Full wwPDB X-ray Structure Validation Report ⓘ

Mar 25, 2026 – 11:05 PM UTC

PDB ID	:	4L71 / pdb_00004l71
Title	:	Crystal Structure of Frameshift Suppressor tRNA SufA6 Bound to Codon CCC-A on the Ribosome
Authors	:	Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on	:	2013-06-13
Resolution	:	3.90 Å(reported)

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

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

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

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

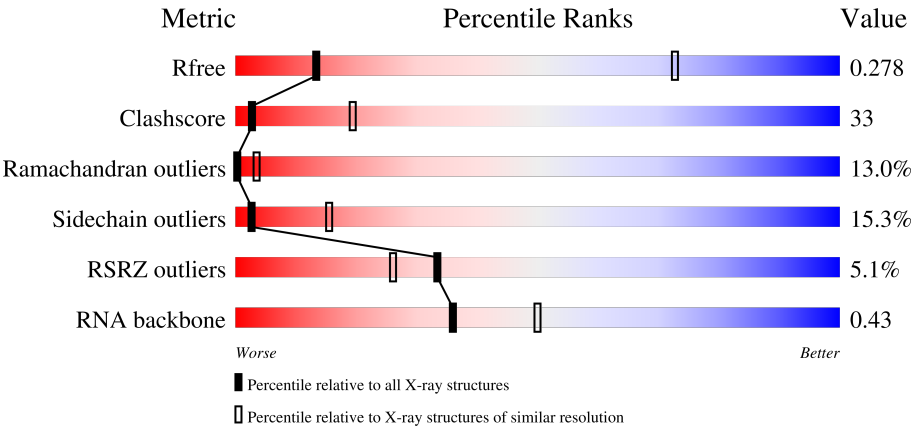
MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	2.0
EDS	:	3.0
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
CCP4	:	9.0.010 (Gargrove)
Density-Fitness	:	1.0.12
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 3.90 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1270 (4.10-3.70)
Clashscore	190562	1034 (4.08-3.72)
Ramachandran outliers	187476	1251 (4.10-3.70)
Sidechain outliers	187428	1243 (4.10-3.70)
RSRZ outliers	180081	1269 (4.10-3.70)
RNA backbone	3983	1014 (4.70-3.10)

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	2% 45% 42% 11%
1	XA	1522	43% 43% 12%
2	QB	256	4% 16% 58% 17% 7%
2	XB	256	16% 59% 16% 7%

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Mol	Chain	Length	Quality of chain
3	QC	239	4% 21% 53% 10% 14%
3	XC	239	2% 22% 53% 9% 14%
4	QD	209	9% 23% 57% 18%
4	XD	209	8% 23% 57% 18%
5	QE	162	7% 23% 51% 19% 7%
5	XE	162	5% 27% 46% 20% 7%
6	QF	101	23% 59% 18%
6	XF	101	23% 58% 19%
7	QG	156	7% 26% 61% 12%
7	XG	156	3% 28% 59% 13%
8	QH	138	9% 24% 59% 14%
8	XH	138	3% 21% 63% 14%
9	QI	128	11% 19% 60% 19%
9	XI	128	12% 17% 61% 20%
10	QJ	105	16% 18% 61% 14% 6%
10	XJ	105	7% 16% 63% 14% 6%
11	QK	129	5% 27% 52% 12% 8%
11	XK	129	4% 28% 51% 11% 8%
12	QL	132	11% 28% 45% 17% 5% 5%
12	XL	132	11% 28% 44% 19% 5%
13	QM	126	13% 14% 56% 23%
13	XM	126	7% 14% 55% 25%
14	QN	61	28% 18% 51% 21% 8%
14	XN	61	10% 11% 59% 23% 5%
15	QO	89	4% 24% 57% 18%

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Mol	Chain	Length	Quality of chain
15	XO	89	3% 25% 56% 18%
16	QP	88	11% 11% 66% 16% 5%
16	XP	88	5% 15% 61% 17% 5%
17	QQ	105	15% 35% 45% 15% 5%
17	XQ	105	6% 30% 50% 15% 5%
18	QR	88	2% 16% 47% 16% 20%
18	XR	88	3% 15% 48% 16% 20%
19	QS	93	15% 22% 41% 24% 10%
19	XS	93	4% 22% 40% 25% 10%
20	QT	106	11% 21% 50% 23% 7%
20	XT	106	14% 18% 54% 22% 7%
21	QU	27	26% 30% 44% 19% 7%
21	XU	27	30% 26% 48% 19% 7%
22	RA	2916	2% 43% 43% 13%
22	YA	2916	2% 42% 45% 12%
23	RB	122	% 39% 49% 10%
23	YB	122	2% 42% 44% 12%
24	RD	276	7% 28% 47% 20%
24	YD	276	7% 27% 48% 19%
25	RE	206	12% 21% 43% 28% 8%
25	YE	206	3% 20% 45% 27% 8%
26	RF	210	3% 29% 49% 16%
26	YF	210	3% 29% 48% 16%
27	RG	182	10% 22% 57% 18%
27	YG	182	3% 22% 57% 18%

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Mol	Chain	Length	Quality of chain
28	RH	180	7% 22% 41% 23% 8% 6%
28	YH	180	6% 21% 42% 22% 9% 6%
29	RI	148	5% 34% 47% 16%
29	YI	148	3% 40% 42% 15%
30	RN	140	5% 16% 50% 31%
30	YN	140	7% 16% 51% 31%
31	RO	122	11% 29% 58% 11%
31	YO	122	2% 28% 59% 12%
32	RP	150	14% 17% 43% 31% 9%
32	YP	150	8% 17% 43% 31% 8%
33	RQ	141	11% 30% 46% 18% 5%
33	YQ	141	11% 30% 47% 18% 5%
34	RR	118	9% 31% 47% 17%
34	YR	118	4% 32% 48% 15%
35	RS	112	4% 12% 58% 22% 6%
35	YS	112	4% 12% 59% 21% 6%
36	RT	146	4% 18% 49% 23% 6%
36	YT	146	3% 18% 49% 23% 6%
37	RU	118	11% 28% 48% 21%
37	YU	118	5% 28% 48% 21%
38	RV	101	5% 25% 49% 25%
38	YV	101	8% 26% 49% 24%
39	RW	113	4% 25% 48% 25%
39	YW	113	% 27% 46% 25%
40	RX	96	8% 38% 40% 18%

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Mol	Chain	Length	Quality of chain
40	YX	96	3% 34% 43% 18%
41	RY	110	20% 15% 42% 32% 5% 7%
41	YY	110	11% 15% 41% 32% 5% 7%
42	RZ	206	3% 41% 34% 12% 11%
42	YZ	206	% 39% 37% 12% 11%
43	R0	85	2% 49% 44%
43	Y0	85	52% 38% 7%
44	R1	98	12% 30% 46% 18% 5%
44	Y1	98	8% 26% 49% 19% 5%
45	R2	72	6% 17% 54% 22%
45	Y2	72	6% 17% 54% 22%
46	R3	60	3% 32% 52% 13%
46	Y3	60	3% 28% 57% 12%
47	R4	71	8% 39% 42% 14%
47	Y4	71	7% 41% 42% 14%
48	R5	60	3% 22% 42% 28% 7%
48	Y5	60	12% 20% 43% 28% 5%
49	R6	54	22% 6% 43% 35% 7% 9%
49	Y6	54	9% 7% 41% 35% 7% 9%
50	R7	49	10% 33% 53% 14%
50	Y7	49	8% 33% 53% 14%
51	R8	65	17% 17% 45% 29% 8%
51	Y8	65	11% 17% 43% 31% 8%
52	R9	37	62% 51% 46%
52	Y9	37	76% 46% 49% 5%

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Mol	Chain	Length	Quality of chain
53	QV	77	14% 23% 57% 19%
53	XV	77	10% 29% 52% 19%
54	QX	25	32% 8% 24% 68%
54	XX	25	20% 8% 20% 68%
55	QY	18	28% 17% 33% 22% 6% 22%
55	XY	18	11% 22% 33% 22% 22%
56	Z6	3	33% 33% 33%
56	Z8	3	67% 33%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QA	1610	-	-	-	X
57	MG	RA	3003	-	-	-	X
57	MG	RA	3005	-	-	-	X
57	MG	RA	3006	-	-	-	X
57	MG	RA	3007	-	-	-	X
57	MG	RA	3014	-	-	-	X
57	MG	RA	3016	-	-	-	X
57	MG	RA	3019	-	-	-	X
57	MG	RA	3020	-	-	-	X
57	MG	RA	3021	-	-	-	X
57	MG	RA	3023	-	-	-	X
57	MG	RA	3027	-	-	-	X
57	MG	RA	3030	-	-	-	X
57	MG	RA	3031	-	-	-	X
57	MG	RA	3035	-	-	-	X
57	MG	RA	3038	-	-	-	X
57	MG	RA	3039	-	-	-	X
57	MG	RA	3041	-	-	-	X
57	MG	RA	3042	-	-	-	X
57	MG	RA	3043	-	-	-	X
57	MG	RA	3048	-	-	-	X
57	MG	RA	3051	-	-	-	X
57	MG	RA	3057	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	RA	3060	-	-	-	X
57	MG	RA	3064	-	-	-	X
57	MG	RA	3065	-	-	-	X
57	MG	RA	3071	-	-	-	X
57	MG	RA	3081	-	-	-	X
57	MG	RA	3093	-	-	-	X
57	MG	RA	3096	-	-	-	X
57	MG	RA	3099	-	-	-	X
57	MG	RA	3100	-	-	-	X
57	MG	RA	3123	-	-	-	X
57	MG	RA	3233	-	-	-	X
57	MG	RA	3234	-	-	-	X
57	MG	XA	1602	-	-	-	X
57	MG	XA	1606	-	-	-	X
57	MG	XA	1615	-	-	-	X
57	MG	XA	1616	-	-	-	X
57	MG	XA	1621	-	-	-	X
57	MG	XA	1635	-	-	-	X
57	MG	XA	1643	-	-	-	X
57	MG	XA	1662	-	-	-	X
57	MG	YA	3001	-	-	-	X
57	MG	YA	3002	-	-	-	X
57	MG	YA	3006	-	-	-	X
57	MG	YA	3009	-	-	-	X
57	MG	YA	3010	-	-	-	X
57	MG	YA	3012	-	-	-	X
57	MG	YA	3014	-	-	-	X
57	MG	YA	3018	-	-	-	X
57	MG	YA	3019	-	-	-	X
57	MG	YA	3021	-	-	-	X
57	MG	YA	3022	-	-	-	X
57	MG	YA	3024	-	-	-	X
57	MG	YA	3026	-	-	-	X
57	MG	YA	3030	-	-	-	X
57	MG	YA	3033	-	-	-	X
57	MG	YA	3040	-	-	-	X
57	MG	YA	3041	-	-	-	X
57	MG	YA	3043	-	-	-	X
57	MG	YA	3049	-	-	-	X
57	MG	YA	3050	-	-	-	X
57	MG	YA	3053	-	-	-	X
57	MG	YA	3054	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	YA	3067	-	-	-	X
57	MG	YA	3072	-	-	-	X
57	MG	YA	3079	-	-	-	X
57	MG	YA	3080	-	-	-	X
57	MG	YA	3082	-	-	-	X
57	MG	YA	3085	-	-	-	X
57	MG	YA	3098	-	-	-	X
57	MG	YA	3099	-	-	-	X
57	MG	YA	3107	-	-	-	X
57	MG	YA	3113	-	-	-	X
57	MG	YA	3117	-	-	-	X
57	MG	YA	3134	-	-	-	X
57	MG	YA	3138	-	-	-	X
57	MG	YA	3151	-	-	-	X
57	MG	YA	3164	-	-	-	X
57	MG	YA	3197	-	-	-	X
57	MG	YA	3224	-	-	-	X
57	MG	YA	3250	-	-	-	X
57	MG	YA	3253	-	-	-	X
57	MG	YA	3255	-	-	-	X
57	MG	YA	3260	-	-	-	X
57	MG	YA	3261	-	-	-	X

2 Entry composition (i)

There are 59 unique types of molecules in this entry. The entry contains 291950 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 22 is a RNA chain called 23S Ribosomal RNA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 55 is a RNA chain called messenger RNA.

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

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

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

- Molecule 57 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QA	65	Total	Mg	0	0
			65	65		
57	QF	1	Total	Mg	0	0
			1	1		
57	QH	1	Total	Mg	0	0
			1	1		
57	QM	1	Total	Mg	0	0
			1	1		
57	RA	244	Total	Mg	0	0
			244	244		

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

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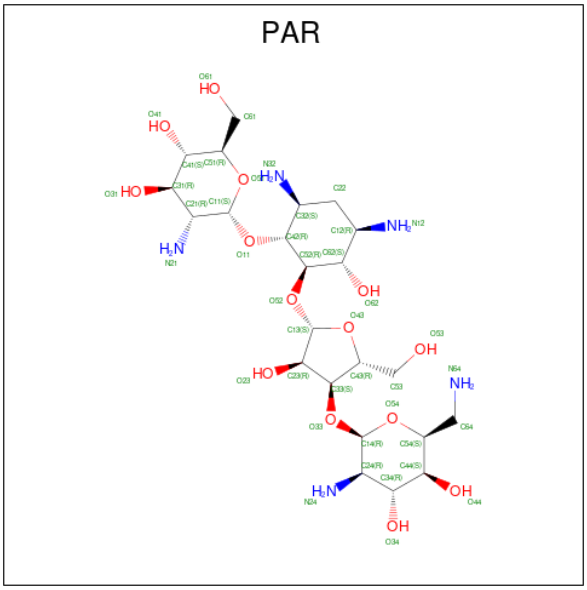
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	XX	1	Total Mg 1 1	0	0

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



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

- Molecule 59 is ZINC ION (CCD ID: ZN) (formula: Zn).

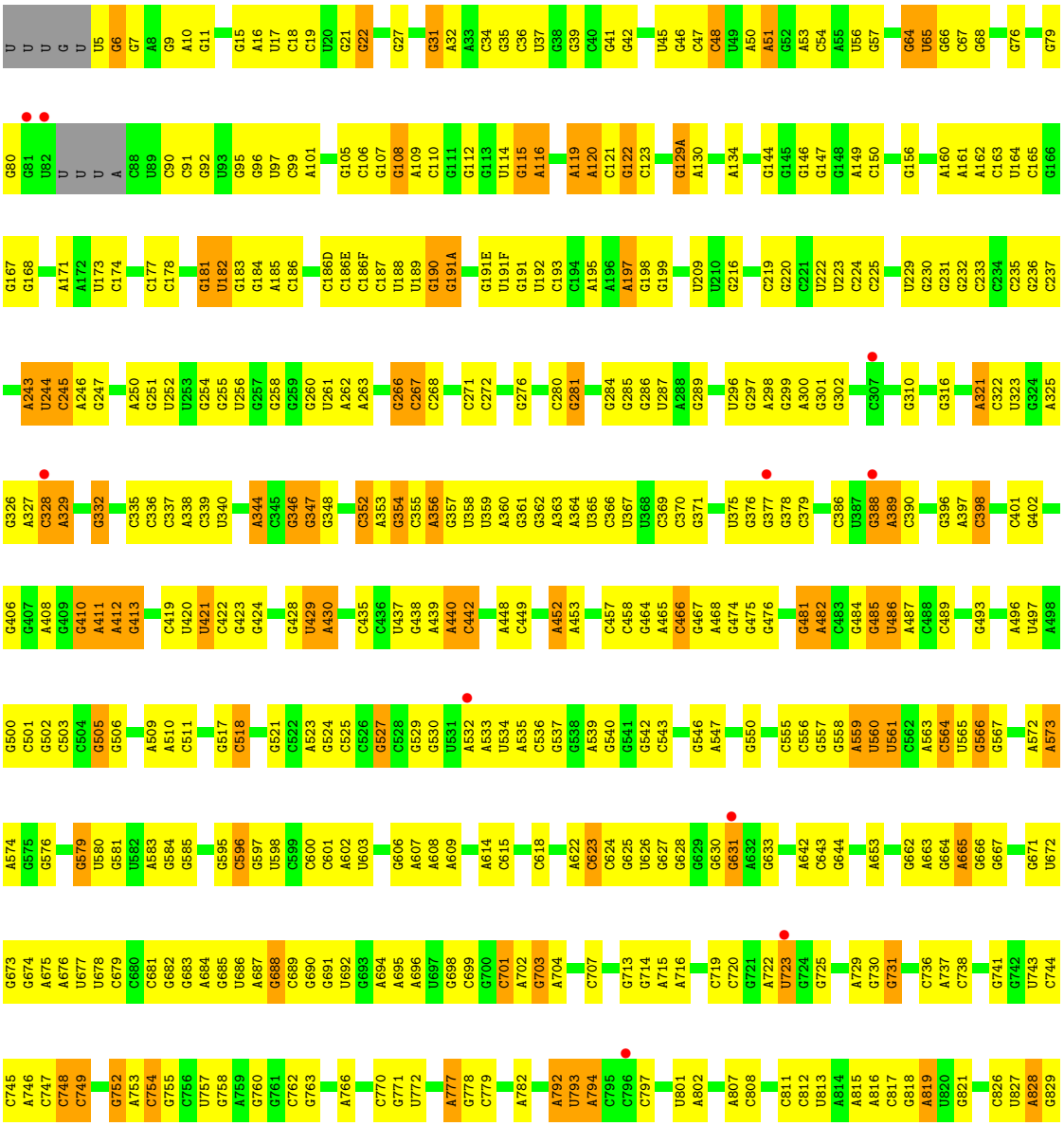
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
59	QD	1	Total Zn 1 1	0	0
59	QN	1	Total Zn 1 1	0	0
59	R9	1	Total Zn 1 1	0	0
59	XD	1	Total Zn 1 1	0	0
59	XN	1	Total Zn 1 1	0	0
59	Y9	1	Total Zn 1 1	0	0

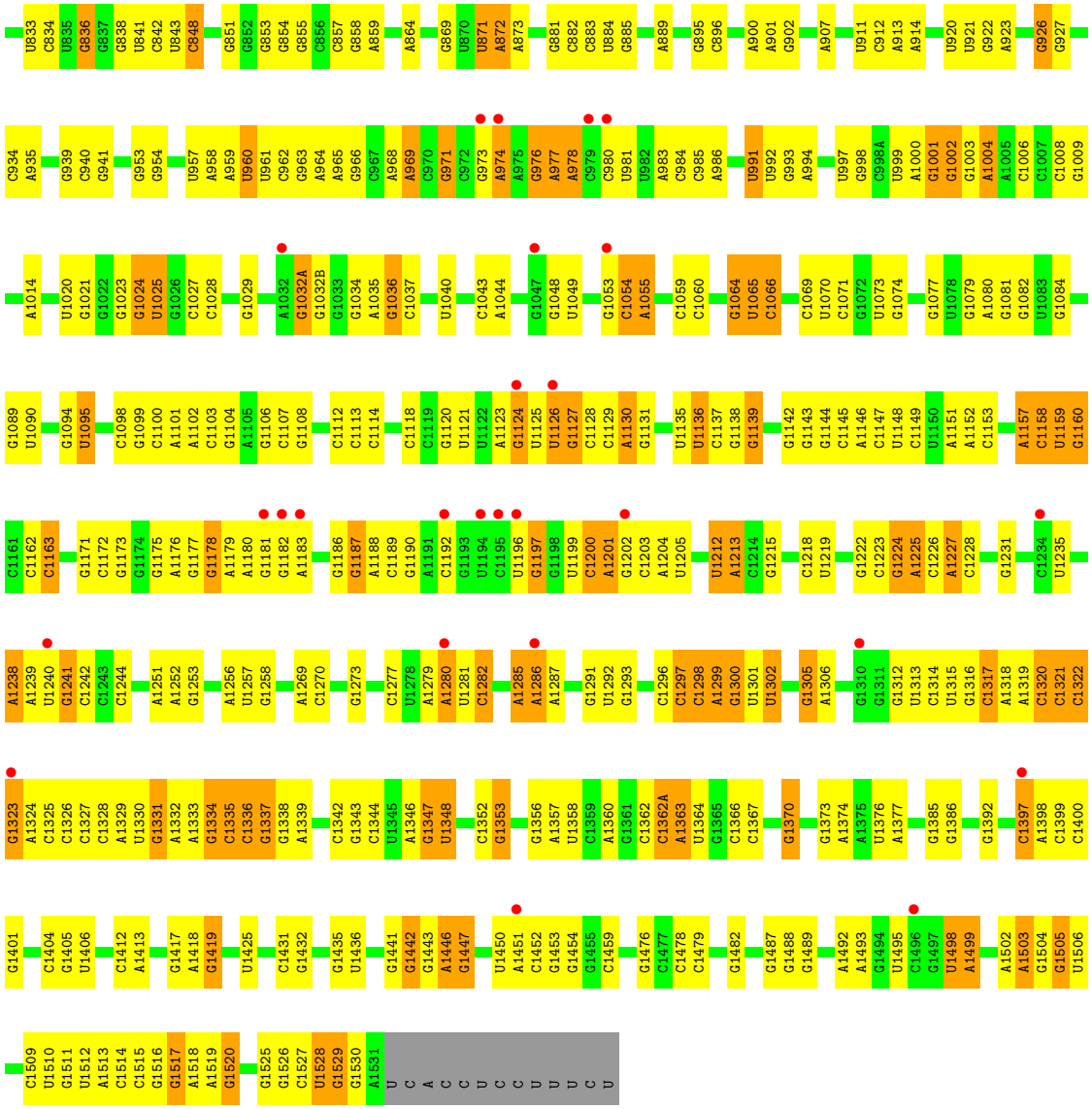
3 Residue-property plots (i)

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 Ribosomal RNA

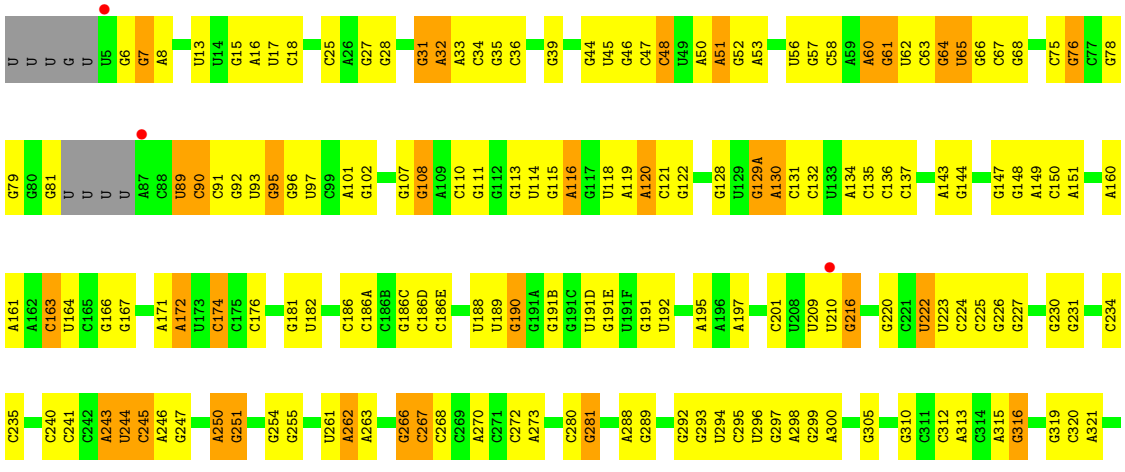
Chain QA:

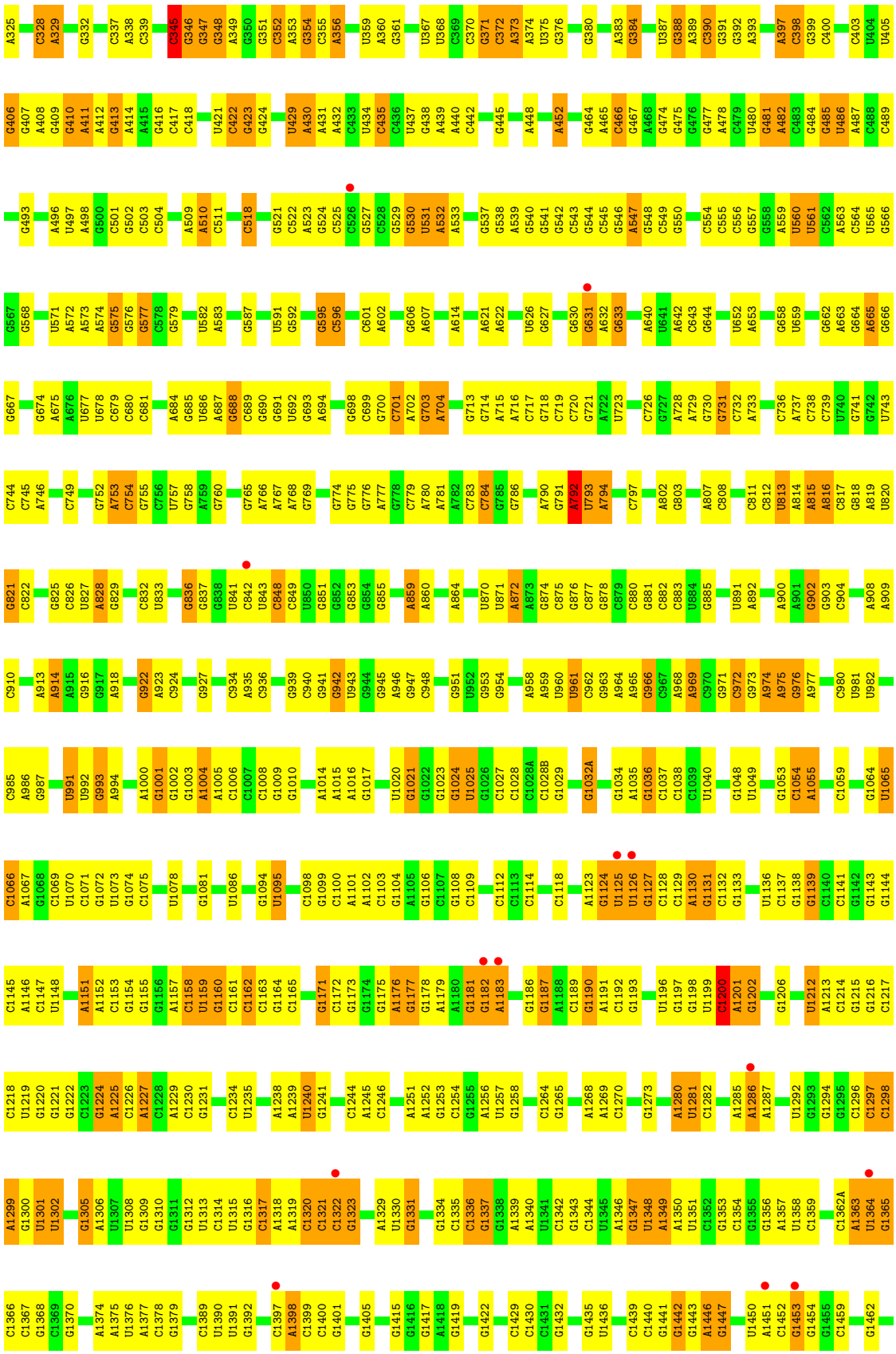


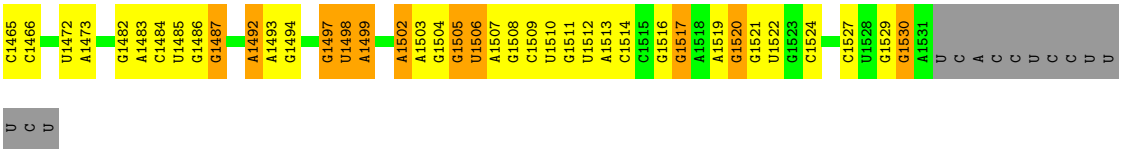


• Molecule 1: 16S Ribosomal RNA

Chain XA:

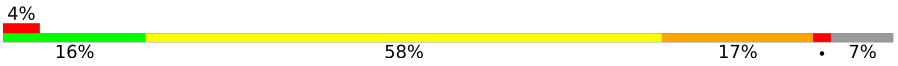


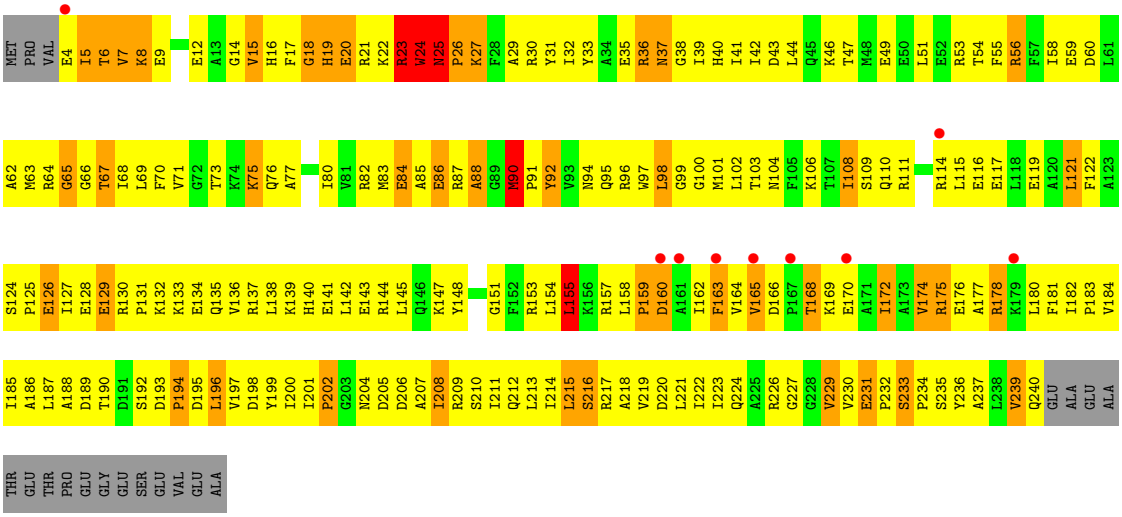

A325 C328 A329 G332 C337 A338 C339 C345 G346 G347 G348 A349 G350 G351 C352 A353 G354 C355 A356 U359 A360 G361 U367 U368 C369 C370 G371 C372 A373 A374 U375 G376 G380 A383 G384 U387 G388 A389 C390 G391 G392 A393 A397 C398 G399 C400 C403 U404 U405
G406 G407 A408 G409 G410 A411 A412 G413 A414 A415 G416 C417 C418 U421 C422 G423 G424 U429 A430 A431 A432 C433 U434 C435 C436 U437 G438 A439 A440 C442 G445 A448 A452 G464 A465 C466 G467 A468 G474 G475 G476 G477 A478 C479 U480 G481 A482 C483 G484 G485 U486 A487 C488 C489
G493 A496 U497 A498 G500 C501 G502 C503 C504 A509 A510 C511 C518 G521 C522 A523 G524 C525 C526 G527 C528 G529 G530 U531 A532 A533 G537 G538 A539 G540 G541 G542 C543 G544 C545 G546 A547 G548 C549 G550 C554 C555 C556 G557 G558 A559 U560 U561 C562 A563 C564 U565 G566
G567 G568 U571 A572 A573 A574 G575 G576 G577 C578 G579 U582 A583 G587 U591 G592 G596 C596 C601 A602 G606 A607 A614 A621 A622 U626 G627 G630 G631 A632 G633 A640 U641 A642 C643 G644 U652 A653 G658 U659 G662 A663 G664 A665 G666
G667 G674 A675 A676 U677 U678 C679 C680 C681 A684 G685 U686 A687 G688 C689 G690 G691 U692 G693 A694 G698 C699 G700 C701 A702 G703 A704 G713 G714 A715 A716 C717 G718 C719 C720 G721 A722 U723 C726 G727 A728 A729 G730 G731 C732 A733 C736 A737 C738 C739 U740 G741 G742 U743
C744 C745 A746 C749 G752 A753 C754 G755 C756 U757 G758 A759 G760 G765 A766 A767 A768 G769 G774 G775 G776 A777 G778 C779 A780 A781 A782 C783 C784 G785 G786 A790 G791 A792 U793 A794 C797 A802 G803 A807 C808 C811 C812 U813 A814 A815 A816 C817 G818 A819 U820
G821 C822 G825 C826 U827 A828 G829 C832 U833 G836 G837 G838 U841 C842 U843 C848 C849 U850 G851 G852 C853 G854 G855 A859 A860 A864 U870 U871 A872 A873 G874 C875 G876 C877 G878 C879 C880 G881 C882 C883 U884 G885 U891 A892 A900 A901 G902 G903 C904 A908 A909
C910 A913 A914 A915 G916 G917 A918 G922 A923 C924 G927 C934 A935 C936 G939 C940 G941 G942 U943 G944 G945 A946 G947 C948 G951 U952 G953 G954 A958 A959 U960 U961 C962 G963 A964 A965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 C980 U981 U982
C985 A986 G987 U991 U992 G993 A994 A1000 G1001 G1002 G1003 A1004 A1005 C1006 C1007 C1008 G1009 G1010 A1014 A1015 A1016 G1017 U1020 G1021 G1022 G1023 G1024 U1025 G1026 C1027 C1028 C1028A C1028B G1029 G1032A G1034 A1035 G1036 C1037 C1038 C1039 U1040 G1048 U1049 G1053 C1054 A1055 C1059 G1064 U1065
C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1074 C1075 U1078 G1081 U1086 G1094 U1095 C1098 G1099 C1100 A1101 A1102 C1103 G1104 A1105 G1106 C1107 G1108 C1109 C1112 C1113 C1114 C1118 A1123 G1124 U1125 U1126 G1127 C1128 C1129 A1130 G1131 C1132 G1133 U1136 C1137 G1138 G1139 C1140 C1141 G1142 G1143 G1144
C1145 A1146 C1147 U1148 A1151 A1152 C1153 G1154 G1155 G1156 A1157 C1158 U1159 G1160 C1161 C1162 C1163 G1164 C1165 G1171 C1172 G1173 G1174 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182 A1183 G1186 G1187 A1188 C1189 G1190 A1191 C1192 G1193 U1196 G1197 G1198 U1199 C1200 A1201 G1202 G1206 U1212 A1213 C1214 G1215 C1216 C1217
C1218 U1219 G1220 G1221 G1222 C1223 G1224 A1225 C1226 A1227 C1228 A1229 C1230 G1231 C1234 U1235 A1238 A1239 U1240 G1241 C1244 A1245 C1246 A1251 A1252 C1253 C1254 G1255 A1256 U1257 G1258 C1264 G1265 A1268 A1269 C1270 G1273 A1280 U1281 C1282 A1285 A1286 A1287 U1292 G1293 A1294 G1295 C1296 C1297 C1298
A1299 G1300 U1301 U1302 G1305 A1306 U1307 U1308 G1309 G1310 G1311 G1312 U1313 C1314 U1315 G1316 C1317 A1318 A1319 C1320 C1321 C1322 C1323 A1329 U1330 G1331 C1334 C1335 C1336 C1337 G1338 A1339 A1340 U1341 C1342 G1343 C1344 U1345 A1346 G1347 U1348 A1349 A1350 U1351 C1352 G1353 C1354 G1355 G1356 A1357 U1358 C1359 C1362A A1363 U1364 G1365
C1366 C1367 G1368 C1369 G1370 A1374 A1375 U1376 A1377 C1378 G1379 C1389 U1390 U1391 G1392 C1397 A1398 C1399 C1400 G1401 G1405 G1415 G1416 G1417 A1418 G1419 G1422 C1429 C1430 C1431 G1432 G1435 U1436 C1439 C1440 U1441 G1442 G1443 A1446 G1447 U1450 A1451 C1452 G1453 G1454 G1455 C1459 G1462



• Molecule 2: 30S ribosomal protein S2

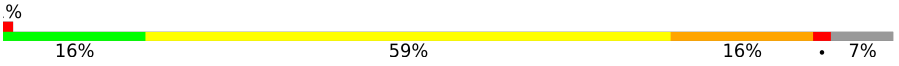
Chain QB:

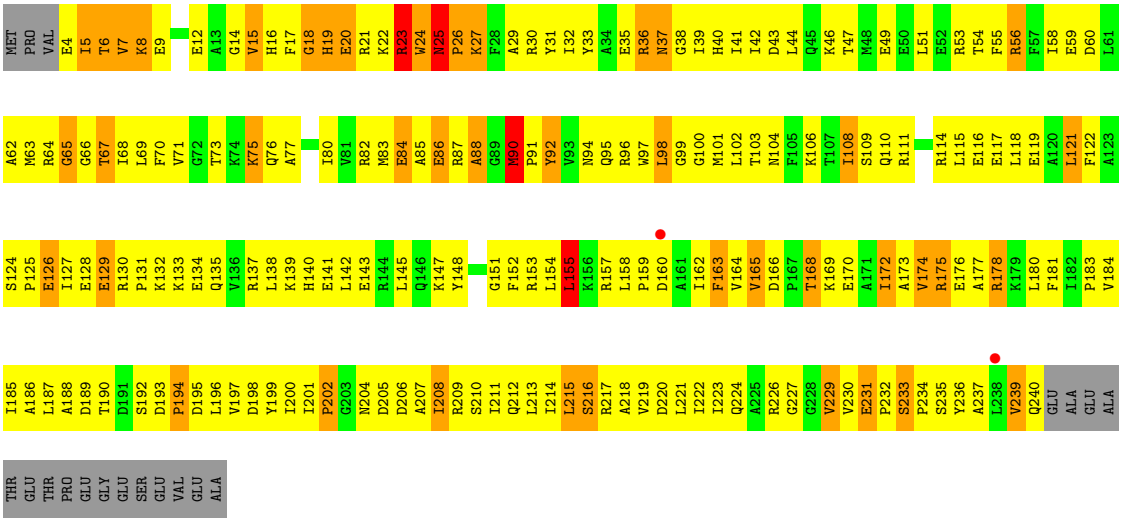




• Molecule 2: 30S ribosomal protein S2

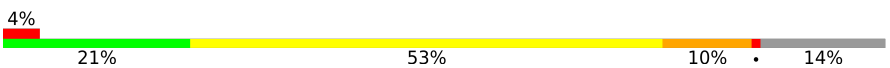
Chain XB:

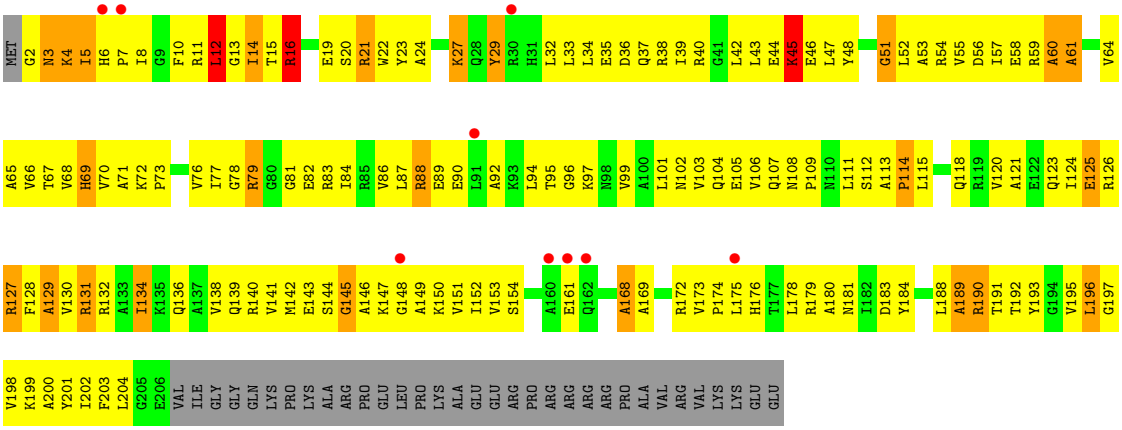




• Molecule 3: 30S ribosomal protein S3

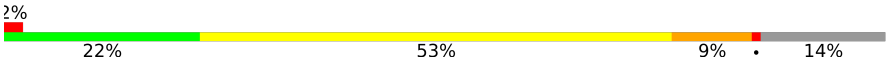
Chain QC:

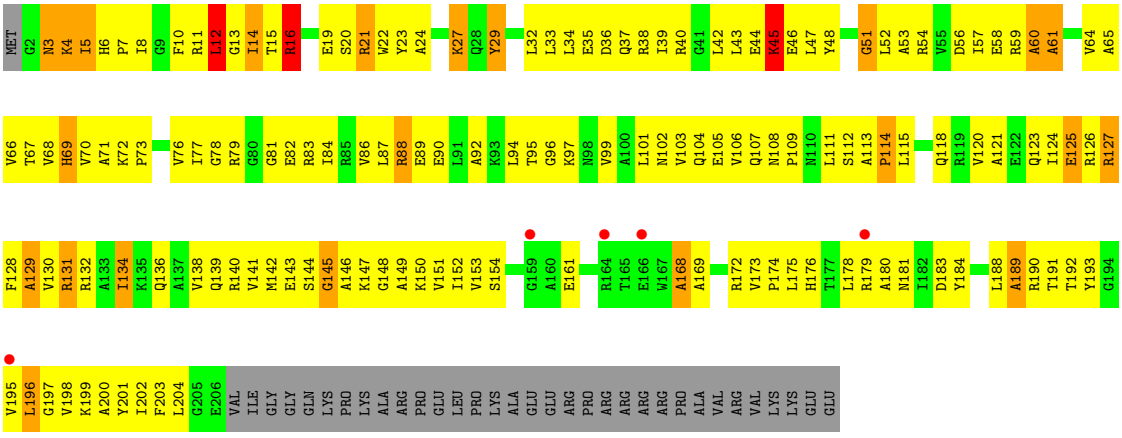




• Molecule 3: 30S ribosomal protein S3

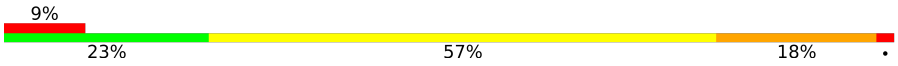
Chain XC:

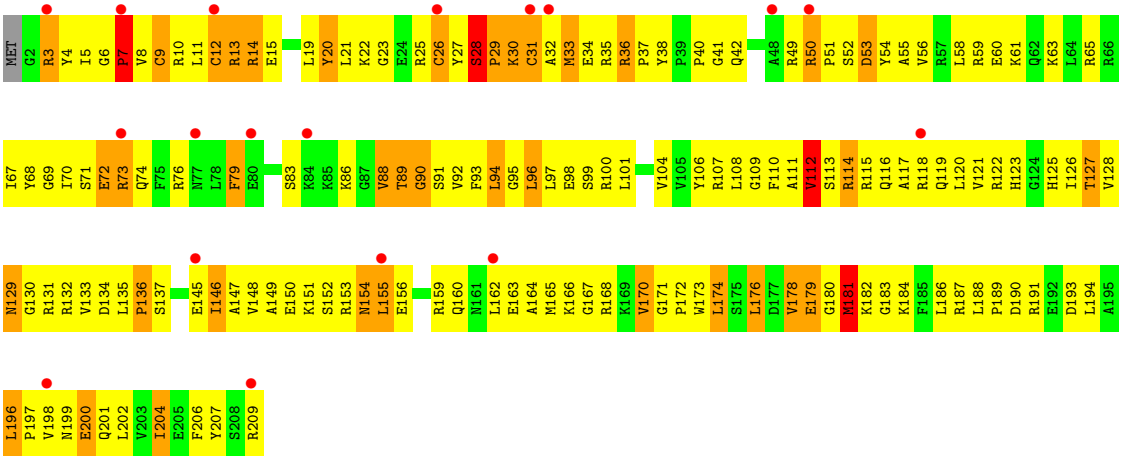




• Molecule 4: 30S ribosomal protein S4

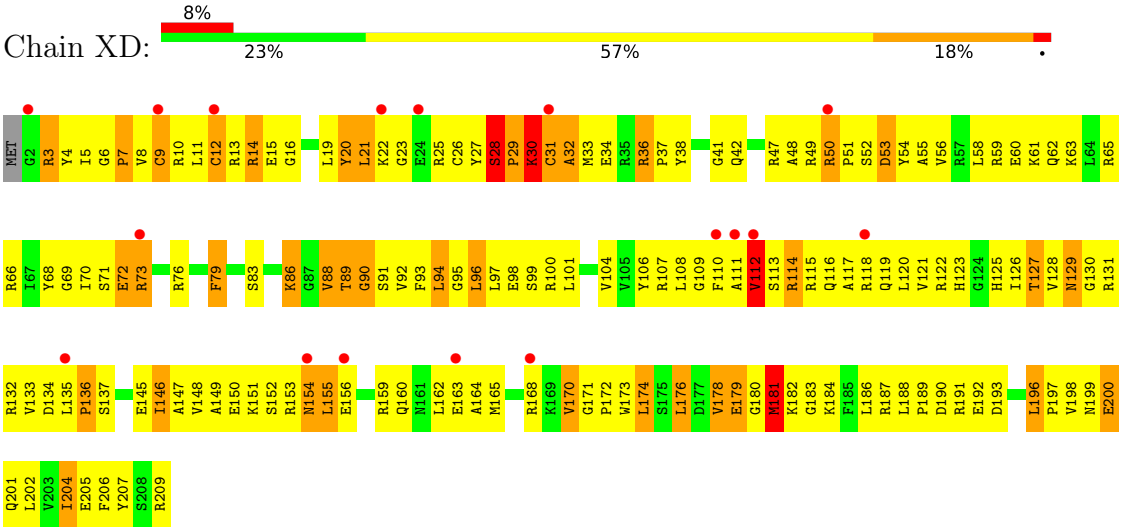
Chain QD:





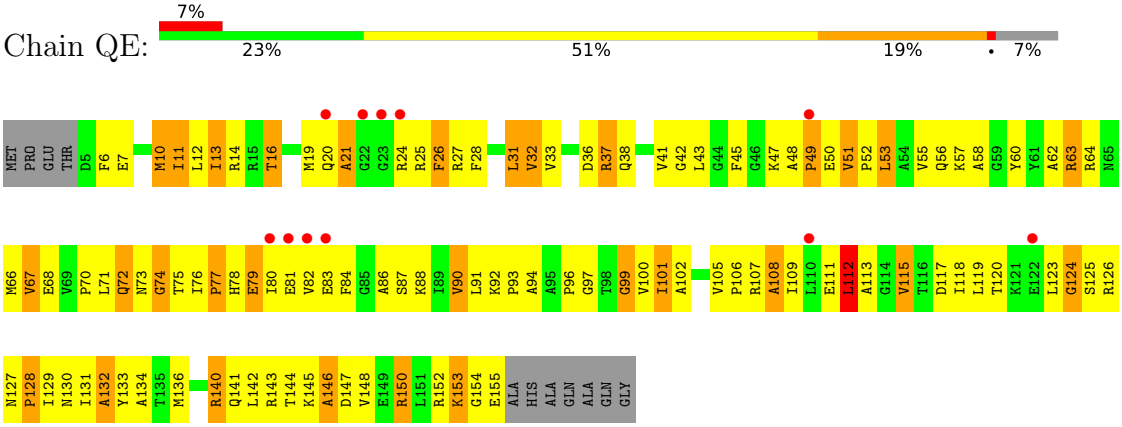
• Molecule 4: 30S ribosomal protein S4

Chain XD:



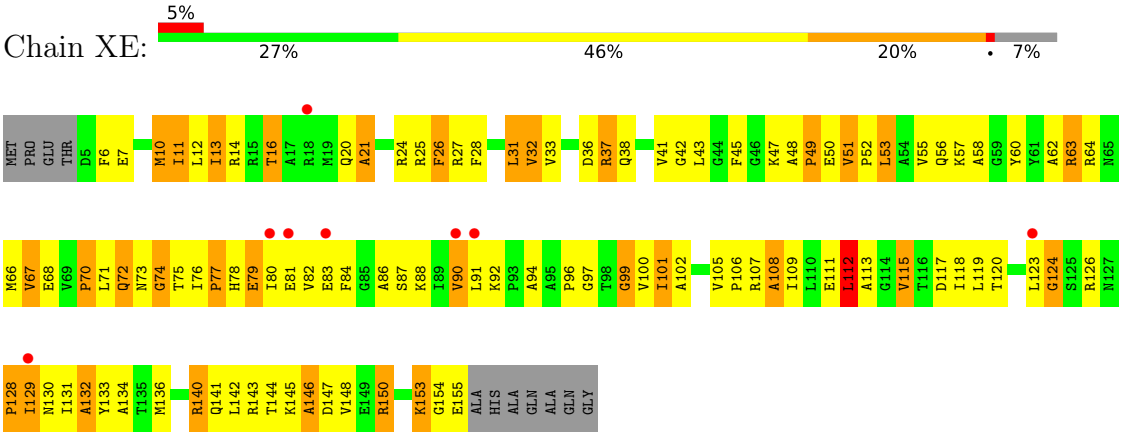
• Molecule 5: 30S ribosomal protein S5

Chain QE:



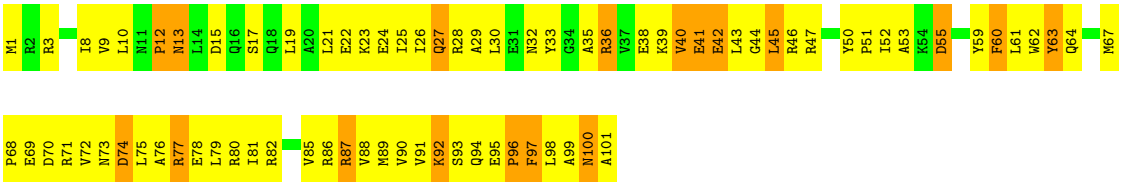
• Molecule 5: 30S ribosomal protein S5

Chain XE:



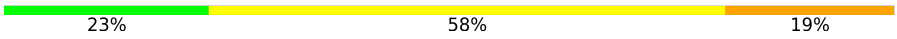
• Molecule 6: 30S ribosomal protein S6

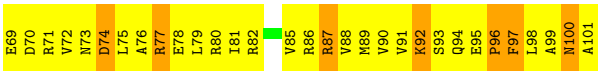
Chain QF:



• Molecule 6: 30S ribosomal protein S6

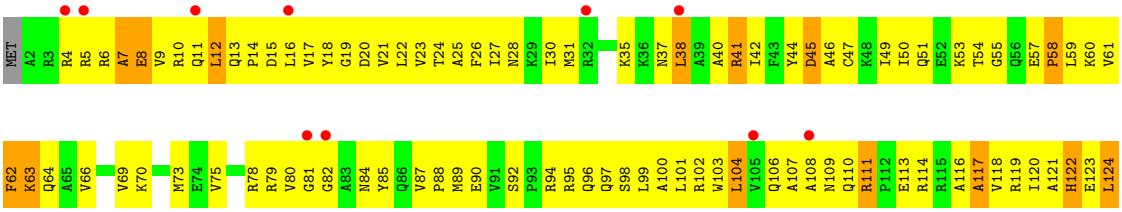
Chain XF:

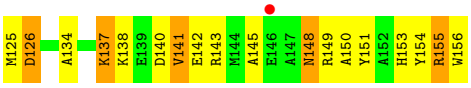




• Molecule 7: 30S ribosomal protein S7

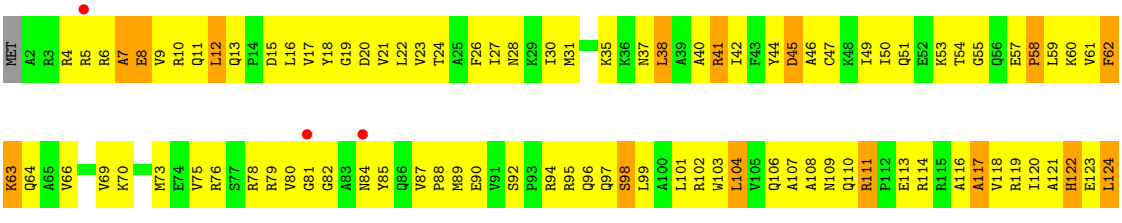
Chain QG:

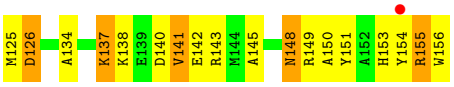




• Molecule 7: 30S ribosomal protein S7

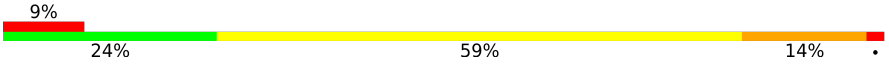
Chain XG:

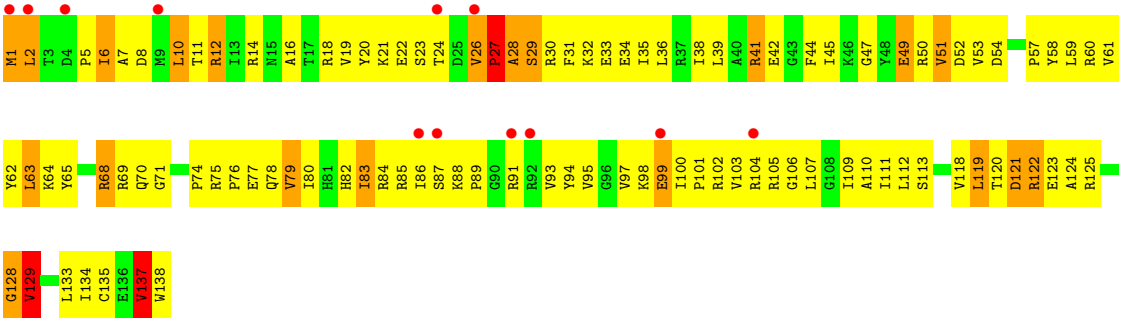




• Molecule 8: 30S ribosomal protein S8

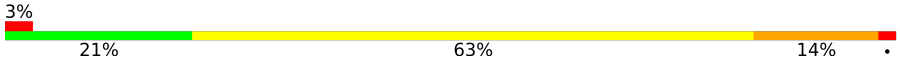
Chain QH:

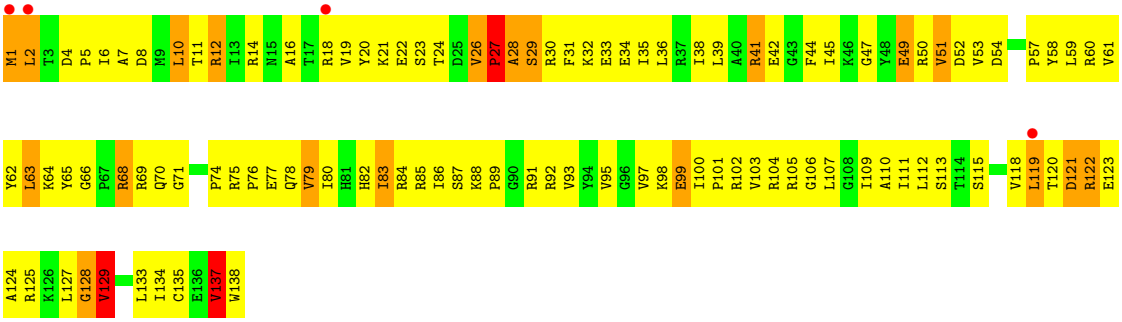




• Molecule 8: 30S ribosomal protein S8

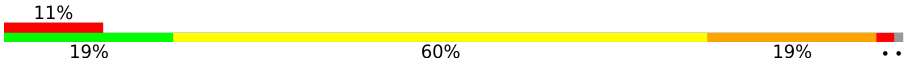
Chain XH:

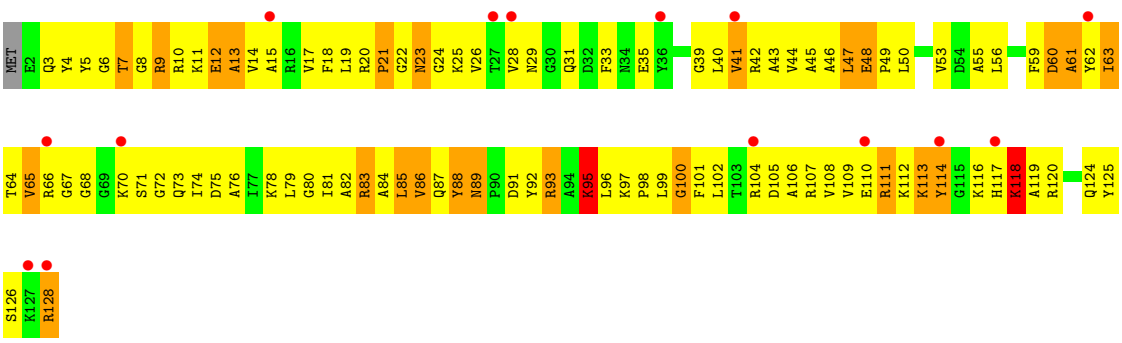




• Molecule 9: 30S ribosomal protein S9

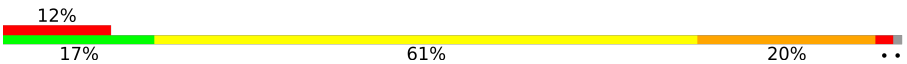
Chain QI:

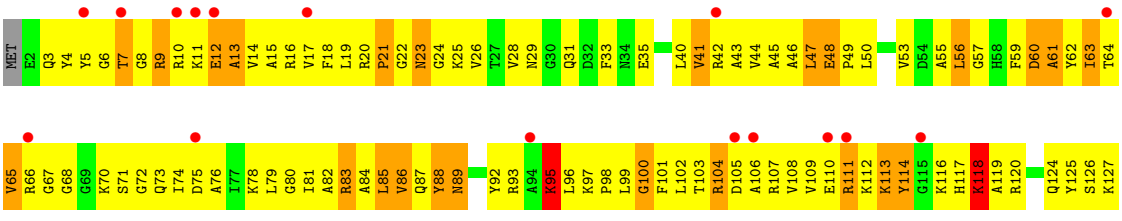




• Molecule 9: 30S ribosomal protein S9

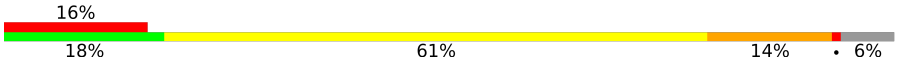
Chain XI:

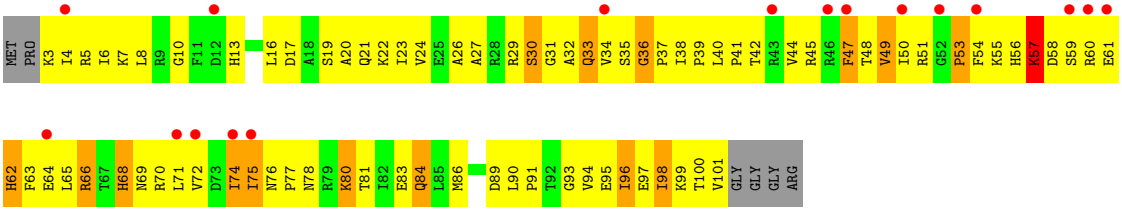




• Molecule 10: 30S ribosomal protein S10

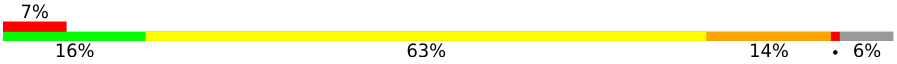
Chain QJ:

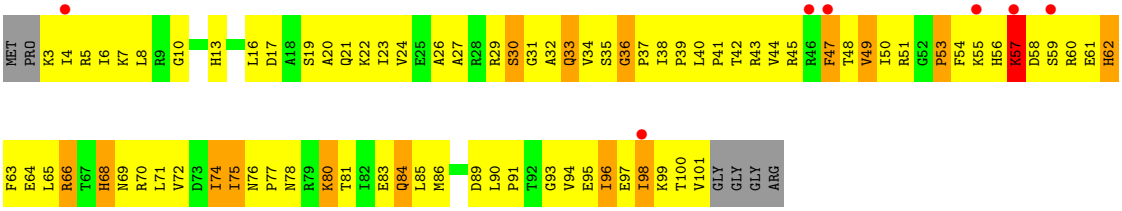




• Molecule 10: 30S ribosomal protein S10

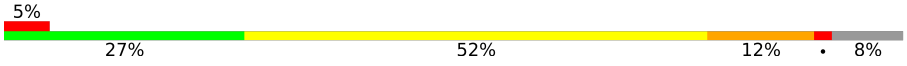
Chain XJ:

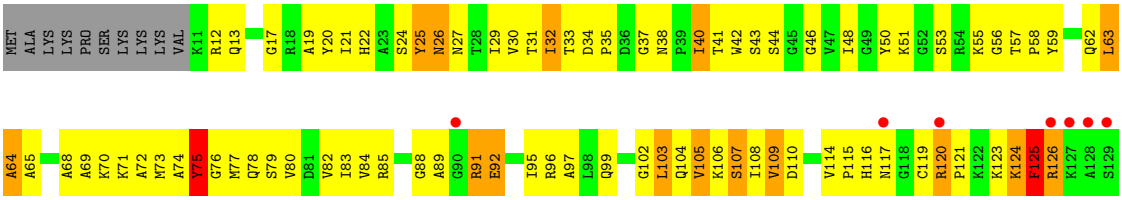




• Molecule 11: 30S ribosomal protein S11

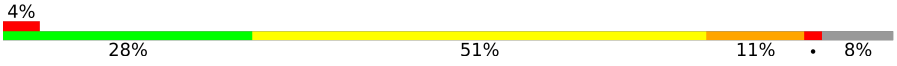
Chain QK:

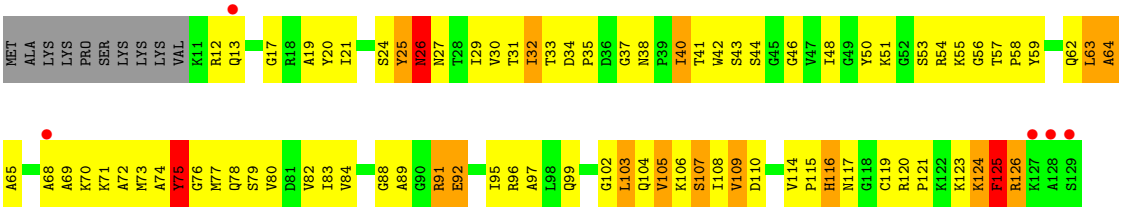




• Molecule 11: 30S ribosomal protein S11

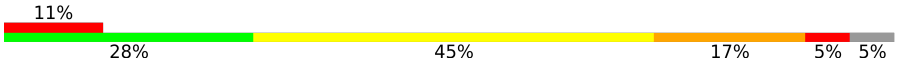
Chain XK:

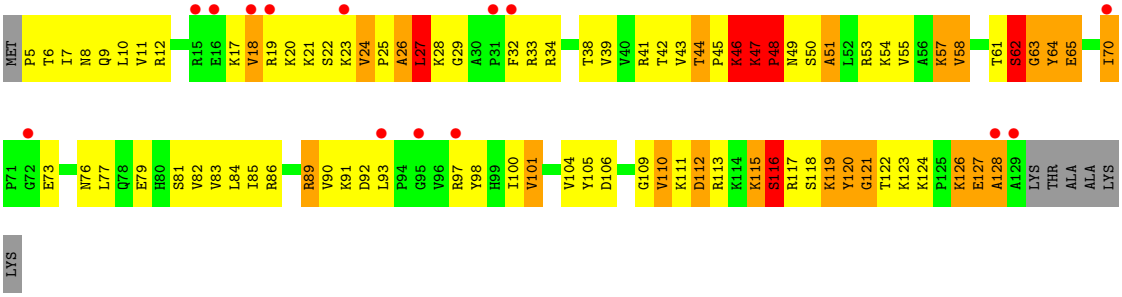




• Molecule 12: 30S ribosomal protein S12

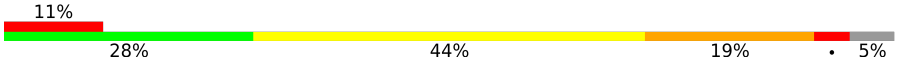
Chain QL:

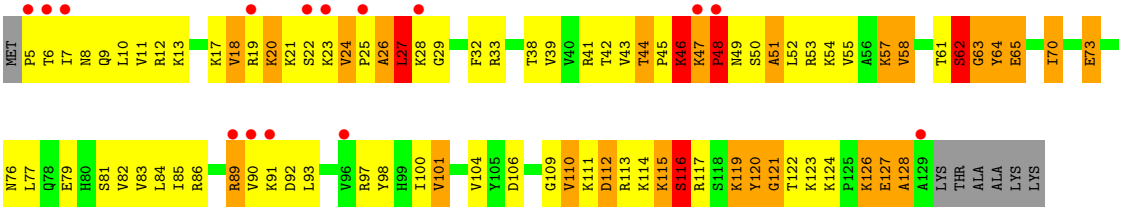




• Molecule 12: 30S ribosomal protein S12

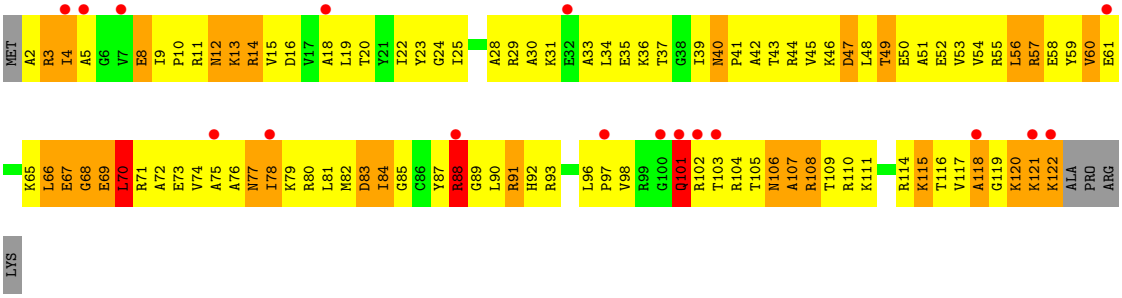
Chain XL:





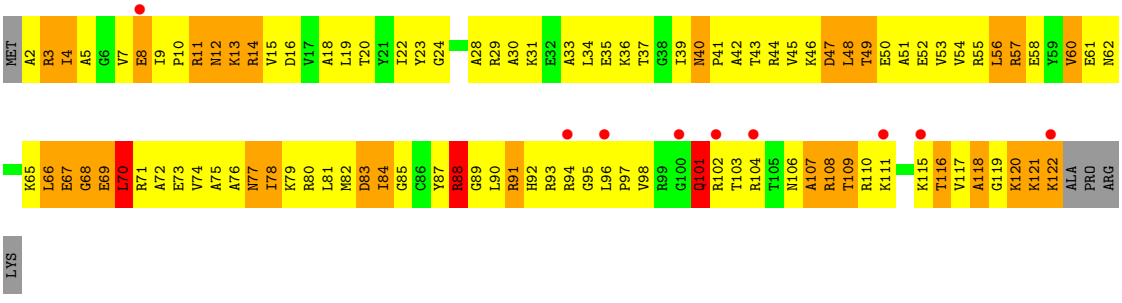
• Molecule 13: 30S ribosomal protein S13

Chain QM:



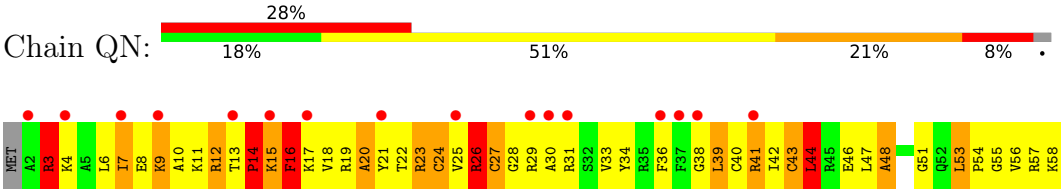
• Molecule 13: 30S ribosomal protein S13

Chain XM:



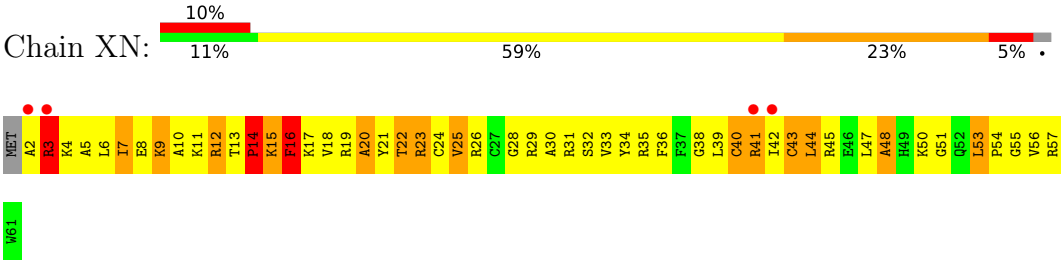
• Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:



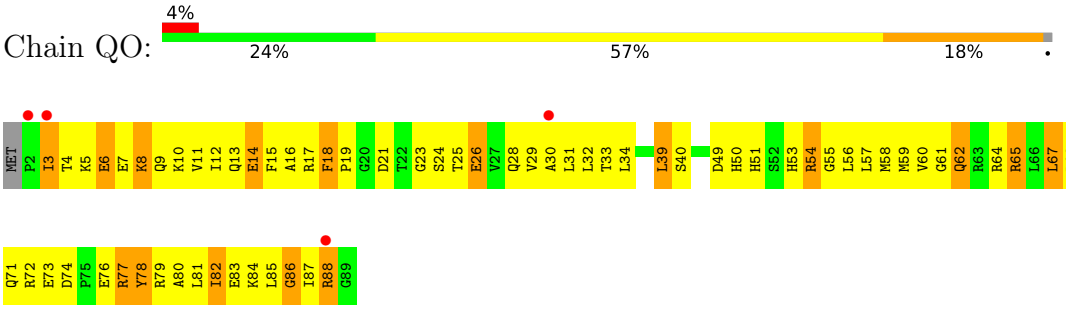
• Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:



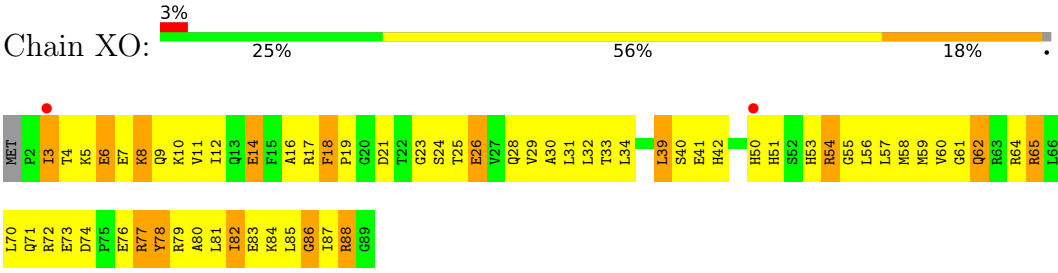
• Molecule 15: 30S ribosomal protein S15

Chain QO:



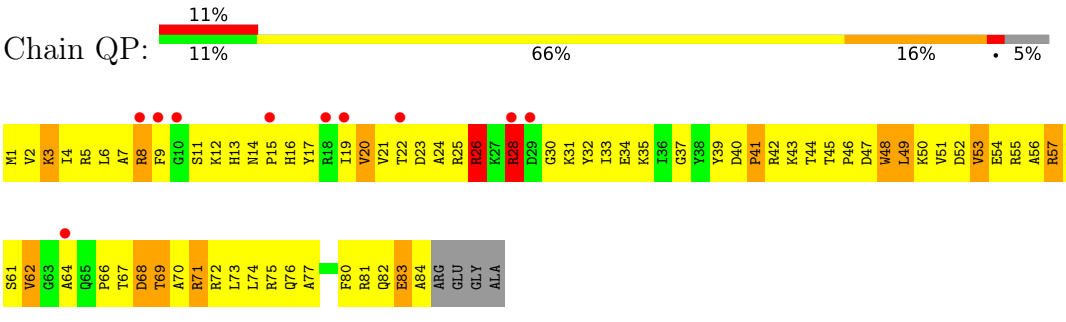
• Molecule 15: 30S ribosomal protein S15

Chain XO:



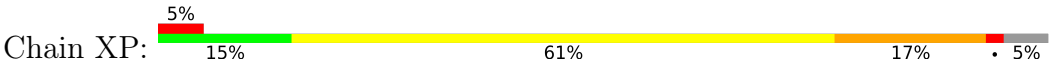
• Molecule 16: 30S ribosomal protein S16

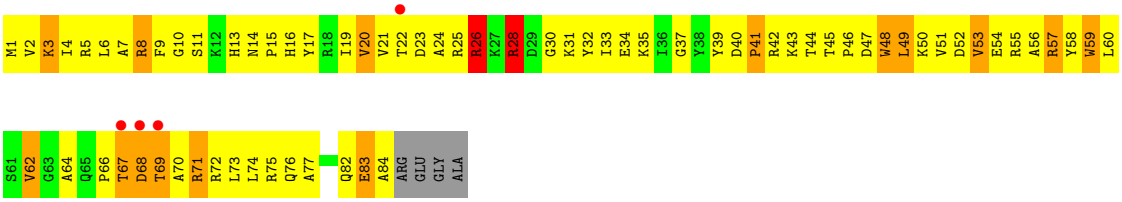
Chain QP:



• Molecule 16: 30S ribosomal protein S16

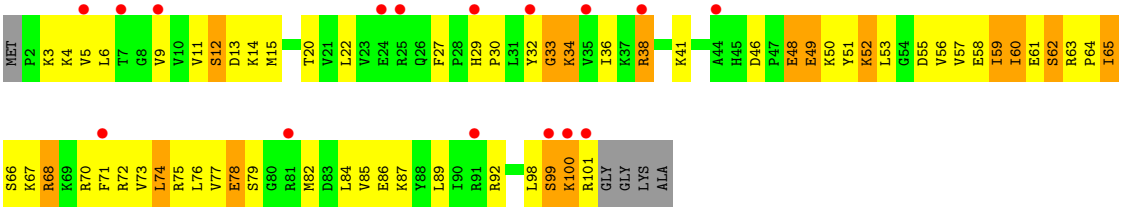
Chain XP:





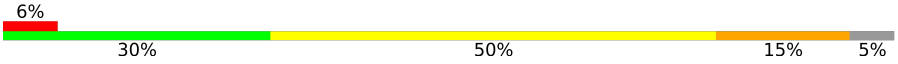
• Molecule 17: 30S ribosomal protein S17

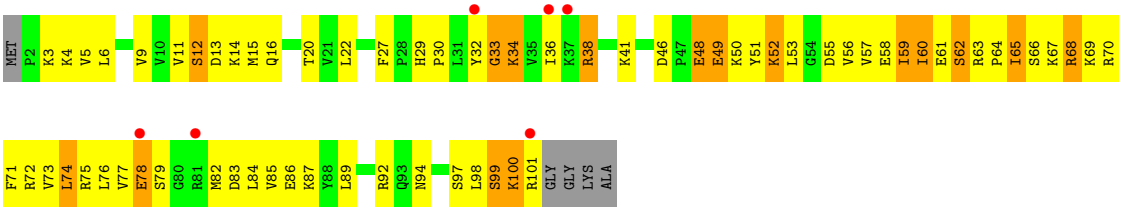
Chain QQ:



• Molecule 17: 30S ribosomal protein S17

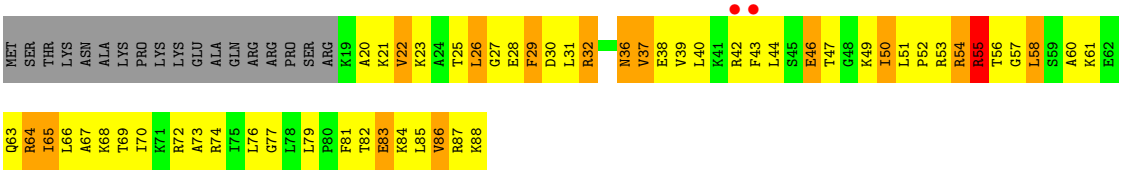
Chain XQ:





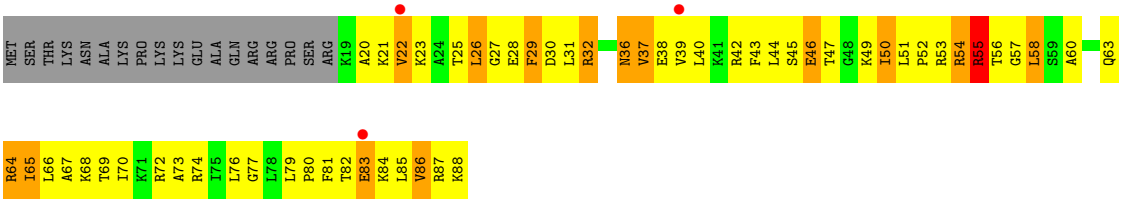
• Molecule 18: 30S ribosomal protein S18

Chain QR:



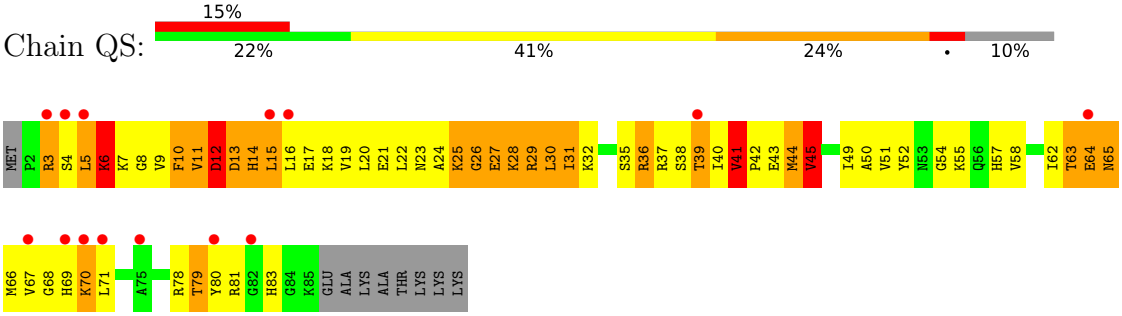
• Molecule 18: 30S ribosomal protein S18

Chain XR:



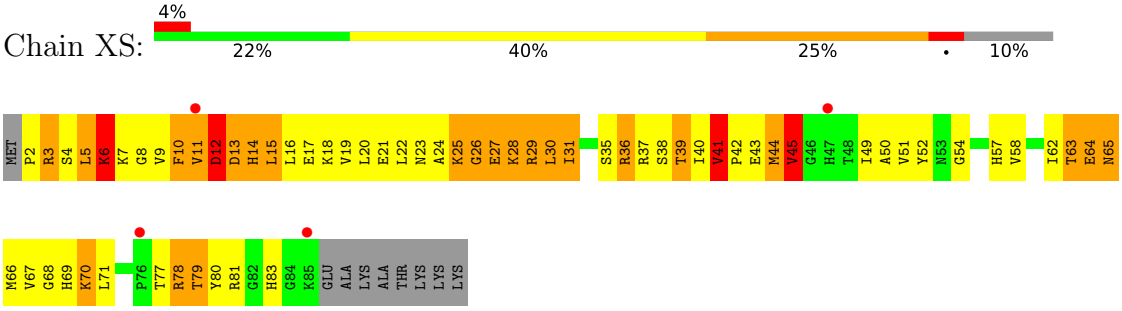
• Molecule 19: 30S ribosomal protein S19

Chain QS:



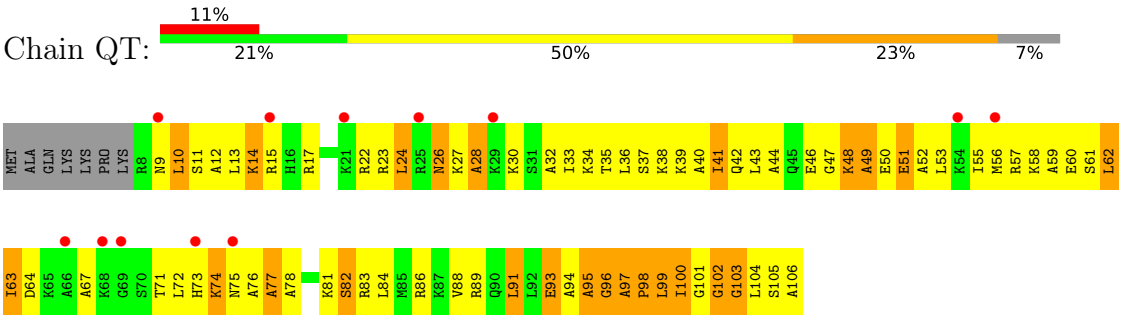
• Molecule 19: 30S ribosomal protein S19

Chain XS:



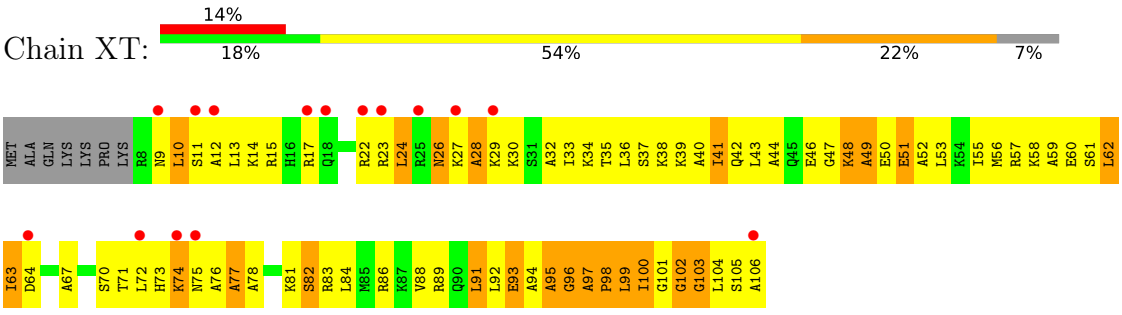
• Molecule 20: 30S ribosomal protein S20

Chain QT:



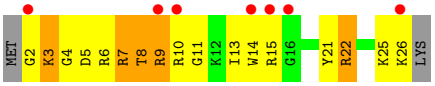
• Molecule 20: 30S ribosomal protein S20

Chain XT:



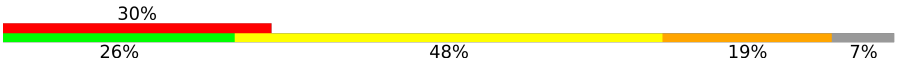
• Molecule 21: 30S ribosomal protein Thx

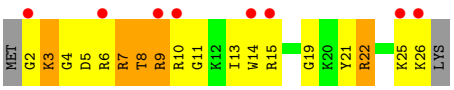
Chain QU:



• Molecule 21: 30S ribosomal protein Thx

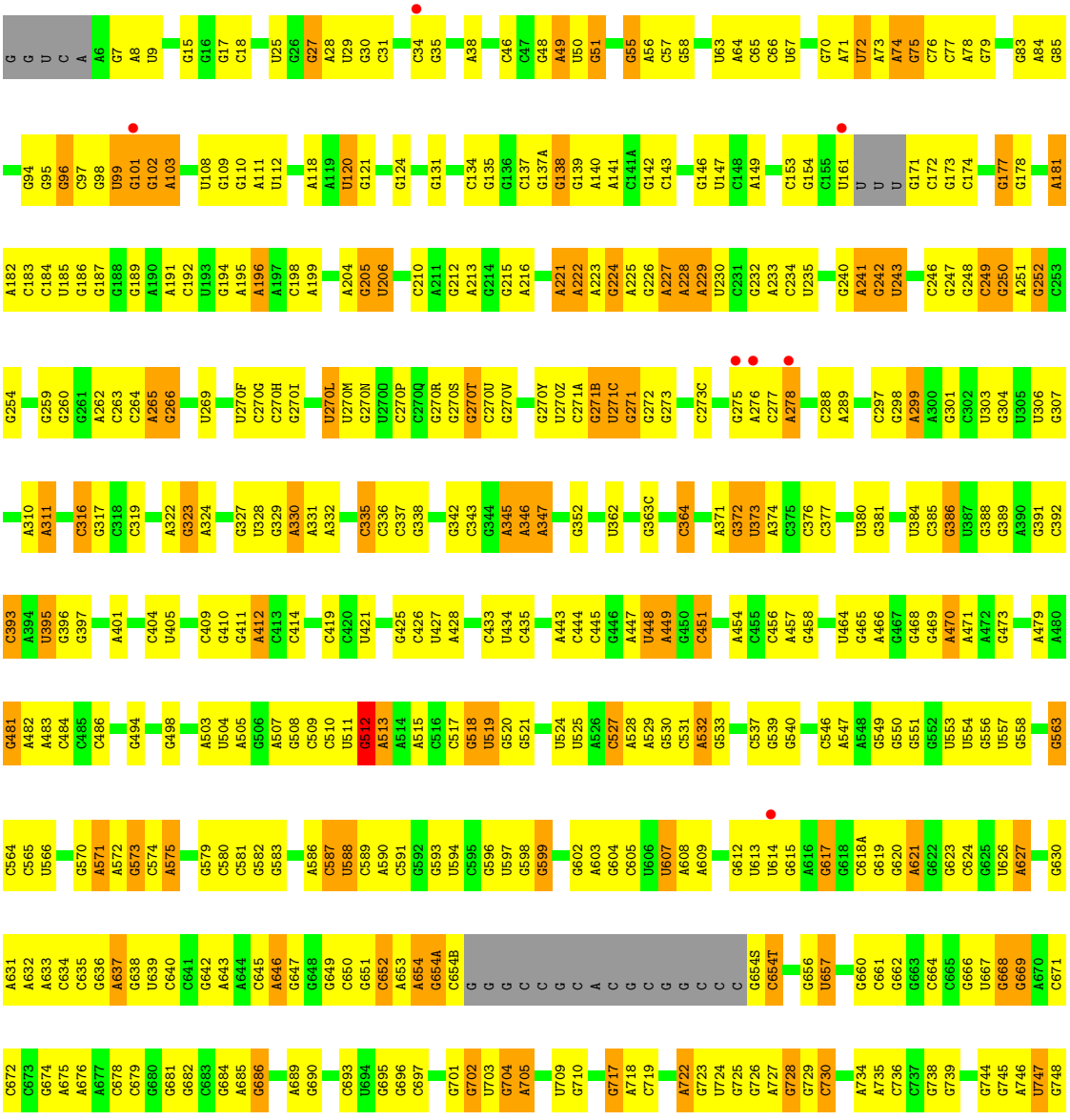
Chain XU:

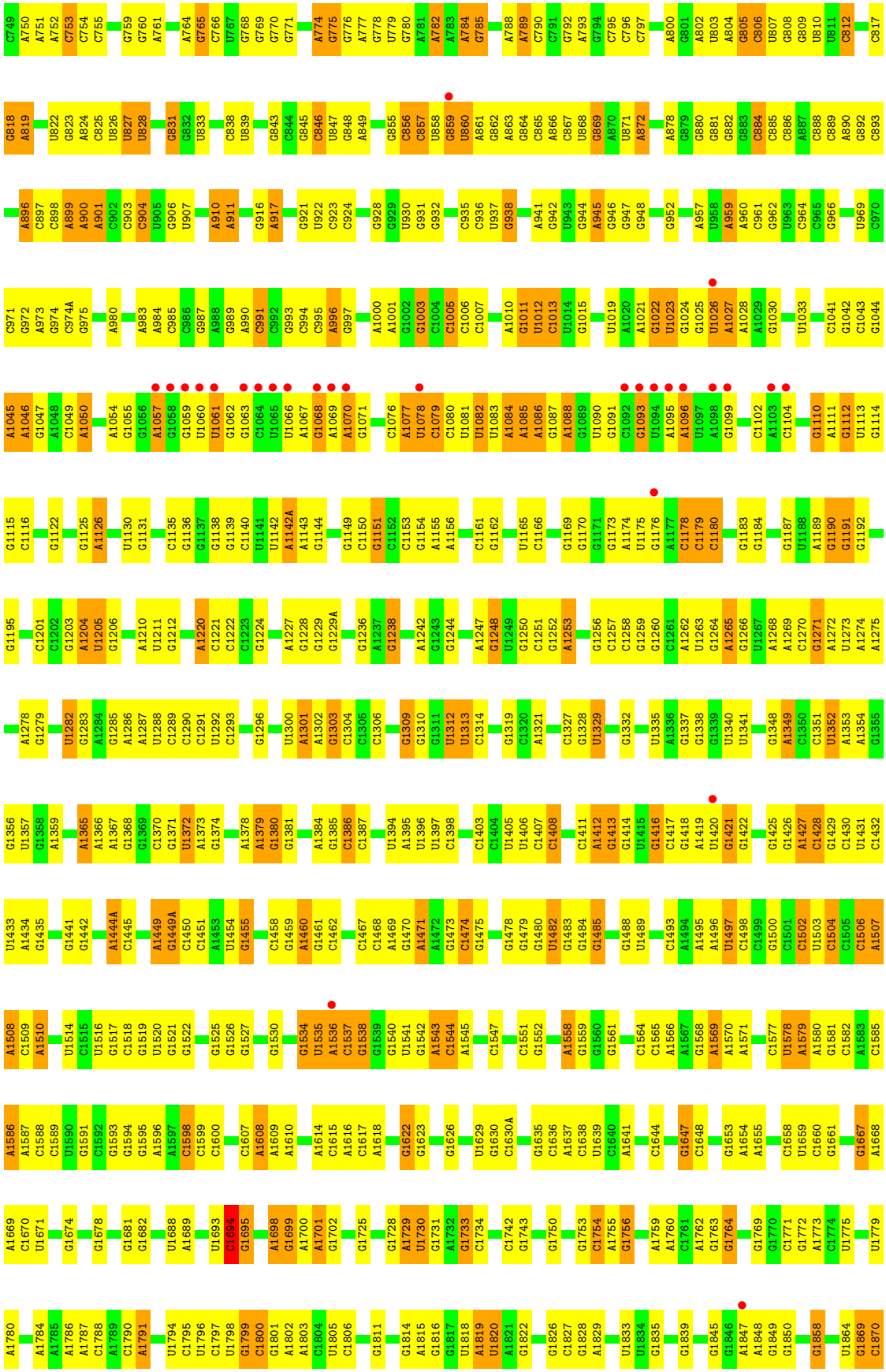


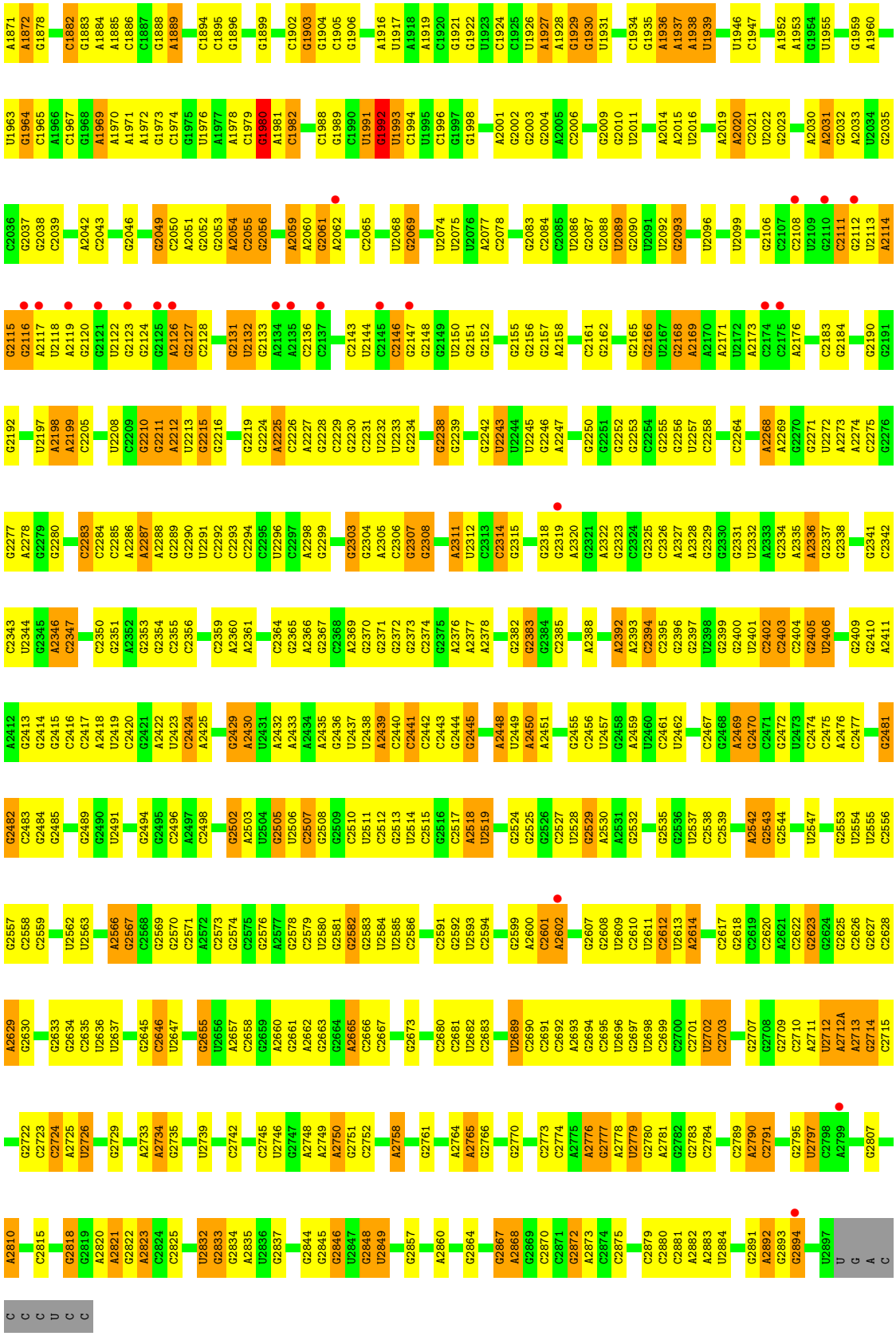


• Molecule 22: 23S Ribosomal RNA

Chain RA:

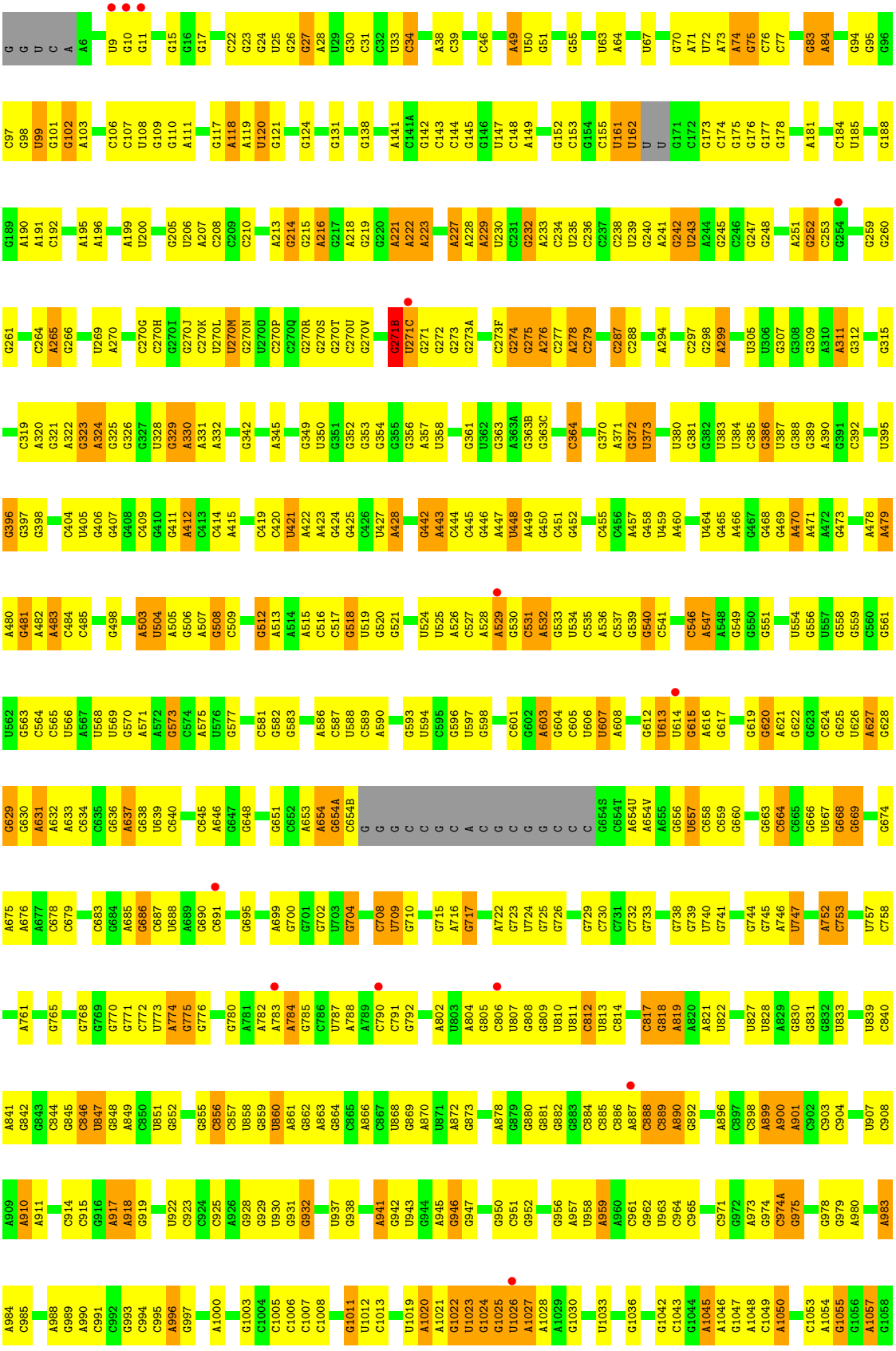


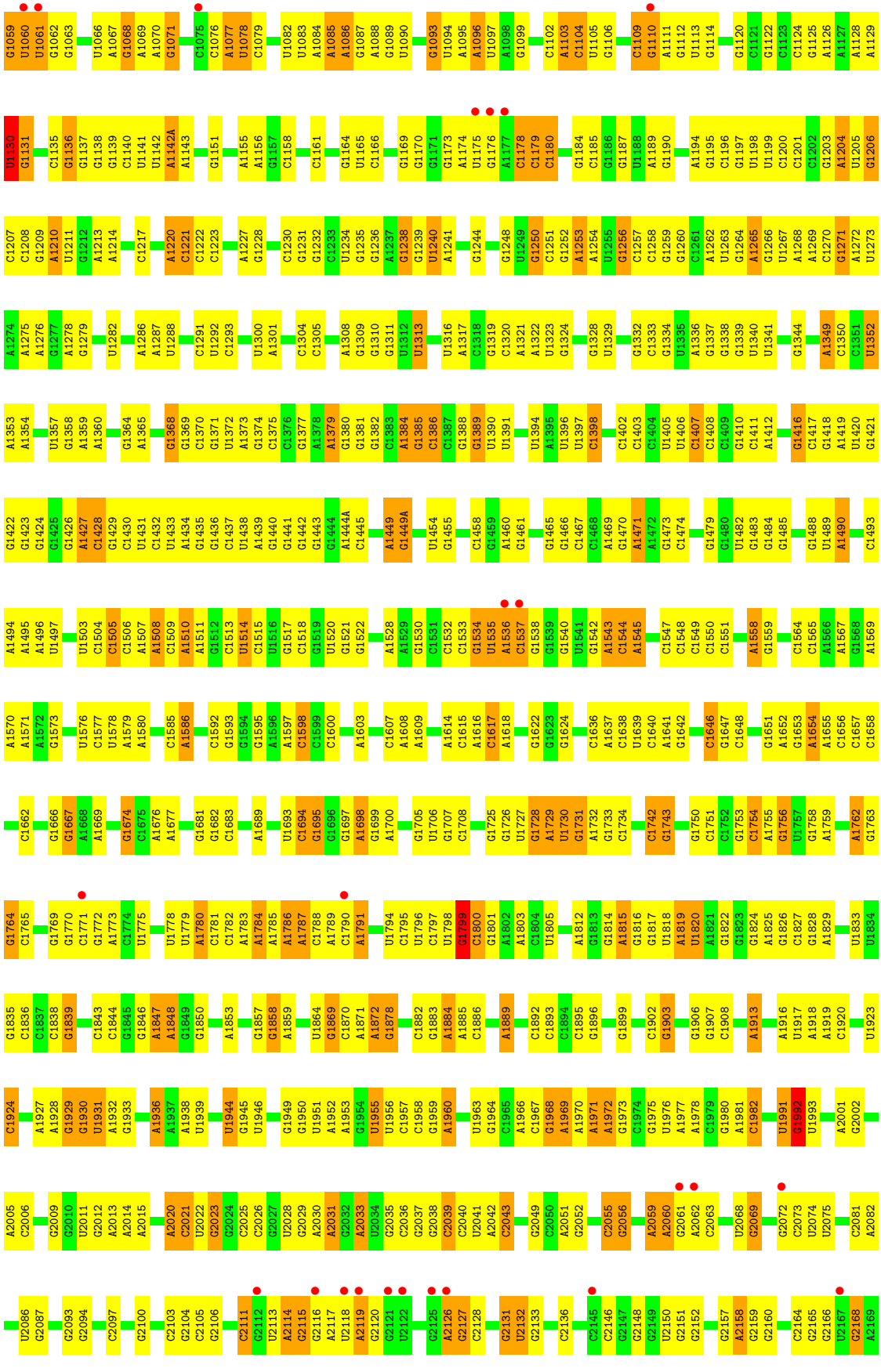




• Molecule 22: 23S Ribosomal RNA

Chain YA:

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U1130 G1131 C1135 G1136 G1137 G1138 G1139 C1140 U1141 U1142 A1142A A1143 G1151 A1155 A1156 G1157 C1158 C1161 G1164 U1165 C1166 G1169 G1170 G1171 G1173 A1174 U1175 G1176 A1177 C1178 C1179 C1180 G1184 C1185 G1186 G1187 U1188 A1189 G1190 A1194 G1195 C1196 G1197 U1198 U1199 C1200 C1201 C1202 G1203 A1204 U1205 G1206
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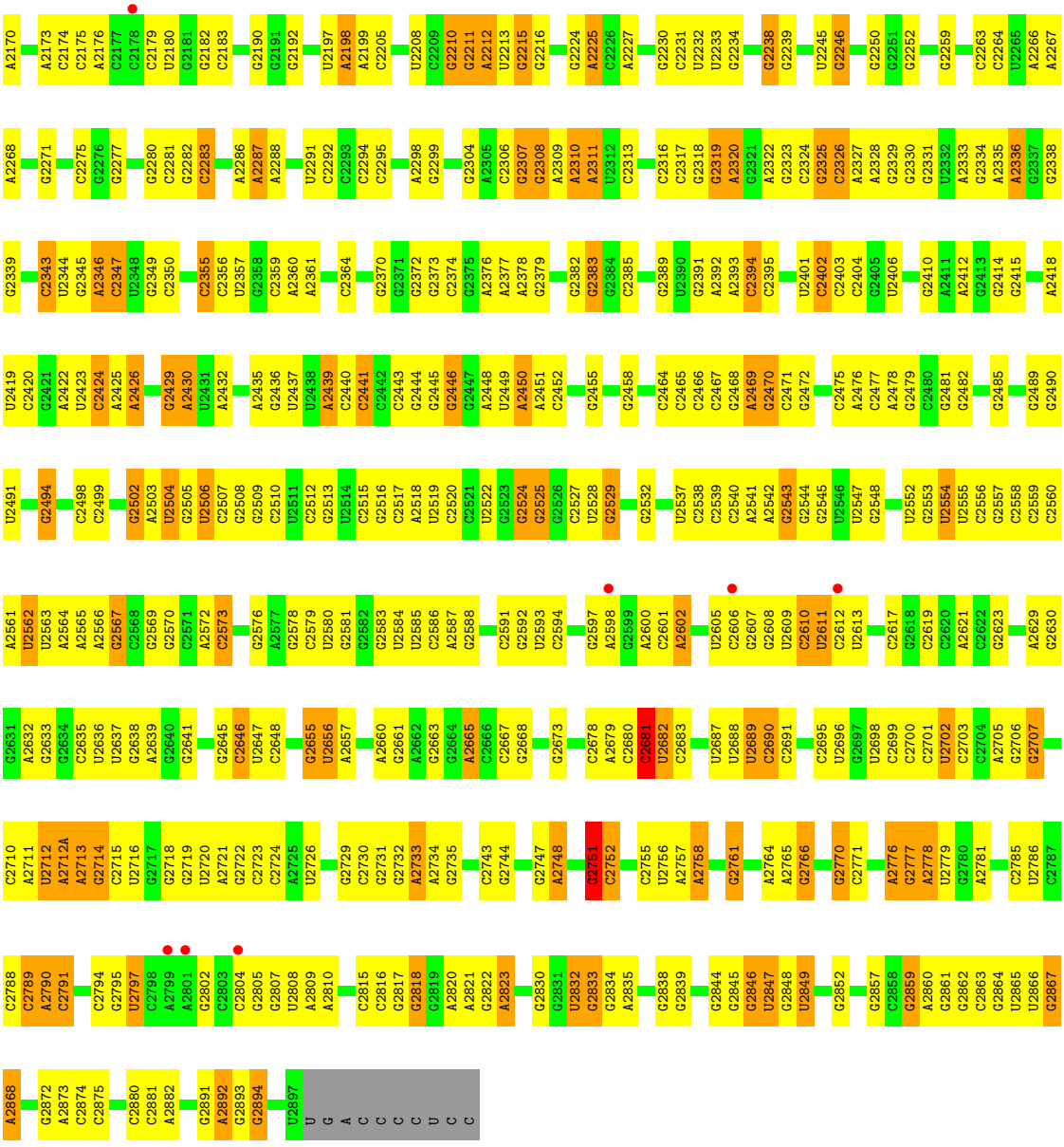
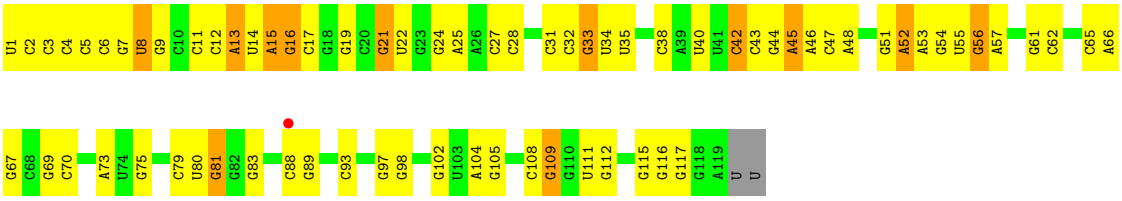


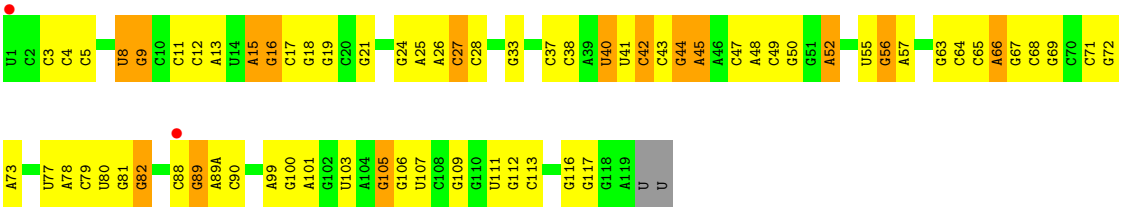
• Molecule 23: 5S Ribosomal RNA

Chain RB:

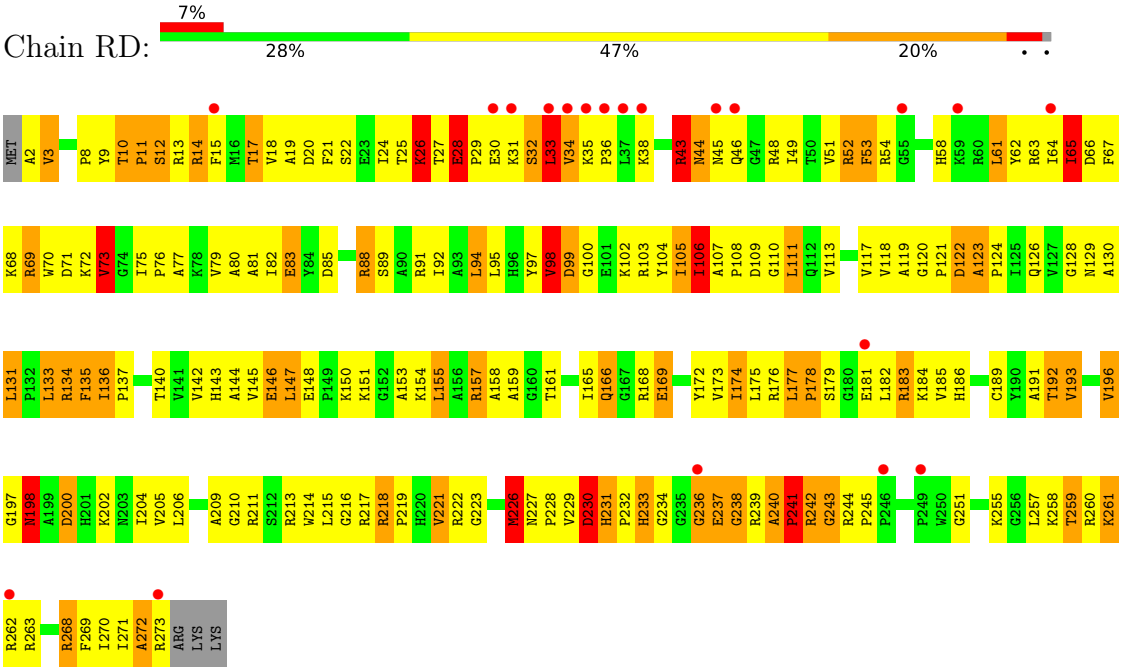


• Molecule 23: 5S Ribosomal RNA

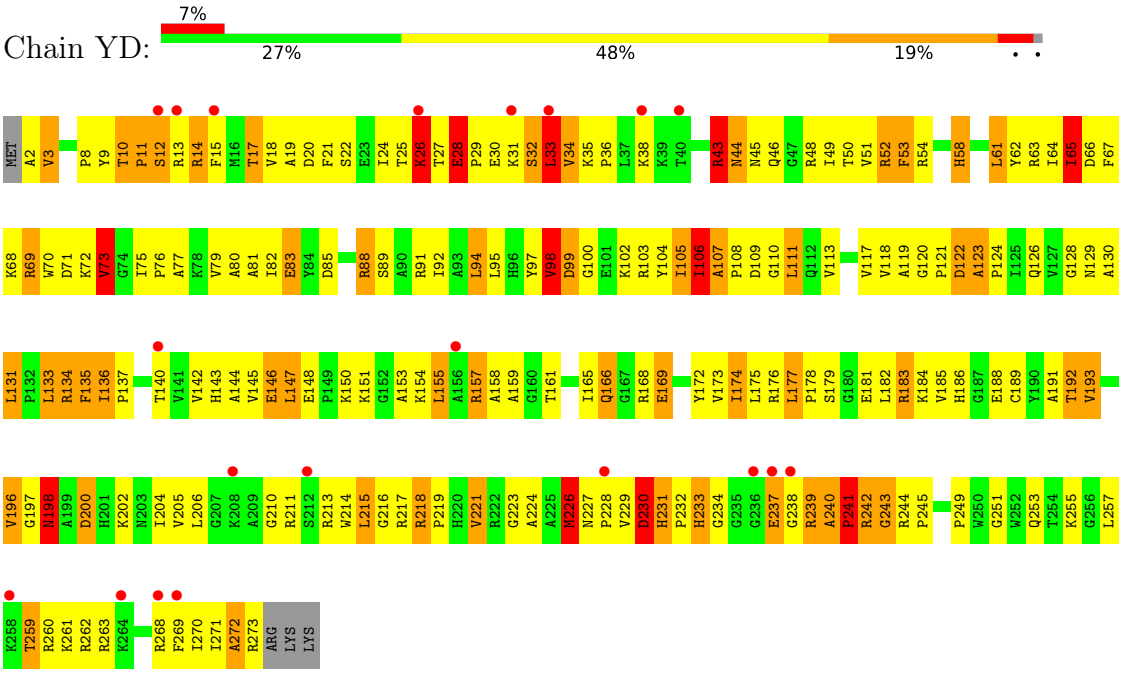
Chain YB:



• Molecule 24: 50S ribosomal protein L2

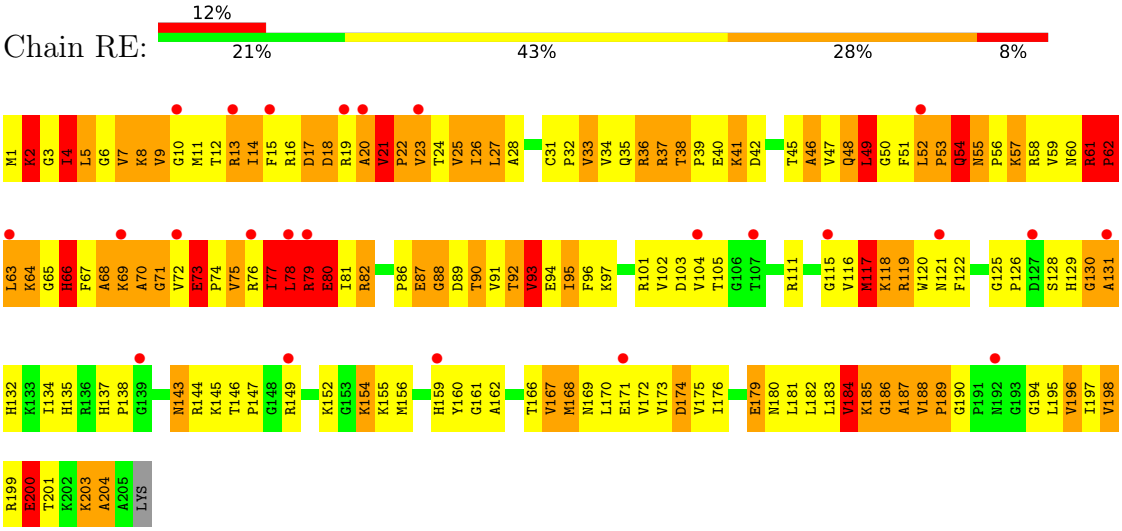


• Molecule 24: 50S ribosomal protein L2



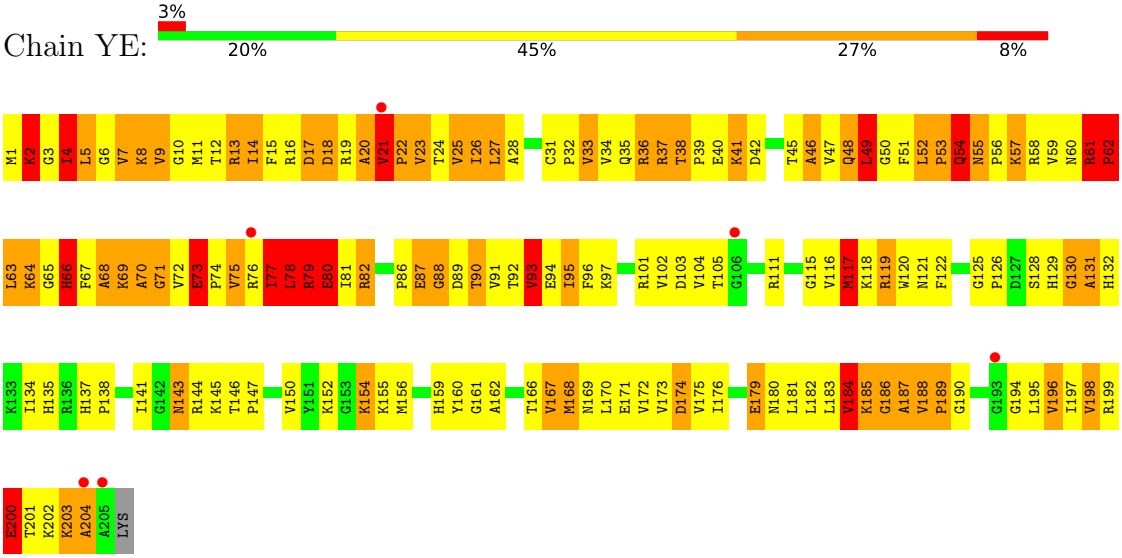
• Molecule 25: 50S ribosomal protein L3

Chain RE:



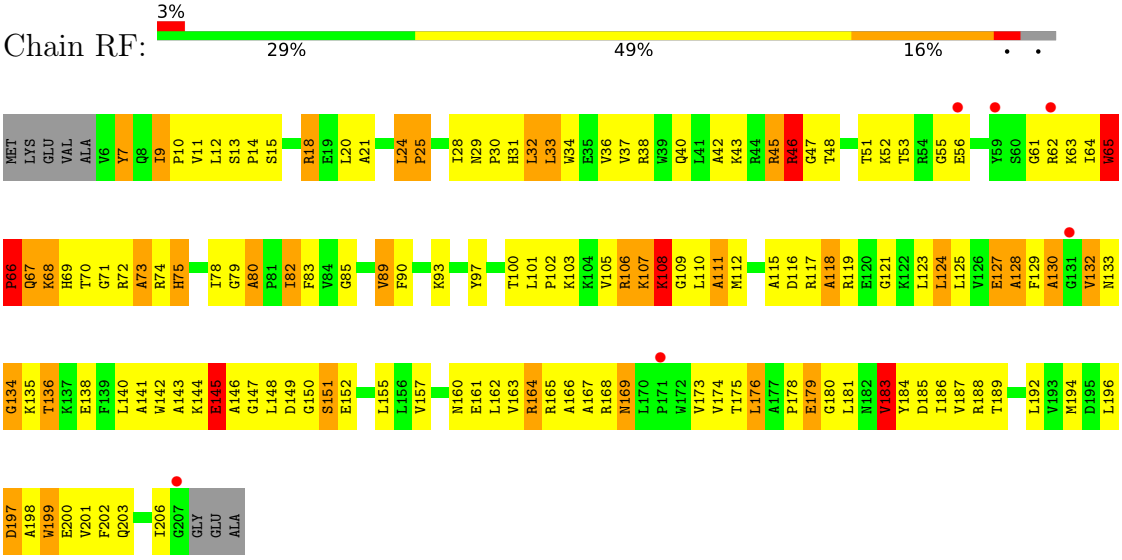
• Molecule 25: 50S ribosomal protein L3

Chain YE:



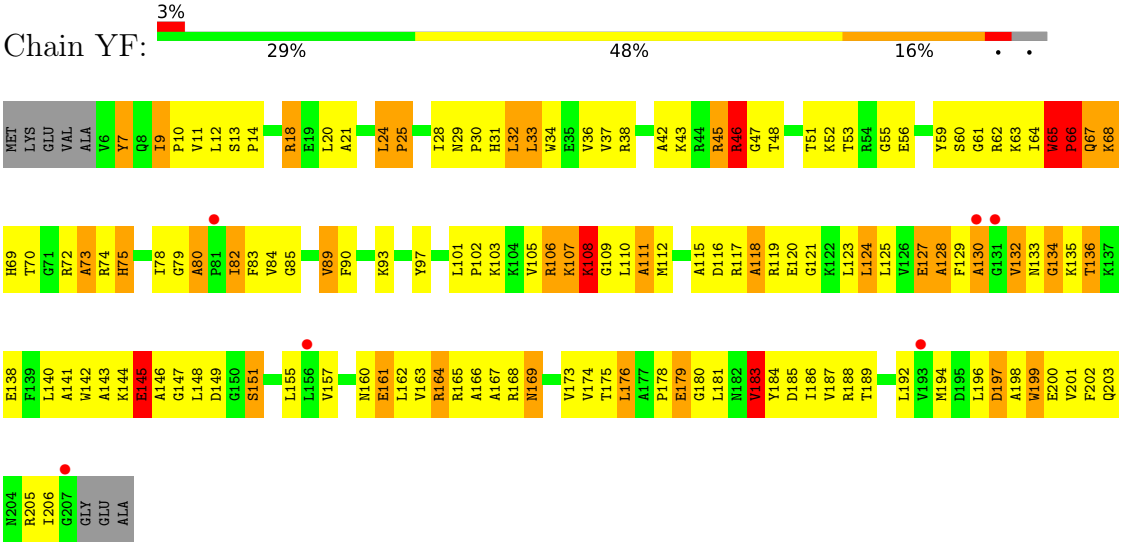
• Molecule 26: 50S ribosomal protein L4

Chain RF:



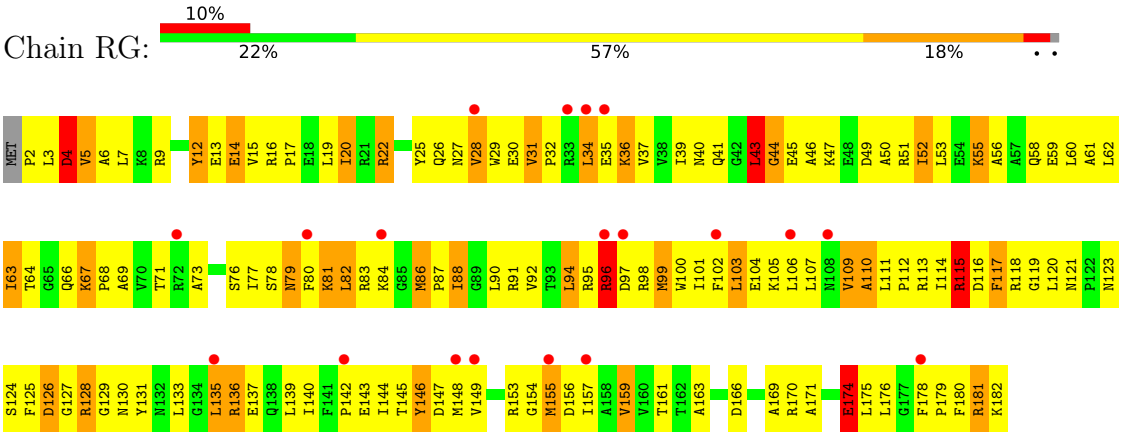
• Molecule 26: 50S ribosomal protein L4

Chain YF:



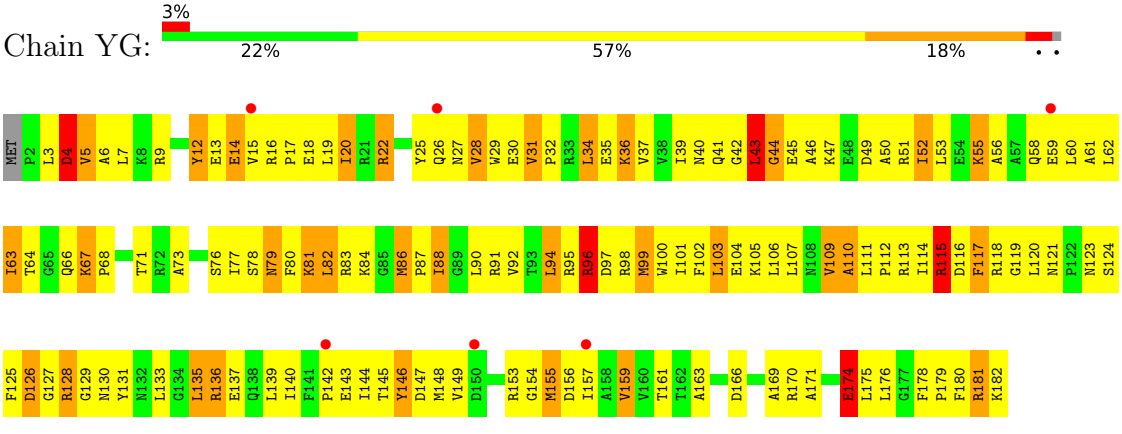
• Molecule 27: 50S ribosomal protein L5

Chain RG:



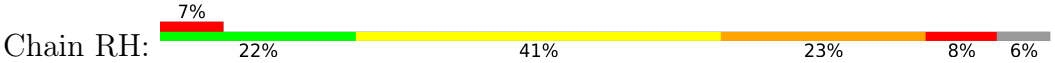
• Molecule 27: 50S ribosomal protein L5

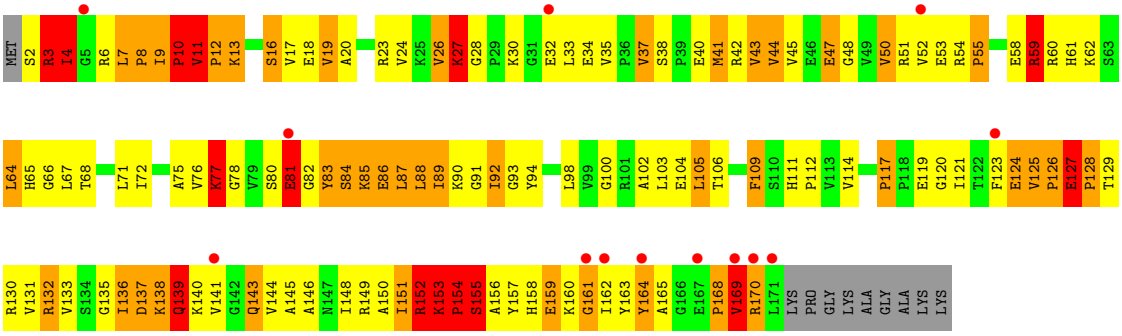
Chain YG:



• Molecule 28: 50S ribosomal protein L6

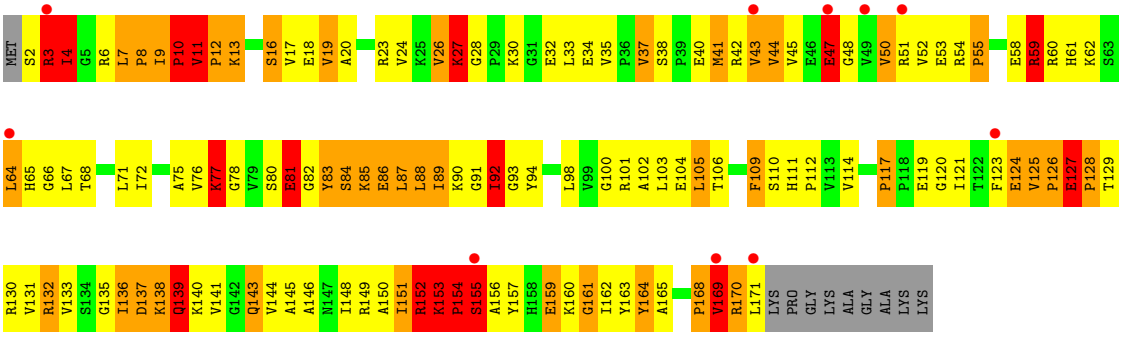
Chain RH:





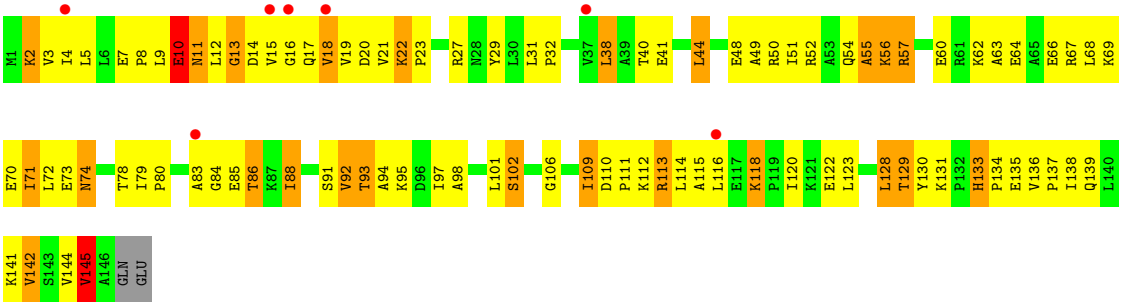
• Molecule 28: 50S ribosomal protein L6

Chain YH:



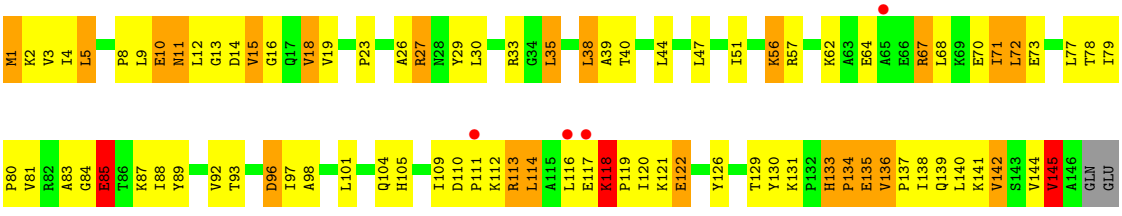
• Molecule 29: 50S ribosomal protein L9

Chain RI:

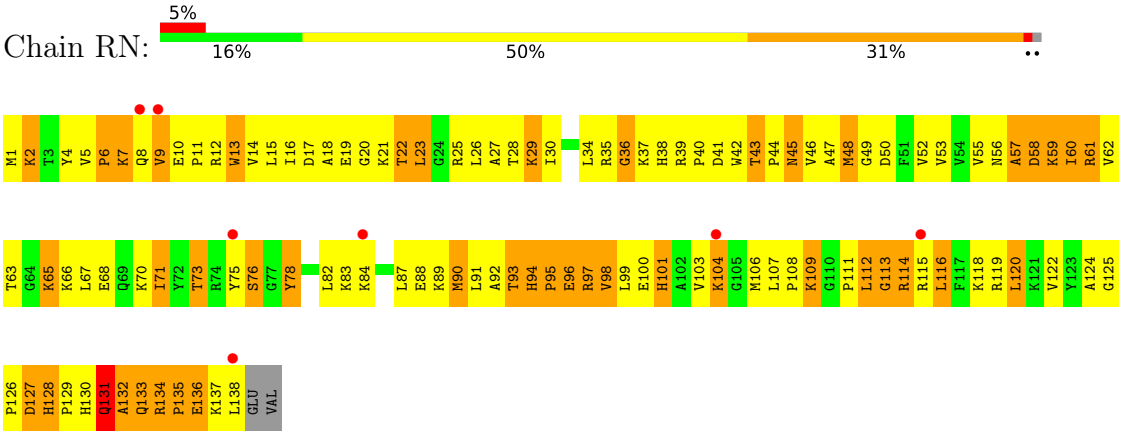


• Molecule 29: 50S ribosomal protein L9

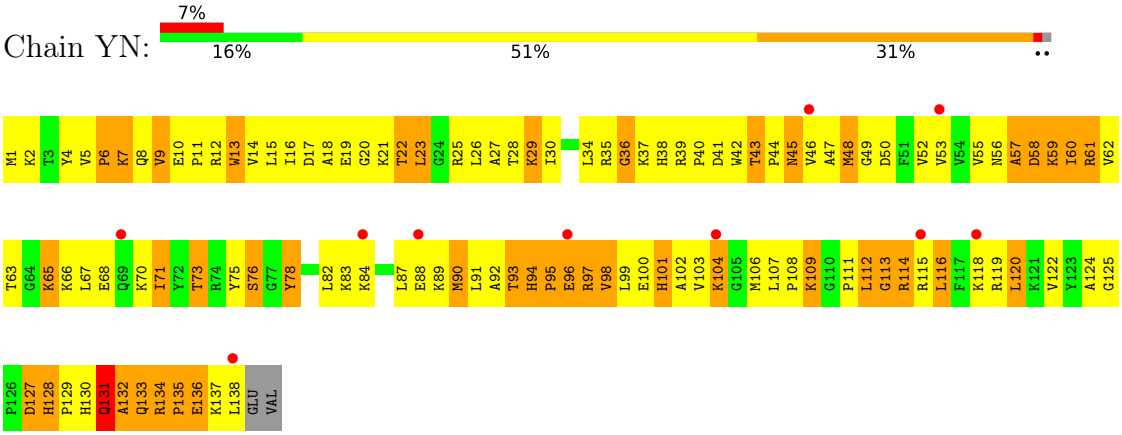
Chain YI:



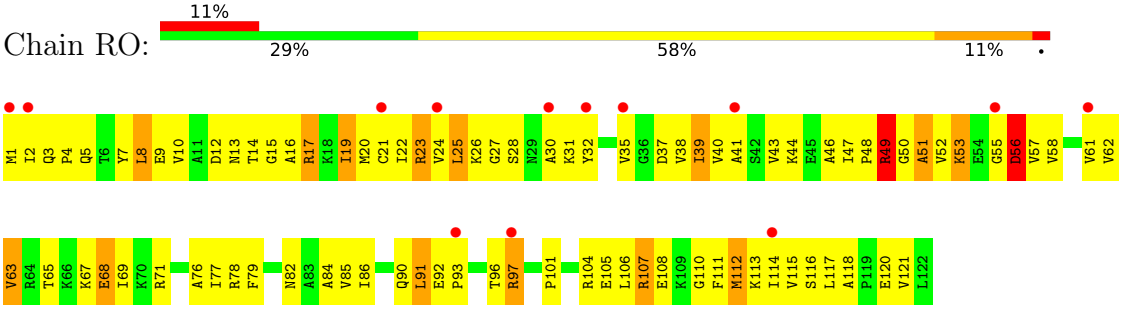
• Molecule 30: 50S ribosomal protein L13



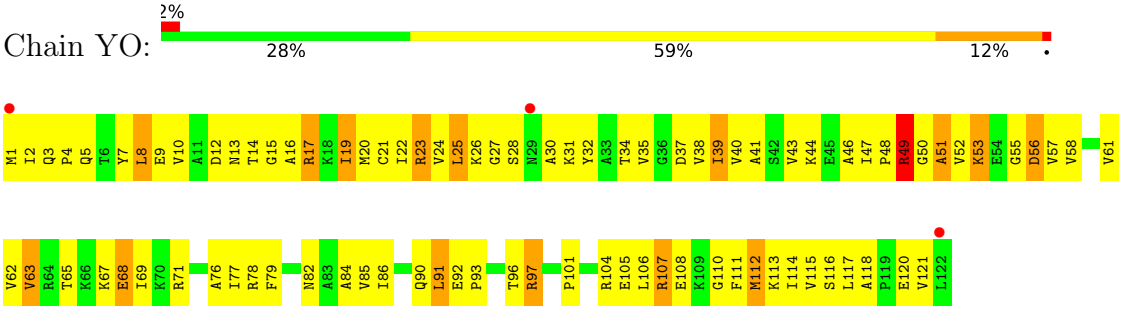
• Molecule 30: 50S ribosomal protein L13



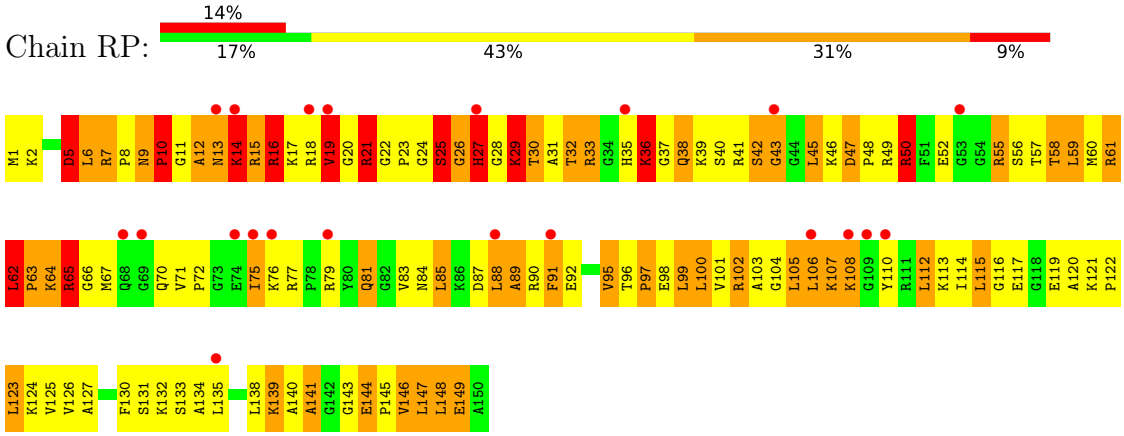
• Molecule 31: 50S ribosomal protein L14



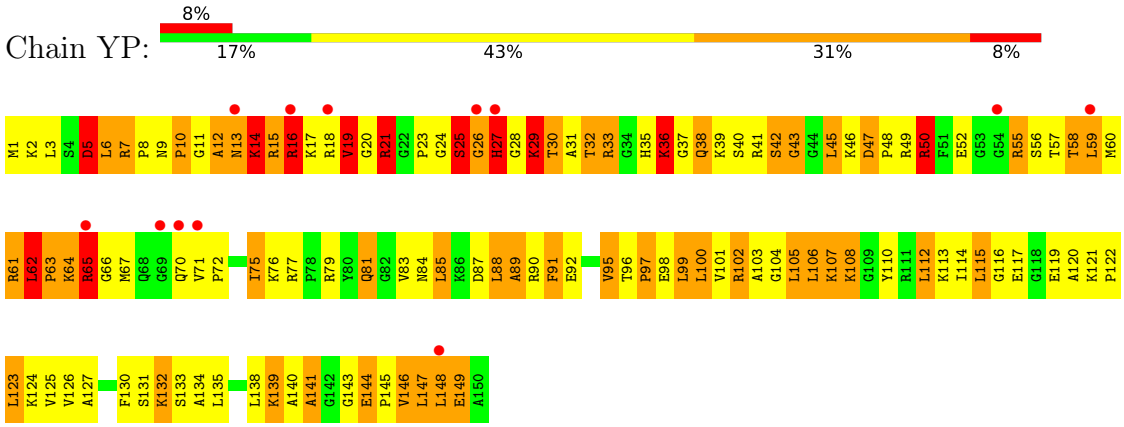
• Molecule 31: 50S ribosomal protein L14



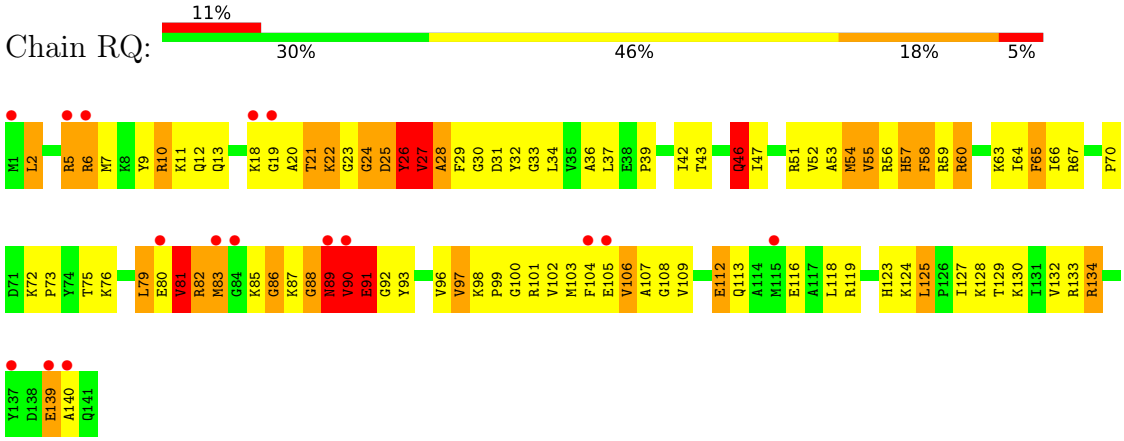
• Molecule 32: 50S ribosomal protein L15



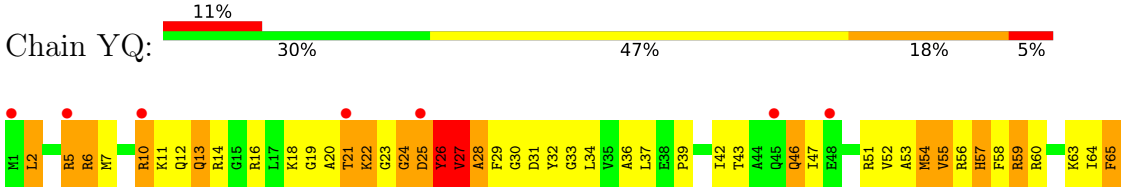
• Molecule 32: 50S ribosomal protein L15

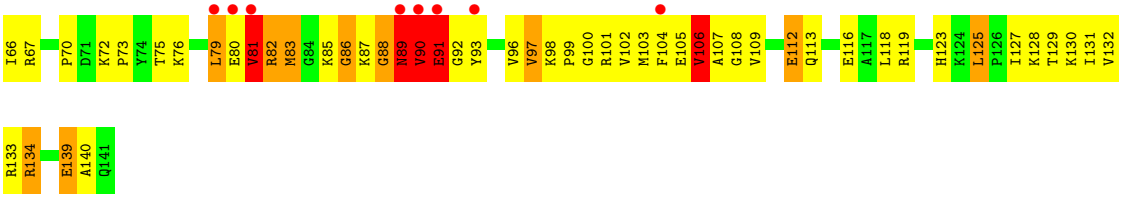


• Molecule 33: 50S ribosomal protein L16

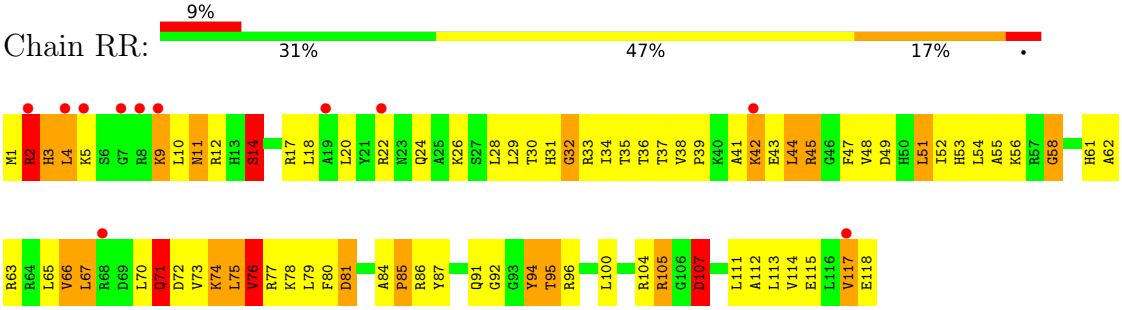


• Molecule 33: 50S ribosomal protein L16

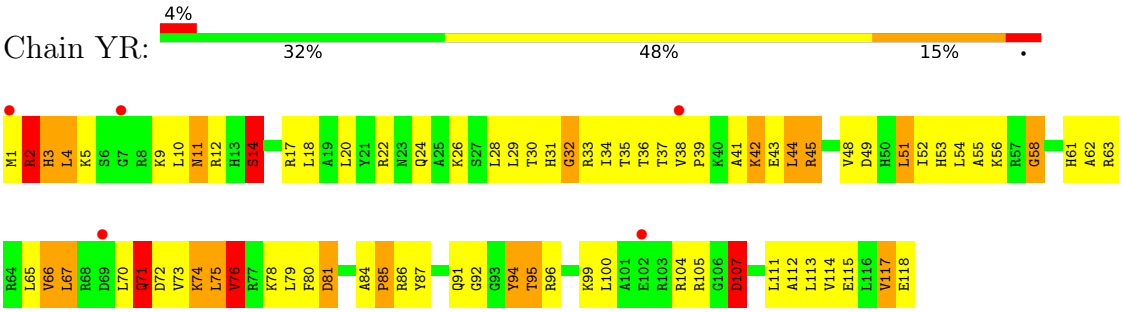




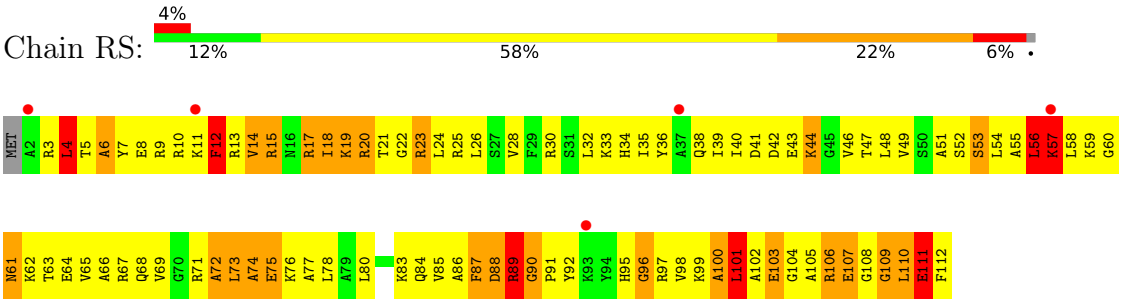
• Molecule 34: 50S ribosomal protein L17



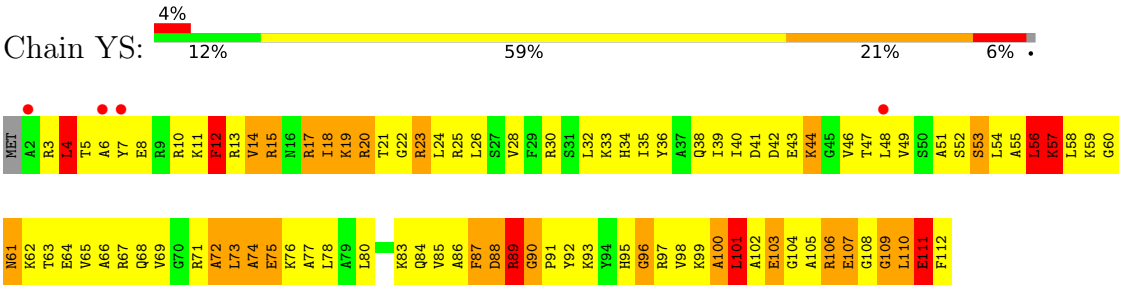
• Molecule 34: 50S ribosomal protein L17



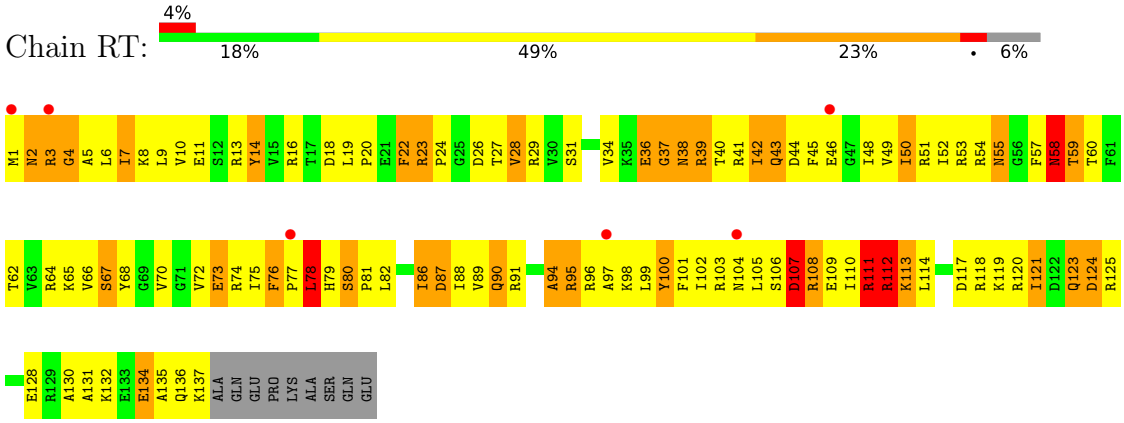
• Molecule 35: 50S ribosomal protein L18



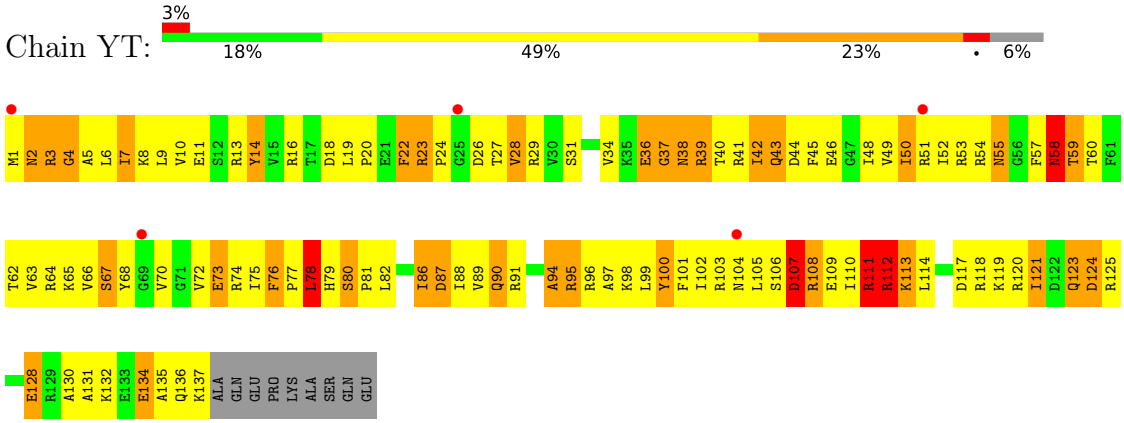
• Molecule 35: 50S ribosomal protein L18



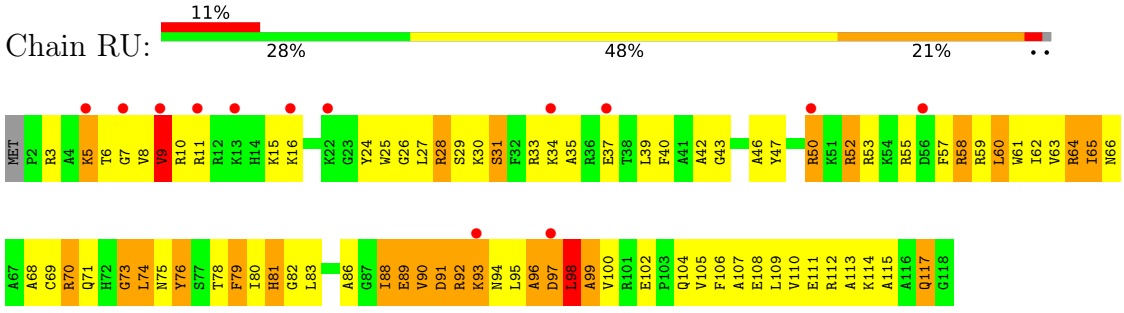
• Molecule 36: 50S ribosomal protein L19



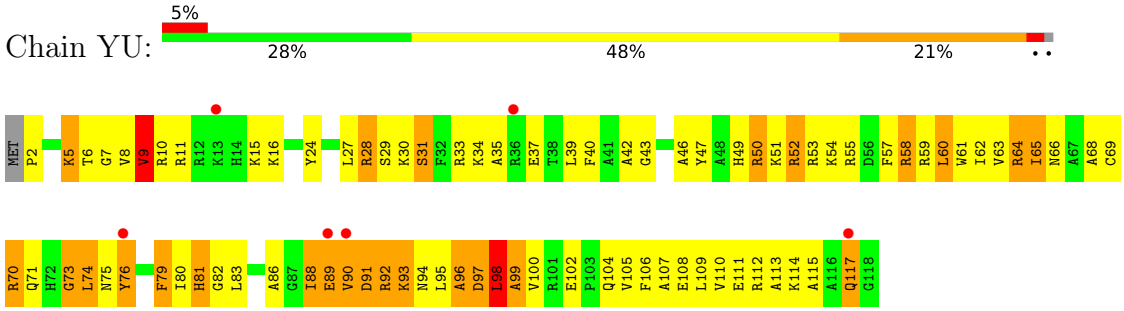
• Molecule 36: 50S ribosomal protein L19



• Molecule 37: 50S ribosomal protein L20

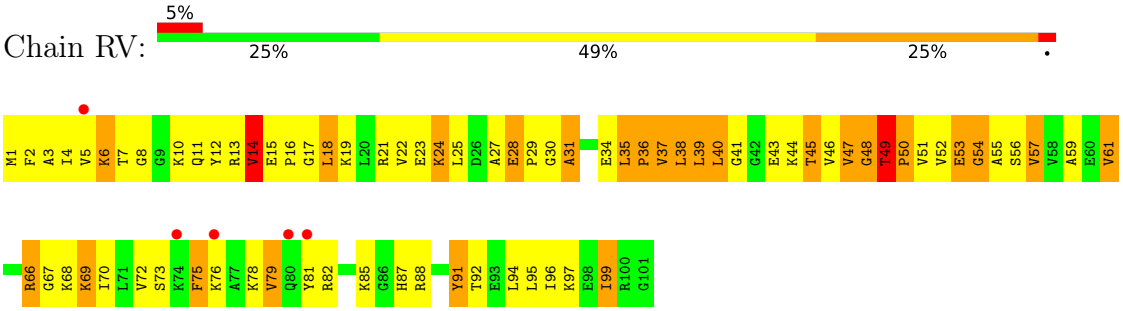


• Molecule 37: 50S ribosomal protein L20



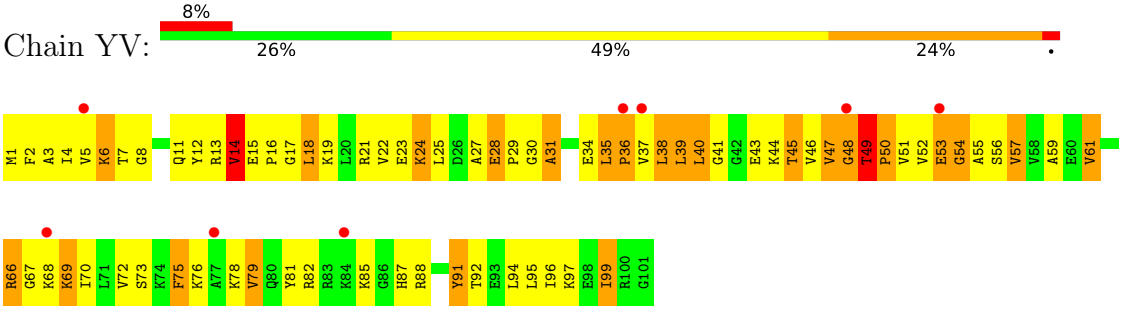
• Molecule 38: 50S ribosomal protein L21

Chain RV:



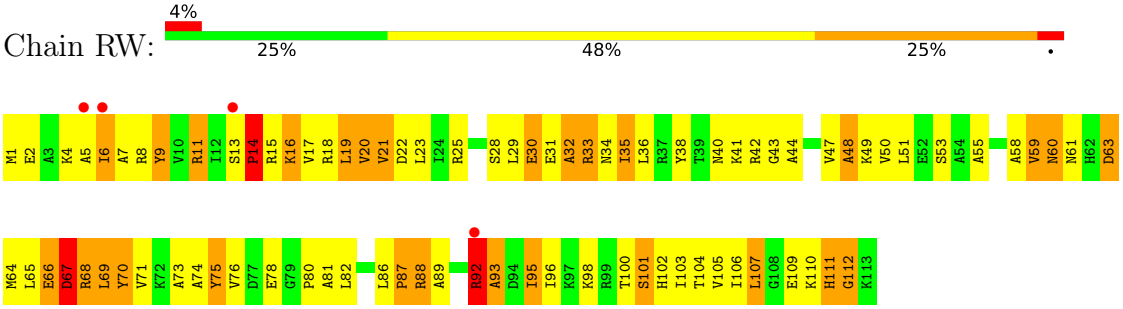
• Molecule 38: 50S ribosomal protein L21

Chain YV:



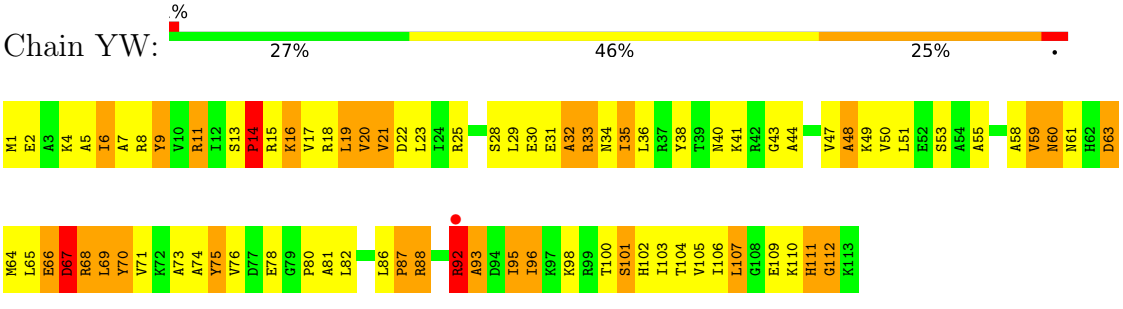
• Molecule 39: 50S ribosomal protein L22

Chain RW:



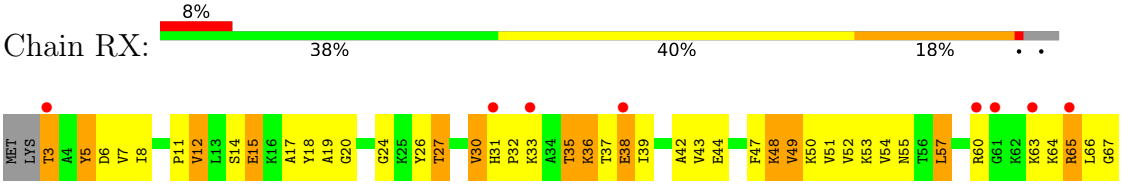
• Molecule 39: 50S ribosomal protein L22

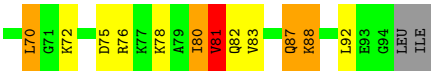
Chain YW:



• Molecule 40: 50S ribosomal protein L23

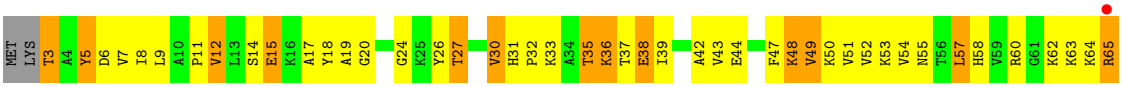
Chain RX:

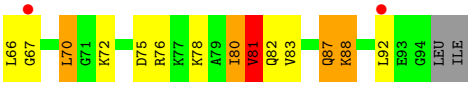




• Molecule 40: 50S ribosomal protein L23

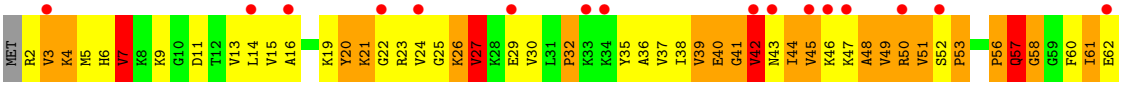
Chain YX:

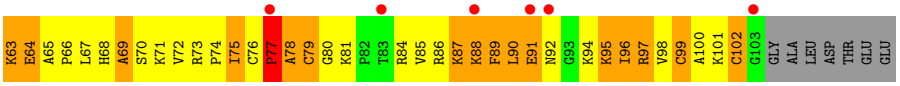




• Molecule 41: 50S ribosomal protein L24

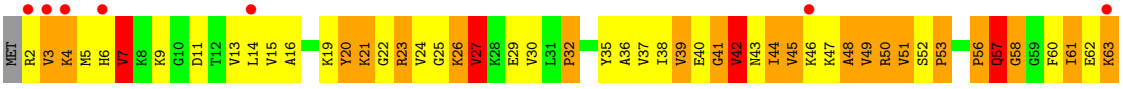
Chain RY:





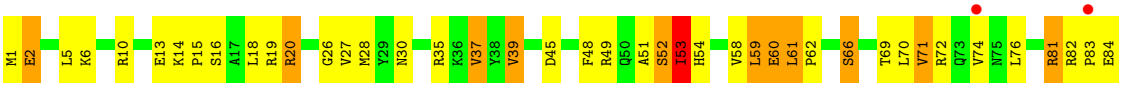
• Molecule 41: 50S ribosomal protein L24

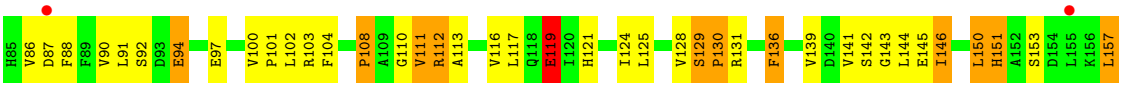
Chain YY:

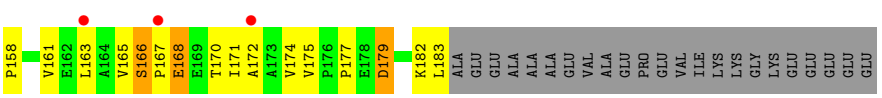


• Molecule 42: 50S ribosomal protein L25

Chain RZ:

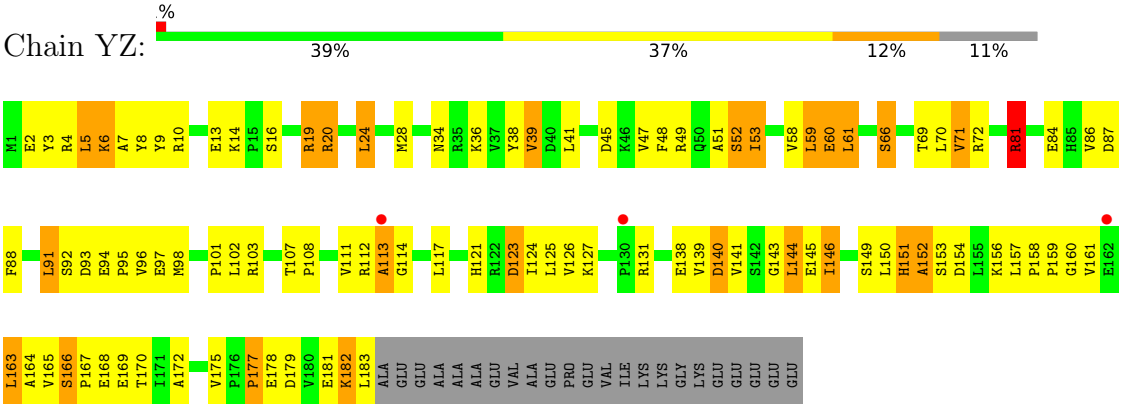






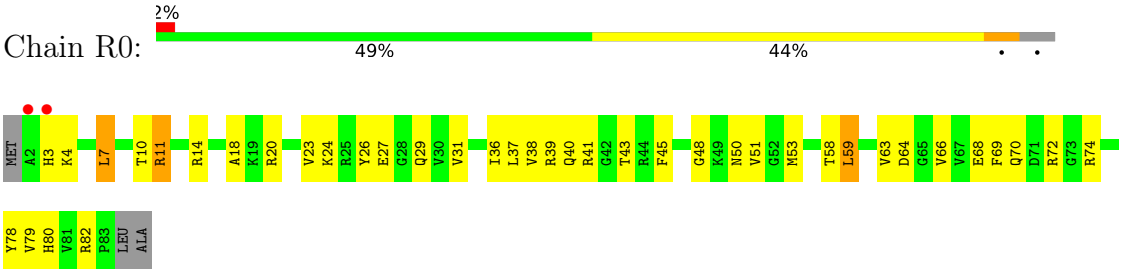
• Molecule 42: 50S ribosomal protein L25

Chain YZ:



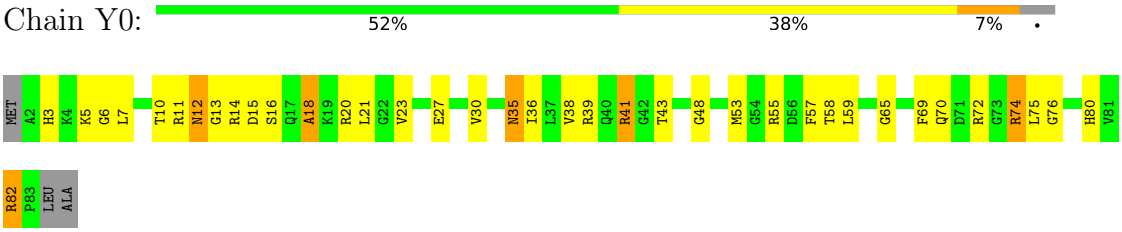
• Molecule 43: 50S ribosomal protein L27

Chain R0:



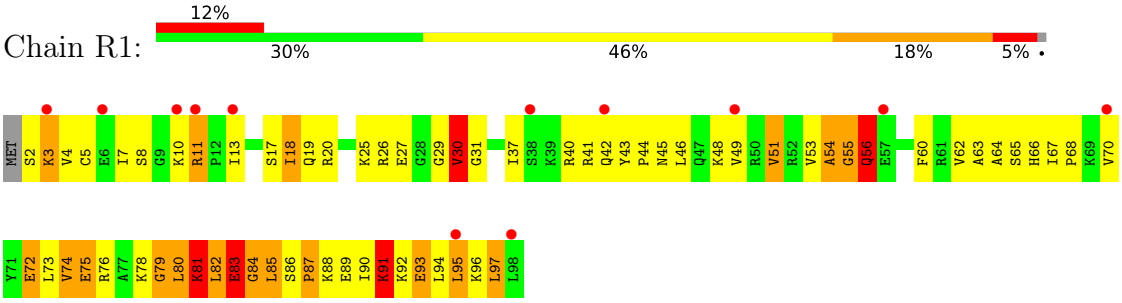
• Molecule 43: 50S ribosomal protein L27

Chain Y0:



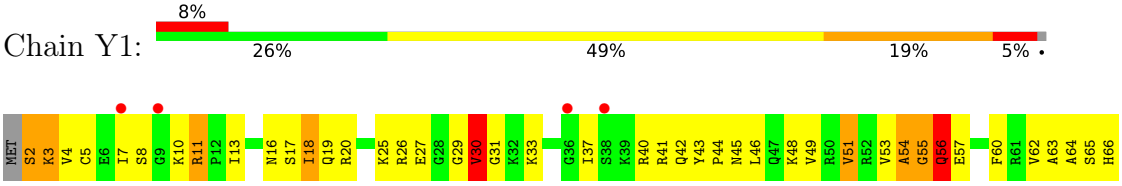
• Molecule 44: 50S ribosomal protein L28

Chain R1:



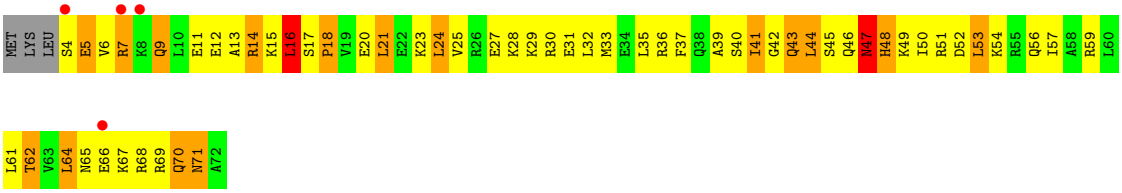
• Molecule 44: 50S ribosomal protein L28

Chain Y1:



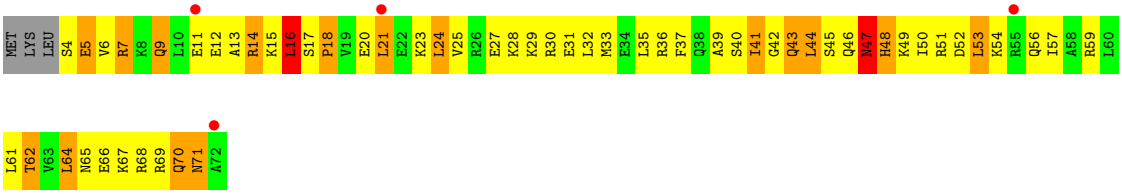
• Molecule 45: 50S ribosomal protein L29

Chain R2:



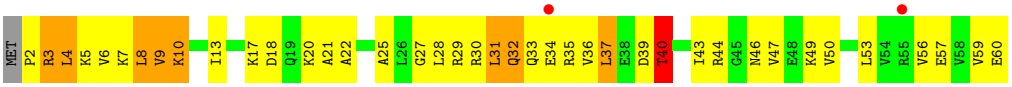
• Molecule 45: 50S ribosomal protein L29

Chain Y2:



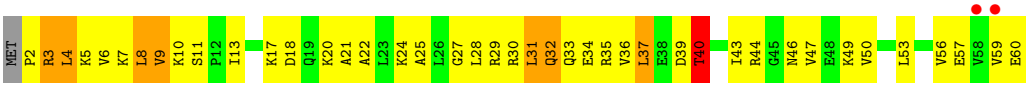
• Molecule 46: 50S ribosomal protein L30

Chain R3:



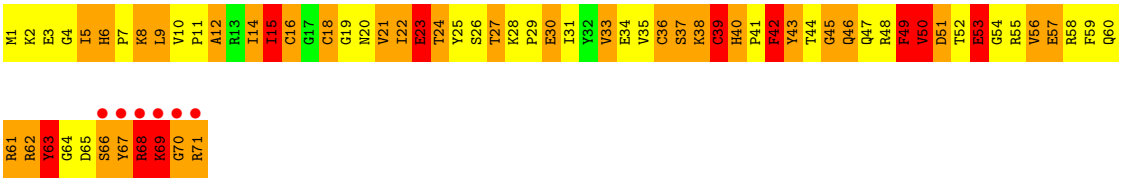
• Molecule 46: 50S ribosomal protein L30

Chain Y3:



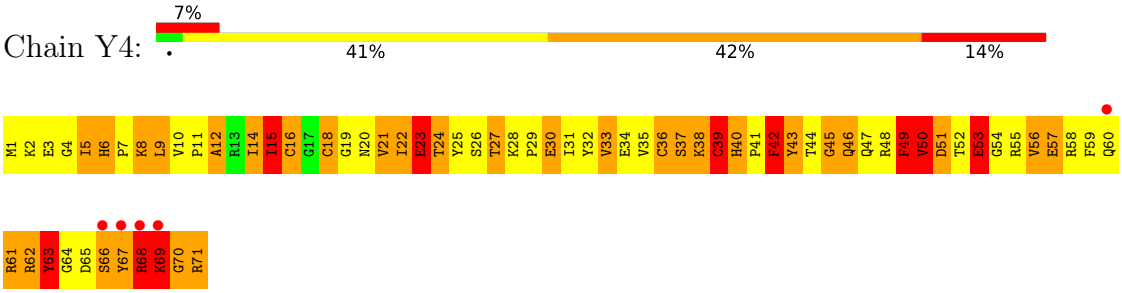
• Molecule 47: 50S ribosomal protein L31

Chain R4:



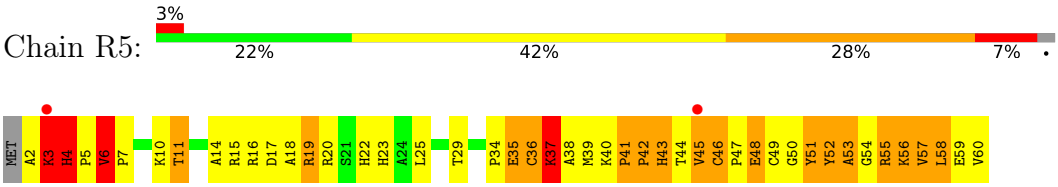
• Molecule 47: 50S ribosomal protein L31

Chain Y4:



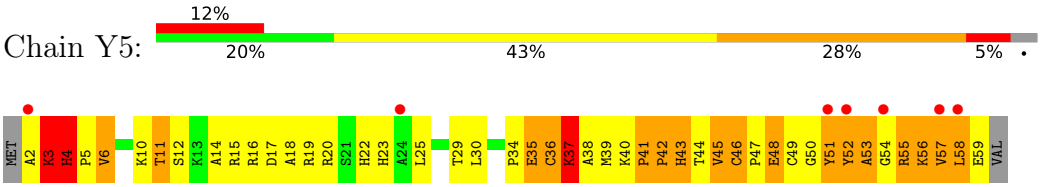
• Molecule 48: 50S ribosomal protein L32

Chain R5:



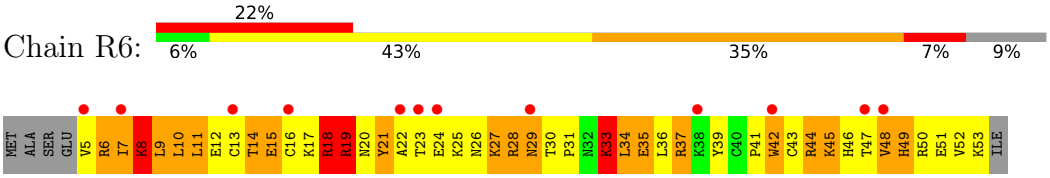
• Molecule 48: 50S ribosomal protein L32

Chain Y5:



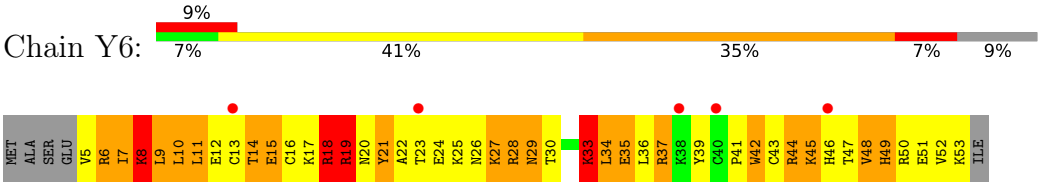
• Molecule 49: 50S ribosomal protein L33

Chain R6:



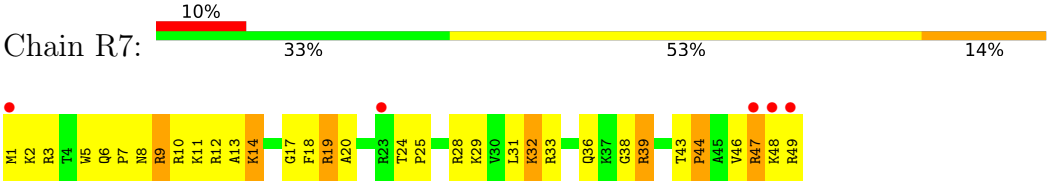
• Molecule 49: 50S ribosomal protein L33

Chain Y6:



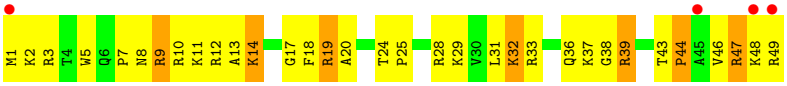
• Molecule 50: 50S ribosomal protein L34

Chain R7:



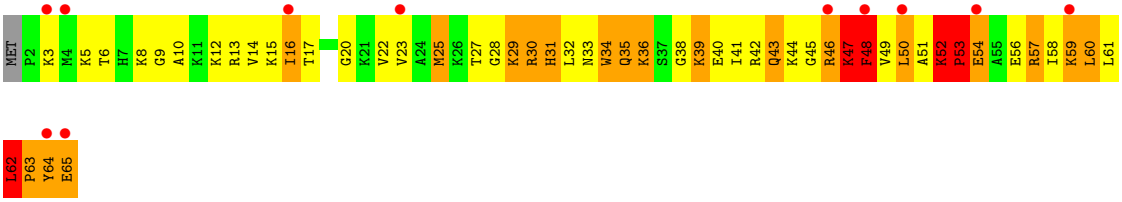
• Molecule 50: 50S ribosomal protein L34

Chain Y7:



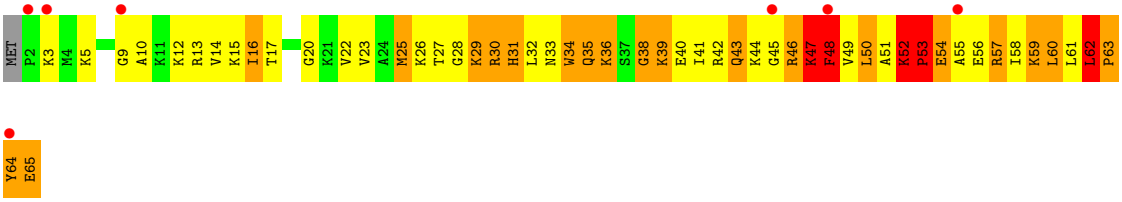
• Molecule 51: 50S ribosomal protein L35

Chain R8:



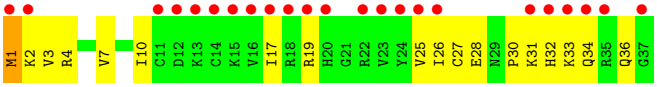
• Molecule 51: 50S ribosomal protein L35

Chain Y8:



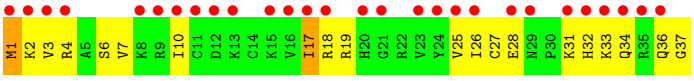
• Molecule 52: 50S ribosomal protein L36

Chain R9:



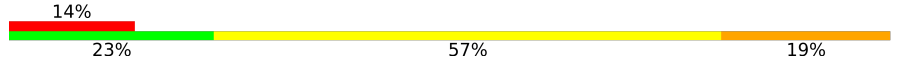
• Molecule 52: 50S ribosomal protein L36

Chain Y9:



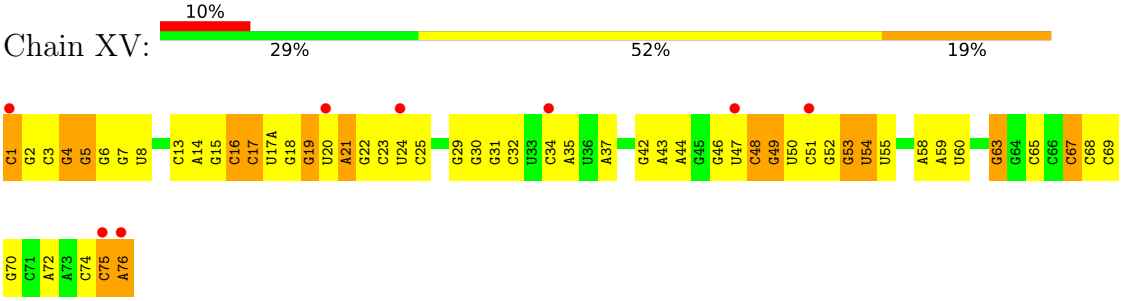
• Molecule 53: P-site tRNA fMet

Chain QV:



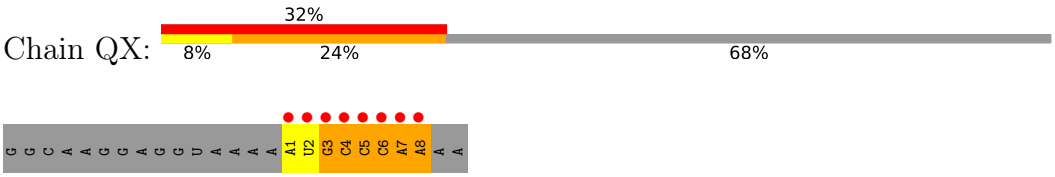
• Molecule 53: P-site tRNA fMet

Chain XV:



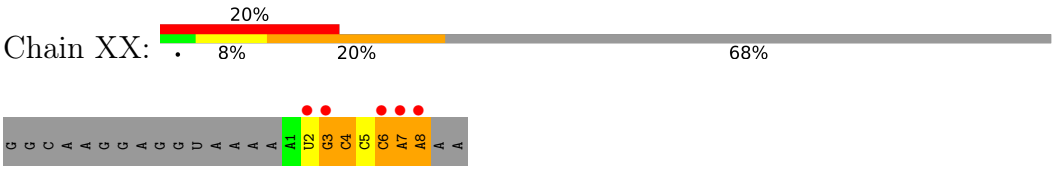
• Molecule 54: A-site ASL SufA6

Chain QX:



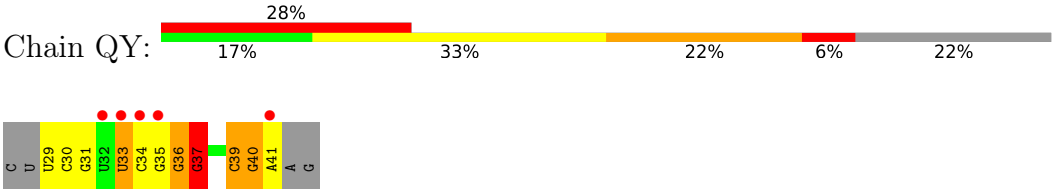
• Molecule 54: A-site ASL SufA6

Chain XX:



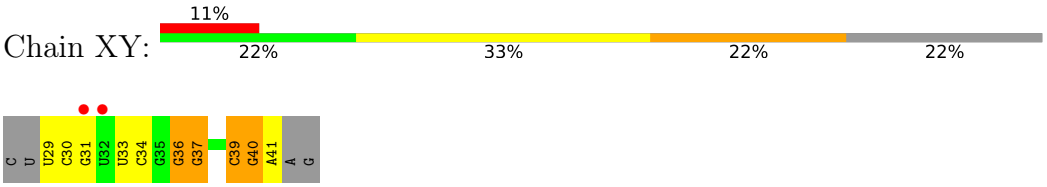
• Molecule 55: messenger RNA

Chain QY:



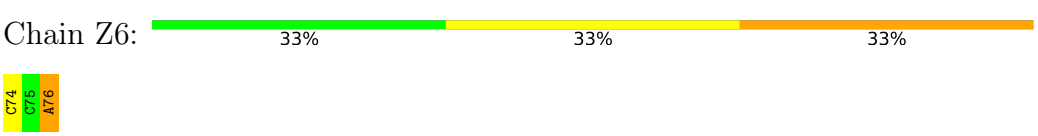
• Molecule 55: messenger RNA

Chain XY:



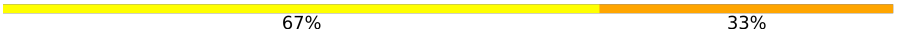
• Molecule 56: tRNA acceptor end mimic

Chain Z6:



• Molecule 56: tRNA acceptor end mimic

Chain Z8:



C74
C75
A76

4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α, β, γ	210.24Å 446.10Å 623.32Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.68 – 3.90 49.68 – 3.90	Depositor EDS
% Data completeness (in resolution range)	99.0 (49.68-3.90) 99.0 (49.68-3.90)	Depositor EDS
R_{merge}	0.31	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.66 (at 3.67Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.235 , 0.278 0.235 , 0.278	Depositor DCC
R_{free} test set	27641 reflections (4.51%)	wwPDB-VP
Wilson B-factor (Å^2)	88.0	Xtriage
Anisotropy	0.281	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.25 , 40.5	EDS
L-test for twinning[2]	$< \|L\| > = 0.38$, $< L^2 > = 0.21$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.90	EDS
Total number of atoms	291950	wwPDB-VP
Average B, all atoms (Å^2)	64.0	wwPDB-VP

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

[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: PAR, MG, 1MG, PPU, ZN

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	QA	0.25	0/36098	0.44	0/56341
1	XA	0.28	0/36101	0.49	3/56346 (0.0%)
2	QB	0.42	0/1959	1.06	15/2642 (0.6%)
2	XB	0.42	0/1959	1.05	10/2642 (0.4%)
3	QC	0.44	0/1629	0.93	1/2195 (0.0%)
3	XC	0.44	0/1629	0.93	1/2195 (0.0%)
4	QD	0.49	0/1733	1.06	12/2318 (0.5%)
4	XD	0.55	0/1733	1.06	14/2318 (0.6%)
5	QE	0.45	0/1171	1.02	9/1576 (0.6%)
5	XE	0.46	0/1171	1.02	9/1576 (0.6%)
6	QF	0.50	0/856	0.97	3/1154 (0.3%)
6	XF	0.50	0/856	0.97	3/1154 (0.3%)
7	QG	0.43	0/1276	0.90	1/1709 (0.1%)
7	XG	0.43	0/1276	0.90	1/1709 (0.1%)
8	QH	0.49	0/1136	1.05	5/1527 (0.3%)
8	XH	0.50	0/1136	1.05	7/1527 (0.5%)
9	QI	0.40	0/1029	1.03	9/1379 (0.7%)
9	XI	0.40	0/1029	1.03	9/1379 (0.7%)
10	QJ	0.46	0/814	0.91	1/1095 (0.1%)
10	XJ	0.46	0/814	0.91	1/1095 (0.1%)
11	QK	0.48	0/900	1.05	6/1213 (0.5%)
11	XK	0.48	0/900	1.04	6/1213 (0.5%)
12	QL	0.58	1/991 (0.1%)	1.20	10/1327 (0.8%)
12	XL	0.57	1/991 (0.1%)	1.21	9/1327 (0.7%)
13	QM	0.43	0/974	1.04	9/1303 (0.7%)
13	XM	0.43	0/974	1.04	9/1303 (0.7%)
14	QN	0.47	0/501	1.08	6/664 (0.9%)
14	XN	0.65	1/501 (0.2%)	1.07	4/664 (0.6%)
15	QO	0.48	0/745	1.00	3/992 (0.3%)
15	XO	0.48	0/745	0.99	3/992 (0.3%)
16	QP	0.45	0/721	1.03	4/970 (0.4%)
16	XP	0.46	0/721	1.04	4/970 (0.4%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
17	QQ	0.43	0/847	1.06	6/1131 (0.5%)
17	XQ	0.43	0/847	1.06	6/1131 (0.5%)
18	QR	0.46	0/579	1.04	3/768 (0.4%)
18	XR	0.46	0/579	1.04	3/768 (0.4%)
19	QS	0.46	0/689	1.21	7/926 (0.8%)
19	XS	0.46	0/689	1.21	7/926 (0.8%)
20	QT	0.42	0/765	1.09	5/1007 (0.5%)
20	XT	0.42	0/765	1.09	4/1007 (0.4%)
21	QU	0.42	0/221	1.00	1/288 (0.3%)
21	XU	0.43	0/221	1.01	1/288 (0.3%)
22	RA	0.29	1/69521 (0.0%)	0.50	4/108529 (0.0%)
22	YA	0.33	0/69543	0.53	9/108563 (0.0%)
23	RB	0.24	0/2878	0.42	0/4490
23	YB	0.28	0/2878	0.48	0/4490
24	RD	0.79	2/2165 (0.1%)	1.30	34/2919 (1.2%)
24	YD	0.72	1/2165 (0.0%)	1.30	34/2919 (1.2%)
25	RE	0.62	0/1601	1.35	29/2160 (1.3%)
25	YE	0.62	0/1601	1.35	29/2160 (1.3%)
26	RF	0.62	0/1620	1.20	19/2194 (0.9%)
26	YF	0.62	0/1620	1.20	19/2194 (0.9%)
27	RG	0.47	0/1499	0.99	9/2016 (0.4%)
27	YG	0.47	0/1499	0.99	10/2016 (0.5%)
28	RH	0.58	0/1332	1.22	14/1802 (0.8%)
28	YH	0.58	0/1332	1.22	15/1802 (0.8%)
29	RI	0.74	3/1151 (0.3%)	1.01	3/1558 (0.2%)
29	YI	0.48	0/1151	0.94	2/1558 (0.1%)
30	RN	0.55	0/1131	1.18	10/1525 (0.7%)
30	YN	0.54	0/1131	1.18	10/1525 (0.7%)
31	RO	0.64	0/943	1.03	5/1269 (0.4%)
31	YO	0.65	0/943	1.04	5/1269 (0.4%)
32	RP	0.63	0/1162	1.37	17/1544 (1.1%)
32	YP	0.63	1/1162 (0.1%)	1.37	17/1544 (1.1%)
33	RQ	0.71	0/1143	1.36	19/1527 (1.2%)
33	YQ	0.71	0/1143	1.35	19/1527 (1.2%)
34	RR	0.55	0/982	1.17	10/1312 (0.8%)
34	YR	0.55	0/982	1.17	10/1312 (0.8%)
35	RS	0.53	0/892	1.18	8/1187 (0.7%)
35	YS	0.52	0/892	1.18	8/1187 (0.7%)
36	RT	0.56	0/1155	1.18	16/1542 (1.0%)
36	YT	0.56	0/1155	1.18	17/1542 (1.1%)
37	RU	0.59	0/982	1.21	10/1306 (0.8%)
37	YU	0.60	0/982	1.21	10/1306 (0.8%)
38	RV	0.56	0/790	1.10	6/1057 (0.6%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
38	YV	0.55	0/790	1.10	6/1057 (0.6%)
39	RW	0.58	0/911	1.18	13/1220 (1.1%)
39	YW	0.57	0/911	1.18	12/1220 (1.0%)
40	RX	0.62	0/739	1.14	5/993 (0.5%)
40	YX	0.62	0/739	1.14	5/993 (0.5%)
41	RY	0.64	0/798	1.17	4/1064 (0.4%)
41	YY	0.64	0/798	1.16	3/1064 (0.3%)
42	RZ	0.50	0/1493	0.95	5/2026 (0.2%)
42	YZ	0.48	0/1493	0.96	2/2026 (0.1%)
43	R0	0.48	0/657	0.92	0/874
43	Y0	0.54	0/657	0.96	0/874
44	R1	0.58	0/770	1.20	9/1022 (0.9%)
44	Y1	0.58	0/770	1.20	9/1022 (0.9%)
45	R2	0.60	0/583	1.32	9/771 (1.2%)
45	Y2	0.60	0/583	1.32	9/771 (1.2%)
46	R3	0.62	1/474 (0.2%)	1.04	0/635
46	Y3	0.54	0/474	1.04	0/635
47	R4	0.47	0/594	1.24	10/795 (1.3%)
47	Y4	0.47	0/594	1.23	10/795 (1.3%)
48	R5	0.65	0/473	1.22	6/639 (0.9%)
48	Y5	0.65	0/465	1.22	7/629 (1.1%)
49	R6	0.53	0/431	1.06	3/575 (0.5%)
49	Y6	0.53	0/431	1.06	3/575 (0.5%)
50	R7	0.73	0/438	1.19	2/575 (0.3%)
50	Y7	0.73	0/438	1.19	2/575 (0.3%)
51	R8	0.79	0/525	1.41	9/691 (1.3%)
51	Y8	0.79	0/525	1.41	9/691 (1.3%)
52	R9	0.42	0/310	0.92	1/407 (0.2%)
52	Y9	0.45	0/310	0.92	1/407 (0.2%)
53	QV	0.34	1/1836 (0.1%)	0.44	0/2859
53	XV	0.34	1/1836 (0.1%)	0.43	0/2859
54	QX	0.67	0/188	0.86	0/290
54	XX	0.40	0/188	0.72	0/290
55	QY	0.47	0/311	0.56	0/483
55	XY	0.37	0/311	0.46	0/483
56	Z6	0.46	0/40	0.62	0/60
56	Z8	0.46	0/40	0.63	0/60
All	All	0.39	14/316321 (0.0%)	0.72	811/472911 (0.2%)

All (14) 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)
24	RD	236	GLY	C-N	14.27	1.53	1.33
29	RI	54	GLN	C-O	-9.39	1.10	1.23
29	RI	55	ALA	C-O	8.61	1.34	1.24
53	QV	1	C	OP3-P	6.62	1.61	1.48
53	XV	1	C	OP3-P	6.37	1.61	1.48
29	RI	54	GLN	C-N	-6.17	1.25	1.33
22	RA	654(T)	C	C1'-N1	6.09	1.57	1.48
12	QL	48	PRO	N-CD	5.44	1.55	1.47
46	R3	10	LYS	C-O	-5.37	1.17	1.23
14	XN	25	VAL	C-N	5.37	1.44	1.33
12	XL	48	PRO	N-CD	5.23	1.55	1.47
32	YP	19	VAL	CA-C	5.18	1.59	1.52
24	RD	241	PRO	N-CD	5.16	1.54	1.47
24	YD	241	PRO	N-CD	5.12	1.54	1.47

All (811) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	YP	59	LEU	N-CA-C	-14.62	91.38	111.56
32	RP	59	LEU	N-CA-C	-14.61	91.39	111.56
47	R4	39	CYS	N-CA-C	-13.59	95.96	112.54
47	Y4	39	CYS	N-CA-C	-13.51	96.06	112.54
25	RE	58	ARG	N-CA-C	-11.82	95.21	113.89
25	YE	58	ARG	N-CA-C	-11.80	95.25	113.89
45	R2	5	GLU	N-CA-C	-11.64	99.56	113.88
45	Y2	5	GLU	N-CA-C	-11.56	99.66	113.88
37	YU	96	ALA	N-CA-C	-11.54	98.63	113.17
30	RN	114	ARG	N-CA-C	-11.50	95.94	110.19
37	RU	96	ALA	N-CA-C	-11.49	98.69	113.17
30	YN	114	ARG	N-CA-C	-11.36	96.10	110.19
49	R6	29	ASN	N-CA-C	-10.65	99.03	113.30
49	Y6	29	ASN	N-CA-C	-10.56	99.15	113.30
12	QL	119	LYS	N-CA-C	-10.36	95.19	110.52
33	RQ	89	ASN	N-CA-C	-10.35	100.45	112.87
12	XL	119	LYS	N-CA-C	-10.34	95.21	110.52
33	YQ	89	ASN	N-CA-C	-10.34	100.47	112.87
25	YE	21	VAL	C-N-CD	-10.09	98.39	120.60
25	RE	21	VAL	C-N-CD	-10.04	98.51	120.60
33	YQ	81	VAL	CB-CA-C	-10.03	94.84	111.29
33	YQ	81	VAL	N-CA-C	9.98	130.10	109.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	RQ	81	VAL	N-CA-C	9.95	130.04	109.34
33	RQ	81	VAL	CB-CA-C	-9.93	95.01	111.29
2	XB	25	ASN	CA-C-N	9.85	132.15	119.84
2	XB	25	ASN	C-N-CA	9.85	132.15	119.84
2	QB	25	ASN	CA-C-N	9.85	132.15	119.84
2	QB	25	ASN	C-N-CA	9.85	132.15	119.84
32	RP	13	ASN	N-CA-C	-9.65	101.53	113.20
32	YP	13	ASN	N-CA-C	-9.59	101.59	113.20
12	QL	26	ALA	N-CA-C	-9.29	102.53	113.21
26	RF	197	ASP	N-CA-C	-9.28	98.69	110.19
26	YF	197	ASP	N-CA-C	-9.27	98.70	110.19
12	XL	26	ALA	N-CA-C	-9.17	102.67	113.21
47	R4	45	GLY	N-CA-C	-9.13	102.72	115.32
47	Y4	45	GLY	N-CA-C	-9.07	102.81	115.32
11	QK	40	ILE	N-CA-C	-9.06	103.77	111.56
11	XK	40	ILE	N-CA-C	-9.02	103.80	111.56
35	YS	110	LEU	CB-CA-C	-9.01	104.98	117.23
35	RS	110	LEU	CB-CA-C	-8.97	105.03	117.23
29	RI	54	GLN	CA-C-O	8.90	131.03	120.53
44	Y1	3	LYS	N-CA-C	-8.90	99.76	110.44
44	R1	3	LYS	N-CA-C	-8.86	99.81	110.44
37	RU	97	ASP	N-CA-C	-8.86	103.58	112.97
50	R7	47	ARG	N-CA-C	8.83	119.58	108.19
50	Y7	47	ARG	N-CA-C	8.82	119.57	108.19
24	RD	91	ARG	N-CA-C	-8.80	98.67	110.55
24	YD	91	ARG	N-CA-C	-8.79	98.69	110.55
37	YU	97	ASP	N-CA-C	-8.72	103.73	112.97
37	RU	98	LEU	N-CA-C	-8.69	102.48	113.43
37	YU	98	LEU	N-CA-C	-8.69	102.49	113.43
33	YQ	125	LEU	CA-C-N	8.66	130.66	119.84
33	YQ	125	LEU	C-N-CA	8.66	130.66	119.84
51	Y8	36	LYS	N-CA-C	-8.66	96.72	110.14
33	RQ	125	LEU	CA-C-N	8.63	130.63	119.84
33	RQ	125	LEU	C-N-CA	8.63	130.63	119.84
51	R8	36	LYS	N-CA-C	-8.62	96.78	110.14
8	XH	79	VAL	N-CA-C	-8.58	102.05	110.72
34	RR	9	LYS	N-CA-C	-8.51	94.65	108.52
25	YE	23	VAL	N-CA-C	8.47	120.98	108.96
8	QH	79	VAL	N-CA-C	-8.46	102.17	110.72
36	YT	59	THR	N-CA-C	-8.46	97.31	110.42
25	RE	23	VAL	N-CA-C	8.44	120.94	108.96
36	RT	59	THR	N-CA-C	-8.41	97.38	110.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	XL	44	THR	CA-C-N	8.40	128.91	119.92
12	XL	44	THR	C-N-CA	8.40	128.91	119.92
34	YR	9	LYS	N-CA-C	-8.40	94.83	108.52
33	RQ	5	ARG	N-CA-C	-8.36	97.00	110.20
16	XP	3	LYS	N-CA-C	8.32	120.60	108.86
36	RT	7	ILE	N-CA-C	-8.32	101.58	110.23
16	QP	3	LYS	N-CA-C	8.31	120.58	108.86
26	RF	75	HIS	N-CA-C	8.31	122.40	109.52
44	R1	79	GLY	N-CA-C	-8.29	93.53	113.18
44	Y1	79	GLY	N-CA-C	-8.29	93.53	113.18
24	RD	193	VAL	N-CA-C	8.23	120.20	109.58
36	YT	13	ARG	N-CA-C	-8.22	102.69	114.12
31	YO	107	ARG	N-CA-C	-8.22	102.27	111.07
36	YT	7	ILE	N-CA-C	-8.22	101.69	110.23
26	YF	75	HIS	N-CA-C	8.21	122.25	109.52
36	RT	13	ARG	N-CA-C	-8.20	102.73	114.12
31	RO	107	ARG	N-CA-C	-8.18	102.32	111.07
24	YD	193	VAL	N-CA-C	8.17	120.12	109.58
28	YH	19	VAL	N-CA-C	8.10	117.95	106.53
4	QD	72	GLU	CA-C-N	-8.09	109.98	120.65
4	QD	72	GLU	C-N-CA	-8.09	109.98	120.65
26	YF	65	TRP	CA-C-N	8.08	129.94	119.84
26	YF	65	TRP	C-N-CA	8.08	129.94	119.84
47	R4	63	TYR	N-CA-C	-8.07	102.69	112.54
28	RH	19	VAL	N-CA-C	8.05	117.88	106.53
26	RF	65	TRP	CA-C-N	8.05	129.90	119.84
26	RF	65	TRP	C-N-CA	8.05	129.90	119.84
41	YY	20	TYR	N-CA-C	-8.02	101.98	113.21
51	R8	45	GLY	N-CA-C	-7.98	101.80	112.81
41	RY	20	TYR	N-CA-C	-7.97	102.06	113.21
51	Y8	45	GLY	N-CA-C	-7.94	101.86	112.81
31	YO	112	MET	N-CA-C	7.90	119.58	110.97
31	RO	112	MET	N-CA-C	7.83	119.50	110.97
48	R5	6	VAL	CA-C-N	7.81	129.04	119.98
48	R5	6	VAL	C-N-CA	7.81	129.04	119.98
33	YQ	5	ARG	N-CA-C	-7.76	96.93	109.96
28	YH	100	GLY	N-CA-C	-7.75	99.70	111.24
47	Y4	63	TYR	N-CA-C	-7.74	102.84	111.82
20	QT	9	ASN	N-CA-C	7.74	121.93	110.48
4	XD	36	ARG	CA-C-N	7.74	128.71	120.12
4	XD	36	ARG	C-N-CA	7.74	128.71	120.12
15	QO	78	TYR	N-CA-C	-7.73	101.27	111.24

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	Y5	6	VAL	CA-C-N	7.73	128.94	119.98
48	Y5	6	VAL	C-N-CA	7.73	128.94	119.98
45	R2	14	ARG	N-CA-C	-7.70	99.88	110.35
15	XO	78	TYR	N-CA-C	-7.70	101.31	111.24
34	RR	30	THR	N-CA-C	-7.69	105.85	114.62
17	XQ	57	VAL	N-CA-C	7.69	118.20	108.82
34	YR	30	THR	N-CA-C	-7.69	105.86	114.62
28	RH	100	GLY	N-CA-C	-7.68	99.79	111.24
20	XT	9	ASN	N-CA-C	7.64	121.79	110.48
11	XK	123	LYS	N-CA-C	-7.64	102.55	111.03
45	Y2	14	ARG	N-CA-C	-7.63	99.97	110.35
51	R8	38	GLY	N-CA-C	-7.63	103.15	113.37
4	QD	36	ARG	CA-C-N	7.63	128.59	120.12
4	QD	36	ARG	C-N-CA	7.63	128.59	120.12
24	RD	251	GLY	N-CA-C	7.62	126.77	115.64
30	YN	116	LEU	N-CA-C	-7.62	102.63	112.23
49	Y6	28	ARG	N-CA-C	7.61	120.44	108.79
11	QK	123	LYS	N-CA-C	-7.61	102.59	111.03
49	R6	28	ARG	N-CA-C	7.61	120.43	108.79
37	YU	70	ARG	N-CA-C	-7.60	103.73	113.16
17	QQ	57	VAL	N-CA-C	7.60	118.09	108.82
28	RH	157	TYR	N-CA-C	-7.60	103.08	112.88
30	RN	116	LEU	N-CA-C	-7.60	102.66	112.23
45	Y2	21	LEU	N-CA-C	-7.59	102.95	111.07
24	YD	251	GLY	N-CA-C	7.58	126.70	115.64
51	Y8	38	GLY	N-CA-C	-7.58	103.22	113.37
25	RE	185	LYS	N-CA-C	7.55	119.89	109.54
28	YH	157	TYR	N-CA-C	-7.55	103.14	112.88
12	QL	58	VAL	N-CA-C	7.54	118.94	107.77
37	RU	70	ARG	N-CA-C	-7.54	103.81	113.16
25	YE	185	LYS	N-CA-C	7.52	119.84	109.54
5	QE	11	ILE	N-CA-C	7.51	117.98	111.90
12	XL	58	VAL	N-CA-C	7.51	118.88	107.77
5	XE	11	ILE	N-CA-C	7.50	117.98	111.90
32	YP	26	GLY	N-CA-C	-7.50	98.57	111.47
45	R2	21	LEU	N-CA-C	-7.44	103.11	111.07
32	RP	26	GLY	N-CA-C	-7.44	98.68	111.47
28	RH	117	PRO	N-CA-C	7.43	119.76	110.70
45	Y2	41	ILE	N-CA-C	-7.42	103.33	112.76
28	YH	117	PRO	N-CA-C	7.42	119.75	110.70
45	R2	41	ILE	N-CA-C	-7.38	103.39	112.76
12	QL	44	THR	CA-C-N	7.33	129.00	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	QL	44	THR	C-N-CA	7.33	129.00	119.84
24	YD	43	ARG	N-CA-C	7.31	122.05	113.20
40	YX	81	VAL	N-CA-C	7.30	119.59	108.71
40	RX	81	VAL	N-CA-C	7.29	119.58	108.71
16	QP	68	ASP	N-CA-C	-7.29	102.35	112.12
51	Y8	54	GLU	N-CA-C	-7.29	102.51	111.33
17	QQ	60	ILE	N-CA-C	7.28	118.61	108.12
4	XD	14	ARG	CA-C-N	-7.28	107.75	122.31
4	XD	14	ARG	C-N-CA	-7.28	107.75	122.31
17	XQ	60	ILE	N-CA-C	7.28	118.60	108.12
16	XP	68	ASP	N-CA-C	-7.28	102.37	112.12
24	RD	43	ARG	N-CA-C	7.27	122.00	113.20
38	YV	49	THR	CA-C-N	-7.27	110.75	119.84
38	YV	49	THR	C-N-CA	-7.27	110.75	119.84
28	RH	139	GLN	N-CA-C	-7.25	103.38	111.28
38	RV	49	THR	CA-C-N	-7.25	110.78	119.84
38	RV	49	THR	C-N-CA	-7.25	110.78	119.84
51	R8	54	GLU	N-CA-C	-7.23	102.58	111.33
37	YU	76	TYR	N-CA-C	-7.22	102.44	111.11
9	QI	63	ILE	N-CA-C	7.22	118.45	107.77
24	RD	53	PHE	N-CA-C	7.22	121.66	112.86
45	Y2	16	LEU	N-CA-C	-7.21	95.45	110.80
28	YH	139	GLN	N-CA-C	-7.20	103.43	111.28
37	RU	76	TYR	N-CA-C	-7.20	102.47	111.11
9	XI	63	ILE	N-CA-C	7.20	118.42	107.77
4	QD	112	VAL	N-CA-C	7.19	117.28	110.30
32	YP	112	LEU	N-CA-C	7.19	121.39	109.46
32	RP	112	LEU	N-CA-C	7.17	121.37	109.46
13	XM	11	ARG	N-CA-C	7.17	117.99	107.88
45	R2	16	LEU	N-CA-C	-7.16	95.55	110.80
24	YD	53	PHE	N-CA-C	7.15	121.59	112.86
14	XN	53	LEU	CA-C-N	7.14	127.54	119.83
14	XN	53	LEU	C-N-CA	7.14	127.54	119.83
25	YE	168	MET	N-CA-C	7.13	121.13	109.94
19	XS	6	LYS	N-CA-C	-7.12	95.63	110.80
13	QM	11	ARG	N-CA-C	7.11	117.91	107.88
9	XI	86	VAL	N-CA-C	-7.09	102.36	112.35
19	QS	6	LYS	N-CA-C	-7.08	95.71	110.80
26	RF	203	GLN	N-CA-C	-7.07	103.26	110.97
25	RE	168	MET	N-CA-C	7.07	121.04	109.94
19	XS	36	ARG	N-CA-C	-7.07	104.63	113.18
4	XD	112	VAL	N-CA-C	7.06	117.15	110.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
50	Y7	19	ARG	N-CA-C	-7.06	103.63	111.82
26	YF	203	GLN	N-CA-C	-7.06	103.28	110.97
15	QO	9	GLN	N-CA-C	-7.04	103.53	111.07
14	QN	53	LEU	CA-C-N	7.03	127.42	119.83
14	QN	53	LEU	C-N-CA	7.03	127.42	119.83
50	R7	19	ARG	N-CA-C	-7.01	103.69	111.82
9	QI	86	VAL	N-CA-C	-7.01	102.47	112.35
19	QS	36	ARG	N-CA-C	-6.99	104.72	113.18
25	RE	188	VAL	CA-C-N	6.98	128.56	119.84
25	RE	188	VAL	C-N-CA	6.98	128.56	119.84
25	YE	188	VAL	CA-C-N	6.97	128.55	119.84
25	YE	188	VAL	C-N-CA	6.97	128.55	119.84
15	XO	9	GLN	N-CA-C	-6.96	103.62	111.07
18	QR	50	ILE	N-CA-C	-6.96	100.61	109.58
18	XR	50	ILE	N-CA-C	-6.95	100.62	109.58
31	YO	90	GLN	N-CA-C	-6.94	104.42	113.17
31	RO	90	GLN	N-CA-C	-6.89	104.49	113.17
36	YT	80	SER	CA-C-N	6.88	126.56	119.82
36	YT	80	SER	C-N-CA	6.88	126.56	119.82
39	YW	9	TYR	N-CA-C	6.88	121.00	112.47
36	RT	80	SER	CA-C-N	6.88	126.56	119.82
36	RT	80	SER	C-N-CA	6.88	126.56	119.82
26	RF	24	LEU	CA-C-N	6.87	128.43	119.84
26	RF	24	LEU	C-N-CA	6.87	128.43	119.84
33	YQ	116	GLU	N-CA-C	-6.85	103.26	111.69
39	RW	9	TYR	N-CA-C	6.83	120.94	112.47
33	RQ	116	GLU	N-CA-C	-6.83	103.29	111.69
35	YS	110	LEU	N-CA-C	6.82	120.06	108.67
30	YN	71	ILE	N-CA-C	6.82	117.72	108.17
26	YF	24	LEU	CA-C-N	6.82	128.36	119.84
26	YF	24	LEU	C-N-CA	6.82	128.36	119.84
35	RS	110	LEU	N-CA-C	6.82	120.05	108.67
33	YQ	10	ARG	N-CA-C	-6.82	99.20	110.17
37	YU	81	HIS	N-CA-C	-6.80	103.79	111.07
33	RQ	10	ARG	N-CA-C	-6.79	99.23	110.17
32	RP	25	SER	N-CA-C	-6.78	96.35	110.80
37	RU	81	HIS	N-CA-C	-6.77	103.83	111.07
6	QF	60	PHE	N-CA-C	6.77	120.53	110.52
32	YP	25	SER	N-CA-C	-6.76	96.39	110.80
30	RN	71	ILE	N-CA-C	6.76	117.63	108.17
18	XR	87	ARG	N-CA-C	6.75	118.80	110.91
18	QR	87	ARG	N-CA-C	6.74	118.80	110.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	RQ	46	GLN	N-CA-C	-6.72	105.08	113.55
33	YQ	46	GLN	N-CA-C	-6.71	105.09	113.55
24	RD	198	ASN	N-CA-C	-6.70	102.23	111.28
24	YD	198	ASN	N-CA-C	-6.70	102.23	111.28
36	YT	111	ARG	N-CA-C	-6.70	99.34	109.79
6	XF	60	PHE	N-CA-C	6.68	120.41	110.52
36	RT	111	ARG	N-CA-C	-6.68	99.37	109.79
24	RD	223	GLY	N-CA-C	-6.68	104.41	112.49
34	RR	76	VAL	N-CA-C	-6.68	102.70	111.05
17	QQ	62	SER	N-CA-C	6.67	116.86	108.45
5	XE	99	GLY	N-CA-C	-6.67	102.22	111.76
5	QE	99	GLY	N-CA-C	-6.65	102.25	111.76
25	YE	95	ILE	N-CA-C	-6.64	104.37	113.00
24	YD	223	GLY	N-CA-C	-6.64	104.46	112.49
34	YR	74	LYS	N-CA-C	-6.63	101.77	110.33
35	YS	15	ARG	N-CA-C	-6.63	103.53	111.69
34	YR	76	VAL	N-CA-C	-6.62	102.77	111.05
49	Y6	11	LEU	N-CA-C	6.61	120.29	109.72
49	R6	11	LEU	N-CA-C	6.60	120.28	109.72
33	YQ	65	PHE	N-CA-C	6.60	121.86	113.55
33	RQ	65	PHE	N-CA-C	6.59	121.86	113.55
24	YD	14	ARG	N-CA-C	-6.58	104.29	112.72
29	YI	135	GLU	N-CA-C	6.57	119.41	109.63
35	RS	15	ARG	N-CA-C	-6.56	103.62	111.69
25	RE	95	ILE	N-CA-C	-6.55	104.48	113.00
25	RE	125	GLY	CA-C-N	6.55	128.03	119.84
25	RE	125	GLY	C-N-CA	6.55	128.03	119.84
34	RR	74	LYS	N-CA-C	-6.55	101.88	110.33
44	R1	83	GLU	N-CA-C	6.54	120.50	110.36
33	YQ	82	ARG	N-CA-C	6.53	123.83	114.16
14	XN	7	ILE	N-CA-C	-6.53	104.12	110.72
36	RT	131	ALA	N-CA-C	-6.51	104.91	112.92
39	YW	112	GLY	N-CA-C	-6.51	106.70	115.36
24	RD	14	ARG	N-CA-C	-6.50	104.39	112.72
33	RQ	82	ARG	N-CA-C	6.50	123.78	114.16
44	Y1	83	GLU	N-CA-C	6.50	120.44	110.36
17	XQ	62	SER	N-CA-C	6.50	116.64	108.45
39	RW	112	GLY	N-CA-C	-6.50	106.72	115.36
36	YT	113	LYS	N-CA-C	-6.48	102.88	111.24
37	YU	89	GLU	N-CA-C	-6.48	103.89	113.61
25	YE	125	GLY	CA-C-N	6.48	127.94	119.84
25	YE	125	GLY	C-N-CA	6.48	127.94	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
37	RU	89	GLU	N-CA-C	-6.48	103.90	113.61
27	RG	28	VAL	N-CA-C	6.47	118.00	110.62
19	XS	79	THR	N-CA-C	-6.47	97.02	110.80
28	YH	164	TYR	N-CA-C	-6.46	100.72	110.28
28	RH	164	TYR	N-CA-C	-6.45	100.73	110.28
36	RT	113	LYS	N-CA-C	-6.44	102.93	111.24
4	XD	12	CYS	N-CA-C	-6.44	104.26	111.28
14	QN	7	ILE	N-CA-C	-6.44	104.22	110.72
19	QS	79	THR	N-CA-C	-6.43	97.09	110.80
24	YD	83	GLU	N-CA-C	6.40	118.90	109.69
27	YG	55	LYS	N-CA-C	-6.40	102.94	111.96
51	Y8	48	PHE	N-CA-C	6.39	118.82	108.34
24	RD	83	GLU	N-CA-C	6.38	118.87	109.69
51	R8	48	PHE	N-CA-C	6.38	118.80	108.34
37	YU	65	ILE	CB-CA-C	-6.37	103.84	111.81
27	RG	55	LYS	N-CA-C	-6.37	102.98	111.96
51	R8	50	LEU	N-CA-C	6.35	118.84	108.55
51	Y8	50	LEU	N-CA-C	6.35	118.84	108.55
13	XM	91	ARG	N-CA-C	-6.34	105.40	113.01
36	RT	123	GLN	N-CA-C	-6.34	97.29	110.80
16	QP	74	LEU	N-CA-C	-6.34	105.70	113.50
51	R8	23	VAL	N-CA-C	6.34	117.15	107.77
36	RT	130	ALA	N-CA-C	-6.34	106.13	114.31
36	YT	123	GLN	N-CA-C	-6.33	97.31	110.80
37	RU	65	ILE	CB-CA-C	-6.33	103.89	111.81
30	YN	113	GLY	N-CA-C	-6.33	105.13	112.73
30	RN	107	LEU	N-CA-C	-6.32	101.82	109.72
27	YG	28	VAL	N-CA-C	6.32	117.83	110.62
33	YQ	106	VAL	N-CA-C	6.32	116.24	108.53
36	YT	131	ALA	N-CA-C	-6.31	105.15	112.92
30	RN	113	GLY	N-CA-C	-6.31	105.16	112.73
36	YT	130	ALA	N-CA-C	-6.31	106.17	114.31
5	QE	32	VAL	N-CA-C	6.30	117.55	108.48
33	RQ	106	VAL	N-CA-C	6.30	116.21	108.53
30	YN	107	LEU	N-CA-C	-6.28	101.87	109.72
5	XE	32	VAL	N-CA-C	6.28	117.52	108.48
16	XP	74	LEU	N-CA-C	-6.26	105.80	113.50
12	XL	89	ARG	N-CA-C	6.25	118.59	110.53
51	Y8	23	VAL	N-CA-C	6.24	117.01	107.77
24	RD	272	ALA	N-CA-C	6.23	124.07	110.80
24	RD	226	MET	N-CA-C	6.23	117.92	110.19
4	QD	21	LEU	N-CA-C	-6.22	105.00	112.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
4	XD	21	LEU	N-CA-C	-6.22	105.01	112.59
9	XI	60	ASP	N-CA-C	-6.21	99.97	109.65
24	RD	69	ARG	N-CA-C	6.21	120.85	113.28
38	RV	69	LYS	N-CA-C	6.20	118.99	110.24
24	YD	272	ALA	N-CA-C	6.20	124.01	110.80
13	QM	91	ARG	N-CA-C	-6.20	105.57	113.01
30	YN	13	TRP	N-CA-C	6.20	118.70	109.59
9	QI	60	ASP	N-CA-C	-6.19	99.99	109.65
4	QD	41	GLY	N-CA-C	6.19	120.47	112.68
32	YP	63	PRO	N-CA-C	6.18	120.83	112.48
47	R4	68	ARG	N-CA-C	6.18	123.96	110.80
24	YD	226	MET	N-CA-C	6.18	117.85	110.19
24	YD	22	SER	N-CA-C	-6.17	103.87	111.40
24	RD	88	ARG	N-CA-C	6.17	117.61	108.60
12	QL	89	ARG	N-CA-C	6.17	118.49	110.53
34	YR	24	GLN	N-CA-C	-6.16	104.49	111.14
27	RG	44	GLY	N-CA-C	-6.16	105.12	113.37
24	YD	69	ARG	N-CA-C	6.16	120.79	113.28
32	RP	63	PRO	N-CA-C	6.15	120.78	112.48
14	QN	39	LEU	CA-C-N	-6.15	112.10	122.92
14	QN	39	LEU	C-N-CA	-6.15	112.10	122.92
27	YG	44	GLY	N-CA-C	-6.15	105.13	113.37
47	Y4	68	ARG	N-CA-C	6.15	123.89	110.80
4	XD	31	CYS	N-CA-C	-6.14	97.73	110.80
28	YH	127	GLU	N-CA-C	-6.14	96.25	109.81
28	RH	127	GLU	N-CA-C	-6.13	96.26	109.81
34	RR	24	GLN	N-CA-C	-6.13	104.52	111.14
21	QU	8	THR	N-CA-C	6.13	116.66	108.38
21	XU	8	THR	N-CA-C	6.13	116.65	108.38
36	RT	76	PHE	CA-C-N	6.12	127.48	119.84
36	RT	76	PHE	C-N-CA	6.12	127.48	119.84
24	YD	230	ASP	N-CA-C	6.11	120.00	111.56
30	RN	13	TRP	N-CA-C	6.11	118.57	109.59
33	YQ	96	VAL	N-CA-C	6.10	116.03	107.37
2	XB	37	ASN	N-CA-C	-6.10	105.79	113.23
40	YX	5	TYR	N-CA-C	-6.10	106.10	112.93
30	RN	57	ALA	N-CA-C	-6.09	100.63	109.59
19	XS	39	THR	N-CA-C	-6.09	102.90	108.75
38	RV	14	VAL	N-CA-C	6.09	116.69	110.05
39	RW	60	ASN	N-CA-C	6.09	123.78	110.80
40	RX	5	TYR	N-CA-C	-6.09	106.11	112.93
30	YN	57	ALA	N-CA-C	-6.09	100.64	109.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
39	YW	60	ASN	N-CA-C	6.08	123.76	110.80
25	YE	77	ILE	N-CA-C	-6.08	103.53	112.04
33	RQ	96	VAL	N-CA-C	6.08	116.00	107.37
19	QS	39	THR	N-CA-C	-6.07	102.92	108.75
33	RQ	97	VAL	N-CA-C	6.07	117.05	108.36
2	QB	37	ASN	N-CA-C	-6.07	105.82	113.23
24	RD	22	SER	N-CA-C	-6.07	103.99	111.40
36	YT	76	PHE	CA-C-N	6.07	127.43	119.84
36	YT	76	PHE	C-N-CA	6.07	127.43	119.84
4	XD	41	GLY	N-CA-C	6.07	120.33	112.68
34	RR	2	ARG	N-CA-C	-6.06	97.89	110.80
32	RP	58	THR	N-CA-C	-6.05	103.02	110.65
4	XD	204	ILE	N-CA-C	-6.05	105.82	111.45
44	Y1	51	VAL	N-CA-C	6.04	117.18	108.48
24	RD	230	ASP	N-CA-C	6.04	119.89	111.56
24	RD	107	ALA	N-CA-C	6.04	118.36	109.42
20	XT	42	GLN	N-CA-C	-6.04	105.88	113.18
24	YD	88	ARG	N-CA-C	6.03	117.41	108.60
34	RR	111	LEU	N-CA-C	6.03	119.38	110.46
39	YW	92	ARG	N-CA-C	6.02	117.72	111.03
34	YR	2	ARG	N-CA-C	-6.02	97.97	110.80
11	QK	75	TYR	N-CA-C	-6.01	106.19	112.93
34	YR	111	LEU	N-CA-C	6.01	119.36	110.46
45	Y2	45	SER	N-CA-C	6.01	118.21	109.07
44	R1	51	VAL	N-CA-C	6.01	117.14	108.48
39	RW	92	ARG	N-CA-C	6.01	117.70	111.03
24	YD	107	ALA	N-CA-C	6.01	118.31	109.42
32	YP	58	THR	N-CA-C	-6.00	103.08	110.65
51	Y8	60	LEU	N-CA-C	-6.00	104.09	112.25
30	RN	38	HIS	N-CA-C	-6.00	106.30	113.97
45	R2	45	SER	N-CA-C	5.99	118.17	109.07
25	YE	18	ASP	N-CA-C	-5.99	98.95	109.02
25	RE	77	ILE	N-CA-C	-5.99	103.66	112.04
47	R4	56	VAL	N-CA-C	-5.98	108.03	113.71
8	QH	28	ALA	N-CA-C	5.98	118.27	110.43
26	RF	183	VAL	N-CA-C	5.98	117.44	110.62
4	QD	204	ILE	N-CA-C	-5.98	105.89	111.45
33	YQ	97	VAL	N-CA-C	5.98	116.91	108.36
20	QT	42	GLN	N-CA-C	-5.97	105.95	113.18
8	XH	28	ALA	N-CA-C	5.97	118.25	110.43
26	YF	183	VAL	N-CA-C	5.96	117.42	110.62
22	YA	1992	G	C2'-C3'-O3'	5.95	118.43	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
25	RE	18	ASP	N-CA-C	-5.95	99.03	109.02
44	R1	56	GLN	N-CA-C	5.95	119.91	109.80
51	R8	60	LEU	N-CA-C	-5.94	104.17	112.25
32	YP	62	LEU	N-CA-C	5.93	115.76	108.11
38	YV	69	LYS	N-CA-C	5.93	118.96	110.24
32	RP	62	LEU	N-CA-C	5.93	115.76	108.11
38	YV	14	VAL	N-CA-C	5.93	116.51	110.05
32	YP	19	VAL	N-CA-C	5.92	121.67	109.34
11	XK	116	HIS	N-CA-C	-5.92	103.28	111.81
24	RD	106	ILE	N-CA-C	-5.92	101.90	109.30
5	QE	150	ARG	N-CA-C	-5.92	105.64	112.92
32	RP	19	VAL	N-CA-C	5.92	121.64	109.34
44	Y1	56	GLN	N-CA-C	5.91	119.85	109.80
30	YN	38	HIS	N-CA-C	-5.91	106.41	113.97
24	YD	196	VAL	N-CA-C	5.91	120.40	111.89
24	RD	99	ASP	N-CA-C	-5.90	105.34	112.54
20	QT	77	ALA	N-CA-C	-5.89	104.93	111.71
29	RI	22	LYS	CA-C-N	5.89	126.04	119.32
29	RI	22	LYS	C-N-CA	5.89	126.04	119.32
24	YD	200	ASP	N-CA-C	-5.89	105.59	112.89
11	XK	75	TYR	N-CA-C	-5.89	106.34	112.93
28	YH	4	ILE	N-CA-C	5.89	117.23	108.23
28	RH	125	VAL	C-N-CD	-5.88	107.66	120.60
24	YD	106	ILE	N-CA-C	-5.88	101.95	109.30
28	YH	125	VAL	C-N-CD	-5.88	107.67	120.60
26	RF	151	SER	N-CA-C	-5.87	106.10	113.20
39	YW	101	SER	N-CA-C	5.87	119.23	110.14
39	RW	101	SER	N-CA-C	5.86	119.22	110.14
20	QT	91	LEU	N-CA-C	-5.86	106.30	113.50
24	RD	196	VAL	N-CA-C	5.86	120.32	111.89
26	YF	85	GLY	N-CA-C	-5.86	107.57	115.36
47	Y4	56	VAL	N-CA-C	-5.86	108.15	113.71
33	RQ	81	VAL	CA-C-N	-5.85	111.16	120.70
33	RQ	81	VAL	C-N-CA	-5.85	111.16	120.70
13	QM	24	GLY	N-CA-C	-5.85	107.61	115.21
8	QH	12	ARG	N-CA-C	-5.85	104.91	111.28
20	XT	77	ALA	N-CA-C	-5.85	104.99	111.71
14	QN	39	LEU	N-CA-C	5.84	117.47	109.18
13	XM	24	GLY	N-CA-C	-5.84	107.62	115.21
26	YF	151	SER	N-CA-C	-5.84	106.14	113.20
28	RH	4	ILE	N-CA-C	5.83	117.16	108.23
48	Y5	4	HIS	CA-C-N	-5.83	113.93	119.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
48	Y5	4	HIS	C-N-CA	-5.83	113.93	119.76
5	XE	150	ARG	N-CA-C	-5.83	105.75	112.92
24	YD	99	ASP	N-CA-C	-5.83	105.43	112.54
33	YQ	81	VAL	CA-C-N	-5.83	111.20	120.70
33	YQ	81	VAL	C-N-CA	-5.83	111.20	120.70
24	RD	200	ASP	N-CA-C	-5.83	105.67	112.89
28	RH	161	GLY	N-CA-C	5.81	118.31	111.63
8	XH	12	ARG	N-CA-C	-5.81	104.95	111.28
48	R5	4	HIS	CA-C-N	-5.81	113.95	119.76
48	R5	4	HIS	C-N-CA	-5.81	113.95	119.76
28	YH	161	GLY	N-CA-C	5.80	118.31	111.63
35	RS	6	ALA	N-CA-C	-5.80	105.04	111.71
25	YE	118	LYS	N-CA-C	-5.79	98.47	110.80
1	XA	792	A	P-O3'-C3'	5.78	128.88	120.20
25	RE	118	LYS	N-CA-C	-5.78	98.49	110.80
36	RT	121	ILE	N-CA-C	-5.78	104.70	111.00
17	XQ	46	ASP	CA-C-N	5.78	127.06	119.84
17	XQ	46	ASP	C-N-CA	5.78	127.06	119.84
9	XI	118	LYS	N-CA-C	5.77	118.78	109.83
20	XT	91	LEU	N-CA-C	-5.77	106.40	113.50
35	YS	12	PHE	N-CA-C	-5.77	98.51	110.80
27	YG	58	GLN	N-CA-C	-5.77	105.74	112.89
47	R4	67	TYR	N-CA-C	5.77	118.61	109.50
9	QI	118	LYS	N-CA-C	5.76	118.76	109.83
36	RT	70	VAL	N-CA-C	5.76	116.77	108.48
17	QQ	46	ASP	CA-C-N	5.76	127.03	119.84
17	QQ	46	ASP	C-N-CA	5.76	127.03	119.84
27	RG	58	GLN	N-CA-C	-5.76	105.75	112.89
5	XE	26	PHE	N-CA-C	5.75	118.97	109.94
36	YT	108	ARG	N-CA-C	-5.75	106.43	113.50
36	YT	70	VAL	N-CA-C	5.75	116.76	108.48
35	RS	12	PHE	N-CA-C	-5.75	98.56	110.80
6	QF	95	GLU	CA-C-N	5.75	127.02	119.84
6	QF	95	GLU	C-N-CA	5.75	127.02	119.84
26	RF	85	GLY	N-CA-C	-5.74	107.72	115.36
9	QI	55	ALA	N-CA-C	-5.74	103.69	111.55
11	QK	116	HIS	N-CA-C	-5.73	103.56	111.81
39	RW	6	ILE	N-CA-C	5.73	117.00	108.23
9	XI	55	ALA	N-CA-C	-5.73	103.70	111.55
2	QB	24	TRP	CA-C-O	5.72	121.26	117.94
5	QE	26	PHE	N-CA-C	5.72	118.92	109.94
25	YE	49	LEU	N-CA-C	5.71	119.78	112.12

