117.00
24	QX	7	G	C4-C5-N7	5.01	112.81	110.80
25	RA	222	A	P-O3'-C3'	5.01	125.71	119.70
31	YH	127	GLU	C-N-CD	-5.01	109.58	120.60
1	XA	1151	A	O4'-C1'-N9	5.01	112.20	108.20
25	RA	1314	C	N1-C2-O2	5.00	121.90	118.90
1	QA	960	U	N1-C2-O2	5.00	126.30	122.80
1	QA	1322	C	N1-C2-O2	5.00	121.90	118.90
25	RA	828	U	N1-C2-O2	5.00	126.30	122.80

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	576	0
1	XA	32249	0	16279	575	1
2	QB	1924	0	1975	287	0
2	XB	1924	0	1975	293	0
3	QC	1605	0	1668	212	0
3	XC	1605	0	1668	215	2
4	QD	1703	0	1765	261	0
4	XD	1703	0	1764	217	0
5	QE	1155	0	1213	140	0
5	XE	1155	0	1213	141	0
6	QF	843	0	857	97	0
6	XF	843	0	857	101	0
7	QG	1257	0	1296	148	0
7	XG	1257	0	1296	143	0
8	QH	1116	0	1175	148	0
8	XH	1116	0	1177	154	0
9	QI	1010	0	1037	145	0
9	XI	1010	0	1037	153	0
10	QJ	801	0	849	152	0
10	XJ	801	0	849	141	0
11	QK	885	0	904	103	2
11	XK	885	0	904	109	0
12	QL	975	0	1062	107	0
12	XL	975	0	1062	110	0
13	QM	964	0	1034	163	0
13	XM	964	0	1034	150	0
14	QN	492	0	529	100	0
14	XN	492	0	529	94	0
15	QO	734	0	771	73	0
15	XO	734	0	771	72	0
16	QP	705	0	725	115	0
16	XP	705	0	725	113	0
17	QQ	834	0	904	85	0
17	XQ	834	0	904	78	0
18	QR	574	0	644	66	0
18	XR	574	0	644	69	0
19	QS	674	0	699	103	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
19	XS	674	0	699	136	0
20	QT	763	0	860	108	0
20	XT	763	0	861	103	0
21	QU	217	0	234	27	0
21	XU	217	0	234	28	0
22	QV	1644	0	836	22	0
22	XV	1644	0	836	15	0
23	QY	323	0	165	2	0
23	XY	323	0	165	6	0
24	QX	170	0	88	2	0
24	XX	170	0	88	1	0
25	RA	62071	0	31288	992	0
25	YA	62091	0	31296	935	0
26	RB	2573	0	1306	62	0
26	YB	2573	0	1306	26	0
27	RD	2115	0	2195	319	0
27	YD	2115	0	2195	332	0
28	RE	1568	0	1634	270	0
28	YE	1568	0	1634	265	0
29	RF	1585	0	1632	181	0
29	YF	1585	0	1632	180	0
30	RG	1474	0	1535	211	0
30	YG	1474	0	1535	193	0
31	RH	1307	0	1382	225	0
31	YH	1307	0	1382	221	0
32	RI	1136	0	1223	42	1
32	YI	1136	0	1223	40	0
33	RN	1104	0	1180	191	0
33	YN	1104	0	1180	183	0
34	RO	933	0	996	123	0
34	YO	933	0	996	123	0
35	RP	1145	0	1228	250	0
35	YP	1145	0	1228	245	0
36	RQ	1122	0	1179	159	0
36	YQ	1122	0	1179	158	0
37	RR	968	0	1033	113	0
37	YR	968	0	1033	113	0
38	RS	882	0	943	165	0
38	YS	882	0	943	159	0
39	RT	1141	0	1202	154	0
39	YT	1141	0	1202	153	0
40	RU	964	0	1022	131	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
40	YU	964	0	1022	137	0
41	RV	779	0	852	129	0
41	YV	779	0	852	136	3
42	RW	900	0	964	99	0
42	YW	900	0	964	100	0
43	RX	725	0	778	69	0
43	YX	725	0	778	74	0
44	RY	785	0	878	163	0
44	YY	785	0	878	151	0
45	RZ	1461	0	1493	46	0
45	YZ	1461	0	1493	57	0
46	R0	648	0	672	20	0
46	Y0	648	0	672	28	0
47	R1	763	0	848	146	0
47	Y1	763	0	848	142	0
48	R2	581	0	629	81	0
48	Y2	581	0	629	77	0
49	R3	469	0	518	41	0
49	Y3	469	0	518	41	0
50	R4	581	0	574	153	0
50	Y4	581	0	574	164	0
51	R5	459	0	480	77	0
51	Y5	459	0	480	75	3
52	R6	424	0	450	92	0
52	Y6	424	0	450	89	0
53	R7	430	0	480	43	0
53	Y7	430	0	480	44	0
54	R8	517	0	582	106	0
54	Y8	517	0	582	103	0
55	R9	307	0	338	18	0
55	Y9	307	0	338	18	0
56	Z6	74	0	51	6	0
56	Z8	74	0	51	7	0
57	QA	69	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	1	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	RA	240	0	0	0	0
57	RB	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	1	0	0	0	0
57	RR	2	0	0	0	0
57	XA	74	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y0	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	265	0	0	0	0
57	YB	3	0	0	0	0
57	YE	2	0	0	0	0
57	YP	1	0	0	0	0
57	YQ	1	0	0	0	0
58	QA	42	0	45	3	0
58	XA	42	0	45	1	0
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
All	All	291998	0	198367	14453	6

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 30.

All (14453) 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	1.35	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.35	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.42
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.35
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	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
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
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.69	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
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
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	1.15
14:XN:42:ILE:O	14:XN:43:CYS:O	1.65	1.15
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.14
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.83	1.14
35:RP:50:ARG:HH21	35:RP:50:ARG:HB3	1.13	1.14
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.25	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.13
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	1.28	1.13
14:XN:32:SER:CB	14:XN:41:ARG:CB	1.97	1.12
35:YP:50:ARG:HH21	35:YP:50:ARG:HB3	1.13	1.12
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.12
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.31	1.12
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	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
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.32	1.10
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.10
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.10
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.31	1.10
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.10
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.09
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	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	1.18	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
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	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
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	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	1.05	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.07
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.33	1.07
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.07
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	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
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
3:QC:79:ARG:HE	11:XK:99:GLN:NE2	1.53	1.06
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.07	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
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.06
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.20	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.71	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.74	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.11	1.05
47:R1:81:LYS:HZ3	47:R1:81:LYS:CA	1.70	1.05
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	1.04
36:RQ:59:ARG:O	36:RQ:60:ARG:CD	2.05	1.04
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.23	1.04
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.14	1.04
25:YA:2701:C:H3'	25:YA:2702:U:H5"	1.38	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.56	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
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.57	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.73	1.02
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.60	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:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.21	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	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
29:YF:46:ARG:HH11	29:YF:46:ARG:HG2	1.20	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
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	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
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
25:RA:2701:C:H3'	25:RA:2702:U:H5"	1.42	1.01
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.41	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
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.25	1.01
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.44	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
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	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
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.26	1.00
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.59	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.22	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	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:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	0.99
25:YA:270(T):G:H5"	47:Y1:97:LEU:HD22	1.41	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.78	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.31	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
35:RP:50:ARG:HH21	35:RP:50:ARG:CB	1.76	0.98
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	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
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
36:RQ:79:LEU:O	36:RQ:79:LEU:HD22	1.64	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.98
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.97
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.46	0.97
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.97
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	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:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
36:YQ:79:LEU:O	36:YQ:79:LEU:HD22	1.64	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.78	0.97
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.97
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
25:RA:1019:U:HO2'	25:RA:1021:A:H2	1.11	0.96
36:RQ:79:LEU:O	36:RQ:79:LEU:HD13	1.63	0.96
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.96
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	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
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.48	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.46	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.31	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.45	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
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	0.96
25:YA:1359:A:N6	25:YA:1372:U:O4	1.99	0.96
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.25	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
1:XA:1286:A:H5"	21:XU:26:LYS:HD2	1.46	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
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.30	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	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
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.48	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.44	0.95
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.54	0.95
4:XD:94:LEU:H	4:XD:94:LEU:HD12	1.28	0.95
35:YP:62:LEU:N	35:YP:62:LEU:HD22	1.82	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	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
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.94
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.94
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.94
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.98	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	1.82	0.94
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.31	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
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
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
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
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.94
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.50	0.94
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.94
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.94
31:YH:77:LYS:HB3	31:YH:77:LYS:NZ	1.82	0.94
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.29	0.93
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ3	1.31	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.93
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.31	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
39:YT:11:GLU:CD	39:YT:11:GLU:H	1.71	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
36:RQ:59:ARG:O	36:RQ:60:ARG:CG	2.17	0.93
41:RV:99:ILE:HD13	41:RV:99:ILE:H	1.31	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	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
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
14:XN:43:CYS:O	14:XN:45:ARG:N	2.01	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.05	0.93
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.84	0.92
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
25:YA:676:A:H8	25:YA:2069:G:H21	1.13	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.35	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	0.92
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	0.94	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
14:XN:32:SER:CB	14:XN:41:ARG:HB2	2.00	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.51	0.92
14:XN:32:SER:OG	14:XN:41:ARG:HB2	1.70	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
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.92
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
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.91
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.91
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.51	0.91
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	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
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
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.00	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
47:R1:81:LYS:HA	47:R1:81:LYS:CE	2.01	0.91
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	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
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.52	0.91
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.48	0.91
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.91
25:RA:242:G:H5'	54:R8:62:LEU:HD22	1.52	0.91
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.51	0.91
22:QV:75:C:OP1	25:RA:2602:A:OP1	1.89	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
25:YA:242:G:H5'	54:Y8:62:LEU:HD22	1.53	0.90
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.90
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	2.06	0.90
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.51	0.90
38:RS:67:ARG:NH1	38:RS:67:ARG:HB2	1.85	0.90
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.03	0.90
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	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
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	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:59:ARG:O	36:RQ:60:ARG:HG3	1.72	0.90
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.90
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
40:RU:92:ARG:HG2	40:RU:92:ARG:O	1.69	0.89
47:R1:81:LYS:NZ	47:R1:81:LYS:CA	2.31	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
27:YD:44:ASN:HD22	27:YD:44:ASN:H	1.19	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	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
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	1.89	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
54:Y8:59:LYS:HB2	54:Y8:59:LYS:NZ	1.88	0.89
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.15	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
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
1:QA:411:A:H62	1:QA:413:G:H21	1.20	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
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.88	0.89
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	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
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.89
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.86	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.37	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.06	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	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
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.88
1:XA:1086:U:H3	1:XA:1099:G:H22	1.21	0.88
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.38	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.88	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.88
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.06	0.88
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.88
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.56	0.88
25:RA:1359:A:N6	25:RA:1372:U:O4	2.05	0.88
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.88
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
54:R8:59:LYS:HB2	54:R8:59:LYS:NZ	1.88	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.38	0.87
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.87
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.04	0.87
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.87
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	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
19:XS:9:VAL:HG12	50:Y4:66:SER:O	1.74	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.37	0.87
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.87
25:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.08	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.06	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.87
1:XA:664:G:H22	1:XA:741:G:H1	1.22	0.87
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.87
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.88	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
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
25:YA:67:U:H3	25:YA:74:A:H2	1.20	0.87
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.38	0.87
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.87
1:XA:971:G:HO2'	1:XA:1365:G:HO2'	1.22	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
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.86
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.22	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
38:RS:106:ARG:HB2	38:RS:106:ARG:HH11	1.39	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	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
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.40	0.86
29:RF:82:ILE:O	29:RF:82:ILE:HG13	1.73	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.53	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	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
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.41	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.56	0.86
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.58	0.86
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.86
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
3:QC:79:ARG:NE	11:XK:99:GLN:NE2	2.23	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
1:QA:1286:A:H5"	21:QU:26:LYS:HD2	1.58	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.39	0.85
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.39	0.85
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.40	0.85
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.76	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
45:YZ:151:HIS:HB3	45:YZ:170:THR:HA	1.59	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
1:XA:1321:C:H5"	1:XA:1322:C:H5"	1.59	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85
40:RU:64:ARG:HG2	40:RU:64:ARG:HH21	1.42	0.85
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	1.80	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	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
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.75	0.85
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.58	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.92	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.59	0.85
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.85
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.92	0.85
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.85
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.39	0.85
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
29:YF:82:ILE:O	29:YF:82:ILE:HG13	1.73	0.85
1:QA:1494:G:N7	58:QA:1670:PAR:N32	2.23	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
1:QA:448:A:OP2	1:QA:485:G:N2	2.10	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.40	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
1:XA:1139:G:N2	1:XA:1143:G:O6	2.09	0.84
28:YE:95:ILE:HD12	28:YE:95:ILE:H	1.42	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	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
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
25:RA:2585:U:H5	56:Z6:76:PPU:HO2'	1.23	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.59	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.76	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
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.76	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	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
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	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
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
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
1:QA:1316:G:H22	1:QA:1319:A:H5"	1.43	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.07	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.83
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.10	0.83
26:YB:42:C:N4	30:YG:91:ARG:HH21	1.76	0.83
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.58	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
4:QD:166:LYS:HG2	27:YD:134:ARG:NH1	1.93	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.59	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.83
31:RH:105:LEU:HD13	31:RH:105:LEU:H	1.42	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	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	1.94	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.61	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
1:QA:1330:U:OP1	13:QM:25:ILE:O	1.95	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
25:RA:1689:A:H62	25:RA:1698:A:H2	1.23	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	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
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	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
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.26	0.83
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.83
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.83
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.83
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.83
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
25:RA:2056:G:N2	51:R5:4:HIS:O	2.12	0.83
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.83
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.83
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.60	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	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:XA:954:G:H4'	13:XM:121:LYS:HG3	1.61	0.82
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.61	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
25:YA:2068:U:H3	25:YA:2430:A:H2	1.25	0.82
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD21	1.61	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	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
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
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
14:XN:44:LEU:HD12	14:XN:53:LEU:CD1	2.08	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
22:XV:6:G:H1	22:XV:67:C:H42	1.25	0.82
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.11	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	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
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
25:YA:265:A:N6	25:YA:427:U:O2'	2.13	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.80	0.82
1:QA:339:C:OP2	34:RO:97:ARG:NH1	2.13	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	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
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.82
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.82
32:RI:52:ARG:HB2	32:RI:56:LYS:HB3	1.62	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.81
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.81
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.81
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.81
50:Y4:71:ARG:HG3	50:Y4:71:ARG:NH1	1.90	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.62	0.81
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.44	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.09	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
10:XJ:63:PHE:HD1	14:XN:58:LYS:HA	1.43	0.81
25:YA:518:G:H4'	42:YW:18:ARG:NH1	1.92	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
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.43	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.45	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
10:XJ:6:ILE:O	10:XJ:6:ILE:HD12	1.81	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.14	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.34	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.81
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.11	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	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	0.81
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.13	0.81
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.81
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.81
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.80
25:RA:583:G:H5"	40:RU:10:ARG:HH12	1.46	0.80
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	2.10	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.80
31:RH:13:LYS:HE2	31:RH:13:LYS:HA	1.60	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.13	0.80
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.79	0.80
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.80
1:XA:1178:G:N2	1:XA:1181:G:N7	2.29	0.80
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	2.14	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.11	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.61	0.80
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.02	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.14	0.80
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.12	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
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.96	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	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
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.12	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.80
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.46	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
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	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
27:RD:34:VAL:O	27:RD:34:VAL:HG13	1.80	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.80
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.80
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.80
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	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
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.44	0.79
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.17	0.79
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.79
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.96	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
1:XA:1152:A:H5"	10:XJ:13:HIS:CD2	2.17	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
12:XL:48:PRO:HD2	12:XL:49:ASN:N	1.97	0.79
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	1.96	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.02	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
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
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
27:YD:34:VAL:O	27:YD:34:VAL:HG13	1.81	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
12:QL:48:PRO:HD2	12:QL:49:ASN:N	1.97	0.79
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.65	0.79
25:RA:2298:A:H62	25:RA:2318:G:H8	1.28	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:138:G:N2	43:YX:44:GLU:OE2	2.12	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
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
25:RA:768:G:O2'	25:RA:1379:A:N6	2.15	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
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.15	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
1:XA:1071:C:H5"	5:XE:49:PRO:HG2	1.65	0.79
1:XA:1348:U:H3	1:XA:1374:A:H2	1.30	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	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
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
25:RA:141:A:H8	25:RA:1595:G:H21	1.31	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
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.63	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.79
54:R8:59:LYS:HB2	54:R8:59:LYS:HZ2	1.47	0.79
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	2.00	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.65	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.16	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	2.17	0.79
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.79
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.79
47:Y1:11:ARG:HB3	47:Y1:11:ARG:NH1	1.98	0.79
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	1.82	0.78
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.78
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.78
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.64	0.78
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.13	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.78
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.78
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	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
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
25:RA:676:A:H8	25:RA:2069:G:H21	1.30	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.18	0.78
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
27:RD:54:ARG:HG3	27:RD:54:ARG:HH11	1.49	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
36:YQ:59:ARG:HD3	36:YQ:59:ARG:H	1.48	0.78
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.48	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
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.48	0.78
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.16	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
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	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
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
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
19:XS:42:PRO:HD3	50:Y4:63:TYR:HE2	1.49	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.66	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
1:XA:1002:G:H1	1:XA:1038:C:H42	1.31	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
4:QD:166:LYS:CG	27:YD:134:ARG:NH1	2.47	0.78
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.31	0.78
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
25:YA:602:G:HO2'	25:YA:604:G:HO2'	1.31	0.78
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.66	0.78
29:YF:145:GLU:O	29:YF:145:GLU:HG3	1.81	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	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
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.48	0.78
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.49	0.78
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.17	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
1:QA:1071:C:H5"	5:QE:49:PRO:HG2	1.66	0.78
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.84	0.78
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.78
35:RP:75:ILE:HD13	35:RP:75:ILE:N	2.00	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
25:YA:890:A:HO2'	25:YA:892:G:H8	1.30	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
1:QA:559:A:H4'	1:QA:560:U:H3'	1.64	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
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.84	0.77
25:YA:1021:A:N6	25:YA:1141:U:O2	2.17	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.94	0.77
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
1:QA:1139:G:N2	1:QA:1143:G:O6	2.16	0.77
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.77
25:RA:1332:G:H21	25:RA:1610:A:H8	1.32	0.77
25:RA:2068:U:H3	25:RA:2430:A:H2	1.31	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:25:THR:O	27:RD:27:THR:N	2.18	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
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.77
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.16	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
25:RA:83:G:N2	25:RA:103:A:OP2	2.17	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	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:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.66	0.77
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.66	0.77
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.84	0.77
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.66	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.17	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.77
27:YD:44:ASN:HD22	27:YD:44:ASN:N	1.79	0.77
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.50	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
1:XA:971:G:N2	1:XA:1363:A:OP2	2.18	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	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
25:RA:2115:G:N2	25:RA:2165:G:N7	2.29	0.77
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	1.99	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.14	0.77
25:YA:1190:G:OP1	35:YP:30:THR:OG1	2.02	0.77
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.05	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.77
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.77
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.77
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
25:YA:259:G:H21	25:YA:621:A:H8	1.31	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.77
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.77
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.77
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.77
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	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
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.77
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.77
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.76
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.76
36:YQ:59:ARG:H	36:YQ:59:ARG:CD	1.99	0.76
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.16	0.76
48:Y2:47:ASN:H	48:Y2:47:ASN:HD22	1.33	0.76
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	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	1.83	0.76
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.96	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.51	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.50	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	1.99	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:530:G:C2	25:RA:2022:U:OP1	2.38	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.01	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.01	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.50	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.97	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	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
1:XA:411:A:H62	1:XA:413:G:H21	1.34	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
25:RA:1754:C:OP1	39:RT:96:ARG:NH1	2.18	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.49	0.76
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD2	1.68	0.76
47:R1:56:GLN:NE2	47:R1:56:GLN:N	2.34	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
55:R9:1:MET:HB3	55:R9:4:ARG:NH1	2.01	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	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:1019:U:H3	25:RA:1142(A):A:H62	1.34	0.76
25:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.19	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.01	0.76
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.48	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.19	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.85	0.76
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.13	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.48	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	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	0.75
25:RA:1187:G:H5"	41:RV:81:TYR:CE2	2.21	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
34:RO:104:ARG:HH11	34:RO:104:ARG:HG2	1.50	0.75
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.75
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.75
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.86	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	1.68	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.48	0.75
35:YP:62:LEU:N	35:YP:62:LEU:CD2	2.46	0.75
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.75
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.75
28:YE:63:LEU:CD1	28:YE:65:GLY:H	2.00	0.75
54:Y8:59:LYS:HB2	54:Y8:59:LYS:HZ2	1.49	0.75
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.18	0.75
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.51	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
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.01	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.85	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.52	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	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
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.17	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.17	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	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
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.68	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.86	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	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
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	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
55:Y9:1:MET:HB3	55:Y9:4:ARG:NH1	2.01	0.75
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.16	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
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
25:YA:1496:A:H8	25:YA:1577:C:HO2'	1.34	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.67	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
12:QL:48:PRO:HD2	12:QL:49:ASN:H	1.52	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
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.16	0.75
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.69	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
47:Y1:56:GLN:NE2	47:Y1:56:GLN:N	2.34	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	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
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.75
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
1:XA:1129:C:N4	1:XA:1133:G:O6	2.20	0.75
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.75
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.19	0.75
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	2.22	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	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
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.75
28:RE:63:LEU:CD1	28:RE:65:GLY:H	2.00	0.75
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.75
25:YA:74:A:H4'	25:YA:75:G:O5'	1.87	0.75
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.75
35:YP:75:ILE:HD13	35:YP:75:ILE:N	2.00	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.02	0.75
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.17	0.74
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.74
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.00	0.74
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.74
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.74
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.74
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.74
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.69	0.74
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.87	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.87	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.03	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	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
50:R4:71:ARG:HG3	50:R4:71:ARG:NH1	1.90	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.69	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
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HG2	1.69	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.74
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.21	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.50	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
36:YQ:79:LEU:O	36:YQ:79:LEU:CD2	2.36	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.53	0.74
25:RA:2245:U:H5"	25:RA:2246:G:H5'	1.67	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.87	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
1:QA:954:G:H21	1:QA:1227:A:H62	1.34	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
4:QD:166:LYS:HD3	27:YD:188:GLU:OE2	1.88	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.88	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
25:YA:583:G:H5"	40:YU:10:ARG:HH12	1.53	0.74
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.52	0.74
25:YA:1403:C:H5"	25:YA:1471:A:H1'	1.70	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.70	0.74
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.68	0.74
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.51	0.74
1:XA:973:G:O3'	14:XN:41:ARG:NH1	2.21	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.53	0.74
39:YT:54:ARG:HG2	39:YT:54:ARG:HH11	1.52	0.74
1:QA:1106:G:H5"	3:QC:172:ARG:HG2	1.70	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
25:RA:602:G:HO2'	25:RA:604:G:HO2'	1.26	0.74
49:R3:29:ARG:HH11	49:R3:29:ARG:HB2	1.52	0.74
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.50	0.74
25:YA:1689:A:H62	25:YA:1698:A:H2	1.35	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
49:Y3:29:ARG:HB2	49:Y3:29:ARG:HH11	1.53	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.74
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
25:RA:221:A:H4'	25:RA:222:A:O5'	1.88	0.73
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.88	0.73
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.73
36:RQ:79:LEU:O	36:RQ:79:LEU:CD1	2.35	0.73
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.73
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.73
47:R1:76:ARG:HH11	47:R1:76:ARG:HG2	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	2.00	0.73
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.73
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.70	0.73
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	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
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.73
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.73
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.73
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.73
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.21	0.73
25:RA:1667:G:O2'	25:RA:1669:A:N6	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
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.73
14:XN:44:LEU:CD1	14:XN:53:LEU:CD1	2.66	0.73
25:YA:1509:C:H3'	25:YA:1510:A:H5"	1.70	0.73
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.88	0.73
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.19	0.73
25:RA:49:A:H5"	25:RA:51:G:H5'	1.70	0.73
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.06	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.17	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.88	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
40:RU:64:ARG:HH21	40:RU:64:ARG:CG	2.00	0.73
2:XB:8:LYS:HD3	2:XB:8:LYS:N	2.03	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
11:XK:17:GLY:HA3	11:XK:77:MET:HE3	1.71	0.73
14:XN:32:SER:O	14:XN:41:ARG:N	2.22	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.18	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.73
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.22	0.73
25:YA:2343:C:O2'	25:YA:2373:G:O2'	2.06	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.68	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.06	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
25:YA:2298:A:H62	25:YA:2318:G:H8	1.36	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.51	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
25:RA:1403:C:H5"	25:RA:1471:A:H1'	1.71	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	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
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
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.46	0.73
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.22	0.73
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.04	0.73
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1542:G:O6	25:RA:1543:A:N6	2.22	0.73
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	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
40:RU:34:LYS:HE2	40:RU:34:LYS:HA	1.70	0.73
45:RZ:19:ARG:NH1	45:RZ:84:GLU:O	2.22	0.73
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.73
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.73
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.73
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.70	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
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.73
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.69	0.73
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.04	0.72
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.72
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.22	0.72
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.88	0.72
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.72
12:XL:11:VAL:HG21	17:XQ:34:LYS:HD3	1.70	0.72
25:YA:2392:A:H2	25:YA:2424:C:H42	1.37	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
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.53	0.72
1:QA:1321:C:H5"	1:QA:1322:C:H5"	1.70	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
25:RA:265:A:N6	25:RA:427:U:O2'	2.21	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.71	0.72
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.19	0.72
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.70	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
25:RA:1543:A:O2'	25:RA:1544:C:H3'	1.90	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.72
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	1.90	0.72
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
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
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72
38:YS:26:LEU:O	38:YS:26:LEU:HD23	1.90	0.72
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.53	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
26:RB:42:C:H41	30:RG:91:ARG:HH21	1.38	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
12:XL:48:PRO:HD2	12:XL:49:ASN:H	1.51	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.87	0.72
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.72
25:RA:27:G:H22	25:RA:512:G:H2'	1.55	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
32:YI:144:VAL:HG13	32:YI:145:VAL:HG13	1.71	0.72
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.72
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.69	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.72
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.53	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.34	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.04	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:54:ARG:HH11	39:RT:54:ARG:HG2	1.52	0.72
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
25:YA:1798:U:H5"	27:YD:259:THR:HG22	1.71	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
31:YH:132:ARG:HH11	31:YH:132:ARG:CB	1.97	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
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
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	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
29:RF:32:LEU:O	29:RF:32:LEU:HD12	1.90	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT: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
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	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
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
25:YA:780:G:H21	25:YA:783:A:H62	1.36	0.72
29:YF:32:LEU:O	29:YF:32:LEU:HD12	1.90	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	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
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.72	0.72
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.72
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	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
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
25:RA:2114:A:N6	25:RA:2119:A:N7	2.38	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:3:HIS:O	37:RR:5:LYS:N	2.22	0.72
38:RS:26:LEU:O	38:RS:26:LEU:HD23	1.90	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	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
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
24:XX:3:G:O2'	24:XX:4:C:OP2	2.07	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:C	2.10	0.72
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	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	2.11	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
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.71
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.71
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.69	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.22	0.71
25:YA:1754:C:OP1	39:YT:96:ARG:NH1	2.21	0.71
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.89	0.71
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
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
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.55	0.71
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.36	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.07	0.71
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.71	0.71
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	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
1:XA:8:A:N6	4:XD:205:GLU:O	2.23	0.71
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.71
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	2.23	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
25:YA:2245:U:H5'	25:YA:2246:G:H5'	1.70	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.23	0.71
1:QA:1395:C:HO2'	1:QA:1401:G:HO2'	1.36	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
25:RA:620:G:H4'	25:RA:621:A:H5"	1.73	0.71
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.38	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	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
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
1:XA:1005:A:HO2'	1:XA:1037:C:HO2'	1.36	0.71
19:XS:42:PRO:HD3	50:Y4:63:TYR:CE2	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	1.91	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	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
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.91	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
1:XA:677:U:H3	1:XA:713:G:H22	1.38	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	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
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
48:Y2:41:ILE:C	48:Y2:41:ILE:HD12	2.10	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.72	0.71
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.73	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	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
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.55	0.71
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.08	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	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
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.19	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
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71
33:YN:1:MET:CE	40:YU:95:LEU:HD21	2.21	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
32:RI:4:ILE:HD11	32:RI:44:LEU:HD12	1.71	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	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
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.54	0.71
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.89	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
1:XA:448:A:OP2	1:XA:485:G:N2	2.18	0.71
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
25:YA:528:A:C2	25:YA:2042:A:H2'	2.25	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
1:QA:1312:G:H5"	50:R4:67:TYR:OH	1.90	0.71
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.02	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.04	0.71
25:RA:1332:G:N2	25:RA:1609:A:O2'	2.24	0.71
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.09	0.71
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.71
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.23	0.71
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.52	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
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.09	0.71
27:RD:263:ARG:HB2	27:RD:263:ARG:NH1	2.05	0.71
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.71
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.71
1:XA:439:A:OP2	1:XA:493:G:N1	2.21	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
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
25:RA:2438:U:O3'	25:RA:2439:A:H3'	1.91	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	1.91	0.70
31:RH:132:ARG:HH11	31:RH:132:ARG:CB	1.97	0.70
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.03	0.70
25:YA:1479:G:N7	25:YA:1510:A:N6	2.39	0.70
25:YA:2287:A:H62	25:YA:2344:U:H3	1.39	0.70
31:YH:59:ARG:HH11	31:YH:59:ARG:HG3	1.56	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
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	1.90	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	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
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.57	0.70
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.71	0.70
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.90	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.91	0.70
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
1:XA:1200:C:H4'	1:XA:1201:A:H5'	1.72	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	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
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:81:LYS:HE2	47:Y1:81:LYS:CA	2.13	0.70
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.45	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.70
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.90	0.70
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.56	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
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.92	0.70
25:YA:1113:U:OP1	31:YH:2:SER:N	2.24	0.70
25:YA:1187:G:H5"	41:YV:81:TYR:CE2	2.26	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
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.06	0.70
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	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:2306:C:H3'	25:RA:2307:G:H5"	1.72	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
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
25:YA:49:A:N7	25:YA:120:U:H5	1.89	0.70
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.25	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.07	0.70
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
1:QA:457:C:H42	1:QA:475:G:H1	1.39	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.73	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
25:RA:1332:G:N2	25:RA:1609:A:HO2'	1.90	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70
25:YA:2467:C:H4'	36:YQ:123:HIS:CD2	2.27	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.72	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.21	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
3:QC:79:ARG:HE	11:XK:99:GLN:HE22	1.37	0.70
25:RA:957:A:H5'	36:RQ:76:LYS:HD2	1.74	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.40	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.21	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
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
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.25	0.70
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.70
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
25:RA:297:C:H5"	44:RY:85:VAL:HG21	1.74	0.70
27:RD:65:ILE:HD13	27:RD:65:ILE:O	1.91	0.70
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.70
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.73	0.70
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.72	0.70
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.24	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.73	0.70
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.70
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.38	0.70
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.21	0.70
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.10	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.57	0.70
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.57	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
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.17	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
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.70
1:QA:184:G:H2'	1:QA:185:A:H8	1.57	0.69
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.69
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	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
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	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
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.57	0.69
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	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
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
46:Y0:12:ASN:HA	46:Y0:14:ARG:HH21	1.56	0.69
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.69
32:RI:88:ILE:HG12	32:RI:122:GLU:H	1.57	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
47:R1:74:VAL:HG12	47:R1:74:VAL:O	1.92	0.69
1:XA:642:A:N3	8:XH:113:SER:OG	2.22	0.69
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.69
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.69
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	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
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.57	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	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:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
14:XN:6:LEU:O	14:XN:6:LEU:HD23	1.93	0.69
34:YO:8:LEU:HD22	34:YO:8:LEU:N	2.07	0.69
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
1:QA:973:G:H3'	1:QA:974:A:H5"	1.73	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.90	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.20	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	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
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.98	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
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:2563:U:H4'	34:RO:28:SER:HA	1.75	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.92	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.06	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.92	0.69
35:YP:61:ARG:H	35:YP:61:ARG:HD2	1.58	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
1:QA:1502:A:H2	1:QA:1505:G:H1	1.41	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.74	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
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
1:XA:538:G:OP1	12:XL:113:ARG:HD2	1.92	0.69
25:YA:704:G:H2'	25:YA:726:G:H22	1.57	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
1:QA:191:G:C4	20:QT:105:SER:HB3	2.28	0.69
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.25	0.69
1:QA:951:G:OP2	13:QM:102:ARG:NH2	2.26	0.69
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.57	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	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
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
25:RA:2393:A:H4'	35:RP:61:ARG:O	1.93	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
35:RP:61:ARG:HD2	35:RP:61:ARG:H	1.58	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.93	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
47:R1:81:LYS:HE2	47:R1:81:LYS:CA	2.13	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.55	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
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.28	0.69
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.75	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:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69
35:YP:62:LEU:HD22	35:YP:62:LEU:H	1.53	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y0:27:GLU:HG3	46:Y0:68:GLU:HA	1.74	0.69
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.69
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.41	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
36:RQ:80:GLU:HG3	36:RQ:81:VAL:H	1.58	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.75	0.69
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.74	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
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.26	0.69
25:RA:2502:G:H5"	25:RA:2503:A:H5"	1.74	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.06	0.69
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.75	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	0.69
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.69
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.22	0.69
25:YA:2632:A:HO2'	25:YA:2811:G:HO2'	1.35	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	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
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.68
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.06	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	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
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.74	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.68
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.75	0.68
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.68
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.58	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.68
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.74	0.68
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.58	0.68
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.68
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.68
38:YS:57:LYS:HD3	38:YS:57:LYS:H	1.58	0.68
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.57	0.68
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.26	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.40	0.68
25:YA:2723:C:H5"	37:YR:1:MET:HG2	1.75	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	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
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	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
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.68
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	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
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.07	0.68
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.09	0.68
32:YI:73:GLU:HG3	32:YI:136:VAL:HG23	1.76	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.74	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.94	0.68
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.68
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
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	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
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
19:XS:64:GLU:HB2	50:Y4:55:ARG:HH12	1.58	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
25:YA:857:C:OP2	46:Y0:77:ARG:NH2	2.26	0.68
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.93	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.08	0.68
1:QA:266:G:H5"	1:QA:267:C:C5	2.29	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	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
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.27	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
5:XE:148:VAL:HG21	8:XH:107:LEU:HD13	1.75	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.08	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
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.58	0.68
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.76	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
25:RA:242:G:H5'	54:R8:62:LEU:CD2	2.23	0.68
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.58	0.68
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
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68
4:XD:165:MET:HA	4:XD:165:MET:HE3	1.76	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	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
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.58	0.68
36:YQ:80:GLU:HG3	36:YQ:81:VAL:H	1.58	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.08	0.68
1:QA:501:C:H2'	1:QA:502:G:H8	1.59	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	0.68
14:QN:6:LEU:O	14:QN:6:LEU:HD23	1.93	0.68
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.93	0.68
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.58	0.68
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.76	0.68
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	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
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.27	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.29	0.68
25:YA:2864:G:OP1	39:YT:119:LYS:HD2	1.93	0.68
27:YD:241:PRO:O	27:YD:243:GLY:N	2.27	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.07	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.75	0.68
17:QQ:59:ILE:HD13	17:QQ:59:ILE:N	2.09	0.68
25:RA:643:A:N1	25:RA:2369:A:O2'	2.26	0.68
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.58	0.68
31:RH:88:LEU:H	31:RH:88:LEU:HD22	1.58	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
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.76	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.68
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.68
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.76	0.68
1:QA:1226:C:O2'	13:QM:103:THR:O	2.06	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.93	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.68
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.56	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.68
10:QJ:96:ILE:HD13	10:QJ:96:ILE:N	2.09	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.29	0.67
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.76	0.67
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.60	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.94	0.67
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HD23	1.75	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	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
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.67
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.22	0.67
28:RE:13:ARG:HH11	28:RE:13:ARG:CB	2.07	0.67
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
25:YA:2277:G:H5'	36:YQ:85:LYS:HG3	1.75	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	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
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	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
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.10	0.67
25:RA:518:G:H4'	42:RW:18:ARG:NH1	2.03	0.67
31:RH:89:ILE:HG12	31:RH:89:ILE:O	1.93	0.67
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	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
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	2.18	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.42	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.91	0.67
25:RA:1300:U:H4'	25:RA:1301:A:H5"	1.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.25	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
19:XS:64:GLU:OE2	50:Y4:55:ARG:NH2	2.26	0.67
25:YA:1899:G:H21	25:YA:1902:C:N4	1.92	0.67
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.75	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:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
38:YS:67:ARG:HB2	38:YS:67:ARG:CZ	2.24	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
1:QA:581:G:N2	1:QA:760:G:N7	2.43	0.67
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.76	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
26:RB:80:U:H2'	26:RB:81:G:H21	1.59	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.60	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	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
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.29	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
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
25:RA:27:G:N2	25:RA:512:G:H2'	2.10	0.67
25:RA:483:A:H3'	25:RA:484:C:H6	1.59	0.67
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.09	0.67
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.13	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.28	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.09	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.12	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.24	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	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
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
25:YA:2580:U:H4'	28:YE:130:GLY:HA3	1.75	0.67
25:YA:2610:C:H4'	25:YA:2611:U:OP2	1.93	0.67
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
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
26:RB:42:C:N4	30:RG:91:ARG:HH21	1.91	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.57	0.67
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.15	0.67
48:R2:47:ASN:H	48:R2:47:ASN:ND2	1.92	0.67
1:XA:532:A:H2	1:XA:1206:G:H21	1.42	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.75	0.67
26:YB:15:A:H5'	26:YB:16:G:C8	2.30	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	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
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.24	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:686:U:O4	1:QA:703:G:H1'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.42	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
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.67
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.59	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
25:YA:1434:A:H61	25:YA:1558:A:N6	1.91	0.67
25:YA:2306:C:H3'	25:YA:2307:G:H5"	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
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:186:C:H5'	20:QT:78:ALA:HB1	1.77	0.67
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.67
25:RA:2131:G:H4'	25:RA:2132:U:H4'	1.77	0.67
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.67
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.67
1:XA:35:G:N2	12:XL:118:SER:OG	2.27	0.67
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.28	0.67
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.67
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.67
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.67
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.77	0.66
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.66
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.66
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.78	0.66
25:RA:2343:C:O2'	25:RA:2373:G:O2'	2.12	0.66
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	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
1:XA:797:C:OP1	11:XK:124:LYS:HE2	1.94	0.66
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.10	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
25:YA:518:G:C4'	42:YW:18:ARG:HH12	1.99	0.66
25:YA:2452:C:O4'	56:Z8:76:PPU:HB2	1.95	0.66
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.76	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
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.28	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	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
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.96	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.93	0.66
25:RA:1939:U:OP1	25:RA:2604:U:O2'	2.12	0.66
25:RA:2864:G:OP1	39:RT:119:LYS:HD2	1.96	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.25	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
32:RI:93:THR:HG22	32:RI:119:PRO:HB3	1.77	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.66
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	1.77	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.60	0.66
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.29	0.66
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.07	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:2112:G:O6	25:RA:2169:A:N6	2.29	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.94	0.66
32:RI:5:LEU:HD11	32:RI:19:VAL:HG12	1.78	0.66
34:RO:86:ILE:H	34:RO:86:ILE:HD12	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	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
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
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
40:YU:88:ILE:HD13	40:YU:88:ILE:N	2.10	0.66
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.66
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
1:QA:677:U:H3	1:QA:713:G:H22	1.40	0.66
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.61	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.29	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.31	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.95	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.95	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.25	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
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.38	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.13	0.66
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.25	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.24	0.66
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
2:XB:24:TRP:HD1	2:XB:24:TRP:H	1.43	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.28	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.96	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.76	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:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
1:XA:973:G:H3'	1:XA:974:A:H5"	1.78	0.66
7:XG:141:VAL:HG12	7:XG:141:VAL:O	1.95	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.35	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	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
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
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.96	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
25:RA:1026:U:H4'	25:RA:1027:A:OP1	1.96	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.25	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	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
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.26	0.66
40:RU:88:ILE:HD13	40:RU:88:ILE:N	2.10	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.75	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
7:XG:69:VAL:HG12	7:XG:69:VAL:O	1.95	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	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
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:860:U:H5	25:YA:917:A:C2	2.13	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
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
50:Y4:71:ARG:HH11	50:Y4:71:ARG:CG	1.98	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
1:QA:926:G:N2	24:QX:1:A:OP1	2.28	0.66
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.08	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	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
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.77	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
47:Y1:11:ARG:HB3	47:Y1:11:ARG:HH11	1.61	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
25:RA:1464:C:HO2'	25:RA:1528:A:H8	1.44	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.29	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.95	0.66
25:YA:1454:U:H5'	37:YR:63:ARG:NE	2.07	0.66
25:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.42	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.66
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.61	0.66
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.66
27:RD:237:GLU:N	27:RD:237:GLU:OE1	2.29	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.66
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.66
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.14	0.66
12:XL:48:PRO:CD	12:XL:49:ASN:N	2.57	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	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
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.66
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:25:PRO:C	12:QL:27:LEU:H	1.98	0.65
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.65
25:RA:942:G:O2'	25:RA:1189:A:N3	2.25	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
41:RV:53:GLU:HG2	41:RV:53:GLU:O	1.94	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
25:YA:2815:C:H5'	51:Y5:29:THR:HG21	1.76	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	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
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.65
1:QA:664:G:H22	1:QA:741:G:H1	1.44	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
25:RA:270(L):U:H2'	32:RI:50:ARG:HD2	1.77	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.95	0.65
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.65
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.29	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	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
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
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.11	0.65
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.65
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	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:1392:G:H21	1:XA:1502:A:H8	1.42	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.26	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	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
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.59	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
25:RA:586:A:H5'	29:RF:89:VAL:HG21	1.78	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	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
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65
43:RX:65:ARG:HD3	43:RX:65:ARG:N	2.12	0.65
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.30	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.60	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.64	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.08	0.65
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	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
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.78	0.65
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.97	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
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
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.78	0.65
26:RB:45:A:H1'	30:RG:95:ARG:HH22	1.62	0.65
36:RQ:59:ARG:C	36:RQ:60:ARG:HG3	2.17	0.65
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.78	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.26	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:CB	2.27	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.77	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
25:YA:1021:A:H8	25:YA:1022:G:H5"	1.61	0.65
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.96	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
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	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:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
27:RD:176:ARG:HH11	27:RD:176:ARG:HG2	1.61	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	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
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
1:XA:356:A:N3	1:XA:368:U:O2'	2.25	0.65
1:XA:1502:A:H2	1:XA:1505:G:H1	1.45	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.61	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.96	0.65
12:XL:48:PRO:CD	12:XL:49:ASN:H	2.10	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
1:QA:618:C:N3	1:QA:622:A:N6	2.44	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
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:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.65
1:XA:538:G:H5”	12:XL:114:LYS:HB2	1.77	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.78	0.65
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.78	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
25:YA:227:A:OP1	35:YP:76:LYS:HE3	1.97	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
45:YZ:94:GLU:HB2	45:YZ:130:PRO:HD2	1.78	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
25:RA:270(T):G:H5”	47:R1:97:LEU:HD22	1.79	0.65
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
1:XA:1014:A:H4’	19:XS:14:HIS:NE2	2.12	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
14:XN:40:CYS:SG	14:XN:43:CYS:CB	2.83	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.60	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.97	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.65
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.31	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.30	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	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
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
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.65
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	1.96	0.65
27:YD:176:ARG:HH11	27:YD:176:ARG:HG2	1.61	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	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
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
1:QA:939:G:H5"	7:QG:102:ARG:HH12	1.62	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	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:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
25:RA:227:A:OP1	35:RP:76:LYS:HE3	1.97	0.65
25:RA:2286:A:OP1	52:R6:28:ARG:NE	2.30	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.65
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.78	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.65
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	2.11	0.65
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.30	0.65
25:YA:530:G:O2'	25:YA:532:A:N7	2.30	0.65
25:YA:2415:G:H4'	35:YP:67:MET:N	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.63	0.65
41:YV:43:GLU:HA	41:YV:43:GLU:OE2	1.95	0.65
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.65
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.65
1:QA:192:U:H4'	20:QT:102:GLY:O	1.97	0.64
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.64
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.64
26:RB:42:C:C6	30:RG:69:ALA:HB2	2.31	0.64
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.64
31:RH:51:ARG:HH11	31:RH:51:ARG:HG3	1.61	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
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ3	1.60	0.64
2:XB:4:GLU:CG	2:XB:5:ILE:H	1.99	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
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.31	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.64
19:XS:64:GLU:CB	50:Y4:55:ARG:HH12	2.09	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.61	0.64
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.31	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
32:YI:129:THR:HA	32:YI:137:PRO:HA	1.80	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
4:QD:79:PHE:C	4:QD:79:PHE:HD2	2.00	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.32	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.79	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.95	0.64
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.80	0.64
1:QA:1095:U:P	1:QA:1108:G:H1	2.20	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.61	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.11	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
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
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.64
1:XA:765:G:N2	1:XA:813:U:OP2	2.31	0.64
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.79	0.64
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.64
32:YI:5:LEU:HD21	32:YI:12:LEU:HB3	1.79	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.64
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.01	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
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.79	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
25:RA:530:G:O2'	25:RA:532:A:N7	2.29	0.64
25:RA:1153:C:OP1	40:RU:76:TYR:OH	2.15	0.64
26:RB:15:A:H5'	26:RB:16:G:C8	2.32	0.64
39:RT:11:GLU:N	39:RT:11:GLU:OE1	2.27	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:52:LYS:O	54:R8:52:LYS:HG3	1.97	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.30	0.64
25:YA:1530:G:O6	25:YA:1542:G:N2	2.30	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.27	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.97	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:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.26	0.64
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	1.96	0.64
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	1.97	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
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.12	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.60	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:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	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
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.79	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.96	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
54:R8:56:GLU:N	54:R8:56:GLU:OE1	2.30	0.64
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.78	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.27	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.77	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.96	0.64
25:YA:259:G:N2	25:YA:621:A:H8	1.95	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
29:YF:46:ARG:HG2	29:YF:46:ARG:NH1	2.00	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.61	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	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
6:QF:92:LYS:HB2	6:QF:92:LYS:HZ2	1.62	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
46:R0:18:ALA:O	46:R0:20:ARG:NH1	2.31	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
25:YA:242:G:H5'	54:Y8:62:LEU:CD2	2.27	0.64
25:YA:1796:U:H2'	25:YA:1797:C:C6	2.32	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.80	0.64
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.79	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
11:QK:103:LEU:H	11:QK:103:LEU:HD22	1.62	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.28	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
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
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.97	0.64
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	0.64
25:RA:242:G:H5"	54:R8:3:LYS:HE3	1.80	0.64
25:RA:2405:G:O2'	25:RA:2411:A:N6	2.31	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.63	0.64
2:XB:8:LYS:H	2:XB:8:LYS:CD	2.09	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.30	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
32:YI:129:THR:HG22	32:YI:137:PRO:HB3	1.80	0.64
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.79	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
11:QK:17:GLY:HA3	11:QK:77:MET:HE3	1.78	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.64
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.64
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.33	0.64
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.63	0.64
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	1.98	0.64
25:YA:620:G:H4'	25:YA:621:A:C5'	2.28	0.64
25:YA:2114:A:N6	25:YA:2119:A:N7	2.45	0.64
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.64
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.12	0.63
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.13	0.63
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
25:RA:2832:U:H4'	25:RA:2833:G:H5"	1.79	0.63
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.63
34:RO:86:ILE:HD12	34:RO:86:ILE:N	2.13	0.63
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.98	0.63
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	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
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.62	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
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.63
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HA	1.80	0.63
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.63
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.13	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
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
22:QV:6:G:H1	22:QV:67:C:H42	1.44	0.63
25:RA:635:C:O2'	25:RA:639:U:OP1	2.16	0.63
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.80	0.63
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.63
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	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
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.79	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.14	0.63
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.12	0.63
1:QA:355:C:H1'	1:QA:388:G:H2'	1.79	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
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.27	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
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:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
32:RI:1:MET:HG3	32:RI:23:PRO:HB3	1.80	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.98	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.63	0.63
25:YA:2335:A:O2'	25:YA:2336:A:O5'	2.15	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.62	0.63
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.13	0.63
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	1.97	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.63	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
2:XB:158:LEU:O	2:XB:158:LEU:HD12	1.97	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
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.34	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
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	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
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.79	0.63
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.63
25:RA:1059:G:O6	25:RA:1079:C:N4	2.29	0.63
26:RB:52:A:O2'	26:RB:53:A:N7	2.32	0.63
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.80	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:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.33	0.63
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	1.98	0.63
25:YA:1077:A:H5'	25:YA:1078:U:H5"	1.80	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.81	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.99	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.11	0.63
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.79	0.63
25:RA:2415:G:H4'	35:RP:67:MET:N	2.14	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.99	0.63
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	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
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.32	0.63
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.14	0.63
25:YA:1291:C:H5'	25:YA:1536:A:H5'	1.81	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.63
48:Y2:46:GLN:OE1	48:Y2:46:GLN:HA	1.97	0.63
1:QA:78:G:O6	1:QA:91:C:N4	2.30	0.63
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.63
25:RA:278:A:H61	25:RA:362:U:H3	1.47	0.63
25:RA:2287:A:N6	25:RA:2344:U:H3	1.97	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.80	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.29	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
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	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
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.14	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.19	0.63
25:YA:1348:G:H2'	25:YA:1349:A:H5"	1.80	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
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.63
33:YN:61:ARG:HA	33:YN:61:ARG:HE	1.63	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
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.28	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.96	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.10	0.63
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.82	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
25:RA:1798:U:H5"	27:RD:259:THR:HG22	1.81	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
1:XA:1314:C:N4	19:XS:3:ARG:O	2.23	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.81	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.20	0.63
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.63
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
35:RP:108:LYS:HD2	35:RP:108:LYS:H	1.64	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.63
36:RQ:83:MET:HB2	46:R0:7:LEU:HD12	1.79	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.63	0.63
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	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:R1:87: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
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.13	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
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	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
39:YT:49:VAL:HG13	39:YT:49:VAL:O	1.99	0.63
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.34	0.63
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.63
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:HB3	1.62	0.63
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.62
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.62
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.62
29:RF:107:LYS:O	29:RF:108:LYS:C	2.36	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.98	0.62
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.62
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.34	0.62
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.14	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.62
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.62
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.80	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.62
25:YA:562:U:O2'	25:YA:572:A:O4'	2.14	0.62
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.32	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
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
33:YN:87:LEU:O	33:YN:87:LEU:HD23	1.99	0.62
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.62
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.62
1:QA:752:G:H1'	1:QA:754:C:H41	1.63	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.99	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
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
25:RA:483:A:H3'	25:RA:484:C:C6	2.33	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	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
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.64	0.62
1:XA:1074:G:H4'	2:XB:104:ASN:HB2	1.81	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.62
25:YA:297:C:H5"	44:YY:85:VAL:HG21	1.80	0.62
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.62
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
48:R2:40:SER:C	48:R2:42:GLY:N	2.50	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.34	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
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
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.10	0.62
25:YA:2311:A:C8	30:YG:82:LEU:HD11	2.34	0.62
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.32	0.62
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.25	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
39:YT:22:PHE:N	39:YT:22:PHE:HD2	1.97	0.62
40:YU:34:LYS:HA	40:YU:34:LYS:CE	2.29	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
25:RA:1795:C:O2	27:RD:255:LYS:HE2	1.99	0.62
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.63	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.13	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	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
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
30:YG:94:LEU:H	30:YG:94:LEU:HD23	1.64	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	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:299:G:H2'	1:QA:300:A:C8	2.34	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.33	0.62
25:RA:259:G:H21	25:RA:621:A:H8	1.46	0.62
30:RG:94:LEU:HD23	30:RG:94:LEU:N	2.14	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
33:RN:133:GLN:O	33:RN:134:ARG:HB3	1.99	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.80	0.62
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.62
1:XA:1049:U:HO2'	14:XN:2:ALA:N	1.97	0.62
1:XA:1106:G:H5"	3:XC:172:ARG:HG2	1.81	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
29:YF:107:LYS:O	29:YF:108:LYS:C	2.36	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
39:YT:96:ARG:NH1	39:YT:96:ARG:HB2	2.14	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.99	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
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
25:RA:307:G:H21	25:RA:330:A:H62	1.46	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
35:RP:65:ARG:HH11	35:RP:65:ARG:CG	2.06	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	2.00	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
25:YA:2723:C:O3'	37:YR:1:MET:HE2	1.99	0.62
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.65	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	1.99	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.65	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.31	0.62
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.14	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
25:YA:443:A:N7	29:YF:45:ARG:HD2	2.15	0.62
25:YA:928:G:O2'	49:Y3:43:ILE:HD11	1.99	0.62
25:YA:2219:G:OP1	27:YD:172:TYR:OH	2.17	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
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.30	0.62
25:RA:1043:C:N3	25:RA:1112:G:N2	2.39	0.62
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.35	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	2.00	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	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
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
47:Y1:91:LYS:HA	47:Y1:91:LYS:HE3	1.82	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.32	0.62
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.33	0.62
25:RA:2745:C:O2	31:RH:139:GLN:NE2	2.28	0.62
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	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	2.29	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:452:A:H62	1:XA:480:U:H3	1.48	0.62
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	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
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.62
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
32:YI:21:VAL:HG21	32:YI:25:TYR:HD1	1.63	0.62
35:YP:50:ARG:CB	35:YP:50:ARG:NH2	2.58	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
1:QA:411:A:N6	1:QA:413:G:H21	1.96	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
25:RA:76:C:O2'	48:R2:62:THR:HG21	1.98	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.62
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.80	0.62
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.82	0.62
48:R2:69:ARG:HB2	48:R2:69:ARG:CZ	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
52:R6:18:ARG:O	52:R6:18:ARG:HD2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:503:C:OP2	12:XL:116:SER:HB3	1.99	0.62
1:XA:1305:G:H22	1:XA:1331:G:H2'	1.62	0.62
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.62
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	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
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
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.00	0.61
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.61
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.61
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.61
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.61
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.61
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.34	0.61
25:RA:1318:C:H2'	25:RA:1319:G:H5"	1.82	0.61
25:RA:1348:G:H2'	25:RA:1349:A:H5"	1.82	0.61
25:RA:2392:A:H2	25:RA:2424:C:H42	1.46	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	2.00	0.61
30:RG:170:ARG:O	30:RG:174:GLU:HB2	2.00	0.61
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.61
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.60	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
1:XA:673:G:H2'	1:XA:674:G:C8	2.35	0.61
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.12	0.61
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.61
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.61
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.61
14:XN:32:SER:O	14:XN:40:CYS:C	2.37	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.61
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.61
35:YP:108:LYS:HD2	35:YP:108:LYS:H	1.64	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
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.61
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.25	0.61
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	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
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.33	0.61
1:XA:595:G:H1'	1:XA:596:C:H5	1.65	0.61
1:XA:1023:G:H3'	1:XA:1024:G:H5"	1.81	0.61
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.61
25:YA:898:C:H2'	25:YA:899:A:H5'	1.81	0.61
25:YA:1026:U:H4'	25:YA:1027:A:OP1	2.00	0.61
26:YB:75:G:H5"	45:YZ:36:LYS:HE2	1.82	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
25:RA:859:G:O2'	25:RA:860:U:O2	2.10	0.61
26:RB:55:U:H4'	30:RG:29:TRP:HE1	1.65	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.82	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.00	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.61
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.61
40:YU:88:ILE:H	40:YU:88:ILE:CD1	2.05	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.01	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
26:RB:55:U:C4'	30:RG:29:TRP:HE1	2.13	0.61
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	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
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.29	0.61
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:77:ARG:HB2	6:XF:77:ARG:NH1	2.15	0.61
25:YA:2335:A:O2'	25:YA:2336:A:H2'	2.00	0.61
25:YA:2850:A:N7	25:YA:2868:A:O2'	2.30	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
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	1.99	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	2.00	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
10:QJ:98:ILE:HD12	10:QJ:98:ILE:N	2.16	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.61
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	2.01	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
25:RA:65:C:O2'	25:RA:456:C:N3	2.33	0.61
25:RA:2439:A:C8	25:RA:2439:A:H5'	2.35	0.61
26:RB:75:G:H5"	45:RZ:36:LYS:HE2	1.83	0.61
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.82	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:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	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:826:C:H2'	1:XA:827:U:O2	2.00	0.61
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.82	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
25:YA:127:A:H5"	25:YA:128:C:C6	2.36	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
1:QA:128:G:O2'	17:QQ:3:LYS:NZ	2.34	0.61
1:QA:671:G:H2'	1:QA:672:U:H6	1.64	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
12:QL:48:PRO:CD	12:QL:49:ASN:H	2.10	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.30	0.61
25:RA:49:A:N7	25:RA:120:U:H5	1.98	0.61
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.82	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.82	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.64	0.61
1:XA:953:G:H5'	1:XA:965:A:H61	1.65	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.61
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
25:YA:2529:G:O6	55:Y9:31:LYS:NZ	2.34	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
28:YE:95:ILE:HD12	28:YE:95:ILE:N	2.15	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:46:VAL:O	41:YV:46:VAL:HG13	2.01	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
1:QA:189:U:O2'	1:QA:190:G:OP1	2.19	0.61
1:QA:346:G:H1'	1:QA:347:G:H5'	1.81	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
25:RA:27:G:HO2'	25:RA:28:A:H8	1.46	0.61
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.34	0.61
25:RA:1794:U:H2'	25:RA:1795:C:H6	1.66	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	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:522:C:H41	12:XL:53:ARG:HH22	1.46	0.61
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.00	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	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
19:XS:68:GLY:N	50:Y4:59:PHE:CE1	2.68	0.61
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.17	0.61
29:YF:164:ARG:HH11	29:YF:164:ARG:HG2	1.66	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	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
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.83	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.31	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.30	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.81	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.16	0.61
1:XA:243:A:H4'	1:XA:244:U:O5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	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
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:96:LEU:HB3	13:XM:97:PRO:HD2	1.82	0.61
25:YA:662:G:H5"	35:YP:15:ARG:O	2.00	0.61
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.61
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	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
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
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
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.83	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.83	0.61
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.36	0.61
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.35	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.29	0.61
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.20	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.61
25:RA:900:A:H3'	25:RA:901:A:H8	1.64	0.61
26:RB:38:C:H42	26:RB:44:G:H1	1.47	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.61
25:YA:247:G:H4'	25:YA:386:G:C5	2.35	0.61
25:YA:468:G:N7	53:Y7:39:ARG:NH2	2.49	0.61
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.11	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.31	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
25:RA:25:U:H5"	42:RW:80:PRO:HD3	1.83	0.61
25:RA:247:G:H4'	25:RA:386:G:C5	2.35	0.61
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.61
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.61
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	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
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
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:1057:A:H62	25:YA:1086:A:H2'	1.66	0.61
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.35	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
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.66	0.61
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.61
35:YP:27:HIS:ND1	35:YP:27:HIS:N	2.49	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	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
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.12	0.60
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
25:RA:395:U:H2'	25:RA:396:G:N7	2.16	0.60
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.37	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:91:LEU:HD22	34:RO:91:LEU:N	2.16	0.60
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	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	1.83	0.60
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	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
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.01	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
25:YA:503:A:H4'	25:YA:504:U:H5'	1.83	0.60
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.37	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
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.82	0.60
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.34	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
31:RH:44:VAL:HG22	31:RH:44:VAL:O	2.01	0.60
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.83	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
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.82	0.60
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.60
25:YA:1019:U:HO2'	25:YA:1021:A:H2	1.49	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.98	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	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
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.83	0.60
16:QP:8:ARG:HH11	16:QP:8:ARG:HG2	1.64	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.35	0.60
25:RA:2131:G:N2	25:RA:2158:A:N7	2.49	0.60
27:RD:263:ARG:HH11	27:RD:263:ARG:CB	2.14	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.65	0.60
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.60
41:RV:35:LEU:O	41:RV:35:LEU:HD23	2.01	0.60
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
25:YA:551:G:H5'	25:YA:1220:A:H1'	1.82	0.60
25:YA:2068:U:N3	25:YA:2430:A:H2	1.97	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.02	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.00	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.83	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
25:RA:612:G:H2'	25:RA:613:U:O2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.17	0.60
25:RA:2636:U:OP1	28:RE:79:ARG:HA	2.01	0.60
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.17	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.84	0.60
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.83	0.60
25:YA:1210:A:H5'	25:YA:1210:A:H8	1.67	0.60
27:YD:263:ARG:HH11	27:YD:263:ARG:CB	2.15	0.60
28:YE:37:ARG:NE	28:YE:37:ARG:CA	2.64	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.37	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
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.01	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
1:QA:22:G:H4'	1:QA:885:G:C8	2.36	0.60
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.84	0.60
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.36	0.60
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	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	1.83	0.60
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	2.16	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.34	0.60
25:RA:1582:C:HO2'	25:RA:1586:A:H8	1.48	0.60
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.36	0.60
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.60
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.82	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.32	0.60
44:RY:19:LYS:O	44:RY:19:LYS:HG3	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	2.11	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
14:XN:44:LEU:HD12	14:XN:48:ALA:HB2	1.83	0.60
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.64	0.60
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.66	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.48	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
25:RA:1262:A:N3	51:R5:10:LYS:HE3	2.16	0.60
25:RA:2723:C:H5"	37:RR:1:MET:HG2	1.82	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	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
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.81	0.60
1:XA:67:C:H2'	1:XA:68: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
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
27:YD:166:GLN:HE21	27:YD:166:GLN:CA	2.14	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
41:YV:35:LEU:HD23	41:YV:35:LEU:O	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.21	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.81	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.02	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.60
1:XA:377:G:OP1	16:XP:5:ARG:NH1	2.35	0.60
1:XA:745:C:OP1	1:XA:851:G:O2'	2.19	0.60
1:XA:1152:A:H5"	10:XJ:13:HIS:HD2	1.64	0.60
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.60
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	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
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.17	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
23:XY:30:C:H2'	23:XY:31:G:H8	1.67	0.60
25:YA:558:G:P	33:YN:111:PRO:HD2	2.42	0.60
25:YA:1812:A:O2'	27:YD:45:ASN:HB2	2.00	0.60
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.19	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
41:YV:99:ILE:N	41:YV:99:ILE:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
1:QA:119:A:H4'	1:QA:120:A:O5'	2.00	0.60
1:QA:1086:U:H3	1:QA:1099:G:H22	1.48	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
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	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
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.34	0.60
25:RA:1509:C:H3'	25:RA:1510:A:H5"	1.83	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.83	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.83	0.60
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.34	0.60
1:XA:842:C:O2'	1:XA:848:C:N4	2.35	0.60
1:XA:1059:C:H2'	1:XA:1060:C:H6	1.67	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60
26:YB:40:U:O2'	26:YB:45:A:N6	2.31	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
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
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
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
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.83	0.60
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.60
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.65	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
28:RE:37:ARG:NE	28:RE:37:ARG:CA	2.64	0.60
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.60
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
1:XA:674:G:H2'	1:XA:675:A:H8	1.67	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
7:XG:150:ALA:HA	11:XK:59:TYR:CD2	2.36	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
25:YA:1049:C:H2'	25:YA:1050:A:H5"	1.84	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	2.01	0.60
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.60
45:YZ:80:ARG:HH21	45:YZ:82:ARG:HH22	1.49	0.60
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.60
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.36	0.60
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.30	0.60
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.66	0.60
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	2.02	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
37:RR:75:LEU:HD13	37:RR:75:LEU:C	2.22	0.60
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.60
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.32	0.60
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
22:XV:61:C:H2'	22:XV:62:C:H6	1.67	0.60
25:YA:566:U:OP1	35:YP:29:LYS:HE2	2.01	0.60
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.60
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.60
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.60
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.02	0.59
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
25:RA:1826:G:OP1	27:RD:224:ALA:N	2.32	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.17	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: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
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.01	0.59
25:YA:2168:G:N2	25:YA:2170:A:N7	2.50	0.59
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	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
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.59
41:YV:1:MET:CE	41:YV:43:GLU:HG2	2.32	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.83	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
1:QA:1152:A:H5"	10:QJ:13:HIS:HD2	1.67	0.59
1:QA:1238:A:H62	1:QA:1299:A:H61	1.48	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.65	0.59
25:RA:1287:A:N7	37:RR:107:ASP:HB2	2.17	0.59
25:RA:2250:G:C6	36:RQ:82:ARG:HD2	2.37	0.59
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.39	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	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:677:U:H1'	11:XK:119:CYS:SG	2.42	0.59
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.37	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.02	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.59
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.84	0.59
47:Y1:81:LYS:HA	47:Y1:81:LYS:HZ3	0.70	0.59
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.36	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.65	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
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.84	0.59
25:RA:414:C:O2	25:RA:1864:U:O2'	2.18	0.59
25:RA:2287:A:H62	25:RA:2344:U:H3	1.50	0.59
25:RA:2292:C:P	38:RS:17:ARG:HH22	2.25	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.84	0.59
27:RD:166:GLN:CA	27:RD:166:GLN:HE21	2.14	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.33	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
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.26	0.59
25:YA:2469:A:H5"	25:YA:2470:G:C8	2.37	0.59
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.85	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.43	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.83	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	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
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.50	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
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
25:RA:558:G:P	33:RN:111:PRO:HD2	2.43	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	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	2.02	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
1:XA:939:G:H5"	7:XG:102:ARG:HH22	1.67	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
19:XS:5:LEU:CD2	50:Y4:67:TYR:CZ	2.85	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
27:YD:174:ILE:HD12	27:YD:174:ILE:N	2.16	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.17	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:48:PRO:CD	12:QL:49:ASN:N	2.57	0.59
25:RA:24:G:O2'	42:RW:78:GLU:O	2.19	0.59
25:RA:654(A):G:H3'	25:RA:654(A):G:OP2	2.03	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.84	0.59
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.84	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
13:XM:93:ARG:NH1	25:YA:887:A:OP1	2.35	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
23:XY:30:C:H2'	23:XY:31:G:C8	2.38	0.59
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.31	0.59
25:YA:2287:A:N6	25:YA:2344:U:H3	2.00	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	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
46:Y0:50:ASN:HB3	46:Y0:63:VAL:HG22	1.83	0.59
1:QA:475:G:H2'	1:QA:476:G:H8	1.67	0.59
1:QA:501:C:H2'	1:QA:502:G:C8	2.37	0.59
1:QA:690:G:H2'	1:QA:691:G:O4'	2.03	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
25:RA:384:U:H2'	25:RA:385:C:H6	1.67	0.59
25:RA:2635:C:H5"	28:RE:78:LEU:HA	1.85	0.59
26:RB:44:G:H1'	26:RB:47:C:H42	1.68	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
14:XN:15:LYS:HD2	14:XN:16:PHE:CZ	2.36	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
25:YA:1939:U:OP1	25:YA:2604:U:O2'	2.18	0.59
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	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
33:YN:41:ASP:O	33:YN:48:MET:HE3	2.02	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.84	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59
1:QA:939:G:H5"	7:QG:102:ARG:NH1	2.18	0.59
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.67	0.59
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.35	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.67	0.59
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.43	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
1:XA:501:C:O3'	12:XL:118:SER:HB2	2.03	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59
19:XS:67:VAL:HG11	50:Y4:59:PHE:O	2.03	0.59
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2469:A:H5”	25:YA:2470:G:H8	1.68	0.59
25:YA:2723:C:OP1	37:YR:3:HIS:HD2	1.86	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59
32:YI:5:LEU:HD11	32:YI:19:VAL:HG12	1.84	0.59
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.03	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
34:YO:107:ARG:O	34:YO:112:MET:HE3	2.02	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	2.48	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
1:QA:1078:U:O2’	5:QE:130:ASN:OD1	2.12	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.59
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.84	0.59
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	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
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	2.03	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
37:RR:79:LEU:HD23	37:RR:79:LEU:C	2.23	0.59
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.67	0.59
13:XM:8:GLU:OE1	30:YG:115:ARG:NH2	2.35	0.59
25:YA:1341:U:OP2	25:YA:1394:U:O2’	2.15	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
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.37	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
25:RA:747:U:N3	51:R5:2:ALA:N	2.51	0.59
25:RA:2344:U:C2	52:R6:37:ARG:HD3	2.38	0.59
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.59
27:RD:44:ASN:N	27:RD:44:ASN:ND2	2.42	0.59
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
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
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
40:RU:52:ARG:HG2	40:RU:52:ARG:NH1	2.18	0.59
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.59
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.36	0.59
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.38	0.59
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.59
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
25:YA:888:C:H3'	25:YA:889:C:H4'	1.85	0.59
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.36	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	2.22	0.59
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.18	0.59
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.59
1:QA:1238:A:H62	1:QA:1299:A:N6	2.00	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	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
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.59
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.84	0.59
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.50	0.59
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.03	0.59
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.02	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
1:XA:565:U:H5"	1:XA:566:G:H2'	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.18	0.59
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
6:XF:97:PHE:C	6:XF:97:PHE:CD2	2.76	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:1667:G:O2'	25:YA:1669:A:N6	2.35	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
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	2.64	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
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.59
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.59
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.85	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	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
25:RA:994:C:H3'	40:RU:54:LYS:HE3	1.83	0.58
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
32:RI:2:LYS:HA	32:RI:20:ASP:HA	1.85	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	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
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.58
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.58
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.58
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.68	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
37:YR:63:ARG:HH11	37:YR:63:ARG:HG3	1.68	0.58
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.58
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.58
1:QA:1510:U:H2'	1:QA:1511:G:C8	2.38	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.58
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
25:RA:1342:A:OP1	43:RX:36:LYS:NZ	2.35	0.58
25:RA:2314:C:OP1	30:RG:91:ARG:NH1	2.36	0.58
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	2.03	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
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
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.32	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.71	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.16	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	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
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.58
1:QA:1152:A:H5"	10:QJ:13:HIS:CD2	2.37	0.58
5:QE:111:GLU:C	5:QE:113:ALA:H	2.06	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
25:RA:288:C:H2'	25:RA:289:A:H8	1.68	0.58
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.32	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.21	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.18	0.58
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.67	0.58
45:RZ:45:ASP:OD1	45:RZ:49:ARG:NE	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
25:YA:1309:G:H4'	53:Y7:7:PRO:HB2	1.84	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.85	0.58
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.02	0.58
1:QA:1023:G:H3'	1:QA:1024:G:H5"	1.84	0.58
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.36	0.58
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.38	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.28	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.39	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
48:R2:69:ARG:NH1	48:R2:69:ARG:CB	2.67	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.03	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
25:YA:2506:U:H2'	25:YA:2506:U:O2	2.01	0.58
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.58
32:YI:62:LYS:HE3	32:YI:134:PRO:HG2	1.85	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
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.04	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.66	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
25:RA:704:G:H1'	25:RA:727:A:N6	2.18	0.58
25:RA:2848:G:HO2'	25:RA:2849:U:P	2.26	0.58
26:RB:45:A:O4'	30:RG:95:ARG:NH1	2.36	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.69	0.58
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.68	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:95:ILE:HD12	42:RW:95:ILE:O	2.04	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
51:R5:60:VAL:HG13	51:R5:60:VAL:OXT	2.03	0.58
1:XA:521:G:H4'	12:XL:73:GLU:HG3	1.86	0.58
1:XA:1048:G:OP1	14:XN:3:ARG:HB3	2.04	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.84	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
14:XN:42:ILE:C	14:XN:43:CYS:O	2.40	0.58
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
25:YA:565:C:OP1	41:YV:82:ARG:NH2	2.37	0.58
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.16	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	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
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
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58
36:YQ:79:LEU:HD12	46:Y0:5:LYS:HD3	1.86	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
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
1:QA:673:G:H2'	1:QA:674:G:C8	2.38	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.03	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.03	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
48:R2:16:LEU:O	48:R2:16:LEU:CG	2.49	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:272:C:H2'	1:XA:273:A:H8	1.68	0.58
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	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
19:XS:68:GLY:HA3	50:Y4:68:ARG:CB	2.29	0.58
22:XV:75:C:OP1	25:YA:2602:A:OP1	2.20	0.58
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.85	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.85	0.58
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	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
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.21	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.58
26:RB:40:U:O2'	26:RB:45:A:N6	2.31	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	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
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.38	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
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.58
38:YS:42:ASP:C	38:YS:44:LYS:H	2.06	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.33	0.58
45:YZ:72:ARG:NH2	45:YZ:97:GLU:O	2.27	0.58
1:QA:939:G:H5"	7:QG:102:ARG:HH22	1.68	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
25:RA:1899:G:H21	25:RA:1902:C:N4	2.01	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.39	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.58
38:RS:67:ARG:HB2	38:RS:67:ARG:HH11	1.65	0.58
45:RZ:150:LEU:HD21	45:RZ:172:ALA:HB3	1.86	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
50:R4:38:LYS:C	50:R4:40:HIS:N	2.52	0.58
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.58
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.03	0.58
1:XA:1112:C:N3	3:XC:178:LEU:HD23	2.19	0.58
2:XB:111:ARG:HA	2:XB:111:ARG:NE	2.18	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.58
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.52	0.58
25:YA:307:G:H21	25:YA:330:A:H62	1.51	0.58
25:YA:1266:G:O4'	42:YW:15:ARG:NH2	2.36	0.58
25:YA:1728:G:H8	25:YA:1732:A:H62	1.51	0.58
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	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
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
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.84	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.33	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	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:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
25:RA:2306:C:H2'	25:RA:2307:G:H21	1.68	0.58
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.84	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.04	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R0:53:MET:HB3	46:R0:59:LEU:HD23	1.85	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
1:XA:828:A:H2'	1:XA:829:G:O4'	2.04	0.58
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.37	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.58
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.03	0.58
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.46	0.58
25:YA:2401:U:H2'	25:YA:2402:C:H5"	1.85	0.58
31:YH:4:ILE:HD13	31:YH:4:ILE:H	1.68	0.58
45:YZ:126:VAL:HG12	45:YZ:163:LEU:HA	1.86	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.34	0.58
51:Y5:60:VAL:HG13	51:Y5:60:VAL:OXT	2.03	0.58
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.68	0.58
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.19	0.58
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.39	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
25:RA:2331:G:O2'	46:R0:43:THR:HG22	2.03	0.58
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.58
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.04	0.58
31:RH:4:ILE:HD13	31:RH:4:ILE:H	1.68	0.58
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.04	0.58
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.58
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.19	0.58
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
1:XA:31:G:O2'	1:XA:48:C:N4	2.36	0.58
1:XA:737:A:H2'	1:XA:738:C:C6	2.39	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.58
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.58
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.58
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.58
1:QA:620:C:H2'	1:QA:621:A:O4'	2.04	0.57
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
25:RA:774:A:H2	25:RA:787:U:HO2'	1.50	0.57
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.20	0.57
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.04	0.57
30:RG:53:LEU:C	30:RG:53:LEU:HD23	2.25	0.57
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.57
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.57
42:RW:1:MET:HA	42:RW:1:MET:HE3	1.85	0.57
47:R1:81:LYS:HA	47:R1:81:LYS:HZ3	0.74	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
1:XA:688:G:H2'	1:XA:689:C:H6	1.69	0.57
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.57
12:XL:54:LYS:N	12:XL:54:LYS:HD2	2.18	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:1103:A:H5'	25:YA:1104:C:H5	1.69	0.57
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.37	0.57
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.57
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	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
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
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.57
1:QA:720:C:H5"	18:QR:52:PRO:HA	1.85	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.35	0.57
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.36	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)
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
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.86	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	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	2.17	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	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:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.57
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.57
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.39	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.86	0.57
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.57
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.57
1:QA:10:A:H2'	1:QA:11:G:H8	1.70	0.57
1:QA:920:U:H2'	1:QA:921:U:C6	2.40	0.57
1:QA:1080:A:H5"	5:QE:16:THR:HG21	1.86	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	2.17	0.57
25:RA:479:A:N3	25:RA:481:G:H5"	2.19	0.57
25:RA:747:U:C4	51:R5:2:ALA:N	2.72	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.86	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.35	0.57
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.57
47:R1:81:LYS:HE2	47:R1:81:LYS:H	1.62	0.57
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:674:G:H2'	1:XA:675:A:C8	2.38	0.57
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.40	0.57
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.69	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:747:U:C4	51:Y5:2:ALA:N	2.73	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.57
34:YO:71:ARG:HG3	34:YO:71:ARG:HH11	1.69	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.70	0.57
46:Y0:10:THR:HG22	46:Y0:12:ASN:H	1.70	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.39	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ2	1.69	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.51	0.57
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.22	0.57
25:RA:2466:C:OP1	55:R9:4:ARG:HB2	2.04	0.57
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.85	0.57
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.86	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	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
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.37	0.57
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	2.13	0.57
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.04	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.50	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.20	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.04	0.57
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1695:G:H1'	27:YD:8:PRO:O	2.04	0.57
25:YA:1799:G:O2'	27:YD:270:ILE:HD11	2.04	0.57
25:YA:2477:C:H2'	55:Y9:1:MET:HG3	1.86	0.57
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.39	0.57
28:YE:41:LYS:HE2	28:YE:41:LYS:HA	1.86	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.18	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	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
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.57
25:RA:997:G:OP1	40:RU:93:LYS:HD3	2.05	0.57
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.38	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.86	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
30:RG: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:20:MET:HG2	34:RO:21:CYS:N	2.20	0.57
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	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
1:XA:192:U:H4'	20:XT:102:GLY:O	2.03	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	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
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.18	0.57
25:YA:704:G:H2'	25:YA:726:G:N2	2.18	0.57
25:YA:2600:A:N7	27:YD:237:GLU:OE2	2.38	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
45:YZ:52:SER:O	45:YZ:52:SER:OG	2.17	0.57
45:YZ:89:PHE:HE1	45:YZ:96:VAL:HG21	1.69	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.20	0.57
1:QA:266:G:O2'	1:QA:267:C:OP2	2.22	0.57
1:QA:976:G:H5"	1:QA:1358:U:O2'	2.04	0.57
1:QA:1053:G:H2'	1:QA:1199:U:C5	2.39	0.57
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.39	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
25:RA:630:G:N2	25:RA:633:A:OP2	2.34	0.57
25:RA:709:U:H2'	25:RA:710:G:C8	2.40	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.68	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.69	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.84	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57
36:RQ:22:LYS:HA	45:RZ:78:LYS:HD2	1.86	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
1:XA:1226:C:O2'	13:XM:103:THR:O	2.10	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.33	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
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
25:YA:2396:G:H4'	47:Y1:30:VAL:HA	1.87	0.57
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	1.85	0.57
30:YG:53:LEU:C	30:YG:53:LEU:HD23	2.25	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
40:YU:52:ARG:HG2	40:YU:52:ARG:NH1	2.18	0.57
45:YZ:181:GLU:HG2	45:YZ:183:LEU:HG	1.85	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:243:A:H4'	1:QA:244:U:O5'	2.03	0.57
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.39	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
25:RA:184:C:H2'	25:RA:185:U:C6	2.39	0.57
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.27	0.57
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.20	0.57
25:RA:2494:G:H2'	25:RA:2495:G:H8	1.69	0.57
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	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	2.03	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.40	0.57
26:YB:50:G:OP1	38:YS:63:THR:HG23	2.04	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.17	0.57
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.69	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.39	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:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
25:RA:1309:G:H4'	53:R7:7:PRO:HB2	1.87	0.57
26:RB:52:A:H62	38:RS:33:LYS:HG3	1.69	0.57
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.05	0.57
1:XA:1069:C:O3'	5:XE:25:ARG:NH1	2.37	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
23:XY:37:1MG:O2'	25:YA:1913:A:N1	2.35	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
27:YD:34:VAL:O	27:YD:34:VAL:CG1	2.51	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	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
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.57
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.38	0.57
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.22	0.57
1:QA:1453:G:H8	20:QT:39:LYS:HZ1	1.52	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
25:RA:1006:C:H1'	33:RN:106:MET:HE3	1.87	0.57
25:RA:1678:G:H22	25:RA:1989:G:H22	1.53	0.57
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.05	0.57
25:RA:2311:A:C1'	30:RG:82:LEU:HD11	2.34	0.57
25:RA:2452:C:O4'	56:Z6:76:PPU:HB2	2.05	0.57
26:RB:42:C:O4'	30:RG:69:ALA:HB2	2.04	0.57
27:RD:239:ARG:O	27:RD:240:ALA:HB2	2.05	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
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.57
40:RU:79:PHE:CD2	40:RU:79:PHE:C	2.78	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.57
25:YA:221:A:H4'	25:YA:222:A:O5'	2.05	0.57
25:YA:1688:U:O2	25:YA:1700:A:H5"	2.05	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.86	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
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	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
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.57
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.04	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.57
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.57
25:RA:102:G:H4'	25:RA:103:A:O5'	2.05	0.57
25:RA:118:A:N3	25:RA:178:G:H1'	2.20	0.57
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.70	0.57
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.57
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.04	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.05	0.57
1:XA:1055:A:H4'	3:XC:161:GLU:OE2	2.05	0.57
1:XA:1305:G:OP1	21:XU:2:GLY:HA2	2.03	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
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
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	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
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.57
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.56
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.56
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.87	0.56
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.39	0.56
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.72	0.56
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.05	0.56
25:RA:2638:G:HO2'	25:RA:2639:A:H8	1.53	0.56
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.56
36:RQ:80:GLU:OE1	46:R0:7:LEU:HB3	2.05	0.56
45:RZ:111:VAL:HG22	45:RZ:112:ARG:H	1.70	0.56
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.35	0.56
1:XA:792:A:H4'	1:XA:793:U:O5'	2.04	0.56
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.56
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.56
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.56
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.04	0.56
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.56
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.56
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.04	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
1:QA:1316:G:N2	1:QA:1319:A:H5"	2.19	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.88	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.70	0.56
1:XA:719:C:C2	18:XR:50:ILE:HD13	2.40	0.56
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:991:U:O4	1:XA:1212:U:O2'	2.18	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.52	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.41	0.56
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.40	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	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
1:QA:671:G:H2'	1:QA:672:U:C6	2.40	0.56
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.50	0.56
1:QA:1224:G:O2'	1:QA:1322:C:OP2	2.23	0.56
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.23	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.70	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	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
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:328:U:H4'	44:RY:68:HIS:CD2	2.40	0.56
25:RA:796:C:H2'	25:RA:797:C:C6	2.40	0.56
25:RA:1496:A:H8	25:RA:1577:C:HO2'	1.52	0.56
25:RA:2451:A:N6	56:Z6:76:PPU:HE2	2.20	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
36:RQ:59:ARG:C	36:RQ:60:ARG:CG	2.74	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	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
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
1:XA:188:U:H2'	1:XA:189:U:H5"	1.87	0.56
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.36	0.56
1:XA:1348:U:H4'	9:XI:120:ARG:HD2	1.87	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.56
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
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
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:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
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
25:YA:83:G:N2	25:YA:103:A:OP2	2.31	0.56
25:YA:263:C:H2'	25:YA:264:C:O4'	2.04	0.56
25:YA:593:G:H2'	25:YA:594:U:C6	2.41	0.56
25:YA:1932:A:H2'	25:YA:1933:G:O4'	2.05	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
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.87	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	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:68:ALA:O	40:YU:71:GLN:HB2	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.05	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.56
55:Y9:2:LYS:HD2	55:Y9:33:LYS:O	2.05	0.56
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.25	0.56
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.56
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.56
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.40	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
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
44:RY:97:ARG:O	44:RY:97:ARG:HG2	2.05	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.21	0.56
1:XA:339:C:H5	34:YO:97:ARG:HH12	1.52	0.56
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.05	0.56
1:XA:1219:U:OP1	14:XN:19:ARG:NH2	2.30	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	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
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.56
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
25:YA:99:U:H4'	25:YA:101:G:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:330:A:HO2'	25:YA:331:A:H8	1.53	0.56
25:YA:1364:G:N7	47:Y1:2:SER:N	2.52	0.56
25:YA:1796:U:H2'	25:YA:1797:C:H6	1.70	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	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
40:YU:104:GLN:OE1	40:YU:104:GLN:N	2.35	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.87	0.56
1:QA:372:C:H42	1:QA:389:A:H62	1.53	0.56
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.35	0.56
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	2.39	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.56
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.56
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.38	0.56
25:RA:2250:G:C2	36:RQ:82:ARG:HB3	2.40	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.87	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56
28:RE:117:MET:O	28:RE:117:MET:HG3	2.06	0.56
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.56
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	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
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
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
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.88	0.56
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.40	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.05	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.24	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.54	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.87	0.56
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
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.08	0.56
1:QA:668:G:O2'	15:QO:46:HIS:HB3	2.04	0.56
1:QA:1288:A:N3	1:QA:1352:C:O2'	2.37	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