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
36	YT	121	ILE	N-CA-C	-5.71	104.77	111.00
47	Y4	67	TYR	N-CA-C	5.71	118.53	109.50
32	YP	123	LEU	N-CA-C	5.71	117.64	109.14
35	YS	72	ALA	N-CA-C	-5.71	104.98	111.14
25	YE	159	HIS	N-CA-C	-5.71	101.96	110.23
2	QB	7	VAL	N-CA-C	5.70	118.37	108.90
25	YE	131	ALA	CB-CA-C	-5.70	110.02	116.63
39	YW	6	ILE	N-CA-C	5.70	116.95	108.23
13	QM	40	ASN	CA-C-N	5.70	125.06	118.85
13	QM	40	ASN	C-N-CA	5.70	125.06	118.85
39	YW	13	SER	CA-C-N	5.70	126.96	119.84
39	YW	13	SER	C-N-CA	5.70	126.96	119.84
19	XS	45	VAL	N-CA-C	5.69	121.18	109.34
2	XB	108	ILE	N-CA-C	-5.69	104.39	110.36
24	RD	120	GLY	CA-C-N	5.69	125.53	119.28
24	RD	120	GLY	C-N-CA	5.69	125.53	119.28
2	QB	56	ARG	N-CA-C	-5.68	104.45	111.33
25	YE	198	VAL	N-CA-C	5.68	116.31	107.28
2	XB	7	VAL	N-CA-C	5.67	118.32	108.90
25	RE	49	LEU	N-CA-C	5.67	119.72	112.12
32	RP	123	LEU	N-CA-C	5.67	117.59	109.14
35	RS	72	ALA	N-CA-C	-5.67	105.02	111.14
41	RY	44	ILE	N-CA-C	5.67	116.33	108.23
9	XI	87	GLN	N-CA-C	-5.67	104.74	111.03
27	YG	20	ILE	N-CA-C	-5.66	104.84	110.62
2	QB	108	ILE	N-CA-C	-5.66	104.42	110.36
24	RD	268	ARG	N-CA-C	5.65	119.68	112.34
26	YF	97	TYR	N-CA-C	5.65	119.65	112.87
27	RG	20	ILE	N-CA-C	-5.64	104.86	110.62
25	RE	159	HIS	N-CA-C	-5.64	102.05	110.23
35	RS	53	SER	N-CA-C	-5.64	106.56	113.50
9	QI	93	ARG	N-CA-C	-5.64	106.57	113.50
9	QI	87	GLN	N-CA-C	-5.63	104.78	111.03
41	YY	44	ILE	N-CA-C	5.63	116.28	108.23
19	QS	45	VAL	N-CA-C	5.62	121.04	109.34
35	YS	6	ALA	N-CA-C	-5.61	105.25	111.71
6	XF	95	GLU	CA-C-N	5.61	126.85	119.84
6	XF	95	GLU	C-N-CA	5.61	126.85	119.84
36	RT	108	ARG	N-CA-C	-5.61	106.61	113.50
11	QK	120	ARG	N-CA-C	-5.60	102.56	110.29
47	Y4	15	ILE	N-CA-C	5.60	118.19	108.90
5	QE	11	ILE	CB-CA-C	-5.59	105.93	111.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
13	QM	88	ARG	N-CA-C	-5.59	106.16	112.87
39	RW	13	SER	CA-C-N	5.59	126.83	119.84
39	RW	13	SER	C-N-CA	5.59	126.83	119.84
40	YX	12	VAL	N-CA-C	-5.59	101.61	109.21
26	RF	97	TYR	N-CA-C	5.58	119.57	112.87
35	YS	53	SER	N-CA-C	-5.58	106.64	113.50
15	QO	54	ARG	N-CA-C	-5.58	104.21	111.02
39	RW	13	SER	N-CA-C	5.58	119.54	109.44
2	XB	56	ARG	N-CA-C	-5.58	104.58	111.33
33	YQ	21	THR	N-CA-C	5.58	122.68	110.80
5	XE	11	ILE	CB-CA-C	-5.58	105.95	111.30
39	YW	13	SER	N-CA-C	5.58	119.53	109.44
24	YD	120	GLY	CA-C-N	5.57	125.41	119.28
24	YD	120	GLY	C-N-CA	5.57	125.41	119.28
25	YE	93	VAL	N-CA-C	-5.57	97.75	109.34
25	RE	131	ALA	CB-CA-C	-5.57	110.17	116.63
25	RE	93	VAL	N-CA-C	-5.57	97.77	109.34
24	RD	174	ILE	N-CA-C	5.56	116.88	109.37
24	YD	11	PRO	N-CA-C	-5.56	102.27	111.11
33	YQ	26	TYR	N-CA-C	5.56	119.16	111.71
9	XI	93	ARG	N-CA-C	-5.56	106.66	113.50
24	YD	268	ARG	N-CA-C	5.56	119.56	112.34
25	YE	87	GLU	N-CA-C	-5.56	103.81	111.81
40	RX	38	GLU	N-CA-C	-5.55	106.67	113.50
13	XM	88	ARG	N-CA-C	-5.55	106.20	112.87
16	QP	20	VAL	N-CA-C	5.55	117.05	108.44
24	RD	11	PRO	N-CA-C	-5.54	102.31	111.11
13	XM	40	ASN	CA-C-N	5.54	124.89	118.85
13	XM	40	ASN	C-N-CA	5.54	124.89	118.85
25	RE	198	VAL	N-CA-C	5.53	116.08	107.28
42	RZ	157	LEU	CA-C-N	5.53	126.08	120.38
42	RZ	157	LEU	C-N-CA	5.53	126.08	120.38
47	R4	15	ILE	N-CA-C	5.53	118.08	108.90
24	RD	146	GLU	N-CA-C	-5.52	101.86	110.42
22	RA	1980	G	P-O3'-C3'	5.52	128.48	120.20
24	YD	174	ILE	N-CA-C	5.52	116.82	109.37
40	RX	12	VAL	N-CA-C	-5.52	101.71	109.21
24	YD	146	GLU	N-CA-C	-5.52	101.87	110.42
25	YE	174	ASP	N-CA-C	5.51	115.52	108.24
15	XO	54	ARG	N-CA-C	-5.51	104.30	111.02
25	RE	87	GLU	N-CA-C	-5.50	103.88	111.81
38	YV	17	GLY	N-CA-C	-5.50	106.06	115.08

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	QB	86	GLU	N-CA-C	-5.50	104.93	111.69
42	YZ	14	LYS	CA-C-N	5.49	126.70	119.84
42	YZ	14	LYS	C-N-CA	5.49	126.70	119.84
26	RF	46	ARG	N-CA-C	5.48	119.69	112.89
26	YF	46	ARG	N-CA-C	5.48	119.69	112.89
42	RZ	136	PHE	N-CA-C	5.47	115.06	107.73
32	RP	85	LEU	N-CA-C	-5.47	106.29	113.12
33	RQ	21	THR	N-CA-C	5.47	122.44	110.80
16	XP	20	VAL	N-CA-C	5.47	116.91	108.44
24	YD	65	ILE	N-CA-C	5.46	116.01	110.05
22	RA	512	G	C2'-C3'-O3'	5.46	117.69	109.50
25	RE	174	ASP	N-CA-C	5.46	115.45	108.24
37	RU	50	ARG	N-CA-C	-5.46	105.22	111.07
37	YU	50	ARG	N-CA-C	-5.46	105.22	111.07
19	XS	80	TYR	N-CA-C	5.46	119.71	112.72
22	YA	2681	C	C2'-C3'-O3'	5.46	117.69	109.50
3	QC	88	ARG	N-CA-C	-5.46	106.32	112.87
12	XL	127	GLU	N-CA-C	-5.45	105.84	113.37
40	YX	38	GLU	N-CA-C	-5.45	106.79	113.50
39	RW	21	VAL	N-CA-C	-5.45	105.84	112.76
9	XI	61	ALA	N-CA-C	5.45	116.68	108.46
38	RV	17	GLY	N-CA-C	-5.44	106.15	115.08
35	YS	101	LEU	N-CA-C	-5.44	105.00	111.69
9	QI	61	ALA	N-CA-C	5.43	116.65	108.46
26	RF	169	ASN	N-CA-C	5.43	119.00	112.38
2	XB	86	GLU	N-CA-C	-5.43	105.02	111.69
33	RQ	26	TYR	N-CA-C	5.42	118.97	111.71
19	QS	80	TYR	N-CA-C	5.42	119.65	112.72
52	R9	3	VAL	N-CA-C	5.41	116.27	108.48
28	RH	38	SER	CA-C-N	5.41	125.08	119.56
28	RH	38	SER	C-N-CA	5.41	125.08	119.56
7	XG	45	ASP	N-CA-C	-5.40	104.84	111.75
44	R1	85	LEU	N-CA-C	5.40	117.91	108.52
24	RD	65	ILE	N-CA-C	5.39	115.92	110.05
26	RF	78	ILE	CB-CA-C	-5.39	104.98	112.04
26	YF	169	ASN	N-CA-C	5.39	118.95	112.38
32	YP	85	LEU	N-CA-C	-5.38	106.39	113.12
12	XL	47	LYS	CA-C-N	-5.38	113.11	119.84
12	XL	47	LYS	C-N-CA	-5.38	113.11	119.84
4	QD	174	LEU	N-CA-C	5.38	117.67	108.90
12	QL	127	GLU	N-CA-C	-5.38	105.95	113.37
3	XC	88	ARG	N-CA-C	-5.38	106.42	112.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	XJ	66	ARG	N-CA-C	5.37	117.47	108.23
26	YF	78	ILE	CB-CA-C	-5.37	105.00	112.04
32	YP	133	SER	N-CA-C	5.37	116.94	111.14
44	Y1	85	LEU	N-CA-C	5.37	117.87	108.52
35	RS	101	LEU	N-CA-C	-5.37	105.09	111.69
37	YU	99	ALA	N-CA-C	-5.36	106.44	112.87
27	RG	31	VAL	CA-C-N	5.36	126.53	119.84
27	RG	31	VAL	C-N-CA	5.36	126.53	119.84
37	RU	99	ALA	N-CA-C	-5.35	106.44	112.87
26	RF	10	PRO	N-CA-C	5.35	118.98	110.21
31	YO	57	VAL	N-CA-C	-5.35	101.83	108.89
4	XD	174	LEU	N-CA-C	5.34	117.61	108.90
22	YA	271(B)	G	P-O3'-C3'	5.34	126.11	119.70
26	RF	199	TRP	N-CA-C	-5.34	105.40	112.34
10	QJ	66	ARG	N-CA-C	5.34	117.41	108.23
31	RO	57	VAL	N-CA-C	-5.34	101.84	108.89
24	YD	98	VAL	N-CA-C	-5.34	105.76	113.07
13	XM	107	ALA	N-CA-C	-5.34	107.42	114.04
8	XH	70	GLN	N-CA-C	5.33	118.15	109.24
24	RD	240	ALA	CA-C-N	-5.33	113.18	119.84
24	RD	240	ALA	C-N-CA	-5.33	113.18	119.84
4	XD	28	SER	CA-C-N	-5.33	113.18	119.84
4	XD	28	SER	C-N-CA	-5.33	113.18	119.84
25	RE	2	LYS	N-CA-C	5.33	118.52	110.64
26	YF	199	TRP	N-CA-C	-5.33	105.42	112.34
28	YH	38	SER	CA-C-N	5.33	124.99	119.56
28	YH	38	SER	C-N-CA	5.33	124.99	119.56
5	QE	97	GLY	N-CA-C	-5.32	107.68	115.72
34	RR	94	TYR	N-CA-C	-5.32	106.82	113.15
26	YF	10	PRO	N-CA-C	5.32	118.93	110.21
30	YN	92	ALA	N-CA-C	5.32	117.08	111.28
39	YW	21	VAL	N-CA-C	-5.32	106.01	112.76
27	YG	31	VAL	CA-C-N	5.31	126.48	119.84
27	YG	31	VAL	C-N-CA	5.31	126.48	119.84
28	RH	28	GLY	CA-C-N	5.31	126.47	119.84
28	RH	28	GLY	C-N-CA	5.31	126.47	119.84
25	YE	2	LYS	N-CA-C	5.30	118.49	110.64
32	RP	133	SER	N-CA-C	5.30	116.86	111.14
45	R2	39	ALA	N-CA-C	-5.30	106.77	113.18
34	YR	94	TYR	N-CA-C	-5.30	106.84	113.15
41	YY	70	SER	N-CA-C	-5.30	106.98	113.50
45	Y2	39	ALA	N-CA-C	-5.30	106.77	113.18

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
41	RY	70	SER	N-CA-C	-5.30	106.98	113.50
13	QM	107	ALA	N-CA-C	-5.29	107.48	114.04
36	RT	28	VAL	N-CA-C	5.29	115.34	108.35
36	YT	28	VAL	N-CA-C	5.29	115.34	108.35
28	YH	28	GLY	CA-C-N	5.29	126.45	119.84
28	YH	28	GLY	C-N-CA	5.29	126.45	119.84
30	RN	92	ALA	N-CA-C	5.29	117.04	111.28
8	QH	137	VAL	N-CA-C	5.29	117.37	108.81
27	RG	99	MET	N-CA-C	-5.28	105.19	111.69
32	YP	132	LYS	N-CA-C	-5.28	104.78	111.11
4	QD	176	LEU	N-CA-C	5.27	116.91	107.80
7	QG	45	ASP	N-CA-C	-5.26	105.01	111.75
47	Y4	18	CYS	CB-CA-C	-5.26	108.80	116.53
39	RW	96	ILE	N-CA-C	-5.25	101.95	108.89
22	YA	1130	U	C2'-C3'-O3'	5.25	117.38	109.50
22	YA	1799	G	P-O3'-C3'	5.25	128.07	120.20
32	RP	36	LYS	N-CA-C	5.25	121.97	110.80
32	RP	132	LYS	N-CA-C	-5.24	104.82	111.11
4	XD	176	LEU	N-CA-C	5.24	116.86	107.80
22	RA	1694	C	C2'-C3'-O3'	5.24	117.36	109.50
25	YE	200	GLU	N-CA-C	-5.24	101.99	110.32
8	QH	70	GLN	N-CA-C	5.23	117.98	109.24
38	YV	6	LYS	N-CA-C	5.23	118.64	107.70
24	YD	240	ALA	CA-C-N	-5.23	113.30	119.84
24	YD	240	ALA	C-N-CA	-5.23	113.30	119.84
11	XK	120	ARG	N-CA-C	-5.23	102.61	110.24
25	YE	80	GLU	N-CA-C	-5.23	100.92	109.80
5	XE	97	GLY	N-CA-C	-5.22	107.84	115.72
13	XM	46	LYS	N-CA-C	-5.21	106.07	112.90
27	YG	99	MET	N-CA-C	-5.21	105.28	111.69
32	YP	36	LYS	N-CA-C	5.21	121.91	110.80
44	R1	17	SER	N-CA-C	-5.21	100.23	108.73
32	RP	149	GLU	N-CA-C	5.21	118.15	107.37
52	Y9	3	VAL	N-CA-C	5.21	115.98	108.48
11	XK	26	ASN	N-CA-C	5.21	119.78	113.38
47	Y4	12	ALA	N-CA-C	5.21	114.71	107.73
8	XH	137	VAL	N-CA-C	5.20	117.24	108.81
25	YE	80	GLU	CA-C-N	-5.20	117.65	123.16
25	YE	80	GLU	C-N-CA	-5.20	117.65	123.16
13	QM	75	ALA	N-CA-C	-5.20	105.69	111.36
24	YD	133	LEU	N-CA-C	5.20	117.62	111.33
39	YW	96	ILE	N-CA-C	-5.20	102.03	108.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
47	R4	12	ALA	N-CA-C	5.20	114.69	107.73
25	RE	80	GLU	N-CA-C	-5.19	100.97	109.80
24	RD	98	VAL	N-CA-C	-5.19	105.96	113.07
47	R4	18	CYS	CB-CA-C	-5.19	108.90	116.53
4	QD	28	SER	CA-C-N	-5.19	113.36	119.84
4	QD	28	SER	C-N-CA	-5.19	113.36	119.84
9	QI	124	GLN	N-CA-C	5.19	117.69	109.96
25	YE	97	LYS	N-CA-C	-5.19	103.15	110.31
2	QB	24	TRP	N-CA-C	5.18	113.03	108.78
40	YX	35	THR	N-CA-C	5.18	117.68	109.24
32	YP	149	GLU	N-CA-C	5.18	118.09	107.37
40	RX	35	THR	N-CA-C	5.17	117.67	109.24
44	R1	18	ILE	N-CA-C	5.17	115.03	107.37
25	YE	194	GLY	N-CA-C	-5.17	105.92	112.54
32	YP	147	LEU	N-CA-C	5.17	118.06	109.94
45	R2	56	GLN	N-CA-C	-5.17	105.64	111.28
25	RE	97	LYS	N-CA-C	-5.17	103.18	110.31
13	QM	46	LYS	N-CA-C	-5.17	106.13	112.90
12	QL	47	LYS	CA-C-N	-5.16	113.39	119.84
12	QL	47	LYS	C-N-CA	-5.16	113.39	119.84
25	RE	200	GLU	N-CA-C	-5.16	102.11	110.32
25	RE	194	GLY	N-CA-C	-5.16	105.93	112.54
44	Y1	72	GLU	N-CA-C	-5.16	106.08	112.38
38	RV	6	LYS	N-CA-C	5.16	118.48	107.70
47	R4	38	LYS	N-CA-C	-5.16	105.88	113.72
33	YQ	90	VAL	N-CA-C	5.16	120.06	109.34
32	RP	45	LEU	N-CA-C	5.15	118.09	110.46
25	RE	80	GLU	CA-C-N	-5.15	117.70	123.16
25	RE	80	GLU	C-N-CA	-5.15	117.70	123.16
47	Y4	38	LYS	N-CA-C	-5.15	105.89	113.72
5	XE	90	VAL	N-CA-C	5.15	115.38	108.17
39	YW	103	ILE	N-CA-C	5.15	115.76	107.73
11	QK	26	ASN	N-CA-C	5.15	119.71	113.38
18	XR	86	VAL	N-CA-C	5.15	116.95	108.97
25	RE	79	ARG	N-CA-C	5.14	121.76	110.80
13	XM	75	ALA	N-CA-C	-5.14	105.75	111.36
25	YE	79	ARG	N-CA-C	5.14	121.75	110.80
44	R1	72	GLU	N-CA-C	-5.14	106.11	112.38
31	YO	58	VAL	N-CA-C	5.14	117.43	108.90
22	RA	1992	G	C2'-C3'-O3'	5.13	117.20	109.50
22	YA	1694	C	C4'-C3'-O3'	5.13	117.10	109.40
41	RY	40	GLU	N-CA-C	-5.13	106.84	114.64

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
26	RF	80	ALA	CA-C-N	5.13	125.42	119.47
26	RF	80	ALA	C-N-CA	5.13	125.42	119.47
32	RP	147	LEU	N-CA-C	5.13	117.99	109.94
5	QE	67	VAL	N-CA-C	5.13	114.95	107.88
44	Y1	18	ILE	N-CA-C	5.13	114.96	107.37
33	RQ	90	VAL	N-CA-C	5.12	120.00	109.34
17	XQ	71	PHE	N-CA-C	5.12	117.51	108.75
17	QQ	71	PHE	N-CA-C	5.12	117.51	108.75
51	R8	53	PRO	N-CA-C	-5.12	101.92	112.47
22	YA	2751	G	C2'-C3'-O3'	5.12	117.18	109.50
51	Y8	53	PRO	N-CA-C	-5.12	101.92	112.47
22	YA	2681	C	P-O3'-C3'	5.12	127.87	120.20
19	XS	23	ASN	N-CA-C	-5.11	104.65	111.24
24	RD	133	LEU	N-CA-C	5.11	117.51	111.33
5	XE	67	VAL	N-CA-C	5.11	114.92	107.88
29	YI	85	GLU	N-CA-C	5.10	115.74	107.23
1	XA	345	C	P-O3'-C3'	5.09	127.84	120.20
25	YE	46	ALA	N-CA-C	5.09	114.55	107.73
31	RO	58	VAL	N-CA-C	5.09	117.35	108.90
44	Y1	17	SER	N-CA-C	-5.09	100.23	108.52
18	QR	86	VAL	N-CA-C	5.08	116.85	108.97
25	RE	46	ALA	N-CA-C	5.08	114.54	107.73
45	Y2	56	GLN	N-CA-C	-5.08	105.75	111.28
34	RR	9	LYS	CA-C-N	-5.07	115.99	122.79
34	RR	9	LYS	C-N-CA	-5.07	115.99	122.79
39	RW	30	GLU	N-CA-C	-5.07	105.45	111.69
24	RD	243	GLY	N-CA-C	-5.07	107.80	114.95
19	QS	23	ASN	N-CA-C	-5.07	104.70	111.24
48	R5	41	PRO	CA-C-N	5.07	126.17	119.84
48	R5	41	PRO	C-N-CA	5.07	126.17	119.84
1	XA	1200	C	P-O3'-C3'	5.06	127.79	120.20
20	QT	14	LYS	N-CA-C	-5.06	105.04	111.11
45	R2	52	ASP	N-CA-C	-5.05	105.66	111.07
2	QB	144	ARG	N-CA-C	-5.05	105.85	111.36
5	QE	90	VAL	N-CA-C	5.05	115.24	108.17
26	YF	80	ALA	CA-C-N	5.05	125.33	119.47
26	YF	80	ALA	C-N-CA	5.05	125.33	119.47
48	Y5	41	PRO	CA-C-N	5.05	126.15	119.84
48	Y5	41	PRO	C-N-CA	5.05	126.15	119.84
28	YH	92	ILE	N-CA-C	5.05	119.84	109.34
27	YG	43	LEU	N-CA-C	5.04	117.34	108.56
42	RZ	129	SER	CA-C-N	5.04	126.14	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
42	RZ	129	SER	C-N-CA	5.04	126.14	119.84
2	QB	90	MET	CA-C-N	5.03	125.19	119.90
2	QB	90	MET	C-N-CA	5.03	125.19	119.90
2	QB	182	ILE	CA-C-N	5.03	126.13	119.84
2	QB	182	ILE	C-N-CA	5.03	126.13	119.84
39	RW	103	ILE	N-CA-C	5.03	115.57	107.73
32	YP	45	LEU	N-CA-C	5.03	117.90	110.46
27	YG	40	ASN	N-CA-C	5.02	118.00	109.76
48	Y5	30	LEU	N-CA-C	5.02	117.94	109.95
24	YD	243	GLY	N-CA-C	-5.02	107.87	114.95
45	Y2	52	ASP	N-CA-C	-5.02	105.70	111.07
24	RD	136	ILE	CA-C-N	5.02	125.80	119.98
24	RD	136	ILE	C-N-CA	5.02	125.80	119.98
27	RG	43	LEU	N-CA-C	5.02	117.29	108.56
14	XN	39	LEU	N-CA-C	5.02	117.30	109.52
34	YR	9	LYS	CA-C-N	-5.02	116.06	122.79
34	YR	9	LYS	C-N-CA	-5.02	116.06	122.79
2	XB	90	MET	CA-C-N	5.01	125.17	119.90
2	XB	90	MET	C-N-CA	5.01	125.17	119.90
9	XI	124	GLN	N-CA-C	5.01	117.43	109.96
30	YN	59	LYS	N-CA-C	-5.01	104.09	111.81
2	XB	27	LYS	N-CA-C	-5.01	106.94	113.16
30	RN	59	LYS	N-CA-C	-5.01	104.09	111.81
2	QB	27	LYS	N-CA-C	-5.01	106.95	113.16
8	XH	66	GLY	CA-C-N	5.01	126.10	119.84
8	XH	66	GLY	C-N-CA	5.01	126.10	119.84
12	QL	105	TYR	CB-CA-C	-5.00	109.33	116.34
24	YD	136	ILE	CA-C-N	5.00	125.78	119.98
24	YD	136	ILE	C-N-CA	5.00	125.78	119.98
26	YF	205	ARG	N-CA-C	-5.00	105.52	110.97
36	YT	63	VAL	N-CA-C	5.00	115.11	108.11
26	RF	15	SER	N-CA-C	5.00	116.73	111.28
22	YA	752	A	C4'-C3'-O3'	5.00	116.90	109.40

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	674	0
1	XA	32249	0	16278	739	1
2	QB	1924	0	1975	303	0
2	XB	1924	0	1975	309	0
3	QC	1605	0	1668	216	0
3	XC	1605	0	1668	213	0
4	QD	1703	0	1764	261	0
4	XD	1703	0	1765	233	1
5	QE	1155	0	1213	174	0
5	XE	1155	0	1213	145	0
6	QF	843	0	857	101	1
6	XF	843	0	857	103	0
7	QG	1257	0	1296	155	0
7	XG	1257	0	1294	155	0
8	QH	1116	0	1175	160	0
8	XH	1116	0	1177	156	0
9	QI	1010	0	1037	146	0
9	XI	1010	0	1037	159	0
10	QJ	801	0	849	150	0
10	XJ	801	0	849	137	0
11	QK	885	0	904	111	0
11	XK	885	0	904	112	0
12	QL	975	0	1062	118	0
12	XL	975	0	1062	118	0
13	QM	964	0	1034	160	0
13	XM	964	0	1034	225	0
14	QN	492	0	529	106	0
14	XN	492	0	529	98	0
15	QO	734	0	771	86	0
15	XO	734	0	771	80	0
16	QP	705	0	725	121	0
16	XP	705	0	725	110	0
17	QQ	834	0	904	79	0
17	XQ	834	0	904	75	0
18	QR	574	0	644	77	0
18	XR	574	0	644	73	0
19	QS	674	0	699	123	0
19	XS	674	0	699	155	0
20	QT	763	0	860	115	0
20	XT	763	0	861	112	0
21	QU	217	0	234	27	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
21	XU	217	0	234	27	0
22	RA	62071	0	31286	1249	0
22	YA	62091	0	31295	1291	0
23	RB	2573	0	1306	70	0
23	YB	2573	0	1306	56	0
24	RD	2115	0	2195	327	0
24	YD	2115	0	2195	329	0
25	RE	1568	0	1634	282	0
25	YE	1568	0	1634	287	0
26	RF	1585	0	1632	192	0
26	YF	1585	0	1632	195	0
27	RG	1474	0	1535	216	0
27	YG	1474	0	1535	217	0
28	RH	1307	0	1382	226	0
28	YH	1307	0	1382	233	3
29	RI	1136	0	1223	62	1
29	YI	1136	0	1223	57	0
30	RN	1104	0	1180	196	0
30	YN	1104	0	1180	194	0
31	RO	933	0	996	132	0
31	YO	933	0	996	139	0
32	RP	1145	0	1227	254	0
32	YP	1145	0	1228	250	0
33	RQ	1122	0	1179	156	0
33	YQ	1122	0	1178	158	0
34	RR	968	0	1033	116	0
34	YR	968	0	1033	118	0
35	RS	882	0	943	163	0
35	YS	882	0	943	163	0
36	RT	1141	0	1202	160	0
36	YT	1141	0	1202	158	0
37	RU	964	0	1022	142	0
37	YU	964	0	1022	144	0
38	RV	779	0	852	138	0
38	YV	779	0	852	133	0
39	RW	900	0	964	105	0
39	YW	900	0	964	106	0
40	RX	725	0	778	69	0
40	YX	725	0	778	68	0
41	RY	785	0	878	172	0
41	YY	785	0	878	163	3
42	RZ	1461	0	1493	65	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	YZ	1461	0	1493	73	0
43	R0	648	0	672	28	0
43	Y0	648	0	672	44	0
44	R1	763	0	848	148	0
44	Y1	763	0	848	144	0
45	R2	581	0	629	85	0
45	Y2	581	0	629	83	0
46	R3	469	0	518	44	0
46	Y3	469	0	518	46	0
47	R4	581	0	574	163	0
47	Y4	581	0	574	229	0
48	R5	459	0	480	76	0
48	Y5	451	0	471	69	0
49	R6	424	0	450	92	0
49	Y6	424	0	450	89	0
50	R7	430	0	480	43	0
50	Y7	430	0	480	46	0
51	R8	517	0	582	103	0
51	Y8	517	0	582	106	0
52	R9	307	0	335	20	0
52	Y9	307	0	336	24	0
53	QV	1644	0	836	64	0
53	XV	1644	0	836	56	0
54	QX	169	0	88	56	0
54	XX	169	0	88	18	0
55	QY	303	0	152	21	0
55	XY	303	0	154	31	0
56	Z6	74	0	51	24	0
56	Z8	74	0	51	13	0
57	QA	65	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QX	1	0	0	0	0
57	R5	1	0	0	0	0
57	R8	1	0	0	0	0
57	RA	244	0	0	0	0
57	RB	2	0	0	0	0
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	2	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	RR	1	0	0	0	0
57	RU	1	0	0	0	0
57	XA	72	0	0	0	0
57	XM	1	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	265	0	0	0	0
57	YB	3	0	0	0	0
57	YE	1	0	0	0	0
57	YP	2	0	0	0	0
57	YQ	1	0	0	0	0
57	YX	1	0	0	0	0
58	QA	42	0	45	4	0
58	XA	42	0	45	2	0
59	QD	1	0	0	0	0
59	QN	1	0	0	0	0
59	R9	1	0	0	0	0
59	XD	1	0	0	0	0
59	XN	1	0	0	0	0
59	Y9	1	0	0	0	0
All	All	291950	0	198321	16251	5

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 33.

All (16251) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1400:C:N4	53:XV:34:C:C6	1.71	1.55
14:XN:32:SER:CB	14:XN:41:ARG:HB3	1.23	1.55
14:XN:32:SER:HB3	14:XN:41:ARG:CB	1.27	1.54
28:RH:127:GLU:CG	28:RH:128:PRO:HD3	1.35	1.53
28:YH:127:GLU:CG	28:YH:128:PRO:HD3	1.35	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.42
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
1:XA:1400:C:N4	53:XV:34:C:N1	1.65	1.39
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:81:LYS:HA	44:R1:81:LYS:NZ	1.43	1.34
44:Y1:81:LYS:HA	44:Y1:81:LYS:NZ	1.42	1.34
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
19:XS:5:LEU:HD11	47:Y4:66:SER:CB	1.59	1.31
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.62	1.29
4:XD:22:LYS:HG3	4:XD:26:CYS:SG	1.63	1.27
44:R1:81:LYS:HE2	44:R1:81:LYS:N	1.50	1.26
44:Y1:81:LYS:HE2	44:Y1:81:LYS:N	1.50	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
14:XN:40:CYS:SG	14:XN:43:CYS:N	2.11	1.23
19:XS:5:LEU:CD1	47:Y4:66:SER:HB2	1.67	1.22
33:RQ:59:ARG:O	33:RQ:60:ARG:HD2	1.38	1.22
1:XA:1400:C:C4	53:XV:34:C:C2	2.09	1.22
28:YH:127:GLU:HG2	28:YH:128:PRO:CD	1.69	1.21
44:Y1:82:LEU:HD12	44:Y1:82:LEU:C	1.66	1.21
28:YH:127:GLU:CB	28:YH:128:PRO:HD3	1.69	1.21
28:RH:127:GLU:HG2	28:RH:128:PRO:CD	1.69	1.20
1:QA:926:G:N2	54:QX:1:A:OP1	1.73	1.20
1:QA:1054:C:N4	55:QY:34:C:H1'	1.58	1.19
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	1.77	1.19
28:RH:127:GLU:CB	28:RH:128:PRO:HD3	1.69	1.19
44:R1:82:LEU:C	44:R1:82:LEU:HD12	1.66	1.18
41:RY:95:LYS:HB3	41:RY:100:ALA:HA	1.20	1.17
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.17
53:QV:35:A:C4	54:QX:3:G:N2	2.13	1.17
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.17
28:RH:132:ARG:HB2	28:RH:132:ARG:HH11	1.10	1.16
41:YY:76:CYS:HB3	41:YY:96:ILE:HD13	1.17	1.16
41:YY:95:LYS:HB3	41:YY:100:ALA:HA	1.20	1.16
14:XN:42:ILE:O	14:XN:43:CYS:O	1.65	1.15
32:RP:50:ARG:HH21	32:RP:50:ARG:HB3	1.13	1.14
22:YA:518:G:H4'	39:YW:18:ARG:HH12	1.07	1.14
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
13:XM:8:GLU:OE1	27:YG:115:ARG:CZ	1.96	1.14
22:RA:2555:U:O2	56:Z6:74:C:C5	2.01	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
13:XM:8:GLU:OE2	27:YG:115:ARG:NH1	1.81	1.13
43:Y0:7:LEU:O	53:XV:2:G:H4'	1.48	1.13
22:RA:2555:U:O2	56:Z6:74:C:C6	2.01	1.13
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.13
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.29	1.12
13:XM:121:LYS:NZ	55:XY:39:C:O2'	1.81	1.12
14:XN:32:SER:CB	14:XN:41:ARG:CB	1.97	1.12
44:Y1:82:LEU:CD1	44:Y1:83:GLU:O	1.97	1.12
30:RN:1:MET:HE1	37:RU:95:LEU:HD21	1.27	1.12
44:R1:82:LEU:CD1	44:R1:83:GLU:O	1.97	1.12
26:RF:101:LEU:HD12	26:RF:102:PRO:HD2	1.21	1.11
37:RU:8:VAL:HG23	37:RU:11:ARG:HH21	1.14	1.11
32:YP:50:ARG:HH21	32:YP:50:ARG:HB3	1.13	1.11
25:YE:179:GLU:HB3	25:YE:181:LEU:HD23	1.31	1.11
24:YD:44:ASN:HB2	24:YD:48:ARG:O	1.51	1.11
37:YU:8:VAL:HG23	37:YU:11:ARG:HH21	1.14	1.11
44:R1:81:LYS:HZ3	44:R1:81:LYS:CA	1.63	1.11
28:YH:132:ARG:HB2	28:YH:132:ARG:HH11	1.10	1.11
30:YN:1:MET:HE1	37:YU:95:LEU:HD21	1.27	1.11
53:QV:35:A:C2	54:QX:3:G:N3	2.18	1.11
24:RD:44:ASN:HB2	24:RD:48:ARG:O	1.50	1.11
25:RE:179:GLU:HB3	25:RE:181:LEU:HD23	1.32	1.11
26:YF:101:LEU:HD12	26:YF:102:PRO:HD2	1.21	1.11
44:Y1:82:LEU:HD12	44:Y1:83:GLU:N	1.66	1.11
11:QK:17:GLY:HA3	11:QK:77:MET:HE1	1.33	1.10
22:RA:2553:G:N2	56:Z6:76:PPU:H2	1.67	1.10
28:RH:86:GLU:HG3	28:RH:165:ALA:H	1.05	1.10
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
41:RY:76:CYS:HB3	41:RY:96:ILE:HD13	1.17	1.10
25:YE:50:GLY:HA2	25:YE:77:ILE:HA	1.31	1.10
53:QV:35:A:C6	54:QX:3:G:C2	2.40	1.10
1:QA:1054:C:H41	55:QY:34:C:H1'	0.95	1.09
22:YA:483:A:H4'	41:YY:49:VAL:HA	1.32	1.09
44:Y1:81:LYS:HZ3	44:Y1:81:LYS:CA	1.65	1.09
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.09
30:YN:134:ARG:H	30:YN:135:PRO:HD3	1.11	1.09
32:RP:19:VAL:HG22	32:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
28:YH:152:ARG:HG3	28:YH:153:LYS:HE2	1.34	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.19	1.08
24:YD:131:LEU:HB2	24:YD:136:ILE:HD11	1.35	1.08
28:YH:86:GLU:HG3	28:YH:165:ALA:H	1.06	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.69	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
24:RD:131:LEU:HB2	24:RD:136:ILE:HD11	1.35	1.08
44:R1:82:LEU:HD12	44:R1:83:GLU:N	1.66	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
28:RH:152:ARG:HG3	28:RH:153:LYS:HE2	1.33	1.07
32:RP:126:VAL:HG12	32:RP:147:LEU:HD21	1.30	1.07
32:YP:126:VAL:HG12	32:YP:147:LEU:HD21	1.30	1.07
47:R4:71:ARG:HH11	47:R4:71:ARG:HG3	1.13	1.07
19:QS:69:HIS:CE1	47:R4:69:LYS:HE2	1.89	1.07
22:RA:2602:A:N6	53:QV:76:A:H2'	1.69	1.07
1:XA:372:C:O2'	1:XA:373:A:OP2	1.72	1.07
25:RE:50:GLY:HA2	25:RE:77:ILE:HA	1.31	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.06
44:Y1:82:LEU:CD1	44:Y1:83:GLU:N	2.18	1.06
32:RP:59:LEU:HA	32:RP:61:ARG:NH2	1.69	1.06
32:YP:59:LEU:HA	32:YP:61:ARG:NH2	1.69	1.06
47:Y4:71:ARG:HG3	47:Y4:71:ARG:HH11	1.13	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
28:YH:153:LYS:HB3	28:YH:154:PRO:HD2	1.07	1.06
51:Y8:52:LYS:H	51:Y8:53:PRO:CD	1.69	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
25:RE:21:VAL:HB	25:RE:22:PRO:HB3	1.37	1.06
44:R1:82:LEU:CD1	44:R1:83:GLU:N	2.18	1.06
25:RE:63:LEU:HD12	25:RE:64:LYS:H	1.18	1.06
26:RF:46:ARG:HH11	26:RF:46:ARG:HG2	1.20	1.06
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.06
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
25:YE:21:VAL:HB	25:YE:22:PRO:HB3	1.37	1.05
25:YE:63:LEU:HD12	25:YE:64:LYS:H	1.18	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
32:YP:19:VAL:HG22	32:YP:20:GLY:H	1.15	1.05
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.05
1:QA:1054:C:H41	55:QY:34:C:C1'	1.70	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
30:RN:134:ARG:H	30:RN:135:PRO:HD3	1.11	1.05
37:RU:90:VAL:HG12	37:RU:91:ASP:H	1.18	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:59:ARG:O	33:RQ:60:ARG:CD	2.05	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.34	1.04
19:QS:68:GLY:CA	47:R4:68:ARG:HG2	1.88	1.04
22:RA:2555:U:C2	56:Z6:74:C:C5	2.46	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
38:YV:49:THR:HB	38:YV:50:PRO:HD2	1.39	1.04
34:RR:67:LEU:HD13	34:RR:76:VAL:HG21	1.39	1.04
35:RS:106:ARG:HA	35:RS:110:LEU:HD11	1.39	1.04
28:YH:127:GLU:CG	28:YH:128:PRO:CD	2.30	1.04
37:YU:90:VAL:HG12	37:YU:91:ASP:H	1.18	1.04
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.04
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.93	1.04
35:RS:83:LYS:O	35:RS:109:GLY:HA3	1.56	1.04
33:RQ:81:VAL:O	33:RQ:82:ARG:CD	2.06	1.03
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.03
14:XN:22:THR:O	14:XN:23:ARG:HB2	1.56	1.03
35:YS:83:LYS:O	35:YS:109:GLY:HA3	1.57	1.03
35:YS:106:ARG:HA	35:YS:110:LEU:HD11	1.39	1.03
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.03
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	1.87	1.03
10:QJ:49:VAL:CG1	14:QN:41:ARG:HB2	1.88	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
24:RD:35:LYS:HG2	24:RD:64:ILE:N	1.72	1.03
28:YH:127:GLU:CB	28:YH:128:PRO:CD	2.35	1.03
51:R8:52:LYS:H	51:R8:53:PRO:CD	1.69	1.03
11:XK:17:GLY:HA3	11:XK:77:MET:HE1	1.34	1.03
13:XM:65:LYS:NZ	47:Y4:52:THR:HG21	1.72	1.03
31:YO:53:LYS:HD2	31:YO:53:LYS:H	1.23	1.03
1:XA:372:C:C4	1:XA:387:U:C4	2.47	1.02
24:YD:35:LYS:HG2	24:YD:64:ILE:N	1.72	1.02
22:RA:2555:U:O2	56:Z6:74:C:C4	2.12	1.02
26:RF:67:GLN:O	26:RF:67:GLN:HG3	1.58	1.02
33:RQ:80:GLU:O	33:RQ:81:VAL:HG13	1.60	1.02
13:XM:77:ASN:HA	47:Y4:71:ARG:NH2	1.75	1.02
26:YF:67:GLN:O	26:YF:68:LYS:HB2	1.56	1.02
19:QS:68:GLY:HA3	47:R4:68:ARG:HG2	1.38	1.02
22:RA:2701:C:H3'	22:RA:2702:U:H5"	1.41	1.02
26:RF:67:GLN:O	26:RF:68:LYS:HB2	1.56	1.02
33:YQ:12:GLN:HG2	33:YQ:73:PRO:HD2	1.42	1.02
33:YQ:65:PHE:O	33:YQ:66:ILE:HG12	1.59	1.02
33:YQ:81:VAL:O	33:YQ:82:ARG:CD	2.06	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:153:LYS:HB3	28:RH:154:PRO:HD2	1.06	1.02
33:RQ:12:GLN:HG2	33:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
19:QS:69:HIS:ND1	47:R4:69:LYS:HE2	1.75	1.02
31:RO:53:LYS:HD2	31:RO:53:LYS:H	1.23	1.02
19:XS:5:LEU:HD21	47:Y4:66:SER:CB	1.90	1.02
26:YF:46:ARG:HH11	26:YF:46:ARG:HG2	1.20	1.02
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.01
27:YG:13:GLU:O	27:YG:14:GLU:HB2	1.60	1.01
41:YY:97:ARG:HH21	41:YY:98:VAL:HB	1.26	1.01
53:QV:35:A:N1	54:QX:3:G:C2	2.28	1.01
54:QX:4:C:C2'	54:QX:5:C:H5'	1.88	1.01
26:RF:185:ASP:HA	26:RF:188:ARG:HD3	1.40	1.01
35:RS:26:LEU:HD12	35:RS:39:ILE:HD11	1.40	1.01
19:XS:5:LEU:HD11	47:Y4:66:SER:HB2	1.04	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
34:YR:67:LEU:HD13	34:YR:76:VAL:HG21	1.39	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.43	1.01
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	1.01
26:YF:67:GLN:O	26:YF:67:GLN:HG3	1.58	1.01
53:QV:35:A:C2	54:QX:3:G:C2	2.48	1.01
19:XS:5:LEU:CD1	47:Y4:66:SER:CB	2.30	1.00
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
24:RD:227:ASN:HB3	24:RD:228:PRO:HD2	1.44	1.00
47:R4:56:VAL:HA	47:R4:60:GLN:HB2	1.43	1.00
22:RA:270(R):G:N3	44:R1:78:LYS:NZ	2.10	1.00
33:RQ:81:VAL:O	33:RQ:82:ARG:NE	1.94	1.00
38:RV:49:THR:HB	38:RV:50:PRO:HD2	1.39	1.00
41:RY:97:ARG:HH21	41:RY:98:VAL:HB	1.25	1.00
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.26	1.00
30:YN:96:GLU:HG2	30:YN:97:ARG:H	1.26	1.00
33:YQ:80:GLU:O	33:YQ:81:VAL:HG13	1.59	1.00
34:YR:54:LEU:HD23	34:YR:66:VAL:HG23	1.44	1.00
49:Y6:7:ILE:HG13	49:Y6:8:LYS:H	1.25	1.00
33:RQ:65:PHE:O	33:RQ:66:ILE:HG12	1.59	1.00
13:XM:68:GLY:CA	27:YG:116:ASP:OD2	2.10	1.00
45:R2:50:ILE:HD12	45:R2:51:ARG:N	1.76	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:26:LEU:HD12	35:YS:39:ILE:HD11	1.40	1.00
38:YV:1:MET:HE2	38:YV:43:GLU:HG2	1.42	1.00
28:RH:153:LYS:HB3	28:RH:154:PRO:CD	1.92	0.99
26:YF:185:ASP:HA	26:YF:188:ARG:HD3	1.41	0.99
25:RE:201:THR:HG22	25:RE:203:LYS:H	1.26	0.99
28:RH:77:LYS:HZ3	28:RH:77:LYS:HB3	1.22	0.99
35:RS:83:LYS:NZ	35:RS:109:GLY:HA2	1.78	0.99
25:YE:201:THR:HG22	25:YE:203:LYS:H	1.26	0.99
28:YH:153:LYS:HB3	28:YH:154:PRO:CD	1.92	0.99
45:Y2:50:ILE:HD12	45:Y2:51:ARG:N	1.76	0.99
22:YA:2701:C:H3'	22:YA:2702:U:H5"	1.40	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.99
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.99
28:RH:127:GLU:CG	28:RH:128:PRO:CD	2.31	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
32:YP:105:LEU:O	32:YP:106:LEU:HB2	1.60	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.99
4:QD:166:LYS:HG2	24:YD:134:ARG:NH1	1.77	0.98
32:RP:50:ARG:HH21	32:RP:50:ARG:CB	1.76	0.98
33:YQ:81:VAL:O	33:YQ:82:ARG:NE	1.94	0.98
36:RT:11:GLU:CD	36:RT:11:GLU:H	1.71	0.98
39:RW:86:LEU:HD12	39:RW:87:PRO:HD2	1.45	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
32:YP:50:ARG:HH21	32:YP:50:ARG:CB	1.76	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
32:RP:105:LEU:O	32:RP:106:LEU:HB2	1.61	0.98
33:RQ:79:LEU:O	33:RQ:79:LEU:HD22	1.64	0.98
36:YT:11:GLU:CD	36:YT:11:GLU:H	1.71	0.98
27:RG:13:GLU:O	27:RG:14:GLU:HB2	1.60	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
53:QV:35:A:C5	54:QX:3:G:N2	2.31	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
13:XM:121:LYS:NZ	55:XY:40:G:OP1	1.96	0.98
3:QC:79:ARG:HE	11:XK:99:GLN:NE2	1.60	0.98
24:RD:44:ASN:HB3	24:RD:49:ILE:HA	1.46	0.98
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
28:YH:86:GLU:HG3	28:YH:165:ALA:N	1.79	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97
25:RE:20:ALA:O	25:RE:21:VAL:HG22	1.64	0.97
28:RH:127:GLU:CB	28:RH:128:PRO:CD	2.35	0.97
33:YQ:79:LEU:HD13	33:YQ:79:LEU:O	1.63	0.97
36:YT:62:THR:HG22	36:YT:75:ILE:HG12	1.46	0.97
24:YD:44:ASN:HB3	24:YD:49:ILE:HA	1.45	0.97
49:Y6:41:PRO:HG2	49:Y6:45:LYS:H	1.30	0.97
35:YS:83:LYS:NZ	35:YS:109:GLY:HA2	1.77	0.97
33:YQ:79:LEU:O	33:YQ:79:LEU:HD22	1.64	0.97
45:Y2:50:ILE:HD12	45:Y2:51:ARG:H	1.24	0.97
33:RQ:79:LEU:O	33:RQ:79:LEU:HD13	1.63	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
39:YW:86:LEU:HD12	39:YW:87:PRO:HD2	1.45	0.97
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.97
30:RN:96:GLU:HG2	30:RN:97:ARG:H	1.26	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
22:YA:83:G:HO2'	22:YA:84:A:H8	0.98	0.97
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.28	0.96
45:R2:50:ILE:HD12	45:R2:51:ARG:H	1.24	0.96
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.96
13:XM:68:GLY:HA2	27:YG:116:ASP:OD2	1.65	0.96
38:RV:1:MET:HE2	38:RV:43:GLU:HG2	1.42	0.96
22:YA:265:A:N6	22:YA:427:U:O2'	1.97	0.96
22:YA:620:G:H4'	22:YA:621:A:H5"	1.46	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
27:RG:112:PRO:HB3	47:R4:37:SER:HB2	1.47	0.96
49:R6:7:ILE:HG13	49:R6:8:LYS:H	1.25	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
19:XS:5:LEU:CG	47:Y4:66:SER:CB	2.43	0.96
22:YA:2015:A:H1'	48:Y5:2:ALA:HA	1.47	0.96
19:QS:68:GLY:HA3	47:R4:68:ARG:CG	1.94	0.96
49:R6:47:THR:HG22	49:R6:48:VAL:HG12	1.46	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
41:YY:84:ARG:HH12	41:YY:97:ARG:HB2	1.28	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
1:XA:370:C:C2'	1:XA:371:G:H5'	1.96	0.96
1:XA:1286:A:H5"	21:XU:26:LYS:HD2	1.46	0.96
27:YG:112:PRO:HB3	47:Y4:37:SER:HB2	1.47	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.96
22:RA:242:G:H5'	51:R8:62:LEU:HD22	1.47	0.96