25:RA:323:G:H2'	29:RF:169:ASN:OD1	2.04	0.56
25:RA:1857:G:O2'	25:RA:1885:A:N6	2.37	0.56
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
32:RI:98:ALA:HB2	32:RI:111:PRO:HB3	1.87	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.54	0.56
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.04	0.56
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.39	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
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
25:YA:395:U:H2'	25:YA:396:G:N7	2.21	0.56
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.21	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.23	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.39	0.56
1:QA:1348:U:C4	1:QA:1374:A:H2	2.23	0.56
4:QD:165:MET:HA	4:QD:165:MET:CE	2.36	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.20	0.56
25:RA:857:C:OP2	46:R0:77:ARG:NH2	2.39	0.56
25:RA:1454:U:H5'	37:RR:63:ARG:NE	2.12	0.56
25:RA:1678:G:N2	25:RA:1989:G:H22	2.03	0.56
25:RA:2377:A:H2	38:RS:18:ILE:HD11	1.70	0.56
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.86	0.56
34:RO:107:ARG:O	34:RO:112:MET:HE3	2.05	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56
45:RZ:110:GLY:HA2	45:RZ:111:VAL:O	2.05	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.25	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
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	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
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.56
25:YA:2469:A:H2	25:YA:2481:G:H21	1.54	0.56
25:YA:2636:U:OP1	28:YE:79:ARG:HA	2.06	0.56
25:YA:2787:C:HO2'	25:YA:2810:A:HO2'	1.53	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.98	0.56
35:YP:59:LEU:O	35:YP:59:LEU:HD23	2.06	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.71	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	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
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.58	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
25:RA:588:U:H2'	25:RA:589:C:C6	2.40	0.56
25:RA:2198:A:HO2'	25:RA:2199:A:P	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
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.71	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
19:XS:67:VAL:N	50:Y4:59:PHE:CZ	2.74	0.56
25:YA:1600:C:H4'	53:Y7:49:ARG:HE	1.69	0.56
27:YD:239:ARG:O	27:YD:240:ALA:HB2	2.05	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
44:YY:95:LYS:HE3	44:YY:95:LYS:O	2.06	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
1:QA:17:U:H2'	1:QA:18:C:C6	2.40	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.56
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.87	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	2.09	0.56
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.27	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
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.61	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
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
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.20	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	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
1:QA:501:C:O3'	12:QL:118:SER:HB2	2.06	0.56
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.56
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.06	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
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.56
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.56
25:RA:1428:C:N4	25:RA:1570:A:OP2	2.33	0.56
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.69	0.56
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.86	0.56
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.71	0.56
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.19	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:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.56
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.56
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.71	0.56
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.56
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.56
1:XA:695:A:H61	1:XA:797:C:H1'	1.70	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	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	1.88	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.53	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.40	0.56
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.56
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.56
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
1:QA:833:U:H2'	1:QA:834:C:C6	2.42	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.89	0.55
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	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:558:G:OP1	33:RN:111:PRO:HD2	2.06	0.55
26:RB:42:C:O2	30:RG:92:VAL:HA	2.06	0.55
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.55
32:RI:30:LEU:HB3	32:RI:36:ALA:HB3	1.88	0.55
39:RT:105:LEU:C	39:RT:107:ASP:H	2.08	0.55
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:58:VAL:O	12:XL:65:GLU:HA	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
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.34	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.55
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
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.55
45:YZ:125:LEU:HG	45:YZ:164:ALA:HB3	1.87	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.05	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.05	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.24	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
32:RI:116:LEU:O	32:RI:118:LYS:N	2.39	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	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
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.21	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.16	0.55
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	2.07	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.55
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.71	0.55
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
25:YA:565:C:H2'	25:YA:566:U:O4'	2.06	0.55
25:YA:612:G:H2'	25:YA:613:U:O2	2.06	0.55
25:YA:1464:C:HO2'	25:YA:1528:A:H8	1.53	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
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	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
45:YZ:121:HIS:ND1	45:YZ:123:ASP:O	2.39	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	2.02	0.55
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
1:QA:966:G:O2'	9:QI:127:LYS:O	2.24	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
9:QI:128:ARG:NH2	22:QV:35:A:OP2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:65:ARG:HB2	15:QO:65:ARG:NH1	2.20	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.55
25:RA:1264:G:H3'	25:RA:1265:A:H5"	1.87	0.55
25:RA:1771:C:HO2'	25:RA:1786:A:H8	1.54	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
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.55
36:RQ:63:LYS:HD2	45:RZ:175:VAL:HG21	1.88	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
44:RY:95:LYS:HB2	44:RY:95:LYS:NZ	2.21	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
1:XA:458:C:H2'	1:XA:464:G:H8	1.70	0.55
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.88	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.06	0.55
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
25:YA:67:U:N3	25:YA:74:A:H2	1.98	0.55
25:YA:278:A:O2'	25:YA:279:C:O4'	2.25	0.55
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.88	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
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.22	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.11	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
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
1:QA:826:C:H2'	1:QA:827:U:O2	2.06	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.05	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.55
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.21	0.55
25:RA:898:C:H2'	25:RA:899:A:H5'	1.88	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	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:1399:C:C2	1:XA:1502:A:N6	2.74	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.06	0.55
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.39	0.55
25:YA:1903:G:OP1	27:YD:241:PRO:HG2	2.07	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
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
25:RA:587:C:H4'	25:RA:588:U:O5'	2.06	0.55
25:RA:1329:U:H5"	25:RA:1330:C:H5	1.71	0.55
25:RA:1338:G:N7	43:RX:62:LYS:NZ	2.50	0.55
25:RA:1858:G:O2'	25:RA:1884:A:N6	2.39	0.55
25:RA:2848:G:O2'	25:RA:2849:U:OP2	2.20	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
1:XA:542:G:OP1	4:XD:10:ARG:NH2	2.33	0.55
1:XA:791:G:H2'	1:XA:792:A:H5'	1.89	0.55
1:XA:1211:U:H4'	1:XA:1213:A:H1'	1.88	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:848:G:H2'	25:YA:849:A:C8	2.42	0.55
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.42	0.55
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.07	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
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.88	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	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	2.74	0.55
1:QA:6:G:H4'	1:QA:298:A:H4'	1.88	0.55
1:QA:420:U:H4'	1:QA:421:U:H5	1.71	0.55
1:QA:980:C:H5'	1:QA:981:U:OP2	2.07	0.55
1:QA:1118:C:OP1	9:QI:9:ARG:HD3	2.06	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.07	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:593:G:H2'	25:RA:594:U:C6	2.42	0.55
25:RA:1043:C:H42	25:RA:1112:G:H1	1.54	0.55
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.42	0.55
25:RA:1794:U:H2'	25:RA:1795:C:C6	2.41	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	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
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.55
40:RU:104:GLN:OE1	40:RU:104:GLN:N	2.35	0.55
42:RW:1:MET:C	42:RW:64:MET:HE1	2.27	0.55
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.22	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	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
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
25:YA:851:U:H1'	49:Y3:46:ASN:HD21	1.71	0.55
25:YA:1416:G:H2'	25:YA:1417:C:C6	2.41	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.49	0.55
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.26	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
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
25:RA:270(T):G:C5'	47:R1:97:LEU:HD22	2.36	0.55
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.41	0.55
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.55
32:RI:31:LEU:HD21	32:RI:38:LEU:HG	1.88	0.55
34:RO:1:MET:HE2	34:RO:67:LYS:HG2	1.88	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.22	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	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
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
15:XO:65:ARG:HB2	15:XO:65:ARG:NH1	2.20	0.55
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.59	0.55
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.06	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.69	0.55
29:YF:28:ILE:HD12	29:YF:28:ILE:O	2.06	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	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:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.55
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.54	0.55
1:QA:652:U:H1'	1:QA:653:A:H2	1.71	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
25:RA:1782:C:H1'	25:RA:2609:U:H5"	1.89	0.55
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.87	0.55
26:RB:50:G:OP1	38:RS:63:THR:HG23	2.07	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	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
38:RS:13:ARG:O	38:RS:13:ARG:HD2	2.06	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	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
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.20	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	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
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
9:XI:128:ARG:NH2	22:XV:35:A:OP2	2.40	0.55
10:XJ:16:LEU:HD13	10:XJ:16:LEU:O	2.07	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.72	0.55
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.39	0.55
25:YA:1309:G:OP1	53:Y7:9:ARG:HD3	2.06	0.55
25:YA:2445:G:OP1	29:YF:74:ARG:NH2	2.40	0.55
25:YA:2656:U:H3	25:YA:2665:A:H2	1.55	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	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
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.06	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.06	0.55
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.88	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.71	0.55
1:QA:1266:G:N2	1:QA:1269:A:OP2	2.30	0.55
3:QC:188:LEU:N	3:QC:188:LEU:HD22	2.21	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	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
25:RA:922:U:H2'	25:RA:923:C:C6	2.42	0.55
25:RA:1264:G:H5'	51:R5:11:THR:HG21	1.89	0.55
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.36	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.06	0.55
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.36	0.55
1:XA:1301:U:H3'	1:XA:1302:U:H5'	1.87	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	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
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	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
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.55
25:YA:207:A:H2'	25:YA:208:C:O4'	2.06	0.55
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.21	0.55
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.07	0.55
25:YA:2724:C:OP1	28:YE:118:LYS:NZ	2.34	0.55
34:YO:19:ILE:O	34:YO:19:ILE:HD13	2.06	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.20	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.55
39:YT:29:ARG:HH11	39:YT:29:ARG:HB2	1.72	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	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
50:Y4:71:ARG:NH1	50:Y4:71:ARG:CG	2.61	0.55
1:QA:792:A:H4'	1:QA:793:U:O5'	2.06	0.55
1:QA:939:G:H5"	7:QG:102:ARG:NH2	2.22	0.55
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.55
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.55
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	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:1309:G:OP1	53:R7:9:ARG:HD3	2.07	0.55
26:RB:42:C:H2'	26:RB:43:C:O4'	2.06	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.07	0.55
33:RN:101:HIS:CD2	33:RN:101:HIS:C	2.79	0.55
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.55
35:RP:59:LEU:O	35:RP:59:LEU:HD23	2.06	0.55
36:RQ:79:LEU:HD12	46:R0:5:LYS:HD3	1.89	0.55
41:RV:99:ILE:N	41:RV:99:ILE:CD1	2.65	0.55
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
1:XA:976:G:H5"	1:XA:1358:U:O2'	2.06	0.55
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.89	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.06	0.55
25:YA:242:G:H5"	54:Y8:3:LYS:HE3	1.89	0.55
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	2.07	0.55
25:YA:2811:G:O6	25:YA:2889:C:N4	2.29	0.55
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.55	0.55
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.55
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	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
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.55
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.37	0.54
1:QA:429:U:H4'	1:QA:430:A:OP1	2.06	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)
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
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.54
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.54
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
25:RA:695:G:OP1	25:RA:1380:G:H4'	2.07	0.54
25:RA:878:A:N6	25:RA:899:A:O2'	2.40	0.54
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.40	0.54
25:RA:1049:C:H2'	25:RA:1050:A:H5"	1.88	0.54
25:RA:1203:G:H3'	25:RA:1204:A:H5"	1.89	0.54
25:RA:1364:G:N7	47:R1:2:SER:N	2.56	0.54
25:RA:2790:A:H2'	25:RA:2791:C:H5"	1.88	0.54
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.54
30:RG:135:LEU:HD12	30:RG:135:LEU:N	2.21	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.40	0.54
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.54
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.07	0.54
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	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
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.55	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:1320:C:H42	19:XS:36:ARG:HG3	1.70	0.54
1:XA:1431:C:H2'	1:XA:1432:G:O4'	2.07	0.54
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.54
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.54
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.40	0.54
25:YA:1359:A:N6	25:YA:1372:U:C4	2.74	0.54
25:YA:2250:G:C5	36:YQ:82:ARG:HD2	2.42	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
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.71	0.54
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
46:Y0:22:GLY:N	46:Y0:39:ARG:O	2.35	0.54
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.55	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.22	0.54
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.08	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
25:RA:1567:A:H5'	27:RD:58:HIS:ND1	2.22	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.38	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.54
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.43	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
4:XD:19:LEU:N	4:XD:19:LEU:HD23	2.23	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	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:26:G:H1'	25:YA:515:A:H61	1.72	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.63	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
39:YT:6:LEU:O	39:YT:7:ILE:C	2.44	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	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
44:YY:2:ARG:HG2	44:YY:2:ARG:NH1	2.22	0.54
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.54
1:QA:243:A:N6	1:QA:281:G:O2'	2.40	0.54
1:QA:1053:G:N7	1:QA:1200:C:H5"	2.22	0.54
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.11	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.22	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
25:RA:1434:A:H61	25:RA:1558:A:N6	2.04	0.54
25:RA:1444(A):A:H4'	25:RA:1460:A:O2'	2.06	0.54
29:RF:62:ARG:HB3	29:RF:62:ARG:NH1	2.22	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.54
53:R7:18:PHE:C	53:R7:18:PHE:CD2	2.81	0.54
1:XA:258:G:H2'	1:XA:259:G:H8	1.73	0.54
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.21	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
9:XI:114:TYR:O	9:XI:114:TYR:CD2	2.59	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
25:YA:573:G:N1	25:YA:2031:A:OP2	2.26	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
32:YI:33:ARG:HB3	32:YI:35:LEU:HG	1.89	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	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:1053:G:O6	1:QA:1199:U:H2'	2.08	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
4:QD:197:PRO:HD3	6:XF:16:GLN:CG	2.37	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.37	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:QV:17:C:OP1	22:QV:61:C:H5'	2.07	0.54
25:RA:1902:C:H5'	27:RD:246:PRO:HD3	1.90	0.54
25:RA:2150:U:H2'	25:RA:2151:G:C8	2.42	0.54
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.43	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.50	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
44:RY:95:LYS:HD3	44:RY:95:LYS:N	2.23	0.54
47:R1:91: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:966:G:O2'	9:XI:127:LYS:O	2.25	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.37	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.42	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	2.07	0.54
25:YA:2757:A:OP1	55:Y9:19:ARG:HA	2.07	0.54
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.22	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
44:YY:95:LYS:HB2	44:YY:95:LYS:NZ	2.21	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.54
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
4:QD:33:MET:HE1	4:QD:37:PRO:HA	1.88	0.54
4:QD:166:LYS:CD	27:YD:134:ARG:HH11	2.18	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2853:C:H2'	25:RA:2854:G:H8	1.71	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.90	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	2.08	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.54
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.54
1:XA:302:G:O3'	12:XL:17:LYS:HE2	2.06	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.37	0.54
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.70	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.43	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
30:YG:83:ARG:HG3	30:YG:86:MET:HE1	1.89	0.54
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
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
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54
1:QA:31:G:O2'	1:QA:48:C:N4	2.39	0.54
1:QA:103:C:P	20:QT:17:ARG:HH21	2.30	0.54
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.40	0.54
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	0.54
25:RA:1693:U:H1'	27:RD:14:ARG:NH2	2.22	0.54
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.11	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.06	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
45:RZ:108:PRO:HA	45:RZ:142:SER:HA	1.90	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
1:XA:272:C:H2'	1:XA:273:A:C8	2.43	0.54
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.25	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
25:YA:1061:U:H3'	25:YA:1062:G:H5"	1.90	0.54
25:YA:2466:C:H5'	55:Y9:5:ALA:HB3	1.90	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	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
1:QA:601:C:H2'	1:QA:602:A:C8	2.43	0.54
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
22:QV:10:G:N2	22:QV:26:G:H1'	2.23	0.54
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.55	0.54
25:RA:1056:G:O2'	25:RA:1086:A:O2'	2.26	0.54
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.88	0.54
25:RA:2867:G:O2'	25:RA:2868:A:O5'	2.26	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.72	0.54
32:RI:133:HIS:HB2	32:RI:134:PRO:HD2	1.90	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.54	0.54
1:XA:986:A:H1'	19:XS:54:GLY:O	2.07	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	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
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.89	0.54
25:YA:264:C:C2'	25:YA:265:A:H5"	2.37	0.54
25:YA:265:A:O2'	25:YA:266:G:H4'	2.08	0.54
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.07	0.54
25:YA:747:U:N3	51:Y5:2:ALA:N	2.56	0.54
25:YA:1085:A:O2'	25:YA:1086:A:OP1	2.22	0.54
25:YA:1678:G:H22	25:YA:1989:G:H22	1.55	0.54
25:YA:1899:G:H21	25:YA:1902:C:H41	1.53	0.54
27:YD:25:THR:O	27:YD:25:THR:HG23	2.07	0.54
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.22	0.54
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.54
28:YE:134:ILE:C	28:YE:134:ILE:HD12	2.28	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.39	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.72	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.73	0.54
38:YS:13:ARG:O	38:YS:13:ARG:HD2	2.06	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
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	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:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	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
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
22:QV:40:C:H2'	22:QV:41:C:H6	1.73	0.54
25:RA:2074:U:H2'	25:RA:2075:U:C6	2.43	0.54
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	2.08	0.54
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.90	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	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
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
41:RV:45:THR:HG22	41:RV:45:THR:O	2.08	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.30	0.54
1:XA:1364:U:HO2'	1:XA:1365:G:P	2.30	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.54
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.54
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.43	0.54
25:YA:2683:C:OP1	39:YT:53:ARG:NH2	2.40	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.88	0.54
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	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
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.43	0.54
1:QA:986:A:H1'	19:QS:54:GLY:O	2.08	0.54
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.54
25:RA:2022:U:O2'	25:RA:2617:C:H5'	2.07	0.54
25:RA:2212:A:H1'	25:RA:2215:G:C5	2.42	0.54
25:RA:2845:G:H5"	39:RT:55:ASN:HA	1.88	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
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.64	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.54
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.54
36:RQ:60:ARG:HH12	36:RQ:113:GLN:HE22	1.55	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
1:XA:22:G:H4'	1:XA:885:G:C8	2.42	0.54
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.43	0.54
1:XA:993:G:O6	1:XA:1045:C:N4	2.27	0.54
1:XA:1095:U:P	1:XA:1108:G:H1	2.30	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
7:XG:12:LEU:N	7:XG:12:LEU:HD22	2.23	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.54
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.54
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
25:YA:918:A:N3	26:YB:80:U:O2'	2.35	0.54
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.43	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.54
28:YE:186:GLY:O	28:YE:188:VAL:N	2.40	0.54
34:YO:49:ARG:HB3	34:YO:49:ARG:NH1	2.23	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	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
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.54
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.54
55:Y9:1:MET:HB3	55:Y9:4:ARG:CZ	2.37	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.54
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.54
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.88	0.54
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.22	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
25:RA:623:G:H2'	25:RA:624:C:C6	2.43	0.54
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.43	0.54
25:RA:2573:C:N4	56:Z6:75:C:O2'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.54
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.54
28:RE:54:GLN:NE2	28:RE:54:GLN:N	2.55	0.54
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.27	0.54
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.54
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ2	1.71	0.54
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.43	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.54
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.54
25:YA:813:U:H2'	25:YA:814:C:C6	2.43	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
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	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
34:YO:1:MET:HE2	34:YO:67:LYS:HG2	1.89	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
41:YV:45:THR:HG22	41:YV:45:THR:O	2.08	0.54
44:YY:87:LYS:HB2	44:YY:87:LYS:NZ	2.23	0.54
1:QA:45:U:H2'	1:QA:46:G:C8	2.43	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
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
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.90	0.53
12:QL:10:LEU:HB3	17:QQ:32:TYR:CE2	2.44	0.53
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.55	0.53
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.22	0.53
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.53
25:RA:263:C:H2'	25:RA:264:C:O4'	2.08	0.53
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.44	0.53
25:RA:2166:G:N2	25:RA:2168:G:OP1	2.41	0.53
25:RA:2506:U:O2	25:RA:2506:U:H2'	2.07	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	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
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.53
40:RU:47:TYR:C	40:RU:47:TYR:CD2	2.81	0.53
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.41	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
25:YA:229:A:OP1	25:YA:229:A:H4'	2.07	0.53
25:YA:2567:G:H2'	25:YA:2568:C:C6	2.43	0.53
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.53
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.53
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.53
39:YT:88:ILE:C	39:YT:88:ILE:HD12	2.29	0.53
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.56	0.53
48:Y2:47:ASN:ND2	48:Y2:47:ASN:N	2.54	0.53
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.61	0.53
1:QA:266:G:H5"	1:QA:267:C:H5	1.71	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.09	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
25:RA:593:G:O3'	54:R8:61:LEU:HD22	2.08	0.53
25:RA:864:G:H1'	25:RA:914:C:H42	1.74	0.53
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.89	0.53
25:RA:2844:G:H3'	25:RA:2845:G:H8	1.73	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	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
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:1190:G:OP1	3:XC:5:ILE:HD12	2.08	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
13:XM:57:ARG:HH21	50:Y4:34:GLU:HA	1.74	0.53
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.37	0.53
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.53
25:YA:746:A:C5	25:YA:2611:U:H5"	2.43	0.53
25:YA:1678:G:N2	25:YA:1989:G:H22	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.08	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.06	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.90	0.53
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	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
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.53
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.53
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	1.91	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
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.39	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.53
1:QA:266:G:H5'	1:QA:268:C:H41	1.72	0.53
1:QA:590:C:OP1	8:QH:29:SER:HA	2.08	0.53
1:QA:842:C:O2'	1:QA:848:C:N4	2.42	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	0.53
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	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
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.53
25:RA:222:A:H3'	25:RA:421:U:H5"	1.91	0.53
25:RA:524:U:H2'	25:RA:525:U:C6	2.44	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	2.10	0.53
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
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.37	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
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.53
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.90	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
1:XA:134:A:H61	16:XP:25:ARG:NH1	2.05	0.53
1:XA:347:G:O2'	1:XA:348:G:H5"	2.08	0.53
1:XA:963:G:H21	10:XJ:55:LYS:CE	2.21	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
25:YA:540:G:H5'	25:YA:541:C:OP2	2.09	0.53
25:YA:1998:G:OP2	28:YE:136:ARG:NH2	2.37	0.53
25:YA:2633:G:H1'	28:YE:62:PRO:HG2	1.90	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.53
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	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
47:Y1:91:LYS:HA	47:Y1:91:LYS:CE	2.38	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.44	0.53
2:QB:75:LYS:HD3	2:QB:75:LYS:C	2.28	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	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
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
18:QR:58:LEU:HD12	18:QR:58:LEU:H	1.72	0.53
25:RA:458:G:O2'	25:RA:469:G:O6	2.23	0.53
25:RA:639:U:H2'	25:RA:640:C:C6	2.44	0.53
25:RA:1588:C:H2'	25:RA:1589:C:C6	2.44	0.53
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.43	0.53
27:RD:25:THR:O	27:RD:25:THR:HG23	2.07	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:7:G:H5'	1:XA:298:A:O4'	2.08	0.53
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.43	0.53
2:XB:178:ARG:HD2	8:XH:71:GLY:HA2	1.89	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
25:YA:307:G:H21	25:YA:330:A:N6	2.07	0.53
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	2.09	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	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
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.91	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
45:YZ:124:ILE:HG22	45:YZ:126:VAL:HG13	1.90	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
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	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
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
22:QV:69:C:H2'	22:QV:70:G:C8	2.44	0.53
25:RA:74:A:H4'	25:RA:75:G:O5'	2.07	0.53
25:RA:469:G:O6	53:R7:37:LYS:HE2	2.07	0.53
25:RA:662:G:H5"	35:RP:15:ARG:O	2.08	0.53
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.23	0.53
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.91	0.53
25:RA:2466:C:H5'	55:R9:5:ALA:HB3	1.90	0.53
26:RB:44:G:H1'	26:RB:47:C:N4	2.24	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
38:RS:25:ARG:HH11	38:RS:25:ARG:CB	2.22	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
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.90	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
14:XN:40:CYS:SG	14:XN:42:ILE:N	2.81	0.53
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.09	0.53
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.33	0.53
25:YA:1769:G:O2'	25:YA:1958:C:OP1	2.24	0.53
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.07	0.53
25:YA:2466:C:OP1	55:Y9:4:ARG:HB2	2.08	0.53
25:YA:2758:A:C4	31:YH:67:LEU:HD21	2.44	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
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.44	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.72	0.53
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
25:RA:859:G:N2	25:RA:917:A:OP2	2.33	0.53
25:RA:1268:A:H2'	25:RA:1269:A:O4'	2.08	0.53
25:RA:1600:C:H4'	53:R7:49:ARG:HE	1.73	0.53
26:RB:55:U:H2'	26:RB:56:G:C8	2.43	0.53
28:RE:134:ILE:C	28:RE:134:ILE:HD12	2.28	0.53
32:RI:11:ASN:O	32:RI:12:LEU:HB2	2.09	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.38	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
36:RQ:119:ARG:HG2	36:RQ:119:ARG:NH1	2.20	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
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.27	0.53
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
45:RZ:27:VAL:HG13	45:RZ:87:ASP:HB3	1.91	0.53
45:RZ:117:LEU:HA	45:RZ:174:VAL:HA	1.91	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:125:PHE:HD1	11:XK:125:PHE:N	2.05	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.90	0.53
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.73	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
25:YA:1404:C:O2'	25:YA:1405:U:H5'	2.08	0.53
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.09	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	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
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
50:Y4:49:PHE:N	50:Y4:49:PHE:CD1	2.77	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.42	0.53
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.23	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	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
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
25:RA:155:C:H42	25:RA:171:G:H1	1.57	0.53
25:RA:249:C:O2	54:R8:12:LYS:HE3	2.09	0.53
25:RA:1952:A:N3	25:RA:2560:C:O2'	2.37	0.53
25:RA:2261:C:C6	46:R0:16:SER:HB3	2.43	0.53
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.28	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.66	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.90	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:981:U:H5	1:XA:982:U:HO2'	1.55	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.44	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
25:YA:1448:G:H5'	25:YA:1543:A:OP1	2.08	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.09	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.24	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
46:Y0:11:ARG:O	46:Y0:14:ARG:NH2	2.42	0.53
47:Y1:20:ARG:HG2	47:Y1:20:ARG:NH1	2.24	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
51:Y5:60:VAL:OXT	51:Y5:60:VAL:CG1	2.56	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.72	0.53
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.53
26:RB:42:C:H41	30:RG:91:ARG:NH2	2.06	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	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
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
45:RZ:163:LEU:H	45:RZ:163:LEU:HD12	1.72	0.53
46:R0:11:ARG:O	46:R0:14:ARG:NH2	2.42	0.53
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.07	0.53
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.55	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.90	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
23:XY:29:U:H2'	23:XY:30:C:H6	1.74	0.53
25:YA:25:U:H5"	42:YW:80:PRO:HD3	1.90	0.53
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.08	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
40:YU:39:LEU:O	40:YU:40:PHE:C	2.48	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.28	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
1:QA:7:G:H5'	1:QA:298:A:O4'	2.09	0.53
1:QA:246:A:N6	1:QA:281:G:H1'	2.24	0.53
1:QA:757:U:H2'	1:QA:758:G:O4'	2.09	0.53
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.26	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
25:RA:678:C:H2'	25:RA:679:C:C6	2.44	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.53
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.08	0.53
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.08	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.73	0.53
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
1:XA:116:A:H61	1:XA:313:A:H1'	1.74	0.53
1:XA:1200:C:O2'	1:XA:1201:A:OP2	2.20	0.53
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.29	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.53
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.53
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:900:A:H5'	25:YA:901:A:OP2	2.09	0.53
25:YA:2250:G:C2	36:YQ:82:ARG:HB3	2.43	0.53
25:YA:2776:A:OP1	25:YA:2776:A:H3'	2.08	0.53
26:YB:12:C:O2'	46:Y0:74:ARG:HG3	2.08	0.53
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.68	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.71	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
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.07	0.53
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.53
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.53
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.53
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
19:QS:65:ASN:ND2	19:QS:65:ASN:H	2.07	0.53
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.09	0.53
27:RD:34:VAL:O	27:RD:34:VAL:CG1	2.50	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:126:PRO:HD2	31:RH:127:GLU:H	1.72	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
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.09	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	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
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
13:XM:65:LYS:HE2	50:Y4:50:VAL:HG11	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.53
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.53
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
25:YA:248:G:H5'	25:YA:250:G:N7	2.24	0.53
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.57	0.53
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.53
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.53
33:YN:109:LYS:HD2	33:YN:109:LYS:H	1.73	0.53
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
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
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.53
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.43	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
6:QF:89:MET:HG2	6:QF:89:MET:O	2.09	0.52
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	0.52
25:RA:270(R):G:H2'	25:RA:270(S):G:H8	1.73	0.52
25:RA:583:G:OP2	40:RU:10:ARG:NH1	2.42	0.52
25:RA:1050:A:H8	25:RA:2751:G:HO2'	1.57	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
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.52
1:XA:250:A:H4'	1:XA:251:G:O5'	2.07	0.52
1:XA:939:G:H5"	7:XG:102:ARG:NH2	2.24	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:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.52
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.72	0.52
16:XP:75:ARG:C	16:XP:77:ALA:H	2.11	0.52
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.52
25:YA:247:G:O6	54:Y8:12:LYS:NZ	2.25	0.52
25:YA:534:U:H5'	40:YU:42:ALA:HB1	1.92	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.52
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.72	0.52
31:YH:44:VAL:O	31:YH:44:VAL:CG2	2.57	0.52
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.52
32:YI:1:MET:HG3	32:YI:23:PRO:HB3	1.90	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.20	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
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.91	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.52
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.09	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
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	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
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.52
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.52
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.13	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
25:YA:620:G:H4'	25:YA:621:A:H5"	1.91	0.52
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.74	0.52
25:YA:2277:G:OP2	46:Y0:10:THR:HG21	2.10	0.52
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.74	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.10	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	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
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
1:QA:921:U:O2'	5:QE:19:MET:O	2.17	0.52
1:QA:1224:G:N1	1:QA:1322:C:H1'	2.23	0.52
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.22	0.52
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.92	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
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.09	0.52
25:RA:140:A:H8	25:RA:1408:C:O2'	1.91	0.52
25:RA:814:C:H41	35:RP:25:SER:HA	1.74	0.52
25:RA:1859:A:N6	25:RA:1883:G:O2'	2.42	0.52
25:RA:2306:C:H2'	25:RA:2307:G:N2	2.24	0.52
29:RF:192:LEU:HD21	29:RF:194:MET:HE2	1.90	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
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
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
47:R1:20:ARG:HG2	47:R1:20:ARG:NH1	2.24	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
50:R4:49:PHE:N	50:R4:49:PHE:CD1	2.76	0.52
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	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
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.52
22:XV:3:C:H2'	22:XV:4:G:H5'	1.92	0.52
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.45	0.52
25:YA:860:U:H5	25:YA:917:A:H2	1.56	0.52
25:YA:1252:G:O4'	40:YU:33:ARG:HD3	2.10	0.52
25:YA:1681:G:H8	25:YA:1681:G:OP2	1.93	0.52
25:YA:1795:C:O2	27:YD:255:LYS:HE2	2.08	0.52
25:YA:1797:C:C2'	25:YA:1798:U:H5'	2.39	0.52
25:YA:2126:A:H4'	25:YA:2127:G:O5'	2.09	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
42:YW:8:ARG:HG3	42:YW:8:ARG:HH11	1.73	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52
50:Y4:15:ILE:HD13	50:Y4:15:ILE:H	1.73	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.44	0.52
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.58	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
25:RA:1028:A:N6	25:RA:1125:G:H2'	2.24	0.52
25:RA:1113:U:OP1	31:RH:2:SER:N	2.42	0.52
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.09	0.52
25:RA:2619:C:H1'	28:RE:156:MET:HE1	1.92	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.91	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
1:XA:64:G:N2	1:XA:68:G:O6	2.34	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.72	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.24	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
25:YA:774:A:H2	25:YA:787:U:HO2'	1.56	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.09	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.52
42:YW:25:ARG:HB2	42:YW:25:ARG:HH11	1.74	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.73	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.91	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.74	0.52
26:RB:56:G:P	30:RG:27:ASN:HD21	2.32	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
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.39	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
40:RU:88:ILE:H	40:RU:88:ILE:CD1	2.05	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.25	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
1:XA:1322:C:O2'	1:XA:1323:G:H5'	2.10	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
25:YA:1203:G:H3'	25:YA:1204:A:H5"	1.92	0.52
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.09	0.52
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.25	0.52
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.75	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
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.10	0.52
48:Y2:7:ARG:HG3	48:Y2:7:ARG:NH1	2.25	0.52
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.73	0.52
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.45	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
25:RA:675:A:N3	25:RA:2443:C:O2'	2.38	0.52
25:RA:1289:C:H2'	25:RA:1290:C:H6	1.73	0.52
25:RA:2723:C:OP1	37:RR:3:HIS:HD2	1.92	0.52
25:RA:2853:C:H2'	25:RA:2854:G:C8	2.45	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	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
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	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
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.20	0.52
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.52
1:XA:960:U:H1'	1:XA:1223:C:H5'	1.92	0.52
1:XA:1126:U:H5	1:XA:1127:G:C4	2.27	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	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:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
25:YA:1169:G:H1	25:YA:1180:C:H42	1.57	0.52
25:YA:1681:G:O2'	25:YA:1762:A:O2'	2.16	0.52
27:YD:174:ILE:N	27:YD:174:ILE:CD1	2.73	0.52
31:YH:24:VAL:HG23	31:YH:24:VAL:O	2.09	0.52
32:YI:83:ALA:O	32:YI:85:GLU:N	2.43	0.52
36:YQ:81:VAL:C	36:YQ:82:ARG:CG	2.76	0.52
39:YT:42:ILE:HD12	39:YT:42:ILE:N	2.25	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	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
52:Y6:30:THR:O	52:Y6:30:THR:HG23	2.09	0.52
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.90	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.91	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
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.57	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
25:RA:247:G:O6	54:R8:12:LYS:NZ	2.28	0.52
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.45	0.52
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.45	0.52
25:RA:2061:G:OP2	25:RA:2502:G:H5'	2.10	0.52
25:RA:2300:G:H2'	25:RA:2301:C:C6	2.45	0.52
25:RA:2319:G:N7	38:RS:3:ARG:HB3	2.24	0.52
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.09	0.52
25:RA:2564:A:OP1	25:RA:2648:C:H4'	2.10	0.52
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	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	2.49	0.52
37:RR:56:LYS:C	37:RR:58:GLY:N	2.62	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
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
1:XA:246:A:N6	1:XA:281:G:H1'	2.24	0.52
1:XA:1132:C:H2'	1:XA:1133:G:H8	1.75	0.52
1:XA:1273:G:H3'	1:XA:1274:G:H8	1.74	0.52
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	1.92	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
25:YA:878:A:N6	25:YA:899:A:O2'	2.42	0.52
25:YA:2753:A:O2'	55:Y9:15:LYS:NZ	2.43	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
33:YN:112:LEU:HD23	33:YN:112:LEU:C	2.30	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
38:YS:67:ARG:HB2	38:YS:67:ARG:HH11	1.65	0.52
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
1:QA:551:U:H2'	1:QA:552:U:C6	2.45	0.52
1:QA:1395:C:O2'	1:QA:1401:G:O2'	2.14	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
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.09	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.72	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
25:RA:270(S):G:C2'	25:RA:270(T):G:H5'	2.40	0.52
25:RA:336:C:O2'	44:RY:35:TYR:OH	2.27	0.52
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.10	0.52
25:RA:2572:A:OP1	25:RA:2574:G:O2'	2.26	0.52
25:RA:2893:G:H5"	25:RA:2894:G:H5'	1.91	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	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:112:LEU:C	33:RN:112:LEU:HD23	2.30	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	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
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	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:1034:G:H2'	1:XA:1035:A:C8	2.44	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.40	0.52
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	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
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.52
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.52
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.52
25:RA:38:A:H2'	25:RA:39:C:C6	2.44	0.52
25:RA:443:A:H1'	25:RA:1201:C:O4'	2.08	0.52
25:RA:1796:U:H2'	25:RA:1797:C:C6	2.45	0.52
25:RA:2335:A:HO2'	25:RA:2336:A:P	2.32	0.52
28:RE:54:GLN:NE2	28:RE:54:GLN:H	2.08	0.52
28:RE:179:GLU:HA	28:RE:179:GLU:OE1	2.10	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	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
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
1:XA:1008:C:H42	1:XA:1021:G:H1	1.57	0.52
1:XA:1080:A:H5"	5:XE:16:THR:HG21	1.91	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.52
3:XC:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.52
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.43	0.52
25:YA:2096:U:H3	25:YA:2193:G:H1	1.57	0.52
25:YA:2645:G:H3'	25:YA:2646:C:H5'	1.92	0.52
26:YB:89:G:C6	26:YB:89(A):A:C6	2.98	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	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
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
1:QA:10:A:H2'	1:QA:11:G:C8	2.44	0.52
1:QA:687:A:H4'	1:QA:688:G:O5'	2.10	0.52
1:QA:745:C:OP1	1:QA:851:G:O2'	2.28	0.52
1:QA:880:C:OP1	12:QL:8:ASN:ND2	2.34	0.52
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.74	0.52
1:QA:1494:G:O6	58:QA:1670:PAR:H42	2.10	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
25:RA:330:A:H2	25:RA:1210:A:H2'	1.75	0.52
25:RA:531:C:H4'	25:RA:532:A:H5"	1.91	0.52
25:RA:747:U:C4	25:RA:2613:U:C4	2.98	0.52
25:RA:1068:G:O2'	25:RA:1096:A:N3	2.43	0.52
25:RA:2543:G:H21	25:RA:2646:C:H5"	1.73	0.52
25:RA:2776:A:OP1	25:RA:2776:A:H3'	2.10	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
34:RO:2:ILE:HD12	34:RO:2:ILE:N	2.24	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
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.52
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.52
47:R1:76:ARG:HG2	47:R1:76:ARG:NH1	2.19	0.52
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.52
1:XA:430:A:OP1	4:XD:9:CYS:N	2.37	0.52
1:XA:737:A:H2'	1:XA:738:C:H6	1.75	0.52
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.25	0.52
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.52
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.08	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.52
25:YA:524:U:H2'	25:YA:525:U:C6	2.45	0.52
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.45	0.52
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.41	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)
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.52
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.91	0.52
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.52
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.52
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.52
44:YY:9:LYS:HG2	44:YY:9:LYS:O	2.10	0.52
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.52
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.92	0.52
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	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
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.76	0.51
25:RA:833:U:H2'	25:RA:834:C:C6	2.45	0.51
25:RA:1289:C:H2'	25:RA:1290:C:C6	2.45	0.51
25:RA:2150:U:H2'	25:RA:2151:G:H8	1.73	0.51
26:RB:37:C:O2	38:RS:95:HIS:NE2	2.39	0.51
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.51
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	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:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.51
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.10	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
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	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
1:XA:522:C:H41	12:XL:53:ARG:NH2	2.08	0.51
1:XA:618:C:H5'	1:XA:619:U:H5"	1.92	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.51
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	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
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
25:YA:64:A:C5	43:YX:66:LEU:HD13	2.45	0.51
25:YA:1020:A:N1	25:YA:1141:U:H2'	2.25	0.51
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	1.92	0.51
25:YA:1265:A:H8	25:YA:1265:A:OP1	1.92	0.51
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.25	0.51
25:YA:2832:U:O2'	25:YA:2833:G:OP2	2.24	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	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
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.66	0.51
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	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:34:C:H2'	1:QA:35:G:C8	2.45	0.51
1:QA:923:A:N6	1:QA:1392:G:O6	2.43	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.51
25:RA:1462:C:H4'	25:RA:2703:C:H5'	1.91	0.51
25:RA:2008:C:H2'	25:RA:2009:G:H8	1.76	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.25	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
36:RQ:134:ARG:HH12	45:RZ:119:GLU:HG3	1.74	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.23	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.75	0.51
1:XA:271:C:H2'	1:XA:272:C:H6	1.74	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	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
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
25:YA:819:A:OP2	25:YA:1187:G:N2	2.40	0.51
25:YA:1929:G:H4'	25:YA:1930:G:OP1	2.09	0.51
25:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.25	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.51
28:YE:77:ILE:O	28:YE:78:LEU:C	2.47	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.51
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.09	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
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
1:QA:64:G:H4'	1:QA:65:U:O5'	2.11	0.51
1:QA:475:G:H2'	1:QA:476:G:C8	2.45	0.51
1:QA:503:C:H2'	1:QA:504:C:H6	1.74	0.51
1:QA:537:G:H5"	12:QL:113:ARG:HH12	1.73	0.51
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.45	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.51
6:QF:63:TYR:HD2	6:QF:63:TYR:N	2.09	0.51
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
25:RA:84:A:N1	25:RA:98:G:O2'	2.30	0.51
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.76	0.51
25:RA:507:A:C5'	25:RA:508:G:H5'	2.40	0.51
25:RA:813:U:H2'	25:RA:814:C:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.09	0.51
25:RA:2420:C:H41	54:R8:30:ARG:HD2	1.75	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.92	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.26	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.26	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.40	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
41:RV:75:PHE:C	41:RV:75:PHE:CD1	2.83	0.51
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.51
1:XA:346:G:H1'	1:XA:347:G:H5'	1.92	0.51
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.25	0.51
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.10	0.51
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	2.10	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.51
12:XL:24:VAL:O	12:XL:24:VAL:CG1	2.58	0.51
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
23:XY:29:U:H2'	23:XY:30:C:C6	2.45	0.51
25:YA:363(A):A:H2'	25:YA:363(B):G:H8	1.76	0.51
25:YA:414:C:O2	25:YA:1864:U:O2'	2.27	0.51
25:YA:1728:G:H3'	25:YA:1729:A:H5"	1.92	0.51
25:YA:1778:U:H2'	25:YA:1784:A:N6	2.25	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	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
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	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
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
1:QA:537:G:H5"	12:QL:113:ARG:NH1	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.44	0.51
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.09	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.11	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
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.25	0.51
25:RA:1331:A:O2'	25:RA:1332:G:H8	1.93	0.51
25:RA:1434:A:H61	25:RA:1558:A:H62	1.58	0.51
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.20	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
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
39:RT:42:ILE:HD12	39:RT:42:ILE:N	2.25	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	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
45:RZ:110:GLY:HA2	45:RZ:111:VAL:C	2.29	0.51
1:XA:243:A:H4'	1:XA:244:U:H3'	1.93	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
25:YA:1055:G:H1	25:YA:1104:C:H42	1.58	0.51
25:YA:1093:G:OP1	31:YH:170:ARG:HD2	2.10	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.09	0.51
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.90	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.45	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
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
25:RA:2746:U:H5"	31:RH:138:LYS:HE2	1.91	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.78	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.40	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
32:RI:93:THR:O	32:RI:97:ILE:HG12	2.10	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.29	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.10	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
1:XA:1281:U:H5'	1:XA:1282:C:OP2	2.10	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	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
25:YA:2619:C:H1'	28:YE:156:MET:HE1	1.93	0.51
32:YI:56:LYS:HE3	32:YI:57:ARG:HG2	1.91	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.51
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.79	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.51
19:QS:15:LEU:HD23	19:QS:15:LEU:H	1.75	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.43	0.51
25:RA:298:G:P	44:RY:85:VAL:HG22	2.50	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:566:U:OP1	35:RP:29:LYS:HE2	2.10	0.51
25:RA:1204:A:H2	25:RA:1241:A:N1	2.07	0.51
25:RA:1786:A:C2	25:RA:2606:C:H1'	2.46	0.51
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.92	0.51
25:RA:2068:U:N3	25:RA:2430:A:H2	2.04	0.51
25:RA:2745:C:H1'	31:RH:143:GLN:HG2	1.93	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
29:RF:127:GLU:OE1	29:RF:127:GLU:HA	2.07	0.51
32:RI:94:ALA:H	32:RI:116:LEU:HD13	1.74	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
1:XA:45:U:H2'	1:XA:46:G:C8	2.45	0.51
1:XA:148:G:H1	1:XA:174:C:H42	1.57	0.51
1:XA:857:C:H2'	1:XA:858:G:O4'	2.10	0.51
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.37	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
14:XN:44:LEU:O	14:XN:48:ALA:N	2.41	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
25:YA:625:G:OP1	54:Y8:64:TYR:HD1	1.94	0.51
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.45	0.51
25:YA:2295:C:OP1	38:YS:10:ARG:HD2	2.11	0.51
27:YD:94:LEU:HD13	27:YD:94:LEU:C	2.30	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
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.25	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.51
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.63	0.51
1:QA:192:U:H2'	1:QA:193:C:C6	2.46	0.51
1:QA:713:G:H2'	1:QA:714:G:C8	2.46	0.51
2:QB:187:LEU:HD13	2:QB:187:LEU:O	2.11	0.51
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
25:RA:288:C:H2'	25:RA:289:A:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1048:A:H2	25:RA:1112:G:H21	1.58	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.74	0.51
45:RZ:182:LYS:HD3	45:RZ:182:LYS:H	1.75	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
1:XA:143:A:H2	1:XA:220:G:H1	1.58	0.51
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.76	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
19:XS:42:PRO:HB3	50:Y4:60:GLN:OE1	2.10	0.51
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.46	0.51
25:YA:2563:U:H1'	25:YA:2566:A:N6	2.26	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	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:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
37:YR:118:GLU:OXT	37:YR:118:GLU:HG3	2.11	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
39:YT:14:TYR:N	39:YT:14:TYR:CD1	2.78	0.51
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.92	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
45:YZ:10:ARG:NH2	45:YZ:26:GLY:O	2.44	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.51
1:QA:642:A:N3	8:QH:113:SER:OG	2.38	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
13:QM:77:ASN:OD1	50:R4:71:ARG:NH1	2.44	0.51
25:RA:1279:G:C4'	37:RR:31:HIS:HD2	2.21	0.51
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.11	0.51
25:RA:2518:A:H4'	25:RA:2519:U:OP1	2.11	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.10	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
1:XA:539:A:H2'	1:XA:540:G:C8	2.45	0.51
1:XA:939:G:H5"	7:XG:102:ARG:HH12	1.76	0.51
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.25	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	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:HD13	1.93	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	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:87:TYR:C	13:XM:89:GLY:N	2.64	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
22:XV:23:C:H2'	22:XV:24:U:C6	2.45	0.51
25:YA:102:G:OP2	48:Y2:7:ARG:NH2	2.44	0.51
25:YA:270(T):G:H5"	47:Y1:97:LEU:CD2	2.28	0.51
25:YA:287:C:H2'	25:YA:288:C:C6	2.45	0.51
25:YA:309:G:N3	25:YA:329:G:O2'	2.42	0.51
25:YA:558:G:OP1	33:YN:111:PRO:HD2	2.11	0.51
25:YA:1759:A:H1'	25:YA:2711:A:C2	2.46	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.41	0.51
36:YQ:58:PHE:HD1	36:YQ:58:PHE:O	1.94	0.51
36:YQ:80:GLU:OE1	46:Y0:7:LEU:HG	2.11	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
43:YX:18:TYR:C	43:YX:20:GLY:N	2.64	0.51
43:YX:47:PHE:CD1	43:YX:47:PHE:N	2.78	0.51
43:YX:65:ARG:H	43:YX:65:ARG:CD	2.23	0.51
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
1:QA:56:U:H2'	1:QA:57:G:C8	2.46	0.51
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.25	0.51
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
4:QD:197:PRO:HD3	6:XF:16:GLN:HG3	1.91	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
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	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:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
25:RA:1939:U:H6	25:RA:1939:U:H5"	1.75	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
38:RS:89:ARG:HD2	38:RS:89:ARG:O	2.11	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.46	0.51
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.46	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	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
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.51
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.51
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	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
22:XV:76:A:H2'	25:YA:2602:A:N6	2.26	0.51
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.46	0.51
25:YA:1264:G:H3'	25:YA:1265:A:H5"	1.92	0.51
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.11	0.51
25:YA:2414:G:H21	35:YP:67:MET:HE1	1.76	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:192:LEU:HD21	29:YF:194:MET:HE2	1.92	0.51
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	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
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:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	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
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.51
51:Y5:56:LYS:HD2	51:Y5:56:LYS:N	2.13	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
1:QA:464:G:O6	1:QA:466:C:H5'	2.11	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
8:QH:10:LEU:N	8:QH:10:LEU:CD2	2.70	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.11	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	0.51
14:QN:8:GLU:C	14:QN:10:ALA:H	2.13	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:2396:G:OP1	47:R1:25:LYS:NZ	2.41	0.51
25:RA:2591:C:H2'	25:RA:2592:G:C8	2.46	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.09	0.51
30:RG:51:ARG:HH11	30:RG:51:ARG:HB3	1.76	0.51
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.51
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.51
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
37:RR:1:MET:O	37:RR:2:ARG:CB	2.59	0.51
44:RY:2:ARG:HG2	44:RY:2:ARG:NH1	2.22	0.51
46:R0:27:GLU:HG3	46:R0:68:GLU:HA	1.92	0.51
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.51
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.51
25:YA:1844:C:H2'	25:YA:1845:G:H8	1.74	0.51
25:YA:2031:A:C6	25:YA:2498:C:H1'	2.46	0.51
25:YA:2331:G:H4'	46:Y0:43:THR:H	1.77	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
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.51
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.51
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.51
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.51
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.51
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.51
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.51	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	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
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.59	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.50
25:RA:270(F):U:H2'	25:RA:270(G):C:C6	2.46	0.50
25:RA:2286:A:H4'	25:RA:2287:A:O4'	2.11	0.50
25:RA:2416:C:H5"	35:RP:64:LYS:HE3	1.92	0.50
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.50
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.50
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.50
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.92	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.50
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.50
47:R1:91:LYS:HE3	47:R1:91:LYS:CA	2.40	0.50
1:XA:96:G:H2'	1:XA:97:U:O4'	2.11	0.50
1:XA:299:G:H2'	1:XA:300:A:C8	2.47	0.50
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.75	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:691:G:H2'	1:XA:692:U:C6	2.46	0.50
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.46	0.50
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.29	0.50
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.45	0.50
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.50
25:YA:102:G:H4'	25:YA:103:A:O5'	2.09	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
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
33:YN:78:TYR:N	33:YN:78:TYR:HD1	2.07	0.50
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.50
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.50
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.50
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.91	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
1:QA:191:G:O2'	20:QT:101:GLY:O	2.28	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.50
4:QD:13:ARG:CB	4:QD:33:MET:CE	2.89	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
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.50
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.76	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
23:QY:30:C:H2'	23:QY:31:G:C8	2.46	0.50
25:RA:669:G:H2'	25:RA:669:G:N3	2.27	0.50
25:RA:1750:G:O2'	25:RA:2860:A:N1	2.42	0.50
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.47	0.50
25:RA:2849:U:O4	39:RT:23:ARG:NH2	2.44	0.50
26:RB:42:C:N4	30:RG:91:ARG:NH2	2.58	0.50
27:RD:94:LEU:HD13	27:RD:94:LEU:C	2.31	0.50
28:RE:37:ARG:HE	28:RE:37:ARG:H	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.50
30:RG:92:VAL:O	30:RG:92:VAL:HG13	2.12	0.50
31:RH: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:95:VAL:HG13	35:RP:100:LEU:CD2	2.40	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.50
1:XA:137:C:O2'	16:XP:61:SER:O	2.28	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	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
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
25:YA:2832:U:H4'	25:YA:2833:G:C5'	2.41	0.50
25:YA:2853:C:H2'	25:YA:2854:G:C8	2.46	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
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
53:Y7:36:GLN:HG2	53:Y7:36:GLN:O	2.09	0.50
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.50
1:QA:520:A:N1	1:QA:536:C:H1'	2.26	0.50
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.50
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	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:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.50
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
25:RA:307:G:N2	25:RA:309:G:H3'	2.26	0.50
25:RA:2867:G:HO2'	25:RA:2868:A:P	2.34	0.50
29:RF:45:ARG:CG	29:RF:45:ARG:NH1	2.71	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	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
51:R5:37:LYS:O	51:R5:37:LYS:HD2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:110:C:O2'	16:XP:25:ARG:O	2.26	0.50
1:XA:258:G:H2'	1:XA:259:G:C8	2.47	0.50
1:XA:328:C:H4'	1:XA:329:A:H5'	1.93	0.50
1:XA:1354:C:H2'	1:XA:1355:G:H8	1.75	0.50
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.47	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
14:XN:8:GLU:C	14:XN:10:ALA:H	2.14	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.75	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
25:YA:27:G:H22	25:YA:512:G:H2'	1.76	0.50
25:YA:639:U:H2'	25:YA:640:C:C6	2.45	0.50
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	1.93	0.50
25:YA:2645:G:N2	25:YA:2767:C:OP2	2.44	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	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
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:89:ARG:HD2	38:YS:89:ARG:O	2.11	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.76	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.50
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.12	0.50
1:QA:524:G:H2'	1:QA:525:C:C6	2.46	0.50
1:QA:597:G:N2	8:QH:94:TYR:OH	2.43	0.50
1:QA:946:A:H61	1:QA:1234:C:H42	1.57	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.50
25:RA:153:C:P	47:R1:88:LYS:HE2	2.51	0.50
25:RA:507:A:H5"	25:RA:508:G:H5'	1.93	0.50
25:RA:1579:A:H2'	25:RA:1580:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2495:G:H5"	36:RQ:81:VAL:CG1	2.41	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.26	0.50
29:RF:108:LYS:HA	29:RF:108:LYS:NZ	2.27	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	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:51:ARG:HG3	39:RT:98:LYS:HG3	1.93	0.50
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.24	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.77	0.50
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.12	0.50
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.12	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.50
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:83:G:N1	25:YA:102:G:H1'	2.27	0.50
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.11	0.50
25:YA:1142(A):A:H4'	33:YN:25:ARG:NH2	2.23	0.50
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.30	0.50
25:YA:1332:G:H21	25:YA:1610:A:H8	1.54	0.50
25:YA:1728:G:H5'	25:YA:1729:A:OP2	2.11	0.50
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.23	0.50
25:YA:1937:A:N7	25:YA:1939:U:H2'	2.26	0.50
25:YA:2636:U:H2'	25:YA:2637:U:H6	1.76	0.50
25:YA:2839:G:H21	37:YR:92:GLY:HA3	1.76	0.50
25:YA:2882:A:OP1	37:YR:96:ARG:NH1	2.45	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
31:YH:143:GLN:C	31:YH:143:GLN:HE21	2.15	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.11	0.50
1:QA:164:U:H2'	1:QA:165:C:H6	1.76	0.50
1:QA:181:G:O2'	1:QA:182:U:O5'	2.28	0.50
1:QA:701:C:O2	1:QA:703:G:N1	2.44	0.50
1:QA:1301:U:H3'	1:QA:1302:U:H5'	1.92	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
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
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.24	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.77	0.50
22:QV:76:A:H2'	25:RA:2602:A:N6	2.27	0.50
25:RA:270(R):G:H1'	47:R1:78:LYS:NZ	2.27	0.50
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.77	0.50
25:RA:1991:U:H2'	25:RA:1992:G:H5"	1.94	0.50
25:RA:2283:C:H2'	25:RA:2284:C:O4'	2.11	0.50
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.47	0.50
25:RA:2836:U:H2'	25:RA:2837:G:C8	2.47	0.50
26:RB:48:A:H2'	26:RB:49:C:C6	2.46	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.76	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
31:RH:143:GLN:HE21	31:RH:143:GLN:C	2.15	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
1:XA:89:U:O2'	1:XA:90:C:OP1	2.27	0.50
1:XA:664:G:N2	1:XA:741:G:H1	2.00	0.50
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.44	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.50
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.50
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.50
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
25:YA:528:A:O2'	25:YA:529:A:H5'	2.11	0.50
25:YA:1204:A:H2	25:YA:1241:A:N1	2.09	0.50
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.12	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
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:768:A:N3	1:QA:1512:U:O2'	2.43	0.50
1:QA:890:G:O2'	1:QA:906:G:O6	2.23	0.50
1:QA:1055:A:N7	1:QA:1200:C:N4	2.59	0.50
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.94	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.26	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
25:RA:323:G:HO2'	25:RA:1205:U:H3	1.60	0.50
25:RA:530:G:O2'	25:RA:2021:C:O2'	2.29	0.50
25:RA:1637:A:H4'	25:RA:2711:A:O2'	2.11	0.50
25:RA:2053:G:O6	25:RA:2614:A:H2	1.95	0.50
26:RB:45:A:H1'	30:RG:95:ARG:NH2	2.26	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.89	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
28:RE:176:ILE:HG22	28:RE:176:ILE:O	2.10	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	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
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.09	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.50
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.37	0.50
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.93	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	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
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.50
13:XM:57:ARG:HH11	13:XM:57:ARG:CB	2.13	0.50
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.42	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.74	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
25:YA:1081:U:H3'	25:YA:1082:U:H4'	1.93	0.50
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.93	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
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.93	0.50
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.32	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.31	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
1:QA:953:G:H5'	1:QA:965:A:H61	1.76	0.50
1:QA:1095:U:OP2	1:QA:1108:G:N1	2.30	0.50
1:QA:1311:G:N2	1:QA:1326:C:O2	2.44	0.50
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.50
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.15	0.50
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
18:QR:30:ASP:C	18:QR:32:ARG:H	2.15	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
25:RA:28:A:N6	25:RA:512:G:H1'	2.26	0.50
25:RA:873:G:H1	25:RA:904:C:H42	1.58	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.45	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.93	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.57	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	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
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.50
1:XA:947:G:H2'	1:XA:948:C:C6	2.46	0.50
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.27	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	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
25:YA:1916:A:H2'	25:YA:1917:U:O4'	2.12	0.50
25:YA:2377:A:H2	38:YS:18:ILE:HD11	1.77	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	1.93	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
45:YZ:152:ALA:O	45:YZ:154:ASP:N	2.41	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
1:QA:347:G:O2'	1:QA:348:G:OP2	2.27	0.50
1:QA:833:U:H2'	1:QA:834:C:H6	1.77	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	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:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
25:RA:392:C:H5"	25:RA:409:C:H5"	1.94	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:6:LEU:N	35:RP:6:LEU:CD2	2.75	0.50
36:RQ:2:LEU:HD23	36:RQ:2:LEU:N	2.27	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:90:LEU:HD22	44:RY:90:LEU:H	1.73	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	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
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.29	0.50
2:XB:23:ARG:HG2	2:XB:23:ARG:HH11	1.76	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
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.50
25:YA:747:U:C4	25:YA:2613:U:C4	3.00	0.50
25:YA:796:C:H2'	25:YA:797:C:C6	2.46	0.50
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.22	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	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
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
51:Y5:37:LYS:O	51:Y5:37:LYS:HD2	2.12	0.50
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.50
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.10	0.50
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.47	0.50
1:QA:411:A:C4	1:QA:413:G:H1'	2.46	0.50
1:QA:538:G:OP1	12:QL:113:ARG:HD2	2.12	0.50
1:QA:946:A:O2'	1:QA:1333:A:N3	2.34	0.50
1:QA:1256:A:P	3:QC:26:LYS:HZ3	2.34	0.50
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.77	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
5:QE:148:VAL:HG21	8:QH:107:LEU:HD13	1.93	0.50
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.50
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.77	0.50
25:RA:1061:U:H3'	25:RA:1062:G:H5"	1.94	0.50
25:RA:1728:G:H3'	25:RA:1729:A:H5"	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.50
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
55:R9:7:VAL:HG12	55:R9:25:VAL:HG21	1.94	0.50
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.46	0.50
1:XA:1446:A:H5"	39:YT:122:ASP:OD1	2.12	0.50
2:XB:172:ILE:H	2:XB:172:ILE:CD1	2.18	0.50
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.25	0.50
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.50
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	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
25:YA:83:G:H1	25:YA:102:G:H1'	1.77	0.50
25:YA:86:C:H4'	25:YA:104:U:H1'	1.94	0.50
25:YA:483:A:H3'	25:YA:484:C:H6	1.77	0.50
25:YA:900:A:H3'	25:YA:901:A:H8	1.77	0.50
25:YA:1048:A:P	25:YA:1110:G:H22	2.34	0.50
25:YA:1500:G:H21	27:YD:100:GLY:HA3	1.77	0.50
25:YA:2688:U:H5	25:YA:2720:U:OP2	1.95	0.50
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.50
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.50
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.25	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.41	0.50
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.50
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.50
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.50
50:Y4:22:ILE:H	50:Y4:22:ILE:HD12	1.77	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
53:Y7:12:ARG:NH1	53:Y7:12:ARG:HG3	2.27	0.50
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
25:RA:642:G:H21	25:RA:646:A:H2	1.59	0.49
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.12	0.49
25:RA:2469:A:H5"	25:RA:2470:G:C8	2.46	0.49
27:RD:72:LYS:O	27:RD:73:VAL:C	2.50	0.49
28:RE:61:ARG:O	28:RE:62:PRO:C	2.50	0.49
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.49
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.49
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.49
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.49
32:RI:5:LEU:HD12	32:RI:5:LEU:H	1.76	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
36:RQ:80:GLU:HG3	36:RQ:81:VAL:N	2.27	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	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
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.49
1:XA:757:U:H2'	1:XA:758:G:O4'	2.12	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:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.49
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.77	0.49
25:YA:1125:G:OP2	25:YA:1126:A:O2'	2.20	0.49
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.47	0.49
25:YA:2728:U:H2'	25:YA:2729:G:C8	2.47	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	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
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.49
32:YI:115:ALA:HB3	32:YI:128:LEU:HD12	1.94	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	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
1:QA:190:G:H4'	1:QA:191(A):G:OP2	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.43	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
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.49
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.48	0.49
26:RB:55:U:H4'	30:RG:28:VAL:HG21	1.93	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.49
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.49
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.49
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
53:R7:12:ARG:NH1	53:R7:12:ARG:HG3	2.27	0.49
1:XA:56:U:H2'	1:XA:57:G:C8	2.46	0.49
1:XA:375:U:H4'	16:XP:17:TYR:CE2	2.40	0.49
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:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.49
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.49
14:XN:44:LEU:HD12	14:XN:53:LEU:HD12	1.94	0.49
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.77	0.49
25:YA:753:C:O5'	25:YA:753:C:H6	1.94	0.49
25:YA:780:G:N2	25:YA:783:A:H62	2.07	0.49
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.47	0.49
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.11	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
28:YE:37:ARG:HE	28:YE:37:ARG:H	1.59	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	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:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.46	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.49
1:QA:1126:U:H1'	1:QA:1280:A:N7	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
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.41	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	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
32:RI:129:THR:HA	32:RI:137:PRO:HA	1.94	0.49
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.49
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.27	0.49
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49
1:XA:115:G:H4'	1:XA:116:A:O5'	2.12	0.49
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.40	0.49
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.77	0.49
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.27	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	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	1.93	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.56	0.49
25:YA:241:A:H4'	25:YA:242:G:OP1	2.12	0.49
25:YA:588:U:C2	29:YF:90:PHE:CE1	3.00	0.49
25:YA:975:G:H1'	25:YA:990:A:C2	2.47	0.49
25:YA:1165:U:H2'	25:YA:1166:C:C6	2.47	0.49
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.27	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.90	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.12	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
37:YR:18:LEU:HD13	37:YR:18:LEU:C	2.33	0.49
41:YV:91:TYR:C	41:YV:91:TYR:HD1	2.16	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.49
1:QA:34:C:H2'	1:QA:35:G:H8	1.76	0.49
1:QA:360:A:H2'	1:QA:361:G:C8	2.47	0.49
1:QA:583:A:H2'	1:QA:584:G:O4'	2.12	0.49
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.47	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	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
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
25:RA:2283:C:OP1	52:R6:5:VAL:HG13	2.12	0.49
25:RA:2862:G:H2'	25:RA:2863:C:H6	1.76	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	1.94	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.44	0.49
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	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
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
37:RR:18:LEU:HD13	37:RR:18:LEU:C	2.33	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	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
41:RV:91:TYR:C	41:RV:91:TYR:HD1	2.16	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
45:RZ:166:SER:HB2	45:RZ:168:GLU:N	2.27	0.49
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
1:XA:720:C:H5"	18:XR:52:PRO:HA	1.93	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	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
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.12	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
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
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.12	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	0.49
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
25:RA:706:A:H2'	25:RA:707:G:O4'	2.13	0.49
25:RA:760:G:H2'	25:RA:761:A:O4'	2.12	0.49
25:RA:896:A:C2	45:RZ:146:ILE:HD11	2.48	0.49
25:RA:1508:A:O2'	25:RA:1509:C:O4'	2.30	0.49
25:RA:1786:A:H2	25:RA:2606:C:H1'	1.77	0.49
25:RA:2749:A:H3'	25:RA:2750:A:H2'	1.92	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	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
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.92	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
1:XA:57:G:H2'	1:XA:58:C:C6	2.48	0.49
1:XA:337:C:H2'	1:XA:338:A:C8	2.47	0.49
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.72	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.28	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
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.76	0.49
25:YA:1550:C:H2'	25:YA:1551:C:H6	1.77	0.49
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.17	0.49
25:YA:2396:G:OP1	47:Y1:25:LYS:NZ	2.33	0.49
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.71	0.49
26:YB:77:U:P	45:YZ:19:ARG:HH22	2.36	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.49
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	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: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
32:YI:133:HIS:HB2	32:YI:134:PRO:HD2	1.95	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	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
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.48	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.27	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HA	1.94	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.58	0.49
50:Y4:1:MET:HG3	50:Y4:1:MET:O	2.12	0.49
1:QA:411:A:C5	1:QA:413:G:H1'	2.47	0.49
1:QA:1127:G:H21	1:QA:1147:C:H41	1.61	0.49
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.28	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.49
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.47	0.49
25:RA:262:A:H2'	25:RA:263:C:O4'	2.11	0.49
25:RA:345:A:H2'	25:RA:347:A:H62	1.77	0.49
25:RA:482:A:H4'	44:RY:47:LYS:HD2	1.95	0.49
25:RA:1021:A:H8	25:RA:1022:G:H5"	1.76	0.49
25:RA:1257:C:O2'	29:RF:84:VAL:HG12	2.12	0.49
25:RA:1266:G:OP2	51:R5:20:ARG:NE	2.45	0.49
25:RA:1853:A:N1	25:RA:2087:G:H1'	2.26	0.49
25:RA:1889:A:N1	25:RA:2234:G:H1'	2.27	0.49
25:RA:2372:G:O2'	52:R6:46:HIS:NE2	2.24	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
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:103:LEU:HD23	31:RH:103:LEU:H	1.77	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
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
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
45:RZ:70:LEU:HB2	45:RZ:91:LEU:HD21	1.95	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.49
1:XA:192:U:H2'	1:XA:193:C:C6	2.47	0.49
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.47	0.49
1:XA:971:G:C5	1:XA:1365:G:H5'	2.47	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI: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
19:XS:64:GLU:CG	50:Y4:55:ARG:HH12	2.25	0.49
25:YA:49:A:N7	25:YA:120:U:C5	2.76	0.49
25:YA:1371:G:HO2'	25:YA:1372:U:H5	1.58	0.49
25:YA:1798:U:H5"	27:YD:259:THR:CG2	2.42	0.49
25:YA:2853:C:H2'	25:YA:2854:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:42:C:N4	30:YG:91:ARG:NH2	2.55	0.49
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	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:151:ILE:C	31:YH:152:ARG:O	2.49	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	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	2.27	0.49
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.49
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.60	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
4:QD:166:LYS:CD	27:YD:134:ARG:HH12	2.23	0.49
6:QF:100:ASN:HD22	6:QF:100:ASN:HA	1.47	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.49
9:QI: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
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.12	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.12	0.49
25:RA:626:U:H5"	25:RA:627:A:H5'	1.95	0.49
25:RA:2015:A:N3	51:R5:2:ALA:N	2.60	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.19	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
31:RH: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
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	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: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
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:376:G:H5"	16:XP:5:ARG:HD2	1.94	0.49
1:XA:890:G:O2'	1:XA:906:G:O6	2.20	0.49
1:XA:975:A:H8	1:XA:975:A:H5'	1.77	0.49
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.13	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
25:YA:389:G:H1	35:YP:70:GLN:HB3	1.78	0.49
25:YA:531:C:OP1	25:YA:561:G:N1	2.45	0.49
25:YA:704:G:H1'	25:YA:727:A:H61	1.78	0.49
25:YA:1007:C:OP1	33:YN:35:ARG:NH1	2.45	0.49
25:YA:1164:G:H2'	25:YA:1165:U:C6	2.47	0.49
25:YA:1689:A:N6	25:YA:1698:A:H2	2.08	0.49
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.43	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
32:YI:93:THR:HG22	32:YI:119:PRO:HB3	1.94	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	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
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
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.95	0.49
1:QA:1316:G:N2	1:QA:1319:A:OP2	2.45	0.49
3:QC:79:ARG:NE	11:XK:99:GLN:CD	2.66	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.28	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
25:RA:137(A):G:H2'	25:RA:139:G:N7	2.28	0.49
25:RA:774:A:H2	25:RA:787:U:O2'	1.96	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2721:A:H1'	25:RA:2873:A:O2'	2.12	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
29:RF:45:ARG:NH1	29:RF:45:ARG:HG2	2.28	0.49
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.42	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.42	0.49
37:RR:71:GLN:HA	37:RR:71:GLN:HE21	1.77	0.49
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	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
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
44:RY:19:LYS:O	44:RY:19:LYS:CG	2.60	0.49
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.49
1:XA:17:U:H2'	1:XA:18:C:C6	2.47	0.49
1:XA:244:U:H4'	1:XA:245:C:O5'	2.12	0.49
1:XA:537:G:H5"	12:XL:113:ARG:NH1	2.27	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.92	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	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
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.94	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
25:YA:322:A:OP2	29:YF:169:ASN:HB2	2.13	0.49
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.47	0.49
25:YA:2722:G:H4'	37:YR:4:LEU:HB2	1.94	0.49
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.49
30:YG:115:ARG:HH11	30:YG:115:ARG:HG2	1.77	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
41:YV:91:TYR:C	41:YV:91:TYR:CD1	2.86	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.76	0.49
55:Y9:7:VAL:HG12	55:Y9:25:VAL:HG21	1.94	0.49
1:QA:35:G:H2'	1:QA:36:C:C6	2.48	0.49
1:QA:644:G:H4'	8:QH:92:ARG:HH21	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1347:G:H22	1:QA:1374:A:P	2.35	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
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	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:7:VAL:HG11	30:RG:115:ARG:HH12	1.77	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
25:RA:137(A):G:H1'	43:RX:41:ASN:ND2	2.27	0.49
25:RA:848:G:H2'	25:RA:849:A:C8	2.48	0.49
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.12	0.49
25:RA:1291:C:H2'	25:RA:1292:U:C6	2.47	0.49
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.43	0.49
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.25	0.49
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	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
44:RY:95:LYS:N	44:RY:95:LYS:CD	2.76	0.49
45:RZ:152:ALA:O	45:RZ:154:ASP:N	2.41	0.49
47:R1:19:GLN:HA	47:R1:19:GLN:OE1	2.12	0.49
47:R1:25:LYS:C	47:R1:27:GLU:H	2.16	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.60	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	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
1:XA:738:C:H5"	6:XF:69:GLU:HB2	1.95	0.49
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.13	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.49
3:XC:188:LEU:N	3:XC:188:LEU:CD2	2.76	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
11:XK:91:ARG:HH22	18:XR:88:LYS:NZ	2.09	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
25:YA:277:C:H3'	25:YA:278:A:C5'	2.43	0.49
25:YA:606:U:H4'	25:YA:658:C:H4'	1.94	0.49
25:YA:1336:A:H2'	25:YA:1337:G:H8	1.77	0.49
25:YA:1434:A:H61	25:YA:1558:A:H62	1.60	0.49
25:YA:2212:A:H1'	25:YA:2215:G:C4	2.47	0.49
25:YA:2298:A:H2'	25:YA:2299:G:O4'	2.13	0.49
25:YA:2790:A:H2'	25:YA:2791:C:H5"	1.94	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	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
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	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
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:267:C:OP2	17:QQ:67:LYS:HD2	2.12	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:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.49
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.49
25:RA:414:C:H2'	25:RA:415:A:H8	1.78	0.49
25:RA:851:U:H1'	49:R3:46:ASN:HD21	1.78	0.49
25:RA:1657:C:H2'	25:RA:1658:C:C6	2.48	0.49
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.48	0.49
26:RB:55:U:H4'	30:RG:29:TRP:NE1	2.27	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
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.94	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.43	0.49
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.49
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.49
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.49
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.49
1:XA:148:G:H2'	1:XA:149:A:H8	1.78	0.49
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.47	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.42	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
10:XJ:63:PHE:CD1	14:XN:58:LYS:HA	2.35	0.49
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.13	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.49
25:YA:1797:C:H2'	25:YA:1798:U:H5'	1.94	0.49
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.78	0.49
25:YA:2319:G:N7	38:YS:3:ARG:HB3	2.28	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.49
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
37:YR:71:GLN:HE21	37:YR:71:GLN:HA	1.77	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.48	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.95	0.49
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.13	0.49
1:QA:662:G:O2'	1:QA:836:G:OP1	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1162:C:H2'	1:QA:1163:C:O4'	2.13	0.48
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.48
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.48
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.48
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.48
25:RA:277:C:H4'	25:RA:278:A:OP2	2.13	0.48
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.46	0.48
25:RA:605:C:O2	25:RA:657:U:O2'	2.30	0.48
25:RA:691:C:H2'	25:RA:692:C:H6	1.77	0.48
25:RA:1041:C:H2'	25:RA:1042:G:H8	1.78	0.48
25:RA:1525:G:H2'	25:RA:1526:G:C8	2.48	0.48
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.77	0.48
25:RA:2286:A:H2'	52:R6:31:PRO:HG2	1.94	0.48
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.48	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.48
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.27	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.12	0.48
34:RO:55:GLY:O	34:RO:56:ASP:C	2.51	0.48
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.48
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.48
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.48
38:RS:48:LEU:N	38:RS:48:LEU:CD1	2.76	0.48
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.48
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.13	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
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.48
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.48
1:XA:918:A:H2'	1:XA:919:A:C8	2.48	0.48
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.28	0.48
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.95	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.77	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.48
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
25:YA:226:G:O2'	25:YA:227:A:O5'	2.25	0.48
25:YA:589:C:H2'	25:YA:590:A:C8	2.48	0.48
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.46	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.48
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	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:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
38:YS:48:LEU:N	38:YS:48:LEU:CD1	2.76	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:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.48
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.44	0.48
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.48
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.93	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.11	0.48
25:RA:817:C:H4'	25:RA:932:G:C5	2.49	0.48
25:RA:1292:U:H2'	25:RA:1293:C:H6	1.76	0.48
25:RA:2123:G:H2'	25:RA:2124:G:H8	1.77	0.48
25:RA:2821:A:OP2	25:RA:2822:G:OP2	2.31	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.48
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.48
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	1.94	0.48
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.48
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.25	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
1:XA:148:G:H2'	1:XA:149:A:C8	2.47	0.48
1:XA:259:G:OP2	20:XT:83:ARG:NH1	2.45	0.48
1:XA:411:A:C4	1:XA:413:G:H1'	2.47	0.48
1:XA:1365:G:H2'	1:XA:1366:C:H6	1.79	0.48
1:XA:1442:G:C5	1:XA:1446:A:C6	3.00	0.48
25:YA:486:C:H4'	42:YW:60:ASN:OD1	2.13	0.48
25:YA:620:G:H4'	25:YA:621:A:H5'	1.94	0.48
25:YA:860:U:C5	25:YA:917:A:H2	2.31	0.48
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.47	0.48
25:YA:1782:C:H1'	25:YA:2609:U:H5"	1.94	0.48
25:YA:1786:A:H1'	25:YA:1938:A:N6	2.28	0.48
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.36	0.48
25:YA:2310:A:N6	30:YG:79:ASN:HB2	2.27	0.48
25:YA:2635:C:H5"	28:YE:78:LEU:HA	1.93	0.48
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.12	0.48
30:YG:115:ARG:NH1	30:YG:115:ARG:HG2	2.26	0.48
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.40	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48
39:YT:58:ASN:HD22	39:YT:58:ASN:N	2.10	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
46:Y0:23:VAL:HG22	46:Y0:38:VAL:HG22	1.94	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
1:QA:519:C:H2'	1:QA:520:A:O4'	2.12	0.48
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.94	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
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
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.48	0.48
25:RA:675:A:OP1	29:RF:63:LYS:NZ	2.44	0.48
25:RA:1204:A:H1'	25:RA:1206:G:C4	2.48	0.48
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.40	0.48
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.95	0.48
25:RA:2576:G:O2'	25:RA:2579:C:OP2	2.26	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	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:95:PRO:O	33:RN:96:GLU:C	2.51	0.48
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.96	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.44	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:411:A:N6	1:XA:413:G:H21	2.06	0.48
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.12	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.95	0.48
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.13	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	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
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.48
25:YA:372:G:O2'	25:YA:373:U:P	2.71	0.48
25:YA:618(A):C:OP2	29:YF:103:LYS:HE2	2.12	0.48
25:YA:1196:C:HO2'	25:YA:1228:G:HO2'	1.55	0.48
25:YA:1225:C:O2'	41:YV:85:LYS:HA	2.13	0.48
25:YA:1262:A:N3	51:Y5:10:LYS:HE3	2.29	0.48
25:YA:1824:G:O3'	27:YD:249:PRO:HD3	2.14	0.48
25:YA:2636:U:OP1	28:YE:79:ARG:HG3	2.13	0.48
25:YA:2820:A:O2'	25:YA:2821:A:OP1	2.28	0.48
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.48
27:YD:48:ARG:HG3	27:YD:48:ARG:HH11	1.78	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:91:ASP:O	40:YU:95:LEU:N	2.42	0.48
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
1:QA:222:U:H2'	1:QA:223:U:H6	1.77	0.48
1:QA:857:C:H2'	1:QA:858:G:O4'	2.13	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.95	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.43	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.48
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.48
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.48	0.48
25:RA:1430:C:H2'	25:RA:1431:U:C6	2.49	0.48
25:RA:1638:C:O3'	25:RA:2709:G:N2	2.47	0.48
25:RA:1903:G:OP1	27:RD:241:PRO:HG2	2.13	0.48
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.46	0.48
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	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
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.13	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.12	0.48
1:XA:1059:C:H2'	1:XA:1060:C:C6	2.48	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	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:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
9:XI:118:LYS:NZ	9:XI:118:LYS:CB	2.75	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.44	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:415:A:H2'	25:YA:416:C:C6	2.48	0.48
25:YA:1336:A:H2'	25:YA:1337:G:C8	2.49	0.48
25:YA:1972:A:H2'	25:YA:1973:G:H8	1.78	0.48
25:YA:2406:U:C2	35:YP:72:PRO:HB2	2.49	0.48
25:YA:2420:C:OP1	54:Y8:34:TRP:HB2	2.13	0.48
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	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
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	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
45:YZ:69:THR:HG22	45:YZ:90:VAL:HG22	1.96	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
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.61	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
1:QA:264:U:O2'	17:QQ:64:PRO:HD2	2.14	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.43	0.48
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	2.26	0.48
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.48
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.42	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
25:RA:588:U:C2	29:RF:90:PHE:CE1	3.01	0.48
25:RA:704:G:C2'	25:RA:726:G:H22	2.26	0.48
25:RA:828:U:H4'	25:RA:831:G:N1	2.28	0.48
25:RA:859:G:O2'	25:RA:860:U:P	2.72	0.48
25:RA:2335:A:O2'	25:RA:2336:A:H2'	2.13	0.48
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.44	0.48
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
30:RG:115:ARG:HG2	30:RG:115:ARG:HH11	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:101:VAL:C	35:RP:103:ALA:H	2.17	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.77	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
43:RX:53:LYS:HZ2	43:RX:55:ASN:HD21	1.62	0.48
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.13	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
1:XA:210:U:O2'	1:XA:216:G:N7	2.43	0.48
1:XA:688:G:H2'	1:XA:689:C:C6	2.48	0.48
1:XA:837:G:H1	1:XA:849:C:H42	1.59	0.48
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.46	0.48
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.78	0.48
1:XA:1354:C:H2'	1:XA:1355:G:C8	2.48	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.28	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.95	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
25:YA:181:A:H5"	53:Y7:36:GLN:NE2	2.28	0.48
25:YA:676:A:H8	25:YA:2069:G:N2	1.96	0.48
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.14	0.48
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.13	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
1:QA:752:G:H1'	1:QA:754:C:N4	2.28	0.48
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.48	0.48
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.29	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.48
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.49	0.48
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.79	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
25:RA:181:A:H1'	25:RA:435:C:H5'	1.94	0.48
25:RA:2529:G:O6	55:R9:31:LYS:NZ	2.40	0.48
25:RA:2729:G:C1'	28:RE:187:ALA:HB2	2.37	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	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
32:RI:49:ALA:O	32:RI:52:ARG:HG2	2.13	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	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
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
1:XA:310:G:H4'	16:XP:31:LYS:HD3	1.95	0.48
1:XA:865:A:C2	1:XA:918:A:H4'	2.48	0.48
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.48	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.76	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
25:YA:570:G:H2'	25:YA:2030:A:C5	2.48	0.48
25:YA:1365:A:OP2	47:Y1:3:LYS:HB2	2.13	0.48
25:YA:2283:C:P	52:Y6:5:VAL:HG13	2.54	0.48
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:13:GLY:HA3	32:YI:17:GLN:OE1	2.14	0.48
32:YI:23:PRO:O	32:YI:27:ARG:HG2	2.14	0.48
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	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
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
1:QA:191:G:N9	20:QT:105:SER:HB3	2.28	0.48
1:QA:565:U:H5"	1:QA:566:G:H2'	1.96	0.48
1:QA:1392:G:H21	1:QA:1502:A:H8	1.60	0.48
1:QA:1399:C:C2	1:QA:1502:A:N6	2.81	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.48
25:RA:478:A:N1	25:RA:500:G:H4'	2.28	0.48
25:RA:910:A:N3	25:RA:2264:C:O2'	2.39	0.48
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.14	0.48
25:RA:1274:A:N3	25:RA:1297:C:H1'	2.28	0.48
25:RA:1578:U:H2'	25:RA:1579:A:H5'	1.95	0.48
25:RA:2119:A:N6	25:RA:2170:A:N7	2.62	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.95	0.48
27:RD:198:ASN:C	27:RD:198:ASN:HD22	2.17	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.73	0.48
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.48
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.44	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
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:56:GLN:NE2	47:R1:56:GLN:H	2.10	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
1:XA:135:C:H2'	1:XA:136:C:H5'	1.96	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
13:XM:3:ARG:HH21	30:YG:139:LEU:HD13	1.78	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
22:XV:74:C:C2'	22:XV:75:C:H5'	2.44	0.48
25:YA:218:A:C2	25:YA:235:U:H4'	2.49	0.48
25:YA:1535:U:H5"	25:YA:1537:C:C4	2.49	0.48
25:YA:2306:C:H2'	25:YA:2307:G:N2	2.29	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.48	0.48
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
32:YI:97:ILE:HD12	32:YI:140:LEU:HD11	1.95	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.48
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.48
39:YT:96:ARG:NH1	39:YT:96:ARG:CB	2.77	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
45:YZ:10:ARG:HH21	45:YZ:26:GLY:H	1.61	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.48
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.79	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
25:RA:250:G:C6	25:RA:251:A:C6	3.02	0.48
25:RA:2401:U:H2'	25:RA:2402:C:H5"	1.96	0.48
25:RA:2867:G:O2'	25:RA:2868:A:P	2.72	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:65:ILE:HD13	27:RD:65:ILE:C	2.32	0.48
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.14	0.48
1:XA:1308:U:OP1	13:XM:98:VAL:N	2.31	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.13	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	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	2.34	0.48
14:XN:15:LYS:HD2	14:XN:16:PHE:CE2	2.49	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
22:XV:61:C:H2'	22:XV:62:C:C6	2.47	0.48
25:YA:459:U:H2'	25:YA:460:A:C8	2.48	0.48
25:YA:942:G:O2'	25:YA:1189:A:N3	2.41	0.48
25:YA:1264:G:H5'	51:Y5:11:THR:CG2	2.44	0.48
25:YA:1588:C:H2'	25:YA:1589:C:H6	1.79	0.48
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.48	0.48
25:YA:2760:C:H2'	25:YA:2761:G:H5"	1.94	0.48
25:YA:2867:G:O2'	25:YA:2868:A:P	2.72	0.48
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	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: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
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
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	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:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.42	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
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.14	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
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
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.14	0.48
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.14	0.48
1:QA:686:U:O2'	1:QA:687:A:O5'	2.29	0.48
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.49	0.48
1:QA:1297:C:HO2'	1:QA:1298:C:P	2.36	0.48
1:QA:1376:U:OP1	7:QG:94:ARG:NH1	2.38	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	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:109:ILE:HG12	8:QH:110:ALA:N	2.28	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.96	0.48
25:RA:807:U:OP2	35:RP:41:ARG:NH1	2.46	0.48
25:RA:1771:C:H1'	25:RA:1786:A:C8	2.48	0.48
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.13	0.48
26:RB:33:G:O5'	30:RG:2:PRO:HG3	2.13	0.48
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
28:RE:64:LYS:C	28:RE:66:HIS:N	2.67	0.48
33:RN:18:ALA:O	33:RN:19:GLU:C	2.53	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:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.48
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.48
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.48
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.38	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
25:YA:862:G:H2'	25:YA:863:A:O4'	2.14	0.48
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.82	0.48
25:YA:2051:A:H5'	25:YA:2578:G:O4'	2.13	0.48
25:YA:2870:C:C5'	37:YR:65:LEU:HD21	2.44	0.48
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.49	0.48
28:YE:64:LYS:C	28:YE:66:HIS:N	2.67	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.48
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
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
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.47	0.48
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.95	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.79	0.48
1:QA:347:G:O2'	1:QA:348:G:H5"	2.14	0.48
1:QA:544:G:OP1	4:QD:59:ARG:NH2	2.30	0.48
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.14	0.48
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.44	0.48
1:QA:1200:C:O2'	1:QA:1201:A:OP2	2.23	0.48
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	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
7:QG:8:GLU:CD	7:QG:8:GLU:N	2.67	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.48
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.48
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.44	0.48
25:RA:530:G:N1	25:RA:2022:U:OP1	2.47	0.48
25:RA:579:G:H2'	25:RA:580:C:C6	2.49	0.48
25:RA:1728:G:H5'	25:RA:1729:A:OP2	2.14	0.48
25:RA:1990:C:H2'	25:RA:1991:U:C6	2.49	0.48
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.46	0.48
25:RA:2563:U:H1'	25:RA:2566:A:N6	2.29	0.48
26:RB:43:C:O5'	30:RG:67:LYS:HE3	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.44	0.48
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.14	0.48
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.95	0.48
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.66	0.48
36:RQ:42:ILE:HD12	36:RQ:42:ILE:N	2.29	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
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.48
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.48
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.48
1:XA:201:C:N4	1:XA:209:U:O2	2.47	0.48
1:XA:1074:G:C4'	2:XB:104:ASN:HB2	2.43	0.48
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.27	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.48
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.49	0.48
7:XG:51:GLN:OE1	7:XG:51:GLN:HA	2.14	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
25:YA:507:A:C5'	25:YA:508:G:H5'	2.43	0.48
25:YA:2067:G:O2'	25:YA:2069:G:H5"	2.14	0.48
25:YA:2364:C:H2'	25:YA:2365:G:O4'	2.14	0.48
25:YA:2389:G:H5"	25:YA:2390:U:O4'	2.14	0.48
25:YA:2724:C:OP1	37:YR:1:MET:HE3	2.14	0.48
26:YB:24:G:H1'	26:YB:27:C:N4	2.29	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.48
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.48
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.48
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.27	0.48
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.47	0.48
1:QA:1095:U:H5"	1:QA:1109:C:O2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.47
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.47
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	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
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.47
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.47
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	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
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:372:G:O2'	25:RA:373:U:P	2.72	0.47
25:RA:1079:C:H2'	25:RA:1080:C:O4'	2.14	0.47
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.14	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
29:RF:53:THR:C	29:RF:55:GLY:N	2.67	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	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
35:RP:75:ILE:H	35:RP:75:ILE:CD1	2.14	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	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:97:ARG:HG2	44:RY:97:ARG:NH1	2.28	0.47
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.47
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.46	0.47
1:XA:690:G:H2'	1:XA:691:G:O4'	2.13	0.47
1:XA:738:C:H2'	1:XA:739:C:H6	1.79	0.47
1:XA:953:G:H2'	1:XA:954:G:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.47
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.47
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.47
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	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
19:XS:36:ARG:HB3	19:XS:36:ARG:NH1	2.29	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.29	0.47
25:YA:185:U:H4'	25:YA:218:A:H4'	1.96	0.47
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.43	0.47
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.49	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	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:75:TYR:C	33:YN:76:SER:O	2.52	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
36:YQ:135:ASP:OD2	45:YZ:49:ARG:NH1	2.46	0.47
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.47
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.47
45:YZ:15:PRO:O	45:YZ:19:ARG:HB2	2.13	0.47
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.44	0.47
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.47
1:QA:487:A:H2'	1:QA:488:C:O4'	2.14	0.47
1:QA:784:C:H4'	25:RA:1837:C:OP1	2.14	0.47
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.47
7:QG:63:LYS:O	7:QG:63:LYS:HD2	2.13	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.47
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.34	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1266:G:O5'	42:RW:15:ARG:NH2	2.44	0.47
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.49	0.47
25:RA:1815:A:OP2	27:RD:54:ARG:NH2	2.47	0.47
25:RA:2526:G:H5'	25:RA:2742:C:O2'	2.14	0.47
25:RA:2760:C:H2'	25:RA:2761:G:H5"	1.95	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.15	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.78	0.47
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	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
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.61	0.47
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.14	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.29	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.47
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	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:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.14	0.47
14:XN:26:ARG:NH1	14:XN:43:CYS:SG	2.86	0.47
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.28	0.47
25:YA:769:G:H5'	25:YA:1379:A:N6	2.29	0.47
25:YA:1637:A:H4'	25:YA:2711:A:O2'	2.14	0.47
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.47
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.47
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.97	0.47
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.62	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	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
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.14	0.47
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	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:164:U:H2'	1:QA:165:C:C6	2.48	0.47
1:QA:737:A:H2'	1:QA:738:C:C6	2.49	0.47
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.78	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	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:7:THR:O	9:QI:83:ARG:HD2	2.14	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.96	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
25:RA:620:G:H4'	25:RA:621:A:C5'	2.41	0.47
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.13	0.47
25:RA:1820:U:H4'	25:RA:1821:A:OP2	2.14	0.47
25:RA:1998:G:OP2	28:RE:136:ARG:NH2	2.37	0.47
25:RA:2243:U:H2'	25:RA:2244:U:C6	2.49	0.47
25:RA:2331:G:H4'	46:R0:43:THR:H	1.79	0.47
25:RA:2396:G:H1'	47:R1:30:VAL:HG13	1.96	0.47
26:RB:94:C:H2'	26:RB:95:U:C6	2.49	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.47
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.29	0.47
39:RT:96:ARG:NH1	39:RT:96:ARG:CB	2.76	0.47
40:RU:91:ASP:O	40:RU:92:ARG:C	2.53	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
50:R4:50:VAL:O	50:R4:50:VAL:CG1	2.63	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.14	0.47
1:XA:67:C:H2'	1:XA:68:G:H8	1.75	0.47
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.44	0.47
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.49	0.47
1:XA:1366:C:O2'	10:XJ:60:ARG:NH1	2.48	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	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
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
25:YA:64:A:O3'	43:YX:71:GLY:HA3	2.14	0.47
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.28	0.47
25:YA:704:G:H1'	25:YA:727:A:N6	2.29	0.47
25:YA:754:C:H2'	25:YA:755:C:C6	2.49	0.47
25:YA:1045:A:N3	25:YA:1047:G:N2	2.62	0.47
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.14	0.47
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.35	0.47
25:YA:2645:G:C3'	25:YA:2646:C:H5'	2.44	0.47
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	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
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.62	0.47
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	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
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
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
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.14	0.47
1:QA:1432:G:OP1	39:RT:107:ASP:HB2	2.15	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	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
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.29	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
22:QV:74:C:C2'	22:QV:75:C:H5'	2.44	0.47
25:RA:590:A:H2'	25:RA:591:C:C6	2.49	0.47
25:RA:900:A:H5'	25:RA:901:A:OP2	2.14	0.47
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.48	0.47
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.14	0.47
26:RB:24:G:H5"	26:RB:25:A:OP1	2.14	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.97	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	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
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.77	0.47
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.14	0.47
1:XA:986:A:N3	19:XS:52:TYR:OH	2.47	0.47
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.50	0.47
1:XA:1081:G:P	5:XE:16:THR:OG1	2.72	0.47
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.14	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.09	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.97	0.47
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.47
20:XT:26:ASN:N	20:XT:26:ASN:ND2	2.62	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
25:YA:10:G:N2	25:YA:2802:G:OP1	2.48	0.47
25:YA:141:A:C8	25:YA:1408:C:H1'	2.49	0.47
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.48	0.47
26:YB:27:C:H5'	26:YB:28:C:OP2	2.15	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	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
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.15	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.45	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.43	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.77	0.47
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	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
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
55:Y9:27:CYS:SG	55:Y9:28:GLU:N	2.87	0.47
1:QA:512:U:H2'	1:QA:513:C:C6	2.49	0.47
1:QA:792:A:O2'	1:QA:794:A:N7	2.34	0.47
1:QA:939:G:H2'	1:QA:940:C:C6	2.50	0.47
1:QA:972:C:H4'	10:QJ:57:LYS:CG	2.44	0.47
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.49	0.47
1:QA:1521:G:H2'	1:QA:1522:U:C6	2.49	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	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
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.47
14:QN:43:CYS:O	14:QN:46:GLU:N	2.43	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.47
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.30	0.47
25:RA:690:G:H2'	25:RA:691:C:C6	2.50	0.47
25:RA:2238:G:H2'	25:RA:2238:G:N3	2.30	0.47
25:RA:2636:U:OP1	28:RE:79:ARG:HG3	2.14	0.47
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.38	0.47
26:RB:13:A:O2'	26:RB:14:U:H3'	2.14	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	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
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.47
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.79	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.47	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
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	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:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.44	0.47
25:YA:2564:A:C2	25:YA:2647:U:H4'	2.50	0.47
25:YA:2566:A:H4'	25:YA:2567:G:O5'	2.13	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
36:YQ:59:ARG:CD	36:YQ:59:ARG:N	2.72	0.47
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
41:YV:36:PRO:HA	41:YV:56:SER:HG	1.79	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.43	0.47
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.79	0.47
1:QA:399:G:H2'	1:QA:400:C:C6	2.50	0.47
1:QA:715:A:H2'	1:QA:716:A:C8	2.49	0.47
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.49	0.47
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.80	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.14	0.47
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	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
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.50	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.80	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.28	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	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
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
55:R9:1:MET:SD	55:R9:31:LYS:O	2.73	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.63	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
25:YA:1045:A:O2'	25:YA:1046:A:OP2	2.31	0.47
25:YA:1385:G:H1'	25:YA:1386:C:C6	2.49	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	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	2.34	0.47
1:QA:403:C:H4'	4:QD:122:ARG:NH2	2.30	0.47
1:QA:430:A:P	4:QD:9:CYS:H	2.38	0.47
1:QA:690:G:H22	11:QK:55:LYS:HZ1	1.62	0.47
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.47	0.47
1:QA:1179:A:O3'	9:QI:103:THR:HG23	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:71:VAL:HG23	2:QB:164:VAL:HG13	1.97	0.47
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	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
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.79	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	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:40:VAL:HG22	6:QF:41:GLU:N	2.30	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
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	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
25:RA:57:C:H2'	25:RA:58:G:O4'	2.14	0.47
25:RA:177:G:N3	25:RA:177:G:H5"	2.28	0.47
25:RA:307:G:H22	25:RA:310:A:P	2.37	0.47
25:RA:635:C:H2'	25:RA:636:G:O4'	2.15	0.47
25:RA:872:A:H4'	36:RQ:66:ILE:HD11	1.97	0.47
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.30	0.47
25:RA:2721:A:H2'	25:RA:2722:G:O4'	2.15	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	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
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: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
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	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:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.27	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	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
1:XA:580:U:H2'	1:XA:581:G:O4'	2.14	0.47
1:XA:686:U:O4	1:XA:703:G:H1'	2.15	0.47
1:XA:1203:C:H2'	1:XA:1204:A:H8	1.78	0.47
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.15	0.47
1:XA:1402:C:H2'	1:XA:1403:C:O4'	2.15	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:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.13	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.35	0.47
5:XE:152:ARG:HD3	8:XH:44:PHE:CZ	2.50	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.96	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
25:YA:99:U:O2'	25:YA:101:G:OP2	2.30	0.47
25:YA:278:A:H2'	25:YA:279:C:C6	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:389:G:H22	35:YP:72:PRO:CG	2.27	0.47
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.14	0.47
25:YA:870:A:OP1	36:YQ:6:ARG:NH2	2.47	0.47
25:YA:1937:A:C8	25:YA:1939:U:H2'	2.50	0.47
26:YB:52:A:N6	38:YS:33:LYS:HG3	2.29	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	2.76	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
30:YG: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:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	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
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
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.15	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.62	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:O	50:Y4:50:VAL:CG1	2.62	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
1:QA:173:U:H5"	1:QA:197:A:O4'	2.14	0.47
1:QA:1224:G:H1	1:QA:1322:C:HO2'	1.63	0.47
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.50	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.24	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.47
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
14:QN:41:ARG:CG	14:QN:41:ARG:HH11	2.28	0.47
25:RA:67:U:H3	25:RA:74:A:H2	1.58	0.47
25:RA:78:A:H2'	25:RA:79:G:H8	1.79	0.47
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.15	0.47
25:RA:270(T):G:H5"	47:R1:97:LEU:CD2	2.43	0.47
25:RA:583:G:H5"	40:RU:10:ARG:NH1	2.21	0.47
25:RA:717:G:H2'	25:RA:718:A:O4'	2.15	0.47
25:RA:806:C:OP2	35:RP:41:ARG:NE	2.47	0.47
25:RA:964:C:O2'	25:RA:2273:A:N3	2.43	0.47
25:RA:1020:A:N6	25:RA:1141:U:O2'	2.47	0.47
25:RA:1264:G:H5'	51:R5:11:THR:CG2	2.45	0.47
25:RA:2468:G:H5"	36:RQ:120:ILE:HD12	1.97	0.47
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47
1:XA:1182:G:H4'	1:XA:1183:A:H5"	1.96	0.47
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.83	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	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:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	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
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.28	0.47
25:YA:27:G:HO2'	25:YA:28:A:H8	1.59	0.47
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.48	0.47
25:YA:2839:G:H5"	37:YR:46:GLY:HA2	1.97	0.47
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.07	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YI:113:ARG:HB3	32:YI:131:LYS:HD3	1.97	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
1:QA:1296:C:HO2'	1:QA:1302:U:H5	1.63	0.47
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.50	0.47
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
25:RA:184:C:H2'	25:RA:185:U:H6	1.79	0.47
25:RA:265:A:O2'	25:RA:266:G:H4'	2.13	0.47
25:RA:2356:C:O3'	46:R0:20:ARG:HD3	2.15	0.47
25:RA:2467:C:H4'	36:RQ:123:HIS:ND1	2.30	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:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	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
1:XA:701:C:O2'	1:XA:702:A:OP2	2.26	0.47
1:XA:1072:G:H2'	1:XA:1073:U:C6	2.50	0.47
1:XA:1292:U:OP1	7:XG:41:ARG:NH2	2.48	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
9:XI:128:ARG:HH21	22:XV:35:A:P	2.38	0.47
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.47
25:YA:2420:C:H41	54:Y8:30:ARG:HD2	1.79	0.47
25:YA:2636:U:OP2	28:YE:79:ARG:NH1	2.47	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.14	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
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.97	0.47
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.97	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.48	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.15	0.47
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
1:QA:606:G:H22	1:QA:631:G:H5'	1.80	0.47
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.30	0.47
1:QA:1321:C:H3'	1:QA:1322:C:H5"	1.96	0.47
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
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
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.47
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.47
15:QO:82:ILE:O	15:QO:86:GLY:N	2.48	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
22:QV:53:G:H4'	22:QV:54:U:OP1	2.14	0.47
25:RA:29:U:H2'	25:RA:30:G:C8	2.50	0.47
25:RA:1005:C:O2'	33:RN:28:THR:HG21	2.15	0.47
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.37	0.47
25:RA:2250:G:C4	36:RQ:82:ARG:HG3	2.50	0.47
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
32:RI:14:ASP:O	32:RI:16:GLY:N	2.48	0.47
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.47
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.47
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.47
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	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
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:676:A:H1'	11:XK:115:PRO:HB3	1.96	0.47
1:XA:713:G:H2'	1:XA:714:G:C8	2.50	0.47
1:XA:1161:C:H2'	1:XA:1162:C:C6	2.50	0.47
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.47
4:XD:135:LEU:O	4:XD:137:SER:N	2.47	0.47
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.47
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.47
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.47
25:YA:1268:A:H2'	25:YA:1269:A:O4'	2.15	0.47
25:YA:1506:C:H3'	25:YA:1507:A:H5"	1.96	0.47
25:YA:2469:A:H2	25:YA:2481:G:N2	2.13	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
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.79	0.47
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.15	0.47
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.15	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	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
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.47
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.13	0.47
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.47
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.15	0.47
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.15	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.46
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.47	0.46
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.97	0.46
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.46
25:RA:389:G:H22	35:RP:72:PRO:CG	2.28	0.46
25:RA:458:G:O2'	53:R7:39:ARG:HD3	2.14	0.46
25:RA:780:G:H21	25:RA:783:A:H62	1.62	0.46
25:RA:1188:U:O2'	25:RA:1189:A:H5'	2.15	0.46
25:RA:1677:A:H2'	25:RA:1678:G:O4'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2052:G:H4'	28:RE:143:ASN:O	2.14	0.46
31:RH:4:ILE:H	31:RH:4:ILE:CD1	2.25	0.46
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.15	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.31	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
1:XA:136:C:H42	1:XA:227:G:H1	1.63	0.46
1:XA:939:G:H5"	7:XG:102:ARG:NH1	2.30	0.46
1:XA:1297:C:HO2'	1:XA:1298:C:P	2.39	0.46
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46
4:XD:146:ILE:N	4:XD:146:ILE:CD1	2.73	0.46
9:XI:112:LYS:HD3	9:XI:112:LYS:C	2.35	0.46
13:XM:11:ARG:HH21	30:YG:146:TYR:HD2	1.61	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
25:YA:415:A:H2'	25:YA:416:C:H6	1.79	0.46
25:YA:1217:C:OP1	40:YU:15:LYS:NZ	2.39	0.46
25:YA:2432:A:C8	47:Y1:33:LYS:HE2	2.50	0.46
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.14	0.46
25:YA:2729:G:C1'	28:YE:187:ALA:HB2	2.38	0.46
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.46
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	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: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
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.46
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.97	0.46
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.46
45:YZ:128:VAL:HB	45:YZ:161:VAL:HG13	1.96	0.46
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.46
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.46
1:QA:189:U:HO2'	1:QA:190:G:P	2.38	0.46
1:QA:429:U:H3'	4:QD:9:CYS:HB2	1.97	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.32	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	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
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.50	0.46
25:RA:2295:C:OP1	38:RS:10:ARG:HD2	2.16	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.49	0.46
28:RE:188:VAL:O	28:RE:188:VAL:HG13	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
33:RN:1:MET:HE3	40:RU:95:LEU:HD21	1.97	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.15	0.46
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.15	0.46
41:RV:30:GLY:O	41:RV:31:ALA:O	2.34	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.97	0.46
48:R2:7:ARG:HG3	48:R2:7:ARG:NH1	2.25	0.46
1:XA:486:U:H2'	1:XA:487:A:C8	2.49	0.46
1:XA:486:U:H2'	1:XA:487:A:H8	1.80	0.46
1:XA:865:A:H2	1:XA:918:A:H4'	1.80	0.46
1:XA:926:G:C6	1:XA:1505:G:C6	3.04	0.46
1:XA:1267:C:O2	21:XU:20:LYS:HD2	2.15	0.46
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.46
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.46
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
14:XN:36:PHE:CD1	14:XN:36:PHE:C	2.88	0.46
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.46
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
25:YA:224:G:O6	25:YA:419:C:O2'	2.33	0.46
25:YA:443:A:H3'	29:YF:45:ARG:HH12	1.79	0.46
25:YA:458:G:O2'	25:YA:469:G:O6	2.20	0.46
25:YA:860:U:C5	25:YA:917:A:C2	2.98	0.46
25:YA:1771:C:H1'	25:YA:1786:A:C8	2.50	0.46
25:YA:1888:G:H5'	25:YA:1889:A:OP1	2.16	0.46
27:YD:198:ASN:C	27:YD:198:ASN:ND2	2.69	0.46
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.46
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.97	0.46
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.46
1:QA:546:G:P	4:QD:72:GLU:HB3	2.55	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	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
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.31	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
25:RA:1025:G:C4	25:RA:1135:C:H1'	2.51	0.46
25:RA:1179:C:H2'	25:RA:1180:C:O4'	2.15	0.46
25:RA:1657:C:H2'	25:RA:1658:C:H6	1.81	0.46
25:RA:2572:A:N3	28:RE:144:ARG:NH2	2.62	0.46
27:RD:183:ARG:CG	27:RD:183:ARG:NH1	2.69	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
37:RR:29:LEU:N	37:RR:29:LEU:CD1	2.78	0.46
37:RR:78:LYS:O	37:RR:78:LYS:HG2	2.15	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	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
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.15	0.46
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
1:XA:779:C:H4'	11:XK:121:PRO:O	2.15	0.46
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.50	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.16	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
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.80	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
4:XD:110:PHE:HD1	4:XD:110:PHE:H	1.62	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
25:YA:192:C:O2'	25:YA:802:A:N3	2.41	0.46
25:YA:479:A:N3	25:YA:481:G:H5"	2.31	0.46
25:YA:755:C:H2'	25:YA:756:C:C6	2.51	0.46
25:YA:814:C:H41	35:YP:25:SER:HA	1.81	0.46
25:YA:1059:G:H3'	25:YA:1060:U:H5"	1.96	0.46
25:YA:2283:C:OP1	52:Y6:5:VAL:HG13	2.15	0.46
25:YA:2636:U:H2'	25:YA:2637:U:C6	2.51	0.46
25:YA:2695:C:H2'	25:YA:2696:U:C6	2.51	0.46
29:YF:46:ARG:CG	29:YF:46:ARG:NH1	2.71	0.46
29:YF:108:LYS:HA	29:YF:108:LYS:HZ3	1.79	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
31:YH:94:TYR:N	31:YH:94:TYR:CD1	2.82	0.46
32:YI:31:LEU:HD21	32:YI:38:LEU:HG	1.97	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
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	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
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
47:Y1:76:ARG:H	47:Y1:76:ARG:CD	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:377:G:P	16:QP:5:ARG:HH11	2.37	0.46
1:QA:502:G:C2	1:QA:503:C:C2	3.03	0.46
1:QA:921:U:O2	5:QE:19:MET:HB2	2.16	0.46
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.16	0.46
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.14	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
4:QD:166:LYS:HD3	27:YD:134:ARG:HH11	1.80	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.80	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.46
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	0.46
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.91	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
25:RA:195:A:H61	25:RA:198:C:H3'	1.80	0.46
25:RA:384:U:H2'	25:RA:385:C:C6	2.48	0.46
25:RA:1582:C:O2'	25:RA:1586:A:H8	1.97	0.46
25:RA:2532:G:H1'	25:RA:2663:G:N2	2.30	0.46
25:RA:2646:C:H2'	25:RA:2647:U:O4'	2.15	0.46
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.79	0.46
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.98	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
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
1:XA:233:C:H2'	1:XA:234:C:H6	1.80	0.46
1:XA:560:U:O2'	1:XA:561:U:OP2	2.25	0.46
1:XA:679:C:H2'	1:XA:680:C:C6	2.51	0.46
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.79	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
15:XO:50:HIS:O	15:XO:53:HIS:N	2.46	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.46
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.46
25:YA:275:G:H21	25:YA:276:A:H62	1.62	0.46
25:YA:443:A:H5"	25:YA:444:C:OP1	2.15	0.46
25:YA:459:U:H2'	25:YA:460:A:H8	1.81	0.46
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.46
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	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:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
32:YI:76:THR:OG1	32:YI:139:GLN:OE1	2.32	0.46
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:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	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
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.80	0.46
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.46
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
25:RA:270(S):G:O2'	25:RA:270(T):G:H5'	2.15	0.46
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.42	0.46
25:RA:605:C:H1'	25:RA:657:U:O2'	2.15	0.46
25:RA:947:G:H2'	25:RA:948:G:C8	2.51	0.46
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.39	0.46
25:RA:1266:G:O4'	42:RW:15:ARG:NH2	2.47	0.46
25:RA:2277:G:P	36:RQ:85:LYS:HB2	2.56	0.46
25:RA:2313:C:H2'	25:RA:2314:C:H6	1.78	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:47:VAL:O	28:RE:48:GLN:C	2.52	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.46
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	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:51:A:N7	1:XA:114:U:O2'	2.45	0.46
1:XA:581:G:N2	1:XA:760:G:N7	2.62	0.46
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.30	0.46
1:XA:1348:U:N3	1:XA:1374:A:H2	2.06	0.46
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.50	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
25:YA:220:G:O2'	25:YA:233:A:N3	2.39	0.46
25:YA:273(F):C:H2'	25:YA:274:G:H5"	1.97	0.46
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.36	0.46
25:YA:1021:A:C8	25:YA:1022:G:H5"	2.47	0.46
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.30	0.46
25:YA:2405:G:O2'	25:YA:2411:A:N6	2.49	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	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:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	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
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
31:YH:53:GLU:OE1	31:YH:53:GLU:HA	2.16	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
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
35:YP:12:ALA:C	35:YP:14:LYS:H	2.17	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.15	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.46
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.53	0.46
1:QA:971:G:N2	1:QA:1363:A:OP2	2.29	0.46
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.51	0.46
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.51	0.46
1:QA:1446:A:C5	39:RT:118:ARG:NH1	2.84	0.46
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.31	0.46
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.14	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	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:13:A:N1	25:RA:525:U:H2'	2.31	0.46
25:RA:451:C:H4'	29:RF:52:LYS:NZ	2.31	0.46
25:RA:1021:A:H3'	25:RA:1022:G:H5"	1.97	0.46
25:RA:1309:G:P	53:R7:9:ARG:HD3	2.55	0.46
25:RA:1332:G:N2	25:RA:1610:A:C8	2.80	0.46
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.81	0.46
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.51	0.46
25:RA:2396:G:H4'	47:R1:30:VAL:HA	1.96	0.46
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.45	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.15	0.46
35:RP:6:LEU:N	35:RP:6:LEU:HD22	2.31	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.16	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
39:RT:58:ASN:HD22	39:RT:58:ASN:N	2.10	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
43:RX:35:THR:O	43:RX:35:THR:HG23	2.16	0.46
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.46
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.56	0.46
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.46
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
25:YA:527:C:OP2	25:YA:2779:U:H5	1.98	0.46
25:YA:1188:U:O2'	25:YA:1189:A:H5'	2.16	0.46
25:YA:2159:G:H2'	25:YA:2160:G:C8	2.51	0.46
25:YA:2572:A:C8	28:YE:144:ARG:HB3	2.51	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
27:YD:48:ARG:HG3	27:YD:48:ARG:NH1	2.31	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.64	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.97	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
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.51	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.79	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	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
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:137:C:O4'	16:QP:63:GLY:HA2	2.16	0.46
1:QA:828:A:H2'	1:QA:829:G:O4'	2.15	0.46
1:QA:892:A:O2'	1:QA:1415:G:H4'	2.16	0.46
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.30	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC: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
4:QD:187:ARG:HH11	4:QD:187:ARG:HG2	1.81	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	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
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
13:QM:87:TYR:C	13:QM:89:GLY:H	2.19	0.46
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
25:RA:108:U:H2'	25:RA:109:G:C8	2.51	0.46
25:RA:612:G:O2'	25:RA:616:A:N1	2.45	0.46
25:RA:741:G:H2'	25:RA:742:G:H8	1.81	0.46
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.45	0.46
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.46
30:RG:88:ILE:O	30:RG:88:ILE:CD1	2.54	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	1.97	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.46
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.46	0.46
45:RZ:54:HIS:CD2	45:RZ:101:PRO:HG3	2.50	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.28	0.46
1:XA:1216:G:H5"	14:XN:5:ALA:CB	2.46	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
8:XH:49:GLU:HG3	8:XH:49:GLU:O	2.14	0.46
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.15	0.46
25:YA:286:C:H2'	25:YA:287:C:C6	2.50	0.46
25:YA:330:A:O2'	25:YA:331:A:H8	1.98	0.46
25:YA:1597:A:H5"	25:YA:1598:C:OP1	2.16	0.46
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.51	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:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	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
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.39	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.97	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.16	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.46
1:QA:564:C:H5'	17:QQ:32:TYR:CE2	2.51	0.46
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.80	0.46
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.16	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
15:QO:76:GLU:C	15:QO:78:TYR:N	2.68	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
25:RA:198:C:O2'	25:RA:199:A:H5'	2.16	0.46
25:RA:1003:G:O2'	25:RA:1010:A:N1	2.37	0.46
27:RD:136:ILE:HD12	27:RD:136:ILE:N	2.30	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.98	0.46
32:RI:101:LEU:HD13	32:RI:109:ILE:HD13	1.97	0.46
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
45:RZ:74:VAL:HG13	45:RZ:86:VAL:HG22	1.98	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
1:XA:75:C:H2'	1:XA:76:G:O4'	2.16	0.46
1:XA:437:U:H2'	1:XA:438:G:O4'	2.14	0.46
1:XA:546:G:P	4:XD:72:GLU:HB3	2.56	0.46
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.51	0.46
1:XA:1129:C:O2'	1:XA:1131:G:N7	2.45	0.46
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.16	0.46
1:XA:1306:A:N6	1:XA:1331:G:O2'	2.49	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	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
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	0.46
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.46
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
25:YA:1930:G:HO2'	25:YA:1931:U:P	2.39	0.46
25:YA:2271:G:OP1	46:Y0:18:ALA:HB1	2.15	0.46
25:YA:2468:G:H5"	36:YQ:120:ILE:HD12	1.97	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	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
36:YQ:87:LYS:O	36:YQ:87:LYS:HG2	2.15	0.46
36:YQ:136:ALA:HB1	45:YZ:52:SER:HB2	1.98	0.46
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.46
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
1:QA:109:A:C6	1:QA:326:G:C6	3.04	0.46
1:QA:779:C:H4'	11:QK:121:PRO:O	2.16	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	0.46
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.46
5:QE:64:ARG:HH11	5:QE:64:ARG:HG3	1.81	0.46
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	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:99:U:H4'	25:RA:101:G:O5'	2.15	0.46
25:RA:1999:C:H4'	25:RA:2723:C:O2	2.16	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.30	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:52:ILE:HG22	30:RG:52:ILE:O	2.15	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	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
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.46
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	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
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.46
1:XA:1405:G:OP2	58:XA:1675:PAR:O34	2.32	0.46
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.97	0.46
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	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
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
25:YA:184:C:H2'	25:YA:185:U:C6	2.51	0.46
25:YA:372:G:H5"	47:Y1:66:HIS:CD2	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:470:A:H2'	25:YA:471:A:O4'	2.16	0.46
25:YA:587:C:H4'	25:YA:588:U:O5'	2.16	0.46
25:YA:1300:U:H4'	25:YA:1301:A:H5"	1.98	0.46
25:YA:2168:G:H2'	25:YA:2168:G:N3	2.31	0.46
25:YA:2491:U:O2'	25:YA:2570:G:OP1	2.25	0.46
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.43	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.46
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.50	0.46
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.51	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
25:RA:900:A:H3'	25:RA:901:A:C8	2.47	0.46
25:RA:1534:G:N3	25:RA:1534:G:H2'	2.31	0.46
25:RA:1993:U:H4'	28:RE:128:SER:OG	2.16	0.46
25:RA:2025:C:H2'	25:RA:2026:C:C6	2.51	0.46
25:RA:2469:A:H5'	25:RA:2470:G:OP2	2.16	0.46
28:RE:47:VAL:O	28:RE:47:VAL:HG23	2.16	0.46
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.46
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.46
30:RG:179:PRO:CG	50:R4:38:LYS:HZ1	2.22	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.40	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.17	0.46
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.46
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.16	0.46
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.46
1:XA:562:C:H4'	1:XA:563:A:O5'	2.15	0.46
1:XA:562:C:N4	12:XL:16:GLU:OE1	2.49	0.46
1:XA:791:G:C2'	1:XA:792:A:H5'	2.45	0.46
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	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
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.46
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.80	0.46
7:XG:54:THR:O	7:XG:54:THR:HG23	2.16	0.46
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.46
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.97	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
10:XJ:29:ARG:HG2	10:XJ:29:ARG:HH11	1.81	0.46
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	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	2.49	0.46
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.46
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.46
25:YA:34:C:H5	25:YA:454:A:H1'	1.80	0.46
25:YA:195:A:N7	25:YA:197:A:OP1	2.49	0.46
25:YA:521:G:H2'	25:YA:522:G:H8	1.81	0.46
25:YA:2030:A:H4'	25:YA:2031:A:H8	1.81	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
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	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
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.46
44:YY:35:TYR:CD1	44:YY:35:TYR:O	2.69	0.46
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.79	0.46
51:Y5:43:HIS:ND1	51:Y5:43:HIS:N	2.63	0.46
1:QA:967:C:H2'	1:QA:968:A:N7	2.31	0.45
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.38	0.45
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.16	0.45
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.45
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
19:QS:63:THR:HG23	19:QS:66:MET:CE	2.46	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.31	0.45
25:RA:207:A:H2'	25:RA:208:C:O4'	2.17	0.45
25:RA:1928:A:C2'	25:RA:1929:G:H5'	2.46	0.45
25:RA:2416:C:H2'	25:RA:2417:C:C6	2.52	0.45
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.45
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	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
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.36	0.45
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.45
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.45
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.45
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.98	0.45
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.45
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.45
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.49	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.45
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.45
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.45
25:YA:222:A:H3'	25:YA:421:U:H5"	1.98	0.45
25:YA:484:C:H2'	25:YA:485:C:C6	2.52	0.45
25:YA:1659:U:O2'	25:YA:2712(A):A:N1	2.39	0.45
25:YA:2035:G:H4'	25:YA:2036:C:OP2	2.16	0.45
25:YA:2636:U:H1'	25:YA:2783:G:N2	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.45
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	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
32:YI:9:LEU:O	32:YI:10:GLU:HG3	2.17	0.45
34:YO:86:ILE:H	34:YO:86:ILE:CD1	2.28	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.46	0.45
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.80	0.45
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.45
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.46	0.45
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.45
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:Y9:1:MET:SD	55:Y9:31:LYS:O	2.74	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: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	2.52	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.45
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.45
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
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.45
22:QV:40:C:H2'	22:QV:41:C:C6	2.50	0.45
25:RA:31:C:O2'	25:RA:1238:G:H5'	2.16	0.45
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.51	0.45
25:RA:917:A:O2'	26:RB:98:G:H4'	2.16	0.45
25:RA:959:A:N3	25:RA:2457:U:O2'	2.43	0.45
25:RA:1165:U:H2'	25:RA:1166:C:C6	2.51	0.45
25:RA:1263:U:O2'	51:R5:11:THR:HG23	2.16	0.45
25:RA:1607:C:N4	25:RA:1622:G:OP2	2.46	0.45
25:RA:2335:A:O2'	25:RA:2336:A:O5'	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2366:A:H2'	25:RA:2367:G:O4'	2.16	0.45
25:RA:2558:C:H2'	25:RA:2559:C:O4'	2.16	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:OP1	2.35	0.45
25:RA:2712:U:OP1	25:RA:2714:G:H4'	2.16	0.45
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.46	0.45
27:RD:198:ASN:C	27:RD:198:ASN:ND2	2.69	0.45
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	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
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
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.98	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.63	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.45
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.45
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.45
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45
55:R9:25:VAL:HG11	55:R9:34:GLN:HE21	1.80	0.45
1:XA:1256:A:OP1	3:XC:26:LYS:NZ	2.45	0.45
1:XA:1344:C:H5'	9:XI:120:ARG:O	2.16	0.45
1:XA:1347:G:N7	9:XI:11:LYS:NZ	2.65	0.45
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.45
10:XJ:95:GLU:OE2	10:XJ:95:GLU:HA	2.16	0.45
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.34	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.45
19:XS:63:THR:HG23	19:XS:66:MET:CE	2.46	0.45
22:XV:3:C:C2'	22:XV:4:G:H5'	2.47	0.45
25:YA:141:A:H8	25:YA:1408:C:H1'	1.82	0.45
25:YA:598:G:H2'	25:YA:599:G:O4'	2.15	0.45
25:YA:898:C:C2'	25:YA:899:A:H5'	2.45	0.45
25:YA:1331:A:H2'	25:YA:1333:C:C5	2.51	0.45
25:YA:2695:C:H2'	25:YA:2696:U:H6	1.81	0.45
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.45
27:YD:241:PRO:O	27:YD:242:ARG:C	2.53	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.84	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.84	0.45
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.45
37:YR:85:PRO:C	37:YR:87:TYR:H	2.18	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.15	0.45
45:YZ:149:SER:HB2	45:YZ:172:ALA:O	2.16	0.45
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.45
55:Y9:25:VAL:HG11	55:Y9:34:GLN:HE21	1.81	0.45
1:QA:175:C:H2'	1:QA:176:C:H6	1.81	0.45
1:QA:967:C:H2'	1:QA:968:A:C8	2.52	0.45
1:QA:1024:G:H4'	1:QA:1024:G:OP1	2.16	0.45
1:QA:1067:A:N1	1:QA:1108:G:O2'	2.38	0.45
1:QA:1465:C:H2'	1:QA:1466:C:O4'	2.15	0.45
3:QC:34:LEU:HD23	3:QC:34:LEU:C	2.37	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.80	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.47	0.45
12:QL:11:VAL:HG21	17:QQ:34:LYS:HD3	1.98	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.45
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	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
23:QY:30:C:H2'	23:QY:31:G:H8	1.81	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'	1.97	0.45
25:RA:898:C:C2'	25:RA:899:A:H5'	2.46	0.45
25:RA:1636:C:H2'	25:RA:1637:A:H8	1.82	0.45
25:RA:2284:C:C5	52:R6:27:LYS:HE2	2.52	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.97	0.45
32:RI:74:ASN:OD1	32:RI:74:ASN:N	2.49	0.45
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.45
34:RO:61:VAL:O	34:RO:84:ALA:HB1	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
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.45
42:RW:48:ALA:O	42:RW:49:LYS:C	2.53	0.45
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.99	0.45
45:RZ:108:PRO:HB2	45:RZ:109:ALA:H	1.62	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
54:R8:48:PHE:N	54:R8:48:PHE:HD1	2.14	0.45
1:XA:49:U:C2	1:XA:361:G:N2	2.84	0.45
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.15	0.45
1:XA:595:G:H1'	1:XA:596:C:C5	2.49	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
6:XF:100:ASN:HD22	6:XF:100:ASN:HA	1.48	0.45
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:264:C:H2'	25:YA:265:A:H5"	1.97	0.45
25:YA:302:C:H2'	25:YA:303:U:C6	2.50	0.45
25:YA:1019:U:O2'	25:YA:1021:A:H2	1.99	0.45
25:YA:2032:G:H21	28:YE:146:THR:HG23	1.82	0.45
25:YA:2308:G:N2	25:YA:2311:A:H2	2.15	0.45
25:YA:2505:G:O6	25:YA:2576:G:H2'	2.16	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.98	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	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)
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.36	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.81	0.45
55:Y9:1:MET:HE2	55:Y9:10:ILE:HD13	1.98	0.45
1:QA:452:A:H2'	1:QA:453:A:C8	2.52	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:101:LEU:HD21	4:QD:121:VAL:HG13	1.98	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
25:RA:412:A:N7	25:RA:2411:A:H2	2.13	0.45
25:RA:923:C:H2'	25:RA:924:C:C6	2.52	0.45
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.16	0.45
25:RA:2009:G:OP1	42:RW:41:LYS:HE2	2.17	0.45
25:RA:2572:A:C4	28:RE:144:ARG:NH2	2.84	0.45
25:RA:2584:U:H2'	25:RA:2585:U:C6	2.51	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.73	0.45
26:RB:13:A:N1	26:RB:69:G:O2'	2.45	0.45
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	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
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.84	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.98	0.45
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.45
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.45
46:R0:41:ARG:HA	46:R0:41:ARG:NE	2.31	0.45
1:XA:335:C:O2'	1:XA:1433:A:N3	2.42	0.45
1:XA:403:C:O2'	4:XD:122:ARG:NH2	2.47	0.45
1:XA:582:U:H2'	1:XA:583:A:C8	2.51	0.45
1:XA:686:U:O2'	11:XK:42:TRP:NE1	2.50	0.45
1:XA:923:A:OP1	5:XE:21:ALA:HB2	2.17	0.45
1:XA:1222:G:P	19:XS:77:THR:HG21	2.57	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.45
5:XE:148:VAL:CG2	8:XH:107:LEU:HD13	2.45	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.31	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:180:G:N2	25:YA:215:G:O6	2.50	0.45
25:YA:273:G:H1	25:YA:364:C:H42	1.64	0.45
25:YA:579:G:H2'	25:YA:580:C:C6	2.51	0.45
25:YA:1794:U:H2'	25:YA:1795:C:C6	2.45	0.45
25:YA:2115:G:N2	25:YA:2165:G:N7	2.55	0.45
25:YA:2784:C:H5"	28:YE:41:LYS:NZ	2.32	0.45
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
36:YQ:132:VAL:HG11	45:YZ:81:ARG:CZ	2.47	0.45
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.80	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.45
45:YZ:141:VAL:HG23	45:YZ:144:LEU:HB2	1.98	0.45
46:Y0:27:GLU:HB2	46:Y0:69:PHE:HD1	1.81	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
1:QA:748:C:H1'	1:QA:749:C:H5	1.81	0.45
1:QA:1125:U:O4	10:QJ:5:ARG:HD3	2.16	0.45
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	1.99	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
25:RA:78:A:H2'	25:RA:79:G:C8	2.52	0.45
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.34	0.45
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.49	0.45
25:RA:1756:G:H4'	25:RA:1758:G:O4'	2.16	0.45
25:RA:1769:G:O2'	25:RA:1958:C:OP1	2.30	0.45
25:RA:2507:C:H5"	25:RA:2573:C:N4	2.32	0.45
25:RA:2630:G:O4'	25:RA:2894:G:H1'	2.16	0.45
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45
27:RD:166:GLN:CA	27:RD:166:GLN:NE2	2.78	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	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
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	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
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.45
36:RQ:93:TYR:CD1	36:RQ:93:TYR:N	2.84	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.45
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.37	0.45
1:XA:266:G:O2'	1:XA:267:C:OP2	2.29	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
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
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
5:XE:152:ARG:HD3	8:XH:44:PHE:CE1	2.52	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.30	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
13:XM:8:GLU:OE2	30:YG:115:ARG:CZ	2.65	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
14:XN:43:CYS:HB3	14:XN:44:LEU:H	1.66	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.45
25:YA:34:C:N4	25:YA:447:A:H61	2.14	0.45
25:YA:580:C:H2'	25:YA:581:C:C6	2.51	0.45
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.81	0.45
25:YA:2286:A:OP1	52:Y6:28:ARG:NE	2.50	0.45
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.43	0.45
26:YB:104:A:H5'	45:YZ:72:ARG:HD3	1.96	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
32:YI:81:VAL:HG21	32:YI:88:ILE:HD12	1.98	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.34	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.65	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.99	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.82	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	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
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.32	0.45
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.16	0.45
1:QA:1095:U:H2'	1:QA:1096:C:C6	2.52	0.45
1:QA:1187:G:P	9:QI:113:LYS:NZ	2.89	0.45
1:QA:1292:U:P	7:QG:41:ARG:HH21	2.40	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
25:RA:177:G:H3'	25:RA:178:G:H8	1.82	0.45
25:RA:372:G:H5"	47:R1:66:HIS:CD2	2.52	0.45
25:RA:709:U:H2'	25:RA:710:G:H8	1.80	0.45
25:RA:769:G:H5'	25:RA:1379:A:H61	1.80	0.45
25:RA:868:U:C4	25:RA:869:G:N7	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1754:C:N3	25:RA:2716:U:O2'	2.49	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
32:RI:83:ALA:HA	32:RI:88:ILE:HA	1.97	0.45
33:RN:35:ARG:HG3	33:RN:35:ARG:O	2.15	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	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
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.98	0.45
1:XA:429:U:H1'	1:XA:430:A:H5"	1.97	0.45
1:XA:560:U:H4'	1:XA:561:U:H5"	1.97	0.45
1:XA:600:C:H2'	1:XA:601:C:C6	2.52	0.45
1:XA:757:U:OP1	1:XA:822:C:O2'	2.31	0.45
1:XA:814:A:O2'	1:XA:815:A:H3'	2.15	0.45
1:XA:939:G:H2'	1:XA:940:C:C6	2.52	0.45
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.50	0.45
1:XA:1424:C:H2'	1:XA:1425:U:O4'	2.17	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:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.45
25:YA:38:A:H2'	25:YA:39:C:C6	2.51	0.45
25:YA:64:A:H1'	43:YX:66:LEU:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:530:G:C5	25:YA:2022:U:H5"	2.51	0.45
25:YA:1797:C:H4'	27:YD:257:LEU:O	2.17	0.45
25:YA:2087:G:C2'	25:YA:2088:G:H5'	2.47	0.45
25:YA:2105:C:H2'	25:YA:2106:G:H8	1.82	0.45
25:YA:2114:A:N6	25:YA:2119:A:H62	2.15	0.45
25:YA:2467:C:N4	25:YA:2468:G:O6	2.50	0.45
25:YA:2579:C:H2'	25:YA:2580:U:O4'	2.16	0.45
25:YA:2655:G:O2'	25:YA:2656:U:OP2	2.34	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	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
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
46:Y0:19:LYS:HD3	46:Y0:19:LYS:HA	1.54	0.45
1:QA:503:C:H2'	1:QA:504:C:C6	2.51	0.45
1:QA:516:U:O2'	1:QA:519:C:N3	2.46	0.45
1:QA:1049:U:HO2'	14:QN:2:ALA:N	2.14	0.45
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.16	0.45
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.32	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.98	0.45
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.45
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.98	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.16	0.45
25:RA:451:C:H4'	29:RF:52:LYS:HZ2	1.81	0.45
25:RA:515:A:H1'	25:RA:581:C:H1'	1.98	0.45
25:RA:519:U:H2'	25:RA:520:G:H8	1.79	0.45
25:RA:686:G:N2	25:RA:788:A:H61	2.15	0.45
25:RA:1217:C:OP1	40:RU:15:LYS:NZ	2.45	0.45
25:RA:1225:C:O2'	41:RV:85:LYS:HA	2.17	0.45
25:RA:1257:C:H4'	29:RF:83:PHE:CE2	2.52	0.45
25:RA:1672:C:H5"	25:RA:2554:U:OP1	2.17	0.45
25:RA:1693:U:H1'	27:RD:14:ARG:HH22	1.80	0.45
25:RA:2168:G:H2'	25:RA:2168:G:N3	2.31	0.45
25:RA:2404:C:H1'	35:RP:67:MET:HE2	1.99	0.45
25:RA:2777:G:OP2	25:RA:2781:A:O2'	2.18	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	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
40:RU:53:ARG:C	40:RU:55:ARG:H	2.19	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	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
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.45
1:XA:1130:A:N6	1:XA:1131:G:O6	2.50	0.45
1:XA:1338:G:C6	1:XA:1339:A:C6	3.05	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
25:YA:26:G:H1'	25:YA:515:A:N6	2.31	0.45
25:YA:71:A:H5"	25:YA:72:U:H3'	1.98	0.45
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.82	0.45
25:YA:871:U:H4'	36:YQ:69:PHE:CE2	2.52	0.45
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.52	0.45
25:YA:1210:A:H5"	25:YA:1212:G:O4'	2.17	0.45
25:YA:1508:A:O2'	25:YA:1509:C:O4'	2.32	0.45
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.98	0.45
25:YA:2377:A:H4'	38:YS:111:GLU:O	2.17	0.45
25:YA:2439:A:C8	25:YA:2439:A:H5'	2.51	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.82	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
31:YH:7:LEU:C	31:YH:7:LEU:HD12	2.37	0.45
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.82	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
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
37:YR:29:LEU:N	37:YR:29:LEU:CD1	2.79	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.98	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.98	0.45
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
54:Y8:52:LYS:O	54:Y8:52:LYS:CG	2.64	0.45
1:QA:741:G:H2'	1:QA:742:G:O4'	2.17	0.45
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.82	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.45	0.45
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.45
16:QP:50:LYS:O	16:QP:50:LYS:HD3	2.16	0.45
22:QV:15:G:H2'	22:QV:59:A:N1	2.31	0.45
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.51	0.45
25:RA:1291:C:H5'	25:RA:1536:A:H5'	1.99	0.45
25:RA:1328:G:H2'	25:RA:1330:C:C5	2.52	0.45
25:RA:1796:U:H2'	25:RA:1797:C:H6	1.80	0.45
26:RB:80:U:O2'	26:RB:81:G:H5"	2.16	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	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
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	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
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.64	0.45
1:XA:58:C:O2'	1:XA:388:G:N7	2.30	0.45
1:XA:1305:G:HO2'	1:XA:1306:A:H8	1.61	0.45
1:XA:1346:A:N6	1:XA:1375:A:OP2	2.47	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
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
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
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.56	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.17	0.45
25:YA:153:C:P	47:Y1:88:LYS:HE2	2.57	0.45
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.51	0.45
25:YA:436:C:H2'	25:YA:438:G:H8	1.81	0.45
25:YA:508:G:HO2'	25:YA:509:C:P	2.40	0.45
25:YA:1250:G:OP2	35:YP:21:ARG:HD3	2.16	0.45
25:YA:2723:C:O3'	37:YR:1:MET:CE	2.65	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
33:YN:5:VAL:O	33:YN:5:VAL:HG13	2.16	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	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:65:PHE:O	36:YQ:66:ILE:CG1	2.48	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
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
1:QA:323:U:H5'	20:QT:23:ARG:HB2	1.98	0.45
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.16	0.45
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.32	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
4:QD:166:LYS:HG2	27:YD:134:ARG:CZ	2.45	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
25:RA:49:A:H61	25:RA:177:G:H2'	1.81	0.45
25:RA:376:C:H2'	25:RA:377:C:C6	2.51	0.45
25:RA:1567:A:H4'	27:RD:58:HIS:CE1	2.51	0.45
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.52	0.45
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.88	0.45
28:RE:77:ILE:O	28:RE:78:LEU:O	2.34	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.45
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	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
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.98	0.45
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	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
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.82	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.17	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.95	0.45
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.45
4:XD:165:MET:HE3	4:XD:168:ARG:HD2	1.98	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
10:XJ:63:PHE:HB3	14:XN:57:ARG:O	2.17	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.45
20:XT:10:LEU:C	20:XT:12:ALA:H	2.21	0.45
25:YA:195:A:OP1	35:YP:46:LYS:HE2	2.17	0.45
25:YA:582:G:OP1	40:YU:14:HIS:ND1	2.41	0.45
25:YA:795:C:H2'	25:YA:796:C:C6	2.52	0.45
25:YA:1535:U:N3	25:YA:1537:C:H1'	2.32	0.45
25:YA:1607:C:H4'	25:YA:1608:A:O5'	2.17	0.45
25:YA:2635:C:OP1	28:YE:78:LEU:HD12	2.16	0.45
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.45
30:YG:121:ASN:C	30:YG:123:ASN:H	2.20	0.45
32:YI:79:ILE:N	32:YI:141:LYS:O	2.50	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
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
36:YQ:58:PHE:O	36:YQ:58:PHE:CD1	2.70	0.45
36:YQ:93:TYR:N	36:YQ:93:TYR:CD1	2.85	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
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
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
1:QA:97:U:H2'	1:QA:99:C:C6	2.52	0.45
1:QA:430:A:O5'	4:QD:7:PRO:HA	2.17	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	0.45
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	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:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
25:RA:108:U:H2'	25:RA:109:G:H8	1.82	0.45
25:RA:324:A:N6	25:RA:338:G:O2'	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1470:G:N2	25:RA:1522:G:OP2	2.50	0.45
25:RA:1510:A:O2'	25:RA:1511:A:N7	2.50	0.45
25:RA:1797:C:H4'	27:RD:257:LEU:O	2.17	0.45
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.51	0.45
26:RB:20:C:H2'	26:RB:21:G:O4'	2.17	0.45
27:RD:44:ASN:HB2	27:RD:49:ILE:HA	1.93	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.98	0.45
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.45
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
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:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	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:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.45
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.47	0.45
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.45
1:XA:164:U:H2'	1:XA:165:C:C6	2.52	0.45
1:XA:240:C:H2'	1:XA:241:C:C6	2.51	0.45
1:XA:748:C:H1'	1:XA:749:C:H5	1.81	0.45
1:XA:944:G:N1	1:XA:1338:G:OP2	2.46	0.45
1:XA:1060:C:C5	3:XC:2:GLY:HA2	2.52	0.45
1:XA:1199:U:H4'	10:XJ:54:PHE:CE1	2.50	0.45
1:XA:1239:A:H62	1:XA:1299:A:N6	2.14	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.45
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.17	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	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
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.45
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.45
25:YA:686:G:N2	25:YA:788:A:H61	2.13	0.45
25:YA:1020:A:N6	25:YA:1141:U:O2'	2.50	0.45
25:YA:1771:C:O2'	25:YA:1786:A:H8	2.00	0.45
25:YA:1992:G:H5'	25:YA:1994:C:H41	1.82	0.45
25:YA:2346:A:H5"	25:YA:2383:G:H1'	1.99	0.45
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.52	0.45
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.45
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.45
28:YE:18:ASP:O	28:YE:19:ARG:C	2.56	0.45
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	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:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.45
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.45
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.45
45:YZ:100:VAL:HA	45:YZ:101:PRO:HD3	1.87	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.17	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.99	0.45
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.24	0.44
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.50	0.44
1:QA:681:C:H2'	1:QA:682:G:H8	1.82	0.44
1:QA:791:G:H2'	1:QA:792:A:H5'	1.99	0.44
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.44
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.44
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.44
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	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:242:G:C5'	54:R8:3:LYS:HE3	2.46	0.44
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.52	0.44
25:RA:2415:G:O3'	35:RP:66:GLY:HA3	2.17	0.44
25:RA:2567:G:H2'	25:RA:2568:C:C6	2.51	0.44
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
27:RD:166:GLN:NE2	27:RD:166:GLN:HA	2.32	0.44
28:RE:36:ARG:HH11	28:RE:36:ARG:CB	2.28	0.44
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.44
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.44
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.80	0.44
34:RO:19:ILE:HD13	34:RO:19:ILE:H	1.82	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.48	0.44
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.44
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	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
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.44
1:XA:109:A:C6	1:XA:326:G:C6	3.05	0.44
1:XA:253:U:H2'	1:XA:254:G:C8	2.52	0.44
1:XA:1412:C:H2'	1:XA:1413:A:C8	2.52	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.81	0.44
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	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
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.44
16:XP:72:ARG:HD3	16:XP:72:ARG:O	2.17	0.44
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.44
25:YA:528:A:H2	25:YA:2043:C:C5'	2.30	0.44
25:YA:870:A:H5"	36:YQ:6:ARG:O	2.16	0.44
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.52	0.44
26:YB:20:C:H2'	26:YB:21:G:O4'	2.17	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.52	0.44
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.44
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.44
32:YI:94:ALA:HB2	32:YI:116:LEU:HD13	1.99	0.44
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.44
38:YS:89:ARG:O	38:YS:90:GLY:C	2.55	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
1:QA:1127:G:H21	1:QA:1147:C:N4	2.15	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.47	0.44
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.44
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.17	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.38	0.44
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.44
25:RA:234:C:H2'	25:RA:235:U:C6	2.52	0.44
25:RA:241:A:H4'	25:RA:242:G:OP1	2.17	0.44
25:RA:567:A:OP2	35:RP:29:LYS:NZ	2.51	0.44
25:RA:1155:A:O3'	40:RU:55:ARG:NH1	2.50	0.44
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.53	0.44
25:RA:2659:G:N2	25:RA:2662:A:OP2	2.50	0.44
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	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
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	1.99	0.44
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.44
38:RS:5:THR:HG1	38:RS:7:TYR:HB3	1.82	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.44
48:R2:41:ILE:HD12	48:R2:41:ILE:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.81	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
2:XB:229:VAL:HG12	2:XB:229:VAL:O	2.17	0.44
4:XD:94:LEU:O	4:XD:98:GLU:N	2.49	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.98	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
10:XJ:61:GLU:CG	14:XN:58:LYS:HE2	2.47	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.86	0.44
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.38	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.47	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
22:XV:13:C:O2'	25:YA:1924:C:H4'	2.18	0.44
25:YA:414:C:H2'	25:YA:415:A:C8	2.52	0.44
26:YB:42:C:C6	30:YG:69:ALA:HB2	2.52	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	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
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.44
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.82	0.44
1:QA:1225:A:H2'	1:QA:1225:A:N3	2.31	0.44
1:QA:1384:C:H2'	1:QA:1385:G:H8	1.82	0.44
1:QA:1496:C:H2'	1:QA:1497:G:O4'	2.17	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	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
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.50	0.44
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
25:RA:26:G:H1'	25:RA:515:A:H61	1.81	0.44
25:RA:30:G:H2'	25:RA:31:C:C6	2.52	0.44
25:RA:229:A:OP1	25:RA:229:A:H4'	2.15	0.44
25:RA:271:G:H2'	25:RA:272:G:H8	1.82	0.44
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.52	0.44
25:RA:335:C:H4'	44:RY:73:ARG:CZ	2.47	0.44
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.33	0.44
25:RA:1228:G:OP2	40:RU:16:LYS:NZ	2.34	0.44
25:RA:1258:C:O4'	29:RF:84:VAL:HG11	2.18	0.44
25:RA:1436:G:H1'	25:RA:1477:A:O2'	2.17	0.44
25:RA:2271:G:H2'	25:RA:2272:U:C6	2.52	0.44
25:RA:2747:G:H21	25:RA:2757:A:H62	1.64	0.44
26:RB:33:G:H8	26:RB:33:G:H5"	1.82	0.44
26:RB:78:A:H2'	26:RB:79:C:O4'	2.17	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
32:RI:41:GLU:HA	32:RI:44:LEU:HB2	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
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.44
35:RP:45:LEU:N	35:RP:45:LEU:HD12	2.32	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
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.18	0.44
53:R7:32:LYS:O	53:R7:33:ARG:C	2.55	0.44
1:XA:292:G:N7	1:XA:293:G:H1'	2.32	0.44
1:XA:392:G:P	16:XP:12:LYS:HG3	2.56	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:411:A:C6	1:XA:429:U:C4	3.05	0.44
1:XA:627:G:H2'	1:XA:628:G:H8	1.82	0.44
1:XA:818:G:H3'	1:XA:819:A:H5"	1.99	0.44
1:XA:1333:A:H2'	1:XA:1334:G:O4'	2.17	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.44
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
8:XH:1:MET:H3	8:XH:1:MET:CE	2.31	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.79	0.44
25:YA:28:A:N6	25:YA:512:G:H1'	2.32	0.44
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.17	0.44
25:YA:2009:G:H1'	37:YR:107:ASP:O	2.18	0.44
25:YA:2715:C:H2'	25:YA:2716:U:H6	1.82	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.33	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.44
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.44
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.44
40:YU: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:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.16	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.86	0.44
1:QA:397:A:H5'	1:QA:398:C:OP1	2.17	0.44
1:QA:1113:C:H2'	1:QA:1114:C:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
7:QG:40:ALA:O	7:QG:41:ARG:C	2.55	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.85	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.81	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.44
25:RA:27:G:O2'	25:RA:28:A:H8	2.00	0.44
25:RA:38:A:N3	29:RF:48:THR:OG1	2.48	0.44
25:RA:373:U:H2'	25:RA:374:A:H8	1.82	0.44
25:RA:792:G:N3	25:RA:2072:G:O2'	2.40	0.44
25:RA:1138:G:H21	33:RN:106:MET:CE	2.29	0.44
25:RA:1161:C:O2'	41:RV:8:GLY:HA2	2.17	0.44
25:RA:2862:G:H2'	25:RA:2863:C:C6	2.52	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	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
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
37:RR:3:HIS:C	37:RR:5:LYS:H	2.16	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	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
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
1:XA:253:U:H2'	1:XA:254:G:H8	1.83	0.44
1:XA:345:C:O3'	39:YT:41:ARG:NH2	2.50	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
13:XM:121:LYS:NZ	23:XY:40:G:O2'	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:50:LYS:HD3	16:XP:50:LYS:O	2.17	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
25:YA:389:G:H22	35:YP:72:PRO:CD	2.29	0.44
25:YA:389:G:H22	35:YP:72:PRO:HD3	1.81	0.44
25:YA:888:C:H3'	25:YA:889:C:C4'	2.46	0.44
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.34	0.44
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.52	0.44
25:YA:2243:U:H2'	25:YA:2244:U:C6	2.51	0.44
25:YA:2495:G:H5"	36:YQ:81:VAL:CG1	2.47	0.44
25:YA:2630:G:O4'	25:YA:2894:G:H1'	2.18	0.44
26:YB:44:G:H1'	26:YB:47:C:N4	2.32	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
35:YP:6:LEU:N	35:YP:6:LEU:HD22	2.31	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
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.44
1:QA:555:C:H2'	1:QA:556:C:C6	2.52	0.44
1:QA:636:U:H2'	1:QA:637:G:H8	1.83	0.44
1:QA:1306:A:C6	1:QA:1307:U:C2	3.05	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	1.99	0.44
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.06	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
9:QI:128:ARG:HH21	22:QV:35:A:P	2.41	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
25:RA:675:A:H4'	29:RF:67:GLN:OE1	2.17	0.44
25:RA:956:G:H2'	25:RA:957:A:H2'	1.99	0.44
25:RA:2122:U:H2'	25:RA:2123:G:H8	1.82	0.44
25:RA:2688:U:H5	25:RA:2720:U:OP2	2.01	0.44
26:RB:57:A:H4'	30:RG:30:GLU:HG2	1.98	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
45:RZ:110:GLY:N	45:RZ:111:VAL:HG12	2.33	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.18	0.44
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.52	0.44
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.52	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	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:53:SER:C	11:XK:55:LYS:H	2.21	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
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
25:YA:155:C:H5'	25:YA:161:U:OP2	2.18	0.44
25:YA:443:A:H3'	29:YF:45:ARG:NH1	2.33	0.44
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.44
25:YA:910:A:N1	25:YA:2277:G:H1'	2.32	0.44
25:YA:1844:C:OP1	27:YD:257:LEU:HD23	2.18	0.44
26:YB:78:A:H2'	26:YB:79:C:O4'	2.18	0.44
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
32:YI:90:GLY:O	32:YI:121:LYS:HE2	2.17	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
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:Y0:36:ILE:HD11	46:Y0:39:ARG:HG2	2.00	0.44
1:QA:392:G:OP1	16:QP:13:HIS:N	2.39	0.44
1:QA:484:G:H4'	1:QA:485:G:O5'	2.18	0.44
1:QA:652:U:H1'	1:QA:653:A:C2	2.51	0.44
1:QA:756:C:H2'	1:QA:757:U:O4'	2.17	0.44
1:QA:765:G:N2	1:QA:813:U:OP2	2.42	0.44
1:QA:1329:A:H5"	13:QM:29:ARG:HG3	1.98	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	2.18	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.98	0.44
12:QL:91:LYS:HE2	12:QL:91:LYS:HB2	1.76	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44
22:QV:9:G:O2'	22:QV:10:G:N7	2.42	0.44
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.52	0.44
25:RA:921:G:H4'	25:RA:2269:A:C5	2.52	0.44
25:RA:1086:A:H3'	25:RA:1086:A:N3	2.33	0.44
25:RA:1366:A:H2'	25:RA:1367:A:O4'	2.17	0.44
25:RA:1870:C:H2'	25:RA:1871:A:O4'	2.17	0.44
25:RA:1889:A:O2'	25:RA:2087:G:H5'	2.17	0.44
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.44
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.18	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
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
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
1:XA:93:U:H2'	1:XA:95:G:O4'	2.18	0.44
1:XA:345:C:OP2	39:YT:41:ARG:NH1	2.49	0.44
1:XA:431:A:H2'	1:XA:432:A:O4'	2.18	0.44
1:XA:963:G:H21	10:XJ:55:LYS:HE2	1.81	0.44
1:XA:973:G:C1'	10:XJ:55:LYS:HG2	2.47	0.44
1:XA:1106:G:H2'	1:XA:1107:C:C6	2.53	0.44
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.38	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	2.00	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2335:A:HO2'	25:YA:2336:A:C5'	2.30	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
29:YF:24:LEU:HD12	29:YF:24:LEU:N	2.33	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.78	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.53	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
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
1:QA:148:G:H1	1:QA:174:C:H42	1.66	0.44
1:QA:229:U:O2'	16:QP:23:ASP:OD2	2.35	0.44
1:QA:868:C:H2'	1:QA:869:G:O4'	2.17	0.44
1:QA:1305:G:O2'	1:QA:1306:A:O4'	2.35	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	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	2.53	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.16	0.44
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.70	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
25:RA:944:G:H5"	25:RA:945:A:O5'	2.17	0.44
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.17	0.44
25:RA:1771:C:O2'	25:RA:1786:A:H8	2.00	0.44
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.83	0.44
25:RA:2227:A:H5"	27:RD:263:ARG:NH1	2.32	0.44
26:RB:43:C:O2	30:RG:93:THR:HB	2.18	0.44
26:RB:48:A:H4'	38:RS:95:HIS:HD2	1.82	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:9:LEU:O	32:RI:10:GLU:HG3	2.18	0.44
32:RI:29:TYR:HD2	32:RI:30:LEU:HD23	1.82	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.72	0.44
35:RP:81:GLN:HG3	35:RP:82:GLY:N	2.33	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.98	0.44
39:RT:114:LEU:HD23	39:RT:114:LEU:HA	1.74	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.44
1:XA:352:C:O2'	1:XA:354:G:OP1	2.22	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	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
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	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
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	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:234:C:H2'	25:YA:235:U:H6	1.82	0.44
25:YA:483:A:H3'	25:YA:484:C:C6	2.53	0.44
25:YA:600:G:N2	25:YA:605:C:O3'	2.51	0.44
25:YA:1006:C:H5'	33:YN:28:THR:HG23	2.00	0.44
25:YA:1586:A:H3'	25:YA:1587:A:H8	1.83	0.44
25:YA:1930:G:H2'	25:YA:1968:G:N1	2.33	0.44
25:YA:2372:G:HO2'	52:Y6:46:HIS:CE1	2.28	0.44
25:YA:2545:G:H2'	25:YA:2546:U:O4'	2.18	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	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:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:41:ALA:C	37:YR:43:GLU:H	2.21	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:86:ALA:CB	40:YU:88:ILE:HD11	2.48	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
42:YW:67:ASP:OD2	42:YW:67:ASP:N	2.50	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
1:QA:625:G:H2'	1:QA:626:U:H6	1.83	0.44
1:QA:701:C:H1'	1:QA:703:G:C2	2.53	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.18	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.48	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
25:RA:194:G:H2'	25:RA:195:A:O4'	2.17	0.44
25:RA:222:A:HO2'	25:RA:223:A:P	2.41	0.44
25:RA:704:G:O2'	25:RA:726:G:N2	2.50	0.44
25:RA:860:U:H5	25:RA:917:A:N1	2.16	0.44
25:RA:1937:A:C8	25:RA:1939:U:H2'	2.52	0.44
25:RA:2106:G:H1	25:RA:2183:C:H42	1.66	0.44
25:RA:2629:A:O2'	25:RA:2630:G:H5"	2.18	0.44
25:RA:2637:U:H5"	28:RE:82:ARG:HH21	1.82	0.44
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
28:RE:13:ARG:HH11	28:RE:13:ARG:HB3	1.82	0.44
28:RE:199:ARG:HH11	28:RE:199:ARG:HG3	1.82	0.44
30:RG:67:LYS:HD2	30:RG:67:LYS:N	2.33	0.44
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.44
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	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:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
37:RR:79:LEU:HD23	37:RR:79:LEU:O	2.16	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.44
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.44
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
1:XA:336:C:H2'	1:XA:337:C:H6	1.83	0.44
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.16	0.44
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.44
4:XD:180:GLY:O	4:XD:181:MET:C	2.54	0.44
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.75	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:68:GLY:CA	50:Y4:68:ARG:HB2	2.36	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:729:G:N7	27:YD:209:ALA:HB3	2.33	0.44
25:YA:1026:U:H1'	25:YA:1027:A:O5'	2.18	0.44
25:YA:1448:G:O2'	25:YA:1529:A:N1	2.36	0.44
25:YA:2032:G:OP2	25:YA:2454:G:O2'	2.29	0.44
25:YA:2311:A:N9	30:YG:82:LEU:HD11	2.33	0.44
25:YA:2469:A:H5'	25:YA:2470:G:OP2	2.17	0.44
25:YA:2567:G:H2'	25:YA:2568:C:H6	1.81	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.44
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
27:YD:213:ARG:HD2	27:YD:213:ARG:HA	1.60	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:109:PHE:C	31:YH:111:HIS:H	2.21	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
42:YW:88:ARG:HH11	42:YW:88:ARG:HG2	1.82	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
1:QA:359:U:H2'	1:QA:360:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:972:C:OP2	10:QJ:57:LYS:HE2	2.18	0.44
1:QA:1129:C:O2	1:QA:1132:C:N4	2.50	0.44
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.80	0.44
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.52	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.76	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.18	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:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.44
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.44
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.25	0.44
25:RA:1161:C:O2'	41:RV:23:GLU:HG2	2.18	0.44
25:RA:2008:C:H2'	25:RA:2009:G:C8	2.51	0.44
25:RA:2023:G:H4'	25:RA:2617:C:O3'	2.18	0.44
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.53	0.44
25:RA:2298:A:C2	25:RA:2299:G:H1'	2.52	0.44
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.52	0.44
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.53	0.44
27:RD:44:ASN:H	27:RD:44:ASN:ND2	1.97	0.44
27:RD:206:LEU:HD23	27:RD:206:LEU:HA	1.49	0.44
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
31:RH:109:PHE:C	31:RH:111:HIS:H	2.21	0.44
34:RO:63:VAL:O	34:RO:63:VAL:HG23	2.18	0.44
34:RO:86:ILE:H	34:RO:86:ILE:CD1	2.28	0.44
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.44
37:RR:41:ALA:C	37:RR:43:GLU:H	2.21	0.44
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.44
39:RT:99:LEU:CD1	39:RT:99:LEU:O	2.65	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	3.01	0.44
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
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.44
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.99	0.44
45:RZ:157:LEU:HD23	45:RZ:161:VAL:HG12	1.98	0.44
46:R0:53:MET:CB	46:R0:59:LEU:HD23	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.44
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.44
1:XA:236:G:H5"	17:XQ:42:TYR:OH	2.18	0.44
1:XA:302:G:C6	1:XA:303:A:C5	3.06	0.44
1:XA:606:G:H1	1:XA:631:G:H5"	1.82	0.44
1:XA:701:C:H1'	1:XA:703:G:C5	2.53	0.44
1:XA:836:G:C6	1:XA:851:G:C6	3.06	0.44
1:XA:1343:G:H1'	9:XI:121:ARG:NH1	2.32	0.44
2:XB:33:TYR:HD1	2:XB:33:TYR:O	2.00	0.44
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	2.16	0.44
5:XE:20:GLN:O	5:XE:21:ALA:C	2.56	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.44
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.44
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.44
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
25:YA:150:C:H2'	25:YA:151:C:C6	2.53	0.44
25:YA:464:U:H4'	53:Y7:5:TRP:CZ3	2.53	0.44
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.18	0.44
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.44
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
32:YI:144:VAL:HG22	32:YI:145:VAL:H	1.83	0.44
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.44
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44
1:QA:376:G:H5"	16:QP:5:ARG:HD2	1.99	0.43
1:QA:437:U:H2'	1:QA:438:G:O4'	2.18	0.43
1:QA:946:A:H61	1:QA:1234:C:N4	2.16	0.43
1:QA:1222:G:OP1	19:QS:77:THR:HG21	2.18	0.43
1:QA:1336:C:O2'	1:QA:1337:G:O5'	2.36	0.43
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.43
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.43
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.43
22:QV:23:C:H2'	22:QV:24:U:C6	2.53	0.43
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.83	0.43
25:RA:852:G:H2'	25:RA:853:G:C8	2.53	0.43
25:RA:1930:G:H2'	25:RA:1968:G:N1	2.33	0.43
25:RA:2031:A:O2'	25:RA:2454:G:N2	2.49	0.43
25:RA:2340:G:H2'	25:RA:2341:G:H8	1.83	0.43
25:RA:2645:G:C3'	25:RA:2646:C:H5'	2.47	0.43
25:RA:2811:G:H8	25:RA:2811:G:OP2	2.00	0.43
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.98	0.43
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.43
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.48	0.43
29:RF:24:LEU:HD12	29:RF:24:LEU:N	2.33	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	1.98	0.43
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.43
32:RI:130:TYR:HB3	32:RI:136:VAL:HG13	2.00	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.53	0.43
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.43
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.43
1:XA:110:C:H2'	1:XA:111:G:O4'	2.18	0.43
1:XA:123:C:OP1	1:XA:311:C:O2'	2.28	0.43
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.30	0.43
1:XA:345:C:H4'	1:XA:346:G:O5'	2.18	0.43
1:XA:1256:A:P	3:XC:26:LYS:HZ3	2.39	0.43
1:XA:1446:A:C5	39:YT:118:ARG:NH1	2.86	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.43
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	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
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.43
25:YA:396:G:O3'	47:Y1:44:PRO:HA	2.17	0.43
25:YA:742:G:H2'	25:YA:743:G:H8	1.82	0.43
25:YA:795:C:H2'	25:YA:796:C:H6	1.83	0.43
25:YA:1677:A:H2'	25:YA:1678:G:O4'	2.18	0.43
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.51	0.43
25:YA:2667:C:H1'	31:YH:109:PHE:HD2	1.83	0.43
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.18	0.43
28:YE:48:GLN:HE21	28:YE:48:GLN:HB3	1.55	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
34:YO:91:LEU:N	34:YO:91:LEU:CD2	2.80	0.43
35:YP:70:GLN:N	35:YP:70:GLN:OE1	2.51	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
46:Y0:36:ILE:HG12	46:Y0:37:LEU:N	2.32	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.82	0.43
52:Y6:19:ARG:HD2	52:Y6:19:ARG:HA	1.77	0.43
1:QA:191(D):U:H2'	1:QA:191(E):G:C8	2.53	0.43
1:QA:430:A:H4'	4:QD:7:PRO:HG3	1.99	0.43
1:QA:456:C:H2'	1:QA:457:C:C6	2.53	0.43
1:QA:564:C:OP1	12:QL:15:ARG:NE	2.50	0.43
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.45	0.43
1:QA:1347:G:O2'	1:QA:1348:U:P	2.76	0.43
1:QA:1370:G:O3'	9:QI:12:GLU:HG3	2.18	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.43
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.53	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.53	0.43
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.43
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
20:QT:101:GLY:C	20:QT:103:GLY:H	2.22	0.43
22:QV:3:C:C2'	22:QV:4:G:H5'	2.48	0.43
25:RA:994:C:OP1	40:RU:53:ARG:NH2	2.51	0.43
25:RA:1090:U:H3	25:RA:1102:C:H1'	1.83	0.43
25:RA:1278:A:O3'	37:RR:34:ILE:HG23	2.18	0.43
25:RA:2126:A:H1'	25:RA:2127:G:OP2	2.18	0.43
25:RA:2377:A:C2	38:RS:18:ILE:HD11	2.52	0.43
25:RA:2441:C:OP2	25:RA:2586:C:O2'	2.30	0.43
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.83	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
37:RR:81:ASP:N	37:RR:81:ASP:OD2	2.50	0.43
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.43
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.67	0.43
43:RX:65:ARG:N	43:RX:65:ARG:CD	2.79	0.43
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.83	0.43
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.43
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
1:XA:28:G:O2'	1:XA:296:U:OP1	2.33	0.43
1:XA:96:G:C6	1:XA:97:U:C2	3.06	0.43
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.17	0.43
1:XA:625:G:H2'	1:XA:626:U:C6	2.53	0.43
1:XA:715:A:H2'	1:XA:716:A:C8	2.53	0.43
1:XA:972:C:O3'	10:XJ:57:LYS:HG2	2.17	0.43
1:XA:1004:A:H1'	1:XA:1036:G:N1	2.33	0.43
1:XA:1122:U:O4	1:XA:1123:A:N6	2.51	0.43
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.51	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
7:XG:150:ALA:HA	11:XK:59:TYR:HD2	1.81	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	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:70:LYS:HA	11:XK:73:MET:HE2	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.85	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.43
19:XS:63:THR:HG23	19:XS:66:MET:HE3	2.00	0.43
25:YA:436:C:H2'	25:YA:438:G:C8	2.53	0.43
25:YA:612:G:O2'	25:YA:616:A:N1	2.37	0.43
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.61	0.43
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.17	0.43
25:YA:1532:C:H2'	25:YA:1533:C:O4'	2.18	0.43
25:YA:1717:G:H1	25:YA:1742:C:H42	1.66	0.43
25:YA:1790:C:H5"	25:YA:1791:A:OP1	2.17	0.43
25:YA:2105:C:H2'	25:YA:2106:G:C8	2.53	0.43
25:YA:2422:A:N7	54:Y8:31:HIS:HE1	2.16	0.43
25:YA:2648:C:H2'	25:YA:2649:U:C6	2.53	0.43
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.43
27:YD:11:PRO:O	27:YD:12:SER:OG	2.30	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
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	1.99	0.43
31:YH:136:ILE:HD12	31:YH:136:ILE:N	2.31	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.43
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	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:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.43
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
1:QA:115:G:H4'	1:QA:116:A:O5'	2.17	0.43
1:QA:664:G:H2'	1:QA:666:G:OP1	2.17	0.43
1:QA:939:G:H5"	7:QG:102:ARG:CZ	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.42	0.43
1:QA:991:U:O4	1:QA:1212:U:O2'	2.23	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.43
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.01	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.43
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.18	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
22:QV:69:C:H2'	22:QV:70:G:H8	1.82	0.43
25:RA:271:G:H2'	25:RA:272:G:C8	2.53	0.43
25:RA:559:G:H22	40:RU:49:HIS:CE1	2.36	0.43
25:RA:586:A:N1	25:RA:809:G:O2'	2.31	0.43
25:RA:629:G:H5'	25:RA:650:C:O2'	2.18	0.43
25:RA:686:G:O6	53:R7:12:ARG:HG3	2.18	0.43
25:RA:952:G:P	36:RQ:16:ARG:HH12	2.41	0.43
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.32	0.43
25:RA:1113:U:H2'	25:RA:1114:G:H8	1.83	0.43
25:RA:1810:A:H2'	25:RA:1811:G:O4'	2.18	0.43
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.19	0.43
25:RA:2653:U:O2'	31:RH:110:SER:HB2	2.18	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.19	0.43
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.01	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.30	0.43
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.17	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
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:82:ARG:HD3	32:RI:146:ALA:HB3	1.99	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	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
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.28	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	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	2.72	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
1:XA:377:G:P	16:XP:5:ARG:HH11	2.40	0.43
1:XA:524:G:H2'	1:XA:525:C:C6	2.53	0.43
1:XA:753:A:H4'	1:XA:754:C:O5'	2.18	0.43
1:XA:792:A:O2'	1:XA:794:A:N7	2.44	0.43
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.49	0.43
1:XA:1347:G:H22	1:XA:1374:A:P	2.39	0.43
1:XA:1446:A:N3	1:XA:1446:A:H5'	2.33	0.43
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
7:XG:60:LYS:O	7:XG:61:VAL:C	2.57	0.43
25:YA:1078:U:HO2'	25:YA:1088:A:H2	1.60	0.43
25:YA:1520:U:H2'	25:YA:1521:G:O4'	2.18	0.43
25:YA:1820:U:H4'	25:YA:1821:A:OP2	2.19	0.43
25:YA:2012:G:H4'	42:YW:96:ILE:HD11	1.99	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
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
33:YN:87:LEU:C	33:YN:87:LEU:CD2	2.87	0.43
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
39:YT:49:VAL:O	39:YT:49:VAL:CG1	2.64	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
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
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:685:G:H5'	11:QK:39:PRO:O	2.18	0.43
1:QA:1221:G:OP1	19:QS:36:ARG:HD3	2.18	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.82	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.81	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
25:RA:34:C:H41	25:RA:447:A:H61	1.66	0.43
25:RA:185:U:H4'	25:RA:218:A:H4'	1.99	0.43
25:RA:1220:A:H5'	25:RA:1221:C:OP2	2.17	0.43
25:RA:1257:C:H5'	29:RF:75:HIS:CE1	2.52	0.43
25:RA:2123:G:H2'	25:RA:2124:G:C8	2.54	0.43
25:RA:2329:G:H2'	25:RA:2330:G:C8	2.54	0.43
25:RA:2350:C:C5	54:R8:42:ARG:NH1	2.87	0.43
25:RA:2543:G:H2'	25:RA:2544:G:H8	1.83	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	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:81:LYS:HZ2	44:RY:98:VAL:HB	1.83	0.43
50:R4:49:PHE:N	50:R4:49:PHE:HD1	2.17	0.43
1:XA:191:G:N9	20:XT:105:SER:HB3	2.33	0.43
1:XA:922:G:H4'	5:XE:20:GLN:HA	1.99	0.43
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.83	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.69	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.49	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
7:XG:78:ARG:HH11	7:XG:78:ARG:CG	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
12:XL:22:SER:C	12:XL:24:VAL:H	2.21	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
19:XS:3:ARG:HB3	50:Y4:67:TYR:CD2	2.53	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
25:YA:952:G:P	36:YQ:16:ARG:HH12	2.41	0.43
25:YA:1309:G:P	53:Y7:9:ARG:HD3	2.58	0.43
25:YA:1368:G:C2	25:YA:1369:G:C8	3.07	0.43
25:YA:1478:G:H2'	25:YA:1479:G:H8	1.83	0.43
25:YA:1820:U:O2	27:YD:202:LYS:HB3	2.18	0.43
25:YA:2377:A:C2	38:YS:18:ILE:HD11	2.54	0.43
25:YA:2471:C:H5'	25:YA:2472:G:OP2	2.19	0.43
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.86	0.43
25:YA:2611:U:OP2	25:YA:2611:U:H6	2.01	0.43
25:YA:2712:U:O2'	25:YA:2712(A):A:OP1	2.37	0.43
26:YB:40:U:HO2'	26:YB:43:C:H5	1.66	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.49	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	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
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
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.18	0.43
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	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
53:Y7:19:ARG:HG2	53:Y7:19:ARG:NH1	2.34	0.43
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.17	0.43
1:QA:1199:U:H4'	10:QJ:54:PHE:CE2	2.53	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
4:QD:166:LYS:CG	27:YD:134:ARG:HH12	2.29	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:62:ALA:O	5:QE:64:ARG: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
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
9:QI:41:VAL:HG12	9:QI:41:VAL:O	2.18	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	0.43
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
25:RA:270(S):G:H1'	47:R1:78:LYS:HD2	2.00	0.43
25:RA:428:A:H8	25:RA:428:A:OP2	2.02	0.43
25:RA:593:G:H2'	25:RA:594:U:H6	1.83	0.43
25:RA:724:U:H2'	25:RA:725:G:O4'	2.18	0.43
25:RA:1357:U:H2'	25:RA:1358:G:O4'	2.19	0.43
25:RA:1578:U:C2'	25:RA:1579:A:H5'	2.48	0.43
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	1.99	0.43
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.18	0.43
32:RI:52:ARG:HA	32:RI:55:ALA:HB3	2.00	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
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
45:RZ:153:SER:HB2	45:RZ:167:PRO:HB3	2.00	0.43
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.43
1:XA:338:A:C6	1:XA:339:C:C4	3.07	0.43
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.18	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
3:XC:27:LYS:HB3	3:XC:27:LYS:NZ	2.34	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	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
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:64:GLU:HB2	50:Y4:55:ARG:NH1	2.29	0.43
25:YA:142:G:H2'	25:YA:143:C:C6	2.53	0.43
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.53	0.43
25:YA:841:A:H2'	25:YA:842:G:C8	2.54	0.43
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	2.00	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
28:YE:143:ASN:N	28:YE:143:ASN:ND2	2.65	0.43
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	2.00	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	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
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.19	0.43
34:YO:63:VAL:O	34:YO:63:VAL:HG23	2.17	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
43:YX:70:LEU:HD23	43:YX:70:LEU:H	1.78	0.43
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.20	0.43
1:QA:1205:U:O2'	3:QC:195:VAL:HG23	2.18	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.49	0.43
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.43
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.43
3:QC:27:LYS:NZ	3:QC:27:LYS:HB3	2.34	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.43
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
25:RA:249:C:H4'	25:RA:250:G:O5'	2.18	0.43
25:RA:500:G:N2	25:RA:502:A:H3'	2.33	0.43
25:RA:2193:G:H2'	25:RA:2194:G:O4'	2.18	0.43
25:RA:2749:A:H4'	31:RH:62:LYS:HB3	1.99	0.43
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	2.01	0.43
26:RB:11:C:H3'	26:RB:12:C:H6	1.83	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
33:RN:103:VAL:O	33:RN:104:LYS:C	2.57	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.54	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.18	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	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:266:G:H5"	1:XA:267:C:C5	2.53	0.43
1:XA:564:C:H5'	17:XQ:32:TYR:CE2	2.54	0.43
1:XA:1321:C:H3'	1:XA:1322:C:H5"	1.99	0.43
1:XA:1346:A:N6	7:XG:10:ARG:HD2	2.33	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.43
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.43
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	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:236:C:H2'	25:YA:237:C:C6	2.54	0.43
25:YA:323:G:H2'	29:YF:169:ASN:OD1	2.18	0.43
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.37	0.43
25:YA:722:A:H3'	25:YA:723:G:H8	1.83	0.43
25:YA:2150:U:H2'	25:YA:2151:G:C8	2.54	0.43
25:YA:2585:U:H5	56:Z8:76:PPU:O2'	2.00	0.43
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.53	0.43
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.43
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.38	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	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
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.43
39:YT:64:ARG:HH11	39:YT:64:ARG:HG2	1.84	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.43
1:QA:520:A:OP2	12:QL:51:ALA:HB1	2.19	0.43
1:QA:946:A:H2'	1:QA:947:G:C8	2.53	0.43
1:QA:1004:A:H1'	1:QA:1036:G:N2	2.33	0.43
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.53	0.43
1:QA:1344:C:H5'	9:QI:120:ARG:O	2.19	0.43
1:QA:1405:G:P	58:QA:1670:PAR:HO34	2.41	0.43
2:QB:33:TYR:C	2:QB:33:TYR:CD1	2.92	0.43
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.21	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.01	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
10:QJ:16:LEU:HD13	10:QJ:16:LEU:C	2.38	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.43
25:RA:116:C:H2'	25:RA:117:G:O4'	2.19	0.43
25:RA:336:C:H5"	44:RY:6:HIS:CD2	2.53	0.43
25:RA:488:G:O2'	25:RA:491:G:N7	2.47	0.43
25:RA:1331:A:H2'	25:RA:1333:C:H5	1.84	0.43
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.54	0.43
25:RA:2439:A:H3'	25:RA:2439:A:P	2.59	0.43
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.54	0.43
26:RB:40:U:H3	26:RB:43:C:H5"	1.84	0.43
28:RE:48:GLN:HE21	28:RE:48:GLN:HB3	1.55	0.43
28:RE:203:LYS:HD2	28:RE:203:LYS:C	2.39	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.38	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
45:RZ:141:VAL:HA	45:RZ:144:LEU:HD23	2.00	0.43
46:R0:82:ARG:HA	46:R0:83:PRO:HD2	1.87	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.86	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
1:XA:313:A:H2'	1:XA:314:C:C6	2.54	0.43
1:XA:963:G:H21	10:XJ:55:LYS:CD	2.32	0.43
1:XA:1222:G:H5"	19:XS:78:ARG:NH1	2.33	0.43
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
4:XD:163:GLU:OE2	4:XD:163:GLU:HA	2.19	0.43
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.43
25:YA:195:A:H2'	25:YA:198:C:N4	2.33	0.43
25:YA:583:G:H5"	40:YU:10:ARG:NH1	2.29	0.43
25:YA:984:A:H5"	25:YA:985:C:H5	1.83	0.43
25:YA:994:C:O2	41:YV:10:LYS:HE2	2.19	0.43
25:YA:1102:C:H2'	25:YA:1103:A:H5"	2.00	0.43
25:YA:1842:G:H2'	25:YA:1843:C:C6	2.53	0.43
25:YA:2210:G:H2'	25:YA:2210:G:N3	2.33	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.83	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.43
33:YN:118:LYS:C	33:YN:120:LEU:H	2.20	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
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
45:YZ:30:ASN:OD1	45:YZ:33:LEU:N	2.49	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:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.56	0.43
1:QA:20:U:H2'	1:QA:21:G:O4'	2.19	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.07	0.43
1:QA:960:U:O2	1:QA:960:U:H2'	2.18	0.43
1:QA:1216:G:H5"	14:QN:5:ALA:CB	2.49	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:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.18	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.83	0.43
25:RA:560:C:H2'	25:RA:561:G:O4'	2.18	0.43
25:RA:827:U:H1'	25:RA:2246:G:O2'	2.18	0.43
25:RA:1265:A:OP1	25:RA:1265:A:H8	2.01	0.43
25:RA:1348:G:C2'	25:RA:1349:A:H5"	2.48	0.43
25:RA:1651:G:H2'	25:RA:1652:A:O4'	2.18	0.43
26:RB:16:G:H2'	26:RB:17:C:H6	1.84	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
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
32:RI:12:LEU:HG	32:RI:19:VAL:HG11	2.00	0.43
32:RI:79:ILE:HB	32:RI:142:VAL:HA	2.00	0.43
33:RN:1:MET:HG3	33:RN:1:MET:O	2.19	0.43
33:RN:7:LYS:HD2	33:RN:7:LYS:N	2.29	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.43
42:RW:28:SER:O	42:RW:30:GLU:N	2.50	0.43
1:XA:187:C:H2'	1:XA:188:U:O4'	2.19	0.43
1:XA:264:U:O2'	17:XQ:64:PRO:HD2	2.19	0.43
1:XA:427:U:OP1	4:XD:13:ARG:NH2	2.52	0.43
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.19	0.43
1:XA:532:A:H2	1:XA:1206:G:N2	2.12	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1161:C:H2'	1:XA:1162:C:H6	1.83	0.43
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.81	0.43
19:XS:68:GLY:CA	50:Y4:68:ARG:CB	2.97	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
25:YA:241:A:H5'	25:YA:243:U:O4'	2.19	0.43
25:YA:559:G:N2	40:YU:49:HIS:CE1	2.86	0.43
25:YA:675:A:H4'	29:YF:67:GLN:OE1	2.19	0.43
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	2.19	0.43
25:YA:1728:G:H8	25:YA:1732:A:N6	2.16	0.43
25:YA:1751:C:H2'	25:YA:1752:C:H6	1.83	0.43
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.54	0.43
25:YA:2131:G:N2	25:YA:2158:A:N7	2.66	0.43
25:YA:2275:C:O2	36:YQ:83:MET:HG3	2.19	0.43
25:YA:2285:C:H5	52:Y6:27:LYS:HE2	1.83	0.43
25:YA:2414:G:H21	35:YP:67:MET:CE	2.31	0.43
25:YA:2469:A:O2'	36:YQ:56:ARG:HG2	2.18	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.81	0.43
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.23	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD21	2.39	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
45:YZ:112:ARG:O	45:YZ:114:GLY:N	2.51	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
1:QA:481:G:O2'	1:QA:482:A:P	2.77	0.43
1:QA:818:G:C3'	1:QA:819:A:H5"	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.43
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.43
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	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
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.43
25:RA:298:G:O2'	25:RA:322:A:N1	2.43	0.43
25:RA:1799:G:H4'	25:RA:1800:C:O5'	2.18	0.43
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.18	0.43
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.53	0.43
25:RA:2277:G:C5'	36:RQ:85:LYS:HG3	2.49	0.43
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.17	0.43
28:RE:18:ASP:O	28:RE:19:ARG:C	2.55	0.43
29:RF:183:VAL:O	29:RF:184:TYR:C	2.57	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
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.99	0.43
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.43
35:RP:18:ARG:O	35:RP:19:VAL:CB	2.52	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.82	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.49	0.43
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.01	0.43
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.43
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.82	0.43
45:RZ:5:LEU:HD21	45:RZ:44:PHE:HA	2.01	0.43
1:XA:1070:U:P	5:XE:25:ARG:NH1	2.91	0.43
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.19	0.43
1:XA:1225:A:H5"	1:XA:1226:C:OP2	2.18	0.43
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.84	0.43
1:XA:1405:G:O4'	1:XA:1519:A:H4'	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	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
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	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
22:XV:51:C:H2'	22:XV:52:G:O4'	2.19	0.43
25:YA:140:A:C8	25:YA:1408:C:O2'	2.70	0.43
25:YA:2629:A:O2'	25:YA:2630:G:H5"	2.19	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
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.43
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.28	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
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.43
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.67	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
46:Y0:41:ARG:NE	46:Y0:41:ARG:HA	2.34	0.43
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	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:1006:C:H2'	1:QA:1007:C:C6	2.54	0.43
1:QA:1178:G:H5"	9:QI:93:ARG:HH21	1.84	0.43
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.43
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.47	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.43
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.84	0.43
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
25:RA:1050:A:H8	25:RA:2751:G:O2'	2.02	0.43
25:RA:2481:G:O2'	25:RA:2482:G:P	2.77	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	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:87:LEU:C	33:RN:87:LEU:CD2	2.86	0.43
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.43
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
38:RS:29:PHE:HD2	38:RS:92:TYR:HH	1.66	0.43
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.43
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.43
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.43
45:RZ:52:SER:O	45:RZ:52:SER:OG	2.33	0.43
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.19	0.43
53:R7:19:ARG:HG2	53:R7:19:ARG:NH1	2.33	0.43
54:R8:28:GLY:O	54:R8:29:LYS:O	2.37	0.43
1:XA:501:C:H2'	1:XA:502:G:H8	1.82	0.43
1:XA:721:G:C6	1:XA:733:A:C2	3.07	0.43
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.19	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.34	0.43
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.54	0.43
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.43
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.43
3:XC:101:LEU:HD23	3:XC:101:LEU:C	2.39	0.43
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.43
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.30	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
25:YA:217:G:H2'	25:YA:218:A:O4'	2.19	0.43
25:YA:634:C:H2'	25:YA:635:C:C6	2.54	0.43
25:YA:1889:A:N1	25:YA:2234:G:H1'	2.34	0.43
25:YA:2492:U:H2'	25:YA:2493:U:C6	2.54	0.43
25:YA:2507:C:H2'	25:YA:2508:G:O4'	2.18	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.19	0.43
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.43
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	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	2.38	0.43
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.43
45:YZ:102:LEU:HG	45:YZ:123:ASP:HA	2.01	0.43
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.43
1:QA:920:U:H2'	1:QA:921:U:H6	1.83	0.42
1:QA:1059:C:H2'	1:QA:1060:C:H6	1.84	0.42
1:QA:1081:G:P	5:QE:16:THR:OG1	2.77	0.42
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.34	0.42
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.19	0.42
2:QB:33:TYR:HD1	2:QB:33:TYR:C	2.23	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:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	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:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.42
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.23	0.42
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.42
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.42
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.42
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.01	0.42
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.42
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.42
25:RA:795:C:H2'	25:RA:796:C:C6	2.54	0.42
25:RA:861:A:H2'	25:RA:862:G:O4'	2.19	0.42
25:RA:1210:A:H4'	25:RA:1211:U:O5'	2.17	0.42
25:RA:1754:C:H2'	25:RA:1755:A:O4'	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.42
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.42
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.42
45:RZ:5:LEU:HB3	45:RZ:6:LYS:H	1.55	0.42
45:RZ:111:VAL:HG13	45:RZ:112:ARG:N	2.34	0.42
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.42
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.42
51:R5:3:LYS:HA	51:R5:3:LYS:CE	2.36	0.42
1:XA:67:C:O2'	1:XA:171:A:N3	2.42	0.42
1:XA:477:G:H2'	1:XA:478:A:C8	2.54	0.42
1:XA:537:G:H5"	12:XL:113:ARG:HH12	1.84	0.42
1:XA:1297:C:O2'	1:XA:1298:C:P	2.77	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.42
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.42
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.42
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.42
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
25:YA:92:G:H2'	25:YA:93:C:C6	2.54	0.42
25:YA:1087:G:C5	25:YA:1089:G:H1'	2.54	0.42
25:YA:1251:C:P	40:YU:10:ARG:HG3	2.59	0.42
25:YA:1322:A:OP1	42:YW:11:ARG:HG3	2.19	0.42
25:YA:2836:U:H2'	25:YA:2837:G:C8	2.54	0.42
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	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
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	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
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
45:YZ:74:VAL:HG13	45:YZ:86:VAL:HG22	2.00	0.42
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.42
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.42
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.42
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.19	0.42
1:QA:543:C:OP1	4:QD:14:ARG:NE	2.52	0.42
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.54	0.42
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.18	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.19	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.49	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	2.34	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
13:QM:119:GLY:HA3	22:QV:29:G:OP1	2.19	0.42
14:QN:47:LEU:O	14:QN:48:ALA:C	2.56	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:345:A:H1'	25:RA:346:A:N7	2.35	0.42
25:RA:1417:C:H2'	25:RA:1418:G:O4'	2.19	0.42
25:RA:1937:A:O2'	25:RA:1939:U:OP2	2.34	0.42
25:RA:2298:A:H2'	25:RA:2299:G:O4'	2.19	0.42
25:RA:2723:C:O3'	37:RR:1:MET:HE2	2.18	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
27:RD:134:ARG:H	27:RD:134:ARG:HG3	1.55	0.42
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.42
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.79	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.49	0.42
33:RN:15:LEU:C	33:RN:15:LEU:HD13	2.40	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	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	2.19	0.42
36:RQ:135:ASP:CG	45:RZ:81:ARG:HH12	2.23	0.42
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.19	0.42
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.42
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.42
1:XA:201:C:H42	1:XA:216:G:H1	1.67	0.42
1:XA:614:A:OP1	4:XD:86:LYS:HE3	2.19	0.42
1:XA:1057:G:H2'	1:XA:1058:G:O4'	2.19	0.42
1:XA:1152:A:H2'	1:XA:1153:C:C6	2.54	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.26	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.54	0.42
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.47	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
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
25:YA:27:G:O2'	25:YA:28:A:C8	2.72	0.42
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.49	0.42
25:YA:978:G:C2	25:YA:986:C:C2	3.07	0.42
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.54	0.42
25:YA:1319:G:C6	25:YA:1320:C:N4	2.87	0.42
25:YA:2283:C:H2'	25:YA:2284:C:O4'	2.19	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
28:YE:203:LYS:HD2	28:YE:203:LYS:C	2.39	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	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
36:YQ:60:ARG:NH1	45:YZ:114:GLY:N	2.67	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
1:QA:753:A:H4'	1:QA:754:C:O5'	2.19	0.42
1:QA:1067:A:H4'	1:QA:1068:G:O5'	2.18	0.42
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.54	0.42
1:QA:1388:C:H2'	1:QA:1389:C:H6	1.83	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:19:LEU:O	4:QD:20:TYR:C	2.57	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.42
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
25:RA:244:A:H2'	25:RA:245:G:O4'	2.20	0.42
25:RA:1042:G:H2'	25:RA:1043:C:C6	2.54	0.42
25:RA:1629:U:H2'	25:RA:1630:G:C8	2.55	0.42
26:RB:88:C:H2'	26:RB:89:G:O4'	2.19	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
27:RD:17:THR:HG21	27:RD:204:ILE:HA	2.00	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	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:114:ILE:O	30:RG:116:ASP:N	2.51	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	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:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.42
42:RW:8:ARG:HG3	42:RW:8:ARG:NH1	2.34	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.35	0.42
1:XA:983:A:H1'	1:XA:1049:U:O2	2.18	0.42
1:XA:1189:C:P	10:XJ:51:ARG:NH2	2.92	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	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
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
25:YA:330:A:H2	25:YA:1210:A:O2'	2.02	0.42
25:YA:952:G:C6	25:YA:953:A:N7	2.87	0.42
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.33	0.42
25:YA:1113:U:H2'	25:YA:1114:G:C8	2.54	0.42
25:YA:1533:C:H42	25:YA:1538:G:H1	1.66	0.42
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.33	0.42
25:YA:2409:G:H2'	25:YA:2410:G:O4'	2.18	0.42
25:YA:2584:U:H2'	25:YA:2585:U:C6	2.54	0.42
25:YA:2655:G:O2'	25:YA:2656:U:P	2.76	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	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
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.39	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
35:YP:81:GLN:HE21	35:YP:81:GLN:HB2	1.59	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
45:YZ:20:ARG:O	45:YZ:20:ARG:HD3	2.18	0.42
45:YZ:150:LEU:HB2	45:YZ:154:ASP:OD1	2.19	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
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.84	0.42
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.19	0.42
1:QA:1297:C:HO2'	1:QA:1298:C:C5'	2.32	0.42
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.84	0.42
2:QB:60:ASP:C	2:QB:62:ALA:N	2.71	0.42
2:QB:204:ASN:HD22	2:QB:204:ASN:C	2.22	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
25:RA:111:A:O3'	48:R2:69:ARG:NH2	2.52	0.42
25:RA:311:A:C6	25:RA:328:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1020:A:N1	25:RA:1141:U:H2'	2.34	0.42
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.84	0.42
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.19	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.46	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.00	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.32	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.67	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: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
45:RZ:136:PHE:HE1	45:RZ:138:GLU:HB3	1.83	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
1:XA:784:C:H4'	25:YA:1837:C:OP1	2.20	0.42
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.19	0.42
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.20	0.42
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.85	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.18	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	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:784:A:C5	27:YD:229:VAL:HG21	2.55	0.42
25:YA:1257:C:H5'	29:YF:75:HIS:CE1	2.54	0.42
25:YA:1354:A:H2'	25:YA:1355:G:O4'	2.19	0.42
25:YA:1359:A:H61	25:YA:1372:U:H3	1.67	0.42
25:YA:1398:C:OP1	43:YX:53:LYS:NZ	2.52	0.42
25:YA:1742:C:H5'	25:YA:1743:G:OP2	2.19	0.42
25:YA:2418:A:H2'	25:YA:2419:U:C6	2.54	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.47	0.42
28:YE:94:GLU:C	28:YE:96:PHE:N	2.73	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.50	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.01	0.42
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.42
35:YP:119:GLU:HA	35:YP:119:GLU:OE1	2.18	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.20	0.42
39:YT:96:ARG:HB2	39:YT:96:ARG:CZ	2.49	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
45:YZ:169:GLU:HG2	45:YZ:170:THR:N	2.34	0.42
48:Y2:27:GLU:H	48:Y2:27:GLU:CD	2.17	0.42
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.22	0.42
1:QA:65:U:H5"	1:QA:65:U:H6	1.85	0.42
1:QA:866:C:C4	1:QA:867:G:H1'	2.55	0.42
1:QA:977:A:O2'	1:QA:981:U:N3	2.50	0.42
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.55	0.42
3:QC:113:ALA:C	3:QC:115:LEU:N	2.73	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.30	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
22:QV:16:C:O2'	22:QV:61:C:OP1	2.37	0.42
25:RA:565:C:H2'	25:RA:566:U:O4'	2.20	0.42
25:RA:1301:A:O2'	25:RA:1302:A:H3'	2.19	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.40	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:89:ILE:CD1	31:RH:89:ILE:H	2.32	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
45:RZ:93:ASP:OD1	45:RZ:93:ASP:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.18	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.42
1:XA:109:A:H2'	1:XA:326:G:N2	2.34	0.42
1:XA:881:G:P	12:XL:12:ARG:HH22	2.43	0.42
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.55	0.42
2:XB:33:TYR:HD1	2:XB:33:TYR:C	2.23	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
11:XK:17:GLY:CA	11:XK:77:MET:HE3	2.45	0.42
14:XN:48:ALA:HA	14:XN:53:LEU:HD12	2.02	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.19	0.42
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.53	0.42
25:YA:1069:A:H4'	25:YA:1070:A:H5"	2.01	0.42
25:YA:1188:U:H4'	41:YV:79:VAL:CG2	2.49	0.42
25:YA:1491:G:O2'	27:YD:101:GLU:HB2	2.19	0.42
25:YA:2729:G:H2'	25:YA:2730:C:H6	1.85	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.02	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	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
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	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:125:VAL:C	35:YP:145:PRO:HD2	2.39	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
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.54	0.42
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.37	0.42
1:QA:1112:C:C4	3:QC:178:LEU:HD23	2.55	0.42
1:QA:1221:G:O3'	19:QS:77:THR:HG21	2.20	0.42
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.83	0.42
1:QA:1388:C:H2'	1:QA:1389:C:C6	2.55	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.02	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
25:RA:244:A:C2	25:RA:255:A:C4	3.08	0.42
25:RA:1412:A:H2'	25:RA:1413:G:O4'	2.20	0.42
25:RA:1778:U:H2'	25:RA:1784:A:N6	2.34	0.42
25:RA:1926:U:H5'	25:RA:1927:A:OP2	2.20	0.42
25:RA:2183:C:H2'	25:RA:2184:G:H8	1.84	0.42
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.55	0.42
25:RA:2494:G:H2'	25:RA:2495:G:C8	2.53	0.42
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.48	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.02	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.67	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.01	0.42
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.42
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.42
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.42
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
55:R9:1:MET:HE2	55:R9:10:ILE:HD13	2.01	0.42
1:XA:347:G:O2'	1:XA:348:G:OP2	2.32	0.42
1:XA:814:A:N7	1:XA:816:A:C4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:109:SER:C	2:XB:111:ARG:H	2.21	0.42
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
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
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	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:55:ARG:O	16:XP:56:ALA:C	2.57	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:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
25:YA:626:U:O4	35:YP:107:LYS:HE2	2.20	0.42
25:YA:656:G:H2'	25:YA:657:U:O4'	2.19	0.42
25:YA:1332:G:C8	25:YA:1332:G:H5'	2.54	0.42
25:YA:2451:A:N6	56:Z8:76:PPU:HE2	2.34	0.42
25:YA:2789:C:H1'	25:YA:2892:A:C2	2.47	0.42
26:YB:42:C:H42	30:YG:91:ARG:HH21	1.62	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
28:YE:176:ILE:HD12	28:YE:176:ILE:N	2.35	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.84	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.19	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.53	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.38	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	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: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
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.37	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:881:G:P	12:QL:12:ARG:HH22	2.43	0.42
1:QA:1004:A:P	1:QA:1025:U:H3	2.42	0.42
1:QA:1297:C:O2'	1:QA:1298:C:O5'	2.33	0.42
1:QA:1346:A:N6	7:QG:10:ARG:HD2	2.35	0.42
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	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:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	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:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.19	0.42
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.34	0.42
25:RA:414:C:H2'	25:RA:415:A:C8	2.54	0.42
25:RA:528:A:C2	25:RA:2042:A:H2'	2.54	0.42
25:RA:565:C:H4'	25:RA:1253:A:C6	2.54	0.42
25:RA:730:C:OP2	25:RA:731:C:OP2	2.38	0.42
25:RA:1222:C:C2	25:RA:1229(A):G:C2	3.08	0.42
25:RA:1250:G:OP2	35:RP:21:ARG:HD3	2.20	0.42
25:RA:1459:G:H2'	25:RA:1460:A:H5"	2.01	0.42
25:RA:2020:A:OP1	40:RU:27:LEU:HD23	2.20	0.42
25:RA:2832:U:HO2'	25:RA:2833:G:P	2.43	0.42
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.85	0.42
26:RB:15:A:H5'	26:RB:16:G:H8	1.83	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.01	0.42
29:RF:132:VAL:CG2	29:RF:133:ASN:N	2.79	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.26	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
34:RO: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
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	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:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.42
55:R9:2:LYS:HD2	55:R9:2:LYS:HA	1.93	0.42
1:XA:501:C:H2'	1:XA:502:G:C8	2.53	0.42
1:XA:870:U:H4'	1:XA:871:U:H5"	2.01	0.42
1:XA:958:A:C6	1:XA:959:A:C6	3.08	0.42
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.19	0.42
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	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	2.33	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
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	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
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
25:YA:37:C:H2'	25:YA:38:A:C8	2.54	0.42
25:YA:41:C:H2'	25:YA:43:G:O4'	2.20	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	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:143:ASN:HB2	28:YE:147:PRO:HD2	2.00	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42
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
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	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
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
41:YV:55:ALA:O	41:YV:56:SER:OG	2.31	0.42
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
1:QA:27:G:H4'	4:QD:209:ARG:HG3	2.01	0.42
1:QA:328:C:H4'	1:QA:329:A:H5'	2.00	0.42
1:QA:407:G:O2'	4:QD:116:GLN:HG3	2.20	0.42
2:QB:109:SER:C	2:QB:111:ARG:N	2.73	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.35	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.42
10:QJ:80:LYS:HD2	1:XA:1163:C:H1'	2.01	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.92	0.42
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.42
25:RA:1162:G:H1'	41:RV:23:GLU:OE2	2.19	0.42
25:RA:1421:G:C2	25:RA:1422:G:C8	3.07	0.42
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.85	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.20	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	2.57	0.42
31:RH:86:GLU:H	31:RH:86:GLU:CD	2.16	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	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:102:ALA:C	38:RS:104:GLY:N	2.73	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.20	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.76	0.42
1:XA:165:C:H2'	1:XA:166:G:C8	2.54	0.42
1:XA:191:G:H1'	20:XT:105:SER:HB3	2.02	0.42
1:XA:271:C:H2'	1:XA:272:C:C6	2.53	0.42
1:XA:412:A:OP2	4:XD:35:ARG:NH2	2.53	0.42
1:XA:701:C:H1'	1:XA:703:G:C6	2.55	0.42
1:XA:940:C:H2'	1:XA:941:G:C8	2.55	0.42
1:XA:971:G:O2'	1:XA:1365:G:O2'	2.11	0.42
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.34	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.42
19:XS:58:VAL:O	19:XS:58:VAL:HG23	2.20	0.42
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.85	0.42
25:YA:612:G:N3	25:YA:613:U:O2	2.53	0.42
25:YA:724:U:H2'	25:YA:725:G:O4'	2.20	0.42
25:YA:1394:U:H4'	25:YA:1603:A:H4'	2.02	0.42
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.54	0.42
25:YA:1813:G:H1'	27:YD:50:THR:OG1	2.20	0.42
25:YA:2126:A:H1'	25:YA:2127:G:OP2	2.20	0.42
25:YA:2331:G:O2'	46:Y0:43:THR:HG22	2.20	0.42
25:YA:2406:U:N3	35:YP:72:PRO:HB2	2.33	0.42
25:YA:2505:G:O2'	25:YA:2506:U:H5'	2.19	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
27:YD:196:VAL:O	27:YD:196:VAL:CG1	2.68	0.42
27:YD:263:ARG:NH1	27:YD:263:ARG:CB	2.75	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.19	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.19	0.42
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	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
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
55:Y9:17:ILE:CG2	55:Y9:18:ARG:N	2.82	0.42
1:QA:575:G:N2	1:QA:880:C:O2	2.44	0.42
1:QA:676:A:H1'	11:QK:115:PRO:HB3	2.01	0.42
1:QA:681:C:H2'	1:QA:682:G:C8	2.55	0.42
1:QA:934:C:HO2'	1:QA:935:A:P	2.42	0.42
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.19	0.42
1:QA:1359:C:H3'	14:QN:35:ARG:HH12	1.85	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	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
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.46	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
18:QR:76:LEU:N	18:QR:76:LEU:HD22	2.35	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42
25:RA:55:G:C2	25:RA:116:C:C2	3.08	0.42
25:RA:265:A:C6	25:RA:428:A:C4	3.08	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:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.42
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	2.02	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	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
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.92	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
38:RS:99:LYS:C	38:RS:101:LEU:N	2.72	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.42
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.24	0.42
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.42
1:XA:35:G:O2'	12:XL:121:GLY:HA2	2.20	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.42
5:XE:153:LYS:HD3	5:XE:153:LYS:C	2.41	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	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
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.42
22:XV:17:C:H2'	22:XV:17:C:O2	2.19	0.42
25:YA:195:A:C8	25:YA:197:A:OP1	2.72	0.42
25:YA:219:G:N3	25:YA:234:C:O2'	2.49	0.42
25:YA:563:G:C6	25:YA:2018:G:C5	3.08	0.42
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.19	0.42
25:YA:1454:U:P	37:YR:77:ARG:NH1	2.93	0.42
25:YA:1467:C:C5	25:YA:1546:C:H2'	2.55	0.42
25:YA:2626:C:H2'	25:YA:2627:G:C8	2.54	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.83	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.42
31:YH:105:LEU:CD1	31:YH:105:LEU:N	2.81	0.42
32:YI:11:ASN:O	32:YI:12:LEU:HB2	2.19	0.42
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.42
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.42
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.42
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.84	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.02	0.42
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.42
38:YS:95:HIS:O	38:YS:96:GLY:C	2.58	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	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:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	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
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
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
1:QA:130:A:H5"	1:QA:190:G:H2'	2.02	0.42
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.19	0.42
1:QA:817:C:H1'	1:QA:819:A:H5'	2.02	0.42
1:QA:1186:G:H21	14:QN:61:TRP:C	2.22	0.42
1:QA:1446:A:N3	1:QA:1446:A:H5'	2.35	0.42
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	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
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	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	2.59	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
11:QK:33:THR:HB	11:QK:37:GLY:C	2.39	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	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
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.42
25:RA:270(S):G:C1'	47:R1:78:LYS:HD2	2.50	0.42
25:RA:528:A:H2	25:RA:2043:C:C5'	2.33	0.42
25:RA:589:C:H2'	25:RA:590:A:C8	2.54	0.42
25:RA:634:C:H2'	25:RA:635:C:C6	2.55	0.42
25:RA:702:G:C2	25:RA:731:C:C2	3.08	0.42
25:RA:1061:U:H5'	25:RA:1070:A:H1'	2.01	0.42
25:RA:1464:C:O2'	25:RA:1528:A:H8	2.01	0.42
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1792:G:H2'	25:RA:1793:C:C6	2.55	0.42
25:RA:1918:A:O2'	25:RA:1920:C:N4	2.53	0.42
25:RA:2696:U:H2'	25:RA:2697:G:C8	2.55	0.42
25:RA:2784:C:H5"	28:RE:41:LYS:NZ	2.35	0.42
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.50	0.42
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
30:RG:51:ARG:NH1	30:RG:51:ARG:CB	2.83	0.42
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.42
33:RN:27:ALA:O	33:RN:28:THR:C	2.57	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.20	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.42
47:R1:76:ARG:H	47:R1:76:ARG:CD	2.29	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.42
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.42
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.42
1:XA:404:U:H2'	1:XA:405:U:C6	2.54	0.42
1:XA:1060:C:C4	3:XC:2:GLY:HA2	2.54	0.42
1:XA:1202:G:O4'	14:XN:29:ARG:HD2	2.19	0.42
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.42
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.42
8:XH: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
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.42
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.01	0.42
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.42
21:XU:2:GLY:C	21:XU:4:GLY:H	2.23	0.42
25:YA:234:C:H2'	25:YA:235:U:C6	2.55	0.42
25:YA:665:C:H2'	25:YA:666:G:H8	1.85	0.42
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1085:A:HO2'	25:YA:1086:A:P	2.40	0.42
25:YA:2818:G:P	37:YR:42:LYS:HZ3	2.43	0.42
26:YB:116:G:H4'	38:YS:54:LEU:HD13	2.01	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
27:YD:215:LEU:H	27:YD:215:LEU:HG	1.59	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	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
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.20	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
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	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
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.42
44:YY:90:LEU:HB2	44:YY:91:GLU:H	1.53	0.42
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.01	0.42
1:QA:530:G:O6	24:QX:6:C:H1'	2.20	0.41
1:QA:1451:A:N3	1:QA:1451:A:H2'	2.35	0.41
4:QD:13:ARG:NH2	4:QD:36:ARG:CZ	2.83	0.41
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.41
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.41
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.41
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	3.03	0.41
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.41
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.41
25:RA:379:G:N2	47:R1:42:GLN:OE1	2.43	0.41
25:RA:407:G:H2'	25:RA:408:G:C8	2.55	0.41
25:RA:521:G:H2'	25:RA:522:G:H8	1.85	0.41
25:RA:556:G:H2'	25:RA:557:U:C6	2.55	0.41
25:RA:691:C:H2'	25:RA:692:C:C6	2.54	0.41
25:RA:817:C:H4'	25:RA:932:G:C6	2.54	0.41
25:RA:1068:G:N2	25:RA:1095:A:O2'	2.53	0.41
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.38	0.41
25:RA:2021:C:OP1	51:R5:12:SER:OG	2.31	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2405:G:O2'	25:RA:2406:U:P	2.78	0.41
25:RA:2667:C:H1'	31:RH:109:PHE:CD2	2.51	0.41
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.41
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.41
30:RG:60:LEU:HD23	30:RG:60:LEU:C	2.41	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
33:RN:63:THR:HG22	33:RN:66:LYS:HZ1	1.84	0.41
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.41
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.50	0.41
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	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
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.41
45:RZ:97:GLU:HB3	45:RZ:125:LEU:HD11	2.02	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
48:R2:41:ILE:C	48:R2:41:ILE:CD1	2.81	0.41
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.41
1:XA:328:C:H4'	1:XA:329:A:C5'	2.50	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41
7:XG:141:VAL:O	7:XG:141:VAL:CG1	2.65	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
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
25:YA:270(M):U:H1'	25:YA:270(N):G:C6	2.55	0.41
25:YA:643:A:N1	25:YA:2369:A:O2'	2.46	0.41
25:YA:1093:G:H4'	31:YH:170:ARG:NH2	2.34	0.41
25:YA:1372:U:H2'	25:YA:1373:A:H5'	2.01	0.41
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.55	0.41
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.33	0.41
25:YA:2378:A:C5	25:YA:2379:G:H1'	2.55	0.41
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	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:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.41
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.41
36:YQ:64:ILE:HG13	45:YZ:178:GLU:OE1	2.20	0.41
37:YR:28:LEU:HD13	37:YR:28:LEU:C	2.40	0.41
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.41
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.41
42:YW:25:ARG:NH1	42:YW:25:ARG:CB	2.79	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.41
1:QA:937:A:N6	1:QA:1345:U:O4	2.51	0.41
1:QA:954:G:N2	1:QA:1227:A:H62	2.11	0.41
1:QA:962:C:H2'	1:QA:963:G:O4'	2.20	0.41
1:QA:1268:A:H4'	21:QU:19:GLY:C	2.40	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.21	0.41
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.41
2:QB:155:LEU:C	2:QB:157:ARG:H	2.23	0.41
2:QB:178:ARG:O	8:QH:71:GLY:HA2	2.20	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.41
13:QM:88:ARG:HD2	13:QM:88:ARG:O	2.19	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	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
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.55	0.41
25:RA:601:C:O2'	25:RA:605:C:H5"	2.20	0.41
25:RA:830:G:N2	25:RA:2445:G:O2'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1006:C:H1'	33:RN:106:MET:CE	2.49	0.41
25:RA:1248:G:N2	29:RF:88:VAL:HG22	2.35	0.41
25:RA:1252:G:O4'	40:RU:33:ARG:HD3	2.20	0.41
25:RA:1317:A:H2'	25:RA:1318:C:C6	2.55	0.41
25:RA:1819:A:H5"	27:RD:158:ALA:CB	2.50	0.41
25:RA:1819:A:H4'	25:RA:1820:U:O5'	2.20	0.41
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.55	0.41
25:RA:2420:C:OP1	54:R8:34:TRP:HB2	2.20	0.41
25:RA:2420:C:H6	25:RA:2420:C:O5'	2.03	0.41
25:RA:2683:C:OP1	39:RT:53:ARG:NH2	2.47	0.41
26:RB:93:C:H2'	26:RB:94:C:H6	1.86	0.41
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.41
28:RE:94:GLU:C	28:RE:96:PHE:N	2.73	0.41
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.41
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.41
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.21	0.41
33:RN:131:GLN:HE21	33:RN:131:GLN:HB3	1.57	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.56	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	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
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
1:XA:64:G:H4'	1:XA:65:U:O5'	2.20	0.41
1:XA:221:C:H2'	1:XA:222:U:H6	1.85	0.41
1:XA:865:A:H2'	1:XA:866:C:C6	2.55	0.41
1:XA:1360:A:OP1	1:XA:1360:A:H8	2.03	0.41
1:XA:1394:A:OP1	1:XA:1394:A:H8	2.03	0.41
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.20	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	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	2.02	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
14:XN:15:LYS:HD3	14:XN:15:LYS:HA	1.86	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
25:YA:1021:A:H61	25:YA:1142(A):A:H61	1.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1363:C:O2'	25:YA:1809:A:N3	2.43	0.41
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.55	0.41
25:YA:2308:G:N1	25:YA:2311:A:C2	2.88	0.41
25:YA:2439:A:O2'	25:YA:2440:C:OP2	2.32	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	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	2.03	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.02	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.26	0.41
33:YN:1:MET:O	33:YN:1:MET:HG3	2.19	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.02	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.41
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	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
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	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
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
1:QA:32:A:C2	1:QA:33:A:C4	3.08	0.41
1:QA:381:C:H2'	1:QA:382:A:O4'	2.20	0.41
1:QA:468:A:H4'	16:QP:80:PHE:O	2.19	0.41
1:QA:665:A:H2'	1:QA:725:G:N2	2.35	0.41
1:QA:909:A:H2'	1:QA:910:C:O4'	2.19	0.41
1:QA:1118:C:OP1	9:QI:104:ARG:NH1	2.49	0.41
1:QA:1194:U:H4'	5:QE:22:GLY:O	2.20	0.41
1:QA:1228:C:H2'	1:QA:1229:A:H8	1.86	0.41
1:QA:1371:G:C6	1:QA:1372:U:C4	3.08	0.41
1:QA:1386:G:C2	1:QA:1387:G:C8	3.09	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.39	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.41
25:RA:139:G:N2	25:RA:1596:A:H4'	2.35	0.41
25:RA:264:C:C2'	25:RA:265:A:H5"	2.50	0.41
25:RA:297:C:H5"	44:RY:85:VAL:CG2	2.46	0.41
25:RA:727:A:H2	27:RD:9:TYR:CD2	2.38	0.41
25:RA:896:A:H2	45:RZ:146:ILE:HD11	1.86	0.41
25:RA:1936:A:H61	25:RA:1963:U:H3	1.69	0.41
25:RA:2009:G:H1'	37:RR:107:ASP:O	2.19	0.41
25:RA:2734:A:H5'	25:RA:2735:G:OP2	2.20	0.41
25:RA:2747:G:O6	25:RA:2755:C:H5"	2.21	0.41
27:RD:13:ARG:HG2	27:RD:13:ARG:O	2.20	0.41
27:RD:269:PHE:CD2	27:RD:269:PHE:N	2.88	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
30:RG:143:GLU:C	50:R4:28:LYS:HZ2	2.24	0.41
31:RH:105:LEU:CD1	31:RH:105:LEU:N	2.81	0.41
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	2.01	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.51	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:81:TYR:C	41:RV:82:ARG:CG	2.89	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	2.20	0.41
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
1:XA:11:G:C6	1:XA:12:U:C4	3.09	0.41
1:XA:1051:C:H2'	1:XA:1052:U:C6	2.55	0.41
1:XA:1162:C:O2'	1:XA:1163:C:O5'	2.37	0.41
1:XA:1366:C:O2'	10:XJ:60:ARG:NH2	2.52	0.41
1:XA:1508:G:H2'	1:XA:1509:C:C6	2.55	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.41
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.20	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.19	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	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:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
14:XN:9:LYS:HB3	14:XN:9:LYS:HE2	1.85	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.41
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.41
25:YA:341:G:H2'	25:YA:342:G:O4'	2.20	0.41
25:YA:638:G:C5	25:YA:651:G:C2	3.09	0.41
25:YA:1348:G:C2'	25:YA:1349:A:H5"	2.49	0.41
25:YA:1454:U:O2'	25:YA:1455:G:N7	2.46	0.41
25:YA:1545(A):A:H2'	25:YA:1546:C:O4'	2.20	0.41
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.47	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.03	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
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
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
43:YX:57:LEU:HD12	43:YX:57:LEU:H	1.85	0.41
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.41
1:QA:37:U:O2'	1:QA:500:G:H4'	2.20	0.41
1:QA:117:G:H2'	1:QA:118:U:O4'	2.21	0.41
1:QA:384:G:H2'	1:QA:385:C:C6	2.55	0.41
1:QA:675:A:H1'	11:QK:116:HIS:CG	2.55	0.41
1:QA:743:U:H2'	1:QA:744:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1338:G:C6	1:QA:1339:A:C6	3.08	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	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
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.50	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
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.85	0.41
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
25:RA:686:G:H21	25:RA:788:A:H61	1.69	0.41
25:RA:784:A:O2'	25:RA:785:G:H5"	2.21	0.41
25:RA:890:A:O2'	25:RA:892:G:H8	2.04	0.41
25:RA:2031:A:C6	25:RA:2498:C:H1'	2.55	0.41
25:RA:2392:A:H2	25:RA:2424:C:N4	2.15	0.41
25:RA:2774:C:H2'	25:RA:2775:A:O4'	2.20	0.41
26:RB:52:A:N6	38:RS:33:LYS:HG3	2.35	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.02	0.41
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.81	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	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:CD2	41:RV:39:LEU:N	2.82	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
1:XA:277:C:H2'	1:XA:278:G:H8	1.85	0.41
1:XA:1106:G:H2'	1:XA:1107:C:H6	1.85	0.41
1:XA:1126:U:C5	1:XA:1127:G:C4	3.08	0.41
1:XA:1293:G:H2'	1:XA:1294:G:O4'	2.20	0.41
1:XA:1312:G:N7	19:XS:2:PRO:HD2	2.36	0.41
1:XA:1442:G:H1	1:XA:1461:G:H21	1.67	0.41
2:XB:178:ARG:O	8:XH:71:GLY:HA2	2.21	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
18:XR:76:LEU:N	18:XR:76:LEU:HD22	2.35	0.41
25:YA:27:G:O2'	25:YA:28:A:H8	2.02	0.41
25:YA:742:G:H2'	25:YA:743:G:C8	2.55	0.41
25:YA:1266:G:O2'	25:YA:2012:G:O6	2.32	0.41
25:YA:1329:U:H5"	25:YA:1330:C:H5	1.85	0.41
25:YA:1478:G:O2'	25:YA:1479:G:H5'	2.19	0.41
25:YA:2057:A:H2'	25:YA:2058:A:O4'	2.20	0.41
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.55	0.41
25:YA:2862:G:H2'	25:YA:2863:C:H6	1.84	0.41
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
27:YD:269:PHE:CD2	27:YD:269:PHE:N	2.88	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	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:42:TRP:HA	33:YN:48:MET:HE1	2.02	0.41
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.41
34:YO:31:LYS:HA	34:YO:31:LYS:HD3	1.92	0.41
34:YO:107:ARG:HA	34:YO:112:MET:HE1	2.01	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.49	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.01	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
49:Y3:37:LEU:HD23	49:Y3:37:LEU:N	2.35	0.41
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.41
1:QA:345:C:O2	1:QA:346:G:N2	2.52	0.41
1:QA:607:A:H2'	1:QA:608:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:853:G:H2'	1:QA:854:G:H8	1.86	0.41
1:QA:1501:C:OP2	1:QA:1504:G:O2'	2.31	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.02	0.41
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.41
25:RA:26:G:H1'	25:RA:515:A:N6	2.35	0.41
25:RA:196:A:O5'	35:RP:46:LYS:NZ	2.38	0.41
25:RA:328:U:H4'	44:RY:68:HIS:CG	2.55	0.41
25:RA:825:C:H2'	25:RA:826:U:O4'	2.21	0.41
25:RA:932:G:H4'	25:RA:933:A:O5'	2.21	0.41
25:RA:1045:A:N3	25:RA:1047:G:N2	2.68	0.41
25:RA:1057:A:H62	25:RA:1086:A:H2'	1.84	0.41
25:RA:1190:G:H2'	25:RA:1191:G:H8	1.84	0.41
25:RA:1973:G:H2'	25:RA:1974:C:C6	2.55	0.41
25:RA:2018:G:H2'	25:RA:2019:A:O4'	2.20	0.41
25:RA:2397:G:H5"	47:R1:28:GLY:HA2	2.02	0.41
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.21	0.41
26:RB:28:C:OP2	38:RS:33:LYS:HE3	2.20	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.36	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.24	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	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
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
36:RQ:134:ARG:HD3	45:RZ:122:ARG:NH1	2.36	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.81	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
49:R3:7:LYS:O	49:R3:7:LYS:HG2	2.20	0.41
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.41
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.41
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.02	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
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
25:YA:99:U:H4'	25:YA:101:G:H5'	2.03	0.41
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	2.20	0.41
25:YA:1550:C:H2'	25:YA:1551:C:C6	2.55	0.41
25:YA:1570:A:H2'	25:YA:1571:A:C8	2.55	0.41
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.55	0.41
25:YA:1676:A:H2'	25:YA:1677:A:O4'	2.20	0.41
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.20	0.41
25:YA:2850:A:C2	25:YA:2851:A:C4	3.09	0.41
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	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
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
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.41
44:YY:95:LYS:H	44:YY:95:LYS:CD	2.33	0.41
45:YZ:6:LYS:NZ	45:YZ:43:GLU:HG3	2.36	0.41
46:Y0:30:VAL:HG22	46:Y0:66:VAL:HG12	2.02	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:408:A:H2'	1:QA:409:G:O4'	2.20	0.41
1:QA:436:C:H2'	1:QA:437:U:H6	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:529:G:O6	12:QL:49:ASN:HA	2.19	0.41
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.86	0.41
1:QA:1316:G:N2	1:QA:1318:A:H3'	2.36	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	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
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.85	0.41
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.41
22:QV:18:G:C6	22:QV:57:A:C6	3.08	0.41
25:RA:637:A:N3	25:RA:638:G:H1'	2.36	0.41
25:RA:741:G:H2'	25:RA:742:G:C8	2.55	0.41
25:RA:744:G:OP1	28:RE:132:HIS:ND1	2.54	0.41
25:RA:1331:A:H2'	25:RA:1333:C:C5	2.56	0.41
25:RA:1678:G:N2	25:RA:1989:G:N2	2.67	0.41
25:RA:2512:C:H2'	25:RA:2513:G:O4'	2.21	0.41
25:RA:2648:C:H2'	25:RA:2649:U:C6	2.55	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
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.41
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.41
41:RV:61:VAL:CG2	41:RV:61:VAL:O	2.68	0.41
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.36	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.20	0.41
54:R8:26:LYS:HA	54:R8:26:LYS:HD3	1.86	0.41
1:XA:743:U:H2'	1:XA:744:C:C6	2.56	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.87	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.41
7:XG:126:ASP:N	7:XG:126:ASP:OD2	2.53	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
14:XN:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
25:YA:242:G:O3'	54:Y8:6:THR:HG23	2.21	0.41
25:YA:748:G:C8	42:YW:89:ALA:HB1	2.55	0.41
25:YA:944:G:H5"	25:YA:945:A:O5'	2.20	0.41
25:YA:1279:G:H2'	25:YA:1280:G:O4'	2.21	0.41
25:YA:1335:U:OP1	43:YX:65:ARG:NE	2.54	0.41
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.20	0.41
25:YA:1965:C:H3'	25:YA:1966:A:H2'	2.03	0.41
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.56	0.41
26:YB:12:C:O4'	26:YB:15:A:N6	2.53	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.04	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.41
44:YY:95:LYS:HB2	44:YY:95:LYS:HZ1	1.86	0.41
45:YZ:77:ASP:OD2	45:YZ:80:ARG:HD3	2.21	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	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
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.50	0.41
1:QA:262:A:C6	1:QA:263:A:C6	3.09	0.41
1:QA:468:A:O3'	16:QP:80:PHE:O	2.39	0.41
1:QA:539:A:H2'	1:QA:540:G:C8	2.55	0.41
1:QA:803:G:C6	1:QA:804:U:C4	3.09	0.41
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.30	0.41
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.46	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.41
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.47	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
7:QG:103:TRP:O	7:QG:104:LEU:C	2.59	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.41
10:QJ:45:ARG:HG3	10:QJ:45:ARG:HH11	1.86	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.41
25:RA:607:U:OP1	29:RF:102:PRO:HA	2.21	0.41
25:RA:675:A:N6	25:RA:676:A:N6	2.68	0.41
25:RA:754:C:H2'	25:RA:755:C:C6	2.55	0.41
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.20	0.41
25:RA:2196:C:N4	25:RA:2197:U:O4	2.54	0.41
25:RA:2320:A:H2'	25:RA:2320:A:N3	2.35	0.41
25:RA:2516:G:C5	25:RA:2517:C:C4	3.09	0.41
25:RA:2517:C:C2	25:RA:2542:A:N6	2.89	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	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
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	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
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	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
48:R2:18:PRO:C	48:R2:20:GLU:N	2.73	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.35	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.51	0.41
1:XA:266:G:H5'	1:XA:268:C:H41	1.85	0.41
1:XA:372:C:H42	1:XA:389:A:H62	1.68	0.41
1:XA:558:G:H2'	1:XA:559:A:H2	1.85	0.41
1:XA:562:C:O2'	12:XL:16:GLU:O	2.16	0.41
1:XA:779:C:H2'	1:XA:780:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:807:A:H2'	1:XA:808:C:C6	2.56	0.41
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.20	0.41
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.41
2:XB:178:ARG:CD	8:XH:71:GLY:C	2.89	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	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
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.71	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.55	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.41
25:YA:26:G:C6	25:YA:27:G:N1	2.89	0.41
25:YA:65:C:P	43:YX:71:GLY:HA3	2.61	0.41
25:YA:581:C:H2'	25:YA:582:G:C8	2.55	0.41
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.85	0.41
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.21	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
31:YH:59:ARG:CG	31:YH:59:ARG:NH1	2.79	0.41
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	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
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
41:YV:22:VAL:CG1	41:YV:23:GLU:H	2.32	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	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
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.36	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.20	0.41
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:184:G:H2'	1:QA:185:A:C8	2.45	0.41
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.20	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
3:QC:55:VAL:HG12	3:QC:55:VAL:O	2.21	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	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
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
16:QP:50:LYS:HD3	16:QP:50:LYS:C	2.41	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
25:RA:140:A:C8	25:RA:1408:C:O2'	2.70	0.41
25:RA:396:G:H1'	47:R1:42:GLN:HB3	2.02	0.41
25:RA:1688:U:O2	25:RA:1700:A:H8	2.04	0.41
25:RA:1799:G:H5'	25:RA:1819:A:H61	1.84	0.41
25:RA:1836:C:H2'	25:RA:1837:C:H6	1.86	0.41
25:RA:2295:C:P	38:RS:10:ARG:HD2	2.61	0.41
25:RA:2725:A:O2'	25:RA:2726:U:H5"	2.20	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
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	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
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
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
42:RW:29:LEU:HD23	42:RW:29:LEU:C	2.41	0.41
44:RY:43:ASN:O	44:RY:43:ASN:OD1	2.39	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
1:XA:485:G:H1'	1:XA:486:U:H5	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.36	0.41
1:XA:1285:A:H4'	1:XA:1286:A:O5'	2.21	0.41
1:XA:1317:C:H5"	1:XA:1318:A:OP2	2.21	0.41
1:XA:1346:A:H5'	9:XI:120:ARG:NH1	2.32	0.41
1:XA:1349:A:OP2	9:XI:118:LYS:NZ	2.51	0.41
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
2:XB: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
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.41
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.41
9:XI:105:ASP:C	9:XI:107:ARG:N	2.74	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
25:YA:475:U:C4	25:YA:481:G:O6	2.74	0.41
25:YA:521:G:H2'	25:YA:522:G:C8	2.55	0.41
25:YA:554:U:HO2'	25:YA:556:G:H8	1.68	0.41
25:YA:642:G:N2	25:YA:645:C:OP2	2.53	0.41
25:YA:1071:G:O5'	25:YA:1071:G:H8	2.04	0.41
25:YA:1418:G:H8	25:YA:1418:G:O5'	2.03	0.41
25:YA:1952:A:C6	25:YA:1953:A:N1	2.89	0.41
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.55	0.41
25:YA:2563:U:H2'	25:YA:2565:A:OP2	2.20	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	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
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.50	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.21	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.21	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.41
48:Y2:41:ILE:C	48:Y2:41:ILE:CD1	2.81	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.82	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
1:QA:129(A):G:C6	1:QA:191(A):G:H1'	2.56	0.41
1:QA:296:U:H2'	1:QA:297:G:C8	2.56	0.41
1:QA:337:C:H2'	1:QA:338:A:C8	2.55	0.41
1:QA:558:G:H2'	1:QA:559:A:C2	2.56	0.41
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.21	0.41
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	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
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.41
5:QE:68:GLU:O	5:QE:68:GLU:CG	2.68	0.41
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.41
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.41
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.21	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
13:QM:7:VAL:HB	30:RG:115:ARG:NH1	2.35	0.41
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.41
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:51:TYR:HA	17:QQ:52:LYS:HZ2	1.85	0.41
17:QQ:60:ILE: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:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.54	0.41
25:RA:270(H):C:H2'	25:RA:270(I):G:C8	2.55	0.41
25:RA:299:A:N3	25:RA:319:C:O2'	2.52	0.41
25:RA:389:G:H22	35:RP:72:PRO:CD	2.34	0.41
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.20	0.41
25:RA:508:G:HO2'	25:RA:509:C:P	2.43	0.41
25:RA:631:A:P	54:R8:46:ARG:HH21	2.40	0.41
25:RA:978:G:H1	25:RA:985:C:H42	1.69	0.41
25:RA:993:G:P	40:RU:50:ARG:HH22	2.40	0.41
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.36	0.41
25:RA:1149:G:H2'	25:RA:1150:C:H6	1.85	0.41
25:RA:1542:G:H5"	25:RA:1543:A:OP2	2.21	0.41
25:RA:1688:U:H1'	25:RA:1701:A:C6	2.56	0.41
25:RA:2051:A:H5'	25:RA:2578:G:O4'	2.20	0.41
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.55	0.41
25:RA:2770:G:H5"	25:RA:2771:C:OP2	2.20	0.41
25:RA:2776:A:H4'	25:RA:2777:G:O5'	2.21	0.41
25:RA:2832:U:O2'	25:RA:2833:G:P	2.79	0.41
26:RB:14:U:OP2	26:RB:70:C:O2'	2.30	0.41
26:RB:55:U:H5'	30:RG:28:VAL:HG21	2.02	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:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
28:RE:9:VAL:HB	28:RE:10:GLY:H	1.71	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:47:LYS:HB2	30:RG:47:LYS:HE3	1.80	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.50	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
32:RI:38:LEU:HD12	32:RI:38:LEU:H	1.86	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
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.03	0.41
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	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: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: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:15:ARG:O	38:RS:19:LYS:HD3	2.20	0.41
38:RS:106:ARG:HB2	38:RS:106:ARG:CZ	2.49	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	2.73	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	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
41:RV:67:GLY:O	41:RV:68:LYS:C	2.60	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
44:RY:86:ARG:HD2	44:RY:86:ARG:HA	1.91	0.41
45:RZ:76:LEU:HD23	45:RZ:76:LEU:H	1.86	0.41
47:R1:18:ILE:O	47:R1:18:ILE:HG22	2.21	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
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
54:R8:3:LYS:HE2	54:R8:3:LYS:HB3	1.82	0.41
1:XA:97:U:H2'	1:XA:99:C:C6	2.56	0.41
1:XA:336:C:H2'	1:XA:337:C:C6	2.55	0.41
1:XA:502:G:P	12:XL:118:SER:HB2	2.60	0.41
1:XA:579:G:H5'	1:XA:728:A:H1'	2.02	0.41
1:XA:626:U:C2	1:XA:627:G:C8	3.09	0.41
1:XA:626:U:H2'	1:XA:627:G:H8	1.86	0.41
1:XA:627:G:H2'	1:XA:628:G:C8	2.56	0.41
1:XA:648:A:H2'	1:XA:649:G:C8	2.55	0.41
1:XA:675:A:H1'	11:XK:116:HIS:CG	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:719:C:O2	18:XR:50:ILE:HD13	2.21	0.41
1:XA:864:A:H2'	1:XA:865:A:C8	2.56	0.41
1:XA:1434:A:H2'	1:XA:1435:G:O4'	2.21	0.41
2:XB:37:ASN:C	2:XB:39:ILE:N	2.73	0.41
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:10:MET:CE	5:XE:13:ILE:HD13	2.51	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.41
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.41
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	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
16:XP:1:MET:H2	16:XP:24:ALA:HB3	1.85	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	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
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.89	0.41
25:YA:118:A:C8	25:YA:119:A:C8	3.08	0.41
25:YA:315:G:H2'	25:YA:316:C:C6	2.56	0.41
25:YA:515:A:H1'	25:YA:581:C:H1'	2.03	0.41
25:YA:569:U:C4	25:YA:570:G:C6	3.08	0.41
25:YA:864:G:C6	25:YA:865:C:N4	2.89	0.41
25:YA:1155:A:O3'	40:YU:55:ARG:NH1	2.54	0.41
25:YA:1257:C:O2'	29:YF:84:VAL:HG12	2.21	0.41
25:YA:1321:A:H2'	25:YA:1322:A:O4'	2.21	0.41
25:YA:1991:U:H2'	25:YA:1992:G:H5"	2.02	0.41
25:YA:2159:G:H2'	25:YA:2160:G:H8	1.85	0.41
25:YA:2295:C:P	38:YS:10:ARG:HD2	2.60	0.41
25:YA:2296:U:H2'	38:YS:9:ARG:NH1	2.36	0.41
25:YA:2303:G:O2'	30:YG:132:ASN:ND2	2.45	0.41
25:YA:2764:A:N6	25:YA:2766:G:C2	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2790:A:O2'	25:YA:2893:G:N3	2.50	0.41
26:YB:15:A:H5'	26:YB:16:G:H8	1.80	0.41
27:YD:134:ARG:H	27:YD:134:ARG:HG3	1.55	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
30:YG:18:GLU:HA	30:YG:18:GLU:OE2	2.21	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.20	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	2.55	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
40:YU:5:LYS:C	40:YU:7:GLY:N	2.74	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:14:PRO:O	42:YW:15:ARG:C	2.58	0.41
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.23	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
45:YZ:91:LEU:HB3	45:YZ:130:PRO:HB3	2.02	0.41
45:YZ:97:GLU:HG3	45:YZ:127:LYS:NZ	2.35	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	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
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.41
55:Y9:2:LYS:HD2	55:Y9:2:LYS:HA	1.96	0.41
1:QA:51:A:N1	1:QA:314:C:O2'	2.48	0.41
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.56	0.41
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.21	0.41
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.52	0.41
1:QA:736:C:H2'	1:QA:737:A:C8	2.56	0.41
1:QA:825:G:H1'	8:QH:2:LEU:HD21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.56	0.41
1:QA:1287:A:H2'	1:QA:1288:A:C8	2.56	0.41
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.56	0.41
1:QA:1384:C:H2'	1:QA:1385:G:C8	2.55	0.41
1:QA:1441:G:H4'	1:QA:1442:G:C4	2.56	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.41
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.41
3:QC:95:THR:HG23	3:QC:97:LYS:HZ1	1.86	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.41
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
13:QM:3:ARG:NH2	30:RG:139:LEU:HD13	2.35	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.60	0.41
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.41
25:RA:554:U:HO2'	25:RA:556:G:H8	1.69	0.41
25:RA:833:U:H2'	25:RA:834:C:H6	1.84	0.41
25:RA:1520:U:H2'	25:RA:1521:G:O4'	2.21	0.41
26:RB:28:C:H2'	26:RB:29:A:C8	2.56	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.41
32:RI:23:PRO:O	32:RI:27:ARG:HG2	2.21	0.41
32:RI:88:ILE:HG12	32:RI:88:ILE:H	1.57	0.41
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	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:84:ASN:HB2	35:RP:87:ASP:OD2	2.21	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.41
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.41
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.41
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.57	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:5:TRP:HE1	53:R7:7:PRO:HG3	1.85	0.41
1:XA:130:A:N3	1:XA:263:A:O2'	2.46	0.41
1:XA:163:C:H2'	1:XA:164:U:C6	2.56	0.41
1:XA:960:U:O2	1:XA:960:U:H2'	2.19	0.41
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.55	0.41
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.54	0.41
1:XA:1305:G:C5'	21:XU:4:GLY:HA3	2.50	0.41
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.41
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
3:XC:55:VAL:HG12	3:XC:55:VAL:O	2.20	0.41
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	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
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.41
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.86	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
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.41
11:XK:31:THR:O	11:XK:31:THR:HG23	2.21	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.41
14:XN:48:ALA:O	14:XN:51:GLY:N	2.53	0.41
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.41
22:XV:4:G:O2'	22:XV:5:G:H8	2.04	0.41
25:YA:49:A:H61	25:YA:177:G:H2'	1.86	0.41
25:YA:458:G:C8	53:Y7:37:LYS:HE3	2.56	0.41
25:YA:1844:C:H2'	25:YA:1845:G:C8	2.54	0.41
25:YA:1847:A:H5'	25:YA:1848:A:OP2	2.21	0.41
25:YA:2037:G:C6	25:YA:2038:G:C6	3.09	0.41
25:YA:2404:C:H1'	35:YP:67:MET:HE2	2.02	0.41
25:YA:2848:G:O2'	25:YA:2867:G:N2	2.50	0.41
27:YD:68:LYS:O	27:YD:68:LYS:HG3	2.20	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.41
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
33:YN:1:MET:HE3	40:YU:95:LEU:HD21	1.98	0.41
34:YO:106:LEU:HD23	34:YO:106:LEU:HA	1.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.86	0.41
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.41
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.41
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.36	0.41
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.84	0.41
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.41
45:YZ:152:ALA:HB2	45:YZ:168:GLU:HA	2.03	0.41
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.32	0.41
47:Y1:94:LEU:HD23	47:Y1:94:LEU:HA	1.82	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.56	0.41
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.54	0.41
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.41
52:Y6:6:ARG:HA	52:Y6:6:ARG:NE	2.36	0.41
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
1:QA:35:G:N2	12:QL:118:SER:OG	2.51	0.40
1:QA:452:A:O2'	1:QA:453:A:O4'	2.38	0.40
1:QA:935:A:H1'	1:QA:1384:C:N3	2.36	0.40
1:QA:1297:C:O2'	1:QA:1298:C:P	2.79	0.40
1:QA:1322:C:H5'	13:QM:100:GLY:HA2	2.02	0.40
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.40
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.40
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.40
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.40
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.02	0.40
22:QV:25:C:H2'	22:QV:26:G:O4'	2.21	0.40
25:RA:819:A:OP2	25:RA:1187:G:N2	2.24	0.40
25:RA:852:G:H2'	25:RA:853:G:H8	1.86	0.40
25:RA:873:G:H1	25:RA:904:C:N4	2.19	0.40
25:RA:910:A:C5	36:RQ:13:GLN:HG3	2.57	0.40
25:RA:1105:U:H2'	25:RA:1106:G:H8	1.86	0.40
25:RA:1689:A:OP2	25:RA:1698:A:N6	2.54	0.40
25:RA:2070:G:H2'	25:RA:2071:A:H8	1.86	0.40
26:RB:3:C:H2'	26:RB:4:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.40
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	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
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
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
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.20	0.40
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.40
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.40
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.85	0.40
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.40
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.40
55:R9:10:ILE:HD12	55:R9:32:HIS:CG	2.56	0.40
1:XA:189:U:C2	17:XQ:72:ARG:NH1	2.90	0.40
1:XA:267:C:OP2	17:XQ:67:LYS:HD2	2.21	0.40
1:XA:509:A:H5"	4:XD:55:ALA:HB2	2.02	0.40
1:XA:598:U:H2'	1:XA:599:C:C6	2.56	0.40
1:XA:911:U:H2'	1:XA:912:C:C6	2.56	0.40
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.49	0.40
1:XA:1256:A:H4'	1:XA:1258:G:C4	2.56	0.40
1:XA:1312:G:OP1	50:Y4:58:ARG:NH1	2.43	0.40
1:XA:1517:G:H1'	25:YA:1919:A:O3'	2.21	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.21	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	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	2.21	0.40
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.40
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.40
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	0.40
14:XN:47:LEU:O	14:XN:50:LYS:N	2.52	0.40
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:252:G:OP2	35:YP:50:ARG:NH1	2.54	0.40
25:YA:414:C:H1'	25:YA:1864:U:O2'	2.21	0.40
25:YA:483:A:H4'	44:YY:49:VAL:HG13	2.03	0.40
25:YA:857:C:H1'	46:Y0:26:TYR:CE2	2.56	0.40
25:YA:1534:G:H2'	25:YA:1534:G:N3	2.36	0.40
25:YA:1667:G:H2'	25:YA:1991:U:O4	2.21	0.40
25:YA:2392:A:H2'	25:YA:2393:A:O4'	2.20	0.40
25:YA:2416:C:H5"	35:YP:64:LYS:HE3	2.03	0.40
25:YA:2678:C:H2'	25:YA:2679:A:O4'	2.20	0.40
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.22	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
29:YF:62:ARG:HB3	29:YF:62:ARG:CZ	2.51	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	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
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.22	0.40
35:YP:85:LEU:HA	35:YP:85:LEU:HD23	1.92	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
39:YT:10:VAL:O	39:YT:11:GLU:C	2.60	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
40:YU:30:LYS:HA	40:YU:30:LYS:HD3	1.84	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
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.36	0.40
1:QA:590:C:O2'	1:QA:591:U:H5'	2.21	0.40
1:QA:730:G:C5	1:QA:731:G:H1'	2.56	0.40
1:QA:1301:U:O2	1:QA:1301:U:H2'	2.20	0.40
2:QB:212:GLN:NE2	2:QB:212:GLN:O	2.54	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	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
8:QH:100:ILE:HA	8:QH:101:PRO:HD3	1.85	0.40
10:QJ:22:LYS:C	10:QJ:22:LYS:CD	2.89	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
25:RA:443:A:H3'	29:RF:45:ARG:HH12	1.86	0.40
25:RA:489:G:N7	42:RW:49:LYS:NZ	2.69	0.40
25:RA:945:A:C4	25:RA:2448:A:C2	3.09	0.40
25:RA:969:U:H2'	25:RA:970:C:C6	2.57	0.40
25:RA:1022:G:C6	25:RA:1140:C:C4	3.09	0.40
25:RA:1543:A:HO2'	25:RA:1544:C:P	2.44	0.40
25:RA:2199:A:H3'	25:RA:2205:C:H6	1.86	0.40
25:RA:2291:U:O2'	25:RA:2374:C:O2	2.34	0.40
25:RA:2469:A:OP1	25:RA:2469:A:H4'	2.20	0.40
25:RA:2477:C:H2'	55:R9:1:MET:CG	2.50	0.40
25:RA:2811:G:P	28:RE:61:ARG:HG3	2.60	0.40
26:RB:11:C:H3'	26:RB:12:C:C6	2.57	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.40
34:RO:106:LEU:HA	34:RO:106:LEU:HD23	1.89	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.85	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
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
48:R2:32:LEU:O	48:R2:32:LEU:HD23	2.21	0.40
52:R6:24:GLU:HB3	52:R6:25:LYS:H	1.56	0.40
1:XA:643:C:H5'	8:XH:31:PHE:CE1	2.57	0.40
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.35	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.51	0.40
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:178:LEU:N	3:XC:178:LEU:CD2	2.85	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.21	0.40
5:XE:75:THR:CG2	5:XE:76:ILE:N	2.80	0.40
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
11:XK:91:ARG:NH2	18:XR:88:LYS:HZ1	2.19	0.40
13:XM:40:ASN:HA	13:XM:41:PRO:HD3	1.84	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.40
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.40
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.40
25:YA:483:A:H5'	44:YY:49:VAL:HG13	2.03	0.40
25:YA:1141:U:H1'	25:YA:1142(A):A:C6	2.57	0.40
25:YA:1707:G:C5	25:YA:1756:G:C6	3.09	0.40
25:YA:2376:A:N1	38:YS:87:PHE:CD2	2.90	0.40
25:YA:2619:C:O2'	25:YA:2620:C:H5'	2.21	0.40
25:YA:2715:C:H2'	25:YA:2716:U:C6	2.56	0.40
25:YA:2870:C:H5'	37:YR:65:LEU:HD21	2.03	0.40
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.51	0.40
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.40
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.87	0.40
34:YO:110:GLY:HA2	34:YO:112:MET:HE2	2.03	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	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
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
45:YZ:182:LYS:CG	45:YZ:183:LEU:HA	2.50	0.40
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
1:QA:518:C:H2'	1:QA:530:G:N3	2.36	0.40
1:QA:776:G:HO2'	1:QA:777:A:H8	1.68	0.40
1:QA:948:C:H2'	1:QA:949:A:H8	1.86	0.40
1:QA:1176:A:H2'	1:QA:1177:G:H5'	2.03	0.40
1:QA:1312:G:H3'	50:R4:67:TYR:OH	2.21	0.40
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.55	0.40
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.40
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.68	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:113:ALA:HB3	3:QC:114:PRO:CD	2.43	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:52:SER:HB3	4:QD:55:ALA:HB3	2.01	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
13:QM:122:LYS:HE2	13:QM:122:LYS:O	2.21	0.40
17:QQ:63:ARG:HA	17:QQ:64:PRO:HD3	1.94	0.40
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
25:RA:503:A:H4'	25:RA:504:U:H5"	2.03	0.40
25:RA:592:G:H1	25:RA:665:C:H42	1.68	0.40
25:RA:631:A:H2'	25:RA:632:A:O4'	2.22	0.40
25:RA:2298:A:N6	25:RA:2318:G:H8	2.05	0.40
26:RB:104:A:H2'	26:RB:105:G:O4'	2.21	0.40
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.35	0.40
28:RE:5:LEU:O	28:RE:28:ALA:HA	2.22	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
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:O	35:RP:66:GLY:C	2.60	0.40
36:RQ:66:ILE:O	36:RQ:67:ARG:HB2	2.22	0.40
37:RR:34:ILE:HG22	37:RR:35:THR:N	2.35	0.40
38:RS:43:GLU:HG2	46:R0:49:LYS:NZ	2.36	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	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:112:G:H4'	1:XA:389:A:H5"	2.04	0.40
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.21	0.40
1:XA:228:A:H2'	1:XA:229:U:O4'	2.22	0.40
1:XA:343:U:O2'	1:XA:344:A:H8	2.05	0.40
1:XA:762:C:H2'	1:XA:763:G:H8	1.85	0.40
1:XA:1131:G:H1	1:XA:1143:G:H21	1.69	0.40
1:XA:1149:C:OP1	9:XI:9:ARG:NH2	2.55	0.40
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.22	0.40
2:XB:125:PRO:O	2:XB:126:GLU:HB2	2.21	0.40
3:XC:33:LEU:HD11	14:XN:53:LEU:HD23	2.04	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:120:LEU:CD2	4:XD:125:HIS:HB2	2.46	0.40
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
10:XJ:22:LYS:HZ1	10:XJ:23:ILE:HG12	1.86	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.22	0.40
14:XN:43:CYS:C	14:XN:45:ARG:N	2.73	0.40
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.41	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	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:29:ARG:HG2	19:XS:29:ARG:NH1	2.37	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
25:YA:57:C:H2'	25:YA:58:G:O4'	2.21	0.40
25:YA:64:A:N9	43:YX:66:LEU:HD13	2.37	0.40
25:YA:141(A):C:H2'	25:YA:142:G:O4'	2.21	0.40
25:YA:388:G:C6	25:YA:390:A:C2	3.10	0.40
25:YA:997:G:OP1	40:YU:93:LYS:HD3	2.21	0.40
25:YA:1427:A:H4'	25:YA:1428:C:O4'	2.21	0.40
25:YA:1705:G:C6	25:YA:1706:U:C4	3.09	0.40
25:YA:2688:U:C5	25:YA:2720:U:OP2	2.74	0.40
25:YA:2867:G:O2'	25:YA:2868:A:H8	2.04	0.40
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.21	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.40
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.81	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.68	0.40
41:YV:24:LYS:CA	41:YV:92:THR:HG23	2.39	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	2.22	0.40
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.70	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.57	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:129(A):G:N2	1:QA:188:U:HO2'	2.19	0.40
1:QA:643:C:H5'	8:QH:31:PHE:CE1	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:722:A:H4'	1:QA:723:U:C4	2.57	0.40
1:QA:1148:U:H2'	1:QA:1149:C:O4'	2.21	0.40
1:QA:1392:G:N2	1:QA:1502:A:H8	2.18	0.40
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	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:73:ARG:O	4:QD:74:GLN:C	2.58	0.40
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.40
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.40
6:QF:8:ILE:HG22	6:QF:10:LEU:HD12	2.03	0.40
6:QF:12:PRO:HG2	6:QF:13:ASN:N	2.34	0.40
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
25:RA:95:G:HO2'	48:R2:48:HIS:CE1	2.29	0.40
25:RA:868:U:H2'	25:RA:869:G:O4'	2.22	0.40
25:RA:987:G:O2'	25:RA:1000:A:N3	2.48	0.40
25:RA:1465:G:H5'	25:RA:1528:A:H1'	2.03	0.40
25:RA:2056:G:N3	25:RA:2056:G:H2'	2.35	0.40
27:RD:228:PRO:HD3	27:RD:234:GLY:O	2.21	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.40
32:RI:129:THR:HG22	32:RI:137:PRO:HB3	2.04	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	1.86	0.40
37:RR:14:SER:HB2	37:RR:15:SER:H	1.72	0.40
37:RR:18:LEU:HD11	37:RR:22:ARG:NE	2.36	0.40
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.40
38:RS:83:LYS:CE	38:RS:109:GLY:HA2	2.47	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.40
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CD1	2.55	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
52:R6:36:LEU:HD23	52:R6:36:LEU:N	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:36:LEU:CD1	52:R6:50:ARG:NH1	2.82	0.40
52:R6:37:ARG:O	52:R6:48:VAL:O	2.39	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.37	0.40
1:XA:191:G:O2'	20:XT:101:GLY:O	2.39	0.40
1:XA:1262:C:H2'	1:XA:1263:C:C6	2.57	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.21	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.40
9:XI:118:LYS:HB2	9:XI:118:LYS:HZ2	1.85	0.40
13:XM:4:ILE:CG2	13:XM:5:ALA:H	2.30	0.40
17:XQ:51:TYR:HA	17:XQ:52:LYS:HZ2	1.86	0.40
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.22	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.03	0.40
25:YA:287:C:O2'	25:YA:288:C:O4'	2.33	0.40
25:YA:1263:U:O2'	51:Y5:11:THR:HG23	2.22	0.40
25:YA:1454:U:O2	37:YR:64:ARG:NH1	2.49	0.40
25:YA:2164:C:H2'	25:YA:2165:G:O4'	2.20	0.40
25:YA:2227:A:H5"	27:YD:263:ARG:NH1	2.36	0.40
25:YA:2455:G:H2'	25:YA:2456:C:C6	2.57	0.40
25:YA:2674:G:H2'	25:YA:2675:A:C8	2.57	0.40
27:YD:72:LYS:HG2	27:YD:103:ARG:HH22	1.85	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
29:YF:198:ALA:C	29:YF:200:GLU:H	2.25	0.40
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	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	2.36	0.40
38:YS:99:LYS:HE2	38:YS:103:GLU:OE2	2.20	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
41:YV:61:VAL:CG2	41:YV:61:VAL:O	2.68	0.40
41:YV:95:LEU:HD13	41:YV:95:LEU:C	2.42	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
50:Y4:49:PHE:N	50:Y4:49:PHE:HD1	2.17	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
1:QA:57:G:C5	1:QA:58:C:C4	3.10	0.40
1:QA:256:U:H2'	1:QA:257:G:C8	2.56	0.40
1:QA:512:U:H2'	1:QA:513:C:H6	1.86	0.40
1:QA:530:G:HO2'	1:QA:531:U:P	2.44	0.40
1:QA:950:U:H2'	1:QA:951:G:C8	2.56	0.40
1:QA:953:G:N7	13:QM:104:ARG:NH2	2.68	0.40
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.27	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
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40
4:QD:11:LEU:O	4:QD:12:CYS:C	2.60	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
4:QD:68:TYR:OH	4:QD:196:LEU:HD21	2.21	0.40
5:QE:48:ALA:C	5:QE:50:GLU:H	2.25	0.40
6:QF:29:ALA:O	6:QF:30:LEU:C	2.60	0.40
6:QF:99:ALA:O	6:QF:100:ASN:CB	2.70	0.40
8:QH:105:ARG:O	8:QH:107:LEU:N	2.47	0.40
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.40
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
17:QQ:8:GLY:HA3	17:QQ:21:VAL:HG12	2.03	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.21	0.40
17:QQ:83:ASP:O	17:QQ:87:LYS:HG2	2.21	0.40
19:QS:13:ASP:O	19:QS:14:HIS:C	2.60	0.40
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.55	0.40
25:RA:1178:C:HO2'	25:RA:1179:C:P	2.44	0.40
25:RA:1310:G:OP2	53:R7:9:ARG:NH1	2.55	0.40
25:RA:1750:G:H2'	25:RA:1751:C:H6	1.87	0.40
25:RA:2070:G:H2'	25:RA:2071:A:C8	2.56	0.40
25:RA:2151:G:H2'	25:RA:2152:G:C8	2.57	0.40
25:RA:2395:C:H2'	25:RA:2396:G:O4'	2.22	0.40
25:RA:2472:G:H22	25:RA:2477:C:H5"	1.86	0.40
27:RD:25:THR:HG23	27:RD:27:THR:HB	2.02	0.40
27:RD:92:ILE:CD1	27:RD:104:TYR:CD2	3.05	0.40
27:RD:117:VAL:HG21	27:RD:128:GLY:O	2.22	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
31:RH:146:ALA:HB2	31:RH:164:TYR:OH	2.21	0.40
33:RN:75:TYR:O	33:RN:76:SER:O	2.40	0.40
34:RO:112:MET:O	34:RO:115:VAL:HG23	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:2:LYS:O	35:RP:5:ASP:CB	2.70	0.40
38:RS:20:ARG:HE	38:RS:21:THR:HA	1.87	0.40
38:RS:89:ARG:HG2	38:RS:89:ARG:NH1	2.36	0.40
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
39:RT:58:ASN:N	39:RT:58:ASN:ND2	2.70	0.40
42:RW:88:ARG:HA	42:RW:88:ARG:HD2	1.92	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
1:XA:20:U:H2'	1:XA:21:G:O4'	2.21	0.40
1:XA:1285:A:H4'	1:XA:1286:A:C5'	2.52	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CD1	2.52	0.40
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.40
6:XF:3:ARG:NH1	6:XF:38:GLU:OE1	2.54	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
6:XF:29:ALA:O	6:XF:30:LEU:C	2.60	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:41:ARG:CG	8:XH:41:ARG:NH1	2.76	0.40
8:XH:122:ARG:O	8:XH:123:GLU:C	2.60	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
10:XJ:65:LEU:HA	14:XN:55:GLY:O	2.21	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
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
16:XP:39:TYR:CD2	16:XP:41:PRO:HD3	2.56	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.03	0.40
25:YA:396:G:H1'	47:Y1:42:GLN:HB3	2.02	0.40
25:YA:488:G:N2	25:YA:491:G:H5"	2.37	0.40
25:YA:751:A:H5'	42:YW:90:ARG:HA	2.03	0.40
25:YA:1567:A:H4'	27:YD:58:HIS:CE1	2.56	0.40
25:YA:2001:A:H2'	25:YA:2002:G:C8	2.56	0.40
25:YA:2308:G:H22	25:YA:2311:A:H2	1.68	0.40
25:YA:2646:C:H2'	25:YA:2647:U:O4'	2.22	0.40
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.22	0.40
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.40
27:YD:142:VAL:HA	27:YD:194:GLY:H	1.86	0.40
28:YE:154:LYS:HD3	28:YE:154:LYS:C	2.42	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
33:YN:53:VAL:HG22	33:YN:121:LYS:HB2	2.04	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
38:YS:59:LYS:CG	38:YS:60:GLY:N	2.80	0.40
45:YZ:5:LEU:HD21	45:YZ:44:PHE:HA	2.03	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.40
50:Y4:51:ASP:O	50:Y4:51:ASP:CG	2.60	0.40