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:370:C:O2'	1:XA:371:G:H5'	1.66	0.94
44:Y1:81:LYS:CA	44:Y1:81:LYS:CE	2.45	0.94
32:RP:62:LEU:N	32:RP:62:LEU:HD22	1.81	0.94
38:YV:35:LEU:HD21	38:YV:57:VAL:HG22	1.47	0.94
41:YY:51:VAL:HG13	41:YY:52:SER:H	1.31	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
44:R1:81:LYS:CA	44:R1:81:LYS:CE	2.45	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.30	0.94
31:RO:2:ILE:HD11	31:RO:82:ASN:HD22	1.33	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
24:RD:28:GLU:HB2	24:RD:29:PRO:CD	1.98	0.94
24:RD:108:PRO:HB3	24:RD:143:HIS:HE1	1.32	0.94
44:R1:81:LYS:N	44:R1:81:LYS:CE	2.30	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
24:YD:28:GLU:HB2	24:YD:29:PRO:CD	1.98	0.94
36:RT:62:THR:HG22	36:RT:75:ILE:HG12	1.46	0.94
49:Y6:47:THR:HG22	49:Y6:48:VAL:HG12	1.45	0.94
25:RE:78:LEU:HG	25:RE:79:ARG:HE	1.31	0.94
32:RP:1:MET:HE2	32:RP:5:ASP:HB3	1.50	0.94
49:R6:41:PRO:HG2	49:R6:45:LYS:H	1.30	0.94
2:XB:8:LYS:HD3	2:XB:8:LYS:H	1.31	0.94
40:RX:57:LEU:CD1	40:RX:78:LYS:HB2	1.98	0.93
48:R5:56:LYS:H	48:R5:56:LYS:HD2	1.30	0.93
28:YH:77:LYS:HB3	28:YH:77:LYS:NZ	1.82	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
53:QV:35:A:C6	54:QX:3:G:N1	2.36	0.93
22:RA:2404:C:H1'	32:RP:67:MET:HE1	1.51	0.93
35:RS:59:LYS:HG2	35:RS:60:GLY:H	1.31	0.93
44:Y1:81:LYS:HA	44:Y1:81:LYS:HZ3	0.79	0.93
30:RN:134:ARG:H	30:RN:135:PRO:CD	1.81	0.93
38:RV:35:LEU:HD21	38:RV:57:VAL:HG22	1.47	0.93
28:YH:127:GLU:HB3	28:YH:128:PRO:CD	1.99	0.93
19:QS:63:THR:HG23	19:QS:66:MET:HE3	1.50	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
30:YN:134:ARG:H	30:YN:135:PRO:CD	1.81	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
33:RQ:59:ARG:O	33:RQ:60:ARG:CG	2.17	0.93
1:XA:1054:C:OP2	1:XA:1197:G:OP2	1.87	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:77:LYS:HB3	28:YH:77:LYS:HZ3	1.31	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
14:XN:43:CYS:O	14:XN:45:ARG:N	2.01	0.93
28:RH:127:GLU:HB3	28:RH:128:PRO:CD	1.99	0.93
33:RQ:34:LEU:HD11	33:RQ:129:THR:HB	1.50	0.93
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.93
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.93
24:YD:108:PRO:HB3	24:YD:143:HIS:CE1	2.05	0.93
34:YR:33:ARG:NH2	48:Y5:55:ARG:HG2	1.84	0.93
40:YX:57:LEU:CD1	40:YX:78:LYS:HB2	1.98	0.93
48:R5:58:LEU:HD13	48:R5:60:VAL:HG12	1.48	0.92
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.92
24:YD:108:PRO:HB3	24:YD:143:HIS:HE1	1.32	0.92
24:RD:147:LEU:HD13	24:RD:155:LEU:HD11	1.51	0.92
32:YP:65:ARG:HG3	32:YP:65:ARG:HH11	1.35	0.92
38:RV:99:ILE:HD13	38:RV:99:ILE:H	1.32	0.92
13:XM:3:ARG:HG2	47:Y4:34:GLU:OE1	1.68	0.92
25:YE:14:ILE:HG12	25:YE:15:PHE:H	1.33	0.92
32:YP:1:MET:HE2	32:YP:5:ASP:HB3	1.50	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.31	0.92
26:RF:103:LYS:HA	26:RF:106:ARG:HG3	1.49	0.92
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
24:RD:183:ARG:HH11	24:RD:183:ARG:HG2	1.34	0.92
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	0.92
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.92
14:XN:32:SER:CB	14:XN:41:ARG:HB2	2.00	0.92
28:RH:153:LYS:CB	28:RH:154:PRO:HD2	1.97	0.92
35:YS:59:LYS:HG2	35:YS:60:GLY:H	1.31	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
27:RG:37:VAL:HG22	27:RG:159:VAL:HA	1.52	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.32	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
14:XN:32:SER:OG	14:XN:41:ARG:HB2	1.70	0.92
1:QA:1405:G:OP1	58:QA:1666:PAR:O34	1.87	0.92
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.92
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
24:RD:108:PRO:HB3	24:RD:143:HIS:CE1	2.05	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.91
38:RV:24:LYS:HA	38:RV:92:THR:HG23	1.52	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
22:YA:1021:A:OP2	30:YN:65:LYS:NZ	2.01	0.91
33:YQ:34:LEU:HD11	33:YQ:129:THR:HB	1.50	0.91
44:Y1:81:LYS:HA	44:Y1:81:LYS:CE	2.00	0.91
44:Y1:82:LEU:C	44:Y1:82:LEU:CD1	2.41	0.91
22:RA:2553:G:H22	56:Z6:76:PPU:C2	1.83	0.91
27:RG:78:SER:HB2	53:QV:56:C:O2'	1.71	0.91
44:R1:81:LYS:HA	44:R1:81:LYS:CE	2.01	0.91
19:XS:5:LEU:CG	47:Y4:66:SER:HB3	2.00	0.91
19:XS:5:LEU:HG	47:Y4:66:SER:HB3	1.50	0.91
35:YS:67:ARG:NH1	35:YS:67:ARG:HB2	1.85	0.91
34:RR:33:ARG:NH2	48:R5:55:ARG:HG2	1.84	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
41:YY:30:VAL:HG22	41:YY:37:VAL:HG12	1.53	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
27:YG:37:VAL:HG22	27:YG:159:VAL:HA	1.52	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.51	0.91
27:RG:101:ILE:HG13	27:RG:102:PHE:N	1.86	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.91
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.91
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.50	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
28:RH:77:LYS:HB3	28:RH:77:LYS:NZ	1.82	0.91
37:YU:92:ARG:HG2	37:YU:92:ARG:O	1.70	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91
24:YD:10:THR:HG23	24:YD:13:ARG:HB3	1.51	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
19:QS:68:GLY:HA3	47:R4:68:ARG:CB	2.01	0.91
26:RF:7:TYR:HB3	26:RF:21:ALA:HB1	1.53	0.91
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.91
44:Y1:80:LEU:O	44:Y1:81:LYS:HB2	1.71	0.91
35:RS:67:ARG:NH1	35:RS:67:ARG:HB2	1.85	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.48	0.90
22:RA:83:G:N2	22:RA:103:A:OP2	2.04	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:10:THR:HG23	24:RD:13:ARG:HB3	1.51	0.90
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
31:YO:2:ILE:HD11	31:YO:82:ASN:HD22	1.33	0.90
25:RE:14:ILE:HG12	25:RE:15:PHE:H	1.33	0.90
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.90
22:RA:1826:G:H4'	24:RD:242:ARG:HH21	1.36	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
41:YY:38:ILE:HG22	41:YY:66:PRO:HA	1.54	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
19:XS:63:THR:HG23	19:XS:66:MET:HE3	1.51	0.90
38:YV:24:LYS:HA	38:YV:92:THR:HG23	1.52	0.90
13:QM:119:GLY:HA3	53:QV:29:G:OP1	1.70	0.90
28:RH:4:ILE:HG13	28:RH:6:ARG:CZ	2.01	0.90
32:YP:106:LEU:O	32:YP:107:LYS:HB2	1.71	0.90
24:YD:147:LEU:HD13	24:YD:155:LEU:HD11	1.51	0.90
28:YH:4:ILE:HG13	28:YH:6:ARG:CZ	2.01	0.90
38:YV:44:LYS:O	38:YV:46:VAL:HG12	1.72	0.90
45:Y2:65:ASN:HB3	45:Y2:69:ARG:HH12	1.34	0.90
32:RP:58:THR:O	32:RP:61:ARG:NE	2.05	0.90
33:RQ:59:ARG:O	33:RQ:60:ARG:HG3	1.72	0.90
14:XN:22:THR:O	14:XN:23:ARG:CB	2.16	0.90
28:YH:26:VAL:HG13	28:YH:27:LYS:H	1.35	0.90
48:Y5:3:LYS:HA	48:Y5:3:LYS:HE3	1.54	0.90
1:XA:1054:C:N4	55:XY:34:C:C1'	2.34	0.90
28:RH:10:PRO:HD2	28:RH:50:VAL:O	1.72	0.89
45:R2:65:ASN:HB3	45:R2:69:ARG:HH12	1.34	0.89
24:YD:44:ASN:HD22	24:YD:44:ASN:H	1.19	0.89
24:YD:69:ARG:HH21	24:YD:130:ALA:HB2	1.37	0.89
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.02	0.89
24:YD:183:ARG:HH11	24:YD:183:ARG:HG2	1.34	0.89
39:YW:65:LEU:HD12	39:YW:68:ARG:HH11	1.36	0.89
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.89
28:RH:26:VAL:HG13	28:RH:27:LYS:H	1.36	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
24:RD:69:ARG:HH21	24:RD:130:ALA:HB2	1.37	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
13:XM:65:LYS:HZ2	47:Y4:52:THR:HG21	1.34	0.89
19:XS:65:ASN:HA	47:Y4:55:ARG:HH11	1.32	0.89
32:YP:88:LEU:HD12	32:YP:95:VAL:HG11	1.52	0.89
51:Y8:52:LYS:H	51:Y8:53:PRO:HD3	1.35	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y8:59:LYS:HB2	51:Y8:59:LYS:NZ	1.87	0.89
22:RA:2553:G:H22	56:Z6:76:PPU:H2	1.34	0.89
37:RU:92:ARG:HG2	37:RU:92:ARG:O	1.69	0.89
41:RY:76:CYS:SG	41:RY:77:PRO:HD2	2.13	0.89
48:R5:3:LYS:HA	48:R5:3:LYS:HE3	1.54	0.89
27:YG:116:ASP:O	27:YG:117:PHE:HB3	1.72	0.89
38:RV:44:LYS:O	38:RV:46:VAL:HG12	1.72	0.89
22:YA:1496:A:H8	22:YA:1577:C:HO2'	1.17	0.89
25:YE:63:LEU:HD12	25:YE:64:LYS:N	1.87	0.89
1:QA:1139:G:N2	1:QA:1143:G:O6	2.06	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
32:RP:88:LEU:HD12	32:RP:95:VAL:HG11	1.52	0.89
51:R8:52:LYS:H	51:R8:53:PRO:HD3	1.35	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
32:YP:58:THR:O	32:YP:61:ARG:NE	2.05	0.89
32:RP:65:ARG:HG3	32:RP:65:ARG:HH11	1.35	0.89
28:YH:10:PRO:HD2	28:YH:50:VAL:O	1.72	0.89
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
22:RA:587:C:OP2	32:RP:21:ARG:NH2	2.07	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
27:YG:88:ILE:O	27:YG:88:ILE:HD13	1.72	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
44:R1:80:LEU:O	44:R1:81:LYS:HB2	1.71	0.88
44:R1:81:LYS:HA	44:R1:81:LYS:HZ3	0.75	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
24:RD:27:THR:HG23	24:RD:28:GLU:H	1.38	0.88
27:RG:88:ILE:HD13	27:RG:88:ILE:O	1.72	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
32:YP:64:LYS:O	32:YP:66:GLY:N	2.07	0.88
32:RP:106:LEU:O	32:RP:107:LYS:HB2	1.71	0.88
41:RY:30:VAL:HG22	41:RY:37:VAL:HG12	1.53	0.88
35:YS:106:ARG:NH1	35:YS:106:ARG:HB2	1.88	0.88
41:YY:76:CYS:SG	41:YY:77:PRO:HD2	2.13	0.88
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.54	0.88
13:XM:62:ASN:HA	47:Y4:49:PHE:CD2	2.08	0.88
30:YN:22:THR:HG22	30:YN:23:LEU:N	1.88	0.88
25:RE:63:LEU:HD12	25:RE:64:LYS:N	1.88	0.88
30:RN:22:THR:HG22	30:RN:23:LEU:N	1.88	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
22:RA:338:G:OP1	41:RY:4:LYS:NZ	2.06	0.88
22:YA:994:C:H3'	37:YU:54:LYS:HE3	1.54	0.88
51:R8:59:LYS:HB2	51:R8:59:LYS:NZ	1.88	0.88
1:XA:1400:C:N4	53:XV:34:C:C2	2.29	0.88
14:XN:12:ARG:C	14:XN:14:PRO:HD2	1.98	0.88
32:YP:49:ARG:HD2	51:Y8:58:ILE:HG22	1.54	0.88
25:RE:77:ILE:HD12	25:RE:78:LEU:N	1.89	0.88
41:RY:38:ILE:HG22	41:RY:66:PRO:HA	1.54	0.88
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.88
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.88
22:YA:498:G:N3	41:YY:47:LYS:NZ	2.22	0.88
22:YA:2068:U:H3	22:YA:2430:A:H2	1.18	0.88
25:YE:77:ILE:HD12	25:YE:78:LEU:N	1.89	0.88
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
35:RS:106:ARG:NH1	35:RS:106:ARG:HB2	1.88	0.87
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.36	0.87
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
22:YA:518:G:H4'	39:YW:18:ARG:NH1	1.89	0.87
24:YD:44:ASN:CB	24:YD:49:ILE:HA	2.04	0.87
42:YZ:151:HIS:HB3	42:YZ:170:THR:HA	1.53	0.87
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.87
39:RW:65:LEU:HD12	39:RW:68:ARG:HH11	1.36	0.87
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.39	0.87
44:Y1:82:LEU:HD13	44:Y1:83:GLU:O	1.74	0.87
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.74	0.87
22:RA:676:A:H8	22:RA:2069:G:H21	1.17	0.87
22:RA:2015:A:H1'	48:R5:2:ALA:HA	1.56	0.87
24:RD:181:GLU:HA	24:RD:272:ALA:HB3	1.57	0.87
38:RV:19:LYS:HD2	38:RV:95:LEU:HD23	1.55	0.87
48:R5:40:LYS:HZ1	48:R5:48:GLU:HB2	1.39	0.87
19:XS:5:LEU:CG	47:Y4:66:SER:HB2	2.04	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.87	0.87
24:RD:44:ASN:HD22	24:RD:44:ASN:H	1.19	0.87
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.08	0.87
19:XS:67:VAL:HG21	47:Y4:60:GLN:HE22	1.38	0.87
22:YA:819:A:OP2	22:YA:1187:G:N2	2.07	0.87
24:YD:27:THR:HG23	24:YD:28:GLU:H	1.38	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:64:ILE:HA	33:YQ:106:VAL:HG12	1.54	0.87
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.87
24:RD:28:GLU:HB2	24:RD:29:PRO:HD2	1.56	0.87
32:RP:49:ARG:HD2	51:R8:58:ILE:HG22	1.54	0.87
24:YD:181:GLU:HA	24:YD:272:ALA:HB3	1.57	0.87
44:Y1:82:LEU:HD11	44:Y1:83:GLU:O	1.75	0.87
32:RP:64:LYS:O	32:RP:66:GLY:N	2.07	0.87
19:XS:2:PRO:HB2	47:Y4:68:ARG:HH22	1.36	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.87
35:RS:106:ARG:HB2	35:RS:106:ARG:HH11	1.39	0.87
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.38	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
26:YF:7:TYR:HB3	26:YF:21:ALA:HB1	1.53	0.87
12:QL:47:LYS:HZ1	54:QX:6:C:H5"	1.40	0.86
33:RQ:64:ILE:HA	33:RQ:106:VAL:HG12	1.54	0.86
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86
27:YG:145:THR:HG23	47:Y4:28:LYS:HZ1	1.38	0.86
22:RA:819:A:OP2	22:RA:1187:G:N2	2.07	0.86
32:RP:75:ILE:HD13	32:RP:75:ILE:H	1.39	0.86
27:YG:101:ILE:HG13	27:YG:102:PHE:N	1.86	0.86
32:YP:18:ARG:O	32:YP:19:VAL:HB	1.75	0.86
54:QX:2:U:O2'	54:QX:3:G:H5'	1.74	0.86
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.41	0.86
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
26:RF:82:ILE:O	26:RF:82:ILE:HG13	1.73	0.86
27:RG:116:ASP:O	27:RG:117:PHE:HB3	1.72	0.86
44:R1:92:LYS:HG3	44:R1:96:LYS:HB2	1.57	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
27:YG:161:THR:HG22	27:YG:163:ALA:H	1.39	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
24:YD:35:LYS:HG2	24:YD:64:ILE:H	1.40	0.86
37:YU:92:ARG:HD2	38:YV:11:GLN:NE2	1.91	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.86
22:RA:1689:A:H62	22:RA:1698:A:H2	1.22	0.86
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.09	0.86
19:XS:5:LEU:CD2	47:Y4:66:SER:CB	2.53	0.86
38:YV:19:LYS:HD2	38:YV:95:LEU:HD23	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YZ:145:GLU:HG3	42:YZ:146:ILE:HG12	1.56	0.86
54:XX:2:U:O2'	54:XX:3:G:H5'	1.75	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
24:RD:44:ASN:CB	24:RD:49:ILE:HA	2.05	0.86
28:RH:8:PRO:C	28:RH:9:ILE:HG12	2.00	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
28:YH:127:GLU:HG2	28:YH:128:PRO:HD3	0.86	0.86
35:YS:106:ARG:HB2	35:YS:106:ARG:HH11	1.39	0.86
27:RG:161:THR:HG22	27:RG:163:ALA:H	1.39	0.86
41:RY:51:VAL:O	41:RY:56:PRO:HA	1.76	0.86
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.09	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.86
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.85
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.85
22:RA:2056:G:N2	48:R5:4:HIS:O	2.08	0.85
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.57	0.85
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.85
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.85
22:RA:2602:A:H61	53:QV:76:A:H2'	1.39	0.85
25:RE:61:ARG:O	25:RE:63:LEU:HG	1.77	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
22:RA:2502:G:H5"	22:RA:2503:A:H5"	1.58	0.85
37:RU:92:ARG:HD2	38:RV:11:GLN:NE2	1.90	0.85
44:R1:82:LEU:HD13	44:R1:83:GLU:O	1.74	0.85
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.57	0.85
53:QV:37:A:N1	54:QX:1:A:C6	2.44	0.85
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.09	0.85
22:YA:443:A:N7	26:YF:45:ARG:HD2	1.89	0.85
33:YQ:75:THR:HA	33:YQ:88:GLY:O	1.76	0.85
1:XA:372:C:N4	1:XA:387:U:N3	2.23	0.85
25:RE:81:ILE:O	25:RE:82:ARG:HB2	1.75	0.85
33:RQ:75:THR:HA	33:RQ:88:GLY:O	1.76	0.85
36:YT:111:ARG:O	36:YT:112:ARG:HG3	1.76	0.85
55:QY:29:U:H2'	55:QY:30:C:C6	2.11	0.85
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.85
25:RE:95:ILE:H	25:RE:95:ILE:HD12	1.41	0.85
26:RF:32:LEU:HD13	26:RF:105:VAL:HG13	1.59	0.85
48:R5:39:MET:O	48:R5:40:LYS:HG3	1.77	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1607:C:N4	22:YA:1622:G:OP2	2.09	0.85
27:YG:67:LYS:HE2	47:Y4:6:HIS:NE2	1.91	0.85
32:YP:101:VAL:HG23	32:YP:107:LYS:H	1.41	0.85
41:YY:51:VAL:O	41:YY:56:PRO:HA	1.76	0.85
27:RG:67:LYS:HE2	47:R4:6:HIS:NE2	1.91	0.85
37:RU:64:ARG:HG2	37:RU:64:ARG:HH21	1.42	0.85
24:YD:28:GLU:HB2	24:YD:29:PRO:HD2	1.56	0.85
32:YP:75:ILE:H	32:YP:75:ILE:HD13	1.39	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
28:RH:127:GLU:HG2	28:RH:128:PRO:HD3	0.86	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
28:YH:89:ILE:HD11	28:YH:129:THR:HB	1.59	0.85
24:RD:17:THR:HG22	24:RD:205:VAL:H	1.41	0.85
32:RP:18:ARG:O	32:RP:19:VAL:HB	1.75	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
22:YA:888:C:H3'	22:YA:889:C:H4'	1.59	0.85
28:YH:8:PRO:C	28:YH:9:ILE:HG12	2.00	0.85
55:XY:29:U:H2'	55:XY:30:C:C6	2.11	0.85
22:RA:2553:G:N2	56:Z6:76:PPU:C2	2.38	0.84
51:R8:59:LYS:NZ	51:R8:59:LYS:CB	2.40	0.84
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.02	0.84
26:YF:82:ILE:O	26:YF:82:ILE:HG13	1.73	0.84
1:QA:448:A:OP2	1:QA:485:G:N2	2.09	0.84
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
22:RA:768:G:O2'	22:RA:1379:A:N6	2.10	0.84
28:RH:89:ILE:HD11	28:RH:129:THR:HB	1.58	0.84
13:XM:3:ARG:HH12	27:YG:113:ARG:NH2	1.75	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
22:YA:958:U:OP2	33:YQ:14:ARG:NH1	2.10	0.84
35:YS:83:LYS:HG2	35:YS:109:GLY:CA	2.07	0.84
4:QD:166:LYS:HD3	24:YD:188:GLU:OE2	1.77	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
25:RE:24:THR:HG21	25:RE:188:VAL:HG11	1.59	0.84
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.41	0.84
22:YA:2056:G:N2	48:Y5:4:HIS:O	2.10	0.84
24:YD:17:THR:HG22	24:YD:205:VAL:H	1.41	0.84
27:YG:98:ARG:HA	27:YG:101:ILE:HG12	1.59	0.84
35:YS:106:ARG:HA	35:YS:110:LEU:CD1	2.07	0.84
38:YV:49:THR:HB	38:YV:50:PRO:CD	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y5:40:LYS:HZ1	48:Y5:48:GLU:HB2	1.41	0.84
1:QA:559:A:H4'	1:QA:560:U:H3'	1.56	0.84
13:XM:65:LYS:CE	47:Y4:50:VAL:HG11	2.08	0.84
25:YE:81:ILE:O	25:YE:82:ARG:HB2	1.75	0.84
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.41	0.84
35:RS:89:ARG:HD2	35:RS:92:TYR:O	1.78	0.84
22:YA:2419:U:H5'	49:Y6:23:THR:HG22	1.60	0.84
31:YO:26:LYS:HB2	31:YO:30:ALA:HB2	1.59	0.84
48:Y5:40:LYS:HD3	48:Y5:46:CYS:HB3	1.60	0.84
32:RP:62:LEU:CD2	51:R8:25:MET:HB2	2.08	0.84
25:YE:61:ARG:O	25:YE:63:LEU:HG	1.77	0.84
25:YE:95:ILE:HD12	25:YE:95:ILE:H	1.42	0.84
28:YH:54:ARG:NH1	28:YH:62:LYS:HG2	1.92	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
9:QI:128:ARG:HD3	53:QV:32:C:OP2	1.76	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RH:54:ARG:NH1	28:RH:62:LYS:HG2	1.92	0.84
31:RO:26:LYS:HB2	31:RO:30:ALA:HB2	1.59	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
26:YF:53:THR:HG23	26:YF:56:GLU:OE1	1.77	0.84
32:YP:62:LEU:CD2	51:Y8:25:MET:HB2	2.08	0.84
33:YQ:30:GLY:HA2	33:YQ:107:ALA:HB2	1.60	0.84
41:YY:57:GLN:NE2	41:YY:58:GLY:H	1.76	0.84
53:QV:37:A:C2	54:QX:1:A:C2	2.66	0.84
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.03	0.84
36:RT:111:ARG:O	36:RT:112:ARG:HG3	1.76	0.84
38:RV:49:THR:HB	38:RV:50:PRO:CD	2.07	0.84
44:R1:82:LEU:HD11	44:R1:83:GLU:O	1.75	0.84
14:XN:32:SER:OG	14:XN:41:ARG:CB	2.24	0.84
19:XS:5:LEU:CD2	47:Y4:66:SER:HB2	2.07	0.84
35:YS:89:ARG:HD2	35:YS:92:TYR:O	1.78	0.84
27:RG:98:ARG:HA	27:RG:101:ILE:HG12	1.59	0.84
35:RS:83:LYS:HG2	35:RS:109:GLY:CA	2.07	0.84
34:YR:117:VAL:HG22	34:YR:118:GLU:H	1.43	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
24:RD:35:LYS:HG2	24:RD:64:ILE:H	1.40	0.84
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.84
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:443:A:C5	26:YF:45:ARG:HD2	2.13	0.84
26:YF:32:LEU:HD13	26:YF:105:VAL:HG13	1.59	0.84
36:YT:3:ARG:HG3	36:YT:7:ILE:HG12	1.60	0.84
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.13	0.83
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.83
22:RA:299:A:H5'	41:RY:84:ARG:HH21	1.42	0.83
22:RA:993:G:OP1	37:RU:50:ARG:NH2	2.11	0.83
34:RR:117:VAL:HG22	34:RR:118:GLU:H	1.43	0.83
41:RY:81:LYS:HD3	41:RY:97:ARG:HE	1.43	0.83
19:XS:5:LEU:HD21	47:Y4:66:SER:HB2	1.59	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.60	0.83
36:RT:24:PRO:HA	36:RT:49:VAL:HG13	1.59	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
28:YH:13:LYS:HE2	28:YH:13:LYS:HA	1.60	0.83
44:Y1:92:LYS:HG3	44:Y1:96:LYS:HB2	1.58	0.83
19:QS:69:HIS:CE1	47:R4:69:LYS:CE	2.60	0.83
28:RH:105:LEU:HD13	28:RH:105:LEU:H	1.42	0.83
48:R5:40:LYS:HD3	48:R5:46:CYS:HB3	1.60	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
48:Y5:39:MET:O	48:Y5:40:LYS:HG3	1.77	0.83
49:Y6:27:LYS:HB2	49:Y6:27:LYS:NZ	1.94	0.83
26:RF:192:LEU:HD21	26:RF:194:MET:HE3	1.59	0.83
14:XN:8:GLU:OE2	14:XN:11:LYS:HD2	1.78	0.83
25:YE:7:VAL:HG23	25:YE:8:LYS:H	1.43	0.83
32:YP:126:VAL:HG22	32:YP:145:PRO:HG2	1.61	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.59	0.83
25:RE:35:GLN:HG2	25:RE:37:ARG:HE	1.44	0.83
35:RS:88:ASP:O	35:RS:89:ARG:HB3	1.78	0.83
1:XA:1078:U:O2'	5:XE:130:ASN:OD1	1.96	0.83
30:YN:131:GLN:NE2	30:YN:132:ALA:H	1.75	0.83
32:YP:59:LEU:HA	32:YP:61:ARG:HH21	1.44	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
30:RN:133:GLN:HB2	30:RN:135:PRO:HD3	1.59	0.83
32:RP:101:VAL:HG23	32:RP:107:LYS:H	1.41	0.83
32:RP:138:LEU:C	32:RP:140:ALA:H	1.85	0.83
36:RT:3:ARG:HG3	36:RT:7:ILE:HG12	1.60	0.83
41:RY:57:GLN:NE2	41:RY:58:GLY:H	1.76	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:24:PRO:HA	36:YT:49:VAL:HG13	1.59	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
29:RI:52:ARG:HB2	29:RI:56:LYS:HB3	1.59	0.83
36:RT:53:ARG:O	36:RT:59:THR:HG23	1.78	0.83
38:RV:66:ARG:NH1	38:RV:88:ARG:HD3	1.94	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
30:RN:131:GLN:NE2	30:RN:132:ALA:H	1.75	0.83
32:RP:65:ARG:HG3	32:RP:65:ARG:NH1	1.90	0.83
35:RS:106:ARG:HA	35:RS:110:LEU:CD1	2.07	0.83
47:R4:36:CYS:O	47:R4:39:CYS:HB2	1.79	0.83
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.83
36:YT:53:ARG:O	36:YT:59:THR:HG23	1.78	0.83
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.61	0.82
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.82
22:YA:2555:U:N3	56:Z8:74:C:C5	2.40	0.82
30:YN:133:GLN:HB2	30:YN:135:PRO:HD3	1.59	0.82
41:YY:81:LYS:HD3	41:YY:97:ARG:HE	1.43	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.60	0.82
33:RQ:30:GLY:HA2	33:RQ:107:ALA:HB2	1.60	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
14:XN:44:LEU:HD12	14:XN:53:LEU:CD1	2.08	0.82
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.82
25:RE:15:PHE:CE1	25:RE:20:ALA:HB2	2.14	0.82
26:RF:53:THR:HG23	26:RF:56:GLU:OE1	1.77	0.82
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
37:YU:88:ILE:HD13	37:YU:88:ILE:H	1.44	0.82
22:RA:2392:A:C8	32:RP:60:MET:HG3	2.14	0.82
37:RU:88:ILE:HD13	37:RU:88:ILE:H	1.44	0.82
49:R6:27:LYS:HB2	49:R6:27:LYS:NZ	1.93	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
24:YD:25:THR:CG2	24:YD:82:ILE:H	1.93	0.82
25:YE:15:PHE:CE1	25:YE:20:ALA:HB2	2.14	0.82
28:YH:105:LEU:HD13	28:YH:105:LEU:H	1.42	0.82
28:YH:153:LYS:HG2	28:YH:162:ILE:HG13	1.61	0.82
37:YU:64:ARG:HG2	37:YU:64:ARG:HH21	1.42	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.62	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:35:LYS:NZ	24:RD:104:TYR:HB2	1.93	0.82
47:R4:33:VAL:HG12	47:R4:34:GLU:H	1.44	0.82
24:YD:35:LYS:NZ	24:YD:104:TYR:HB2	1.93	0.82
26:YF:192:LEU:HD21	26:YF:194:MET:HE3	1.59	0.82
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.82
49:R6:15:GLU:CD	49:R6:41:PRO:HB3	2.04	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
45:Y2:16:LEU:O	45:Y2:16:LEU:HG	1.78	0.82
25:RE:7:VAL:HG23	25:RE:8:LYS:H	1.44	0.82
27:RG:127:GLY:HA2	27:RG:166:ASP:CG	2.05	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
30:YN:22:THR:HG22	30:YN:23:LEU:H	1.45	0.82
53:QV:37:A:C2	54:QX:1:A:N1	2.47	0.82
22:RA:1019:U:H3	22:RA:1142(A):A:H62	1.28	0.82
27:RG:179:PRO:HG3	47:R4:38:LYS:NZ	1.95	0.82
30:RN:22:THR:HG22	30:RN:23:LEU:H	1.44	0.82
27:YG:127:GLY:HA2	27:YG:166:ASP:CG	2.05	0.82
36:YT:102:ILE:HA	36:YT:105:LEU:HD21	1.62	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.82
31:YO:14:THR:HG21	31:YO:86:ILE:HB	1.62	0.82
32:YP:39:LYS:HA	32:YP:45:LEU:CD1	2.10	0.82
35:YS:19:LYS:O	35:YS:20:ARG:HB3	1.80	0.82
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.82
22:RA:259:G:O2'	22:RA:621:A:O2'	1.97	0.82
1:XA:1054:C:N4	55:XY:34:C:H1'	1.95	0.82
19:XS:5:LEU:HD11	47:Y4:66:SER:CA	2.09	0.82
47:Y4:36:CYS:O	47:Y4:39:CYS:HB2	1.80	0.82
47:Y4:71:ARG:HG3	47:Y4:71:ARG:NH1	1.90	0.82
49:Y6:15:GLU:CD	49:Y6:41:PRO:HB3	2.04	0.82
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.43	0.81
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.81
26:RF:155:LEU:HD13	26:RF:174:VAL:HG13	1.62	0.81
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.09	0.81
22:YA:637:A:H2'	32:YP:117:GLU:OE2	1.79	0.81
27:YG:179:PRO:HG3	47:Y4:38:LYS:NZ	1.95	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
45:R2:16:LEU:O	45:R2:16:LEU:HG	1.78	0.81
8:XH:1:MET:HE2	8:XH:1:MET:H3	1.46	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:67:VAL:HG21	47:Y4:60:GLN:NE2	1.93	0.81
55:QY:35:G:H2'	55:QY:36:G:H5"	1.62	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.09	0.81
28:RH:132:ARG:HB2	28:RH:132:ARG:NH1	1.94	0.81
28:RH:153:LYS:HG2	28:RH:162:ILE:HG13	1.61	0.81
31:RO:53:LYS:HD2	31:RO:53:LYS:N	1.96	0.81
51:R8:52:LYS:N	51:R8:53:PRO:CD	2.43	0.81
1:XA:1313:U:OP2	47:Y4:67:TYR:OH	1.97	0.81
25:YE:24:THR:HG21	25:YE:188:VAL:HG11	1.59	0.81
27:YG:67:LYS:HE2	47:Y4:6:HIS:CE1	2.14	0.81
28:YH:10:PRO:O	28:YH:11:VAL:HG13	1.80	0.81
33:YQ:90:VAL:HG13	33:YQ:91:GLU:N	1.95	0.81
35:YS:88:ASP:O	35:YS:89:ARG:HB3	1.78	0.81
38:YV:66:ARG:NH1	38:YV:88:ARG:HD3	1.94	0.81
1:QA:1286:A:H5"	21:QU:26:LYS:HD2	1.60	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
33:RQ:90:VAL:HG13	33:RQ:91:GLU:N	1.95	0.81
36:RT:102:ILE:HA	36:RT:105:LEU:HD21	1.62	0.81
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.29	0.81
27:YG:47:LYS:HD3	27:YG:81:LYS:HB2	1.63	0.81
50:Y7:48:LYS:HG2	50:Y7:49:ARG:H	1.46	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
22:RA:674:G:H1'	26:RF:74:ARG:HD3	1.61	0.81
45:R2:43:GLN:O	45:R2:44:LEU:HG	1.81	0.81
1:XA:1492:A:OP1	12:XL:47:LYS:HG3	1.81	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
10:XJ:6:ILE:O	10:XJ:6:ILE:HD12	1.81	0.81
22:RA:631:A:OP2	51:R8:46:ARG:NH2	2.14	0.81
25:RE:3:GLY:O	25:RE:4:ILE:HB	1.81	0.81
27:RG:67:LYS:HE2	47:R4:6:HIS:CE1	2.14	0.81
32:RP:39:LYS:HA	32:RP:45:LEU:CD1	2.10	0.81
32:RP:126:VAL:HG22	32:RP:145:PRO:HG2	1.61	0.81
50:R7:48:LYS:HG2	50:R7:49:ARG:H	1.46	0.81
22:YA:1728:G:N1	22:YA:1730:U:OP2	2.13	0.81
54:QX:4:C:H2'	54:QX:5:C:H5'	1.62	0.81
1:QA:411:A:H62	1:QA:413:G:H21	1.26	0.81
24:RD:27:THR:HG23	24:RD:28:GLU:N	1.96	0.81
28:RH:152:ARG:O	28:RH:153:LYS:HB2	1.80	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:63:PHE:HD1	14:XN:58:LYS:HA	1.43	0.81
45:Y2:43:GLN:O	45:Y2:44:LEU:HG	1.81	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
22:RA:242:G:H5"	51:R8:3:LYS:HE3	1.63	0.81
30:RN:35:ARG:HG3	30:RN:37:LYS:HG3	1.63	0.81
35:RS:36:TYR:HD2	35:RS:52:SER:HB3	1.46	0.81
36:RT:62:THR:CG2	36:RT:75:ILE:HG12	2.11	0.81
30:YN:35:ARG:HG3	30:YN:37:LYS:HG3	1.63	0.81
51:Y8:59:LYS:NZ	51:Y8:59:LYS:CB	2.39	0.81
27:RG:47:LYS:HD3	27:RG:81:LYS:HB2	1.63	0.81
35:RS:106:ARG:CA	35:RS:110:LEU:HD21	2.11	0.81
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.81
25:YE:50:GLY:CA	25:YE:77:ILE:HA	2.10	0.81
25:YE:116:VAL:HG21	25:YE:122:PHE:CD2	2.16	0.81
29:YI:92:VAL:HG13	29:YI:120:ILE:HG23	1.63	0.81
30:YN:43:THR:HB	30:YN:46:VAL:HG12	1.63	0.81
32:YP:138:LEU:C	32:YP:140:ALA:H	1.85	0.81
36:YT:39:ARG:HG2	36:YT:40:THR:H	1.46	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
25:RE:116:VAL:HG21	25:RE:122:PHE:CD2	2.16	0.81
41:RY:76:CYS:HB3	41:RY:96:ILE:CD1	2.06	0.81
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.14	0.81
19:XS:2:PRO:CB	47:Y4:68:ARG:HH12	1.93	0.81
22:YA:1264:G:H3'	22:YA:1265:A:H5"	1.61	0.81
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.80
28:RH:13:LYS:HE2	28:RH:13:LYS:HA	1.61	0.80
36:RT:39:ARG:HG2	36:RT:40:THR:H	1.46	0.80
41:RY:6:HIS:O	41:RY:7:VAL:HG13	1.81	0.80
1:XA:1400:C:N4	53:XV:34:C:C1'	2.43	0.80
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.80
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.80
22:YA:1021:A:N6	22:YA:1141:U:O2	2.14	0.80
26:YF:155:LEU:HD13	26:YF:174:VAL:HG13	1.62	0.80
35:YS:36:TYR:HD2	35:YS:52:SER:HB3	1.46	0.80
35:RS:19:LYS:O	35:RS:20:ARG:HB3	1.80	0.80
48:R5:4:HIS:HB3	48:R5:5:PRO:CD	2.11	0.80
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.64	0.80
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.80
1:XA:1224:G:O2'	1:XA:1225:A:OP1	1.98	0.80
22:YA:242:G:H5'	51:Y8:62:LEU:HD22	1.63	0.80
22:YA:1899:G:H21	22:YA:1902:C:N4	1.79	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2361:A:O5'	51:Y8:27:THR:OG1	1.98	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.80
25:RE:52:LEU:HB2	25:RE:75:VAL:HG23	1.62	0.80
1:XA:1139:G:N2	1:XA:1143:G:O6	2.14	0.80
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
13:XM:3:ARG:NH1	27:YG:113:ARG:HH21	1.80	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
22:YA:1454:U:H5'	34:YR:63:ARG:HE	1.44	0.80
24:YD:27:THR:HG23	24:YD:28:GLU:N	1.96	0.80
41:YY:6:HIS:O	41:YY:7:VAL:HG13	1.81	0.80
22:RA:270(L):U:H2'	29:RI:50:ARG:HD2	1.63	0.80
22:RA:483:A:H4'	41:RY:49:VAL:HA	1.64	0.80
25:RE:50:GLY:CA	25:RE:77:ILE:HA	2.10	0.80
25:RE:201:THR:CG2	25:RE:203:LYS:HB3	2.12	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
33:YQ:80:GLU:O	33:YQ:81:VAL:CG1	2.30	0.80
41:YY:76:CYS:HB3	41:YY:96:ILE:CD1	2.07	0.80
32:RP:47:ASP:OD2	32:RP:49:ARG:HG2	1.82	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
25:YE:52:LEU:HB2	25:YE:75:VAL:HG23	1.61	0.80
51:Y8:52:LYS:N	51:Y8:53:PRO:CD	2.43	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
1:XA:1400:C:N4	53:XV:34:C:C5	2.36	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
25:YE:3:GLY:O	25:YE:4:ILE:HB	1.81	0.80
25:YE:35:GLN:HG2	25:YE:37:ARG:HE	1.44	0.80
26:YF:198:ALA:HA	26:YF:201:VAL:HG12	1.62	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.96	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.45	0.80
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.80
22:RA:1153:C:OP1	37:RU:76:TYR:OH	1.99	0.80
24:RD:25:THR:HG22	24:RD:82:ILE:H	1.46	0.80
24:RD:27:THR:HG21	24:RD:83:GLU:HB3	1.64	0.80
24:RD:35:LYS:HZ1	24:RD:104:TYR:HB2	1.46	0.80
26:RF:198:ALA:HA	26:RF:201:VAL:HG12	1.62	0.80
28:RH:150:ALA:C	28:RH:152:ARG:H	1.88	0.80
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
25:YE:201:THR:CG2	25:YE:203:LYS:HB3	2.12	0.80
28:YH:152:ARG:O	28:YH:153:LYS:HB2	1.80	0.80
31:YO:31:LYS:HG3	31:YO:32:TYR:CE2	2.17	0.80
35:YS:106:ARG:CA	35:YS:110:LEU:HD21	2.10	0.80
47:Y4:33:VAL:HG12	47:Y4:34:GLU:H	1.44	0.80
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.80
38:RV:99:ILE:HD13	38:RV:99:ILE:N	1.95	0.80
13:XM:8:GLU:OE1	27:YG:115:ARG:NH2	2.14	0.80
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
22:YA:593:G:O3'	51:Y8:61:LEU:HD22	1.81	0.80
22:YA:2306:C:H2'	22:YA:2307:G:H21	1.45	0.80
27:YG:61:ALA:HB2	27:YG:68:PRO:CD	2.12	0.80
48:Y5:4:HIS:HB3	48:Y5:5:PRO:CD	2.11	0.80
1:QA:346:G:OP1	36:RT:41:ARG:NH2	2.15	0.80
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.80
24:YD:68:LYS:HB2	24:YD:70:TRP:CH2	2.17	0.80
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
23:RB:56:G:OP1	27:RG:27:ASN:ND2	2.15	0.79
24:RD:25:THR:CG2	24:RD:82:ILE:H	1.93	0.79
24:RD:121:PRO:HB3	24:RD:135:PHE:HE1	1.46	0.79
27:RG:145:THR:HG23	47:R4:28:LYS:HZ1	1.47	0.79
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.79
22:YA:222:A:H3'	22:YA:421:U:H5'	1.63	0.79
24:YD:121:PRO:HB3	24:YD:135:PHE:HE1	1.47	0.79
38:YV:99:ILE:HD13	38:YV:99:ILE:N	1.95	0.79
22:RA:1359:A:N6	22:RA:1372:U:O4	2.15	0.79
26:RF:145:GLU:HG3	26:RF:145:GLU:O	1.81	0.79
31:RO:14:THR:HG21	31:RO:86:ILE:HB	1.62	0.79
13:XM:65:LYS:HE2	47:Y4:50:VAL:HG11	1.65	0.79
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.79
24:YD:34:VAL:O	24:YD:34:VAL:HG13	1.81	0.79
28:YH:150:ALA:C	28:YH:152:ARG:H	1.88	0.79
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
24:RD:34:VAL:O	24:RD:34:VAL:HG13	1.80	0.79
27:RG:77:ILE:HD13	27:RG:82:LEU:HD12	1.64	0.79
32:RP:14:LYS:O	32:RP:16:ARG:HG2	1.83	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79
33:YQ:79:LEU:HD12	43:Y0:5:LYS:HD3	1.65	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:62:THR:CG2	36:YT:75:ILE:HG12	2.11	0.79
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.14	0.79
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.79
22:RA:265:A:N6	22:RA:427:U:O2'	2.15	0.79
22:RA:1403:C:H5"	22:RA:1471:A:H1'	1.64	0.79
26:RF:11:VAL:HB	26:RF:18:ARG:HG3	1.64	0.79
27:RG:61:ALA:HB2	27:RG:68:PRO:CD	2.12	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.17	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
37:YU:105:VAL:HG22	38:YV:44:LYS:HD2	1.65	0.79
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.62	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
25:RE:111:ARG:HE	25:RE:160:TYR:HE1	1.31	0.79
25:RE:137:HIS:HB3	25:RE:138:PRO:HD2	1.65	0.79
32:RP:59:LEU:HA	32:RP:61:ARG:HH21	1.44	0.79
33:RQ:81:VAL:O	33:RQ:82:ARG:CG	2.31	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.47	0.79
19:XS:5:LEU:HD21	47:Y4:66:SER:OG	1.82	0.79
22:YA:2593:U:H2'	22:YA:2594:C:H6	1.48	0.79
27:YG:77:ILE:HD13	27:YG:82:LEU:HD12	1.64	0.79
28:YH:126:PRO:CG	28:YH:127:GLU:H	1.95	0.79
28:YH:169:VAL:HG22	28:YH:170:ARG:H	1.48	0.79
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.47	0.79
24:RD:54:ARG:NH1	24:RD:54:ARG:HG3	1.98	0.79
28:RH:86:GLU:CG	28:RH:165:ALA:H	1.94	0.79
36:RT:102:ILE:HA	36:RT:105:LEU:CD2	2.13	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
32:YP:14:LYS:O	32:YP:16:ARG:HG2	1.83	0.79
33:YQ:81:VAL:O	33:YQ:82:ARG:CG	2.31	0.79
1:QA:971:G:N2	1:QA:1363:A:OP2	2.15	0.79
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.62	0.79
28:RH:10:PRO:O	28:RH:11:VAL:HG13	1.80	0.79
28:RH:126:PRO:CG	28:RH:127:GLU:H	1.96	0.79
32:RP:97:PRO:O	32:RP:98:GLU:HB3	1.83	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:165:MET:HA	4:XD:165:MET:HE3	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
25:YE:24:THR:HG21	25:YE:188:VAL:CG1	2.13	0.79
28:YH:26:VAL:HG13	28:YH:27:LYS:N	1.96	0.79
32:YP:65:ARG:HG3	32:YP:65:ARG:NH1	1.90	0.79
46:Y3:56:VAL:HG12	46:Y3:57:GLU:H	1.48	0.79
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.63	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
24:RD:68:LYS:HB2	24:RD:70:TRP:CH2	2.17	0.79
1:XA:1152:A:H5"	10:XJ:13:HIS:CD2	2.18	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.79
24:YD:17:THR:CG2	24:YD:205:VAL:H	1.96	0.79
36:YT:102:ILE:HA	36:YT:105:LEU:CD2	2.13	0.79
31:RO:31:LYS:HG3	31:RO:32:TYR:CE2	2.17	0.79
22:YA:2114:A:N6	22:YA:2119:A:N7	2.31	0.79
28:YH:153:LYS:CG	28:YH:162:ILE:H	1.96	0.79
44:Y1:11:ARG:HB3	44:Y1:11:ARG:NH1	1.98	0.79
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
30:RN:71:ILE:HG21	30:RN:84:LYS:HB3	1.65	0.79
13:XM:3:ARG:HB3	47:Y4:34:GLU:HB3	1.64	0.79
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.12	0.79
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.79
22:YA:2245:U:H5'	22:YA:2246:G:H5'	1.64	0.79
22:YA:2298:A:H62	22:YA:2318:G:H8	1.27	0.79
41:YY:86:ARG:HB2	41:YY:95:LYS:HD2	1.64	0.79
30:RN:43:THR:HB	30:RN:46:VAL:HG12	1.63	0.78
37:RU:105:VAL:HG22	38:RV:44:LYS:HD2	1.65	0.78
13:XM:3:ARG:CG	47:Y4:34:GLU:OE1	2.30	0.78
31:YO:53:LYS:HD2	31:YO:53:LYS:N	1.96	0.78
32:YP:47:ASP:OD2	32:YP:49:ARG:HG2	1.82	0.78
47:Y4:58:ARG:O	47:Y4:63:TYR:HB2	1.84	0.78
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.78
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	1.82	0.78
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.78
30:RN:62:VAL:HG12	30:RN:66:LYS:HD2	1.65	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
24:YD:27:THR:HG21	24:YD:83:GLU:HB3	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:150:ALA:O	28:YH:152:ARG:N	2.14	0.78
37:YU:90:VAL:HG12	37:YU:91:ASP:N	1.98	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
33:RQ:80:GLU:O	33:RQ:81:VAL:CG1	2.30	0.78
44:R1:11:ARG:NH1	44:R1:11:ARG:HB3	1.98	0.78
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.48	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.65	0.78
12:XL:49:ASN:HD22	12:XL:92:ASP:CG	1.90	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.65	0.78
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.65	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
13:XM:65:LYS:N	47:Y4:50:VAL:HG21	1.98	0.78
22:YA:247:G:O6	51:Y8:12:LYS:NZ	2.14	0.78
33:YQ:59:ARG:HD3	33:YQ:59:ARG:H	1.48	0.78