All (6) 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)
11:QK:99:GLN:NE2	3:XC:79:ARG:NH2[4_555]	1.49	0.71
41:YV:51:VAL:N	51:Y5:60:VAL:O[4_445]	1.70	0.50
11:QK:99:GLN:OE1	3:XC:79:ARG:NE[4_555]	2.04	0.16
41:YV:50:PRO:CG	51:Y5:60:VAL:O[4_445]	2.14	0.06
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.15	0.05
41:YV:50:PRO:C	51:Y5:60:VAL:O[4_445]	2.18	0.02

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0 1
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0 1
3	QC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0 3
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0 3

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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
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	2
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	5
11	XK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	5
12	QL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	1
12	XL	123/132 (93%)	85 (69%)	24 (20%)	14 (11%)	0	1
13	QM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	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	6
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	6
16	QP	82/88 (93%)	48 (58%)	24 (29%)	10 (12%)	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	4
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	1	4
18	QR	68/88 (77%)	45 (66%)	15 (22%)	8 (12%)	0	1
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	1
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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	6
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	6
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	1
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	1
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%)	102 (71%)	27 (19%)	15 (10%)	0	2
32	YI	144/148 (97%)	103 (72%)	25 (17%)	16 (11%)	0	2
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	0
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	5
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	5
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%)	83 (72%)	19 (16%)	14 (12%)	0	1
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	1
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	0
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	5
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	5
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
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	10
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	2	10
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%)	126 (70%)	35 (19%)	20 (11%)	0	2
45	YZ	181/206 (88%)	135 (75%)	28 (16%)	18 (10%)	0	3
46	R0	80/85 (94%)	71 (89%)	7 (9%)	2 (2%)	5	25
46	Y0	80/85 (94%)	72 (90%)	6 (8%)	2 (2%)	5	25
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	1
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	1
48	R2	67/72 (93%)	46 (69%)	12 (18%)	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	11
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	2	11
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	7
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	7
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100 100
All	All	11470/12128 (95%)	7666 (67%)	2321 (20%)	1483 (13%)	0 1

All (1483) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG
4	QD	28	SER
4	QD	29	PRO
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU
4	QD	178	VAL
5	QE	146	ALA
7	QG	5	ARG
7	QG	7	ALA
8	QH	50	ARG
8	QH	129	VAL
9	QI	23	ASN
9	QI	56	LEU
9	QI	95	LYS
9	QI	111	ARG
9	QI	117	HIS
10	QJ	30	SER
10	QJ	33	GLN
11	QK	91	ARG

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
36	RQ	134	ARG
37	RR	2	ARG
37	RR	3	HIS
37	RR	4	LEU
37	RR	14	SER
37	RR	58	GLY
37	RR	86	ARG
37	RR	117	VAL
38	RS	4	LEU
38	RS	12	PHE
38	RS	14	VAL
38	RS	23	ARG
38	RS	56	LEU
38	RS	57	LYS
38	RS	88	ASP
38	RS	89	ARG
38	RS	90	GLY
38	RS	107	GLU
39	RT	2	ASN
39	RT	3	ARG
39	RT	39	ARG
39	RT	55	ASN
39	RT	58	ASN
39	RT	90	GLN
39	RT	94	ALA
39	RT	97	ALA
39	RT	106	SER
39	RT	107	ASP
41	RV	28	GLU
41	RV	31	ALA
41	RV	45	THR
41	RV	48	GLY
41	RV	49	THR
41	RV	50	PRO
41	RV	53	GLU
41	RV	79	VAL
42	RW	59	VAL
42	RW	67	ASP
42	RW	75	TYR
42	RW	111	HIS
43	RX	36	LYS
44	RY	3	VAL

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Mol	Chain	Res	Type
44	RY	23	ARG
44	RY	48	ALA
44	RY	49	VAL
44	RY	50	ARG
44	RY	53	PRO
44	RY	58	GLY
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	111	VAL
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

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Mol	Chain	Res	Type
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA
7	XG	5	ARG
7	XG	7	ALA

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Mol	Chain	Res	Type
8	XH	50	ARG
8	XH	129	VAL
9	XI	23	ASN
9	XI	56	LEU
9	XI	95	LYS
9	XI	111	ARG
9	XI	117	HIS
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	48	PRO
12	XL	62	SER
12	XL	121	GLY
13	XM	67	GLU
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

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Mol	Chain	Res	Type
20	XT	48	LYS
20	XT	49	ALA
20	XT	74	LYS
20	XT	95	ALA
20	XT	96	GLY
20	XT	100	ILE
21	XU	7	ARG
21	XU	9	ARG
21	XU	22	ARG
27	YD	26	LYS
27	YD	28	GLU
27	YD	123	ALA
27	YD	231	HIS
28	YE	4	ILE
28	YE	7	VAL
28	YE	9	VAL
28	YE	22	PRO
28	YE	54	GLN
28	YE	57	LYS
28	YE	60	ASN
28	YE	63	LEU
28	YE	64	LYS
28	YE	68	ALA
28	YE	70	ALA
28	YE	73	GLU
28	YE	90	THR
28	YE	92	THR
28	YE	93	VAL
28	YE	169	ASN
28	YE	187	ALA
28	YE	189	PRO
29	YF	25	PRO
29	YF	66	PRO
29	YF	68	LYS
29	YF	73	ALA
29	YF	89	VAL
29	YF	128	ALA
29	YF	176	LEU
30	YG	4	ASP
30	YG	14	GLU
30	YG	79	ASN
30	YG	86	MET

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Mol	Chain	Res	Type
31	YH	10	PRO
31	YH	12	PRO
31	YH	83	TYR
31	YH	85	LYS
31	YH	86	GLU
31	YH	87	LEU
31	YH	90	LYS
31	YH	92	ILE
31	YH	126	PRO
31	YH	127	GLU
31	YH	128	PRO
31	YH	137	ASP
31	YH	138	LYS
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	169	VAL
32	YI	10	GLU
32	YI	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

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Mol	Chain	Res	Type
35	YP	65	ARG
35	YP	95	VAL
35	YP	106	LEU
35	YP	107	LYS
35	YP	141	ALA
35	YP	148	LEU
36	YQ	6	ARG
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP
41	YV	28	GLU
41	YV	31	ALA

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Mol	Chain	Res	Type
41	YV	45	THR
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	146	ILE
45	YZ	152	ALA
45	YZ	159	PRO
45	YZ	166	SER
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	22	ILE
50	Y4	23	GLU

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Mol	Chain	Res	Type
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO
4	QD	20	TYR
4	QD	164	ALA

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Mol	Chain	Res	Type
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
8	QH	128	GLY
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY

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Mol	Chain	Res	Type
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	5	VAL
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA

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Mol	Chain	Res	Type
30	RG	115	ARG
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	11	ASN
32	RI	84	GLY
32	RI	117	GLU
32	RI	133	HIS
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

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Mol	Chain	Res	Type
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
44	RY	56	PRO
44	RY	57	GLN
44	RY	91	GLU
44	RY	99	CYS
45	RZ	51	ALA
45	RZ	108	PRO
45	RZ	116	VAL
45	RZ	153	SER
45	RZ	177	PRO
46	R0	3	HIS
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

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Mol	Chain	Res	Type
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	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

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Mol	Chain	Res	Type
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG
28	YE	53	PRO
28	YE	61	ARG
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	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

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Mol	Chain	Res	Type
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO
32	YI	84	GLY
32	YI	114	LEU
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

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Mol	Chain	Res	Type
44	YY	41	GLY
44	YY	53	PRO
44	YY	56	PRO
44	YY	57	GLN
44	YY	99	CYS
45	YZ	53	ILE
45	YZ	59	LEU
45	YZ	81	ARG
45	YZ	113	ALA
46	Y0	18	ALA
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

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Mol	Chain	Res	Type
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
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	20	ALA
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	15	VAL
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

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Mol	Chain	Res	Type
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA
38	RS	75	GLU
39	RT	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	102	CYS
45	RZ	112	ARG
45	RZ	166	SER
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
3	XC	16	ARG

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Mol	Chain	Res	Type
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
8	XH	128	GLY
9	XI	12	GLU
9	XI	13	ALA
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
19	XS	64	GLU
20	XT	82	SER
20	XT	98	PRO
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

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Mol	Chain	Res	Type
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	5	VAL
30	YG	115	ARG
30	YG	128	ARG
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU
31	YH	152	ARG
32	YI	11	ASN
32	YI	72	LEU
32	YI	87	LYS
32	YI	113	ARG
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	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

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Mol	Chain	Res	Type
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
45	YZ	13	GLU
45	YZ	92	SER
45	YZ	181	GLU
46	Y0	15	ASP
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
11	QK	105	VAL
12	QL	64	TYR
13	QM	4	ILE

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Mol	Chain	Res	Type
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
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	115	ALA
32	RI	122	GLU
33	RN	96	GLU
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	7	ALA

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Mol	Chain	Res	Type
45	RZ	13	GLU
45	RZ	92	SER
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	42	PRO
51	R5	45	VAL
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG
2	XB	19	HIS
2	XB	131	PRO
2	XB	160	ASP
2	XB	175	ARG
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

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Mol	Chain	Res	Type
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
20	XT	40	ALA
20	XT	51	GLU
27	YD	12	SER
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	12	LEU
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	78	LEU
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

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Mol	Chain	Res	Type
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
54	Y8	57	ARG
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
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

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Mol	Chain	Res	Type
31	RH	77	LYS
31	RH	170	ARG
33	RN	29	LYS
33	RN	104	LYS
33	RN	127	ASP
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
43	RX	19	ALA
44	RY	7	VAL
45	RZ	61	LEU
45	RZ	66	SER
45	RZ	81	ARG
45	RZ	130	PRO
49	R3	13	ILE
50	R4	30	GLU
52	R6	35	GLU
54	R8	64	TYR
2	XB	23	ARG
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL

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Mol	Chain	Res	Type
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
10	XJ	75	ILE
11	XK	64	ALA
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
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	7	ALA
45	YZ	61	LEU
45	YZ	143	GLY
45	YZ	153	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

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Mol	Chain	Res	Type
54	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL
9	QI	88	TYR
11	QK	106	LYS
13	QM	13	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	9	LEU
32	RI	12	LEU
39	RT	38	ASN
42	RW	11	ARG
42	RW	33	ARG
50	R4	33	VAL
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
53	R7	44	PRO
2	XB	25	ASN
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

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Mol	Chain	Res	Type
32	YI	13	GLY
39	YT	38	ASN
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
45	YZ	177	PRO
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
45	RZ	53	ILE
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
5	XE	49	PRO
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
28	YE	86	PRO
28	YE	184	VAL
32	YI	15	VAL
32	YI	18	VAL
32	YI	71	ILE
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
2	QB	227	GLY

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Mol	Chain	Res	Type
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
16	QP	53	VAL
27	RD	241	PRO
32	RI	18	VAL
44	RY	32	PRO
45	RZ	94	GLU
51	R5	46	CYS
2	XB	227	GLY
3	XC	134	ILE
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
30	YG	52	ILE
44	YY	27	VAL
44	YY	32	PRO
45	YZ	160	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	27	VAL
44	RY	51	VAL
45	RZ	62	PRO
45	RZ	165	VAL
51	R5	34	PRO
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

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Mol	Chain	Res	Type
28	RE	55	ASN
34	RO	27	GLY
49	R3	40	THR
9	XI	21	PRO
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
34	YO	27	GLY
49	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
20	QT	97	ALA
32	RI	71	ILE
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 21
2	XB	205/220 (93%)	181 (88%)	24 (12%)	5 21
3	QC	159/188 (85%)	143 (90%)	16 (10%)	7 26
3	XC	159/188 (85%)	143 (90%)	16 (10%)	7 26
4	QD	180/181 (99%)	160 (89%)	20 (11%)	6 23
4	XD	180/181 (99%)	165 (92%)	15 (8%)	11 36
5	QE	116/123 (94%)	108 (93%)	8 (7%)	15 43
5	XE	116/123 (94%)	107 (92%)	9 (8%)	12 38
6	QF	90/90 (100%)	76 (84%)	14 (16%)	2 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
6	XF	90/90 (100%)	76 (84%)	14 (16%)	2	11
7	QG	126/127 (99%)	114 (90%)	12 (10%)	8	29
7	XG	126/127 (99%)	115 (91%)	11 (9%)	10	34
8	QH	119/119 (100%)	106 (89%)	13 (11%)	6	23
8	XH	119/119 (100%)	106 (89%)	13 (11%)	6	23
9	QI	98/99 (99%)	87 (89%)	11 (11%)	6	22
9	XI	98/99 (99%)	87 (89%)	11 (11%)	6	22
10	QJ	89/92 (97%)	81 (91%)	8 (9%)	9	32
10	XJ	89/92 (97%)	81 (91%)	8 (9%)	9	32
11	QK	90/99 (91%)	81 (90%)	9 (10%)	7	27
11	XK	90/99 (91%)	81 (90%)	9 (10%)	7	27
12	QL	104/109 (95%)	90 (86%)	14 (14%)	4	15
12	XL	104/109 (95%)	90 (86%)	14 (14%)	4	15
13	QM	97/101 (96%)	81 (84%)	16 (16%)	2	9
13	XM	97/101 (96%)	81 (84%)	16 (16%)	2	9
14	QN	49/50 (98%)	40 (82%)	9 (18%)	1	7
14	XN	49/50 (98%)	44 (90%)	5 (10%)	7	25
15	QO	79/80 (99%)	73 (92%)	6 (8%)	13	39
15	XO	79/80 (99%)	73 (92%)	6 (8%)	13	39
16	QP	72/74 (97%)	63 (88%)	9 (12%)	4	18
16	XP	72/74 (97%)	63 (88%)	9 (12%)	4	18
17	QQ	95/97 (98%)	89 (94%)	6 (6%)	18	46
17	XQ	95/97 (98%)	89 (94%)	6 (6%)	18	46
18	QR	61/77 (79%)	54 (88%)	7 (12%)	5	21
18	XR	61/77 (79%)	54 (88%)	7 (12%)	5	21
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3	12
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3	12
20	QT	76/82 (93%)	68 (90%)	8 (10%)	7	24
20	XT	76/82 (93%)	68 (90%)	8 (10%)	7	24
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24	55
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24	55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
27	RD	214/218 (98%)	177 (83%)	37 (17%)	2	8
27	YD	214/218 (98%)	177 (83%)	37 (17%)	2	8
28	RE	165/166 (99%)	128 (78%)	37 (22%)	1	3
28	YE	165/166 (99%)	127 (77%)	38 (23%)	1	3
29	RF	161/166 (97%)	140 (87%)	21 (13%)	4	17
29	YF	161/166 (97%)	140 (87%)	21 (13%)	4	17
30	RG	155/156 (99%)	130 (84%)	25 (16%)	2	10
30	YG	155/156 (99%)	130 (84%)	25 (16%)	2	10
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%)	100 (82%)	22 (18%)	1	7
32	YI	122/124 (98%)	98 (80%)	24 (20%)	1	6
33	RN	117/119 (98%)	98 (84%)	19 (16%)	2	10
33	YN	117/119 (98%)	98 (84%)	19 (16%)	2	10
34	RO	100/100 (100%)	90 (90%)	10 (10%)	7	27
34	YO	100/100 (100%)	90 (90%)	10 (10%)	7	27
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	10
36	YQ	111/111 (100%)	93 (84%)	18 (16%)	2	10
37	RR	101/101 (100%)	84 (83%)	17 (17%)	2	9
37	YR	101/101 (100%)	84 (83%)	17 (17%)	2	9
38	RS	87/88 (99%)	74 (85%)	13 (15%)	3	12
38	YS	87/88 (99%)	74 (85%)	13 (15%)	3	12
39	RT	120/127 (94%)	97 (81%)	23 (19%)	1	6
39	YT	120/127 (94%)	97 (81%)	23 (19%)	1	6
40	RU	93/94 (99%)	80 (86%)	13 (14%)	3	14
40	YU	93/94 (99%)	80 (86%)	13 (14%)	3	14
41	RV	82/82 (100%)	71 (87%)	11 (13%)	4	16
41	YV	82/82 (100%)	71 (87%)	11 (13%)	4	16
42	RW	92/92 (100%)	77 (84%)	15 (16%)	2	10

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	YW	92/92 (100%)	77 (84%)	15 (16%)	2	10
43	RX	74/78 (95%)	63 (85%)	11 (15%)	3	12
43	YX	74/78 (95%)	63 (85%)	11 (15%)	3	12
44	RY	85/91 (93%)	70 (82%)	15 (18%)	2	8
44	YY	85/91 (93%)	70 (82%)	15 (18%)	2	8
45	RZ	162/179 (90%)	138 (85%)	24 (15%)	3	12
45	YZ	162/179 (90%)	142 (88%)	20 (12%)	4	18
46	R0	65/67 (97%)	58 (89%)	7 (11%)	6	24
46	Y0	65/67 (97%)	63 (97%)	2 (3%)	40	69
47	R1	82/83 (99%)	67 (82%)	15 (18%)	1	7
47	Y1	82/83 (99%)	67 (82%)	15 (18%)	1	7
48	R2	64/67 (96%)	57 (89%)	7 (11%)	6	23
48	Y2	64/67 (96%)	57 (89%)	7 (11%)	6	23
49	R3	51/52 (98%)	40 (78%)	11 (22%)	1	4
49	Y3	51/52 (98%)	40 (78%)	11 (22%)	1	4
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	42
53	Y7	42/42 (100%)	39 (93%)	3 (7%)	14	42
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	48
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	19	48
All	All	9702/10066 (96%)	8299 (86%)	1403 (14%)	3	13

All (1403) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE

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Mol	Chain	Res	Type
2	QB	8	LYS
2	QB	16	HIS
2	QB	23	ARG
2	QB	24	TRP
2	QB	33	TYR
2	QB	36	ARG
2	QB	63	MET
2	QB	67	THR
2	QB	73	THR
2	QB	82	ARG
2	QB	92	TYR
2	QB	94	ASN
2	QB	121	LEU
2	QB	155	LEU
2	QB	163	PHE
2	QB	165	VAL
2	QB	168	THR
2	QB	172	ILE
2	QB	174	VAL
2	QB	178	ARG
2	QB	196	LEU
2	QB	204	ASN
2	QB	215	LEU
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	29	TYR
3	QC	56	ASP
3	QC	69	HIS
3	QC	94	LEU
3	QC	127	ARG
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

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Mol	Chain	Res	Type
4	QD	12	CYS
4	QD	13	ARG
4	QD	14	ARG
4	QD	30	LYS
4	QD	31	CYS
4	QD	50	ARG
4	QD	53	ASP
4	QD	73	ARG
4	QD	79	PHE
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	114	ARG
4	QD	122	ARG
4	QD	131	ARG
4	QD	181	MET
4	QD	200	GLU
5	QE	10	MET
5	QE	13	ILE
5	QE	16	THR
5	QE	31	LEU
5	QE	53	LEU
5	QE	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

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Mol	Chain	Res	Type
7	QG	78	ARG
7	QG	84	ASN
7	QG	98	SER
7	QG	111	ARG
7	QG	114	ARG
7	QG	124	LEU
7	QG	137	LYS
7	QG	148	ASN
7	QG	155	ARG
8	QH	1	MET
8	QH	10	LEU
8	QH	27	PRO
8	QH	41	ARG
8	QH	52	ASP
8	QH	63	LEU
8	QH	69	ARG
8	QH	81	HIS
8	QH	99	GLU
8	QH	119	LEU
8	QH	121	ASP
8	QH	129	VAL
8	QH	137	VAL
9	QI	7	THR
9	QI	9	ARG
9	QI	48	GLU
9	QI	65	VAL
9	QI	83	ARG
9	QI	95	LYS
9	QI	104	ARG
9	QI	113	LYS
9	QI	114	TYR
9	QI	121	ARG
9	QI	128	ARG
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

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Mol	Chain	Res	Type
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
11	QK	116	HIS
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	27	LEU
12	QL	41	ARG
12	QL	53	ARG
12	QL	57	LYS
12	QL	60	LEU
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	89	ARG
12	QL	112	ASP
12	QL	120	TYR
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU
13	QM	57	ARG
13	QM	64	TRP
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG
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

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Mol	Chain	Res	Type
14	QN	26	ARG
14	QN	29	ARG
14	QN	41	ARG
14	QN	43	CYS
14	QN	44	LEU
15	QO	3	ILE
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG
16	QP	1	MET
16	QP	26	ARG
16	QP	28	ARG
16	QP	59	TRP
16	QP	62	VAL
16	QP	69	THR
16	QP	71	ARG
16	QP	72	ARG
16	QP	82	GLN
17	QQ	12	SER
17	QQ	48	GLU
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	68	ARG
17	QQ	74	LEU
18	QR	26	LEU
18	QR	29	PHE
18	QR	32	ARG
18	QR	36	ASN
18	QR	46	GLU
18	QR	54	ARG
18	QR	55	ARG
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	13	ASP
19	QS	15	LEU
19	QS	29	ARG
19	QS	30	LEU
19	QS	41	VAL
19	QS	63	THR

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Mol	Chain	Res	Type
19	QS	65	ASN
19	QS	83	HIS
20	QT	11	SER
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	62	LEU
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
21	QU	6	ARG
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	61	LEU
27	RD	65	ILE
27	RD	67	PHE
27	RD	71	ASP
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL
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

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Mol	Chain	Res	Type
27	RD	237	GLU
27	RD	257	LEU
27	RD	259	THR
27	RD	261	LYS
27	RD	262	ARG
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	13	ARG
28	RE	16	ARG
28	RE	17	ASP
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	37	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	54	GLN
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	79	ARG
28	RE	80	GLU
28	RE	101	ARG
28	RE	113	PHE
28	RE	117	MET
28	RE	119	ARG
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

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Mol	Chain	Res	Type
28	RE	203	LYS
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	117	ARG
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	164	ARG
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	33	ARG
30	RG	34	LEU
30	RG	35	GLU
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR
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

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Mol	Chain	Res	Type
30	RG	155	MET
30	RG	156	ASP
30	RG	159	VAL
30	RG	167	GLU
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	85	LYS
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	132	ARG
31	RH	139	GLN
31	RH	143	GLN
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	158	HIS
31	RH	169	VAL
32	RI	1	MET
32	RI	2	LYS
32	RI	10	GLU
32	RI	27	ARG
32	RI	33	ARG
32	RI	38	LEU
32	RI	40	THR
32	RI	56	LYS
32	RI	57	ARG

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Mol	Chain	Res	Type
32	RI	67	ARG
32	RI	70	GLU
32	RI	85	GLU
32	RI	86	THR
32	RI	88	ILE
32	RI	101	LEU
32	RI	113	ARG
32	RI	118	LYS
32	RI	128	LEU
32	RI	135	GLU
32	RI	138	ILE
32	RI	142	VAL
32	RI	145	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	101	HIS
33	RN	109	LYS
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	17	ARG
34	RO	19	ILE
34	RO	23	ARG
34	RO	31	LYS
34	RO	39	ILE
34	RO	49	ARG
34	RO	53	LYS
34	RO	65	THR

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Mol	Chain	Res	Type
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
36	RQ	79	LEU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU

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Mol	Chain	Res	Type
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
39	RT	26	ASP
39	RT	27	THR
39	RT	42	ILE
39	RT	51	ARG
39	RT	58	ASN

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Mol	Chain	Res	Type
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
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO
42	RW	16	LYS
42	RW	18	ARG

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Mol	Chain	Res	Type
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
45	RZ	2	GLU
45	RZ	5	LEU
45	RZ	19	ARG
45	RZ	20	ARG
45	RZ	52	SER

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Mol	Chain	Res	Type
45	RZ	60	GLU
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	87	ASP
45	RZ	93	ASP
45	RZ	94	GLU
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	121	HIS
45	RZ	128	VAL
45	RZ	145	GLU
45	RZ	150	LEU
45	RZ	151	HIS
45	RZ	163	LEU
45	RZ	166	SER
45	RZ	168	GLU
45	RZ	174	VAL
45	RZ	182	LYS
45	RZ	183	LEU
46	R0	10	THR
46	R0	11	ARG
46	R0	35	ASN
46	R0	36	ILE
46	R0	64	ASP
46	R0	66	VAL
46	R0	74	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	21	ARG
47	R1	30	VAL
47	R1	40	ARG
47	R1	41	ARG
47	R1	56	GLN
47	R1	76	ARG
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	92	LYS
47	R1	97	LEU
48	R2	7	ARG

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Mol	Chain	Res	Type
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
51	R5	25	LEU

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Mol	Chain	Res	Type
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
2	XB	33	TYR

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Mol	Chain	Res	Type
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
2	XB	73	THR
2	XB	82	ARG
2	XB	92	TYR
2	XB	94	ASN
2	XB	121	LEU
2	XB	155	LEU
2	XB	163	PHE
2	XB	165	VAL
2	XB	168	THR
2	XB	172	ILE
2	XB	174	VAL
2	XB	178	ARG
2	XB	196	LEU
2	XB	204	ASN
2	XB	215	LEU
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG
3	XC	21	ARG
3	XC	29	TYR
3	XC	56	ASP
3	XC	69	HIS
3	XC	94	LEU
3	XC	127	ARG
3	XC	131	ARG
3	XC	154	SER
3	XC	184	TYR
3	XC	192	THR
3	XC	193	TYR
3	XC	196	LEU
4	XD	3	ARG
4	XD	7	PRO
4	XD	9	CYS
4	XD	30	LYS
4	XD	50	ARG
4	XD	53	ASP
4	XD	79	PHE
4	XD	86	LYS

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Mol	Chain	Res	Type
4	XD	94	LEU
4	XD	96	LEU
4	XD	114	ARG
4	XD	122	ARG
4	XD	131	ARG
4	XD	181	MET
4	XD	200	GLU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	53	LEU
5	XE	73	ASN
5	XE	79	GLU
5	XE	101	ILE
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	27	GLN
6	XF	36	ARG
6	XF	55	ASP
6	XF	63	TYR
6	XF	69	GLU
6	XF	74	ASP
6	XF	77	ARG
6	XF	87	ARG
6	XF	92	LYS
6	XF	94	GLN
6	XF	97	PHE
6	XF	100	ASN
7	XG	8	GLU
7	XG	12	LEU
7	XG	78	ARG
7	XG	84	ASN
7	XG	98	SER
7	XG	111	ARG
7	XG	114	ARG
7	XG	124	LEU
7	XG	137	LYS
7	XG	148	ASN
7	XG	155	ARG
8	XH	1	MET

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Mol	Chain	Res	Type
8	XH	10	LEU
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
8	XH	63	LEU
8	XH	69	ARG
8	XH	81	HIS
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	121	ARG
9	XI	128	ARG
10	XJ	22	LYS
10	XJ	47	PHE
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
11	XK	26	ASN
11	XK	32	ILE
11	XK	63	LEU
11	XK	75	TYR
11	XK	92	GLU
11	XK	109	VAL
11	XK	114	VAL
11	XK	116	HIS
11	XK	125	PHE
12	XL	17	LYS
12	XL	20	LYS

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Mol	Chain	Res	Type
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
16	XP	28	ARG

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Mol	Chain	Res	Type
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
27	YD	26	LYS

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Mol	Chain	Res	Type
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
28	YE	27	LEU

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Mol	Chain	Res	Type
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
29	YF	106	ARG

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Mol	Chain	Res	Type
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
31	YH	32	GLU

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Mol	Chain	Res	Type
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	101	LEU
32	YI	105	HIS
32	YI	112	LYS
32	YI	113	ARG
32	YI	131	LYS
32	YI	135	GLU
32	YI	136	VAL

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Mol	Chain	Res	Type
32	YI	139	GLN
32	YI	142	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	101	HIS
33	YN	109	LYS
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	17	ARG
34	YO	19	ILE
34	YO	23	ARG
34	YO	31	LYS
34	YO	39	ILE
34	YO	49	ARG
34	YO	53	LYS
34	YO	65	THR
35	YP	5	ASP
35	YP	9	ASN
35	YP	10	PRO
35	YP	16	ARG
35	YP	21	ARG
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	36	LYS
35	YP	38	GLN

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Mol	Chain	Res	Type
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
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	57	ARG
37	YR	66	VAL
37	YR	67	LEU

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Mol	Chain	Res	Type
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
39	YT	99	LEU
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG

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Mol	Chain	Res	Type
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
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	107	LEU
42	YW	109	GLU

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Mol	Chain	Res	Type
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	4	ARG
45	YZ	19	ARG
45	YZ	20	ARG
45	YZ	41	LEU
45	YZ	53	ILE
45	YZ	60	GLU
45	YZ	70	LEU
45	YZ	71	VAL
45	YZ	76	LEU
45	YZ	81	ARG
45	YZ	87	ASP
45	YZ	94	GLU
45	YZ	123	ASP
45	YZ	140	ASP
45	YZ	144	LEU

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Mol	Chain	Res	Type
45	YZ	150	LEU
45	YZ	151	HIS
45	YZ	181	GLU
45	YZ	182	LYS
46	Y0	36	ILE
46	Y0	74	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	21	ARG
47	Y1	30	VAL
47	Y1	40	ARG
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	76	ARG
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	92	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	53	LEU
48	Y2	62	THR
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU
49	Y3	9	VAL
49	Y3	10	LYS
49	Y3	17	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS

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Mol	Chain	Res	Type
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	48	ARG
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	67	TYR
50	Y4	68	ARG
50	Y4	71	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	43	HIS
51	Y5	52	TYR
51	Y5	56	LYS
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	18	ARG
52	Y6	19	ARG
52	Y6	28	ARG
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	46	HIS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	43	THR
54	Y8	15	LYS

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

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (106) 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
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	62	ASN
13	QM	101	GLN
19	QS	65	ASN
20	QT	26	ASN

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Mol	Chain	Res	Type
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	81	HIS
40	RU	94	ASN
41	RV	11	GLN
42	RW	61	ASN
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
47	R1	56	GLN
48	R2	9	GLN
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
55	R9	32	HIS
2	XB	95	GLN
2	XB	135	GLN
2	XB	204	ASN
2	XB	212	GLN
3	XC	181	ASN
5	XE	72	GLN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	37	ASN

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Mol	Chain	Res	Type
7	XG	86	GLN
7	XG	148	ASN
9	XI	89	ASN
10	XJ	78	ASN
11	XK	99	GLN
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
29	YF	169	ASN
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
47	Y1	56	GLN
48	Y2	9	GLN
48	Y2	47	ASN
49	Y3	19	GLN
49	Y3	32	GLN
54	Y8	31	HIS
55	Y9	32	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	293 (19%)	45 (3%)
1	XA	1498/1522 (98%)	299 (19%)	47 (3%)
22	QV	76/77 (98%)	21 (27%)	1 (1%)
22	XV	76/77 (98%)	21 (27%)	1 (1%)
23	QY	14/17 (82%)	4 (28%)	1 (7%)
23	XY	14/17 (82%)	4 (28%)	1 (7%)
24	QX	7/25 (28%)	4 (57%)	0
24	XX	7/25 (28%)	3 (42%)	2 (28%)
25	RA	2879/2916 (98%)	618 (21%)	67 (2%)
25	YA	2880/2916 (98%)	612 (21%)	64 (2%)
26	RB	119/122 (97%)	24 (20%)	2 (1%)
26	YB	119/122 (97%)	29 (24%)	1 (0%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9190/9364 (98%)	1932 (21%)	232 (2%)

All (1932) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	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
1	QA	66	G
1	QA	79	G
1	QA	80	G
1	QA	90	C
1	QA	91	C
1	QA	95	G
1	QA	101	A
1	QA	116	A
1	QA	120	A
1	QA	121	C
1	QA	144	G
1	QA	146	G

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Mol	Chain	Res	Type
1	QA	147	G
1	QA	163	C
1	QA	172	A
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	247	G
1	QA	251	G
1	QA	267	C
1	QA	270	A
1	QA	281	G
1	QA	289	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	363	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

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Mol	Chain	Res	Type
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	435	C
1	QA	440	A
1	QA	442	C
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
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	536	C
1	QA	545	C
1	QA	547	A
1	QA	559	A
1	QA	561	U
1	QA	565	U

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Mol	Chain	Res	Type
1	QA	568	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	618	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
1	QA	653	A
1	QA	665	A
1	QA	686	U
1	QA	687	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	753	A
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	786	G
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

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Mol	Chain	Res	Type
1	QA	871	U
1	QA	872	A
1	QA	885	G
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
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	983	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G

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Mol	Chain	Res	Type
1	QA	1040	U
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1094	G
1	QA	1095	U
1	QA	1101	A
1	QA	1123	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	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1185	G
1	QA	1187	G
1	QA	1196	U
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A
1	QA	1225	A
1	QA	1238	A

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Mol	Chain	Res	Type
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
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	1290	G
1	QA	1296	C
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	1312	G
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	1332	A
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1359	C
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1368	G
1	QA	1370	G

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Mol	Chain	Res	Type
1	QA	1397	C
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1469	G
1	QA	1492	A
1	QA	1499	A
1	QA	1503	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	4	G
22	QV	5	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
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	52	G
22	QV	53	G
22	QV	54	U
22	QV	67	C
22	QV	75	C
22	QV	76	A
23	QY	31	G
23	QY	33	U

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Mol	Chain	Res	Type
23	QY	36	G
23	QY	42	G
24	QX	3	G
24	QX	4	C
24	QX	7	G
24	QX	8	A
25	RA	9	U
25	RA	14	A
25	RA	15	G
25	RA	28	A
25	RA	34	C
25	RA	46	C
25	RA	49	A
25	RA	51	G
25	RA	55	G
25	RA	72	U
25	RA	74	A
25	RA	75	G
25	RA	96	G
25	RA	97	C
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	140	A
25	RA	161	U
25	RA	177	G
25	RA	196	A
25	RA	199	A
25	RA	206	U
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G

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Mol	Chain	Res	Type
25	RA	233	A
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	268	C
25	RA	269	U
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(P)	C
25	RA	270(T)	G
25	RA	271(B)	G
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	305	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	333	G
25	RA	342	G
25	RA	346	A
25	RA	352	G
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	386	G
25	RA	391	G
25	RA	395	U

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Mol	Chain	Res	Type
25	RA	396	G
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	428	A
25	RA	442	G
25	RA	444	C
25	RA	448	U
25	RA	454	A
25	RA	455	C
25	RA	457	A
25	RA	470	A
25	RA	481	G
25	RA	483	A
25	RA	504	U
25	RA	505	A
25	RA	509	C
25	RA	512	G
25	RA	513	A
25	RA	527	C
25	RA	528	A
25	RA	529	A
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	547	A
25	RA	554	U
25	RA	556	G
25	RA	563	G
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	586	A
25	RA	588	U
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	614	U

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Mol	Chain	Res	Type
25	RA	615	G
25	RA	616	A
25	RA	617	G
25	RA	621	A
25	RA	624	C
25	RA	626	U
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
25	RA	654(B)	C
25	RA	668	G
25	RA	669	G
25	RA	686	G
25	RA	702	G
25	RA	705	A
25	RA	717	G
25	RA	722	A
25	RA	726	G
25	RA	730	C
25	RA	747	U
25	RA	753	C
25	RA	764	A
25	RA	765	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	790	C
25	RA	791	C
25	RA	792	G
25	RA	805	G
25	RA	812	C
25	RA	818	G
25	RA	819	A
25	RA	827	U

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Mol	Chain	Res	Type
25	RA	828	U
25	RA	846	C
25	RA	847	U
25	RA	854	G
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	869	G
25	RA	872	A
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
25	RA	896	A
25	RA	897	C
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	904	C
25	RA	907	U
25	RA	910	A
25	RA	914	C
25	RA	917	A
25	RA	932	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	980	A
25	RA	983	A
25	RA	990	A
25	RA	991	C

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Mol	Chain	Res	Type
25	RA	996	A
25	RA	1003	G
25	RA	1005	C
25	RA	1011	G
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1016	G
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
25	RA	1055	G
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1065	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	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	1091	G
25	RA	1093	G

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Mol	Chain	Res	Type
25	RA	1095	A
25	RA	1096	A
25	RA	1099	G
25	RA	1104	C
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1129	A
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	1170	G
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1180	C
25	RA	1195	G
25	RA	1204	A
25	RA	1205	U
25	RA	1210	A
25	RA	1211	U
25	RA	1220	A
25	RA	1238	G
25	RA	1248	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	1303	G
25	RA	1306	C
25	RA	1312	U

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Mol	Chain	Res	Type
25	RA	1313	U
25	RA	1314	C
25	RA	1319	G
25	RA	1321	A
25	RA	1329	U
25	RA	1332	G
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
25	RA	1386	C
25	RA	1395	A
25	RA	1407	C
25	RA	1408	C
25	RA	1411	C
25	RA	1412	A
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1427	A
25	RA	1428	C
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1448	G
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

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Mol	Chain	Res	Type
25	RA	1497	U
25	RA	1503	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	1513	C
25	RA	1514	U
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1525	G
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1538	G
25	RA	1543	A
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1569	A
25	RA	1578	U
25	RA	1579	A
25	RA	1581	G
25	RA	1585	C
25	RA	1586	A
25	RA	1591	G
25	RA	1593	G
25	RA	1598	C
25	RA	1608	A
25	RA	1609	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1640	C
25	RA	1647	G

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Mol	Chain	Res	Type
25	RA	1648	C
25	RA	1654	A
25	RA	1667	G
25	RA	1674	G
25	RA	1675	C
25	RA	1686	C
25	RA	1694	C
25	RA	1695	G
25	RA	1725	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1733	G
25	RA	1742	C
25	RA	1743	G
25	RA	1753	G
25	RA	1754	C
25	RA	1756	G
25	RA	1762	A
25	RA	1763	G
25	RA	1764	G
25	RA	1769	G
25	RA	1773	A
25	RA	1780	A
25	RA	1782	C
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1816	G
25	RA	1820	U
25	RA	1829	A
25	RA	1835	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

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Mol	Chain	Res	Type
25	RA	1885	A
25	RA	1888	G
25	RA	1889	A
25	RA	1896	G
25	RA	1905	C
25	RA	1906	G
25	RA	1913	A
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	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	2032	G
25	RA	2033	A
25	RA	2043	C
25	RA	2052	G
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	2093	G
25	RA	2096	U
25	RA	2099	U

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Mol	Chain	Res	Type
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	2118	U
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
25	RA	2148	G
25	RA	2158	A
25	RA	2166	G
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2198	A
25	RA	2199	A
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2213	U
25	RA	2215	G
25	RA	2225	A
25	RA	2239	G
25	RA	2243	U
25	RA	2245	U
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C
25	RA	2287	A
25	RA	2288	A
25	RA	2300	G

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Mol	Chain	Res	Type
25	RA	2301	C
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2310	A
25	RA	2312	U
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	2382	G
25	RA	2383	G
25	RA	2385	C
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	2429	G
25	RA	2430	A
25	RA	2434	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C
25	RA	2441	C
25	RA	2445	G
25	RA	2448	A
25	RA	2469	A
25	RA	2470	G
25	RA	2475	C
25	RA	2476	A
25	RA	2481	G

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Mol	Chain	Res	Type
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2487	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	2558	C
25	RA	2567	G
25	RA	2569	G
25	RA	2573	C
25	RA	2578	G
25	RA	2582	G
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	2646	C
25	RA	2655	G
25	RA	2665	A
25	RA	2673	G
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

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Mol	Chain	Res	Type
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2739	U
25	RA	2748	A
25	RA	2752	C
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
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A
25	RA	2818	G
25	RA	2820	A
25	RA	2821	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	13	A
26	RB	15	A
26	RB	16	G
26	RB	19	G

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Mol	Chain	Res	Type
26	RB	21	G
26	RB	22	U
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	32	C
26	RB	33	G
26	RB	40	U
26	RB	42	C
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	101	A
26	RB	109	G
1	XA	6	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	116	A
1	XA	120	A
1	XA	121	C
1	XA	129(A)	G

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Mol	Chain	Res	Type
1	XA	130	A
1	XA	144	G
1	XA	147	G
1	XA	163	C
1	XA	172	A
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	191(A)	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	222	U
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	281	G
1	XA	289	G
1	XA	315	A
1	XA	316	G
1	XA	318	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
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

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Mol	Chain	Res	Type
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
1	XA	413	G
1	XA	414	A
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	442	C
1	XA	465	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	519	C
1	XA	521	G
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	562	C

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Mol	Chain	Res	Type
1	XA	564	C
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	595	G
1	XA	596	C
1	XA	607	A
1	XA	617	G
1	XA	618	C
1	XA	630	G
1	XA	631	G
1	XA	653	A
1	XA	665	A
1	XA	666	G
1	XA	687	A
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	704	A
1	XA	721	G
1	XA	723	U
1	XA	731	G
1	XA	748	C
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	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	819	A
1	XA	821	G
1	XA	828	A

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Mol	Chain	Res	Type
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	874	G
1	XA	902	G
1	XA	914	A
1	XA	920	U
1	XA	927	G
1	XA	934	C
1	XA	935	A
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	981	U
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
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	1053	G

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Mol	Chain	Res	Type
1	XA	1054	C
1	XA	1066	C
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U
1	XA	1096	C
1	XA	1101	A
1	XA	1104	G
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1188	A
1	XA	1190	G
1	XA	1196	U
1	XA	1197	G
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A

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Mol	Chain	Res	Type
1	XA	1214	C
1	XA	1225	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
1	XA	1286	A
1	XA	1287	A
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1317	C
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1324	A
1	XA	1331	G
1	XA	1334	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1347	G
1	XA	1348	U
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1370	G

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Mol	Chain	Res	Type
1	XA	1397	C
1	XA	1398	A
1	XA	1406	U
1	XA	1419	G
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	4	G
22	XV	5	G
22	XV	8	U
22	XV	9	G
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	31	G
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	52	G
22	XV	54	U
22	XV	67	C

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Mol	Chain	Res	Type
22	XV	75	C
22	XV	76	A
23	XY	31	G
23	XY	33	U
23	XY	36	G
23	XY	42	G
24	XX	4	C
24	XX	7	G
24	XX	8	A
25	YA	9	U
25	YA	15	G
25	YA	27	G
25	YA	34	C
25	YA	35	G
25	YA	46	C
25	YA	55	G
25	YA	63	U
25	YA	72	U
25	YA	74	A
25	YA	75	G
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	125	G
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	214	G
25	YA	215	G
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	227	A
25	YA	228	A

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Mol	Chain	Res	Type
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	250	G
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	269	U
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	305	U
25	YA	311	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	332	A
25	YA	333	G
25	YA	342	G
25	YA	352	G
25	YA	363	G
25	YA	364	C
25	YA	371	A
25	YA	372	G
25	YA	373	U

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Mol	Chain	Res	Type
25	YA	386	G
25	YA	387	U
25	YA	395	U
25	YA	396	G
25	YA	405	U
25	YA	406	G
25	YA	411	G
25	YA	412	A
25	YA	428	A
25	YA	443	A
25	YA	444	C
25	YA	448	U
25	YA	454	A
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	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	575	A
25	YA	577	G
25	YA	586	A
25	YA	587	C
25	YA	588	U
25	YA	603	A
25	YA	607	U

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Mol	Chain	Res	Type
25	YA	613	U
25	YA	614	U
25	YA	615	G
25	YA	617	G
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	649	G
25	YA	650	C
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	657	U
25	YA	668	G
25	YA	669	G
25	YA	686	G
25	YA	702	G
25	YA	717	G
25	YA	722	A
25	YA	730	C
25	YA	734	A
25	YA	747	U
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	789	A
25	YA	790	C
25	YA	791	C
25	YA	792	G
25	YA	805	G
25	YA	812	C

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Mol	Chain	Res	Type
25	YA	818	G
25	YA	819	A
25	YA	827	U
25	YA	828	U
25	YA	831	G
25	YA	847	U
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	865	C
25	YA	866	A
25	YA	870	A
25	YA	872	A
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	896	A
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	902	C
25	YA	907	U
25	YA	910	A
25	YA	915	C
25	YA	917	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
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	980	A
25	YA	983	A
25	YA	991	C

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Mol	Chain	Res	Type
25	YA	996	A
25	YA	1003	G
25	YA	1005	C
25	YA	1010	A
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1014	U
25	YA	1016	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
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1088	A
25	YA	1090	U
25	YA	1095	A

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Mol	Chain	Res	Type
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	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	1219	G
25	YA	1220	A
25	YA	1238	G
25	YA	1244	G
25	YA	1253	A
25	YA	1256	G
25	YA	1265	A
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1282	U
25	YA	1300	U
25	YA	1301	A
25	YA	1302	A
25	YA	1321	A

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Mol	Chain	Res	Type
25	YA	1329	U
25	YA	1349	A
25	YA	1352	U
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	1407	C
25	YA	1411	C
25	YA	1415	U
25	YA	1416	G
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1429	G
25	YA	1444(A)	A
25	YA	1448	G
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
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1474	C
25	YA	1477	A
25	YA	1482	U
25	YA	1483	G
25	YA	1485	G
25	YA	1493	C
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A

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Mol	Chain	Res	Type
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1513	C
25	YA	1514	U
25	YA	1515	C
25	YA	1520	U
25	YA	1522	G
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	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	1597	A
25	YA	1598	C
25	YA	1608	A
25	YA	1609	A
25	YA	1617	C
25	YA	1618	A
25	YA	1640	C
25	YA	1647	G
25	YA	1648	C
25	YA	1654	A
25	YA	1667	G
25	YA	1668	A
25	YA	1669	A
25	YA	1674	G
25	YA	1695	G
25	YA	1698	A

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Mol	Chain	Res	Type
25	YA	1699	G
25	YA	1700	A
25	YA	1701	A
25	YA	1703	G
25	YA	1725	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	1769	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	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1835	G
25	YA	1847	A
25	YA	1848	A
25	YA	1858	G
25	YA	1869	G
25	YA	1872	A
25	YA	1878	G
25	YA	1882	C
25	YA	1884	A
25	YA	1889	A
25	YA	1896	G
25	YA	1903	G
25	YA	1906	G

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Mol	Chain	Res	Type
25	YA	1913	A
25	YA	1923	U
25	YA	1927	A
25	YA	1930	G
25	YA	1931	U
25	YA	1939	U
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	1992	G
25	YA	1993	U
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2039	C
25	YA	2043	C
25	YA	2049	G
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
25	YA	2100	G
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G

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Mol	Chain	Res	Type
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	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	2193	G
25	YA	2198	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	2243	U
25	YA	2246	G
25	YA	2275	C
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2294	C
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	2334	G

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Mol	Chain	Res	Type
25	YA	2335	A
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	2372	G
25	YA	2377	A
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	2405	G
25	YA	2406	U
25	YA	2410	G
25	YA	2423	U
25	YA	2424	C
25	YA	2425	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	2471	C
25	YA	2474	C
25	YA	2475	C
25	YA	2476	A
25	YA	2482	G
25	YA	2494	G
25	YA	2498	C
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C

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Mol	Chain	Res	Type
25	YA	2518	A
25	YA	2519	U
25	YA	2525	G
25	YA	2529	G
25	YA	2542	A
25	YA	2554	U
25	YA	2558	C
25	YA	2566	A
25	YA	2567	G
25	YA	2569	G
25	YA	2573	C
25	YA	2599	G
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	2637	U
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
25	YA	2714	G
25	YA	2718	G
25	YA	2724	C
25	YA	2726	U
25	YA	2733	A
25	YA	2734	A
25	YA	2744	G

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Mol	Chain	Res	Type
25	YA	2752	C
25	YA	2758	A
25	YA	2761	G
25	YA	2764	A
25	YA	2765	A
25	YA	2766	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	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	2845	G
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	2873	A
25	YA	2880	C
25	YA	2892	A
25	YA	2894	G
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	25	A
26	YB	26	A

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Mol	Chain	Res	Type
26	YB	27	C
26	YB	31	C
26	YB	33	G
26	YB	40	U
26	YB	41	U
26	YB	42	C
26	YB	44	G
26	YB	45	A
26	YB	47	C
26	YB	52	A
26	YB	56	G
26	YB	67	G
26	YB	73	A
26	YB	81	G
26	YB	88	C
26	YB	89	G
26	YB	96	G
26	YB	101	A
26	YB	105	G
26	YB	109	G

All (232) 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	189	U
1	QA	190	G
1	QA	243	A
1	QA	250	A
1	QA	266	G
1	QA	328	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

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Mol	Chain	Res	Type
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
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	992	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1201	A
1	QA	1285	A
1	QA	1297	C
1	QA	1331	G
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	QY	30	C
25	RA	27	G
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

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Mol	Chain	Res	Type
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	508	G
25	RA	512	G
25	RA	587	C
25	RA	637	A
25	RA	704	G
25	RA	752	A
25	RA	846	C
25	RA	856	C
25	RA	859	G
25	RA	974(A)	C
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	1141	U
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1312	U
25	RA	1427	A
25	RA	1558	A
25	RA	1653	G
25	RA	1694	C
25	RA	1799	G
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1992	G
25	RA	2060	A
25	RA	2126	A
25	RA	2198	A
25	RA	2238	G
25	RA	2405	G
25	RA	2439	A

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Mol	Chain	Res	Type
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	2723	C
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	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	190	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	345	C
1	XA	372	C
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	530	G
1	XA	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	703	G

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Mol	Chain	Res	Type
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	815	A
1	XA	913	A
1	XA	960	U
1	XA	991	U
1	XA	992	U
1	XA	1027	C
1	XA	1065	U
1	XA	1200	C
1	XA	1285	A
1	XA	1297	C
1	XA	1298	C
1	XA	1336	C
1	XA	1347	G
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A
22	XV	53	G
23	XY	30	C
24	XX	3	G
24	XX	6	C
25	YA	74	A
25	YA	99	U
25	YA	102	G
25	YA	196	A
25	YA	221	A
25	YA	222	A
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	508	G
25	YA	587	C
25	YA	637	A
25	YA	653	A

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Mol	Chain	Res	Type
25	YA	654	A
25	YA	669	G
25	YA	752	A
25	YA	764	A
25	YA	846	C
25	YA	856	C
25	YA	859	G
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1130	U
25	YA	1141	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	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	2126	A
25	YA	2405	G
25	YA	2439	A
25	YA	2481	G
25	YA	2506	U
25	YA	2566	A
25	YA	2610	C
25	YA	2655	G
25	YA	2681	C
25	YA	2689	U
25	YA	2712	U
25	YA	2751	G

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Mol	Chain	Res	Type
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	25,56	32,40,41	2.55	6 (18%)	33,57,60	2.16	5 (15%)
23	1MG	XY	37	23	18,26,27	2.23	2 (11%)	19,39,42	1.55	4 (21%)
56	PPU	Z8	76	25,56	32,40,41	2.54	6 (18%)	33,57,60	2.15	5 (15%)
23	1MG	QY	37	23	18,26,27	2.24	2 (11%)	19,39,42	1.45	4 (21%)

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	25,56	-	2/21/43/44	0/4/4/4
23	1MG	XY	37	23	-	0/3/25/26	0/3/3/3
56	PPU	Z8	76	25,56	-	2/21/43/44	0/4/4/4
23	1MG	QY	37	23	-	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	9.29	1.41	1.23
56	Z8	76	PPU	O-C	9.21	1.41	1.23
23	QY	37	1MG	C2-N2	7.57	1.47	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
23	XY	37	1MG	C2-N2	7.51	1.47	1.34
56	Z6	76	PPU	C9-N6	-5.95	1.32	1.45
56	Z8	76	PPU	C9-N6	-5.93	1.32	1.45
56	Z6	76	PPU	C-N3'	5.73	1.46	1.34
56	Z8	76	PPU	C-N3'	5.70	1.46	1.34
56	Z6	76	PPU	C10-N6	-5.61	1.32	1.45
56	Z8	76	PPU	C10-N6	-5.61	1.32	1.45
23	QY	37	1MG	C4-N3	4.99	1.49	1.37
23	XY	37	1MG	C4-N3	4.92	1.49	1.37
56	Z8	76	PPU	O4'-C1'	2.67	1.44	1.41
56	Z6	76	PPU	O4'-C1'	2.63	1.44	1.41
56	Z6	76	PPU	C4-N3	-2.07	1.32	1.35
56	Z8	76	PPU	C4-N3	-2.06	1.32	1.35

All (18) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	Z6	76	PPU	C3'-N3'-C	-8.64	110.18	123.21
56	Z8	76	PPU	C3'-N3'-C	-8.63	110.19	123.21
56	Z8	76	PPU	N3-C2-N1	-4.66	121.40	128.68
56	Z6	76	PPU	N3-C2-N1	-4.63	121.45	128.68
56	Z6	76	PPU	CA-C-N3'	4.03	121.74	116.15
56	Z8	76	PPU	CA-C-N3'	4.01	121.71	116.15
23	XY	37	1MG	C2-N1-C6	3.68	123.94	120.95
23	QY	37	1MG	C2-N1-C6	3.54	123.83	120.95
56	Z6	76	PPU	CM-OC-CZ	-3.42	110.08	117.51
56	Z8	76	PPU	CM-OC-CZ	-3.38	110.18	117.51
56	Z6	76	PPU	C4-C5-N7	-3.36	105.90	109.40
56	Z8	76	PPU	C4-C5-N7	-3.26	106.01	109.40
23	QY	37	1MG	C8-N7-C5	3.12	108.93	102.99
23	XY	37	1MG	C8-N7-C5	3.07	108.85	102.99
23	XY	37	1MG	C5-C6-N1	3.04	118.47	113.90
23	QY	37	1MG	C5-C6-N1	2.81	118.13	113.90
23	XY	37	1MG	O6-C6-C5	-2.57	119.64	124.19
23	QY	37	1MG	O6-C6-C5	-2.18	120.34	124.19

There are no chirality outliers.

All (4) torsion outliers are listed below:

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

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

There are no ring outliers.

3 monomers are involved in 13 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	Z6	76	PPU	5	0
23	XY	37	1MG	1	0
56	Z8	76	PPU	7	0

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

Of 682 ligands modelled in this entry, 680 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	XA	1675	-	45,45,45	1.50	7 (15%)	64,67,67	1.34	5 (7%)
58	PAR	QA	1670	-	45,45,45	1.47	7 (15%)	64,67,67	1.39	8 (12%)

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	XA	1675	-	-	6/18/94/94	0/4/4/4
58	PAR	QA	1670	-	-	8/18/94/94	0/4/4/4

All (14) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1670	PAR	C64-C54	5.09	1.59	1.52
58	XA	1675	PAR	C64-C54	4.86	1.58	1.52
58	QA	1670	PAR	C52-C42	3.12	1.58	1.52
58	XA	1675	PAR	C52-C42	3.02	1.58	1.52
58	QA	1670	PAR	O54-C14	2.93	1.49	1.41
58	XA	1675	PAR	O54-C14	2.87	1.49	1.41
58	XA	1675	PAR	C11-C21	2.82	1.57	1.52
58	XA	1675	PAR	O51-C11	2.64	1.48	1.41
58	QA	1670	PAR	O51-C11	2.28	1.47	1.41
58	XA	1675	PAR	C14-C24	2.26	1.56	1.52
58	QA	1670	PAR	C11-C21	2.23	1.56	1.52
58	QA	1670	PAR	C31-C21	2.12	1.56	1.53
58	QA	1670	PAR	C14-C24	2.08	1.56	1.52
58	XA	1675	PAR	C31-C21	2.01	1.56	1.53

All (13) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	XA	1675	PAR	O33-C14-C24	4.67	116.26	108.22
58	XA	1675	PAR	C14-O54-C54	4.31	122.16	113.69
58	QA	1670	PAR	O52-C13-C23	3.84	115.92	107.96
58	QA	1670	PAR	C14-O54-C54	3.81	121.16	113.69
58	QA	1670	PAR	O33-C14-C24	3.76	114.69	108.22
58	XA	1675	PAR	O52-C13-C23	3.44	115.08	107.96
58	QA	1670	PAR	O11-C42-C52	3.14	115.45	107.48
58	QA	1670	PAR	O11-C42-C32	-3.11	101.76	109.18
58	QA	1670	PAR	O54-C54-C64	3.00	111.60	106.01
58	XA	1675	PAR	O54-C54-C64	2.88	111.37	106.01
58	XA	1675	PAR	C11-O51-C51	2.56	118.72	113.69
58	QA	1670	PAR	O54-C54-C44	-2.13	105.83	109.69
58	QA	1670	PAR	C22-C32-C42	2.08	114.79	109.53

There are no chirality outliers.

All (14) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
58	QA	1670	PAR	C44-C54-C64-N64
58	QA	1670	PAR	O54-C54-C64-N64
58	QA	1670	PAR	O51-C51-C61-O61
58	XA	1675	PAR	O51-C51-C61-O61
58	XA	1675	PAR	C41-C51-C61-O61

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Mol	Chain	Res	Type	Atoms
58	QA	1670	PAR	C41-C51-C61-O61
58	XA	1675	PAR	C33-C43-C53-O53
58	QA	1670	PAR	O43-C13-O52-C52
58	XA	1675	PAR	O43-C13-O52-C52
58	XA	1675	PAR	O43-C43-C53-O53
58	QA	1670	PAR	C23-C13-O52-C52
58	XA	1675	PAR	C23-C13-O52-C52
58	QA	1670	PAR	C23-C33-O33-C14
58	QA	1670	PAR	C43-C33-O33-C14

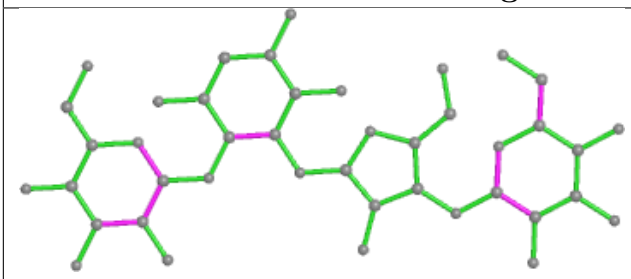
There are no ring outliers.

2 monomers are involved in 4 short contacts:

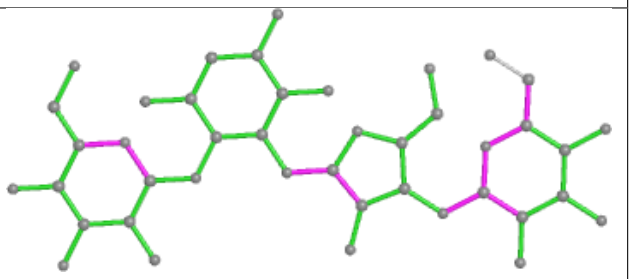
Mol	Chain	Res	Type	Clashes	Symm-Clashes
58	XA	1675	PAR	1	0
58	QA	1670	PAR	3	0

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.

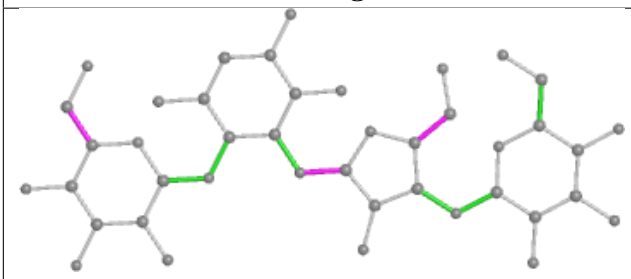
Ligand PAR XA 1675



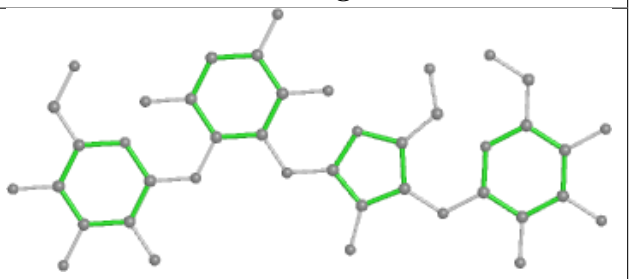
Bond lengths



Bond angles

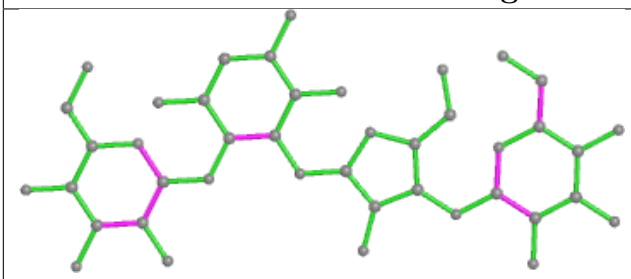


Torsions

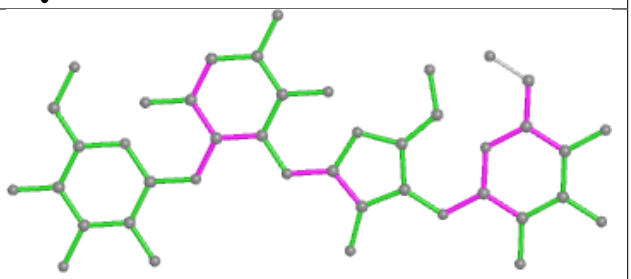


Rings

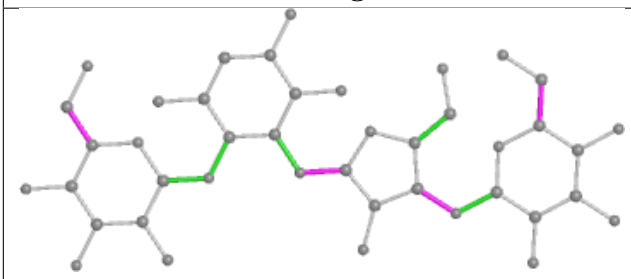
Ligand PAR QA 1670



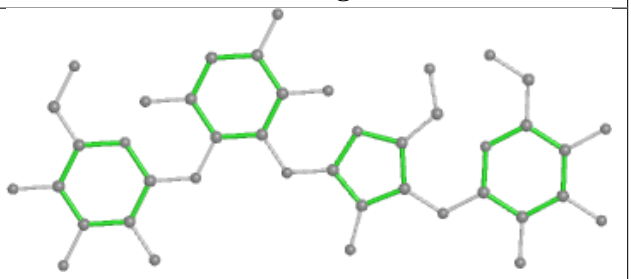
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
1	QA	1500/1522 (98%)	1.17	266 (17%)	1	0	27, 67, 148, 352	0
1	XA	1500/1522 (98%)	1.28	291 (19%)	1	0	18, 55, 149, 326	0
2	QB	237/256 (92%)	1.03	44 (18%)	1	0	54, 126, 215, 288	0
2	XB	237/256 (92%)	0.69	22 (9%)	8	3	43, 102, 177, 293	0
3	QC	205/239 (85%)	0.68	26 (12%)	3	1	56, 108, 175, 255	0
3	XC	205/239 (85%)	0.46	9 (4%)	34	17	30, 78, 132, 181	0
4	QD	208/209 (99%)	1.23	52 (25%)	0	0	41, 79, 136, 185	0
4	XD	208/209 (99%)	0.89	28 (13%)	3	1	30, 74, 134, 231	0
5	QE	151/162 (93%)	0.82	20 (13%)	3	1	42, 85, 148, 260	0
5	XE	151/162 (93%)	0.63	12 (7%)	12	5	23, 61, 121, 196	0
6	QF	101/101 (100%)	0.34	0	100	100	30, 74, 112, 155	0
6	XF	101/101 (100%)	0.46	5 (4%)	28	13	26, 69, 110, 146	0
7	QG	155/156 (99%)	0.87	23 (14%)	2	1	46, 97, 158, 302	0
7	XG	155/156 (99%)	0.72	16 (10%)	6	2	35, 82, 149, 230	0
8	QH	138/138 (100%)	0.74	10 (7%)	15	6	39, 83, 130, 174	0
8	XH	138/138 (100%)	0.73	13 (9%)	8	3	34, 68, 117, 169	0
9	QI	127/128 (99%)	2.28	60 (47%)	0	0	48, 117, 170, 243	0
9	XI	127/128 (99%)	1.25	33 (25%)	0	0	33, 91, 152, 203	0
10	QJ	99/105 (94%)	2.53	51 (51%)	0	0	53, 140, 243, 282	0
10	XJ	99/105 (94%)	1.87	43 (43%)	0	0	21, 100, 169, 213	0
11	QK	119/129 (92%)	0.93	14 (11%)	4	2	42, 77, 149, 228	0
11	XK	119/129 (92%)	1.23	24 (20%)	1	0	28, 70, 134, 196	0
12	QL	125/132 (94%)	1.19	28 (22%)	0	0	35, 69, 140, 262	0
12	XL	125/132 (94%)	0.84	13 (10%)	6	2	22, 51, 113, 282	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
13	QM	121/126 (96%)	2.08	45 (37%)	0	0	43, 108, 185, 410	0
13	XM	121/126 (96%)	1.36	30 (24%)	0	0	36, 86, 141, 273	0
14	QN	60/61 (98%)	2.07	27 (45%)	0	0	59, 101, 150, 166	0
14	XN	60/61 (98%)	1.14	15 (25%)	0	0	36, 67, 127, 143	0
15	QO	88/89 (98%)	0.74	9 (10%)	6	2	32, 78, 150, 180	0
15	XO	88/89 (98%)	0.78	10 (11%)	5	2	27, 62, 111, 129	0
16	QP	84/88 (95%)	1.07	14 (16%)	1	1	38, 71, 115, 186	0
16	XP	84/88 (95%)	1.38	24 (28%)	0	0	39, 73, 119, 211	0
17	QQ	100/105 (95%)	0.87	12 (12%)	4	2	44, 79, 131, 161	0
17	XQ	100/105 (95%)	1.35	23 (23%)	0	0	35, 75, 127, 166	0
18	QR	70/88 (79%)	0.54	2 (2%)	51	30	28, 73, 141, 149	0
18	XR	70/88 (79%)	0.38	3 (4%)	35	17	27, 66, 118, 171	0
19	QS	84/93 (90%)	2.59	52 (61%)	0	0	80, 119, 195, 275	0
19	XS	84/93 (90%)	1.45	24 (28%)	0	0	47, 88, 168, 219	0
20	QT	99/106 (93%)	1.53	33 (33%)	0	0	37, 82, 140, 220	0
20	XT	99/106 (93%)	1.80	44 (44%)	0	0	28, 86, 149, 177	0
21	QU	25/27 (92%)	5.65	24 (96%)	0	0	45, 98, 150, 185	0
21	XU	25/27 (92%)	3.12	14 (56%)	0	0	43, 69, 139, 153	0
22	QV	77/77 (100%)	0.95	13 (16%)	1	1	27, 73, 146, 212	0
22	XV	77/77 (100%)	0.72	8 (10%)	6	2	17, 59, 103, 207	0
23	QY	14/17 (82%)	1.43	3 (21%)	0	0	69, 116, 169, 189	0
23	XY	14/17 (82%)	1.51	3 (21%)	0	0	41, 102, 143, 157	0
24	QX	8/25 (32%)	1.22	2 (25%)	0	0	49, 58, 151, 164	0
24	XX	8/25 (32%)	2.15	2 (25%)	0	0	32, 38, 89, 104	0
25	RA	2882/2916 (98%)	1.12	339 (11%)	4	2	13, 44, 212, 472	0
25	YA	2883/2916 (98%)	0.99	232 (8%)	12	5	7, 35, 201, 461	0
26	RB	120/122 (98%)	0.98	18 (15%)	2	1	43, 69, 105, 120	0
26	YB	120/122 (98%)	0.38	0	100	100	29, 51, 71, 110	0
27	RD	272/276 (98%)	0.53	8 (2%)	51	30	9, 42, 81, 176	0
27	YD	272/276 (98%)	0.52	9 (3%)	46	25	5, 35, 71, 188	0
28	RE	205/206 (99%)	0.75	15 (7%)	15	6	11, 56, 123, 335	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	YE	205/206 (99%)	0.62	8 (3%) 39 20	2, 52, 123, 250	0
29	RF	202/210 (96%)	0.50	10 (4%) 28 13	15, 62, 132, 185	0
29	YF	202/210 (96%)	0.50	8 (3%) 38 20	8, 45, 121, 194	0
30	RG	181/182 (99%)	3.16	111 (61%) 0 0	79, 156, 284, 386	0
30	YG	181/182 (99%)	1.52	58 (32%) 0 0	30, 89, 155, 309	0
31	RH	170/180 (94%)	2.71	106 (62%) 0 0	79, 145, 235, 306	0
31	YH	170/180 (94%)	0.81	12 (7%) 16 6	31, 79, 122, 167	0
32	RI	146/148 (98%)	0.42	8 (5%) 25 11	25, 87, 178, 297	0
32	YI	146/148 (98%)	0.51	10 (6%) 17 7	22, 83, 152, 183	0
33	RN	138/140 (98%)	0.40	3 (2%) 62 42	26, 64, 124, 179	0
33	YN	138/140 (98%)	0.40	2 (1%) 75 59	16, 54, 108, 166	0
34	RO	122/122 (100%)	0.45	3 (2%) 57 37	22, 55, 103, 142	0
34	YO	122/122 (100%)	0.55	2 (1%) 72 53	16, 48, 78, 126	0
35	RP	150/150 (100%)	1.18	36 (24%) 0 0	18, 68, 154, 247	0
35	YP	150/150 (100%)	0.81	17 (11%) 5 2	9, 53, 126, 253	0
36	RQ	141/141 (100%)	1.23	30 (21%) 0 0	28, 67, 128, 178	0
36	YQ	141/141 (100%)	0.52	9 (6%) 19 8	14, 47, 124, 154	0
37	RR	118/118 (100%)	0.62	10 (8%) 10 4	18, 48, 81, 170	0
37	YR	118/118 (100%)	0.55	4 (3%) 45 24	20, 46, 85, 137	0
38	RS	111/112 (99%)	1.05	20 (18%) 1 0	38, 76, 131, 184	0
38	YS	111/112 (99%)	0.62	3 (2%) 54 32	28, 58, 106, 195	0
39	RT	137/146 (93%)	0.84	13 (9%) 8 3	29, 67, 161, 259	0
39	YT	137/146 (93%)	0.75	12 (8%) 10 4	27, 61, 152, 303	0
40	RU	117/118 (99%)	0.97	19 (16%) 1 1	20, 54, 114, 221	0
40	YU	117/118 (99%)	0.63	4 (3%) 45 24	19, 39, 97, 221	0
41	RV	101/101 (100%)	0.59	3 (2%) 50 29	21, 77, 140, 320	0
41	YV	101/101 (100%)	0.54	4 (3%) 38 20	13, 63, 124, 304	0
42	RW	113/113 (100%)	0.34	3 (2%) 54 32	19, 41, 99, 220	0
42	YW	113/113 (100%)	0.14	1 (0%) 84 72	15, 41, 95, 193	0
43	RX	92/96 (95%)	0.47	0 100 100	26, 53, 87, 135	0
43	YX	92/96 (95%)	0.44	0 100 100	12, 39, 76, 116	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å^2)	Q<0.9
44	RY	102/110 (92%)	1.36	23 (22%)	0	0	40, 99, 177, 285	0
44	YY	102/110 (92%)	0.85	12 (11%)	4	2	31, 73, 155, 210	0
45	RZ	183/206 (88%)	1.11	33 (18%)	1	0	41, 93, 178, 292	0
45	YZ	183/206 (88%)	0.63	14 (7%)	13	5	32, 71, 179, 271	0
46	R0	82/85 (96%)	0.63	6 (7%)	15	6	18, 49, 71, 179	0
46	Y0	82/85 (96%)	0.47	4 (4%)	29	14	11, 34, 60, 87	0
47	R1	97/98 (98%)	0.80	6 (6%)	20	9	21, 51, 160, 335	0
47	Y1	97/98 (98%)	0.83	9 (9%)	8	3	16, 49, 139, 210	0
48	R2	69/72 (95%)	0.35	0	100	100	28, 69, 143, 169	0
48	Y2	69/72 (95%)	0.61	3 (4%)	35	17	19, 59, 119, 177	0
49	R3	59/60 (98%)	0.64	3 (5%)	28	13	31, 71, 112, 169	0
49	Y3	59/60 (98%)	0.37	2 (3%)	45	24	22, 49, 91, 198	0
50	R4	71/71 (100%)	3.01	34 (47%)	0	0	107, 211, 311, 396	0
50	Y4	71/71 (100%)	2.42	33 (46%)	0	0	66, 156, 274, 384	0
51	R5	59/60 (98%)	0.90	6 (10%)	6	2	8, 49, 223, 238	0
51	Y5	59/60 (98%)	0.72	7 (11%)	4	2	11, 49, 223, 335	0
52	R6	49/54 (90%)	5.55	39 (79%)	0	0	86, 175, 268, 291	0
52	Y6	49/54 (90%)	4.62	38 (77%)	0	0	76, 163, 229, 312	0
53	R7	49/49 (100%)	0.49	4 (8%)	11	5	16, 29, 87, 168	0
53	Y7	49/49 (100%)	0.35	3 (6%)	21	9	8, 23, 87, 176	0
54	R8	64/65 (98%)	1.44	16 (25%)	0	0	20, 53, 102, 208	0
54	Y8	64/65 (98%)	1.16	11 (17%)	1	1	16, 44, 97, 214	0
55	R9	37/37 (100%)	8.29	37 (100%)	0	0	82, 138, 203, 344	0
55	Y9	37/37 (100%)	5.92	35 (94%)	0	0	57, 119, 223, 246	0
56	Z6	2/3 (66%)	1.44	0	100	100	33, 33, 33, 47	0
56	Z8	2/3 (66%)	1.72	0	100	100	24, 24, 24, 36	0
All	All	20873/21492 (97%)	1.06	3067 (14%)	2	1	2, 61, 174, 472	0

All (3067) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
25	YA	2117	A	23.8
25	YA	1061	U	20.2

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Mol	Chain	Res	Type	RSRZ
13	QM	7	VAL	20.1
25	YA	2112	G	20.1
25	YA	2136	C	19.0
25	YA	2116	G	18.8
25	YA	2135	A	18.5
25	RA	2116	G	17.7
25	RA	1088	A	17.6
25	RA	1057	A	17.4
55	R9	1	MET	17.1
55	R9	37	GLY	16.8
25	YA	1060	U	16.8
25	RA	1089	G	16.7
25	RA	1096	A	16.7
25	YA	2801	A	16.6
55	R9	36	GLN	16.6
25	RA	2174	C	15.9
25	RA	1061	U	15.7
25	RA	1065	U	15.6
55	R9	34	GLN	15.5
25	RA	2175	C	15.2
25	RA	1093	G	15.0
25	YA	2175	C	15.0
25	RA	2173	A	14.9
25	RA	1070	A	14.7
25	RA	1060	U	14.6
25	RA	2119	A	14.6
52	R6	46	HIS	14.5
25	YA	2174	C	14.3
25	RA	1064	C	14.2
50	R4	71	ARG	14.1
52	Y6	13	CYS	13.8
25	YA	2118	U	13.8
25	YA	2168	G	13.8
12	QL	129	ALA	13.7
25	RA	1063	G	13.3
52	R6	42	TRP	13.3
55	R9	23	VAL	13.3
25	RA	1095	A	13.2
31	RH	43	VAL	13.0
25	RA	1084	A	12.9
25	YA	2169	A	12.9
25	RA	1094	U	12.8

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Mol	Chain	Res	Type	RSRZ
55	Y9	1	MET	12.8
25	RA	1068	G	12.8
25	YA	2114	A	12.7
21	XU	26	LYS	12.6
50	R4	67	TYR	12.6
25	YA	2119	A	12.6
25	RA	1058	G	12.5
52	R6	23	THR	12.4
25	YA	2170	A	12.3
50	R4	69	LYS	12.3
25	RA	1066	U	12.2
11	QK	129	SER	12.2
25	YA	1075	C	12.2
25	YA	2129	C	12.1
25	YA	2795	G	12.1
50	R4	1	MET	12.1
52	R6	13	CYS	12.1
52	R6	40	CYS	12.0
25	YA	2798	C	11.9
25	YA	2178	C	11.9
13	QM	6	GLY	11.9
21	QU	26	LYS	11.7
25	RA	1054	A	11.7
55	R9	24	TYR	11.6
52	Y6	12	GLU	11.6
25	RA	1056	G	11.6
50	Y4	71	ARG	11.6
25	RA	1059	G	11.6
25	YA	1088	A	11.5
25	YA	1076	C	11.4
45	YZ	113	ALA	11.3
25	RA	1097	U	11.3
14	XN	2	ALA	11.2
25	RA	1071	G	11.2
55	R9	25	VAL	11.2
31	RH	3	ARG	11.2
25	YA	2159	G	11.1
25	RA	1103	A	11.0
30	RG	155	MET	10.9
25	RA	2125	G	10.8
25	YA	2799	A	10.7
55	R9	11	CYS	10.6

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Mol	Chain	Res	Type	RSRZ
50	R4	70	GLY	10.6
25	RA	1087	G	10.6
25	YA	2130	U	10.6
1	QA	1000	A	10.5
25	YA	1069	A	10.5
25	YA	2161	C	10.5
1	QA	1129	C	10.5
25	RA	2170	A	10.5
25	YA	2160	G	10.5
25	RA	2121	G	10.4
21	QU	10	ARG	10.4
25	YA	1096	A	10.4
55	R9	19	ARG	10.3
25	YA	2122	U	10.3
55	Y9	34	GLN	10.3
25	RA	2128	C	10.3
25	YA	2125	G	10.2
55	Y9	4	ARG	10.2
25	RA	2148	G	10.2
1	XA	91	C	10.1
30	RG	154	GLY	10.1
30	RG	137	GLU	10.1
50	R4	68	ARG	10.1
25	RA	2114	A	10.0
52	Y6	42	TRP	10.0
55	R9	18	ARG	10.0
50	R4	66	SER	10.0
28	RE	204	ALA	9.9
55	Y9	36	GLN	9.9
25	YA	2803	C	9.9
55	R9	35	ARG	9.8
1	QA	1036	G	9.8
30	RG	2	PRO	9.8
25	RA	1062	G	9.8
50	Y4	68	ARG	9.7
55	Y9	37	GLY	9.7
25	RA	2118	U	9.7
25	YA	2894	G	9.7
25	RA	1067	A	9.7
25	RA	1098	A	9.6
1	XA	1451	A	9.6
1	XA	1032(A)	G	9.6

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Mol	Chain	Res	Type	RSRZ
52	R6	39	TYR	9.6
25	RA	1055	G	9.5
13	QM	102	ARG	9.5
25	RA	2138	C	9.5
52	R6	43	CYS	9.5
55	R9	22	ARG	9.5
1	XA	90	C	9.5
25	RA	2176	A	9.4
50	Y4	67	TYR	9.4
25	YA	2127	G	9.3
25	RA	2135	A	9.2
50	Y4	69	LYS	9.2
55	R9	26	ILE	9.2
40	YU	118	GLY	9.2
30	RG	12	TYR	9.2
25	RA	2136	C	9.2
55	Y9	29	ASN	9.2
52	R6	24	GLU	9.1
52	Y6	53	LYS	9.1
55	R9	15	LYS	9.1
25	RA	2137	C	9.0
25	RA	2123	G	9.0
30	RG	72	ARG	9.0
45	RZ	113	ALA	9.0
25	YA	2120	G	9.0
55	Y9	3	VAL	9.0
52	R6	14	THR	9.0
25	RA	2894	G	8.9
52	R6	49	HIS	8.9
25	RA	1099	G	8.9
1	QA	1001	G	8.9
25	RA	1069	A	8.9
25	YA	2123	G	8.8
25	RA	1092	C	8.8
25	RA	2117	A	8.8
25	YA	2162	G	8.8
55	R9	4	ARG	8.8
55	R9	16	VAL	8.8
25	YA	2173	A	8.8
25	YA	2151	G	8.7
25	RA	2147	G	8.6
55	R9	14	CYS	8.6

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Mol	Chain	Res	Type	RSRZ
52	R6	20	ASN	8.6
1	QA	1026	G	8.6
55	R9	6	SER	8.6
25	RA	2159	G	8.6
25	YA	2121	G	8.5
55	Y9	6	SER	8.5
55	R9	20	HIS	8.5
25	RA	1074	G	8.5
31	YH	2	SER	8.4
52	R6	38	LYS	8.4
25	YA	2133	G	8.4
30	RG	100	TRP	8.4
25	RA	2124	G	8.4
25	YA	2108	C	8.3
55	Y9	5	ALA	8.3
25	RA	2797	U	8.3
25	YA	1058	G	8.2
25	YA	2802	G	8.2
25	RA	2129	C	8.2
1	XA	64	G	8.1
55	Y9	22	ARG	8.1
30	RG	108	ASN	8.1
31	RH	63	SER	8.1
30	RG	97	ASP	8.1
17	QQ	101	ARG	8.1
55	R9	3	VAL	8.1
25	YA	2797	U	8.1
25	YA	2137	C	8.0
1	XA	1000	A	8.0
50	R4	6	HIS	8.0
30	RG	107	LEU	8.0
52	Y6	20	ASN	8.0
52	Y6	43	CYS	8.0
19	QS	27	GLU	8.0
52	R6	6	ARG	8.0
2	QB	4	GLU	8.0
9	QI	110	GLU	8.0
30	RG	142	PRO	7.9
1	QA	1032(B)	G	7.9
25	RA	2801	A	7.9
55	R9	5	ALA	7.8
11	XK	129	SER	7.8

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Mol	Chain	Res	Type	RSRZ
25	YA	2115	G	7.8
25	RA	1053	C	7.8
25	RA	2168	G	7.8
9	QI	124	GLN	7.8
52	R6	45	LYS	7.8
20	XT	106	ALA	7.7
52	Y6	49	HIS	7.7
55	R9	17	ILE	7.7
21	QU	17	THR	7.7
25	YA	2145	C	7.6
25	YA	1063	G	7.6
25	YA	1097	U	7.6
31	RH	52	VAL	7.6
25	RA	2160	G	7.6
13	XM	6	GLY	7.6
25	YA	2149	G	7.6
25	RA	2798	C	7.5
10	QJ	33	GLN	7.5
8	XH	1	MET	7.5
14	QN	31	ARG	7.5
1	QA	1451	A	7.5
52	Y6	22	ALA	7.5
1	XA	999	U	7.4
25	RA	1075	C	7.4
25	RA	2162	G	7.4
52	R6	12	GLU	7.4
25	YA	2148	G	7.4
28	RE	205	ALA	7.4
9	QI	66	ARG	7.4
31	YH	3	ARG	7.4
13	QM	8	GLU	7.4
25	RA	1085	A	7.4
7	XG	5	ARG	7.4
25	YA	1062	G	7.4
50	Y4	70	GLY	7.4
55	Y9	23	VAL	7.4
25	YA	1064	C	7.3
25	YA	2147	G	7.3
52	R6	26	ASN	7.3
1	XA	89	U	7.3
31	RH	35	VAL	7.3
52	R6	37	ARG	7.3

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Mol	Chain	Res	Type	RSRZ
25	RA	1102	C	7.3
25	YA	1074	G	7.3
25	RA	2172	U	7.3
25	YA	1070	A	7.3
21	QU	15	ARG	7.3
20	XT	9	ASN	7.3
1	XA	80	G	7.2
19	QS	79	THR	7.2
55	Y9	32	HIS	7.2
25	YA	1057	A	7.2
25	RA	2799	A	7.2
52	Y6	40	CYS	7.2
7	QG	32	ARG	7.2
21	XU	25	LYS	7.1
52	R6	11	LEU	7.1
52	Y6	37	ARG	7.1
14	QN	2	ALA	7.1
25	YA	2164	C	7.1
12	XL	129	ALA	7.1
1	XA	92	G	7.1
1	QA	1032	A	7.1
25	YA	1059	G	7.1
25	YA	2167	U	7.0
36	RQ	141	GLN	7.0
55	Y9	7	VAL	7.0
52	Y6	24	GLU	7.0
25	YA	2141	G	7.0
25	YA	2134	A	7.0
1	XA	1001	G	7.0
52	R6	22	ALA	7.0
10	QJ	64	GLU	7.0
40	YU	117	GLN	6.9
1	QA	1002	G	6.9
30	RG	157	ILE	6.9
30	RG	35	GLU	6.9
13	QM	101	GLN	6.9
25	RA	2110	G	6.9
25	YA	2111	C	6.9
50	R4	56	VAL	6.9
41	RV	36	PRO	6.9
25	YA	2128	C	6.9
25	YA	2176	A	6.9

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Mol	Chain	Res	Type	RSRZ
52	R6	25	LYS	6.9
50	Y4	66	SER	6.9
55	R9	12	ASP	6.9
1	QA	1033	G	6.9
8	QH	1	MET	6.8
25	YA	2113	U	6.8
25	RA	1086	A	6.8
1	XA	184	G	6.8
7	QG	82	GLY	6.8
52	Y6	46	HIS	6.8
25	RA	1083	U	6.8
7	QG	81	GLY	6.8
13	XM	100	GLY	6.8
25	RA	1049	C	6.8
13	QM	103	THR	6.7
10	QJ	8	LEU	6.7
39	RT	2	ASN	6.7
39	YT	2	ASN	6.7
21	QU	5	ASP	6.7
25	RA	2120	G	6.7
54	R8	65	GLU	6.7
10	QJ	6	ILE	6.7
25	RA	1107	G	6.7
30	YG	116	ASP	6.6
52	Y6	23	THR	6.6
1	QA	1027	C	6.6
41	YV	36	PRO	6.6
21	QU	14	TRP	6.6
13	XM	7	VAL	6.6
25	RA	1108	U	6.6
25	YA	2150	U	6.6
25	YA	2146	C	6.6
45	RZ	93	ASP	6.6
12	QL	127	GLU	6.6
25	RA	1104	C	6.6
25	YA	2139	C	6.6
1	QA	1034	G	6.5
55	R9	2	LYS	6.5
52	Y6	39	TYR	6.5
47	R1	98	LEU	6.5
25	RA	1100	C	6.5
55	Y9	21	GLY	6.5

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Mol	Chain	Res	Type	RSRZ
1	QA	1041	A	6.5
19	QS	71	LEU	6.5
25	RA	1082	U	6.4
25	YA	1084	A	6.4
25	RA	2127	G	6.4
25	RA	1105	U	6.4
25	RA	1072	C	6.4
25	RA	2149	G	6.4
10	QJ	5	ARG	6.4
31	RH	33	LEU	6.4
10	QJ	45	ARG	6.4
25	RA	2164	C	6.4
7	XG	32	ARG	6.4
31	RH	24	VAL	6.3
25	YA	2104	G	6.3
30	RG	69	ALA	6.3
25	RA	2122	U	6.3
52	Y6	26	ASN	6.3
30	RG	58	GLN	6.3
54	R8	64	TYR	6.3
21	QU	25	LYS	6.3
25	YA	2177	C	6.3
25	YA	2166	G	6.3
4	XD	3	ARG	6.3
21	QU	2	GLY	6.3
2	XB	6	THR	6.3
30	RG	64	THR	6.3
1	QA	999	U	6.3
40	RU	118	GLY	6.2
31	RH	25	LYS	6.2
1	XA	1032	A	6.2
9	XI	8	GLY	6.2
30	RG	41	GLN	6.2
1	XA	69	G	6.2
52	R6	7	ILE	6.2
25	RA	279	C	6.2
55	Y9	35	ARG	6.2
52	R6	41	PRO	6.2
10	QJ	29	ARG	6.2
31	RH	4	ILE	6.2
30	RG	4	ASP	6.2
30	RG	39	ILE	6.2

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Mol	Chain	Res	Type	RSRZ
45	YZ	162	GLU	6.2
30	RG	136	ARG	6.2
4	QD	24	GLU	6.2
19	QS	2	PRO	6.2
21	QU	16	GLY	6.1
30	RG	36	LYS	6.1
52	Y6	38	LYS	6.1
25	RA	2178	C	6.1
30	RG	96	ARG	6.1
55	R9	33	LYS	6.1
25	RA	1106	G	6.1
1	XA	1129	C	6.1
10	XJ	69	ASN	6.1
24	XX	8	A	6.1
39	YT	1	MET	6.0
31	RH	2	SER	6.0
11	XK	11	LYS	6.0
1	XA	183	G	6.0
25	YA	2109	U	6.0
30	RG	93	THR	6.0
52	Y6	11	LEU	6.0
25	RA	1109	C	6.0
1	XA	1032(B)	G	6.0
25	YA	2131	G	6.0
31	RH	10	PRO	6.0
55	Y9	30	PRO	6.0
14	QN	25	VAL	6.0
25	YA	2163	C	6.0
21	QU	9	ARG	6.0
25	RA	2112	G	6.0
20	XT	72	LEU	5.9
25	YA	1071	G	5.9
20	QT	104	LEU	5.9
30	RG	34	LEU	5.9
25	YA	2171	A	5.9
1	XA	88	C	5.9
21	QU	18	TYR	5.9
45	RZ	114	GLY	5.9
52	R6	50	ARG	5.9
20	QT	106	ALA	5.9
20	XT	18	GLN	5.9
52	Y6	18	ARG	5.8

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Mol	Chain	Res	Type	RSRZ
10	QJ	4	ILE	5.8
13	QM	104	ARG	5.8
25	YA	1066	U	5.8
55	Y9	25	VAL	5.8
1	XA	220	G	5.8
1	XA	1026	G	5.8
25	YA	1087	G	5.8
25	RA	1536	A	5.8
9	QI	70	LYS	5.8
25	YA	1077	A	5.8
55	Y9	31	LYS	5.8
38	RS	37	ALA	5.8
25	YA	2105	C	5.8
2	XB	4	GLU	5.8
30	RG	9	ARG	5.8
1	XA	102	G	5.8
10	QJ	98	ILE	5.8
25	YA	2172	U	5.8
25	RA	1052	C	5.8
31	RH	141	VAL	5.8
25	YA	2165	G	5.8
31	RH	42	ARG	5.8
1	QA	1029	G	5.7
25	YA	2110	G	5.7
25	YA	2107	C	5.7
39	RT	115	ARG	5.7
31	RH	82	GLY	5.7
20	QT	102	GLY	5.7
1	XA	1025	U	5.7
25	YA	1078	U	5.7
25	YA	899	A	5.7
30	RG	74	LYS	5.7
21	QU	6	ARG	5.7
13	QM	2	ALA	5.7
19	QS	39	THR	5.6
45	RZ	175	VAL	5.6
1	XA	73	G	5.6
1	XA	79	G	5.6
55	Y9	12	ASP	5.6
9	QI	125	TYR	5.6
17	XQ	17	LYS	5.6
25	YA	1065	U	5.6

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Mol	Chain	Res	Type	RSRZ
35	YP	13	ASN	5.6
25	RA	889	C	5.6
1	XA	1024	G	5.6
30	YG	2	PRO	5.6
1	XA	1027	C	5.6
25	RA	2161	C	5.6
9	QI	117	HIS	5.6
20	XT	75	ASN	5.6
19	QS	67	VAL	5.6
9	QI	9	ARG	5.6
30	YG	26	GLN	5.6
1	QA	984	C	5.6
25	YA	2138	C	5.6
52	R6	29	ASN	5.6
9	QI	127	LYS	5.6
25	RA	2171	A	5.6
1	XA	223	U	5.6
25	RA	2802	G	5.6
36	YQ	141	GLN	5.5
30	RG	33	ARG	5.5
50	Y4	49	PHE	5.5
25	YA	2101	G	5.5
21	QU	24	ARG	5.5
25	RA	1026	U	5.5
55	Y9	24	TYR	5.5
25	RA	2111	C	5.5
1	QA	1032(A)	G	5.5
25	RA	2115	G	5.5
30	RG	135	LEU	5.5
52	R6	9	LEU	5.5
1	QA	1222	G	5.5
2	QB	217	ARG	5.5
55	R9	9	ARG	5.5
21	QU	21	TYR	5.5
47	Y1	98	LEU	5.5
1	XA	78	G	5.5
30	RG	152	LEU	5.5
1	XA	81	G	5.5
23	QY	31	G	5.5
30	RG	65	GLY	5.4
1	XA	181	G	5.4
19	QS	38	SER	5.4

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Mol	Chain	Res	Type	RSRZ
25	RA	890	A	5.4
25	YA	1073	A	5.4
7	QG	4	ARG	5.4
21	XU	15	ARG	5.4
35	RP	150	ALA	5.4
21	QU	23	PRO	5.4
25	RA	2146	C	5.4
25	YA	2804	C	5.4
25	YA	897	C	5.4
32	YI	113	ARG	5.4
1	QA	1224	G	5.4
1	QA	1223	C	5.4
55	R9	7	VAL	5.4
7	QG	5	ARG	5.4
21	QU	7	ARG	5.3
12	XL	128	ALA	5.3
25	YA	2126	A	5.3
1	QA	1039	C	5.3
25	RA	280	C	5.3
52	Y6	5	VAL	5.3
1	QA	1131	G	5.3
9	QI	128	ARG	5.3
31	RH	41	MET	5.3
30	RG	13	GLU	5.3
55	Y9	18	ARG	5.3
23	XY	32	U	5.3
25	YA	1086	A	5.3
30	RG	8	LYS	5.3
50	Y4	32	TYR	5.3
55	Y9	16	VAL	5.3
25	RA	2145	C	5.3
1	QA	983	A	5.2
1	QA	1040	U	5.2
10	QJ	59	SER	5.2
13	XM	102	ARG	5.2
55	Y9	2	LYS	5.2
25	RA	859	G	5.2
50	R4	58	ARG	5.2
20	XT	73	HIS	5.2
30	RG	117	PHE	5.2
9	QI	65	VAL	5.2
51	R5	54	GLY	5.2

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Mol	Chain	Res	Type	RSRZ
20	XT	68	LYS	5.2
25	YA	2154	G	5.2
55	Y9	28	GLU	5.2
4	QD	7	PRO	5.2
12	XL	19	ARG	5.2
30	YG	90	LEU	5.2
30	RG	159	VAL	5.2
25	RA	2169	A	5.2
31	RH	5	GLY	5.2
1	QA	1450	U	5.2
9	QI	53	VAL	5.2
13	QM	97	PRO	5.2
36	RQ	33	GLY	5.1
55	R9	27	CYS	5.1
3	XC	193	TYR	5.1
55	R9	30	PRO	5.1
1	QA	1006	C	5.1
19	XS	11	VAL	5.1
52	R6	5	VAL	5.1
25	RA	1078	U	5.1
50	R4	23	GLU	5.1
4	QD	8	VAL	5.1
25	YA	2140	C	5.1
19	QS	80	TYR	5.1
25	YA	2179	C	5.1
1	XA	68	G	5.1
35	RP	132	LYS	5.0
21	QU	8	THR	5.0
25	RA	11	G	5.0
50	R4	55	ARG	5.0
5	QE	125	SER	5.0
10	QJ	74	ILE	5.0
25	RA	1051	G	5.0
1	XA	195	A	5.0
4	QD	32	ALA	5.0
10	QJ	55	LYS	5.0
30	RG	160	VAL	5.0
9	QI	69	GLY	5.0
7	XG	156	TRP	5.0
10	XJ	5	ARG	5.0
1	QA	1042	G	5.0
4	QD	84	LYS	5.0

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Mol	Chain	Res	Type	RSRZ
3	QC	193	TYR	5.0
19	XS	39	THR	5.0
1	XA	208	U	5.0
25	RA	2179	C	5.0
17	XQ	66	SER	5.0
45	RZ	78	LYS	5.0
25	RA	2133	G	5.0
25	RA	2893	G	5.0
25	YA	2157	G	5.0
54	Y8	65	GLU	4.9
25	RA	362	U	4.9
25	RA	2154	G	4.9
1	XA	152	A	4.9
21	XU	10	ARG	4.9
25	RA	902	C	4.9
21	QU	22	ARG	4.9
52	Y6	6	ARG	4.9
32	YI	65	ALA	4.9
13	QM	3	ARG	4.9
25	RA	916	G	4.9
31	RH	67	LEU	4.9
1	XA	194	C	4.9
1	QA	1004	A	4.9
1	XA	1042	G	4.9
1	XA	1450	U	4.9
25	YA	1079	C	4.9
50	Y4	1	MET	4.9
10	XJ	8	LEU	4.9
30	RG	156	ASP	4.9
10	QJ	47	PHE	4.8
1	QA	196	A	4.8
25	YA	2892	A	4.8
1	XA	1043	C	4.8
9	QI	16	ARG	4.8
36	RQ	136	ALA	4.8
11	QK	11	LYS	4.8
2	XB	217	ARG	4.8
1	XA	454	C	4.8
30	RG	43	LEU	4.8
35	RP	13	ASN	4.8
35	RP	109	GLY	4.8
1	XA	210	U	4.8

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Mol	Chain	Res	Type	RSRZ
25	YA	2106	G	4.8
1	QA	1096	C	4.8
12	QL	32	PHE	4.8
30	YG	157	ILE	4.8
25	YA	898	C	4.8
10	QJ	72	VAL	4.8
13	XM	101	GLN	4.8
25	YA	2152	G	4.8
30	RG	103	LEU	4.8
30	RG	87	PRO	4.8
9	XI	106	ALA	4.8
1	QA	1003	G	4.8
16	QP	29	ASP	4.8
30	RG	133	LEU	4.8
30	YG	142	PRO	4.8
40	RU	91	ASP	4.8
1	QA	977	A	4.8
2	XB	240	GLN	4.8
25	RA	1077	A	4.8
13	QM	88	ARG	4.7
20	XT	79	ARG	4.7
18	XR	88	LYS	4.7
5	QE	81	GLU	4.7
10	QJ	10	GLY	4.7
20	QT	66	ALA	4.7
27	YD	26	LYS	4.7
25	RA	919	G	4.7
25	YA	1089	G	4.7
4	QD	20	TYR	4.7
25	RA	2134	A	4.7
31	RH	18	GLU	4.7
31	RH	157	TYR	4.7
30	RG	171	ALA	4.7
30	RG	17	PRO	4.7
1	XA	456	C	4.7
20	XT	70	SER	4.7
25	RA	1076	C	4.7
9	QI	64	THR	4.7
1	XA	457	C	4.7
20	XT	64	ASP	4.7
10	QJ	85	LEU	4.7
25	YA	1106	G	4.7