1:QA:1223:C:H5"	1:QA:1224:G:H5"	1.65	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
22:RA:859:G:O2'	22:RA:860:U:O2	2.01	0.78
27:RG:61:ALA:HB2	27:RG:68:PRO:HD3	1.65	0.78
33:RQ:119:ARG:HH11	33:RQ:119:ARG:HG2	1.48	0.78
40:RX:70:LEU:HD23	40:RX:70:LEU:N	1.99	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
13:XM:8:GLU:CD	27:YG:115:ARG:CZ	2.55	0.78
22:YA:1279:G:H4'	34:YR:31:HIS:HD2	1.48	0.78
24:YD:54:ARG:HG3	24:YD:54:ARG:NH1	1.98	0.78
25:YE:137:HIS:HB3	25:YE:138:PRO:HD2	1.64	0.78
31:YO:97:ARG:H	31:YO:117:LEU:HD22	1.48	0.78
40:YX:70:LEU:HD23	40:YX:70:LEU:N	1.99	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.66	0.78
22:RA:2555:U:O2	56:Z6:74:C:C2	2.36	0.78
24:RD:54:ARG:HG3	24:RD:54:ARG:HH11	1.49	0.78
26:RF:20:LEU:HD12	26:RF:21:ALA:H	1.49	0.78
28:RH:153:LYS:CG	28:RH:162:ILE:H	1.96	0.78
33:RQ:20:ALA:HB1	33:RQ:99:PRO:HB2	1.65	0.78
37:RU:90:VAL:HG12	37:RU:91:ASP:N	1.97	0.78
22:YA:2131:G:H4'	22:YA:2132:U:H4'	1.63	0.78
22:YA:2810:A:O3'	25:YE:61:ARG:HG3	1.84	0.78
27:YG:128:ARG:HH21	27:YG:128:ARG:HG3	1.48	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YI:27:ARG:HD3	44:Y1:71:TYR:HE1	1.46	0.78
38:YV:47:VAL:HG13	38:YV:48:GLY:H	1.49	0.78
31:RO:47:ILE:HD12	31:RO:48:PRO:HD2	1.66	0.78
46:R3:56:VAL:HG12	46:R3:57:GLU:H	1.48	0.78
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
19:XS:65:ASN:HA	47:Y4:55:ARG:NH1	1.99	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.65	0.78
24:RD:94:LEU:HD22	24:RD:95:LEU:N	1.98	0.78
22:YA:994:C:O2'	22:YA:996:A:OP1	2.01	0.78
24:YD:34:VAL:HG21	24:YD:103:ARG:HA	1.66	0.78
27:YG:97:ASP:H	27:YG:100:TRP:HD1	1.31	0.78
32:YP:19:VAL:HG22	32:YP:20:GLY:N	1.97	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
22:RA:270(T):G:OP1	44:R1:97:LEU:HD13	1.83	0.78
24:RD:142:VAL:HG23	24:RD:193:VAL:HA	1.66	0.78
41:RY:86:ARG:HB2	41:RY:95:LYS:HD2	1.64	0.78
13:XM:57:ARG:HE	47:Y4:35:VAL:HG23	1.47	0.78
26:YF:145:GLU:O	26:YF:145:GLU:HG3	1.81	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.78
25:RE:24:THR:HG21	25:RE:188:VAL:CG1	2.13	0.78
32:RP:75:ILE:HD13	32:RP:75:ILE:N	1.99	0.78
37:RU:66:ASN:O	37:RU:70:ARG:HB2	1.84	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
24:YD:94:LEU:HD22	24:YD:95:LEU:N	1.98	0.78
25:YE:4:ILE:HD12	25:YE:28:ALA:HB1	1.66	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.77
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.77
35:RS:106:ARG:HA	35:RS:110:LEU:HD21	1.64	0.77
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.83	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
22:YA:1190:G:OP1	32:YP:30:THR:OG1	2.01	0.77
31:YO:47:ILE:HD12	31:YO:48:PRO:HD2	1.66	0.77
43:Y0:10:THR:HG22	43:Y0:12:ASN:H	1.49	0.77
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
24:RD:25:THR:O	24:RD:27:THR:N	2.18	0.77
26:RF:29:ASN:H	26:RF:112:MET:CE	1.97	0.77
27:RG:128:ARG:HH21	27:RG:128:ARG:HG3	1.48	0.77
32:RP:62:LEU:N	32:RP:62:LEU:CD2	2.46	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:59:LYS:HB2	51:R8:59:LYS:HZ2	1.48	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
22:YA:451:C:H4'	26:YF:52:LYS:NZ	2.00	0.77
28:YH:132:ARG:HB2	28:YH:132:ARG:NH1	1.95	0.77
32:YP:84:ASN:ND2	32:YP:116:GLY:HA3	1.99	0.77
37:YU:66:ASN:O	37:YU:70:ARG:HB2	1.84	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
22:RA:1012:U:H3	30:RN:25:ARG:HH11	1.30	0.77
22:YA:392:C:H5"	22:YA:409:C:H5"	1.65	0.77
26:YF:11:VAL:HB	26:YF:18:ARG:HG3	1.64	0.77
26:YF:20:LEU:HD12	26:YF:21:ALA:H	1.49	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.85	0.77
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.63	0.77
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.49	0.77
24:RD:17:THR:CG2	24:RD:205:VAL:H	1.96	0.77
25:RE:4:ILE:HD12	25:RE:28:ALA:HB1	1.67	0.77
25:RE:55:ASN:C	25:RE:57:LYS:H	1.91	0.77
28:RH:150:ALA:O	28:RH:152:ARG:N	2.14	0.77
36:RT:43:GLN:HG2	36:RT:44:ASP:N	1.99	0.77
39:RW:65:LEU:CD1	39:RW:68:ARG:HH11	1.97	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
24:YD:25:THR:HG22	24:YD:82:ILE:H	1.46	0.77
25:YE:55:ASN:C	25:YE:57:LYS:H	1.91	0.77
28:YH:152:ARG:HG3	28:YH:153:LYS:CE	2.14	0.77
30:YN:71:ILE:HG21	30:YN:84:LYS:HB3	1.65	0.77
32:YP:88:LEU:C	32:YP:90:ARG:H	1.92	0.77
34:YR:74:LYS:O	34:YR:75:LEU:HB3	1.84	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
32:RP:84:ASN:ND2	32:RP:116:GLY:HA3	1.99	0.77
32:RP:114:ILE:HD11	32:RP:130:PHE:CE1	2.19	0.77
41:RY:97:ARG:HH21	41:RY:98:VAL:CB	1.98	0.77
47:R4:22:ILE:O	47:R4:24:THR:HG23	1.84	0.77
41:YY:79:CYS:SG	41:YY:80:GLY:N	2.57	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
24:RD:146:GLU:HB2	24:RD:189:CYS:HB3	1.67	0.77
32:RP:127:ALA:C	32:RP:147:LEU:HD23	2.10	0.77
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.77
35:YS:83:LYS:C	35:YS:109:GLY:HA3	2.10	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:13:ILE:HD11	44:Y1:42:GLN:OE1	1.84	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
22:RA:2602:A:H62	53:QV:76:A:H8	1.32	0.77
47:R4:58:ARG:O	47:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
24:YD:44:ASN:HD22	24:YD:44:ASN:N	1.79	0.77
39:YW:65:LEU:CD1	39:YW:68:ARG:HH11	1.97	0.77
22:RA:518:G:H4'	39:RW:18:ARG:HH12	1.49	0.77
22:RA:2701:C:H3'	22:RA:2702:U:C5'	2.14	0.77
32:RP:88:LEU:C	32:RP:90:ARG:H	1.92	0.77
35:RS:60:GLY:O	35:RS:61:ASN:HB3	1.84	0.77
41:RY:79:CYS:SG	41:RY:80:GLY:N	2.57	0.77
44:R1:13:ILE:HD11	44:R1:42:GLN:OE1	1.84	0.77
44:R1:86:SER:N	44:R1:87:PRO:CD	2.48	0.77
11:XK:77:MET:HE3	11:XK:80:VAL:HG12	1.67	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77
26:YF:183:VAL:O	26:YF:187:VAL:HG23	1.85	0.77
33:YQ:20:ALA:CB	33:YQ:99:PRO:HD2	2.14	0.77
33:YQ:79:LEU:HD22	33:YQ:79:LEU:C	2.07	0.77
35:YS:106:ARG:HA	35:YS:110:LEU:HD21	1.64	0.77
47:Y4:22:ILE:O	47:Y4:24:THR:HG23	1.84	0.77
51:Y8:59:LYS:CB	51:Y8:59:LYS:HZ3	1.96	0.77
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.96	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
28:RH:26:VAL:HG13	28:RH:27:LYS:N	1.96	0.77
31:RO:97:ARG:H	31:RO:117:LEU:HD22	1.48	0.77
33:RQ:79:LEU:HD22	33:RQ:79:LEU:C	2.07	0.77
47:R4:1:MET:HB2	47:R4:6:HIS:NE2	2.00	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
24:YD:25:THR:O	24:YD:27:THR:N	2.17	0.77
46:Y3:35:ARG:HB3	46:Y3:37:LEU:HD21	1.66	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
36:RT:57:PHE:C	36:RT:58:ASN:HD22	1.93	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
39:YW:18:ARG:HG3	39:YW:76:VAL:CG1	2.16	0.77
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
22:RA:1818:U:H2'	24:RD:157:ARG:HG3	1.67	0.76
22:RA:2555:U:O2	56:Z6:74:C:N1	2.18	0.76
26:RF:32:LEU:C	26:RF:32:LEU:HD12	2.10	0.76
26:RF:183:VAL:O	26:RF:187:VAL:HG23	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:153:LYS:HA	28:RH:153:LYS:NZ	1.99	0.76
33:RQ:20:ALA:CB	33:RQ:99:PRO:HD2	2.14	0.76
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.76
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.85	0.76
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.76
22:YA:531:C:OP1	22:YA:561:G:N1	2.18	0.76
24:YD:153:ALA:O	24:YD:154:LYS:HG3	1.85	0.76
32:YP:114:ILE:HD11	32:YP:130:PHE:CE1	2.19	0.76
33:YQ:59:ARG:H	33:YQ:59:ARG:CD	1.99	0.76
45:Y2:47:ASN:H	45:Y2:47:ASN:HD22	1.33	0.76
53:QV:35:A:N1	54:QX:3:G:N3	2.31	0.76
53:QV:35:A:C5	54:QX:3:G:C2	2.71	0.76
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
33:RQ:90:VAL:HG13	33:RQ:91:GLU:H	1.49	0.76
34:RR:33:ARG:HH22	48:R5:55:ARG:HG2	1.51	0.76
41:RY:97:ARG:NH2	41:RY:98:VAL:HB	2.01	0.76
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.76
14:XN:25:VAL:HG22	14:XN:38:GLY:O	1.84	0.76
26:YF:32:LEU:C	26:YF:32:LEU:HD12	2.10	0.76
32:YP:127:ALA:C	32:YP:147:LEU:HD23	2.10	0.76
33:YQ:20:ALA:HB1	33:YQ:99:PRO:HB2	1.65	0.76
33:YQ:66:ILE:HG13	33:YQ:67:ARG:N	1.99	0.76
33:YQ:119:ARG:HH11	33:YQ:119:ARG:HG2	1.48	0.76
35:YS:60:GLY:O	35:YS:61:ASN:HB3	1.84	0.76
48:Y5:40:LYS:CD	48:Y5:46:CYS:HB3	2.15	0.76
51:Y8:60:LEU:C	51:Y8:63:PRO:HD2	2.11	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
9:QI:83:ARG:O	9:QI:86:VAL:HG12	1.84	0.76
24:RD:44:ASN:HD22	24:RD:44:ASN:N	1.79	0.76
27:RG:127:GLY:O	27:RG:128:ARG:HG2	1.85	0.76
33:RQ:66:ILE:HG13	33:RQ:67:ARG:N	1.99	0.76
1:XA:973:G:O3'	14:XN:41:ARG:NH1	2.18	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
19:XS:3:ARG:HB3	47:Y4:67:TYR:CD2	2.21	0.76
27:YG:61:ALA:HB2	27:YG:68:PRO:HD3	1.65	0.76
27:YG:142:PRO:HB2	47:Y4:31:ILE:HD13	1.68	0.76
28:YH:153:LYS:HA	28:YH:153:LYS:NZ	2.00	0.76
31:YO:104:ARG:HH11	31:YO:104:ARG:HG2	1.50	0.76
47:Y4:1:MET:HB2	47:Y4:6:HIS:NE2	2.00	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:88:ILE:HG22	37:RU:90:VAL:HG23	1.67	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
25:YE:111:ARG:HE	25:YE:160:TYR:HE1	1.31	0.76
27:YG:127:GLY:O	27:YG:128:ARG:HG2	1.85	0.76
33:YQ:90:VAL:HG13	33:YQ:91:GLU:H	1.49	0.76
41:YY:94:LYS:O	41:YY:101:LYS:HB3	1.85	0.76
44:Y1:80:LEU:C	44:Y1:81:LYS:HE2	2.10	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.76
24:RD:34:VAL:HG21	24:RD:103:ARG:HA	1.66	0.76
24:RD:153:ALA:O	24:RD:154:LYS:HG3	1.85	0.76
49:R6:34:LEU:HD13	49:R6:34:LEU:H	1.50	0.76
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.76
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
26:YF:29:ASN:H	26:YF:112:MET:CE	1.97	0.76
30:YN:62:VAL:HG12	30:YN:66:LYS:HD2	1.65	0.76
41:YY:81:LYS:HD3	41:YY:97:ARG:NE	2.00	0.76
41:YY:95:LYS:HB3	41:YY:100:ALA:CA	2.10	0.76
45:Y2:41:ILE:C	45:Y2:41:ILE:HD12	2.10	0.76
12:QL:47:LYS:O	12:QL:49:ASN:N	2.18	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
22:YA:1490:A:O2'	24:YD:99:ASP:OD2	2.04	0.76
22:YA:1918:A:O2'	22:YA:1920:C:N4	2.18	0.76
39:YW:73:ALA:HB3	39:YW:106:ILE:HG12	1.68	0.76
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.16	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
22:RA:288:C:H2'	22:RA:289:A:H8	1.49	0.76
27:RG:101:ILE:HG13	27:RG:102:PHE:H	1.49	0.76
41:RY:81:LYS:HD3	41:RY:97:ARG:NE	2.01	0.76
46:R3:35:ARG:HB3	46:R3:37:LEU:HD21	1.66	0.76
52:R9:1:MET:HB3	52:R9:4:ARG:NH1	2.01	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
26:YF:101:LEU:CD1	26:YF:102:PRO:HD2	2.11	0.76
1:QA:346:G:H1'	1:QA:347:G:H5'	1.66	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.50	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
28:RH:169:VAL:HG22	28:RH:170:ARG:H	1.48	0.76
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2680:C:H5'	25:YE:189:PRO:HA	1.68	0.76
27:YG:76:SER:OG	27:YG:83:ARG:HA	1.85	0.76
1:QA:339:C:OP2	31:RO:97:ARG:NH1	2.19	0.76
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
31:RO:104:ARG:HH11	31:RO:104:ARG:HG2	1.50	0.76
34:RR:74:LYS:O	34:RR:75:LEU:HB3	1.84	0.76
44:R1:56:GLN:NE2	44:R1:56:GLN:N	2.34	0.76
47:R4:34:GLU:HG3	47:R4:35:VAL:H	1.51	0.76
48:R5:47:PRO:O	48:R5:48:GLU:HG3	1.86	0.76
51:R8:60:LEU:C	51:R8:63:PRO:HD2	2.10	0.76
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
22:YA:1006:C:H1'	30:YN:106:MET:HE2	1.67	0.76
24:YD:69:ARG:HH21	24:YD:130:ALA:CB	1.99	0.76
31:YO:107:ARG:HA	31:YO:112:MET:HE1	1.67	0.76
5:QE:53:LEU:H	5:QE:53:LEU:CD1	1.99	0.76
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.20	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
23:RB:55:U:H4'	27:RG:28:VAL:HG21	1.67	0.76
24:RD:69:ARG:HH21	24:RD:130:ALA:CB	1.99	0.76
28:RH:152:ARG:HG3	28:RH:153:LYS:CE	2.14	0.76
35:RS:83:LYS:C	35:RS:109:GLY:HA3	2.10	0.76
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.50	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
22:YA:1138:G:H21	30:YN:106:MET:HE3	1.51	0.76
28:YH:125:VAL:HA	28:YH:126:PRO:HB3	1.68	0.76
32:YP:97:PRO:O	32:YP:98:GLU:HB3	1.83	0.76
36:YT:111:ARG:O	36:YT:113:LYS:N	2.17	0.76
49:Y6:34:LEU:H	49:Y6:34:LEU:HD13	1.50	0.76
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.75
27:RG:76:SER:OG	27:RG:83:ARG:HA	1.85	0.75
42:RZ:94:GLU:HB2	42:RZ:130:PRO:HD2	1.66	0.75
1:XA:939:G:H5"	7:XG:102:ARG:HH22	1.51	0.75
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.75
25:YE:23:VAL:HG21	25:YE:183:LEU:HD23	1.68	0.75
25:YE:36:ARG:HH21	25:YE:88:GLY:HA2	1.51	0.75
25:YE:63:LEU:CD1	25:YE:65:GLY:H	1.99	0.75
27:YG:101:ILE:HG13	27:YG:102:PHE:H	1.49	0.75
32:YP:62:LEU:N	32:YP:62:LEU:CD2	2.46	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:50:ILE:HD12	36:YT:102:ILE:HD11	1.68	0.75
47:Y4:34:GLU:HG3	47:Y4:35:VAL:H	1.51	0.75
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.16	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.86	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
26:RF:129:PHE:HA	26:RF:142:TRP:NE1	2.02	0.75
48:R5:40:LYS:CD	48:R5:46:CYS:HB3	2.15	0.75
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.75
12:XL:46:LYS:HG3	12:XL:47:LYS:H	1.51	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
22:YA:2723:C:O3'	34:YR:1:MET:HE3	1.87	0.75
22:YA:2789:C:H1'	22:YA:2892:A:H2	1.50	0.75
36:YT:57:PHE:C	36:YT:58:ASN:HD22	1.93	0.75
44:Y1:86:SER:N	44:Y1:87:PRO:CD	2.48	0.75
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.67	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
22:RA:242:G:H5'	51:R8:62:LEU:CD2	2.15	0.75
27:RG:3:LEU:HD12	27:RG:4:ASP:H	1.51	0.75
29:RI:78:THR:HG22	29:RI:141:LYS:HD2	1.68	0.75
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.01	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.66	0.75
13:XM:57:ARG:HH21	47:Y4:34:GLU:C	1.94	0.75
22:YA:270(T):G:H5"	44:Y1:97:LEU:HD22	1.67	0.75
27:YG:3:LEU:HD12	27:YG:4:ASP:H	1.52	0.75
31:YO:47:ILE:CD1	31:YO:48:PRO:HD2	2.16	0.75
32:YP:62:LEU:HD21	51:Y8:25:MET:HB2	1.69	0.75
37:YU:88:ILE:HG22	37:YU:90:VAL:HG23	1.68	0.75
44:Y1:80:LEU:C	44:Y1:81:LYS:HD2	2.12	0.75
54:QX:6:C:O2'	54:QX:7:A:OP1	2.03	0.75
53:XV:35:A:C2	54:XX:3:G:C2	2.75	0.75
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.52	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
27:RG:142:PRO:HB2	47:R4:31:ILE:HD13	1.68	0.75
32:RP:62:LEU:HD21	51:R8:25:MET:HB2	1.69	0.75
51:R8:59:LYS:CB	51:R8:59:LYS:HZ3	1.98	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.86	0.75
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
37:YU:92:ARG:HH11	37:YU:95:LEU:CD1	2.00	0.75
41:YY:44:ILE:HG13	41:YY:45:VAL:N	2.00	0.75
41:YY:97:ARG:HH21	41:YY:98:VAL:CB	1.98	0.75
51:Y8:59:LYS:HB2	51:Y8:59:LYS:HZ2	1.49	0.75
52:Y9:1:MET:HB3	52:Y9:4:ARG:NH1	2.01	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.68	0.75
22:RA:630:G:N2	22:RA:633:A:OP2	2.19	0.75
28:RH:153:LYS:HG2	28:RH:162:ILE:H	1.52	0.75
37:RU:52:ARG:HH11	37:RU:52:ARG:HG2	1.51	0.75
38:RV:15:GLU:O	38:RV:18:LEU:HB2	1.86	0.75
38:RV:47:VAL:HG13	38:RV:48:GLY:H	1.49	0.75
44:R1:80:LEU:C	44:R1:81:LYS:HE2	2.10	0.75
7:XG:148:ASN:HD22	7:XG:148:ASN:N	1.82	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
22:YA:2712:U:HO2'	22:YA:2712(A):A:H8	1.32	0.75
24:YD:142:VAL:HG23	24:YD:193:VAL:HA	1.67	0.75
38:YV:52:VAL:HG21	38:YV:55:ALA:HB3	1.68	0.75
53:QV:34:C:N4	54:QX:3:G:H1	1.85	0.75
41:RY:48:ALA:O	41:RY:49:VAL:C	2.30	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
24:YD:146:GLU:HB2	24:YD:189:CYS:HB3	1.67	0.75
36:YT:43:GLN:HG2	36:YT:44:ASP:N	1.99	0.75
40:YX:57:LEU:HD11	40:YX:78:LYS:HB2	1.68	0.75
41:YY:90:LEU:HD22	41:YY:90:LEU:N	2.01	0.75
44:Y1:56:GLN:NE2	44:Y1:56:GLN:N	2.34	0.75
1:QA:1055:A:N7	1:QA:1200:C:N4	2.35	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
41:RY:90:LEU:N	41:RY:90:LEU:HD22	2.02	0.75
41:RY:94:LYS:O	41:RY:101:LYS:HB3	1.85	0.75
38:YV:35:LEU:H	38:YV:35:LEU:HD22	1.51	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.67	0.75
33:RQ:83:MET:HB2	43:R0:7:LEU:HD12	1.67	0.75
34:RR:73:VAL:O	34:RR:76:VAL:HG12	1.87	0.75
44:R1:3:LYS:HD3	44:R1:43:TYR:HD2	1.52	0.75
45:R2:41:ILE:C	45:R2:41:ILE:HD12	2.10	0.75
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.34	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1019:U:H3	22:YA:1142(A):A:H62	1.34	0.75
26:YF:7:TYR:HB3	26:YF:21:ALA:CB	2.16	0.75
30:YN:42:TRP:HA	30:YN:48:MET:HE1	1.69	0.75
32:YP:75:ILE:HD13	32:YP:75:ILE:N	2.00	0.75
38:YV:51:VAL:HG12	38:YV:52:VAL:H	1.52	0.75
44:Y1:80:LEU:O	44:Y1:81:LYS:CB	2.35	0.75
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.12	0.75
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.75
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
25:RE:63:LEU:CD1	25:RE:65:GLY:H	1.99	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.01	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.75
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.75
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.75
34:YR:73:VAL:O	34:YR:76:VAL:HG12	1.87	0.75
39:YW:40:ASN:O	39:YW:41:LYS:HG2	1.86	0.75
41:YY:97:ARG:NH2	41:YY:98:VAL:HB	2.01	0.75
48:Y5:47:PRO:O	48:Y5:48:GLU:HG3	1.86	0.75
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.74
19:QS:42:PRO:CD	47:R4:63:TYR:HE2	2.00	0.74
19:QS:68:GLY:HA3	47:R4:68:ARG:HB2	1.69	0.74
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.87	0.74
27:RG:97:ASP:H	27:RG:100:TRP:HD1	1.31	0.74
31:RO:107:ARG:HA	31:RO:112:MET:HE1	1.67	0.74
35:RS:62:LYS:HB3	35:RS:97:ARG:HD3	1.68	0.74
37:RU:92:ARG:HH11	37:RU:95:LEU:CD1	1.99	0.74
38:RV:52:VAL:HG21	38:RV:55:ALA:HB3	1.68	0.74
39:RW:18:ARG:HG3	39:RW:76:VAL:CG1	2.15	0.74
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.74
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.52	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.74
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.74
22:YA:571:A:O2'	38:YV:78:LYS:NZ	2.19	0.74
25:YE:61:ARG:HB2	25:YE:62:PRO:HD3	1.69	0.74
29:YI:1:MET:HG3	29:YI:23:PRO:HB3	1.69	0.74
34:YR:33:ARG:HH22	48:Y5:55:ARG:HG2	1.51	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RE:36:ARG:HH21	25:RE:88:GLY:HA2	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:96:GLU:CG	30:RN:97:ARG:H	2.00	0.74
1:XA:486:U:H2'	1:XA:487:A:H8	1.52	0.74
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
22:YA:2393:A:H4'	32:YP:61:ARG:O	1.87	0.74
26:RF:7:TYR:HB3	26:RF:21:ALA:CB	2.16	0.74
32:RP:64:LYS:C	32:RP:66:GLY:H	1.94	0.74
36:RT:111:ARG:O	36:RT:113:LYS:N	2.17	0.74
39:RW:40:ASN:O	39:RW:41:LYS:HG2	1.87	0.74
24:YD:30:GLU:HG3	24:YD:63:ARG:CZ	2.17	0.74
33:YQ:81:VAL:HG23	43:Y0:7:LEU:HD21	1.69	0.74
37:YU:52:ARG:HH11	37:YU:52:ARG:HG2	1.51	0.74
22:RA:1341:U:OP2	22:RA:1394:U:O2'	2.04	0.74
26:RF:136:THR:HG22	26:RF:166:ALA:O	1.87	0.74
31:RO:26:LYS:HB2	31:RO:30:ALA:CB	2.18	0.74
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
22:YA:24:G:O2'	39:YW:78:GLU:O	2.04	0.74
22:YA:1859:A:N6	22:YA:1883:G:O2'	2.20	0.74
24:YD:54:ARG:HG3	24:YD:54:ARG:HH11	1.49	0.74
36:YT:26:ASP:HB3	36:YT:91:ARG:HA	1.69	0.74
36:YT:78:LEU:HD13	36:YT:78:LEU:O	1.87	0.74
41:YY:51:VAL:HG13	41:YY:52:SER:N	2.03	0.74
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.12	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
41:RY:44:ILE:HG13	41:RY:45:VAL:N	2.00	0.74
44:R1:26:ARG:O	44:R1:26:ARG:HD2	1.86	0.74
45:R2:47:ASN:HD22	45:R2:47:ASN:H	1.33	0.74
47:R4:71:ARG:HG3	47:R4:71:ARG:NH1	1.90	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
33:YQ:79:LEU:O	33:YQ:79:LEU:CD2	2.36	0.74
46:Y3:7:LYS:HB2	46:Y3:34:GLU:HG2	1.69	0.74
1:QA:439:A:OP2	1:QA:493:G:N1	2.21	0.74
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.52	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.52	0.74
8:QH:1:MET:HE2	8:QH:1:MET:H3	1.50	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.74
38:RV:1:MET:HE2	38:RV:43:GLU:CG	2.17	0.74
40:RX:57:LEU:HD11	40:RX:78:LYS:HB2	1.68	0.74
1:XA:411:A:H62	1:XA:413:G:H21	1.33	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.52	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
26:YF:136:THR:HG22	26:YF:166:ALA:O	1.87	0.74
32:YP:64:LYS:C	32:YP:66:GLY:H	1.94	0.74
37:YU:64:ARG:HH21	37:YU:64:ARG:CG	2.00	0.74
54:QX:2:U:C2'	54:QX:3:G:H5'	2.17	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
22:RA:1264:G:H3'	22:RA:1265:A:H5"	1.70	0.74
22:RA:2114:A:N6	22:RA:2119:A:N7	2.36	0.74
22:RA:2393:A:H4'	32:RP:61:ARG:O	1.86	0.74
35:RS:83:LYS:HZ2	35:RS:109:GLY:HA2	1.49	0.74
36:RT:50:ILE:HD12	36:RT:102:ILE:HD11	1.68	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.87	0.74
26:YF:29:ASN:HB3	26:YF:112:MET:HE1	1.70	0.74
26:YF:129:PHE:HA	26:YF:142:TRP:NE1	2.02	0.74
28:YH:150:ALA:C	28:YH:152:ARG:N	2.44	0.74
28:YH:153:LYS:HG2	28:YH:162:ILE:H	1.52	0.74
30:YN:96:GLU:HG2	30:YN:97:ARG:N	2.01	0.74
35:YS:36:TYR:CD2	35:YS:52:SER:HB3	2.23	0.74
36:YT:54:ARG:HG2	36:YT:54:ARG:HH11	1.52	0.74
44:Y1:26:ARG:O	44:Y1:26:ARG:HD2	1.86	0.74
22:RA:297:C:H5"	41:RY:85:VAL:HG21	1.70	0.74
22:RA:385:C:O2'	22:RA:388:G:N2	2.21	0.74
25:RE:201:THR:HG22	25:RE:203:LYS:HB3	1.70	0.74
32:RP:19:VAL:HG22	32:RP:20:GLY:N	1.97	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.88	0.74
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
22:YA:1814:G:H4'	24:YD:51:VAL:HG21	1.68	0.74
42:YZ:19:ARG:NH1	42:YZ:84:GLU:O	2.21	0.74
46:Y3:29:ARG:HB2	46:Y3:29:ARG:HH11	1.53	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.88	0.74
22:RA:2355:C:H1'	43:R0:39:ARG:HH21	1.53	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:77:ALA:CB	24:RD:97:TYR:HA	2.18	0.74
31:RO:47:ILE:CD1	31:RO:48:PRO:HD2	2.16	0.74
32:RP:50:ARG:HB3	32:RP:50:ARG:NH2	1.97	0.74
38:RV:35:LEU:H	38:RV:35:LEU:HD22	1.51	0.74
39:RW:73:ALA:HB3	39:RW:106:ILE:HG12	1.68	0.74
46:R3:29:ARG:HH11	46:R3:29:ARG:HB2	1.52	0.74
13:XM:65:LYS:NZ	47:Y4:52:THR:CG2	2.50	0.74
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.74
25:YE:78:LEU:HG	25:YE:79:ARG:NE	2.03	0.74
38:YV:15:GLU:O	38:YV:18:LEU:HB2	1.86	0.74
54:QX:4:C:O2'	54:QX:5:C:H5'	1.86	0.74
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.74
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.74
33:RQ:79:LEU:O	33:RQ:79:LEU:CD1	2.35	0.74
41:RY:52:SER:OG	41:RY:53:PRO:HD3	1.88	0.74
1:XA:539:A:H2'	1:XA:540:G:H8	1.52	0.74
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74
13:XM:77:ASN:ND2	47:Y4:71:ARG:NH1	2.36	0.74
24:YD:131:LEU:HB2	24:YD:136:ILE:CD1	2.17	0.74
30:YN:56:ASN:HD22	30:YN:125:GLY:C	1.96	0.74
38:YV:1:MET:HE2	38:YV:43:GLU:CG	2.17	0.74
3:QC:79:ARG:NE	11:XK:99:GLN:NE2	2.36	0.73
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
22:RA:571:A:O2'	38:RV:78:LYS:NZ	2.21	0.73
22:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.22	0.73
25:RE:77:ILE:HD12	25:RE:78:LEU:H	1.52	0.73
32:RP:62:LEU:HD22	32:RP:62:LEU:H	1.53	0.73
38:RV:51:VAL:HG12	38:RV:52:VAL:H	1.52	0.73
39:RW:70:TYR:HD2	39:RW:70:TYR:H	1.36	0.73
41:RY:95:LYS:HB3	41:RY:100:ALA:CA	2.10	0.73
44:R1:80:LEU:O	44:R1:81:LYS:CB	2.35	0.73
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.73
47:Y4:41:PRO:O	47:Y4:42:PHE:HB3	1.87	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
30:RN:58:ASP:H	30:RN:60:ILE:HD11	1.53	0.73
35:RS:36:TYR:CD2	35:RS:52:SER:HB3	2.23	0.73
44:R1:76:ARG:HH11	44:R1:76:ARG:HG2	1.53	0.73
48:R5:2:ALA:O	48:R5:3:LYS:HB2	1.88	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:618:C:N3	1:QA:622:A:N6	2.36	0.73
26:RF:29:ASN:HB3	26:RF:112:MET:HE1	1.70	0.73
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.54	0.73
28:YH:153:LYS:HG3	28:YH:161:GLY:CA	2.18	0.73
1:QA:45:U:H2'	1:QA:46:G:H8	1.51	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.50	0.73
22:RA:900:A:H3'	22:RA:901:A:H8	1.53	0.73
22:RA:2723:C:O3'	34:RR:1:MET:HE3	1.89	0.73
25:RE:61:ARG:HB2	25:RE:62:PRO:HD3	1.69	0.73
36:RT:23:ARG:HB2	36:RT:24:PRO:HD2	1.70	0.73
37:RU:64:ARG:HH21	37:RU:64:ARG:CG	2.00	0.73
1:XA:961:U:O2	1:XA:1201:A:N6	2.20	0.73
2:XB:8:LYS:HD3	2:XB:8:LYS:N	2.03	0.73
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.73
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.02	0.73
14:XN:44:LEU:CD1	14:XN:53:LEU:CD1	2.66	0.73
22:YA:2451:A:O2'	53:XV:76:A:O2'	2.06	0.73
31:YO:26:LYS:HB2	31:YO:30:ALA:CB	2.18	0.73
36:YT:102:ILE:HB	36:YT:110:ILE:CD1	2.19	0.73
26:RF:9:ILE:HD11	26:RF:125:LEU:HG	1.70	0.73
28:RH:84:SER:O	28:RH:85:LYS:HB2	1.89	0.73
46:R3:7:LYS:HB2	46:R3:34:GLU:HG2	1.69	0.73
1:XA:372:C:N4	1:XA:387:U:C4	2.55	0.73
14: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
4:QD:166:LYS:CG	24:YD:134:ARG:NH1	2.51	0.73
19:QS:42:PRO:CG	47:R4:63:TYR:HE2	2.02	0.73
25:RE:23:VAL:HG21	25:RE:183:LEU:HD23	1.68	0.73
25:RE:203:LYS:O	25:RE:203:LYS:HD2	1.88	0.73
28:RH:153:LYS:HG3	28:RH:161:GLY:CA	2.18	0.73
47:R4:41:PRO:O	47:R4:42:PHE:HB3	1.87	0.73
26:YF:29:ASN:H	26:YF:112:MET:HE1	1.54	0.73
35:YS:62:LYS:HB3	35:YS:97:ARG:HD3	1.68	0.73
41:YY:48:ALA:O	41:YY:49:VAL:C	2.30	0.73
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.73
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.73
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.73
22:RA:380:U:H2'	22:RA:381:G:H8	1.52	0.73
24:RD:30:GLU:HG3	24:RD:63:ARG:CZ	2.18	0.73
28:RH:125:VAL:HA	28:RH:126:PRO:HB3	1.68	0.73
30:RN:96:GLU:HG2	30:RN:97:ARG:N	2.01	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:80:LEU:C	44:R1:81:LYS:HD2	2.13	0.73
1:XA:714:G:H2'	1:XA:715:A:C8	2.23	0.73
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
13:XM:77:ASN:CA	47:Y4:71:ARG:NH2	2.51	0.73
25:YE:77:ILE:HD12	25:YE:78:LEU:H	1.51	0.73
27:YG:7:LEU:HD21	27:YG:176:LEU:HD22	1.70	0.73
47:Y4:29:PRO:O	47:Y4:30:GLU:HB2	1.89	0.73
1:QA:352:C:O2'	1:QA:354:G:OP1	2.05	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
12:QL:47:LYS:HB3	12:QL:48:PRO:HD3	1.71	0.73
22:RA:2115:G:N2	22:RA:2165:G:N7	2.31	0.73
22:RA:2298:A:H62	22:RA:2318:G:H8	1.35	0.73
30:RN:42:TRP:HA	30:RN:48:MET:HE1	1.69	0.73
32:RP:15:ARG:O	32:RP:16:ARG:C	2.32	0.73
33:RQ:90:VAL:CG1	33:RQ:91:GLU:H	2.02	0.73
36:RT:26:ASP:HB3	36:RT:91:ARG:HA	1.69	0.73
1:XA:878:G:H5'	8:XH:89:PRO:HG2	1.70	0.73
1:XA:1002:G:H1	1:XA:1038:C:H42	1.37	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.88	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
22:YA:210:C:OP2	50:Y7:29:LYS:NZ	2.21	0.73
22:YA:607:U:H3	22:YA:621:A:H2	1.35	0.73
22:YA:1803:A:H4'	24:YD:259:THR:CG2	2.19	0.73
45:Y2:29:LYS:HD3	45:Y2:57:ILE:HD13	1.71	0.73
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.73
12:QL:50:SER:O	12:QL:51:ALA:HB2	1.89	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.73
24:RD:131:LEU:HB2	24:RD:136:ILE:CD1	2.17	0.73
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.73
25:YE:203:LYS:O	25:YE:203:LYS:HD2	1.88	0.73
48:Y5:40:LYS:CE	48:Y5:46:CYS:HB3	2.19	0.73
51:Y8:16:ILE:HD11	51:Y8:57:ARG:HG2	1.69	0.73
28:RH:54:ARG:HH12	28:RH:62:LYS:HG2	1.54	0.73
37:RU:34:LYS:HE2	37:RU:34:LYS:HA	1.70	0.73
45:R2:27:GLU:OE1	45:R2:27:GLU:N	2.19	0.73
1:XA:372:C:C4	1:XA:387:U:O4	2.41	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.53	0.73
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.73
13:XM:62:ASN:HA	47:Y4:49:PHE:HD2	1.50	0.73
33:YQ:79:LEU:O	33:YQ:79:LEU:CD1	2.35	0.73
49:Y6:13:CYS:HA	49:Y6:50:ARG:O	1.89	0.73
51:Y8:61:LEU:O	51:Y8:62:LEU:HB2	1.88	0.73
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.72
26:RF:101:LEU:CD1	26:RF:102:PRO:HD2	2.11	0.72
26:RF:157:VAL:HB	26:RF:194:MET:HB3	1.70	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
22:YA:666:G:H4'	32:YP:49:ARG:NH1	2.04	0.72
24:YD:77:ALA:CB	24:YD:97:TYR:HA	2.18	0.72
29:YI:5:LEU:H	29:YI:5:LEU:HD12	1.52	0.72
30:YN:58:ASP:H	30:YN:60:ILE:HD11	1.53	0.72
34:YR:3:HIS:O	34:YR:5:LYS:N	2.22	0.72
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.70	0.72
22:RA:84:A:N1	22:RA:98:G:O2'	2.21	0.72
22:RA:704:G:H2'	22:RA:726:G:H22	1.54	0.72
22:RA:1190:G:OP1	32:RP:30:THR:OG1	2.04	0.72
25:RE:56:PRO:O	25:RE:57:LYS:HB2	1.89	0.72
28:RH:80:SER:O	28:RH:81:GLU:HB2	1.89	0.72
1:XA:1054:C:N4	55:XY:34:C:C2	2.57	0.72
1:XA:1152:A:H5"	10:XJ:13:HIS:HD2	1.54	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
24:YD:35:LYS:HZ1	24:YD:65:ILE:HA	1.52	0.72
28:YH:125:VAL:HG12	28:YH:126:PRO:HG3	1.71	0.72
28:YH:152:ARG:O	28:YH:153:LYS:HD2	1.90	0.72
32:YP:15:ARG:O	32:YP:16:ARG:C	2.32	0.72
35:YS:83:LYS:HG2	35:YS:109:GLY:N	2.04	0.72
51:Y8:29:LYS:HD3	51:Y8:44:LYS:HB2	1.71	0.72
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
27:RG:146:TYR:O	27:RG:149:VAL:HG22	1.88	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:80:LEU:HB2	44:R1:81:LYS:HE2	1.71	0.72
27:YG:146:TYR:O	27:YG:149:VAL:HG22	1.89	0.72
28:YH:153:LYS:HA	28:YH:153:LYS:HZ3	1.52	0.72
30:YN:89:LYS:O	30:YN:93:THR:HG22	1.90	0.72
32:YP:126:VAL:CG1	32:YP:147:LEU:HD21	2.17	0.72
34:YR:117:VAL:HG22	34:YR:118:GLU:N	2.05	0.72
37:YU:98:LEU:HD23	37:YU:99:ALA:N	2.04	0.72
46:Y3:56:VAL:HG12	46:Y3:57:GLU:N	2.04	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.72
12:QL:47:LYS:HG2	12:QL:48:PRO:HD3	1.70	0.72
25:RE:13:ARG:HA	25:RE:22:PRO:HA	1.71	0.72
31:RO:113:LYS:HG2	31:RO:117:LEU:HD11	1.71	0.72
36:RT:117:ASP:O	36:RT:121:ILE:HG13	1.89	0.72
39:RW:1:MET:HA	39:RW:1:MET:HE3	1.71	0.72
48:R5:40:LYS:CE	48:R5:46:CYS:HB3	2.19	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
19:XS:2:PRO:HB2	47:Y4:68:ARG:NH2	2.03	0.72
22:YA:2713:A:OP1	34:YR:14:SER:OG	2.07	0.72
23:YB:15:A:H5'	23:YB:16:G:C8	2.24	0.72
33:YQ:90:VAL:CG1	33:YQ:91:GLU:H	2.02	0.72
35:YS:83:LYS:HZ2	35:YS:109:GLY:HA2	1.53	0.72
38:YV:39:LEU:O	38:YV:40:LEU:HD23	1.90	0.72
41:YY:52:SER:OG	41:YY:53:PRO:HD3	1.88	0.72
44:Y1:3:LYS:HD3	44:Y1:43:TYR:HD2	1.52	0.72
1:QA:1330:U:OP1	13:QM:25:ILE:O	2.08	0.72
28:RH:30:LYS:HD2	28:RH:81:GLU:H	1.54	0.72
36:RT:78:LEU:HD13	36:RT:78:LEU:O	1.87	0.72
1:XA:67:C:H2'	1:XA:68:G:C8	2.25	0.72
1:XA:439:A:OP2	1:XA:493:G:N1	2.22	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
25:YE:14:ILE:HD11	36:YT:14:TYR:OH	1.90	0.72
34:YR:85:PRO:O	34:YR:87:TYR:N	2.22	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
25:RE:78:LEU:HG	25:RE:79:ARG:NE	2.03	0.72
30:RN:56:ASN:HD22	30:RN:125:GLY:C	1.96	0.72
35:RS:42:ASP:O	35:RS:43:GLU:HB2	1.90	0.72
1:XA:1494:G:OP1	58:XA:1673:PAR:N32	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
22:YA:1210:A:H5'	22:YA:1210:A:H8	1.53	0.72
25:YE:21:VAL:HB	25:YE:22:PRO:CB	2.18	0.72
26:YF:124:LEU:HD12	26:YF:125:LEU:N	2.04	0.72
28:YH:54:ARG:HH12	28:YH:62:LYS:HG2	1.54	0.72
35:YS:26:LEU:O	35:YS:26:LEU:HD23	1.90	0.72
25:RE:28:ALA:HB3	25:RE:93:VAL:HG22	1.72	0.72
26:RF:124:LEU:HD12	26:RF:125:LEU:N	2.04	0.72
28:RH:26:VAL:CG1	28:RH:27:LYS:H	2.02	0.72
32:RP:29:LYS:HD2	32:RP:30:THR:HG22	1.72	0.72
32:RP:114:ILE:HD13	32:RP:125:VAL:HG21	1.72	0.72
35:RS:103:GLU:O	35:RS:106:ARG:HG3	1.90	0.72
48:R5:58:LEU:CD1	48:R5:60:VAL:HG12	2.19	0.72
1:XA:1071:C:H5"	5:XE:49:PRO:HG2	1.71	0.72
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
13:XM:65:LYS:HZ1	47:Y4:52:THR:HG21	1.54	0.72
26:YF:157:VAL:HB	26:YF:194:MET:HB3	1.70	0.72
28:YH:132:ARG:HH11	28:YH:132:ARG:CB	1.97	0.72
37:YU:34:LYS:HE2	37:YU:34:LYS:HA	1.69	0.72
44:Y1:80:LEU:HB2	44:Y1:81:LYS:HE2	1.71	0.72
50:Y7:10:ARG:O	50:Y7:14:LYS:HB2	1.89	0.72
1:QA:673:G:H2'	1:QA:674:G:C8	2.23	0.72
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.70	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
22:RA:1266:G:O5'	39:RW:15:ARG:NH2	2.23	0.72
26:RF:32:LEU:HD12	26:RF:32:LEU:O	1.90	0.72
37:RU:98:LEU:HD23	37:RU:99:ALA:N	2.04	0.72
46:R3:56:VAL:HG12	46:R3:57:GLU:N	2.04	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72
22:YA:26:G:H1'	22:YA:515:A:H61	1.53	0.72
25:YE:201:THR:HG22	25:YE:203:LYS:HB3	1.69	0.72
26:YF:32:LEU:HD12	26:YF:32:LEU:O	1.90	0.72
28:YH:128:PRO:HD2	28:YH:129:THR:H	1.55	0.72
45:Y2:27:GLU:OE1	45:Y2:27:GLU:N	2.19	0.72
1:QA:606:G:H22	1:QA:631:G:H5'	1.54	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
25:RE:93:VAL:H	25:RE:95:ILE:HD12	1.54	0.72
27:RG:7:LEU:HD21	27:RG:176:LEU:HD22	1.70	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:89:ILE:CD1	28:RH:129:THR:HB	2.19	0.72
34:RR:117:VAL:HG22	34:RR:118:GLU:N	2.05	0.72
36:RT:54:ARG:HH11	36:RT:54:ARG:HG2	1.52	0.72
37:RU:69:CYS:HB3	37:RU:106:PHE:HZ	1.55	0.72
50:R7:5:TRP:NE1	50:R7:7:PRO:HG3	2.04	0.72
51:R8:16:ILE:HD11	51:R8:57:ARG:HG2	1.70	0.72
51:R8:61:LEU:O	51:R8:62:LEU:HB2	1.88	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.72
25:YE:13:ARG:HA	25:YE:22:PRO:HA	1.71	0.72
25:YE:56:PRO:O	25:YE:57:LYS:HB2	1.89	0.72
26:YF:9:ILE:HD11	26:YF:125:LEU:HG	1.70	0.72
41:YY:57:GLN:HE21	41:YY:58:GLY:H	1.38	0.72
42:YZ:60:GLU:HA	42:YZ:66:SER:HA	1.72	0.72
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.90	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.72
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.72
33:RQ:79:LEU:O	33:RQ:79:LEU:CD2	2.36	0.72
34:RR:85:PRO:O	34:RR:87:TYR:N	2.22	0.72
36:RT:102:ILE:HB	36:RT:110:ILE:CD1	2.19	0.72
37:RU:66:ASN:HB2	37:RU:76:TYR:HB2	1.72	0.72
41:RY:51:VAL:HG13	41:RY:52:SER:N	2.03	0.72
50:R7:10:ARG:O	50:R7:14:LYS:HB2	1.90	0.72
51:R8:60:LEU:O	51:R8:63:PRO:HD2	1.90	0.72
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.05	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.72
25:YE:197:ILE:HD11	25:YE:199:ARG:HH12	1.55	0.72
28:YH:26:VAL:CG1	28:YH:27:LYS:H	2.02	0.72
39:YW:70:TYR:H	39:YW:70:TYR:HD2	1.37	0.72
44:Y1:76:ARG:HH11	44:Y1:76:ARG:HG2	1.53	0.72
1:QA:191:G:C4	20:QT:105:SER:HB3	2.25	0.71
1:QA:1316:G:H22	1:QA:1319:A:H5"	1.55	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.71
35:RS:26:LEU:O	35:RS:26:LEU:HD23	1.90	0.71
35:RS:83:LYS:HG2	35:RS:109:GLY:N	2.04	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R6:7:ILE:C	49:R6:9:LEU:H	1.98	0.71
49:R6:13:CYS:HA	49:R6:50:ARG:O	1.89	0.71
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.71
36:YT:117:ASP:O	36:YT:121:ILE:HG13	1.89	0.71
26:RF:29:ASN:H	26:RF:112:MET:HE1	1.54	0.71
28:RH:152:ARG:O	28:RH:153:LYS:HD2	1.90	0.71
33:RQ:81:VAL:C	33:RQ:82:ARG:HG2	2.14	0.71
37:RU:8:VAL:HG23	37:RU:11:ARG:NH2	1.99	0.71
45:R2:29:LYS:HD3	45:R2:57:ILE:HD13	1.71	0.71
1:XA:448:A:OP2	1:XA:485:G:N2	2.22	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.54	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
28:YH:30:LYS:HD2	28:YH:81:GLU:H	1.54	0.71
37:YU:69:CYS:HB3	37:YU:106:PHE:HZ	1.55	0.71
1:QA:1124:G:H5”	1:QA:1145:C:H41	1.55	0.71
1:QA:1158:C:H4’	2:QB:133:LYS:HZ1	1.55	0.71
22:RA:1454:U:OP1	34:RR:77:ARG:NH1	2.23	0.71
24:RD:244:ARG:HB2	24:RD:245:PRO:HD2	1.71	0.71
25:RE:197:ILE:HD11	25:RE:199:ARG:HH12	1.55	0.71
32:RP:85:LEU:HA	32:RP:88:LEU:HD22	1.71	0.71
34:RR:3:HIS:O	34:RR:5:LYS:N	2.22	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
28:YH:84:SER:O	28:YH:85:LYS:HB2	1.89	0.71
31:YO:3:GLN:HB2	31:YO:4:PRO:HD2	1.72	0.71
35:YS:103:GLU:O	35:YS:106:ARG:HG3	1.90	0.71
39:YW:1:MET:HA	39:YW:1:MET:HE3	1.71	0.71
42:YZ:144:LEU:HD11	42:YZ:149:SER:HA	1.70	0.71
48:Y5:2:ALA:O	48:Y5:3:LYS:HB2	1.88	0.71
50:Y7:5:TRP:NE1	50:Y7:7:PRO:HG3	2.04	0.71
51:Y8:58:ILE:HD13	51:Y8:61:LEU:HD11	1.72	0.71
51:Y8:60:LEU:O	51:Y8:63:PRO:HD2	1.90	0.71
1:QA:1104:G:H4’	2:QB:111:ARG:NH1	2.06	0.71
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.56	0.71
7:QG:8:GLU:CD	7:QG:8:GLU:H	1.96	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
25:RE:21:VAL:HB	25:RE:22:PRO:CB	2.18	0.71
31:RO:3:GLN:HB2	31:RO:4:PRO:HD2	1.72	0.71
38:RV:39:LEU:O	38:RV:40:LEU:HD23	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:601:C:H2'	1:XA:602:A:H8	1.56	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
13:XM:8:GLU:CD	27:YG:115:ARG:NH1	2.48	0.71
13:XM:65:LYS:HZ2	47:Y4:52:THR:CG2	2.02	0.71
26:YF:185:ASP:OD1	26:YF:188:ARG:NH1	2.23	0.71
32:YP:85:LEU:HA	32:YP:88:LEU:HD22	1.71	0.71
35:YS:67:ARG:O	35:YS:71:ARG:HG3	1.90	0.71
49:Y6:28:ARG:HB3	49:Y6:30:THR:H	1.56	0.71
1:QA:954:G:H21	1:QA:1227:A:H62	1.38	0.71
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.24	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
28:RH:125:VAL:HG12	28:RH:126:PRO:HG3	1.70	0.71
35:RS:67:ARG:O	35:RS:71:ARG:HG3	1.90	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.71