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Mol	Chain	Res	Type	RSRZ
13	QM	85	GLY	4.7
17	XQ	97	SER	4.7
30	RG	101	ILE	4.7
9	XI	117	HIS	4.7
30	YG	89	GLY	4.7
31	RH	49	VAL	4.7
11	QK	128	ALA	4.7
35	RP	149	GLU	4.7
30	RG	118	ARG	4.7
10	QJ	70	ARG	4.6
25	YA	1068	G	4.6
25	YA	1107	G	4.6
30	RG	57	ALA	4.6
25	YA	1082	U	4.6
50	Y4	60	GLN	4.6
2	QB	6	THR	4.6
19	QS	74	PHE	4.6
29	YF	133	ASN	4.6
11	XK	25	TYR	4.6
31	RH	169	VAL	4.6
30	RG	91	ARG	4.6
14	QN	6	LEU	4.6
1	QA	1225	A	4.6
25	YA	2132	U	4.6
31	RH	161	GLY	4.6
1	XA	1286	A	4.6
31	RH	89	ILE	4.6
35	RP	108	LYS	4.6
1	XA	1224	G	4.6
11	QK	117	ASN	4.6
25	YA	2893	G	4.6
25	YA	2144	U	4.6
30	RG	85	GLY	4.6
30	RG	172	LEU	4.6
40	RU	90	VAL	4.6
12	QL	128	ALA	4.6
25	YA	1026	U	4.6
21	QU	12	LYS	4.6
20	QT	9	ASN	4.5
25	RA	2126	A	4.5
10	QJ	71	LEU	4.5
53	R7	49	ARG	4.5

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Mol	Chain	Res	Type	RSRZ
30	RG	176	LEU	4.5
10	QJ	54	PHE	4.5
7	XG	85	TYR	4.5
16	XP	69	THR	4.5
1	QA	1005	A	4.5
2	QB	231	GLU	4.5
31	RH	37	VAL	4.5
10	QJ	46	ARG	4.5
2	QB	165	VAL	4.5
1	QA	1019	C	4.5
9	XI	17	VAL	4.5
36	RQ	80	GLU	4.5
14	QN	61	TRP	4.5
13	QM	16	ASP	4.5
31	RH	109	PHE	4.5
4	QD	23	GLY	4.5
52	Y6	9	LEU	4.5
30	RG	138	GLN	4.5
25	YA	2102	U	4.5
7	QG	33	ASP	4.5
13	QM	4	ILE	4.5
17	XQ	65	ILE	4.5
31	RH	34	GLU	4.5
45	RZ	2	GLU	4.4
52	Y6	44	ARG	4.4
9	QI	27	THR	4.4
30	RG	29	TRP	4.4
36	RQ	63	LYS	4.4
23	XY	31	G	4.4
12	QL	19	ARG	4.4
1	XA	87	A	4.4
9	XI	66	ARG	4.4
25	RA	878	A	4.4
38	RS	31	SER	4.4
1	XA	63	C	4.4
16	XP	68	ASP	4.4
13	XM	99	ARG	4.4
31	RH	170	ARG	4.4
44	RY	86	ARG	4.4
25	RA	2139	C	4.4
20	QT	68	LYS	4.4
31	RH	9	ILE	4.4

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Mol	Chain	Res	Type	RSRZ
52	Y6	45	LYS	4.4
25	RA	281	G	4.4
26	RB	60	C	4.4
50	R4	32	TYR	4.4
19	QS	78	ARG	4.4
20	QT	75	ASN	4.4
24	XX	7	G	4.4
1	XA	185	A	4.4
35	YP	70	GLN	4.4
20	XT	17	ARG	4.4
45	RZ	96	VAL	4.4
31	RH	55	PRO	4.4
50	R4	11	PRO	4.4
25	RA	229	A	4.4
1	XA	103	C	4.4
9	QI	36	TYR	4.4
52	Y6	48	VAL	4.4
31	RH	50	VAL	4.4
19	XS	69	HIS	4.4
18	QR	88	LYS	4.4
50	R4	33	VAL	4.3
25	RA	1047	G	4.3
55	R9	10	ILE	4.3
19	QS	70	LYS	4.3
26	RB	41	U	4.3
55	Y9	9	ARG	4.3
1	QA	1094	G	4.3
25	RA	1073	A	4.3
20	XT	65	LYS	4.3
19	XS	35	SER	4.3
19	QS	69	HIS	4.3
30	RG	66	GLN	4.3
30	RG	131	TYR	4.3
1	QA	1286	A	4.3
10	XJ	10	GLY	4.3
21	QU	11	GLY	4.3
25	RA	2412	A	4.3
1	XA	93	U	4.3
13	QM	83	ASP	4.3
55	R9	32	HIS	4.3
10	XJ	71	LEU	4.3
25	YA	1095	A	4.3

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Mol	Chain	Res	Type	RSRZ
38	RS	36	TYR	4.3
50	R4	49	PHE	4.3
25	RA	2155	G	4.3
25	YA	2181	G	4.3
31	RH	51	ARG	4.3
50	Y4	37	SER	4.3
31	RH	64	LEU	4.3
13	QM	43	THR	4.3
25	RA	1110	G	4.3
9	QI	126	SER	4.3
10	QJ	83	GLU	4.3
25	YA	2188	C	4.3
32	RI	83	ALA	4.3
1	QA	1035	A	4.2
25	RA	1079	C	4.2
2	QB	187	LEU	4.2
30	RG	111	LEU	4.2
53	Y7	49	ARG	4.2
1	XA	1002	G	4.2
30	RG	75	LYS	4.2
1	XA	221	C	4.2
44	RY	58	GLY	4.2
1	QA	1221	G	4.2
1	XA	1220	G	4.2
1	QA	974	A	4.2
1	QA	962	C	4.2
10	XJ	45	ARG	4.2
14	QN	46	GLU	4.2
25	RA	1101	U	4.2
1	QA	220	G	4.2
21	XU	6	ARG	4.2
30	YG	46	ALA	4.2
30	YG	87	PRO	4.2
8	QH	115	SER	4.2
1	QA	963	G	4.2
13	QM	106	ASN	4.2
25	YA	1093	G	4.2
9	XI	105	ASP	4.2
50	Y4	56	VAL	4.2
19	QS	6	LYS	4.2
2	QB	133	LYS	4.2
14	QN	35	ARG	4.2

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Mol	Chain	Res	Type	RSRZ
41	YV	45	THR	4.2
25	YA	2189	U	4.2
51	R5	53	ALA	4.2
9	QI	121	ARG	4.2
1	QA	1220	G	4.2
4	QD	42	GLN	4.2
10	XJ	39	PRO	4.2
52	Y6	14	THR	4.2
31	RH	71	LEU	4.1
41	YV	42	GLY	4.1
19	QS	77	THR	4.1
1	XA	1029	G	4.1
49	Y3	60	GLU	4.1
30	RG	84	LYS	4.1
53	R7	48	LYS	4.1
1	QA	994	A	4.1
1	QA	1028	C	4.1
10	XJ	38	ILE	4.1
39	RT	112	ARG	4.1
30	RG	109	VAL	4.1
45	RZ	69	THR	4.1
1	QA	1048	G	4.1
39	RT	1	MET	4.1
1	XA	1028(A)	C	4.1
2	QB	143	GLU	4.1
11	XK	30	VAL	4.1
36	RQ	25	ASP	4.1
7	QG	41	ARG	4.1
8	XH	2	LEU	4.1
25	RA	2794	C	4.1
25	YA	2143	C	4.1
31	RH	36	PRO	4.1
1	XA	196	A	4.1
25	RA	918	A	4.1
31	RH	45	VAL	4.1
50	R4	34	GLU	4.1
25	YA	2477	C	4.1
36	YQ	80	GLU	4.0
30	RG	88	ILE	4.0
30	RG	90	LEU	4.0
55	Y9	17	ILE	4.0
1	XA	101	A	4.0

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Mol	Chain	Res	Type	RSRZ
25	YA	1110	G	4.0
25	YA	2158	A	4.0
25	YA	2182	G	4.0
25	RA	2150	U	4.0
19	QS	64	GLU	4.0
19	QS	75	ALA	4.0
7	XG	81	GLY	4.0
30	YG	155	MET	4.0
36	YQ	140	ALA	4.0
4	XD	7	PRO	4.0
19	QS	3	ARG	4.0
52	R6	21	TYR	4.0
54	Y8	64	TYR	4.0
25	RA	2629	A	4.0
25	YA	2156	G	4.0
36	RQ	140	ALA	4.0
9	XI	126	SER	4.0
25	RA	917	A	4.0
30	RG	53	LEU	4.0
38	RS	32	LEU	4.0
1	QA	1202	G	4.0
54	R8	39	LYS	4.0
1	XA	222	U	4.0
25	RA	899	A	4.0
30	RG	21	ARG	4.0
45	YZ	167	PRO	4.0
7	QG	2	ALA	4.0
1	QA	221	C	4.0
25	YA	2794	C	4.0
25	YA	1177	A	4.0
8	XH	115	SER	4.0
9	QI	10	ARG	4.0
10	QJ	28	ARG	4.0
25	RA	270(M)	U	4.0
30	RG	68	PRO	4.0
1	QA	1321	C	3.9
1	XA	143	A	3.9
44	RY	91	GLU	3.9
9	QI	14	VAL	3.9
30	RG	28	VAL	3.9
9	QI	95	LYS	3.9
1	QA	1234	C	3.9

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Mol	Chain	Res	Type	RSRZ
1	XA	455	C	3.9
7	QG	45	ASP	3.9
25	RA	2163	C	3.9
20	XT	14	LYS	3.9
1	QA	1049	U	3.9
16	XP	1	MET	3.9
25	YA	1105	U	3.9
19	XS	2	PRO	3.9
11	XK	124	LYS	3.9
19	QS	52	TYR	3.9
1	XA	1397	C	3.9
25	YA	1109	C	3.9
1	XA	66	G	3.9
25	RA	1125	G	3.9
4	QD	33	MET	3.9
21	QU	3	LYS	3.9
52	Y6	21	TYR	3.9
25	RA	2803	C	3.9
5	QE	80	ILE	3.9
13	QM	121	LYS	3.9
1	QA	1020	U	3.9
10	XJ	40	LEU	3.9
31	RH	70	THR	3.9
28	RE	69	LYS	3.9
1	XA	631	G	3.9
10	QJ	9	ARG	3.9
1	QA	1226	C	3.9
1	XA	65	U	3.9
55	R9	29	ASN	3.9
1	XA	171	A	3.9
1	XA	389	A	3.9
17	QQ	97	SER	3.9
12	QL	64	TYR	3.9
1	QA	1116	C	3.9
30	RG	115	ARG	3.9
8	XH	4	ASP	3.9
1	XA	162	A	3.9
25	RA	2156	G	3.9
25	RA	2166	G	3.9
30	RG	180	PHE	3.9
4	XD	42	GLN	3.9
9	QI	75	ASP	3.9

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Mol	Chain	Res	Type	RSRZ
30	RG	143	GLU	3.9
26	RB	59	A	3.9
25	RA	2751	G	3.9
9	QI	123	PRO	3.8
31	RH	123	PHE	3.8
38	RS	33	LYS	3.8
3	QC	190	ARG	3.8
10	XJ	24	VAL	3.8
25	YA	1847	A	3.8
1	QA	1124	G	3.8
9	QI	7	THR	3.8
12	XL	127	GLU	3.8
19	QS	40	ILE	3.8
30	YG	39	ILE	3.8
50	Y4	18	CYS	3.8
1	QA	466	C	3.8
25	RA	2165	G	3.8
10	QJ	7	LYS	3.8
35	RP	79	ARG	3.8
1	QA	978	A	3.8
5	QE	82	VAL	3.8
7	XG	34	GLY	3.8
25	YA	1072	C	3.8
10	XJ	34	VAL	3.8
30	RG	94	LEU	3.8
52	R6	34	LEU	3.8
31	RH	111	HIS	3.8
50	R4	51	ASP	3.8
55	Y9	26	ILE	3.8
8	QH	2	LEU	3.8
13	QM	10	PRO	3.8
31	RH	48	GLY	3.8
32	RI	59	ALA	3.8
19	XS	12	ASP	3.8
1	XA	1223	C	3.8
13	XM	3	ARG	3.8
35	YP	71	VAL	3.8
19	QS	35	SER	3.8
25	RA	1044	G	3.8
11	XK	29	ILE	3.8
54	R8	41	ILE	3.8
10	QJ	34	VAL	3.8

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Mol	Chain	Res	Type	RSRZ
38	YS	2	ALA	3.8
51	Y5	2	ALA	3.8
19	XS	27	GLU	3.8
2	QB	233	SER	3.8
1	XA	1222	G	3.8
3	XC	190	ARG	3.8
9	QI	17	VAL	3.8
13	QM	15	VAL	3.8
1	QA	1092	A	3.8
1	QA	1051	C	3.8
30	RG	77	ILE	3.8
55	Y9	10	ILE	3.8
25	RA	1091	G	3.8
47	Y1	97	LEU	3.8
1	QA	112	G	3.7
1	XA	1094	G	3.7
10	QJ	99	LYS	3.7
17	XQ	45	HIS	3.7
9	QI	52	ALA	3.7
10	QJ	43	ARG	3.7
31	RH	59	ARG	3.7
50	R4	65	ASP	3.7
14	QN	39	LEU	3.7
15	QO	2	PRO	3.7
35	RP	139	LYS	3.7
7	XG	4	ARG	3.7
1	QA	1117	G	3.7
25	RA	2158	A	3.7
25	RA	2411	A	3.7
1	QA	88	C	3.7
25	RA	2140	C	3.7
44	RY	92	ASN	3.7
31	RH	32	GLU	3.7
31	RH	38	SER	3.7
52	Y6	41	PRO	3.7
30	RG	153	ARG	3.7
13	XM	8	GLU	3.7
14	QN	38	GLY	3.7
31	RH	53	GLU	3.7
10	QJ	65	LEU	3.7
30	YG	34	LEU	3.7
11	XK	12	ARG	3.7

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Mol	Chain	Res	Type	RSRZ
21	XU	14	TRP	3.7
1	QA	1214	C	3.7
10	XJ	95	GLU	3.7
4	XD	167	GLY	3.7
14	QN	9	LYS	3.7
30	YG	54	GLU	3.7
9	XI	15	ALA	3.7
25	YA	2180	U	3.7
19	QS	15	LEU	3.7
5	QE	94	ALA	3.7
30	YG	135	LEU	3.7
25	RA	1113	U	3.7
7	QG	36	LYS	3.7
36	RQ	104	PHE	3.7
1	QA	1050	G	3.7
3	QC	127	ARG	3.7
30	RG	40	ASN	3.7
40	RU	66	ASN	3.7
1	QA	961	U	3.7
2	XB	165	VAL	3.7
52	Y6	52	VAL	3.7
13	XM	43	THR	3.7
13	XM	103	THR	3.7
2	XB	48	MET	3.7
12	QL	23	LYS	3.7
17	QQ	100	LYS	3.7
10	XJ	54	PHE	3.7
22	XV	20	U	3.7
31	RH	95	ARG	3.7
1	QA	1093	A	3.7
19	XS	67	VAL	3.7
7	QG	34	GLY	3.6
30	YG	42	GLY	3.6
22	QV	9	G	3.6
13	QM	42	ALA	3.6
1	XA	172	A	3.6
10	XJ	72	VAL	3.6
35	YP	108	LYS	3.6
5	QE	24	ARG	3.6
19	XS	38	SER	3.6
2	XB	133	LYS	3.6
1	XA	224	C	3.6

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Mol	Chain	Res	Type	RSRZ
27	YD	33	LEU	3.6
1	QA	89	U	3.6
1	QA	1025	U	3.6
20	QT	70	SER	3.6
25	YA	1094	U	3.6
31	RH	94	TYR	3.6
25	RA	2795	G	3.6
2	XB	96	ARG	3.6
12	QL	28	LYS	3.6
17	QQ	65	ILE	3.6
30	RG	99	MET	3.6
3	QC	198	VAL	3.6
25	RA	879	G	3.6
1	QA	959	A	3.6
25	YA	1536	A	3.6
31	RH	21	PRO	3.6
36	RQ	105	GLU	3.6
51	Y5	52	TYR	3.6
1	XA	197	A	3.6
25	RA	920	G	3.6
25	RA	1460	A	3.6
31	RH	155	SER	3.6
30	RG	113	ARG	3.6
52	R6	44	ARG	3.6
9	QI	8	GLY	3.6
13	QM	19	LEU	3.6
10	XJ	6	ILE	3.6
38	RS	35	ILE	3.6
8	XH	116	LYS	3.6
9	XI	124	GLN	3.6
30	RG	116	ASP	3.6
50	R4	39	CYS	3.6
31	RH	54	ARG	3.6
10	QJ	62	HIS	3.6
1	QA	1128	C	3.6
1	XA	977	A	3.6
1	XA	983	A	3.6
12	XL	28	LYS	3.6
30	RG	158	ALA	3.6
55	Y9	33	LYS	3.6
11	XK	90	GLY	3.6
30	RG	11	TYR	3.6

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Mol	Chain	Res	Type	RSRZ
1	QA	951	G	3.6
54	Y8	34	TRP	3.6
14	XN	60	SER	3.6
30	YG	88	ILE	3.6
39	RT	37	GLY	3.6
1	QA	1130	A	3.6
39	YT	115	ARG	3.6
55	R9	31	LYS	3.6
10	QJ	73	ASP	3.6
20	XT	11	SER	3.6
21	XU	9	ARG	3.5
52	R6	18	ARG	3.5
25	RA	2177	C	3.5
1	XA	353	A	3.5
13	QM	39	ILE	3.5
1	QA	1283	G	3.5
10	XJ	21	GLN	3.5
10	XJ	33	GLN	3.5
17	XQ	93	GLN	3.5
19	XS	71	LEU	3.5
26	RB	5	C	3.5
46	R0	2	ALA	3.5
1	QA	1053	G	3.5
19	QS	76	PRO	3.5
25	RA	2804	C	3.5
17	XQ	99	SER	3.5
9	QI	102	LEU	3.5
31	RH	88	LEU	3.5
21	XU	5	ASP	3.5
4	QD	18	LYS	3.5
16	XP	6	LEU	3.5
17	QQ	71	PHE	3.5
25	RA	1090	U	3.5
1	QA	993	G	3.5
50	Y4	31	ILE	3.5
55	R9	28	GLU	3.5
25	RA	270(L)	U	3.5
31	RH	125	VAL	3.5
11	XK	87	THR	3.5
1	XA	1003	G	3.5
13	XM	2	ALA	3.5
25	YA	1176	G	3.5

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Mol	Chain	Res	Type	RSRZ
54	R8	29	LYS	3.5
54	Y8	29	LYS	3.5
1	QA	1201	A	3.5
30	RG	92	VAL	3.5
2	XB	16	HIS	3.5
5	QE	45	PHE	3.5
10	XJ	28	ARG	3.5
25	RA	546	C	3.5
25	YA	2190	G	3.5
52	R6	36	LEU	3.5
25	RA	896	A	3.5
34	RO	1	MET	3.5
35	RP	87	ASP	3.5
52	R6	27	LYS	3.5
50	R4	9	LEU	3.5
1	XA	1362(A)	C	3.5
4	QD	25	ARG	3.5
10	QJ	36	GLY	3.5
14	QN	29	ARG	3.5
1	XA	1236	A	3.5
17	XQ	63	ARG	3.5
1	QA	1037	C	3.4
1	XA	1028(B)	C	3.4
13	QM	5	ALA	3.5
25	YA	1104	C	3.4
25	RA	2101	G	3.4
25	RA	2765	A	3.4
50	Y4	40	HIS	3.4
1	QA	1018	C	3.4
1	XA	1006	C	3.4
32	RI	86	THR	3.4
52	Y6	7	ILE	3.4
1	QA	81	G	3.4
5	XE	133	TYR	3.4
9	QI	5	TYR	3.4
10	XJ	43	ARG	3.4
40	RU	92	ARG	3.4
30	RG	82	LEU	3.4
25	YA	1528	A	3.4
25	RA	2833	G	3.4
55	R9	21	GLY	3.4
8	QH	116	LYS	3.4

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Mol	Chain	Res	Type	RSRZ
20	QT	60	GLU	3.4
20	XT	8	ARG	3.4
38	RS	13	ARG	3.4
2	QB	240	GLN	3.4
1	QA	430	A	3.4
4	QD	83	SER	3.4
4	XD	156	GLU	3.4
44	RY	52	SER	3.4
45	RZ	149	SER	3.4
25	RA	2189	U	3.4
5	QE	20	GLN	3.4
44	RY	89	PHE	3.4
25	RA	654	A	3.4
25	YA	2100	G	3.4
25	YA	2153	G	3.4
22	QV	47	U	3.4
1	QA	1007	C	3.4
25	YA	277	C	3.4
1	QA	1235	U	3.4
25	RA	860	U	3.4
1	QA	1353	G	3.4
45	YZ	130	PRO	3.4
4	QD	73	ARG	3.4
20	QT	79	ARG	3.4
30	RG	37	VAL	3.4
30	RG	46	ALA	3.4
30	RG	182	LYS	3.4
30	RG	112	PRO	3.4
44	RY	87	LYS	3.4
1	QA	1249	C	3.4
1	XA	351	G	3.4
4	QD	28	SER	3.4
9	QI	111	ARG	3.4
10	QJ	66	ARG	3.4
16	XP	71	ARG	3.4
25	RA	1111	A	3.4
1	XA	177	C	3.4
25	RA	2474	C	3.4
51	Y5	54	GLY	3.4
25	YA	2793	G	3.4
4	QD	13	ARG	3.4
31	RH	19	VAL	3.3

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Mol	Chain	Res	Type	RSRZ
25	RA	12	U	3.3
50	R4	29	PRO	3.3
16	QP	76	GLN	3.3
39	RT	95	ARG	3.3
35	RP	30	THR	3.3
25	RA	862	G	3.3
2	XB	214	ILE	3.3
44	RY	55	TYR	3.3
20	QT	101	GLY	3.3
30	RG	54	GLU	3.3
11	XK	28	THR	3.3
20	XT	25	ARG	3.3
20	QT	103	GLY	3.3
25	YA	273	G	3.3
30	YG	97	ASP	3.3
10	QJ	40	LEU	3.3
19	QS	5	LEU	3.3
42	YW	113	LYS	3.3
2	QB	33	TYR	3.3
10	XJ	98	ILE	3.3
1	QA	960	U	3.3
1	QA	1024	G	3.3
1	XA	95	G	3.3
19	QS	36	ARG	3.3
31	RH	158	HIS	3.3
36	RQ	6	ARG	3.3
1	XA	151	A	3.3
9	QI	62	TYR	3.3
19	QS	13	ASP	3.3
25	RA	2791	C	3.3
28	RE	187	ALA	3.3
3	QC	194	GLY	3.3
1	QA	1269	A	3.3
1	XA	42	G	3.3
1	XA	949	A	3.3
1	XA	951	G	3.3
25	YA	11	G	3.3
45	RZ	50	GLN	3.3
22	QV	8	U	3.3
35	RP	27	HIS	3.3
42	RW	113	LYS	3.3
20	QT	83	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
1	QA	1236	A	3.3
10	QJ	12	ASP	3.3
25	RA	864	G	3.3
25	RA	2190	G	3.3
9	QI	13	ALA	3.3
45	RZ	176	PRO	3.3
50	R4	47	GLN	3.3
3	QC	2	GLY	3.3
13	XM	122	LYS	3.3
21	QU	4	GLY	3.3
25	RA	2268	A	3.3
25	RA	2790	A	3.3
53	Y7	48	LYS	3.3
1	QA	1047	G	3.3
1	XA	1221	G	3.3
5	QE	154	GLY	3.3
5	QE	130	ASN	3.3
1	XA	144	G	3.3
1	XA	180	U	3.3
1	QA	1284	C	3.3
1	XA	1018	C	3.3
6	XF	64	GLN	3.3
37	RR	91	GLN	3.3
50	Y4	15	ILE	3.3
13	XM	53	VAL	3.3
31	RH	76	VAL	3.3
1	XA	1016	A	3.2
16	XP	41	PRO	3.2
25	YA	1848	A	3.2
55	Y9	19	ARG	3.2
2	QB	41	ILE	3.2
28	YE	187	ALA	3.2
35	YP	69	GLY	3.2
1	QA	1043	C	3.2
1	QA	1200	C	3.2
1	QA	1322	C	3.2
1	XA	191	G	3.2
1	XA	610	G	3.2
30	RG	62	LEU	3.2
44	RY	79	CYS	3.2
2	QB	229	VAL	3.2
35	RP	76	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
1	XA	134	A	3.2
1	XA	1046	A	3.2
4	QD	6	GLY	3.2
25	RA	901	A	3.2
21	XU	21	TYR	3.2
1	XA	1028	C	3.2
25	RA	2630	G	3.2
4	QD	40	PRO	3.2
10	QJ	39	PRO	3.2
10	XJ	55	LYS	3.2
38	RS	93	LYS	3.2
29	YF	200	GLU	3.2
1	QA	113	G	3.2
1	QA	1323	G	3.2
1	XA	105	G	3.2
20	XT	105	SER	3.2
25	RA	1046	A	3.2
25	YA	229	A	3.2
4	QD	69	GLY	3.2
13	XM	4	ILE	3.2
19	XS	78	ARG	3.2
32	YI	84	GLY	3.2
17	XQ	71	PHE	3.2
1	QA	947	G	3.2
35	RP	64	LYS	3.2
3	QC	6	HIS	3.2
25	RA	2733	A	3.2
25	YA	1048	A	3.2
44	RY	57	GLN	3.2
47	Y1	36	GLY	3.2
1	XA	263	A	3.2
19	QS	61	TYR	3.2
1	XA	998(A)	C	3.2
35	RP	75	ILE	3.2
28	YE	56	PRO	3.2
19	QS	37	ARG	3.2
32	YI	61	ARG	3.2
20	XT	101	GLY	3.2
10	XJ	13	HIS	3.2
16	XP	13	HIS	3.2
19	QS	47	HIS	3.2
20	QT	29	LYS	3.2

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Mol	Chain	Res	Type	RSRZ
22	QV	49	G	3.2
31	RH	74	ASN	3.2
7	QG	108	ALA	3.2
9	QI	28	VAL	3.2
20	QT	88	VAL	3.2
31	RH	73	ALA	3.2
1	XA	1364	U	3.2
19	XS	34	TRP	3.2
1	XA	727	G	3.2
20	XT	69	GLY	3.2
31	YH	5	GLY	3.2
19	XS	77	THR	3.2
40	RU	117	GLN	3.2
1	QA	985	C	3.2
1	XA	186(A)	C	3.2
52	Y6	10	LEU	3.2
52	Y6	19	ARG	3.2
31	RH	145	ALA	3.2
54	R8	35	GLN	3.2
54	Y8	35	GLN	3.2
1	QA	428	G	3.2
25	RA	273(A)	G	3.2
25	RA	2793	G	3.2
45	RZ	55	HIS	3.2
1	XA	754	C	3.1
19	XS	76	PRO	3.1
25	RA	1018	C	3.1
55	R9	13	LYS	3.1
20	XT	85	MET	3.1
13	XM	54	VAL	3.1
15	QO	26	GLU	3.1
20	XT	60	GLU	3.1
54	R8	37	SER	3.1
37	RR	5	LYS	3.1
55	Y9	20	HIS	3.1
9	QI	85	LEU	3.1
12	QL	94	PRO	3.1
25	RA	887	A	3.1
1	XA	153	C	3.1
1	XA	173	U	3.1
1	XA	1322	C	3.1
20	QT	56	MET	3.1

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Mol	Chain	Res	Type	RSRZ
25	RA	2104	G	3.1
25	RA	2345	G	3.1
14	XN	18	VAL	3.1
3	XC	15	THR	3.1
1	QA	315	A	3.1
1	XA	978	A	3.1
1	XA	186	C	3.1
1	XA	950	U	3.1
4	XD	84	LYS	3.1
30	YG	37	VAL	3.1
25	YA	2861	G	3.1
50	R4	25	TYR	3.1
17	XQ	98	LEU	3.1
12	QL	63	GLY	3.1
4	QD	145	GLU	3.1
50	Y4	39	CYS	3.1
25	RA	2108	C	3.1
25	YA	2142	C	3.1
26	RB	28	C	3.1
3	QC	17	ASP	3.1
25	RA	1154	G	3.1
31	RH	8	PRO	3.1
16	XP	76	GLN	3.1
4	XD	154	ASN	3.1
5	XE	129	ILE	3.1
16	XP	19	ILE	3.1
25	YA	1545(A)	A	3.1
30	YG	161	THR	3.1
54	R8	46	ARG	3.1
1	QA	310	G	3.1
1	XA	1036	G	3.1
2	XB	188	ALA	3.1
4	XD	23	GLY	3.1
31	RH	72	ILE	3.1
1	QA	1240	U	3.1
4	QD	115	ARG	3.1
35	RP	71	VAL	3.1
1	QA	1149	C	3.1
1	XA	315	A	3.1
25	RA	2188	C	3.1
27	RD	40	THR	3.1
31	RH	30	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
3	QC	186	PHE	3.1
4	QD	35	ARG	3.1
25	YA	2155	G	3.1
2	QB	19	HIS	3.1
25	RA	2144	U	3.1
4	QD	30	LYS	3.1
36	RQ	31	ASP	3.1
30	YG	69	ALA	3.1
1	XA	453	A	3.1
4	QD	4	TYR	3.1
1	XA	466	C	3.1
16	XP	80	PHE	3.1
44	RY	50	ARG	3.1
50	R4	57	GLU	3.1
1	QA	266	G	3.1
25	RA	361	G	3.1
25	RA	2523	G	3.1
52	Y6	30	THR	3.1
1	XA	1004	A	3.1
19	XS	70	LYS	3.1
26	RB	6	C	3.1
17	XQ	83	ASP	3.1
19	QS	53	ASN	3.1
1	QA	1232	U	3.1
1	XA	1047	G	3.1
2	QB	80	ILE	3.1
10	XJ	93	GLY	3.1
22	QV	12	G	3.1
25	RA	2157	G	3.1
32	RI	54	GLN	3.1
36	RQ	21	THR	3.1
44	YY	102	CYS	3.1
16	XP	83	GLU	3.1
52	Y6	15	GLU	3.1
1	QA	1115	C	3.1
1	QA	1363	A	3.1
1	XA	1041	A	3.1
39	RT	116	ALA	3.1
36	RQ	89	ASN	3.0
4	QD	21	LEU	3.0
20	QT	72	LEU	3.0
20	XT	24	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
47	Y1	95	LEU	3.0
1	QA	1288	A	3.0
1	QA	1324	A	3.0
1	XA	149	A	3.0
2	QB	163	PHE	3.0
9	QI	106	ALA	3.0
25	RA	2892	A	3.0
36	RQ	88	GLY	3.0
38	RS	29	PHE	3.0
4	XD	24	GLU	3.0
54	R8	61	LEU	3.0
12	XL	23	LYS	3.0
14	XN	5	ALA	3.0
45	YZ	121	HIS	3.0
1	XA	115	G	3.0
1	XA	218	C	3.0
5	XE	125	SER	3.0
10	XJ	59	SER	3.0
30	YG	93	THR	3.0
31	RH	106	THR	3.0
13	QM	120	LYS	3.0
52	Y6	25	LYS	3.0
2	QB	70	PHE	3.0
14	QN	34	TYR	3.0
48	Y2	11	GLU	3.0
1	QA	176	C	3.0
2	XB	11	LEU	3.0
25	RA	2747	G	3.0
25	YA	2124	G	3.0
28	RE	143	ASN	3.0
45	YZ	142	SER	3.0
1	QA	1067	A	3.0
1	QA	1242	C	3.0
26	RB	31	C	3.0
1	QA	1302	U	3.0
4	QD	80	GLU	3.0
9	QI	47	LEU	3.0
10	QJ	80	LYS	3.0
1	XA	269	C	3.0
9	QI	83	ARG	3.0
1	QA	171	A	3.0
1	XA	313	A	3.0

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Mol	Chain	Res	Type	RSRZ
1	XA	380	G	3.0
1	XA	1048	G	3.0
14	QN	7	ILE	3.0
25	RA	1114	G	3.0
25	RA	2372	G	3.0
46	R0	54	GLY	3.0
32	RI	144	VAL	3.0
31	RH	85	LYS	3.0
1	XA	43	C	3.0
1	XA	984	C	3.0
1	XA	1234	C	3.0
3	QC	7	PRO	3.0
25	YA	1888	G	3.0
9	XI	20	ARG	3.0
16	XP	75	ARG	3.0
9	QI	11	LYS	3.0
31	YH	155	SER	3.0
11	XK	31	THR	3.0
30	YG	139	LEU	3.0
1	QA	998(A)	C	3.0
1	XA	345	C	3.0
1	XA	1049	U	3.0
46	Y0	57	PHE	3.0
25	RA	900	A	3.0
1	QA	409	G	3.0
1	XA	388	G	3.0
30	YG	129	GLY	3.0
45	RZ	92	SER	3.0
19	QS	16	LEU	3.0
30	RG	162	THR	3.0
37	RR	2	ARG	3.0
45	RZ	155	LEU	3.0
52	R6	30	THR	3.0
1	QA	1090	U	3.0
7	QG	113	GLU	3.0
13	QM	100	GLY	3.0
1	XA	51	A	3.0
11	XK	81	ASP	3.0
25	RA	1444(A)	A	3.0
25	RA	1469	A	3.0
17	QQ	66	SER	3.0
1	XA	1034	G	3.0

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Mol	Chain	Res	Type	RSRZ
8	XH	3	THR	3.0
25	YA	271(A)	C	3.0
25	RA	861	A	3.0
35	RP	35	HIS	3.0
40	RU	69	CYS	3.0
25	RA	1034	G	2.9
25	RA	1449(A)	G	2.9
25	RA	1863	G	2.9
31	RH	108	GLY	2.9
10	XJ	70	ARG	2.9
31	RH	6	ARG	2.9
1	QA	1091	U	2.9
2	XB	15	VAL	2.9
7	XG	33	ASP	2.9
1	XA	1321	C	2.9
14	QN	32	SER	2.9
12	QL	31	PRO	2.9
14	QN	26	ARG	2.9
30	RG	129	GLY	2.9
30	RG	165	THR	2.9
44	YY	99	CYS	2.9
30	YG	172	LEU	2.9
1	XA	142	G	2.9
1	XA	1233	G	2.9
25	RA	226	G	2.9
25	YA	1108	U	2.9
15	XO	88	ARG	2.9
31	RH	110	SER	2.9
44	RY	2	ARG	2.9
4	QD	112	VAL	2.9
26	RB	58	A	2.9
4	XD	168	ARG	2.9
25	RA	2109	U	2.9
30	RG	175	LEU	2.9
10	XJ	9	ARG	2.9
1	XA	1085	U	2.9
4	QD	45	GLN	2.9
9	XI	65	VAL	2.9
25	RA	10	G	2.9
25	RA	2141	G	2.9
30	YG	80	PHE	2.9
36	RQ	133	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
46	R0	11	ARG	2.9
50	Y4	52	THR	2.9
1	XA	186(B)	C	2.9
12	XL	91	LYS	2.9
30	YG	137	GLU	2.9
8	QH	104	ARG	2.9
23	QY	32	U	2.9
28	RE	79	ARG	2.9
45	RZ	169	GLU	2.9
1	XA	106	C	2.9
1	XA	354	G	2.9
8	XH	127	LEU	2.9
25	RA	1045	A	2.9
31	YH	134	SER	2.9
32	YI	25	TYR	2.9
51	R5	2	ALA	2.9
1	QA	1095	U	2.9
2	QB	234	PRO	2.9
54	R8	34	TRP	2.9
10	XJ	66	ARG	2.9
31	RH	87	LEU	2.9
1	XA	74	C	2.9
1	XA	219	C	2.9
14	QN	30	ALA	2.9
47	Y1	96	LYS	2.9
1	QA	79	G	2.9
25	RA	1448	G	2.9
30	RG	178	PHE	2.9
1	QA	222	U	2.9
25	RA	2757	A	2.9
37	RR	118	GLU	2.9
30	RG	95	ARG	2.9
30	YG	154	GLY	2.9
2	QB	5	ILE	2.9
10	XJ	7	LYS	2.9
19	QS	10	PHE	2.9
1	QA	1097	C	2.9
31	RH	112	PRO	2.9
45	RZ	121	HIS	2.9
25	RA	2153	G	2.9
30	YG	74	LYS	2.9
1	XA	729	A	2.9

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Mol	Chain	Res	Type	RSRZ
30	RG	63	ILE	2.9
50	R4	60	GLN	2.9
50	Y4	55	ARG	2.9
4	XD	2	GLY	2.9
45	YZ	160	GLY	2.9
1	XA	170	U	2.9
25	YA	270(Z)	U	2.9
1	QA	309	G	2.9
25	RA	1190	G	2.9
25	RA	1470	G	2.9
10	XJ	80	LYS	2.9
20	QT	64	ASP	2.9
38	RS	60	GLY	2.9
12	QL	62	SER	2.8
19	QS	4	SER	2.8
1	XA	99	C	2.8
25	YA	1047	G	2.8
25	YA	1054	A	2.8
49	R3	2	PRO	2.8
28	RE	1	MET	2.8
1	QA	950	U	2.8
47	R1	47	GLN	2.8
50	Y4	34	GLU	2.8
1	XA	369	C	2.8
25	RA	1121	C	2.8
55	Y9	27	CYS	2.8
9	QI	105	ASP	2.8
20	XT	104	LEU	2.8
30	RG	24	GLY	2.8
45	YZ	155	LEU	2.8
51	Y5	58	LEU	2.8
10	QJ	37	PRO	2.8
14	QN	56	VAL	2.8
19	QS	11	VAL	2.8
1	QA	1280	A	2.8
14	XN	57	ARG	2.8
25	RA	863	A	2.8
36	RQ	83	MET	2.8
1	XA	1033	G	2.8
44	YY	55	TYR	2.8
19	XS	15	LEU	2.8
9	XI	9	ARG	2.8

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Mol	Chain	Res	Type	RSRZ
25	RA	267	C	2.8
25	YA	1464	C	2.8
20	XT	21	LYS	2.8
3	QC	154	SER	2.8
17	XQ	44	ALA	2.8
1	XA	104	G	2.8
1	XA	477	G	2.8
15	QO	88	ARG	2.8
15	XO	64	ARG	2.8
21	XU	2	GLY	2.8
26	RB	61	G	2.8
31	RH	7	LEU	2.8
1	QA	1358	U	2.8
19	QS	12	ASP	2.8
1	QA	1038	C	2.8
25	YA	270(D)	C	2.8
3	QC	184	TYR	2.8
1	XA	349	A	2.8
19	QS	41	VAL	2.8
25	RA	402	A	2.8
25	RA	1050	A	2.8
45	YZ	120	ILE	2.8
2	XB	12	GLU	2.8
10	QJ	68	HIS	2.8
25	YA	2792	G	2.8
40	RU	2	PRO	2.8
1	XA	366	C	2.8
7	XG	3	ARG	2.8
20	XT	67	ALA	2.8
30	RG	151	ALA	2.8
3	QC	196	LEU	2.8
10	XJ	16	LEU	2.8
14	XN	15	LYS	2.8
30	YG	100	TRP	2.8
35	RP	16	ARG	2.8
15	XO	61	GLY	2.8
16	QP	10	GLY	2.8
19	QS	82	GLY	2.8
20	XT	62	LEU	2.8
30	RG	42	GLY	2.8
35	RP	70	GLN	2.8
7	QG	26	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
30	RG	141	PHE	2.8
39	YT	21	GLU	2.8
1	QA	1278	U	2.8
13	XM	97	PRO	2.8
1	QA	218	C	2.8
1	XA	1017	G	2.8
16	QP	9	PHE	2.8
25	RA	1124	C	2.8
4	QD	49	ARG	2.8
12	XL	89	ARG	2.8
16	XP	67	THR	2.8
39	RT	93	ARG	2.8
1	XA	192	U	2.8
4	XD	97	LEU	2.8
19	XS	52	TYR	2.8
9	QI	31	GLN	2.8
1	XA	176	C	2.8
17	XQ	101	ARG	2.8
25	YA	2103	C	2.8
15	QO	89	GLY	2.8
50	Y4	12	ALA	2.8
16	QP	48	TRP	2.8
25	RA	1048	A	2.8
15	QO	68	ARG	2.8
20	QT	25	ARG	2.8
20	XT	58	LYS	2.8
37	RR	6	SER	2.8
1	XA	193	C	2.8
9	QI	119	ALA	2.8
38	RS	55	ALA	2.8
1	QA	1370	G	2.8
1	XA	113	G	2.8
52	R6	48	VAL	2.8
12	XL	7	ILE	2.8
9	QI	29	ASN	2.8
30	RG	132	ASN	2.8
1	XA	979	C	2.8
9	QI	93	ARG	2.8
40	RU	76	TYR	2.8
10	QJ	101	VAL	2.8
26	RB	4	C	2.8
7	XG	52	GLU	2.7

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Mol	Chain	Res	Type	RSRZ
54	R8	40	GLU	2.7
1	QA	95	G	2.7
4	XD	181	MET	2.7
25	RA	1122	G	2.7
25	RA	2382	G	2.7
1	XA	179	A	2.7
9	QI	81	ILE	2.7
40	RU	62	ILE	2.7
45	YZ	159	PRO	2.7
1	XA	578	C	2.7
15	XO	68	ARG	2.7
25	RA	270(O)	U	2.7
51	Y5	55	ARG	2.7
1	XA	428	G	2.7
32	RI	53	ALA	2.7
13	XM	88	ARG	2.7
13	XM	104	ARG	2.7
14	QN	17	LYS	2.7
19	XS	37	ARG	2.7
1	QA	64	G	2.7
1	QA	1068	G	2.7
5	XE	135	THR	2.7
17	QQ	63	ARG	2.7
25	YA	270(B)	A	2.7
26	RB	29	A	2.7
38	RS	30	ARG	2.7
44	RY	88	LYS	2.7
41	YV	101	GLY	2.7
44	RY	102	CYS	2.7
45	RZ	115	GLY	2.7
25	RA	2107	C	2.7
20	XT	74	LYS	2.7
44	YY	2	ARG	2.7
52	R6	19	ARG	2.7
14	XN	6	LEU	2.7
3	QC	167	TRP	2.7
1	XA	357	G	2.7
25	RA	2543	G	2.7
25	RA	2722	G	2.7
25	YA	273(A)	G	2.7
25	YA	1085	A	2.7
31	RH	142	GLY	2.7

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Mol	Chain	Res	Type	RSRZ
16	QP	19	ILE	2.7
16	XP	12	LYS	2.7
19	QS	28	LYS	2.7
31	RH	132	ARG	2.7
10	XJ	37	PRO	2.7
9	QI	18	PHE	2.7
5	QE	47	LYS	2.7
47	R1	26	ARG	2.7
25	YA	1103	A	2.7
1	QA	146	G	2.7
2	QB	232	PRO	2.7
9	XI	31	GLN	2.7
18	XR	63	GLN	2.7
45	YZ	166	SER	2.7
3	QC	165	THR	2.7
5	QE	129	ILE	2.7
27	YD	237	GLU	2.7
1	XA	59	A	2.7
1	XA	262	A	2.7
25	YA	896	A	2.7
25	YA	2476	A	2.7
25	RA	1388	G	2.7
25	RA	2290	G	2.7
35	YP	16	ARG	2.7
35	YP	118	GLY	2.7
39	YT	56	GLY	2.7
50	Y4	59	PHE	2.7
1	QA	173	U	2.7
1	QA	1127	G	2.7
8	QH	4	ASP	2.7
11	XK	42	TRP	2.7
52	R6	32	ASN	2.7
25	YA	889	C	2.7
25	YA	2402	C	2.7
50	Y4	25	TYR	2.7
21	QU	20	LYS	2.7
30	RG	26	GLN	2.7
38	RS	38	GLN	2.7
1	QA	1212	U	2.7
1	XA	992	U	2.7
36	YQ	136	ALA	2.7
1	QA	311	C	2.7

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Mol	Chain	Res	Type	RSRZ
1	QA	417	C	2.7
1	XA	190	G	2.7
1	XA	232	G	2.7
1	XA	1365	G	2.7
4	QD	46	LYS	2.7
12	QL	115	LYS	2.7
25	YA	2805	G	2.7
5	XE	64	ARG	2.7
51	R5	55	ARG	2.7
31	RH	44	VAL	2.7
14	XN	61	TRP	2.7
30	YG	131	TYR	2.7
10	XJ	17	ASP	2.7
25	RA	2167	U	2.7
31	RH	60	ARG	2.7
31	RH	105	LEU	2.7
50	R4	61	ARG	2.7
1	QA	42	G	2.7
1	QA	1108	G	2.7
1	QA	1233	G	2.7
1	QA	1387	G	2.7
1	XA	993	G	2.7
25	RA	2805	G	2.7
30	YG	160	VAL	2.7
31	RH	26	VAL	2.7
44	RY	22	GLY	2.7
10	XJ	64	GLU	2.7
14	XN	30	ALA	2.7
14	QN	57	ARG	2.6
1	QA	197	A	2.6
9	QI	68	GLY	2.6
22	XV	21	A	2.6
9	QI	109	VAL	2.6
35	RP	118	GLY	2.6
10	XJ	57	LYS	2.6
30	YG	84	LYS	2.6
7	QG	38	LEU	2.6
20	XT	83	ARG	2.6
28	YE	204	ALA	2.6
1	XA	657	G	2.6
51	R5	50	GLY	2.6
9	XI	110	GLU	2.6

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Mol	Chain	Res	Type	RSRZ
1	XA	201	C	2.6
1	XA	355	C	2.6
25	RA	366	C	2.6
25	YA	1463	C	2.6
16	QP	80	PHE	2.6
1	QA	46	G	2.6
1	QA	426	G	2.6
1	QA	570	G	2.6
3	QC	177	THR	2.6
22	QV	46	G	2.6
31	YH	135	GLY	2.6
50	Y4	20	ASN	2.6
4	QD	50	ARG	2.6
20	XT	23	ARG	2.6
39	YT	51	ARG	2.6
25	RA	1019	U	2.6
16	XP	15	PRO	2.6
30	YG	73	ALA	2.6
34	RO	30	ALA	2.6
25	RA	2477	C	2.6
31	YH	161	GLY	2.6
12	QL	52	LEU	2.6
45	RZ	146	ILE	2.6
47	Y1	35	THR	2.6
1	QA	939	G	2.6
1	QA	1125	U	2.6
1	QA	1156	G	2.6
1	XA	1031	G	2.6
1	XA	1219	U	2.6
1	XA	1353	G	2.6
1	QA	313	A	2.6
25	YA	878	A	2.6
30	YG	28	VAL	2.6
39	YT	133	GLU	2.6
35	RP	38	GLN	2.6
13	QM	90	LEU	2.6
40	RU	65	ILE	2.6
17	XQ	69	LYS	2.6
20	QT	21	LYS	2.6
39	YT	135	ALA	2.6
1	QA	223	U	2.6
2	QB	144	ARG	2.6

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Mol	Chain	Res	Type	RSRZ
4	QD	209	ARG	2.6
20	QT	86	ARG	2.6
25	RA	1081	U	2.6
1	XA	1050	G	2.6
2	QB	14	GLY	2.6
25	RA	273	G	2.6
1	XA	1039	C	2.6
11	XK	15	ALA	2.6
4	QD	125	HIS	2.6
25	RA	2113	U	2.6
4	QD	152	SER	2.6
17	XQ	16	GLN	2.6
55	R9	8	LYS	2.6
20	QT	22	ARG	2.6
30	RG	146	TYR	2.6
1	QA	1289	A	2.6
1	QA	1326	C	2.6
19	QS	51	VAL	2.6
36	RQ	112	GLU	2.6
4	QD	3	ARG	2.6
5	XE	89	ILE	2.6
35	RP	135	LEU	2.6
40	RU	58	ARG	2.6
2	QB	31	TYR	2.6
9	XI	125	TYR	2.6
55	Y9	14	CYS	2.6
1	QA	190	G	2.6
1	QA	1261	A	2.6
27	RD	35	LYS	2.6
1	XA	848	C	2.6
28	YE	79	ARG	2.6
21	XU	3	LYS	2.6
13	XM	106	ASN	2.6
13	QM	14	ARG	2.6
20	QT	85	MET	2.6
40	RU	60	LEU	2.6
52	Y6	47	THR	2.6
15	XO	62	GLN	2.6
22	XV	15	G	2.6
25	RA	1508	A	2.6
25	RA	1847	A	2.6
1	QA	427	U	2.6

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Mol	Chain	Res	Type	RSRZ
3	QC	160	ALA	2.6
4	XD	38	TYR	2.6
25	RA	1957	C	2.6
16	XP	35	LYS	2.6
31	RH	163	TYR	2.6
19	QS	26	GLY	2.6
4	QD	12	CYS	2.6
4	XD	118	ARG	2.6
30	YG	118	ARG	2.6
36	RQ	102	VAL	2.6
44	RY	3	VAL	2.6
45	YZ	148	ASP	2.6
4	QD	157	LEU	2.6
28	RE	56	PRO	2.6
44	YY	82	PRO	2.6
50	R4	40	HIS	2.6
15	QO	30	ALA	2.5
29	RF	166	ALA	2.5
1	QA	55	A	2.5
1	XA	356	A	2.5
1	XA	728	A	2.5
25	YA	529	A	2.5
27	RD	237	GLU	2.5
1	QA	1314	C	2.5
1	QA	1443	G	2.5
1	XA	1023	G	2.5
3	QC	195	VAL	2.5
9	XI	121	ARG	2.5
16	XP	28	ARG	2.5
25	RA	1500	G	2.5
25	RA	2100	G	2.5
28	RE	10	GLY	2.5
4	XD	135	LEU	2.5
40	RU	97	ASP	2.5
13	QM	50	GLU	2.5
35	RP	65	ARG	2.5
49	R3	48	GLU	2.5
9	XI	75	ASP	2.5
13	QM	96	LEU	2.5
1	QA	366	C	2.5
1	XA	178	C	2.5
12	XL	13	LYS	2.5

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Mol	Chain	Res	Type	RSRZ
15	QO	15	PHE	2.5
20	XT	29	LYS	2.5
20	XT	63	ILE	2.5
25	RA	2142	C	2.5
25	RA	1215	G	2.5
12	QL	73	GLU	2.5
27	RD	156	ALA	2.5
15	XO	60	VAL	2.5
20	QT	62	LEU	2.5
25	YA	270(L)	U	2.5
30	RG	80	PHE	2.5
1	QA	150	C	2.5
1	QA	1268	A	2.5
1	XA	1093	A	2.5
1	XA	1201	A	2.5
10	QJ	25	GLU	2.5
25	YA	1049	C	2.5
16	XP	82	GLN	2.5
1	QA	44	G	2.5
22	QV	64	G	2.5
25	RA	818	G	2.5
30	RG	70	VAL	2.5
11	XK	127	LYS	2.5
20	XT	81	LYS	2.5
31	RH	23	ARG	2.5
46	Y0	56	ASP	2.5
1	QA	1348	U	2.5
1	XA	114	U	2.5
25	YA	362	U	2.5
49	R3	60	GLU	2.5
11	XK	22	HIS	2.5
1	QA	195	A	2.5
1	QA	1244	C	2.5
11	QK	31	THR	2.5
13	QM	45	VAL	2.5
37	YR	19	ALA	2.5
41	RV	12	TYR	2.5
25	YA	1467	C	2.5
27	RD	33	LEU	2.5
35	RP	32	THR	2.5
30	RG	16	ARG	2.5
31	RH	97	ARG	2.5

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Mol	Chain	Res	Type	RSRZ
1	QA	925	G	2.5
1	QA	1023	G	2.5
25	RA	1191	G	2.5
26	RB	54	G	2.5
9	QI	12	GLU	2.5
29	RF	171	PRO	2.5
30	RG	124	SER	2.5
35	RP	119	GLU	2.5
1	QA	82	U	2.5
12	QL	51	ALA	2.5
25	YA	2406	U	2.5
1	QA	948	C	2.5
1	QA	1357	A	2.5
1	XA	393	A	2.5
1	XA	476	G	2.5
11	XK	20	TYR	2.5
3	XC	179	ARG	2.5
25	RA	30	G	2.5
26	RB	55	U	2.5
31	YH	152	ARG	2.5
40	YU	75	ASN	2.5
8	XH	126	LYS	2.5
1	QA	194	C	2.5
1	XA	67	C	2.5
1	XA	970	C	2.5
22	QV	21	A	2.5
25	RA	1751	C	2.5
51	Y5	59	GLU	2.5
16	XP	48	TRP	2.5
25	RA	101	G	2.5
25	YA	1929	G	2.5
33	RN	84	LYS	2.5
2	QB	15	VAL	2.5
4	QD	10	ARG	2.5
4	XD	6	GLY	2.5
30	YG	38	VAL	2.5
47	Y1	21	ARG	2.5
1	XA	140	A	2.5
5	XE	128	PRO	2.5
10	QJ	88	LEU	2.5
17	QQ	44	ALA	2.5
20	XT	53	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
25	RA	2381	C	2.5
54	Y8	61	LEU	2.5
25	YA	1545	A	2.5
38	YS	33	LYS	2.5
46	Y0	3	HIS	2.5
5	XE	130	ASN	2.5
36	RQ	1	MET	2.5
13	QM	105	THR	2.5
46	R0	10	THR	2.5
2	XB	7	VAL	2.5
12	QL	93	LEU	2.5
13	QM	87	TYR	2.5
24	QX	7	G	2.5
44	RY	18	GLY	2.5
2	XB	160	ASP	2.5
28	RE	41	LYS	2.5
45	RZ	177	PRO	2.5
1	XA	1306	A	2.5
25	YA	1508	A	2.5
30	YG	72	ARG	2.5
31	RH	124	GLU	2.5
11	XK	27	ASN	2.5
2	XB	187	LEU	2.5
31	RH	122	THR	2.5
4	XD	4	TYR	2.5
29	YF	166	ALA	2.5
1	QA	727	G	2.5
1	QA	1031	G	2.5
1	XA	1305	G	2.5
5	XE	122	GLU	2.5
25	RA	1461	G	2.5
25	RA	2182	G	2.5
26	RB	56	G	2.5
1	QA	1243	C	2.4
1	XA	130	A	2.4
12	QL	95	GLY	2.4
13	XM	96	LEU	2.4
14	QN	55	GLY	2.4
25	RA	953	A	2.4
25	YA	890	A	2.4
25	YA	2790	A	2.4
44	YY	103	GLY	2.4

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Mol	Chain	Res	Type	RSRZ
50	R4	38	LYS	2.4
52	Y6	29	ASN	2.4
36	RQ	65	PHE	2.4
9	XI	123	PRO	2.4
28	RE	54	GLN	2.4
30	YG	41	GLN	2.4
42	RW	92	ARG	2.4
31	RH	84	SER	2.4
1	QA	265	G	2.4
1	QA	1231	G	2.4
10	XJ	101	VAL	2.4
15	XO	89	GLY	2.4
21	XU	19	GLY	2.4
1	XA	381	C	2.4
25	YA	887	A	2.4
50	R4	20	ASN	2.4
22	QV	20	U	2.4
2	QB	12	GLU	2.4
3	QC	174	PRO	2.4
35	YP	72	PRO	2.4
14	QN	4	LYS	2.4
14	XN	9	LYS	2.4
52	R6	8	LYS	2.4
14	XN	31	ARG	2.4
21	XU	7	ARG	2.4
31	RH	164	TYR	2.4
36	RQ	59	ARG	2.4
17	QQ	93	GLN	2.4
31	RH	58	GLU	2.4
40	RU	89	GLU	2.4
45	RZ	145	GLU	2.4
25	RA	858	U	2.4
7	XG	55	GLY	2.4
9	QI	30	GLY	2.4
47	Y1	17	SER	2.4
31	RH	20	ALA	2.4
4	XD	158	ILE	2.4
44	YY	91	GLU	2.4
35	YP	68	GLN	2.4
1	XA	234	C	2.4
1	XA	843	U	2.4
25	RA	2130	U	2.4

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Mol	Chain	Res	Type	RSRZ
25	YA	270(C)	C	2.4
1	QA	1021	G	2.4
1	XA	622	A	2.4
1	XA	1005	A	2.4
1	XA	1182	G	2.4
2	QB	16	HIS	2.4
10	XJ	68	HIS	2.4
25	RA	654(U)	A	2.4
25	RA	1176	G	2.4
25	RA	2766	G	2.4
36	RQ	24	GLY	2.4
19	QS	85	LYS	2.4
30	YG	14	GLU	2.4
31	RH	167	GLU	2.4
51	R5	59	GLU	2.4
2	QB	11	LEU	2.4
2	QB	38	GLY	2.4
4	XD	40	PRO	2.4
13	QM	89	GLY	2.4
17	QQ	35	VAL	2.4
37	RR	7	GLY	2.4
45	RZ	167	PRO	2.4
1	QA	1066	C	2.4
1	XA	169	C	2.4
1	XA	952	U	2.4
16	XP	29	ASP	2.4
25	RA	1080	C	2.4
1	XA	1151	A	2.4
1	QA	198	G	2.4
16	XP	11	SER	2.4
25	RA	221	A	2.4
25	RA	223	A	2.4
25	YA	276	A	2.4
21	QU	13	ILE	2.4
35	YP	56	SER	2.4
7	QG	37	ASN	2.4
9	XI	27	THR	2.4
10	QJ	69	ASN	2.4
30	YG	40	ASN	2.4
31	RH	31	GLY	2.4
47	R1	78	LYS	2.4
30	YG	143	GLU	2.4

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Mol	Chain	Res	Type	RSRZ
35	RP	110	TYR	2.4
36	RQ	135	ASP	2.4
1	QA	1303	C	2.4
1	QA	1362	C	2.4
1	XA	620	C	2.4
2	QB	32	ILE	2.4
2	QB	130	ARG	2.4
10	XJ	4	ILE	2.4
12	QL	50	SER	2.4
19	QS	49	ILE	2.4
31	YH	63	SER	2.4
38	RS	27	SER	2.4
39	RT	129	ARG	2.4
12	QL	27	LEU	2.4
1	QA	852	G	2.4
1	QA	1181	G	2.4
1	XA	316	G	2.4
4	QD	41	GLY	2.4
9	QI	80	GLY	2.4
19	QS	9	VAL	2.4
25	YA	2523	G	2.4
2	QB	96	ARG	2.4
10	XJ	46	ARG	2.4
13	QM	11	ARG	2.4
13	QM	28	ALA	2.4
13	XM	94	ARG	2.4
19	QS	57	HIS	2.4
20	XT	16	HIS	2.4
31	RH	61	HIS	2.4
31	RH	65	HIS	2.4
35	RP	117	GLU	2.4
1	XA	314	C	2.4
1	XA	390	C	2.4
13	QM	65	LYS	2.4
25	RA	654(T)	C	2.4
9	QI	39	GLY	2.4
10	XJ	36	GLY	2.4
35	RP	68	GLN	2.4
1	QA	32	A	2.4
1	XA	611	A	2.4
10	XJ	47	PHE	2.4
25	YA	330	A	2.4

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Mol	Chain	Res	Type	RSRZ
54	R8	48	PHE	2.4
21	XU	23	PRO	2.4
2	QB	188	ALA	2.4
20	XT	22	ARG	2.4
28	RE	68	ALA	2.4
30	RG	163	ALA	2.4
30	YG	145	THR	2.4
31	RH	69	ARG	2.4
1	QA	973	G	2.4
1	QA	1361	G	2.4
1	XA	1323	G	2.4
1	XA	1331	G	2.4
7	QG	156	TRP	2.4
25	RA	1144	G	2.4
25	YA	275	G	2.4
13	QM	122	LYS	2.4
2	QB	146	GLN	2.4
1	QA	1109	C	2.4
13	QM	71	ARG	2.4
1	XA	1287	A	2.4
3	QC	199	LYS	2.4
31	RH	96	ALA	2.4
35	YP	64	LYS	2.4
44	RY	49	VAL	2.4
1	QA	1148	U	2.4
1	QA	1405	G	2.4
2	QB	21	ARG	2.4
3	XC	79	ARG	2.4
25	RA	1525	G	2.4
25	YA	1056	G	2.4
31	RH	138	LYS	2.4
44	RY	47	LYS	2.4
45	RZ	68	PRO	2.4
45	RZ	159	PRO	2.4
1	QA	312	C	2.4
1	QA	1354	C	2.4
7	XG	120	ILE	2.4
25	RA	885	C	2.4
4	QD	123	HIS	2.4
1	QA	1183	A	2.3
7	QG	78	ARG	2.3
14	XN	41	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
25	RA	632	A	2.3
25	RA	2665	A	2.3
35	RP	81	GLN	2.3
5	XE	81	GLU	2.3
25	YA	2689	U	2.3
47	R1	93	GLU	2.3
1	QA	1241	G	2.3
1	QA	1271	G	2.3
1	XA	426	G	2.3
1	XA	1304	G	2.3
2	XB	200	ILE	2.3
17	XQ	42	TYR	2.3
25	YA	1465	G	2.3
5	QE	119	LEU	2.3
19	XS	16	LEU	2.3
8	QH	18	ARG	2.3
20	QT	26	ASN	2.3
29	RF	181	LEU	2.3
38	RS	54	LEU	2.3
44	YY	79	CYS	2.3
25	RA	1387	C	2.3
29	RF	136	THR	2.3
14	QN	37	PHE	2.3
19	XS	44	MET	2.3
4	QD	38	TYR	2.3
12	XL	85	ILE	2.3
16	QP	84	ALA	2.3
30	YG	107	LEU	2.3
31	RH	152	ARG	2.3
45	RZ	83	PRO	2.3
1	XA	46	G	2.3
1	XA	350	G	2.3
3	QC	197	GLY	2.3
17	XQ	94	ASN	2.3
50	Y4	35	VAL	2.3
1	QA	1030	C	2.3
1	QA	949	A	2.3
20	QT	20	LEU	2.3
25	RA	2476	A	2.3
28	RE	123	ALA	2.3
35	RP	120	ALA	2.3
54	R8	63	PRO	2.3

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Mol	Chain	Res	Type	RSRZ
10	QJ	44	VAL	2.3
27	RD	34	VAL	2.3
30	RG	71	THR	2.3
25	RA	2103	C	2.3
25	RA	2105	C	2.3
25	YA	2896	C	2.3
46	Y0	41	ARG	2.3
20	XT	100	ILE	2.3
12	QL	18	VAL	2.3
31	RH	144	VAL	2.3
1	QA	728	A	2.3
1	QA	1364	U	2.3
1	XA	373	A	2.3
1	XA	1014	A	2.3
31	RH	40	GLU	2.3
35	RP	77	ARG	2.3
40	RU	75	ASN	2.3
53	Y7	1	MET	2.3
9	XI	7	THR	2.3
11	QK	99	GLN	2.3
4	QD	134	ASP	2.3
29	RF	176	LEU	2.3
45	RZ	77	ASP	2.3
2	QB	214	ILE	2.3
10	QJ	96	ILE	2.3
52	Y6	27	LYS	2.3
1	QA	1362(A)	C	2.3
1	XA	174	C	2.3
1	QA	142	G	2.3
1	XA	731	G	2.3
10	QJ	35	SER	2.3
25	RA	1123	C	2.3
25	RA	1447	G	2.3
25	YA	1667	G	2.3
12	QL	16	GLU	2.3
35	RP	18	ARG	2.3
35	RP	136	GLU	2.3
1	XA	478	A	2.3
1	XA	482	A	2.3
11	XK	123	LYS	2.3
28	YE	60	ASN	2.3
50	Y4	2	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
44	RY	16	ALA	2.3
50	R4	22	ILE	2.3
30	YG	178	PHE	2.3
53	R7	46	VAL	2.3
1	XA	131	C	2.3
1	XA	1218	C	2.3
3	XC	161	GLU	2.3
4	QD	29	PRO	2.3
19	XS	36	ARG	2.3
50	Y4	26	SER	2.3
13	QM	27	LYS	2.3
46	R0	53	MET	2.3
1	QA	124	G	2.3
1	QA	633	G	2.3
1	XA	730	G	2.3
10	QJ	38	ILE	2.3
25	RA	1930	G	2.3
25	YA	508	G	2.3
1	QA	1251	A	2.3
31	RH	57	ASP	2.3
8	XH	130	GLY	2.3
46	R0	55	ARG	2.3
4	QD	9	CYS	2.3
17	XQ	15	MET	2.3
19	XS	6	LYS	2.3
7	XG	56	GLN	2.3
25	RA	2347	C	2.3
1	XA	182	U	2.3
35	YP	114	ILE	2.3
6	XF	101	ALA	2.3
8	XH	129	VAL	2.3
30	RG	31	VAL	2.3
36	RQ	32	TYR	2.3
44	YY	37	VAL	2.3
1	QA	388	G	2.3
1	QA	976	G	2.3
1	QA	1304	G	2.3
1	QA	1365	G	2.3
16	QP	27	LYS	2.3
25	RA	1401	G	2.3
25	RA	2191	G	2.3
25	YA	1529	A	2.3

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Mol	Chain	Res	Type	RSRZ
26	RB	97	G	2.3
27	RD	241	PRO	2.3
4	QD	132	ARG	2.3
14	QN	21	TYR	2.3
1	QA	982	U	2.3
1	XA	726	C	2.3
8	XH	117	GLY	2.3
17	XQ	14	LYS	2.3
20	XT	102	GLY	2.3
30	RG	145	THR	2.3
31	RH	62	LYS	2.3
36	YQ	91	GLU	2.3
40	RU	56	ASP	2.3
20	XT	56	MET	2.3
27	YD	219	PRO	2.3
35	YP	67	MET	2.3
1	XA	690	G	2.3
1	XA	1044	A	2.3
1	XA	1084	G	2.3
1	XA	1131	G	2.3
1	XA	1453	G	2.3
25	YA	1186	G	2.3
4	QD	5	ILE	2.3
30	YG	52	ILE	2.3
9	XI	28	VAL	2.3
13	XM	121	LYS	2.3
20	QT	65	LYS	2.3
31	RH	83	TYR	2.3
31	RH	131	VAL	2.3
31	RH	160	LYS	2.3
39	RT	97	ALA	2.3
54	R8	31	HIS	2.3
38	YS	111	GLU	2.3
1	XA	1040	U	2.3
25	RA	894	C	2.3
25	YA	1546	C	2.3
37	RR	69	ASP	2.3
2	XB	10	LEU	2.3
19	QS	66	MET	2.3
31	YH	60	ARG	2.3
31	YH	171	LEU	2.3
48	Y2	7	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
30	YG	144	ILE	2.3
32	RI	56	LYS	2.3
52	R6	53	LYS	2.3
1	QA	1287	A	2.3
1	QA	1502	A	2.3
13	XM	87	TYR	2.3
17	QQ	99	SER	2.3
25	RA	222	A	2.3
25	RA	633	A	2.3
25	RA	1528	A	2.3
25	RA	2346	A	2.3
40	YU	90	VAL	2.3
1	QA	1057	G	2.2
1	XA	942	G	2.2
54	R8	38	GLY	2.2
1	XA	1232	U	2.2
8	XH	112	LEU	2.2
9	XI	10	ARG	2.2
20	QT	57	ARG	2.2
25	RA	614	U	2.2
35	YP	115	LEU	2.2
16	QP	15	PRO	2.2
25	YA	884	C	2.2
44	RY	4	LYS	2.2
11	XK	68	ALA	2.2
27	YD	233	HIS	2.2
36	YQ	24	GLY	2.2
39	YT	94	ALA	2.2
1	XA	383	A	2.2
16	XP	72	ARG	2.2
45	YZ	82	ARG	2.2
1	QA	66	G	2.2
1	QA	1215	G	2.2
1	XA	310	G	2.2
1	XA	630	G	2.2
9	XI	11	LYS	2.2
30	RG	60	LEU	2.2
25	RA	2631	G	2.2
25	YA	892	G	2.2
26	RB	24	G	2.2
38	RS	61	ASN	2.2
4	QD	158	ILE	2.2

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Mol	Chain	Res	Type	RSRZ
10	QJ	63	PHE	2.2
12	QL	48	PRO	2.2
12	XL	125	PRO	2.2
11	XK	89	ALA	2.2
13	XM	23	TYR	2.2
14	QN	33	VAL	2.2
15	XO	75	PRO	2.2
1	QA	186(A)	C	2.2
1	XA	307	C	2.2
47	Y1	26	ARG	2.2
37	YR	5	LYS	2.2
1	QA	143	A	2.2
1	QA	389	A	2.2
34	RO	81	ASP	2.2
54	Y8	41	ILE	2.2
1	XA	524	G	2.2
1	XA	971	G	2.2
1	XA	988	G	2.2
3	XC	127	ARG	2.2
9	XI	122	ALA	2.2
22	XV	17(A)	U	2.2
25	YA	614	U	2.2
38	RS	92	TYR	2.2
4	QD	86	LYS	2.2
55	Y9	13	LYS	2.2
1	QA	418	C	2.2
6	XF	62	TRP	2.2
25	RA	2467	C	2.2
11	XK	82	VAL	2.2
19	QS	62	ILE	2.2
30	YG	70	VAL	2.2
1	XA	964	A	2.2
2	XB	134	GLU	2.2
14	XN	29	ARG	2.2
50	Y4	51	ASP	2.2
9	QI	78	LYS	2.2
25	YA	2629	A	2.2
34	YO	30	ALA	2.2
50	Y4	28	LYS	2.2
1	XA	427	U	2.2
1	QA	1184	G	2.2
1	XA	260	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	XA	266	G	2.2
1	XA	725	G	2.2
25	RA	874	G	2.2
25	YA	2224	G	2.2
37	YR	14	SER	2.2
1	QA	1325	C	2.2
1	XA	132	C	2.2
2	QB	68	ILE	2.2
12	QL	55	VAL	2.2
28	YE	76	ARG	2.2
44	YY	49	VAL	2.2
10	XJ	22	LYS	2.2
15	QO	7	GLU	2.2
30	RG	177	GLY	2.2
3	XC	192	THR	2.2
1	QA	919	A	2.2
3	QC	175	LEU	2.2
25	RA	412	A	2.2
25	RA	819	A	2.2
25	RA	1960	A	2.2
25	YA	1510	A	2.2
4	XD	175	SER	2.2
30	YG	96	ARG	2.2
1	XA	146	G	2.2
1	XA	656	C	2.2
8	QH	77	GLU	2.2
10	QJ	97	GLU	2.2
16	QP	30	GLY	2.2
25	RA	270(H)	C	2.2
25	RA	2143	C	2.2
30	YG	35	GLU	2.2
9	QI	73	GLN	2.2
9	QI	96	LEU	2.2
1	QA	101	A	2.2
1	XA	344	A	2.2
2	QB	97	TRP	2.2
5	QE	18	ARG	2.2
7	XG	78	ARG	2.2
44	YY	84	ARG	2.2
50	Y4	6	HIS	2.2
2	XB	5	ILE	2.2
29	YF	173	VAL	2.2

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Mol	Chain	Res	Type	RSRZ
30	RG	140	ILE	2.2
29	YF	134	GLY	2.2
39	RT	133	GLU	2.2
5	QE	133	TYR	2.2
11	QK	25	TYR	2.2
27	YD	225	ALA	2.2
1	XA	732	C	2.2
11	QK	115	PRO	2.2
29	RF	170	LEU	2.2
33	YN	138	LEU	2.2
1	QA	68	G	2.2
19	QS	63	THR	2.2
31	RH	148	ILE	2.2
20	XT	103	GLY	2.2
25	YA	2522	U	2.2
1	QA	1213	A	2.2
1	QA	1279	A	2.2
1	XA	116	A	2.2
4	XD	78	LEU	2.2
13	XM	18	ALA	2.2
25	RA	2860	A	2.2
29	RF	7	TYR	2.2
14	QN	47	LEU	2.2
10	XJ	58	ASP	2.2
16	QP	18	ARG	2.2
32	YI	50	ARG	2.2
35	YP	65	ARG	2.2
36	YQ	138	ASP	2.2
1	QA	90	C	2.2
1	QA	175	C	2.2
1	QA	400	C	2.2
25	RA	1499	C	2.2
25	RA	1967	C	2.2
25	RA	2402	C	2.2
28	RE	60	ASN	2.2
2	QB	40	HIS	2.2
9	XI	63	ILE	2.2
17	XQ	61	GLU	2.2
1	QA	485	G	2.2
1	QA	941	G	2.2
1	XA	44	G	2.2
1	XA	122	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	XA	392	G	2.2
9	QI	6	GLY	2.2
9	QI	4	TYR	2.2
9	XI	111	ARG	2.2
39	RT	90	GLN	2.2
50	Y4	16	CYS	2.2
1	QA	1285	A	2.2
11	XK	125	PHE	2.2
5	QE	19	MET	2.2
9	XI	81	ILE	2.2
13	QM	53	VAL	2.2
13	XM	50	GLU	2.2
1	QA	924	C	2.2
5	QE	152	ARG	2.2
14	QN	41	ARG	2.2
2	QB	155	LEU	2.2
9	QI	19	LEU	2.2
1	QA	210	U	2.2
1	XA	97	U	2.2
1	XA	1095	U	2.2
1	QA	115	G	2.2
1	XA	1215	G	2.2
20	QT	18	GLN	2.2
25	RA	2861	G	2.2
25	YA	1750	G	2.2
4	QD	131	ARG	2.2
7	QG	109	ASN	2.2
12	QL	17	LYS	2.2
13	XM	29	ARG	2.2
27	YD	236	GLY	2.2
35	RP	26	GLY	2.2
40	RU	59	ARG	2.2
54	Y8	33	ASN	2.2
2	XB	138	LEU	2.1
1	QA	634	C	2.1
1	QA	1069	C	2.1
1	XA	370	C	2.1
16	QP	7	ALA	2.1
25	RA	915	C	2.1
25	RA	2380	C	2.1
1	QA	429	U	2.1
4	XD	45	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
7	QG	86	GLN	2.1
45	RZ	73	GLN	2.1
16	XP	66	PRO	2.1
15	XO	65	ARG	2.1
17	XQ	96	GLU	2.1
29	YF	154	VAL	2.1
31	RH	154	PRO	2.1
19	QS	32	LYS	2.1
31	RH	77	LYS	2.1
37	RR	9	LYS	2.1
1	QA	331	G	2.1
1	QA	823	G	2.1
1	XA	941	G	2.1
20	XT	26	ASN	2.1
22	QV	6	G	2.1
25	RA	1030	G	2.1
25	RA	1959	G	2.1
25	RA	2834	G	2.1
25	YA	2545	G	2.1
25	RA	2542	A	2.1
31	RH	68	THR	2.1
4	QD	147	ALA	2.1
10	QJ	20	ALA	2.1
45	RZ	51	ALA	2.1
11	XK	13	GLN	2.1
50	Y4	47	GLN	2.1
1	QA	1237	C	2.1
1	XA	150	C	2.1
4	QD	179	GLU	2.1
17	XQ	36	ILE	2.1
37	RR	8	ARG	2.1
22	XV	60	U	2.1
30	YG	65	GLY	2.1
45	RZ	76	LEU	2.1
7	XG	153	HIS	2.1
11	QK	119	CYS	2.1
35	YP	57	THR	2.1
36	RQ	107	ALA	2.1
45	RZ	107	THR	2.1
51	Y5	53	ALA	2.1
55	Y9	11	CYS	2.1
1	QA	1356	G	2.1

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Mol	Chain	Res	Type	RSRZ
1	XA	1181	G	2.1
22	QV	7	G	2.1
25	RA	1112	G	2.1
25	YA	333	G	2.1
25	YA	921	G	2.1
30	YG	101	ILE	2.1
32	YI	66	GLU	2.1
36	YQ	10	ARG	2.1
48	Y2	43	GLN	2.1
2	QB	101	MET	2.1
1	QA	1028(A)	C	2.1
1	QA	1259	C	2.1
1	XA	985	C	2.1
1	XA	1325	C	2.1
6	XF	79	LEU	2.1
25	RA	2849	U	2.1
26	RB	49	C	2.1
29	YF	196	LEU	2.1
2	QB	114	ARG	2.1
4	XD	111	ALA	2.1
9	XI	36	TYR	2.1
18	QR	84	LYS	2.1
36	RQ	11	LYS	2.1
36	RQ	87	LYS	2.1
37	RR	22	ARG	2.1
31	RH	17	VAL	2.1
1	XA	117	G	2.1
1	XA	452	A	2.1
4	QD	137	SER	2.1
22	XV	22	G	2.1
25	YA	1098	A	2.1
25	YA	1950	G	2.1
32	RI	9	LEU	2.1
5	QE	21	ALA	2.1
13	QM	76	ALA	2.1
19	QS	29	ARG	2.1
20	XT	86	ARG	2.1
25	RA	1467	C	2.1
25	RA	2473	U	2.1
35	RP	14	LYS	2.1
39	YT	100	TYR	2.1
32	YI	135	GLU	2.1

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Mol	Chain	Res	Type	RSRZ
44	RY	64	GLU	2.1
4	XD	11	LEU	2.1
17	QQ	98	LEU	2.1
5	XE	18	ARG	2.1
1	QA	356	A	2.1
1	XA	1350	A	2.1
25	RA	1189	A	2.1
54	Y8	48	PHE	2.1
1	QA	538	G	2.1
1	QA	1295	G	2.1
1	XA	145	G	2.1
1	XA	475	G	2.1
1	XA	878	G	2.1
19	XS	75	ALA	2.1
1	XA	1091	U	2.1
7	QG	105	VAL	2.1
11	QK	116	HIS	2.1
25	RA	1184	G	2.1
1	QA	1320	C	2.1
13	XM	69	GLU	2.1
13	XM	98	VAL	2.1
16	QP	69	THR	2.1
25	RA	634	C	2.1
25	RA	1462	C	2.1
25	YA	1852	C	2.1
4	XD	132	ARG	2.1
9	XI	120	ARG	2.1
29	RF	164	ARG	2.1
53	R7	23	ARG	2.1
52	R6	31	PRO	2.1
30	YG	124	SER	2.1
10	QJ	89	ASP	2.1
30	YG	156	ASP	2.1
31	RH	46	GLU	2.1
1	QA	1170	A	2.1
1	XA	1251	A	2.1
13	XM	64	TRP	2.1
22	QV	59	A	2.1
25	RA	1010	A	2.1
45	RZ	58	VAL	2.1
25	YA	1083	U	2.1
2	QB	228	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
1	QA	1342	C	2.1
1	XA	805	C	2.1
1	XA	822	C	2.1
1	XA	973	G	2.1
5	QE	127	ASN	2.1
12	QL	44	THR	2.1
20	XT	20	LEU	2.1
50	R4	64	GLY	2.1
25	YA	1547	C	2.1
25	YA	2691	C	2.1
33	RN	95	PRO	2.1
36	RQ	29	PHE	2.1
7	QG	83	ALA	2.1
9	QI	92	TYR	2.1
37	YR	6	SER	2.1
38	RS	52	SER	2.1
28	YE	167	VAL	2.1
19	QS	81	ARG	2.1
19	QS	83	HIS	2.1
31	RH	90	LYS	2.1
31	RH	162	ILE	2.1
1	XA	702	A	2.1
19	QS	44	MET	2.1
30	YG	43	LEU	2.1
25	RA	294	A	2.1
25	YA	363(F)	A	2.1
25	YA	2765	A	2.1
3	QC	10	PHE	2.1
1	QA	703	G	2.1
1	QA	934	C	2.1
1	XA	1037	C	2.1
3	QC	23	TYR	2.1
12	QL	69	TYR	2.1
25	RA	888	C	2.1
25	RA	2403	C	2.1
25	RA	2413	G	2.1
25	YA	270(Y)	G	2.1
35	RP	78	PRO	2.1
29	RF	167	ALA	2.1
50	Y4	30	GLU	2.1
6	XF	3	ARG	2.1
13	QM	13	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
20	QT	100	ILE	2.1
34	YO	102	VAL	2.1
45	RZ	128	VAL	2.1
27	RD	99	ASP	2.1
30	YG	133	LEU	2.1
28	YE	54	GLN	2.1
41	RV	101	GLY	2.1
1	XA	1235	U	2.1
1	XA	1285	A	2.1
3	XC	160	ALA	2.1
9	XI	70	LYS	2.1
25	RA	1009	A	2.1
25	RA	2541	A	2.1
25	RA	2764	A	2.1
25	YA	1789	A	2.1
14	XN	3	ARG	2.1
31	RH	39	PRO	2.1
32	YI	70	GLU	2.1
25	RA	34	C	2.1
38	RS	98	VAL	2.1
39	RT	3	ARG	2.1
39	YT	112	ARG	2.1
44	RY	48	ALA	2.1
1	QA	43	C	2.1
1	QA	1254	C	2.1
1	XA	233	C	2.1
1	XA	1066	C	2.1
1	QA	540	G	2.1
13	QM	92	HIS	2.1
25	YA	270(W)	G	2.1
25	YA	2543	G	2.1
1	QA	863	U	2.1
4	QD	156	GLU	2.1
7	QG	35	LYS	2.1
10	XJ	20	ALA	2.1
11	QK	30	VAL	2.1
16	XP	7	ALA	2.1
54	R8	27	THR	2.1
24	QX	8	A	2.1
25	YA	2062	A	2.1
25	YA	2665	A	2.1
30	YG	140	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
1	XA	217	C	2.1
1	XA	1118	C	2.1
4	XD	137	SER	2.1
3	QC	162	GLN	2.0
9	QI	33	PHE	2.0
36	YQ	1	MET	2.1
8	XH	30	ARG	2.0
11	QK	120	ARG	2.0
54	Y8	3	LYS	2.0
54	Y8	39	LYS	2.0
1	QA	378	G	2.0
1	XA	124	G	2.0
25	RA	1667	G	2.0
32	YI	10	GLU	2.0
9	XI	108	VAL	2.0
25	RA	877	U	2.0
25	RA	913	U	2.0
29	YF	178	PRO	2.0
50	R4	44	THR	2.0
50	R4	31	ILE	2.0
11	QK	49	GLY	2.0
19	QS	72	GLY	2.0
27	YD	235	GLY	2.0
1	QA	622	A	2.0
3	QC	104	GLN	2.0
12	XL	32	PHE	2.0
20	QT	73	HIS	2.0
25	RA	225	A	2.0
1	QA	940	C	2.0
1	QA	972	C	2.0
1	XA	972	C	2.0
25	RA	1463	C	2.0
9	QI	86	VAL	2.0
45	YZ	164	ALA	2.0
7	XG	84	ASN	2.0
15	XO	2	PRO	2.0
19	XS	40	ILE	2.0
20	QT	99	LEU	2.0
1	QA	1079	G	2.0
1	QA	1311	G	2.0
1	XA	96	G	2.0
1	XA	579	G	2.0

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Mol	Chain	Res	Type	RSRZ
23	QY	33	U	2.0
25	RA	2544	G	2.0
25	YA	920	G	2.0
25	YA	2211	G	2.0
52	Y6	8	LYS	2.0
9	XI	104	ARG	2.0
14	QN	3	ARG	2.0
10	QJ	84	GLN	2.0
1	XA	994	A	2.0
4	XD	8	VAL	2.0
25	RA	1545(A)	A	2.0
1	XA	311	C	2.0
20	XT	76	ALA	2.0
28	RE	151	TYR	2.0
23	XY	30	C	2.0
9	XI	64	THR	2.0
11	QK	90	GLY	2.0
13	QM	99	ARG	2.0
30	YG	132	ASN	2.0
39	YT	37	GLY	2.0
42	RW	60	ASN	2.0
45	RZ	80	ARG	2.0
1	QA	1186	G	2.0
1	QA	1312	G	2.0
1	QA	1497	G	2.0
1	XA	664	G	2.0
5	QE	155	GLU	2.0
22	QV	45	G	2.0
22	XV	53	G	2.0
25	RA	1968	G	2.0
25	RA	2524	G	2.0
2	QB	39	ILE	2.0
5	XE	134	ALA	2.0
8	QH	107	LEU	2.0
14	XN	4	LYS	2.0
29	RF	11	VAL	2.0
30	RG	149	VAL	2.0
31	YH	125	VAL	2.0
40	RU	63	VAL	2.0
15	QO	64	ARG	2.0
20	QT	63	ILE	2.0
25	RA	654(V)	A	2.0

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Mol	Chain	Res	Type	RSRZ
25	YA	412	A	2.0
49	Y3	29	ARG	2.0
17	XQ	64	PRO	2.0
25	RA	1402	C	2.0
30	YG	112	PRO	2.0
1	XA	982	U	2.0
25	RA	1188	U	2.0
25	RA	2779	U	2.0
2	QB	210	SER	2.0
30	RG	5	VAL	2.0
33	RN	83	LYS	2.0
8	QH	112	LEU	2.0
33	YN	134	ARG	2.0
36	RQ	28	ALA	2.0
1	QA	1087	G	2.0
25	RA	266	G	2.0
25	RA	1385	G	2.0
25	RA	1521	G	2.0
25	RA	1948	G	2.0
25	YA	1559	G	2.0
35	RP	34	GLY	2.0
1	XA	621	A	2.0
1	XA	1280	A	2.0
1	XA	1324	A	2.0
25	RA	866	A	2.0
25	RA	1029	A	2.0
26	RB	78	A	2.0
38	RS	111	GLU	2.0
45	RZ	119	GLU	2.0
12	QL	91	LYS	2.0
22	XV	1	C	2.0
25	RA	856	C	2.0
25	RA	1118	C	2.0
25	YA	2521	C	2.0
47	R1	42	GLN	2.0
18	XR	54	ARG	2.0
27	YD	51	VAL	2.0
30	RG	120	LEU	2.0
35	YP	135	LEU	2.0
36	RQ	35	VAL	2.0
44	YY	86	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	PPU	Z8	76	37/38	0.88	0.42	37,37,37,37	0
56	PPU	Z6	76	37/38	0.89	0.43	41,41,41,41	0
23	1MG	QY	37	24/25	0.93	0.27	63,63,63,63	0
23	1MG	XY	37	24/25	0.95	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3105	1/1	0.12	0.26	21,21,21,21	0
57	MG	QA	1626	1/1	0.14	0.20	59,59,59,59	0
57	MG	RA	3120	1/1	0.22	0.34	60,60,60,60	0
57	MG	YA	3165	1/1	0.30	0.32	54,54,54,54	0
57	MG	YA	3139	1/1	0.36	0.26	70,70,70,70	0
57	MG	RA	3222	1/1	0.37	0.42	93,93,93,93	0
57	MG	QA	1629	1/1	0.38	0.33	43,43,43,43	0
57	MG	RA	3192	1/1	0.44	0.34	79,79,79,79	0
57	MG	YA	3120	1/1	0.45	0.62	63,63,63,63	0
57	MG	RA	3204	1/1	0.48	0.38	82,82,82,82	0
57	MG	RA	3226	1/1	0.48	0.27	48,48,48,48	0
57	MG	RA	3221	1/1	0.52	0.40	62,62,62,62	0
57	MG	XA	1655	1/1	0.56	0.23	81,81,81,81	0
57	MG	YA	3164	1/1	0.59	0.41	36,36,36,36	0
57	MG	YA	3241	1/1	0.59	0.25	46,46,46,46	0
57	MG	QA	1657	1/1	0.60	0.30	58,58,58,58	0
57	MG	QA	1650	1/1	0.62	0.18	49,49,49,49	0
57	MG	YA	3207	1/1	0.64	0.69	80,80,80,80	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1672	1/1	0.65	0.20	40,40,40,40	0
57	MG	YA	3127	1/1	0.67	0.30	26,26,26,26	0
57	MG	RA	3200	1/1	0.68	0.28	38,38,38,38	0
57	MG	QA	1656	1/1	0.68	0.26	52,52,52,52	0
57	MG	RA	3091	1/1	0.68	0.47	73,73,73,73	0
57	MG	RA	3139	1/1	0.73	0.20	49,49,49,49	0
57	MG	YA	3158	1/1	0.73	0.19	24,24,24,24	0
57	MG	XA	1656	1/1	0.73	0.12	31,31,31,31	0
57	MG	RA	3084	1/1	0.74	0.16	9,9,9,9	0
57	MG	RA	3050	1/1	0.74	0.26	31,31,31,31	0
57	MG	RA	3227	1/1	0.74	0.24	73,73,73,73	0
59	ZN	XN	101	1/1	0.74	0.23	65,65,65,65	0
57	MG	RA	3130	1/1	0.75	0.23	46,46,46,46	0
57	MG	RB	202	1/1	0.75	0.09	54,54,54,54	0
57	MG	RA	3115	1/1	0.75	0.20	7,7,7,7	0
57	MG	RA	3207	1/1	0.76	0.36	47,47,47,47	0
57	MG	RA	3101	1/1	0.76	0.22	7,7,7,7	0
57	MG	XA	1609	1/1	0.76	0.21	22,22,22,22	0
57	MG	YA	3172	1/1	0.76	0.18	43,43,43,43	0
57	MG	YA	3189	1/1	0.76	0.27	23,23,23,23	0
57	MG	YA	3198	1/1	0.76	0.34	59,59,59,59	0
57	MG	RA	3155	1/1	0.76	0.30	24,24,24,24	0
57	MG	RA	3177	1/1	0.76	0.40	38,38,38,38	0
57	MG	YA	3153	1/1	0.76	0.15	21,21,21,21	0
57	MG	QH	201	1/1	0.77	0.09	58,58,58,58	0
57	MG	QA	1637	1/1	0.77	0.23	57,57,57,57	0
57	MG	RA	3199	1/1	0.77	0.14	29,29,29,29	0
57	MG	YA	3170	1/1	0.77	0.15	38,38,38,38	0
57	MG	XA	1610	1/1	0.77	0.23	42,42,42,42	0
57	MG	QA	1609	1/1	0.78	0.16	34,34,34,34	0
57	MG	YA	3196	1/1	0.78	0.30	28,28,28,28	0
57	MG	RA	3195	1/1	0.78	0.37	31,31,31,31	0
57	MG	RA	3002	1/1	0.78	0.54	36,36,36,36	0
57	MG	YA	3222	1/1	0.78	0.18	34,34,34,34	0
57	MG	YA	3235	1/1	0.78	0.26	29,29,29,29	0
57	MG	RA	3209	1/1	0.78	0.32	50,50,50,50	0
57	MG	RA	3220	1/1	0.78	0.27	56,56,56,56	0
57	MG	YA	3144	1/1	0.79	0.24	35,35,35,35	0
57	MG	XA	1653	1/1	0.79	0.15	60,60,60,60	0
57	MG	RA	3232	1/1	0.79	0.18	30,30,30,30	0
57	MG	YA	3160	1/1	0.79	0.16	12,12,12,12	0
57	MG	XA	1631	1/1	0.80	0.19	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	RA	3194	1/1	0.80	0.22	44,44,44,44	0
57	MG	YA	3204	1/1	0.80	0.17	19,19,19,19	0
57	MG	YA	3259	1/1	0.80	0.42	43,43,43,43	0
57	MG	XA	1630	1/1	0.80	0.15	16,16,16,16	0
57	MG	RA	3176	1/1	0.81	0.14	24,24,24,24	0
57	MG	YA	3220	1/1	0.81	0.32	52,52,52,52	0
57	MG	XA	1647	1/1	0.81	0.15	49,49,49,49	0
57	MG	RA	3212	1/1	0.81	0.19	42,42,42,42	0
57	MG	RA	3026	1/1	0.81	0.16	8,8,8,8	0
57	MG	YA	3130	1/1	0.81	0.25	17,17,17,17	0
59	ZN	XD	301	1/1	0.81	0.36	45,45,45,45	0
57	MG	QA	1645	1/1	0.81	0.28	53,53,53,53	0
57	MG	RA	3143	1/1	0.82	0.27	40,40,40,40	0
57	MG	RA	3217	1/1	0.82	0.10	28,28,28,28	0
57	MG	YA	3237	1/1	0.82	0.21	44,44,44,44	0
57	MG	RA	3134	1/1	0.82	0.27	44,44,44,44	0
57	MG	XA	1621	1/1	0.82	0.15	29,29,29,29	0
57	MG	YA	3208	1/1	0.82	0.15	55,55,55,55	0
57	MG	RA	3055	1/1	0.82	0.17	7,7,7,7	0
57	MG	R0	101	1/1	0.83	0.19	11,11,11,11	0
57	MG	YA	3045	1/1	0.83	0.18	2,2,2,2	0
57	MG	YA	3192	1/1	0.83	0.25	30,30,30,30	0
57	MG	RA	3043	1/1	0.83	0.16	4,4,4,4	0
57	MG	QA	1644	1/1	0.83	0.33	40,40,40,40	0
57	MG	YA	3244	1/1	0.83	0.28	25,25,25,25	0
57	MG	RA	3210	1/1	0.83	0.18	30,30,30,30	0
57	MG	QA	1638	1/1	0.83	0.25	27,27,27,27	0
57	MG	XA	1665	1/1	0.83	0.21	44,44,44,44	0
57	MG	RA	3188	1/1	0.84	0.22	39,39,39,39	0
57	MG	YA	3146	1/1	0.84	0.32	57,57,57,57	0
57	MG	YA	3016	1/1	0.84	0.13	8,8,8,8	0
57	MG	QA	1664	1/1	0.84	0.15	40,40,40,40	0
57	MG	YA	3052	1/1	0.84	0.23	21,21,21,21	0
57	MG	YA	3071	1/1	0.84	0.25	10,10,10,10	0
57	MG	XA	1652	1/1	0.84	0.25	32,32,32,32	0
57	MG	YA	3116	1/1	0.84	0.19	36,36,36,36	0
57	MG	RA	3193	1/1	0.84	0.30	51,51,51,51	0
57	MG	YA	3173	1/1	0.84	0.21	43,43,43,43	0
57	MG	RA	3211	1/1	0.84	0.40	43,43,43,43	0
57	MG	RA	3201	1/1	0.84	0.20	24,24,24,24	0
57	MG	RA	3180	1/1	0.84	0.17	34,34,34,34	0
57	MG	RA	3179	1/1	0.85	0.23	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3197	1/1	0.85	0.18	55,55,55,55	0
57	MG	YA	3221	1/1	0.85	0.23	19,19,19,19	0
57	MG	QA	1631	1/1	0.85	0.52	46,46,46,46	0
57	MG	YA	3229	1/1	0.85	0.16	24,24,24,24	0
57	MG	RA	3228	1/1	0.85	0.67	58,58,58,58	0
57	MG	RA	3131	1/1	0.85	0.39	41,41,41,41	0
57	MG	XA	1649	1/1	0.85	0.20	30,30,30,30	0
57	MG	RA	3124	1/1	0.85	0.18	23,23,23,23	0
57	MG	YA	3084	1/1	0.85	0.21	10,10,10,10	0
57	MG	RA	3137	1/1	0.85	0.20	10,10,10,10	0
57	MG	RA	3138	1/1	0.85	0.32	12,12,12,12	0
57	MG	RA	3187	1/1	0.86	0.24	63,63,63,63	0
57	MG	RA	3119	1/1	0.86	0.24	56,56,56,56	0
57	MG	YA	3194	1/1	0.86	0.23	41,41,41,41	0
57	MG	RA	3145	1/1	0.86	0.15	27,27,27,27	0
57	MG	XA	1654	1/1	0.86	0.27	53,53,53,53	0
57	MG	QA	1665	1/1	0.86	0.14	18,18,18,18	0
57	MG	RA	3171	1/1	0.86	0.18	33,33,33,33	0
57	MG	RA	3069	1/1	0.86	0.11	21,21,21,21	0
57	MG	YA	3210	1/1	0.86	0.21	37,37,37,37	0
57	MG	XA	1671	1/1	0.86	0.16	71,71,71,71	0
57	MG	YA	3155	1/1	0.86	0.17	53,53,53,53	0
57	MG	RA	3215	1/1	0.86	0.14	48,48,48,48	0
57	MG	RA	3127	1/1	0.86	0.21	23,23,23,23	0
57	MG	RA	3219	1/1	0.86	0.27	63,63,63,63	0
57	MG	QA	1632	1/1	0.86	0.22	35,35,35,35	0
57	MG	RA	3142	1/1	0.86	0.24	39,39,39,39	0
57	MG	XA	1633	1/1	0.86	0.16	37,37,37,37	0
57	MG	RA	3181	1/1	0.86	0.33	48,48,48,48	0
57	MG	YB	203	1/1	0.86	0.17	37,37,37,37	0
57	MG	YA	3174	1/1	0.86	0.12	19,19,19,19	0
57	MG	YA	3177	1/1	0.86	0.10	20,20,20,20	0
57	MG	QA	1651	1/1	0.87	0.21	35,35,35,35	0
57	MG	YA	3171	1/1	0.87	0.37	32,32,32,32	0
57	MG	RA	3010	1/1	0.87	0.26	78,78,78,78	0
57	MG	QA	1620	1/1	0.87	0.17	28,28,28,28	0
57	MG	RA	3216	1/1	0.87	0.24	43,43,43,43	0
57	MG	RA	3183	1/1	0.87	0.17	19,19,19,19	0
57	MG	YA	3183	1/1	0.87	0.18	30,30,30,30	0
57	MG	YA	3063	1/1	0.87	0.14	13,13,13,13	0
57	MG	YA	3239	1/1	0.87	0.28	46,46,46,46	0
57	MG	RA	3068	1/1	0.87	0.18	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3074	1/1	0.87	0.09	6,6,6,6	0
57	MG	RA	3135	1/1	0.87	0.17	16,16,16,16	0
57	MG	XA	1664	1/1	0.87	0.24	51,51,51,51	0
57	MG	YE	301	1/1	0.87	0.18	7,7,7,7	0
57	MG	YE	302	1/1	0.87	0.20	10,10,10,10	0
57	MG	Y0	101	1/1	0.87	0.22	7,7,7,7	0
57	MG	Y7	101	1/1	0.87	0.40	38,38,38,38	0
57	MG	YA	3107	1/1	0.87	0.22	11,11,11,11	0
57	MG	XA	1635	1/1	0.87	0.16	41,41,41,41	0
57	MG	XA	1663	1/1	0.88	0.09	44,44,44,44	0
57	MG	RA	3088	1/1	0.88	0.33	19,19,19,19	0
57	MG	YA	3152	1/1	0.88	0.23	51,51,51,51	0
57	MG	YA	3182	1/1	0.88	0.21	24,24,24,24	0
57	MG	RA	3163	1/1	0.88	0.16	38,38,38,38	0
57	MG	QA	1655	1/1	0.88	0.14	51,51,51,51	0
57	MG	YA	3191	1/1	0.88	0.25	24,24,24,24	0
57	MG	RA	3225	1/1	0.88	0.10	27,27,27,27	0
57	MG	XA	1673	1/1	0.88	0.32	26,26,26,26	0
57	MG	YA	3255	1/1	0.88	0.31	13,13,13,13	0
57	MG	RA	3173	1/1	0.88	0.16	15,15,15,15	0
57	MG	YA	3039	1/1	0.88	0.12	19,19,19,19	0
57	MG	YA	3200	1/1	0.88	0.19	26,26,26,26	0
57	MG	YA	3166	1/1	0.88	0.30	58,58,58,58	0
57	MG	QA	1668	1/1	0.88	0.14	42,42,42,42	0
57	MG	XA	1661	1/1	0.88	0.22	48,48,48,48	0
58	PAR	QA	1670	42/42	0.88	0.39	56,56,56,56	0
57	MG	YA	3060	1/1	0.88	0.17	4,4,4,4	0
57	MG	YA	3216	1/1	0.88	0.20	59,59,59,59	0
57	MG	YA	3201	1/1	0.89	0.13	14,14,14,14	0
57	MG	RA	3049	1/1	0.89	0.10	8,8,8,8	0
57	MG	YA	3205	1/1	0.89	0.18	38,38,38,38	0
57	MG	YA	3206	1/1	0.89	0.14	15,15,15,15	0
57	MG	RA	3141	1/1	0.89	0.16	33,33,33,33	0
57	MG	RA	3008	1/1	0.89	0.20	27,27,27,27	0
57	MG	QA	1640	1/1	0.89	0.14	51,51,51,51	0
57	MG	RA	3235	1/1	0.89	0.25	22,22,22,22	0
57	MG	RA	3238	1/1	0.89	0.32	32,32,32,32	0
57	MG	YA	3072	1/1	0.89	0.23	17,17,17,17	0
57	MG	RA	3013	1/1	0.89	0.29	20,20,20,20	0
57	MG	RD	301	1/1	0.89	0.23	41,41,41,41	0
57	MG	XA	1660	1/1	0.89	0.12	30,30,30,30	0
57	MG	RA	3198	1/1	0.89	0.12	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	R5	101	1/1	0.89	0.19	19,19,19,19	0
57	MG	QA	1647	1/1	0.89	0.10	23,23,23,23	0
57	MG	YA	3179	1/1	0.89	0.23	35,35,35,35	0
57	MG	RA	3081	1/1	0.89	0.07	30,30,30,30	0
57	MG	YA	3128	1/1	0.89	0.27	26,26,26,26	0
57	MG	YA	3129	1/1	0.89	0.19	27,27,27,27	0
57	MG	RA	3165	1/1	0.89	0.09	19,19,19,19	0
57	MG	QA	1618	1/1	0.89	0.19	42,42,42,42	0
57	MG	RA	3205	1/1	0.89	0.24	46,46,46,46	0
57	MG	YA	3195	1/1	0.89	0.20	35,35,35,35	0
57	MG	RA	3190	1/1	0.89	0.17	38,38,38,38	0
57	MG	YA	3150	1/1	0.89	0.23	61,61,61,61	0
57	MG	YA	3018	1/1	0.89	0.32	13,13,13,13	0
57	MG	RA	3208	1/1	0.90	0.15	19,19,19,19	0
57	MG	YA	3227	1/1	0.90	0.19	13,13,13,13	0
57	MG	YA	3137	1/1	0.90	0.15	6,6,6,6	0
57	MG	XA	1645	1/1	0.90	0.13	29,29,29,29	0
57	MG	YA	3199	1/1	0.90	0.31	18,18,18,18	0
57	MG	RA	3150	1/1	0.90	0.13	25,25,25,25	0
57	MG	XA	1648	1/1	0.90	0.11	39,39,39,39	0
57	MG	YA	3243	1/1	0.90	0.21	42,42,42,42	0
57	MG	RA	3153	1/1	0.90	0.28	51,51,51,51	0
57	MG	QF	201	1/1	0.90	0.21	39,39,39,39	0
57	MG	RA	3158	1/1	0.90	0.33	51,51,51,51	0
57	MG	RA	3213	1/1	0.90	0.29	29,29,29,29	0
57	MG	YA	3156	1/1	0.90	0.26	33,33,33,33	0
57	MG	RA	3159	1/1	0.90	0.17	30,30,30,30	0
57	MG	YA	3215	1/1	0.90	0.31	25,25,25,25	0
57	MG	RA	3160	1/1	0.90	0.21	51,51,51,51	0
57	MG	YA	3217	1/1	0.90	0.15	29,29,29,29	0
57	MG	RA	3161	1/1	0.90	0.15	27,27,27,27	0
57	MG	QA	1633	1/1	0.90	0.26	44,44,44,44	0
57	MG	YA	3145	1/1	0.91	0.23	11,11,11,11	0
57	MG	RA	3044	1/1	0.91	0.21	24,24,24,24	0
57	MG	QA	1615	1/1	0.91	0.25	23,23,23,23	0
57	MG	XA	1632	1/1	0.91	0.18	17,17,17,17	0
57	MG	YA	3008	1/1	0.91	0.22	9,9,9,9	0
57	MG	QA	1616	1/1	0.91	0.07	40,40,40,40	0
57	MG	YA	3209	1/1	0.91	0.17	27,27,27,27	0
57	MG	RA	3009	1/1	0.91	0.10	9,9,9,9	0
57	MG	YA	3022	1/1	0.91	0.28	7,7,7,7	0
57	MG	XA	1636	1/1	0.91	0.13	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1638	1/1	0.91	0.11	16,16,16,16	0
57	MG	YA	3046	1/1	0.91	0.25	8,8,8,8	0
57	MG	XA	1639	1/1	0.91	0.09	35,35,35,35	0
57	MG	XA	1643	1/1	0.91	0.15	29,29,29,29	0
57	MG	RA	3062	1/1	0.91	0.10	56,56,56,56	0
57	MG	YA	3228	1/1	0.91	0.19	22,22,22,22	0
57	MG	RA	3184	1/1	0.91	0.24	13,13,13,13	0
57	MG	QA	1646	1/1	0.91	0.09	39,39,39,39	0
57	MG	QA	1669	1/1	0.91	0.23	45,45,45,45	0
57	MG	RA	3164	1/1	0.91	0.29	36,36,36,36	0
57	MG	RA	3191	1/1	0.91	0.10	21,21,21,21	0
57	MG	QA	1660	1/1	0.91	0.21	35,35,35,35	0
57	MG	RA	3170	1/1	0.91	0.11	25,25,25,25	0
57	MG	YA	3251	1/1	0.91	0.29	20,20,20,20	0
57	MG	YA	3188	1/1	0.91	0.14	32,32,32,32	0
57	MG	RR	202	1/1	0.91	0.23	19,19,19,19	0
57	MG	YA	3262	1/1	0.91	0.17	38,38,38,38	0
57	MG	XA	1659	1/1	0.91	0.30	34,34,34,34	0
57	MG	QA	1662	1/1	0.91	0.11	53,53,53,53	0
57	MG	RA	3086	1/1	0.91	0.23	14,14,14,14	0
57	MG	RA	3175	1/1	0.91	0.20	21,21,21,21	0
57	MG	RA	3218	1/1	0.91	0.18	29,29,29,29	0
57	MG	RA	3151	1/1	0.91	0.11	18,18,18,18	0
58	PAR	XA	1675	42/42	0.91	0.32	49,49,49,49	0
59	ZN	QN	101	1/1	0.91	0.12	80,80,80,80	0
57	MG	YA	3143	1/1	0.91	0.18	17,17,17,17	0
57	MG	XA	1666	1/1	0.91	0.34	43,43,43,43	0
57	MG	RA	3196	1/1	0.92	0.20	15,15,15,15	0
57	MG	YA	3234	1/1	0.92	0.14	21,21,21,21	0
57	MG	XA	1674	1/1	0.92	0.12	25,25,25,25	0
57	MG	YA	3236	1/1	0.92	0.22	40,40,40,40	0
57	MG	XA	1622	1/1	0.92	0.16	26,26,26,26	0
57	MG	YA	3126	1/1	0.92	0.15	22,22,22,22	0
57	MG	XA	1625	1/1	0.92	0.12	16,16,16,16	0
57	MG	QA	1666	1/1	0.92	0.19	36,36,36,36	0
57	MG	RA	3058	1/1	0.92	0.25	37,37,37,37	0
57	MG	YA	3247	1/1	0.92	0.13	30,30,30,30	0
57	MG	RA	3214	1/1	0.92	0.17	18,18,18,18	0
57	MG	YA	3135	1/1	0.92	0.14	21,21,21,21	0
57	MG	XA	1657	1/1	0.92	0.19	31,31,31,31	0
57	MG	RA	3185	1/1	0.92	0.33	25,25,25,25	0
57	MG	YB	202	1/1	0.92	0.23	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1625	1/1	0.92	0.09	36,36,36,36	0
57	MG	RA	3126	1/1	0.92	0.34	33,33,33,33	0
57	MG	QA	1603	1/1	0.92	0.16	7,7,7,7	0
57	MG	YP	201	1/1	0.92	0.12	23,23,23,23	0
57	MG	QA	1617	1/1	0.92	0.16	19,19,19,19	0
57	MG	YA	3218	1/1	0.92	0.10	10,10,10,10	0
57	MG	RA	3178	1/1	0.92	0.16	22,22,22,22	0
57	MG	RA	3110	1/1	0.92	0.21	9,9,9,9	0
57	MG	YA	3082	1/1	0.92	0.14	8,8,8,8	0
57	MG	QA	1658	1/1	0.92	0.20	63,63,63,63	0
57	MG	RA	3118	1/1	0.92	0.10	33,33,33,33	0
57	MG	XA	1613	1/1	0.93	0.27	13,13,13,13	0
57	MG	YA	3133	1/1	0.93	0.12	18,18,18,18	0
57	MG	YA	3202	1/1	0.93	0.21	59,59,59,59	0
57	MG	YA	3134	1/1	0.93	0.18	21,21,21,21	0
57	MG	XA	1616	1/1	0.93	0.11	17,17,17,17	0
57	MG	RA	3133	1/1	0.93	0.18	28,28,28,28	0
57	MG	XA	1668	1/1	0.93	0.33	19,19,19,19	0
57	MG	YA	3142	1/1	0.93	0.22	28,28,28,28	0
57	MG	QA	1605	1/1	0.93	0.32	30,30,30,30	0
57	MG	XA	1624	1/1	0.93	0.10	55,55,55,55	0
57	MG	YA	3211	1/1	0.93	0.27	14,14,14,14	0
57	MG	YA	3214	1/1	0.93	0.16	35,35,35,35	0
57	MG	RA	3162	1/1	0.93	0.14	18,18,18,18	0
57	MG	QA	1623	1/1	0.93	0.16	37,37,37,37	0
57	MG	YA	3148	1/1	0.93	0.16	14,14,14,14	0
57	MG	QA	1602	1/1	0.93	0.20	18,18,18,18	0
57	MG	YA	3219	1/1	0.93	0.90	52,52,52,52	0
57	MG	RA	3001	1/1	0.93	0.24	11,11,11,11	0
57	MG	RA	3167	1/1	0.93	0.14	29,29,29,29	0
57	MG	YA	3154	1/1	0.93	0.22	9,9,9,9	0
57	MG	YA	3224	1/1	0.93	0.15	24,24,24,24	0
57	MG	RA	3168	1/1	0.93	0.26	22,22,22,22	0
57	MG	YA	3024	1/1	0.93	0.19	16,16,16,16	0
57	MG	YA	3029	1/1	0.93	0.23	12,12,12,12	0
57	MG	YA	3233	1/1	0.93	0.12	34,34,34,34	0
57	MG	YA	3159	1/1	0.93	0.21	18,18,18,18	0
57	MG	RA	3051	1/1	0.93	0.16	3,3,3,3	0
57	MG	YA	3161	1/1	0.93	0.10	25,25,25,25	0
57	MG	YA	3041	1/1	0.93	0.23	5,5,5,5	0
57	MG	YA	3238	1/1	0.93	0.12	24,24,24,24	0
57	MG	XA	1637	1/1	0.93	0.34	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3240	1/1	0.93	0.44	43,43,43,43	0
57	MG	RA	3223	1/1	0.93	0.17	23,23,23,23	0
57	MG	YA	3242	1/1	0.93	0.17	72,72,72,72	0
57	MG	RA	3052	1/1	0.93	0.25	4,4,4,4	0
57	MG	QA	1661	1/1	0.93	0.09	38,38,38,38	0
57	MG	RA	3174	1/1	0.93	0.10	38,38,38,38	0
57	MG	RA	3056	1/1	0.93	0.31	17,17,17,17	0
57	MG	QA	1613	1/1	0.93	0.19	21,21,21,21	0
57	MG	RA	3234	1/1	0.93	0.17	48,48,48,48	0
57	MG	RA	3148	1/1	0.93	0.27	36,36,36,36	0
57	MG	YB	201	1/1	0.93	0.33	35,35,35,35	0
57	MG	YA	3181	1/1	0.93	0.21	34,34,34,34	0
57	MG	RA	3149	1/1	0.93	0.16	32,32,32,32	0
57	MG	YA	3088	1/1	0.93	0.18	1,1,1,1	0
57	MG	YA	3101	1/1	0.93	0.30	8,8,8,8	0
57	MG	RA	3059	1/1	0.93	0.16	2,2,2,2	0
57	MG	QA	1627	1/1	0.93	0.10	26,26,26,26	0
57	MG	QA	1639	1/1	0.93	0.11	36,36,36,36	0
57	MG	RA	3182	1/1	0.93	0.18	10,10,10,10	0
57	MG	QA	1614	1/1	0.93	0.12	26,26,26,26	0
57	MG	RA	3070	1/1	0.93	0.24	26,26,26,26	0
57	MG	QA	1641	1/1	0.93	0.17	24,24,24,24	0
57	MG	XA	1611	1/1	0.93	0.21	23,23,23,23	0
57	MG	YA	3140	1/1	0.94	0.28	20,20,20,20	0
57	MG	QA	1659	1/1	0.94	0.11	39,39,39,39	0
57	MG	RA	3103	1/1	0.94	0.12	8,8,8,8	0
57	MG	QA	1622	1/1	0.94	0.07	32,32,32,32	0
57	MG	RA	3064	1/1	0.94	0.24	5,5,5,5	0
57	MG	RA	3066	1/1	0.94	0.20	24,24,24,24	0
57	MG	YA	3054	1/1	0.94	0.22	49,49,49,49	0
57	MG	XA	1658	1/1	0.94	0.24	46,46,46,46	0
57	MG	YA	3151	1/1	0.94	0.17	25,25,25,25	0
57	MG	QA	1667	1/1	0.94	0.13	32,32,32,32	0
57	MG	YA	3065	1/1	0.94	0.14	8,8,8,8	0
57	MG	YA	3068	1/1	0.94	0.23	17,17,17,17	0
57	MG	QA	1601	1/1	0.94	0.17	33,33,33,33	0
57	MG	QA	1643	1/1	0.94	0.12	22,22,22,22	0
57	MG	RA	3071	1/1	0.94	0.18	19,19,19,19	0
57	MG	YA	3223	1/1	0.94	0.15	25,25,25,25	0
57	MG	YA	3075	1/1	0.94	0.25	28,28,28,28	0
57	MG	YA	3079	1/1	0.94	0.13	12,12,12,12	0
57	MG	RA	3156	1/1	0.94	0.23	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	YA	3163	1/1	0.94	0.14	28,28,28,28	0
57	MG	YA	3083	1/1	0.94	0.20	7,7,7,7	0
57	MG	RA	3072	1/1	0.94	0.24	13,13,13,13	0
57	MG	RA	3011	1/1	0.94	0.49	32,32,32,32	0
57	MG	RA	3082	1/1	0.94	0.18	42,42,42,42	0
57	MG	YA	3103	1/1	0.94	0.22	31,31,31,31	0
57	MG	YA	3104	1/1	0.94	0.25	24,24,24,24	0
57	MG	RA	3054	1/1	0.94	0.11	0,0,0,0	0
57	MG	YA	3106	1/1	0.94	0.13	9,9,9,9	0
57	MG	QA	1663	1/1	0.94	0.10	82,82,82,82	0
57	MG	YA	3178	1/1	0.94	0.19	35,35,35,35	0
57	MG	YA	3113	1/1	0.94	0.19	19,19,19,19	0
57	MG	RA	3023	1/1	0.94	0.21	14,14,14,14	0
57	MG	YA	3246	1/1	0.94	0.24	21,21,21,21	0
57	MG	YA	3117	1/1	0.94	0.12	18,18,18,18	0
57	MG	YA	3119	1/1	0.94	0.23	31,31,31,31	0
57	MG	YA	3185	1/1	0.94	0.14	10,10,10,10	0
57	MG	YA	3186	1/1	0.94	0.16	39,39,39,39	0
57	MG	QA	1653	1/1	0.94	0.15	36,36,36,36	0
57	MG	YA	3263	1/1	0.94	0.17	33,33,33,33	0
57	MG	YA	3123	1/1	0.94	0.18	9,9,9,9	0
57	MG	XV	101	1/1	0.94	0.19	9,9,9,9	0
57	MG	RA	3092	1/1	0.94	0.12	9,9,9,9	0
57	MG	RA	3166	1/1	0.94	0.12	43,43,43,43	0
57	MG	XA	1607	1/1	0.94	0.28	31,31,31,31	0
57	MG	RA	3098	1/1	0.94	0.25	10,10,10,10	0
57	MG	YA	3131	1/1	0.94	0.14	35,35,35,35	0
57	MG	YA	3132	1/1	0.94	0.14	18,18,18,18	0
57	MG	XA	1650	1/1	0.94	0.09	26,26,26,26	0
57	MG	RA	3099	1/1	0.94	0.34	24,24,24,24	0
57	MG	YA	3030	1/1	0.94	0.38	20,20,20,20	0
57	MG	YA	3032	1/1	0.94	0.21	4,4,4,4	0
57	MG	YA	3033	1/1	0.94	0.28	4,4,4,4	0
57	MG	YA	3197	1/1	0.95	0.13	44,44,44,44	0
57	MG	RA	3045	1/1	0.95	0.24	16,16,16,16	0
57	MG	RA	3144	1/1	0.95	0.26	17,17,17,17	0
57	MG	QA	1634	1/1	0.95	0.23	20,20,20,20	0
57	MG	RA	3146	1/1	0.95	0.14	33,33,33,33	0
57	MG	RA	3102	1/1	0.95	0.23	14,14,14,14	0
57	MG	QA	1619	1/1	0.95	0.11	33,33,33,33	0
57	MG	QA	1654	1/1	0.95	0.11	79,79,79,79	0
57	MG	QA	1628	1/1	0.95	0.28	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3117	1/1	0.95	0.19	3,3,3,3	0
57	MG	YA	3036	1/1	0.95	0.22	5,5,5,5	0
57	MG	YA	3038	1/1	0.95	0.12	6,6,6,6	0
57	MG	RA	3076	1/1	0.95	0.26	15,15,15,15	0
57	MG	RA	3078	1/1	0.95	0.21	22,22,22,22	0
57	MG	YA	3213	1/1	0.95	0.27	29,29,29,29	0
57	MG	XA	1640	1/1	0.95	0.30	31,31,31,31	0
57	MG	XA	1641	1/1	0.95	0.11	40,40,40,40	0
57	MG	YA	3147	1/1	0.95	0.14	8,8,8,8	0
57	MG	YA	3048	1/1	0.95	0.22	10,10,10,10	0
57	MG	YA	3149	1/1	0.95	0.13	16,16,16,16	0
57	MG	YA	3049	1/1	0.95	0.28	14,14,14,14	0
57	MG	RA	3189	1/1	0.95	0.10	34,34,34,34	0
57	MG	YA	3053	1/1	0.95	0.23	5,5,5,5	0
57	MG	RA	3157	1/1	0.95	0.23	49,49,49,49	0
57	MG	XA	1646	1/1	0.95	0.25	45,45,45,45	0
57	MG	YA	3061	1/1	0.95	0.11	15,15,15,15	0
57	MG	YA	3226	1/1	0.95	0.19	3,3,3,3	0
57	MG	RA	3080	1/1	0.95	0.23	19,19,19,19	0
57	MG	YA	3157	1/1	0.95	0.10	30,30,30,30	0
57	MG	RA	3121	1/1	0.95	0.20	29,29,29,29	0
57	MG	YA	3230	1/1	0.95	0.18	32,32,32,32	0
57	MG	YA	3231	1/1	0.95	0.10	19,19,19,19	0
57	MG	RA	3024	1/1	0.95	0.21	5,5,5,5	0
57	MG	RA	3006	1/1	0.95	0.34	18,18,18,18	0
57	MG	RA	3030	1/1	0.95	0.27	12,12,12,12	0
57	MG	YA	3162	1/1	0.95	0.15	20,20,20,20	0
57	MG	RA	3085	1/1	0.95	0.18	16,16,16,16	0
57	MG	RA	3034	1/1	0.95	0.34	30,30,30,30	0
57	MG	RB	201	1/1	0.95	0.12	59,59,59,59	0
57	MG	RA	3132	1/1	0.95	0.31	22,22,22,22	0
57	MG	RA	3087	1/1	0.95	0.14	34,34,34,34	0
57	MG	RF	301	1/1	0.95	0.10	40,40,40,40	0
57	MG	RA	3035	1/1	0.95	0.31	11,11,11,11	0
57	MG	YA	3099	1/1	0.95	0.35	7,7,7,7	0
57	MG	RA	3036	1/1	0.95	0.21	4,4,4,4	0
57	MG	YA	3175	1/1	0.95	0.21	37,37,37,37	0
57	MG	YA	3249	1/1	0.95	0.18	26,26,26,26	0
57	MG	YA	3250	1/1	0.95	0.12	40,40,40,40	0
57	MG	YA	3102	1/1	0.95	0.26	12,12,12,12	0
57	MG	YA	3253	1/1	0.95	0.30	18,18,18,18	0
57	MG	RA	3202	1/1	0.95	0.10	21,21,21,21	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3258	1/1	0.95	0.36	11,11,11,11	0
57	MG	XA	1601	1/1	0.95	0.20	4,4,4,4	0
57	MG	YA	3180	1/1	0.95	0.25	49,49,49,49	0
57	MG	XA	1606	1/1	0.95	0.25	17,17,17,17	0
57	MG	RA	3203	1/1	0.95	0.14	35,35,35,35	0
57	MG	QA	1648	1/1	0.95	0.16	12,12,12,12	0
57	MG	RA	3093	1/1	0.95	0.25	9,9,9,9	0
57	MG	XA	1670	1/1	0.95	0.11	29,29,29,29	0
57	MG	YA	3187	1/1	0.95	0.09	29,29,29,29	0
57	MG	RA	3172	1/1	0.95	0.12	23,23,23,23	0
57	MG	RA	3096	1/1	0.95	0.28	23,23,23,23	0
57	MG	RA	3140	1/1	0.95	0.38	26,26,26,26	0
57	MG	RA	3097	1/1	0.95	0.27	14,14,14,14	0
57	MG	YA	3193	1/1	0.95	0.20	27,27,27,27	0
59	ZN	QD	301	1/1	0.95	0.26	47,47,47,47	0
57	MG	QA	1621	1/1	0.95	0.08	14,14,14,14	0
57	MG	XX	101	1/1	0.95	0.18	22,22,22,22	0
57	MG	YA	3004	1/1	0.95	0.17	5,5,5,5	0
57	MG	RA	3128	1/1	0.96	0.25	31,31,31,31	0
57	MG	YA	3047	1/1	0.96	0.28	6,6,6,6	0
57	MG	RA	3053	1/1	0.96	0.37	16,16,16,16	0
57	MG	RA	3073	1/1	0.96	0.21	24,24,24,24	0
57	MG	RA	3074	1/1	0.96	0.18	4,4,4,4	0
57	MG	XA	1603	1/1	0.96	0.14	38,38,38,38	0
57	MG	RA	3033	1/1	0.96	0.27	3,3,3,3	0
57	MG	YA	3056	1/1	0.96	0.14	8,8,8,8	0
57	MG	YA	3058	1/1	0.96	0.18	12,12,12,12	0
57	MG	QA	1652	1/1	0.96	0.20	37,37,37,37	0
57	MG	QA	1630	1/1	0.96	0.17	48,48,48,48	0
57	MG	YA	3062	1/1	0.96	0.12	9,9,9,9	0
57	MG	RA	3136	1/1	0.96	0.10	9,9,9,9	0
57	MG	QA	1612	1/1	0.96	0.21	13,13,13,13	0
57	MG	RA	3105	1/1	0.96	0.26	18,18,18,18	0
57	MG	YA	3069	1/1	0.96	0.31	15,15,15,15	0
57	MG	YA	3070	1/1	0.96	0.18	8,8,8,8	0
57	MG	RA	3107	1/1	0.96	0.17	25,25,25,25	0
57	MG	YA	3225	1/1	0.96	0.19	9,9,9,9	0
57	MG	XA	1617	1/1	0.96	0.16	14,14,14,14	0
57	MG	RA	3108	1/1	0.96	0.14	24,24,24,24	0
57	MG	QA	1608	1/1	0.96	0.06	13,13,13,13	0
57	MG	RA	3112	1/1	0.96	0.10	25,25,25,25	0
57	MG	RA	3113	1/1	0.96	0.11	32,32,32,32	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1629	1/1	0.96	0.19	29,29,29,29	0
57	MG	RA	3083	1/1	0.96	0.20	11,11,11,11	0
57	MG	RA	3060	1/1	0.96	0.29	8,8,8,8	0
57	MG	YA	3094	1/1	0.96	0.18	2,2,2,2	0
57	MG	YA	3168	1/1	0.96	0.08	13,13,13,13	0
57	MG	YA	3169	1/1	0.96	0.20	20,20,20,20	0
57	MG	YA	3095	1/1	0.96	0.21	7,7,7,7	0
57	MG	RA	3019	1/1	0.96	0.31	19,19,19,19	0
57	MG	RA	3231	1/1	0.96	0.37	9,9,9,9	0
57	MG	XA	1634	1/1	0.96	0.10	15,15,15,15	0
57	MG	YA	3001	1/1	0.96	0.22	9,9,9,9	0
57	MG	QA	1607	1/1	0.96	0.10	40,40,40,40	0
57	MG	RA	3047	1/1	0.96	0.34	9,9,9,9	0
57	MG	YA	3012	1/1	0.96	0.38	9,9,9,9	0
57	MG	YA	3013	1/1	0.96	0.22	1,1,1,1	0
57	MG	YA	3110	1/1	0.96	0.10	15,15,15,15	0
57	MG	YA	3111	1/1	0.96	0.15	34,34,34,34	0
57	MG	YA	3014	1/1	0.96	0.17	3,3,3,3	0
57	MG	YA	3252	1/1	0.96	0.38	25,25,25,25	0
57	MG	YA	3115	1/1	0.96	0.15	17,17,17,17	0
57	MG	QA	1649	1/1	0.96	0.17	39,39,39,39	0
57	MG	RA	3236	1/1	0.96	0.28	33,33,33,33	0
57	MG	YA	3118	1/1	0.96	0.28	25,25,25,25	0
57	MG	RA	3237	1/1	0.96	0.27	26,26,26,26	0
57	MG	RA	3122	1/1	0.96	0.15	29,29,29,29	0
57	MG	YA	3264	1/1	0.96	0.13	24,24,24,24	0
57	MG	YA	3265	1/1	0.96	0.29	27,27,27,27	0
57	MG	YA	3025	1/1	0.96	0.19	8,8,8,8	0
57	MG	YA	3125	1/1	0.96	0.18	11,11,11,11	0
57	MG	RA	3239	1/1	0.96	0.23	19,19,19,19	0
57	MG	XA	1642	1/1	0.96	0.19	23,23,23,23	0
57	MG	RA	3240	1/1	0.96	0.33	25,25,25,25	0
57	MG	XA	1644	1/1	0.96	0.19	27,27,27,27	0
57	MG	RA	3206	1/1	0.96	0.33	15,15,15,15	0
57	MG	QA	1611	1/1	0.96	0.26	14,14,14,14	0
57	MG	QA	1624	1/1	0.96	0.19	27,27,27,27	0
57	MG	YA	3040	1/1	0.96	0.26	8,8,8,8	0
57	MG	RE	302	1/1	0.96	0.26	23,23,23,23	0
57	MG	YA	3044	1/1	0.96	0.29	7,7,7,7	0
57	MG	RA	3032	1/1	0.96	0.26	15,15,15,15	0
57	MG	YA	3138	1/1	0.96	0.10	10,10,10,10	0
57	MG	YA	3121	1/1	0.97	0.11	18,18,18,18	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3034	1/1	0.97	0.33	9,9,9,9	0
57	MG	YA	3035	1/1	0.97	0.20	5,5,5,5	0
57	MG	XA	1605	1/1	0.97	0.21	16,16,16,16	0
57	MG	YA	3037	1/1	0.97	0.19	1,1,1,1	0
57	MG	RA	3111	1/1	0.97	0.35	22,22,22,22	0
57	MG	XA	1651	1/1	0.97	0.15	12,12,12,12	0
57	MG	RA	3018	1/1	0.97	0.12	9,9,9,9	0
57	MG	XA	1608	1/1	0.97	0.34	23,23,23,23	0
57	MG	QA	1642	1/1	0.97	0.10	21,21,21,21	0
57	MG	RA	3020	1/1	0.97	0.24	1,1,1,1	0
57	MG	RA	3169	1/1	0.97	0.44	35,35,35,35	0
57	MG	XA	1612	1/1	0.97	0.12	13,13,13,13	0
57	MG	RA	3090	1/1	0.97	0.17	23,23,23,23	0
57	MG	XA	1614	1/1	0.97	0.17	7,7,7,7	0
57	MG	QA	1635	1/1	0.97	0.08	33,33,33,33	0
57	MG	RA	3039	1/1	0.97	0.24	2,2,2,2	0
57	MG	YA	3141	1/1	0.97	0.10	16,16,16,16	0
57	MG	XA	1662	1/1	0.97	0.08	11,11,11,11	0
57	MG	YA	3055	1/1	0.97	0.24	10,10,10,10	0
57	MG	XA	1620	1/1	0.97	0.23	17,17,17,17	0
57	MG	RA	3230	1/1	0.97	0.32	18,18,18,18	0
57	MG	RA	3040	1/1	0.97	0.30	21,21,21,21	0
57	MG	XA	1623	1/1	0.97	0.27	40,40,40,40	0
57	MG	XA	1667	1/1	0.97	0.32	32,32,32,32	0
57	MG	RA	3094	1/1	0.97	0.14	9,9,9,9	0
57	MG	YA	3064	1/1	0.97	0.08	39,39,39,39	0
57	MG	XA	1669	1/1	0.97	0.16	41,41,41,41	0
57	MG	RA	3233	1/1	0.97	0.27	24,24,24,24	0
57	MG	XA	1627	1/1	0.97	0.09	7,7,7,7	0
57	MG	RA	3041	1/1	0.97	0.21	2,2,2,2	0
57	MG	YA	3232	1/1	0.97	0.13	23,23,23,23	0
57	MG	RA	3123	1/1	0.97	0.18	28,28,28,28	0
57	MG	RA	3003	1/1	0.97	0.30	14,14,14,14	0
57	MG	YA	3073	1/1	0.97	0.21	7,7,7,7	0
57	MG	RA	3075	1/1	0.97	0.09	15,15,15,15	0
57	MG	XV	102	1/1	0.97	0.21	0,0,0,0	0
57	MG	YA	3077	1/1	0.97	0.23	16,16,16,16	0
57	MG	YA	3078	1/1	0.97	0.24	19,19,19,19	0
57	MG	RA	3152	1/1	0.97	0.17	14,14,14,14	0
57	MG	RA	3057	1/1	0.97	0.27	11,11,11,11	0
57	MG	RA	3154	1/1	0.97	0.20	22,22,22,22	0
57	MG	RA	3004	1/1	0.97	0.32	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3086	1/1	0.97	0.22	6,6,6,6	0
57	MG	YA	3245	1/1	0.97	0.14	38,38,38,38	0
57	MG	YA	3010	1/1	0.97	0.21	4,4,4,4	0
57	MG	YA	3089	1/1	0.97	0.27	8,8,8,8	0
57	MG	YA	3090	1/1	0.97	0.23	5,5,5,5	0
57	MG	YA	3093	1/1	0.97	0.16	13,13,13,13	0
57	MG	YA	3011	1/1	0.97	0.27	20,20,20,20	0
57	MG	RA	3129	1/1	0.97	0.12	21,21,21,21	0
57	MG	YA	3096	1/1	0.97	0.21	10,10,10,10	0
57	MG	YA	3254	1/1	0.97	0.19	7,7,7,7	0
57	MG	YA	3097	1/1	0.97	0.21	19,19,19,19	0
57	MG	YA	3098	1/1	0.97	0.16	16,16,16,16	0
57	MG	QA	1606	1/1	0.97	0.10	22,22,22,22	0
57	MG	YA	3260	1/1	0.97	0.17	14,14,14,14	0
57	MG	YA	3100	1/1	0.97	0.31	13,13,13,13	0
57	MG	RE	301	1/1	0.97	0.11	1,1,1,1	0
57	MG	YA	3015	1/1	0.97	0.32	8,8,8,8	0
57	MG	RA	3046	1/1	0.97	0.15	12,12,12,12	0
57	MG	YA	3017	1/1	0.97	0.18	2,2,2,2	0
57	MG	RA	3061	1/1	0.97	0.28	9,9,9,9	0
57	MG	YA	3019	1/1	0.97	0.25	1,1,1,1	0
57	MG	YA	3020	1/1	0.97	0.37	7,7,7,7	0
57	MG	RP	201	1/1	0.97	0.29	30,30,30,30	0
57	MG	YA	3023	1/1	0.97	0.26	16,16,16,16	0
57	MG	YQ	201	1/1	0.97	0.14	25,25,25,25	0
57	MG	RA	3106	1/1	0.97	0.16	11,11,11,11	0
57	MG	YA	3114	1/1	0.97	0.19	8,8,8,8	0
57	MG	RA	3015	1/1	0.97	0.17	2,2,2,2	0
57	MG	YA	3026	1/1	0.97	0.29	8,8,8,8	0
57	MG	RA	3063	1/1	0.97	0.41	6,6,6,6	0
57	MG	RA	3109	1/1	0.97	0.09	8,8,8,8	0
57	MG	RA	3048	1/1	0.97	0.16	1,1,1,1	0
57	MG	XA	1604	1/1	0.97	0.14	15,15,15,15	0
57	MG	YA	3043	1/1	0.98	0.33	15,15,15,15	0
57	MG	RA	3079	1/1	0.98	0.20	17,17,17,17	0
57	MG	RA	3186	1/1	0.98	0.07	20,20,20,20	0
57	MG	YA	3002	1/1	0.98	0.27	9,9,9,9	0
57	MG	YA	3003	1/1	0.98	0.22	10,10,10,10	0
57	MG	RA	3007	1/1	0.98	0.24	6,6,6,6	0
57	MG	YA	3005	1/1	0.98	0.06	1,1,1,1	0
57	MG	YA	3050	1/1	0.98	0.33	9,9,9,9	0
57	MG	YA	3006	1/1	0.98	0.28	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3109	1/1	0.98	0.30	10,10,10,10	0
57	MG	XA	1615	1/1	0.98	0.08	15,15,15,15	0
57	MG	YA	3167	1/1	0.98	0.09	21,21,21,21	0
57	MG	YA	3009	1/1	0.98	0.27	12,12,12,12	0
57	MG	YA	3112	1/1	0.98	0.06	15,15,15,15	0
57	MG	RA	3012	1/1	0.98	0.26	8,8,8,8	0
57	MG	RA	3021	1/1	0.98	0.29	2,2,2,2	0
57	MG	XA	1618	1/1	0.98	0.17	7,7,7,7	0
57	MG	YA	3059	1/1	0.98	0.12	6,6,6,6	0
57	MG	XA	1619	1/1	0.98	0.11	18,18,18,18	0
57	MG	RA	3100	1/1	0.98	0.34	9,9,9,9	0
57	MG	YA	3176	1/1	0.98	0.16	6,6,6,6	0
57	MG	RA	3022	1/1	0.98	0.22	16,16,16,16	0
57	MG	RA	3037	1/1	0.98	0.21	11,11,11,11	0
57	MG	QA	1610	1/1	0.98	0.13	11,11,11,11	0
57	MG	RA	3147	1/1	0.98	0.18	21,21,21,21	0
57	MG	YA	3124	1/1	0.98	0.27	9,9,9,9	0
57	MG	RA	3125	1/1	0.98	0.24	28,28,28,28	0
57	MG	RA	3104	1/1	0.98	0.19	16,16,16,16	0
57	MG	YA	3184	1/1	0.98	0.20	20,20,20,20	0
57	MG	YA	3021	1/1	0.98	0.30	9,9,9,9	0
57	MG	XA	1628	1/1	0.98	0.16	27,27,27,27	0
57	MG	YA	3248	1/1	0.98	0.23	26,26,26,26	0
57	MG	RA	3014	1/1	0.98	0.30	9,9,9,9	0
57	MG	RR	201	1/1	0.98	0.22	7,7,7,7	0
57	MG	RA	3025	1/1	0.98	0.17	15,15,15,15	0
57	MG	RA	3042	1/1	0.98	0.24	3,3,3,3	0
57	MG	YA	3076	1/1	0.98	0.34	7,7,7,7	0
57	MG	YA	3027	1/1	0.98	0.28	0,0,0,0	0
57	MG	YA	3028	1/1	0.98	0.19	9,9,9,9	0
57	MG	YA	3136	1/1	0.98	0.17	18,18,18,18	0
57	MG	RA	3224	1/1	0.98	0.11	52,52,52,52	0
57	MG	YA	3080	1/1	0.98	0.18	10,10,10,10	0
57	MG	YA	3261	1/1	0.98	0.29	8,8,8,8	0
57	MG	YA	3081	1/1	0.98	0.19	5,5,5,5	0
57	MG	RA	3089	1/1	0.98	0.15	8,8,8,8	0
57	MG	YA	3031	1/1	0.98	0.22	2,2,2,2	0
57	MG	XA	1602	1/1	0.98	0.12	30,30,30,30	0
57	MG	YA	3085	1/1	0.98	0.15	71,71,71,71	0
57	MG	YA	3203	1/1	0.98	0.18	27,27,27,27	0
57	MG	RA	3005	1/1	0.98	0.37	13,13,13,13	0
57	MG	YA	3087	1/1	0.98	0.27	15,15,15,15	0

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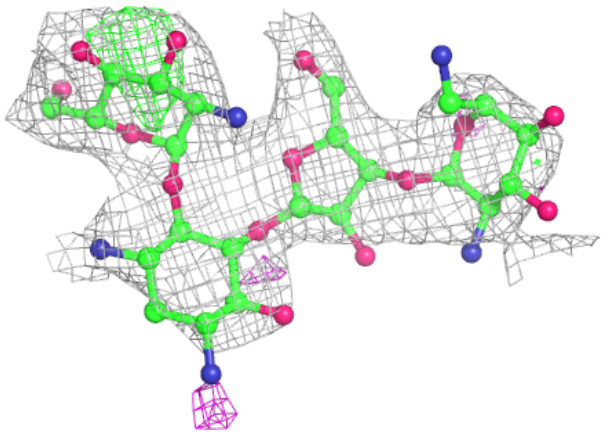
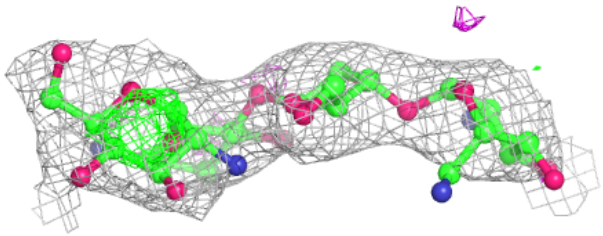
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3028	1/1	0.98	0.23	4,4,4,4	0
57	MG	RA	3029	1/1	0.98	0.32	2,2,2,2	0
57	MG	RA	3229	1/1	0.98	0.30	5,5,5,5	0
57	MG	YA	3091	1/1	0.98	0.19	21,21,21,21	0
57	MG	Y5	101	1/1	0.98	0.16	26,26,26,26	0
57	MG	RA	3016	1/1	0.98	0.24	1,1,1,1	0
57	MG	QA	1604	1/1	0.98	0.25	12,12,12,12	0
57	MG	YA	3212	1/1	0.98	0.11	9,9,9,9	0
57	MG	RA	3114	1/1	0.98	0.25	20,20,20,20	0
57	MG	RA	3095	1/1	0.98	0.26	14,14,14,14	0
57	MG	RA	3116	1/1	0.98	0.22	1,1,1,1	0
57	MG	YA	3042	1/1	0.98	0.19	19,19,19,19	0
57	MG	RA	3077	1/1	0.99	0.30	6,6,6,6	0
57	MG	YA	3122	1/1	0.99	0.17	9,9,9,9	0
57	MG	RA	3038	1/1	0.99	0.31	9,9,9,9	0
57	MG	YA	3007	1/1	0.99	0.20	9,9,9,9	0
57	MG	YA	3057	1/1	0.99	0.22	6,6,6,6	0
57	MG	QM	201	1/1	0.99	0.04	55,55,55,55	0
57	MG	YA	3108	1/1	0.99	0.17	3,3,3,3	0
57	MG	RA	3027	1/1	0.99	0.23	3,3,3,3	0
57	MG	YA	3092	1/1	0.99	0.18	30,30,30,30	0
57	MG	QV	101	1/1	0.99	0.15	26,26,26,26	0
57	MG	QA	1636	1/1	0.99	0.09	16,16,16,16	0
57	MG	RA	3017	1/1	0.99	0.28	8,8,8,8	0
57	MG	YA	3190	1/1	0.99	0.07	2,2,2,2	0
57	MG	RA	3065	1/1	0.99	0.14	16,16,16,16	0
57	MG	RA	3031	1/1	0.99	0.18	16,16,16,16	0
57	MG	YA	3051	1/1	0.99	0.18	2,2,2,2	0
57	MG	YA	3066	1/1	0.99	0.22	16,16,16,16	0
57	MG	YA	3067	1/1	0.99	0.20	22,22,22,22	0
57	MG	YA	3256	1/1	0.99	0.28	7,7,7,7	0
57	MG	YA	3257	1/1	0.99	0.24	3,3,3,3	0
57	MG	RA	3067	1/1	0.99	0.20	9,9,9,9	0
57	MG	XA	1626	1/1	0.99	0.19	19,19,19,19	0

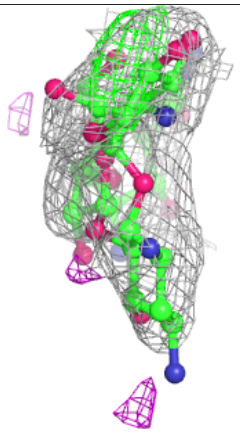
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around PAR QA 1670:

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

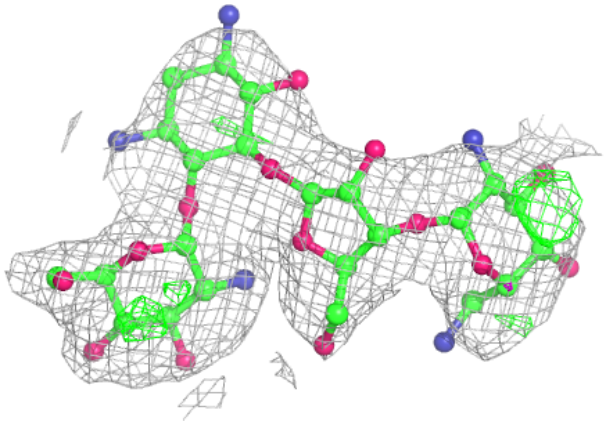


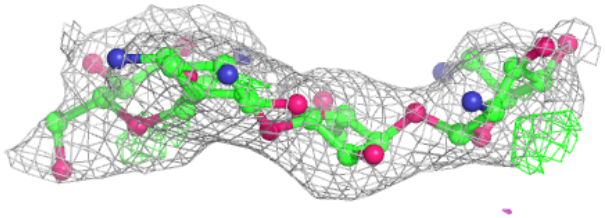


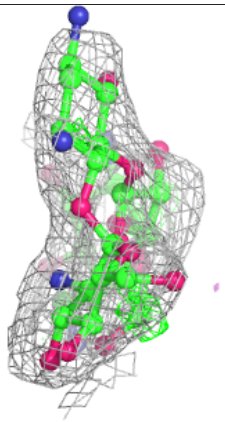


Electron density around PAR XA 1675:

$2mF_o$-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.