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.71
22:YA:674:G:C1'	26:YF:74:ARG:HD3	2.21	0.71
22:YA:2111:C:N3	22:YA:2118:U:O2'	2.23	0.71
22:YA:2287:A:H62	22:YA:2344:U:H3	1.38	0.71
26:YF:185:ASP:HA	26:YF:188:ARG:CD	2.20	0.71
32:YP:58:THR:O	32:YP:61:ARG:CZ	2.38	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	1.89	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
22:RA:336:C:O2'	41:RY:35:TYR:OH	2.06	0.71
25:RE:14:ILE:HD11	36:RT:14:TYR:OH	1.90	0.71
32:RP:49:ARG:HD2	51:R8:58:ILE:CG2	2.20	0.71
40:RX:12:VAL:HG12	40:RX:27:THR:O	1.91	0.71
1:XA:36:C:O2'	1:XA:501:C:OP1	2.08	0.71
22:YA:2450:A:O2'	53:XV:76:A:N1	2.20	0.71
23:YB:52:A:H62	35:YS:33:LYS:HG3	1.55	0.71
35:YS:83:LYS:HZ1	35:YS:109:GLY:HA2	1.52	0.71
40:YX:12:VAL:HG12	40:YX:27:THR:O	1.90	0.71
41:YY:89:PHE:C	41:YY:90:LEU:HD13	2.15	0.71
49:Y6:36:LEU:HD13	49:Y6:50:ARG:NH1	2.05	0.71
1:QA:45:U:H2'	1:QA:46:G:C8	2.26	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.71
13:QM:77:ASN:HA	47:R4:71:ARG:NH2	2.05	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.03	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:89:PHE:C	41:RY:90:LEU:HD13	2.15	0.71
49:R6:25:LYS:HD2	51:R8:34:TRP:HZ2	1.56	0.71
51:R8:58:ILE:HD13	51:R8:61:LEU:HD11	1.72	0.71
1:XA:1400:C:H42	53:XV:34:C:C1'	2.04	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
22:YA:2033:A:O2'	22:YA:2035:G:OP2	2.08	0.71
22:YA:2610:C:H4'	22:YA:2611:U:OP2	1.90	0.71
24:YD:263:ARG:HB2	24:YD:263:ARG:NH1	2.06	0.71
25:YE:93:VAL:H	25:YE:95:ILE:HD12	1.54	0.71
36:YT:23:ARG:HB2	36:YT:24:PRO:HD2	1.70	0.71
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71
22:RA:573:G:N1	22:RA:2031:A:OP2	2.23	0.71
22:RA:1791:A:N6	22:RA:1828:G:O2'	2.23	0.71
24:RD:263:ARG:HB2	24:RD:263:ARG:NH1	2.05	0.71
32:RP:83:VAL:CG1	32:RP:112:LEU:HD21	2.21	0.71
35:RS:106:ARG:CA	35:RS:110:LEU:HD11	2.19	0.71
47:R4:29:PRO:O	47:R4:30:GLU:HB2	1.89	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.90	0.71
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.71
33:YQ:81:VAL:C	33:YQ:82:ARG:HG2	2.15	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.71
26:RF:178:PRO:HB2	26:RF:201:VAL:HG11	1.73	0.71
26:RF:185:ASP:OD1	26:RF:188:ARG:NH1	2.24	0.71
29:RI:3:VAL:HG12	29:RI:38:LEU:HA	1.73	0.71
49:R6:36:LEU:HD13	49:R6:50:ARG:NH1	2.05	0.71
1:XA:1226:C:O2'	13:XM:103:THR:O	2.05	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
22:YA:2788:C:O2'	22:YA:2809:A:N3	2.23	0.71
28:YH:80:SER:O	28:YH:81:GLU:HB2	1.89	0.71
32:YP:49:ARG:HD2	51:Y8:58:ILE:CG2	2.20	0.71
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HD23	1.72	0.71
45:Y2:7:ARG:HG3	45:Y2:7:ARG:HH11	1.55	0.71
49:Y6:29:ASN:OD1	49:Y6:30:THR:HG22	1.91	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
29:RI:92:VAL:HG13	29:RI:120:ILE:HG23	1.72	0.71
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.71
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.71
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.71
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.03	0.71
25:YE:174:ASP:CG	25:YE:175:VAL:H	1.98	0.71
39:YW:6:ILE:HG12	39:YW:104:THR:HG23	1.73	0.71
48:Y5:40:LYS:HE2	48:Y5:47:PRO:HD2	1.73	0.71
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.71	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
22:RA:1080:C:N4	22:RA:1088:A:OP2	2.22	0.70
25:RE:174:ASP:CG	25:RE:175:VAL:H	1.98	0.70
36:RT:11:GLU:CD	36:RT:11:GLU:N	2.47	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.70
22:YA:2311:A:C8	27:YG:82:LEU:HD11	2.25	0.70
28:YH:59:ARG:HH11	28:YH:59:ARG:HG3	1.56	0.70
31:YO:113:LYS:HG2	31:YO:117:LEU:HD11	1.71	0.70
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.23	0.70
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.70
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.70
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.54	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
26:RF:66:PRO:O	26:RF:67:GLN:HB3	1.89	0.70
26:RF:101:LEU:O	26:RF:106:ARG:NH1	2.23	0.70
28:RH:132:ARG:HH11	28:RH:132:ARG:CB	1.97	0.70
51:R8:29:LYS:HD3	51:R8:44:LYS:HB2	1.71	0.70
1:XA:372:C:N3	1:XA:387:U:O4	2.24	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
24:YD:244:ARG:HB2	24:YD:245:PRO:HD2	1.72	0.70
26:YF:66:PRO:O	26:YF:67:GLN:HB3	1.90	0.70
29:YI:144:VAL:HG13	29:YI:145:VAL:HG13	1.72	0.70
1:QA:939:G:H1	1:QA:1344:C:H42	1.39	0.70
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.56	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
26:RF:164:ARG:HG3	26:RF:175:THR:OG1	1.92	0.70
32:RP:58:THR:O	32:RP:61:ARG:CZ	2.38	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RV:51:VAL:HG12	38:RV:52:VAL:N	2.06	0.70
42:RZ:5:LEU:HD11	42:RZ:39:VAL:HB	1.73	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
25:YE:14:ILE:HG12	25:YE:15:PHE:N	2.06	0.70
28:YH:89:ILE:CD1	28:YH:129:THR:HB	2.20	0.70
32:YP:20:GLY:HA2	32:YP:27:HIS:O	1.92	0.70
24:RD:43:ARG:HB3	24:RD:54:ARG:HB2	1.73	0.70
33:RQ:32:TYR:CD1	33:RQ:133:ARG:HA	2.27	0.70
1:XA:372:C:O2'	1:XA:373:A:P	2.49	0.70
1:XA:1348:U:H3	1:XA:1374:A:H2	1.37	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	0.70
25:YE:28:ALA:HB3	25:YE:93:VAL:HG22	1.72	0.70
28:YH:103:LEU:HD12	28:YH:131:VAL:HG21	1.73	0.70
35:YS:42:ASP:O	35:YS:43:GLU:HB2	1.90	0.70
44:Y1:81:LYS:HE2	44:Y1:81:LYS:CA	2.13	0.70
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
26:RF:65:TRP:HZ3	26:RF:73:ALA:O	1.74	0.70
49:R6:29:ASN:OD1	49:R6:30:THR:HG22	1.91	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
13:XM:68:GLY:HA3	27:YG:116:ASP:OD2	1.90	0.70
22:YA:1169:G:H1	22:YA:1180:C:H42	1.38	0.70
26:YF:178:PRO:HG2	26:YF:179:GLU:OE2	1.90	0.70
28:YH:152:ARG:O	28:YH:153:LYS:CB	2.39	0.70
37:YU:65:ILE:HG12	37:YU:96:ALA:HB1	1.73	0.70
38:YV:22:VAL:HG12	38:YV:23:GLU:N	2.06	0.70
44:Y1:7:ILE:CD1	44:Y1:70:VAL:HG22	2.21	0.70
1:QA:842:C:O2'	1:QA:848:C:N4	2.24	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
22:RA:1803:A:H4'	24:RD:259:THR:CG2	2.20	0.70
26:RF:178:PRO:HG2	26:RF:179:GLU:OE2	1.90	0.70
28:RH:154:PRO:O	28:RH:155:SER:HB2	1.91	0.70
35:RS:83:LYS:HZ1	35:RS:109:GLY:HA2	1.56	0.70
41:RY:45:VAL:HG12	41:RY:60:PHE:CD1	2.27	0.70
45:R2:7:ARG:HH11	45:R2:7:ARG:HG3	1.55	0.70
8:XH:49:GLU:HG3	8:XH:51:VAL:HG13	1.74	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:CA	2.21	0.70
22:YA:1833:U:O2'	22:YA:1969:A:N1	2.18	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2446:G:N2	22:YA:2449:U:O2	2.24	0.70
22:YA:2747:G:OP1	28:YH:138:LYS:NZ	2.24	0.70
26:YF:101:LEU:O	26:YF:106:ARG:NH1	2.23	0.70
33:YQ:32:TYR:CD1	33:YQ:133:ARG:HA	2.27	0.70
36:YT:41:ARG:NH2	36:YT:43:GLN:HB2	2.06	0.70
37:YU:66:ASN:HB2	37:YU:76:TYR:HB2	1.72	0.70
24:RD:65:ILE:HD13	24:RD:65:ILE:O	1.91	0.70
28:RH:154:PRO:HG2	28:RH:162:ILE:O	1.92	0.70
30:RN:89:LYS:O	30:RN:93:THR:HG22	1.90	0.70
35:RS:54:LEU:HD13	35:RS:54:LEU:O	1.91	0.70
41:RY:57:GLN:HE21	41:RY:58:GLY:H	1.37	0.70
44:R1:82:LEU:HD13	44:R1:83:GLU:N	2.05	0.70
1:XA:372:C:HO2'	1:XA:373:A:P	2.12	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
22:YA:84:A:N1	22:YA:98:G:O2'	2.25	0.70
22:YA:2306:C:H3'	22:YA:2307:G:H5"	1.74	0.70
22:YA:2636:U:OP1	25:YE:79:ARG:HA	1.91	0.70
24:YD:43:ARG:HB3	24:YD:54:ARG:HB2	1.73	0.70
26:YF:164:ARG:HG3	26:YF:175:THR:OG1	1.91	0.70
26:YF:178:PRO:HB2	26:YF:201:VAL:HG11	1.73	0.70
28:YH:154:PRO:HG2	28:YH:162:ILE:O	1.92	0.70
39:YW:29:LEU:HD21	39:YW:33:ARG:CZ	2.22	0.70
49:Y6:25:LYS:HD2	51:Y8:34:TRP:HZ2	1.56	0.70
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.74	0.70
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
22:RA:71:A:H4'	22:RA:72:U:H5"	1.73	0.70
22:RA:2404:C:H1'	32:RP:67:MET:CE	2.21	0.70
22:RA:2815:C:H5'	48:R5:29:THR:HG21	1.72	0.70
28:RH:128:PRO:HD2	28:RH:129:THR:H	1.55	0.70
33:RQ:59:ARG:C	33:RQ:60:ARG:HG3	2.16	0.70
39:RW:29:LEU:HD21	39:RW:33:ARG:CZ	2.22	0.70
1:XA:827:U:O2	1:XA:874:G:N2	2.25	0.70
22:YA:1509:C:H3'	22:YA:1510:A:H5"	1.73	0.70
28:YH:86:GLU:CG	28:YH:165:ALA:H	1.94	0.70
31:YO:63:VAL:HG13	31:YO:84:ALA:HA	1.72	0.70
33:YQ:43:THR:OG1	33:YQ:46:GLN:HB2	1.91	0.70
48:Y5:40:LYS:HE2	48:Y5:47:PRO:CD	2.21	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1509:C:H3'	22:RA:1510:A:H5"	1.74	0.70
28:RH:152:ARG:O	28:RH:153:LYS:CB	2.40	0.70
44:R1:7:ILE:CD1	44:R1:70:VAL:HG22	2.21	0.70
48:R5:40:LYS:HE2	48:R5:47:PRO:HD2	1.73	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
25:YE:103:ASP:OD1	25:YE:201:THR:HA	1.92	0.70
49:Y6:7:ILE:C	49:Y6:9:LEU:H	1.98	0.70
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
27:RG:131:TYR:O	27:RG:159:VAL:HG13	1.92	0.70
35:RS:106:ARG:N	35:RS:110:LEU:HD21	2.07	0.70
37:RU:65:ILE:HG12	37:RU:96:ALA:HB1	1.73	0.70
40:RX:57:LEU:HD11	40:RX:78:LYS:HD2	1.73	0.70
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.70
24:YD:65:ILE:HD13	24:YD:65:ILE:O	1.91	0.70
27:YG:131:TYR:O	27:YG:159:VAL:HG13	1.92	0.70
32:YP:114:ILE:HD13	32:YP:125:VAL:HG21	1.72	0.70
38:YV:51:VAL:HG12	38:YV:52:VAL:N	2.06	0.70
40:YX:57:LEU:HD11	40:YX:78:LYS:HD2	1.73	0.70
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.69
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.69
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.69
19:QS:69:HIS:HD1	47:R4:69:LYS:HE2	1.56	0.69
22:RA:2111:C:N3	22:RA:2118:U:O2'	2.24	0.69
24:RD:65:ILE:HD11	24:RD:67:PHE:CD1	2.27	0.69
28:RH:59:ARG:HH11	28:RH:59:ARG:HG3	1.56	0.69
28:RH:150:ALA:C	28:RH:152:ARG:N	2.44	0.69
45:R2:47:ASN:O	45:R2:49:LYS:N	2.25	0.69
32:YP:83:VAL:CG1	32:YP:112:LEU:HD21	2.21	0.69
44:Y1:82:LEU:HD12	44:Y1:83:GLU:CA	2.21	0.69
9:QI:113:LYS:HD2	9:QI:113:LYS:N	2.07	0.69
29:RI:62:LYS:HE3	29:RI:134:PRO:HG2	1.74	0.69
41:RY:2:ARG:HH11	41:RY:2:ARG:HG2	1.57	0.69
44:R1:7:ILE:HD12	44:R1:70:VAL:HG22	1.73	0.69
1:XA:767:A:O2'	1:XA:1524:C:O2	2.09	0.69
1:XA:1106:G:H5"	3:XC:172:ARG:HG2	1.74	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.57	0.69
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.74	0.69
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:54:LEU:HD13	35:YS:54:LEU:O	1.91	0.69
38:YV:41:GLY:HA3	38:YV:46:VAL:HG11	1.74	0.69
44:Y1:7:ILE:HD12	44:Y1:70:VAL:HG22	1.73	0.69
1:QA:501:C:H2'	1:QA:502:G:H8	1.55	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.92	0.69
27:RG:56:ALA:HB2	27:RG:153:ARG:HE	1.57	0.69
43:R0:11:ARG:O	43:R0:14:ARG:NH2	2.26	0.69
44:R1:82:LEU:CD1	44:R1:83:GLU:C	2.64	0.69
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.25	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
14:XN:6:LEU:O	14:XN:6:LEU:HD23	1.92	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
31:YO:8:LEU:HD22	31:YO:8:LEU:N	2.07	0.69
44:Y1:82:LEU:CD1	44:Y1:83:GLU:C	2.64	0.69
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.74	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.74	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.91	0.69
24:RD:76:PRO:O	24:RD:98:VAL:HG23	1.91	0.69
25:RE:103:ASP:OD1	25:RE:201:THR:HA	1.92	0.69
28:RH:103:LEU:HD12	28:RH:131:VAL:HG21	1.73	0.69
30:RN:46:VAL:O	30:RN:47:ALA:HB3	1.92	0.69
32:RP:126:VAL:CG1	32:RP:147:LEU:HD21	2.16	0.69
44:R1:74:VAL:HG12	44:R1:74:VAL:O	1.93	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
19:XS:9:VAL:HG12	47:Y4:66:SER:O	1.92	0.69
22:YA:83:G:O2'	22:YA:84:A:O5'	2.10	0.69
22:YA:2086:U:H2'	22:YA:2087:G:C8	2.27	0.69
24:YD:65:ILE:HD11	24:YD:67:PHE:CD1	2.27	0.69
32:YP:61:ARG:H	32:YP:61:ARG:HD2	1.58	0.69
32:YP:64:LYS:HB2	51:Y8:25:MET:CG	2.22	0.69
38:YV:66:ARG:HH12	38:YV:88:ARG:NH1	1.90	0.69
39:YW:86:LEU:HD12	39:YW:87:PRO:CD	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:53:VAL:HG22	44:Y1:74:VAL:HG13	1.74	0.69
1:QA:664:G:H22	1:QA:741:G:H1	1.38	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
28:RH:4:ILE:HG13	28:RH:6:ARG:NE	2.08	0.69
30:RN:120:LEU:HD11	30:RN:122:VAL:HG23	1.74	0.69
32:RP:20:GLY:HA2	32:RP:27:HIS:O	1.92	0.69
44:R1:4:VAL:HG23	44:R1:10:LYS:O	1.93	0.69
44:R1:82:LEU:HD12	44:R1:83:GLU:CA	2.22	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
22:YA:1006:C:H1'	30:YN:106:MET:CE	2.22	0.69
24:YD:89:SER:HB2	24:YD:159:ALA:HB2	1.75	0.69
30:YN:120:LEU:HD11	30:YN:122:VAL:HG23	1.74	0.69
44:Y1:82:LEU:HD13	44:Y1:83:GLU:N	2.05	0.69
45:Y2:47:ASN:O	45:Y2:49:LYS:N	2.25	0.69
1:QA:581:G:N2	1:QA:760:G:N7	2.41	0.69
1:QA:953:G:H5'	1:QA:965:A:H61	1.58	0.69
4:QD:79:PHE:C	4:QD:79:PHE:HD2	1.99	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
22:RA:1454:U:H5'	34:RR:63:ARG:HE	1.56	0.69
22:RA:1799:G:H5'	22:RA:1819:A:H61	1.57	0.69
25:RE:7:VAL:HG23	25:RE:8:LYS:N	2.07	0.69
26:RF:103:LYS:HA	26:RF:106:ARG:CG	2.21	0.69
32:RP:39:LYS:CA	32:RP:45:LEU:HD11	2.23	0.69
33:RQ:43:THR:OG1	33:RQ:46:GLN:HB2	1.91	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
22:YA:551:G:H5'	22:YA:1220:A:H1'	1.73	0.69
22:YA:601:C:O2'	22:YA:605:C:OP1	2.10	0.69
25:YE:7:VAL:HG23	25:YE:8:LYS:N	2.06	0.69
26:YF:65:TRP:HZ3	26:YF:73:ALA:O	1.74	0.69
30:YN:68:GLU:HG2	30:YN:88:GLU:OE1	1.92	0.69
32:YP:62:LEU:HD22	32:YP:62:LEU:H	1.53	0.69
44:Y1:64:ALA:HA	44:Y1:67:ILE:HG13	1.75	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
22:RA:2555:U:C2	56:Z6:74:C:C4	2.74	0.69
24:RD:89:SER:HB2	24:RD:159:ALA:HB2	1.75	0.69
25:RE:65:GLY:HA2	25:RE:70:ALA:CB	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:63:VAL:HG13	31:RO:84:ALA:HA	1.72	0.69
32:RP:64:LYS:HB2	51:R8:25:MET:CG	2.22	0.69
36:RT:41:ARG:NH2	36:RT:43:GLN:HB2	2.06	0.69
41:YY:45:VAL:HG12	41:YY:60:PHE:CD1	2.27	0.69
45:Y2:40:SER:C	45:Y2:42:GLY:H	2.01	0.69
48:Y5:40:LYS:HG2	48:Y5:47:PRO:HD2	1.75	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	0.69
8:QH:6:ILE:HD12	8:QH:6:ILE:N	2.08	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
10:QJ:54:PHE:C	10:QJ:55:LYS:HG3	2.18	0.69
16:QP:1:MET:O	16:QP:24:ALA:HB2	1.92	0.69
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.69
22:RA:77:C:O3'	45:R2:14:ARG:NH2	2.26	0.69
22:RA:385:C:HO2'	22:RA:388:G:N2	1.91	0.69
22:RA:654:A:O2'	22:RA:654(A):G:N7	2.25	0.69
22:RA:660:G:O3'	26:RF:38:ARG:NH2	2.26	0.69
22:RA:2555:U:C2	56:Z6:74:C:C6	2.78	0.69
24:RD:35:LYS:HB3	24:RD:63:ARG:HA	1.75	0.69
30:RN:7:LYS:HD3	30:RN:9:VAL:HA	1.75	0.69
30:RN:68:GLU:HG2	30:RN:88:GLU:OE1	1.92	0.69
38:RV:41:GLY:HA3	38:RV:46:VAL:HG11	1.74	0.69
38:RV:66:ARG:HH12	38:RV:88:ARG:NH1	1.90	0.69
48:R5:4:HIS:HB3	48:R5:5:PRO:HD3	1.75	0.69
48:R5:40:LYS:HE2	48:R5:47:PRO:CD	2.21	0.69
48:R5:40:LYS:HG2	48:R5:47:PRO:HD2	1.75	0.69
49:R6:28:ARG:HB3	49:R6:30:THR:H	1.56	0.69
1:XA:64:G:N2	1:XA:68:G:O6	2.21	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.74	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
14:XN:23:ARG:CZ	14:XN:30:ALA:HB2	2.22	0.69
22:YA:2701:C:H3'	22:YA:2702:U:C5'	2.21	0.69
22:YA:2864:G:OP1	36:YT:119:LYS:HD2	1.92	0.69
24:YD:17:THR:HG22	24:YD:205:VAL:N	2.08	0.69
24:YD:76:PRO:O	24:YD:98:VAL:HG23	1.92	0.69
27:YG:16:ARG:HH21	27:YG:31:VAL:CG1	2.05	0.69
27:YG:28:VAL:HG23	27:YG:29:TRP:CD1	2.28	0.69
28:YH:89:ILE:HG12	28:YH:89:ILE:O	1.93	0.69
28:YH:154:PRO:O	28:YH:155:SER:HB2	1.91	0.69
32:YP:29:LYS:HD2	32:YP:30:THR:HG22	1.72	0.69
32:YP:50:ARG:HB3	32:YP:50:ARG:NH2	1.98	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:29:LEU:HD23	34:YR:79:LEU:HD12	1.75	0.69
35:YS:106:ARG:CA	35:YS:110:LEU:HD11	2.19	0.69
35:YS:106:ARG:N	35:YS:110:LEU:HD21	2.07	0.69
42:YZ:182:LYS:HG3	42:YZ:183:LEU:HA	1.73	0.69
49:Y6:14:THR:HG21	49:Y6:19:ARG:HH21	1.58	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.07	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.69
19:QS:42:PRO:HD3	47:R4:63:TYR:CE2	2.28	0.69
27:RG:28:VAL:HG23	27:RG:29:TRP:CD1	2.28	0.69
33:RQ:80:GLU:HG3	33:RQ:81:VAL:H	1.58	0.69
35:RS:52:SER:O	35:RS:56:LEU:HD22	1.93	0.69
37:RU:90:VAL:O	37:RU:92:ARG:N	2.26	0.69
41:RY:29:GLU:HB3	41:RY:38:ILE:HG12	1.75	0.69
44:R1:81:LYS:HE2	44:R1:81:LYS:CA	2.13	0.69
1:XA:1516:G:N2	1:XA:1519:A:OP2	2.24	0.69
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.69
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
14:XN:44:LEU:CD1	14:XN:53:LEU:HD13	2.23	0.69
22:YA:922:U:H2'	22:YA:923:C:C6	2.27	0.69
24:YD:17:THR:CG2	24:YD:204:ILE:HA	2.23	0.69
24:YD:35:LYS:HB3	24:YD:63:ARG:HA	1.75	0.69
27:YG:56:ALA:HB2	27:YG:153:ARG:HE	1.57	0.69
32:YP:62:LEU:HD23	51:Y8:25:MET:HB2	1.74	0.69
37:YU:65:ILE:HD11	37:YU:93:LYS:HA	1.74	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.69
27:RG:171:ALA:O	27:RG:175:LEU:HG	1.93	0.69
38:RV:22:VAL:HG12	38:RV:23:GLU:N	2.06	0.69
44:R1:53:VAL:HG22	44:R1:74:VAL:HG13	1.74	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.69
22:YA:2848:G:O2'	22:YA:2867:G:N2	2.26	0.69
30:YN:7:LYS:HD3	30:YN:9:VAL:HA	1.75	0.69
33:YQ:88:GLY:C	33:YQ:90:VAL:N	2.47	0.69
37:YU:8:VAL:HG23	37:YU:11:ARG:NH2	1.99	0.69
40:YX:12:VAL:HG11	40:YX:27:THR:OG1	1.93	0.69
2:QB:24:TRP:H	2:QB:24:TRP:CD1	2.11	0.68
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:565:C:OP1	38:RV:82:ARG:NH2	2.26	0.68
22:RA:2419:U:H5'	49:R6:23:THR:HG22	1.75	0.68
29:RI:5:LEU:HD11	29:RI:19:VAL:HG12	1.75	0.68
32:RP:61:ARG:HD2	32:RP:61:ARG:H	1.58	0.68
37:RU:65:ILE:HD11	37:RU:93:LYS:HA	1.74	0.68
39:RW:6:ILE:HG12	39:RW:104:THR:HG23	1.73	0.68
45:R2:23:LYS:O	45:R2:27:GLU:OE1	2.12	0.68
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.68
13:XM:65:LYS:HE3	47:Y4:50:VAL:HG11	1.74	0.68
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.68
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.68
24:YD:122:ASP:CG	24:YD:123:ALA:H	2.00	0.68
25:YE:65:GLY:HA2	25:YE:70:ALA:CB	2.23	0.68
47:Y4:37:SER:C	47:Y4:39:CYS:H	1.99	0.68
1:QA:1071:C:H5"	5:QE:49:PRO:HG2	1.74	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.23	0.68
24:RD:17:THR:HG22	24:RD:205:VAL:N	2.08	0.68
24:RD:122:ASP:CG	24:RD:123:ALA:H	2.00	0.68
26:RF:185:ASP:HA	26:RF:188:ARG:CD	2.20	0.68
27:RG:16:ARG:HH21	27:RG:31:VAL:CG1	2.06	0.68
49:R6:14:THR:HG21	49:R6:19:ARG:HH21	1.58	0.68
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.06	0.68
54:XX:2:U:C2'	54:XX:3:G:H5'	2.22	0.68
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
27:RG:112:PRO:CB	47:R4:37:SER:HB2	2.22	0.68
30:RN:131:GLN:CD	30:RN:132:ALA:H	2.01	0.68
32:RP:26:GLY:O	32:RP:28:GLY:N	2.26	0.68
32:RP:62:LEU:HD23	51:R8:25:MET:HB2	1.74	0.68
43:R0:40:GLN:OE1	43:R0:45:PHE:N	2.27	0.68
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.18	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
35:YS:57:LYS:HD3	35:YS:57:LYS:H	1.58	0.68
41:YY:2:ARG:HH11	41:YY:2:ARG:HG2	1.57	0.68
41:YY:61:ILE:CG2	41:YY:62:GLU:N	2.56	0.68
43:Y0:6:GLY:O	53:XV:1:C:O2'	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y6:41:PRO:CG	49:Y6:45:LYS:H	2.05	0.68
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
22:RA:2037:G:H2'	22:RA:2038:G:C8	2.29	0.68
22:RA:2233:U:H2'	22:RA:2234:G:C8	2.28	0.68
22:RA:2844:G:H3'	22:RA:2845:G:H8	1.58	0.68
23:RB:45:A:O4'	27:RG:95:ARG:NH1	2.26	0.68
31:RO:8:LEU:HD22	31:RO:8:LEU:N	2.08	0.68
47:R4:15:ILE:N	47:R4:15:ILE:HD13	2.09	0.68
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
36:YT:109:GLU:O	36:YT:113:LYS:HB2	1.94	0.68
41:YY:29:GLU:HB3	41:YY:38:ILE:HG12	1.74	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.74	0.68
22:RA:1228:G:OP2	37:RU:16:LYS:NZ	2.24	0.68
22:RA:2680:C:H5'	25:RE:189:PRO:HA	1.76	0.68
24:RD:17:THR:CG2	24:RD:204:ILE:HA	2.23	0.68
30:RN:134:ARG:N	30:RN:135:PRO:HD3	1.97	0.68
44:R1:83:GLU:HG2	44:R1:84:GLY:N	2.09	0.68
49:R6:41:PRO:CG	49:R6:45:LYS:H	2.05	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	0.68
13:XM:65:LYS:HE3	47:Y4:50:VAL:CG1	2.23	0.68
22:YA:275:G:H21	22:YA:276:A:H62	1.41	0.68
22:YA:2392:A:C8	32:YP:60:MET:HG3	2.28	0.68
28:YH:4:ILE:HG13	28:YH:6:ARG:NE	2.08	0.68
30:YN:131:GLN:CD	30:YN:132:ALA:H	2.01	0.68
35:YS:100:ALA:HA	35:YS:103:GLU:HG2	1.75	0.68
36:YT:11:GLU:CD	36:YT:11:GLU:N	2.47	0.68
38:YV:18:LEU:O	38:YV:95:LEU:HA	1.94	0.68
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.07	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.68
22:RA:861:A:N3	23:RB:79:C:O2'	2.27	0.68
28:RH:126:PRO:HB2	28:RH:130:ARG:O	1.93	0.68
36:RT:50:ILE:HG22	36:RT:62:THR:OG1	1.94	0.68
41:RY:40:GLU:HA	41:RY:64:GLU:OE1	1.94	0.68
47:R4:37:SER:C	47:R4:39:CYS:H	1.98	0.68
1:XA:328:C:H4'	1:XA:329:A:H5'	1.75	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
22:YA:458:G:N2	22:YA:470:A:OP2	2.27	0.68
25:YE:16:ARG:O	25:YE:16:ARG:HG3	1.92	0.68
28:YH:126:PRO:HB2	28:YH:130:ARG:O	1.93	0.68
30:YN:46:VAL:O	30:YN:47:ALA:HB3	1.92	0.68
33:YQ:80:GLU:HG3	33:YQ:81:VAL:H	1.58	0.68
36:YT:111:ARG:C	36:YT:113:LYS:H	2.01	0.68
44:Y1:4:VAL:HG23	44:Y1:10:LYS:O	1.93	0.68
48:Y5:20:ARG:HA	48:Y5:23:HIS:ND1	2.08	0.68
1:QA:190:G:O2'	1:QA:191(A):G:OP2	2.11	0.68
1:QA:192:U:H4'	20:QT:102:GLY:O	1.94	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
22:RA:102:G:OP2	45:R2:7:ARG:NH2	2.27	0.68
22:RA:1224:G:OP2	38:RV:66:ARG:NH2	2.27	0.68
22:RA:2810:A:O3'	25:RE:61:ARG:HG3	1.91	0.68
31:RO:25:LEU:HB2	31:RO:38:VAL:HG13	1.74	0.68
34:RR:29:LEU:HD23	34:RR:79:LEU:HD12	1.75	0.68
35:RS:100:ALA:HA	35:RS:103:GLU:HG2	1.75	0.68
36:RT:108:ARG:HA	36:RT:111:ARG:CZ	2.23	0.68
36:RT:109:GLU:O	36:RT:113:LYS:HB2	1.94	0.68
38:RV:18:LEU:O	38:RV:95:LEU:HA	1.94	0.68
44:R1:64:ALA:HA	44:R1:67:ILE:HG13	1.75	0.68
48:R5:20:ARG:HA	48:R5:23:HIS:ND1	2.08	0.68
1:XA:539:A:H2'	1:XA:540:G:C8	2.26	0.68
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.76	0.68
1:XA:1400:C:N3	53:XV:34:C:C2	2.62	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
17:XQ:59:ILE:HD13	17:XQ:59:ILE:N	2.08	0.68
27:YG:112:PRO:CB	47:Y4:37:SER:HB2	2.22	0.68
28:YH:126:PRO:CD	28:YH:127:GLU:H	2.07	0.68
36:YT:50:ILE:HG22	36:YT:62:THR:OG1	1.94	0.68
39:YW:29:LEU:HD21	39:YW:33:ARG:NE	2.09	0.68
41:YY:40:GLU:HA	41:YY:64:GLU:OE1	1.94	0.68
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.19	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:6:LEU:O	14:QN:6:LEU:HD23	1.93	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
17:QQ:59:ILE:HD13	17:QQ:59:ILE:N	2.08	0.68
28:RH:126:PRO:HG2	28:RH:127:GLU:H	1.59	0.68
33:RQ:12:GLN:CG	33:RQ:73:PRO:HD2	2.21	0.68
33:RQ:104:PHE:HE1	33:RQ:125:LEU:HD11	1.58	0.68
35:RS:57:LYS:HD3	35:RS:57:LYS:H	1.58	0.68
40:RX:12:VAL:HG11	40:RX:27:THR:OG1	1.93	0.68
40:RX:18:TYR:C	40:RX:20:GLY:H	2.02	0.68
1:XA:272:C:H2'	1:XA:273:A:H8	1.56	0.68
1:XA:765:G:N2	1:XA:813:U:OP2	2.27	0.68
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.68
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
22:YA:993:G:OP1	37:YU:50:ARG:NH2	2.26	0.68
24:YD:35:LYS:HZ1	24:YD:104:TYR:HB2	1.57	0.68
25:YE:9:VAL:HB	25:YE:25:VAL:HG23	1.76	0.68
28:YH:4:ILE:HG13	28:YH:6:ARG:NH1	2.09	0.68
28:YH:126:PRO:HG2	28:YH:127:GLU:H	1.59	0.68
45:Y2:23:LYS:O	45:Y2:27:GLU:OE1	2.11	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.68
22:RA:298:G:O2'	22:RA:322:A:N1	2.26	0.68
22:RA:2112:G:O6	22:RA:2169:A:N6	2.27	0.68
26:RF:67:GLN:O	26:RF:67:GLN:CG	2.32	0.68
28:RH:88:LEU:H	28:RH:88:LEU:HD22	1.58	0.68
41:RY:49:VAL:O	41:RY:51:VAL:N	2.27	0.68
45:R2:40:SER:C	45:R2:42:GLY:H	2.00	0.68
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.27	0.68
1:XA:370:C:H2'	1:XA:371:G:H5'	1.76	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
13:XM:57:ARG:HH21	47:Y4:34:GLU:CA	2.07	0.68
24:YD:241:PRO:O	24:YD:243:GLY:N	2.27	0.68
27:YG:171:ALA:O	27:YG:175:LEU:HG	1.93	0.68
32:YP:39:LYS:CA	32:YP:45:LEU:HD11	2.23	0.68
33:YQ:90:VAL:CG1	33:YQ:91:GLU:N	2.57	0.68
33:YQ:133:ARG:O	33:YQ:134:ARG:HB2	1.94	0.68
40:YX:18:TYR:C	40:YX:20:GLY:H	2.02	0.68
44:Y1:74:VAL:HG12	44:Y1:74:VAL:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y4:15:ILE:N	47:Y4:15:ILE:HD13	2.09	0.68
1:QA:1053:G:N7	1:QA:1200:C:H5"	2.10	0.68
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.56	0.68
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.27	0.68
22:RA:608:A:OP1	26:RF:100:THR:OG1	2.10	0.68
25:RE:116:VAL:O	25:RE:117:MET:HB3	1.94	0.68
33:RQ:88:GLY:C	33:RQ:90:VAL:N	2.47	0.68
33:RQ:90:VAL:CG1	33:RQ:91:GLU:N	2.57	0.68
44:R1:20:ARG:HH11	44:R1:20:ARG:HG2	1.58	0.68
44:R1:87:PRO:O	44:R1:88:LYS:C	2.37	0.68
5:XE:63:ARG:O	5:XE:66:MET:HE2	1.94	0.68
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.09	0.68
22:YA:1820:U:C2	24:YD:202:LYS:HB3	2.28	0.68
44:Y1:20:ARG:HH11	44:Y1:20:ARG:HG2	1.58	0.68
45:Y2:64:LEU:HD22	45:Y2:68:ARG:HD2	1.77	0.68
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.67
10:QJ:96:ILE:HD13	10:QJ:96:ILE:N	2.09	0.67
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.67
22:RA:1184:G:OP1	46:R3:29:ARG:NH1	2.27	0.67
22:RA:1630:G:N2	22:RA:1636:C:O2	2.26	0.67
1:XA:737:A:H2'	1:XA:738:C:H6	1.59	0.67
2:XB:24:TRP:CD1	2:XB:24:TRP:H	2.11	0.67
3:XC:147:LYS:O	3:XC:203:PHE:HB3	1.92	0.67
22:YA:1980:G:O2'	22:YA:1982:C:OP2	2.12	0.67
28:YH:77:LYS:HG2	28:YH:77:LYS:O	1.94	0.67
33:YQ:66:ILE:HG13	33:YQ:67:ARG:H	1.58	0.67
35:YS:35:ILE:HD13	35:YS:101:LEU:HD23	1.76	0.67
1:QA:1106:G:H5"	3:QC:172:ARG:HG2	1.76	0.67
1:QA:1498:U:O2'	54:QX:2:U:OP1	2.11	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.08	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.09	0.67
13:QM:118:ALA:O	53:QV:28:C:O3'	2.12	0.67
19:QS:42:PRO:HD3	47:R4:63:TYR:HE2	1.57	0.67
26:RF:184:TYR:O	26:RF:188:ARG:HG3	1.94	0.67
33:RQ:104:PHE:CE1	33:RQ:125:LEU:HD11	2.29	0.67
35:RS:35:ILE:HD13	35:RS:101:LEU:HD23	1.76	0.67
49:R6:48:VAL:HG13	49:R6:49:HIS:H	1.59	0.67
1:XA:486:U:H2'	1:XA:487:A:C8	2.29	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.20	0.67
30:YN:96:GLU:CG	30:YN:97:ARG:H	2.00	0.67
31:YO:14:THR:O	31:YO:51:ALA:HB3	1.95	0.67
33:YQ:33:GLY:HA2	33:YQ:105:GLU:HA	1.76	0.67
33:YQ:104:PHE:CE1	33:YQ:125:LEU:HD11	2.29	0.67
41:YY:21:LYS:HG3	41:YY:22:GLY:N	2.09	0.67
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.67
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.77	0.67
25:RE:13:ARG:HH11	25:RE:13:ARG:CB	2.07	0.67
26:RF:107:LYS:O	26:RF:108:LYS:C	2.37	0.67
33:RQ:133:ARG:O	33:RQ:134:ARG:HB2	1.94	0.67
36:RT:111:ARG:C	36:RT:113:LYS:H	2.01	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.24	0.67
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
22:YA:469:G:O6	50:Y7:37:LYS:HE2	1.94	0.67
22:YA:2364:C:OP1	43:Y0:55:ARG:NH1	2.26	0.67
32:YP:65:ARG:HH11	32:YP:65:ARG:CG	2.06	0.67
36:YT:50:ILE:CD1	36:YT:102:ILE:HD11	2.25	0.67
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.29	0.67
22:RA:910:A:N3	22:RA:2264:C:O2'	2.27	0.67
28:RH:89:ILE:HG12	28:RH:89:ILE:O	1.93	0.67
31:RO:13:ASN:ND2	31:RO:96:THR:O	2.28	0.67
33:RQ:20:ALA:HB1	33:RQ:99:PRO:HD2	1.76	0.67
1:XA:971:G:H5"	1:XA:972:C:H5"	1.77	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67
22:YA:900:A:H5'	22:YA:901:A:OP2	1.94	0.67
22:YA:2502:G:H5"	22:YA:2503:A:H5"	1.76	0.67
24:YD:44:ASN:N	24:YD:44:ASN:ND2	2.42	0.67
32:YP:26:GLY:O	32:YP:28:GLY:N	2.26	0.67
33:YQ:12:GLN:CG	33:YQ:73:PRO:HD2	2.21	0.67
33:YQ:90:VAL:O	33:YQ:92:GLY:N	2.25	0.67
35:YS:67:ARG:HB2	35:YS:67:ARG:CZ	2.24	0.67
41:YY:14:LEU:HD23	41:YY:15:VAL:N	2.10	0.67
47:Y4:33:VAL:HG12	47:Y4:34:GLU:N	2.10	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
22:RA:1187:G:H5"	38:RV:81:TYR:CE2	2.29	0.67
22:RA:1798:U:O2'	22:RA:1802:A:O2'	2.13	0.67
22:RA:2818:G:OP2	34:RR:42:LYS:NZ	2.27	0.67
24:RD:135:PHE:CD2	24:RD:135:PHE:N	2.62	0.67
25:RE:10:GLY:H	25:RE:25:VAL:HG23	1.59	0.67
37:RU:92:ARG:O	37:RU:94:ASN:N	2.25	0.67
38:RV:25:LEU:H	38:RV:92:THR:HG21	1.60	0.67
39:RW:29:LEU:HD21	39:RW:33:ARG:NE	2.08	0.67
49:R6:43:CYS:SG	49:R6:44:ARG:HD3	2.35	0.67
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.67
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.75	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
22:YA:1057:A:H62	22:YA:1086:A:H2'	1.58	0.67
22:YA:1271:G:N2	22:YA:1617:C:O4'	2.26	0.67
25:YE:116:VAL:O	25:YE:117:MET:HB3	1.94	0.67
31:YO:25:LEU:HB2	31:YO:38:VAL:HG13	1.74	0.67
41:YY:49:VAL:O	41:YY:51:VAL:N	2.27	0.67
44:Y1:51:VAL:HG11	44:Y1:74:VAL:HG21	1.76	0.67
1:QA:1081:G:OP1	5:QE:16:THR:OG1	2.12	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
28:RH:126:PRO:CD	28:RH:127:GLU:H	2.07	0.67
32:RP:90:ARG:NE	32:RP:91:PHE:HD1	1.93	0.67
47:R4:33:VAL:HG12	47:R4:34:GLU:N	2.10	0.67
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.24	0.67
22:YA:102:G:OP2	45:Y2:7:ARG:NH2	2.27	0.67
22:YA:1416:G:H2'	22:YA:1417:C:C6	2.29	0.67
25:YE:13:ARG:HH11	25:YE:13:ARG:CB	2.07	0.67
35:YS:52:SER:O	35:YS:56:LEU:HD22	1.93	0.67
38:YV:25:LEU:H	38:YV:92:THR:HG21	1.60	0.67
42:YZ:70:LEU:HB2	42:YZ:91:LEU:HD21	1.77	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:14:ILE:HG12	25:RE:15:PHE:N	2.06	0.67
28:RH:4:ILE:HG13	28:RH:6:ARG:NH1	2.09	0.67
33:RQ:32:TYR:HD1	33:RQ:133:ARG:HA	1.60	0.67
34:RR:26:LYS:HE2	34:RR:70:LEU:O	1.95	0.67
1:XA:1054:C:C4	55:XY:34:C:C1'	2.78	0.67
1:XA:1151:A:H1'	10:XJ:39:PRO:HB2	1.77	0.67
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
13:XM:50:GLU:OE1	47:Y4:32:TYR:CE2	2.47	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.75	0.67
22:YA:780:G:H21	22:YA:783:A:H62	1.39	0.67
25:YE:26:ILE:HD13	25:YE:27:LEU:N	2.10	0.67
26:YF:107:LYS:O	26:YF:108:LYS:C	2.36	0.67
33:YQ:104:PHE:HE1	33:YQ:125:LEU:HD11	1.58	0.67
36:YT:108:ARG:HA	36:YT:111:ARG:CZ	2.24	0.67
37:YU:90:VAL:O	37:YU:92:ARG:N	2.26	0.67
48:Y5:4:HIS:HB3	48:Y5:5:PRO:HD3	1.75	0.67
49:Y6:48:VAL:HG13	49:Y6:49:HIS:H	1.60	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
22:RA:530:G:O2'	22:RA:532:A:N7	2.27	0.67
22:RA:896:A:C2	42:RZ:146:ILE:HD11	2.30	0.67
25:RE:16:ARG:O	25:RE:16:ARG:HG3	1.93	0.67
28:RH:125:VAL:CG1	28:RH:126:PRO:HG3	2.25	0.67
33:RQ:66:ILE:HG13	33:RQ:67:ARG:H	1.57	0.67
39:RW:60:ASN:C	39:RW:61:ASN:HD22	2.03	0.67
45:R2:47:ASN:H	45:R2:47:ASN:ND2	1.92	0.67
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.09	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.67
25:YE:62:PRO:O	25:YE:64:LYS:N	2.28	0.67
26:YF:34:TRP:HA	32:YP:6:LEU:HD12	1.77	0.67
26:YF:184:TYR:O	26:YF:188:ARG:HG3	1.94	0.67
31:YO:13:ASN:ND2	31:YO:96:THR:O	2.28	0.67
38:YV:44:LYS:O	38:YV:46:VAL:N	2.28	0.67
46:Y3:29:ARG:HB2	46:Y3:29:ARG:NH1	2.10	0.67
47:Y4:16:CYS:SG	47:Y4:33:VAL:HB	2.35	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
29:RI:73:GLU:HG3	29:RI:136:VAL:HG23	1.77	0.67
41:RY:61:ILE:CG2	41:RY:62:GLU:N	2.56	0.67
1:XA:411:A:N6	1:XA:413:G:H21	1.93	0.67
1:XA:1128:C:H42	1:XA:1144:G:H1	1.43	0.67
19:XS:64:GLU:C	47:Y4:55:ARG:HH12	2.03	0.67
22:YA:1341:U:OP2	22:YA:1394:U:O2'	2.12	0.67
24:YD:35:LYS:CA	24:YD:64:ILE:HG22	2.25	0.67
26:YF:46:ARG:HH11	26:YF:46:ARG:CG	2.04	0.67
28:YH:88:LEU:H	28:YH:88:LEU:HD22	1.59	0.67
44:Y1:86:SER:N	44:Y1:87:PRO:HD2	2.10	0.67
1:QA:923:A:OP1	5:QE:21:ALA:HB2	1.94	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
5:QE:63:ARG:O	5:QE:66:MET:HE2	1.94	0.67
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	0.67
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.77	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
22:RA:479:A:N3	22:RA:481:G:H5"	2.10	0.67
22:RA:1252:G:N3	37:RU:33:ARG:HD2	2.10	0.67
22:RA:2030:A:H4'	22:RA:2031:A:C8	2.30	0.67
22:RA:2355:C:O3'	43:R0:24:LYS:NZ	2.24	0.67
22:RA:2821:A:OP2	22:RA:2822:G:OP2	2.13	0.67
24:RD:35:LYS:CG	24:RD:64:ILE:N	2.56	0.67
28:RH:124:GLU:HB3	28:RH:132:ARG:HD2	1.77	0.67
41:RY:21:LYS:HG3	41:RY:22:GLY:N	2.09	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.67
19:XS:5:LEU:CD1	47:Y4:66:SER:HB3	2.24	0.67
22:YA:1068:G:O2'	22:YA:1096:A:N3	2.28	0.67
26:YF:103:LYS:HA	26:YF:106:ARG:CG	2.21	0.67
32:YP:61:ARG:H	32:YP:61:ARG:CD	2.08	0.67
41:YY:60:PHE:O	41:YY:61:ILE:HD12	1.95	0.67
49:Y6:43:CYS:SG	49:Y6:44:ARG:HD3	2.35	0.67
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.30	0.66
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:241:PRO:O	24:RD:243:GLY:N	2.28	0.66
32:RP:122:PRO:HA	32:RP:141:ALA:O	1.95	0.66
33:RQ:90:VAL:O	33:RQ:92:GLY:N	2.25	0.66
35:RS:107:GLU:H	35:RS:110:LEU:HD11	1.60	0.66
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.66
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	0.66
32:YP:122:PRO:HA	32:YP:141:ALA:O	1.95	0.66
39:YW:60:ASN:C	39:YW:61:ASN:HD22	2.03	0.66
42:YZ:45:ASP:OD1	42:YZ:49:ARG:NE	2.24	0.66
1:QA:745:C:OP1	1:QA:851:G:O2'	2.12	0.66
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.66
22:RA:2734:A:N6	22:RA:2770:G:O2'	2.28	0.66
24:RD:80:ALA:HB3	24:RD:94:LEU:CD1	2.25	0.66
32:RP:66:GLY:O	32:RP:67:MET:HB3	1.94	0.66
35:RS:67:ARG:HB2	35:RS:67:ARG:CZ	2.25	0.66
40:RX:57:LEU:HD12	40:RX:78:LYS:HB2	1.77	0.66
41:RY:42:VAL:CG1	41:RY:65:ALA:HB3	2.25	0.66
46:R3:29:ARG:HB2	46:R3:29:ARG:NH1	2.10	0.66
27:YG:179:PRO:HG3	47:Y4:38:LYS:HZ2	1.59	0.66
39:YW:18:ARG:HG3	39:YW:76:VAL:HG13	1.77	0.66
41:YY:75:ILE:HG12	41:YY:76:CYS:N	2.10	0.66
44:Y1:83:GLU:HG2	44:Y1:84:GLY:N	2.09	0.66
48:Y5:56:LYS:H	48:Y5:56:LYS:CD	2.07	0.66
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.07	0.66
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.42	0.66
22:RA:878:A:N6	22:RA:899:A:O2'	2.28	0.66
24:RD:145:VAL:HG12	24:RD:146:GLU:O	1.95	0.66
25:RE:9:VAL:HB	25:RE:25:VAL:HG23	1.75	0.66
25:RE:36:ARG:HH11	25:RE:36:ARG:HB3	1.60	0.66
28:RH:77:LYS:HG2	28:RH:77:LYS:O	1.94	0.66
31:RO:86:ILE:H	31:RO:86:ILE:HD12	1.60	0.66
44:R1:80:LEU:HD23	44:R1:80:LEU:N	2.10	0.66
1:XA:1492:A:OP1	12:XL:47:LYS:CG	2.43	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:32:SER:O	14:XN:40:CYS:C	2.37	0.66
23:YB:5:C:O2'	23:YB:27:C:O2	2.13	0.66
25:YE:51:PHE:O	25:YE:52:LEU:C	2.38	0.66
30:YN:57:ALA:HA	30:YN:60:ILE:HD11	1.78	0.66
44:Y1:56:GLN:N	44:Y1:56:GLN:HE21	1.93	0.66
44:Y1:87:PRO:O	44:Y1:88:LYS:C	2.37	0.66
45:Y2:65:ASN:HB3	45:Y2:69:ARG:NH1	2.10	0.66
1:QA:35:G:O2'	12:QL:118:SER:O	2.09	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
22:RA:2287:A:N6	22:RA:2344:U:H3	1.92	0.66
32:RP:1:MET:CE	32:RP:5:ASP:HB3	2.24	0.66
37:RU:88:ILE:HD13	37:RU:88:ILE:N	2.10	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
25:YE:28:ALA:O	25:YE:93:VAL:HG23	1.96	0.66
30:YN:58:ASP:H	30:YN:60:ILE:CD1	2.09	0.66
33:YQ:32:TYR:HD1	33:YQ:133:ARG:HA	1.61	0.66
37:YU:88:ILE:HD13	37:YU:88:ILE:N	2.10	0.66
38:YV:53:GLU:HG2	38:YV:53:GLU:O	1.94	0.66
1:QA:27:G:H4'	4:QD:209:ARG:HG3	1.77	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
24:RD:68:LYS:HB2	24:RD:70:TRP:CZ3	2.31	0.66
26:RF:34:TRP:HA	32:RP:6:LEU:HD12	1.77	0.66
31:RO:14:THR:O	31:RO:51:ALA:HB3	1.95	0.66
36:RT:50:ILE:CD1	36:RT:102:ILE:HD11	2.25	0.66
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.30	0.66
4:XD:14:ARG:O	4:XD:14:ARG:HD3	1.95	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
24:YD:68:LYS:HB2	24:YD:70:TRP:CZ3	2.31	0.66
25:YE:37:ARG:NE	25:YE:37:ARG:HA	2.11	0.66
27:YG:136:ARG:O	27:YG:154:GLY:HA3	1.95	0.66
32:YP:81:GLN:NE2	32:YP:106:LEU:O	2.29	0.66
40:YX:11:PRO:HB3	40:YX:92:LEU:HD21	1.78	0.66
44:Y1:73:LEU:C	44:Y1:75:GLU:H	2.03	0.66
48:Y5:40:LYS:NZ	48:Y5:48:GLU:HB2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:25:ASN:O	2:QB:27:LYS:N	2.28	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.95	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
12:QL:47:LYS:HZ2	54:QX:6:C:H5"	1.60	0.66
19:QS:69:HIS:ND1	47:R4:69:LYS:CE	2.56	0.66
25:RE:101:ARG:CZ	25:RE:171:GLU:HB2	2.25	0.66
26:RF:175:THR:O	26:RF:176:LEU:HB2	1.95	0.66
28:RH:168:PRO:O	28:RH:169:VAL:HG12	1.96	0.66
32:RP:81:GLN:NE2	32:RP:106:LEU:O	2.29	0.66
33:RQ:86:GLY:C	33:RQ:88:GLY:H	2.03	0.66
38:RV:44:LYS:O	38:RV:46:VAL:N	2.28	0.66
41:RY:94:LYS:HE3	41:RY:101:LYS:NZ	2.11	0.66
49:R6:27:LYS:HB2	49:R6:27:LYS:HZ2	1.57	0.66
7:XG:69:VAL:HG12	7:XG:69:VAL:O	1.95	0.66
22:YA:1286:A:H1'	22:YA:1288:U:OP2	1.96	0.66
24:YD:172:TYR:HB3	24:YD:184:LYS:HG2	1.77	0.66
32:YP:66:GLY:O	32:YP:67:MET:HB3	1.94	0.66
33:YQ:88:GLY:C	33:YQ:90:VAL:H	2.02	0.66
35:YS:106:ARG:HA	35:YS:110:LEU:CD2	2.25	0.66
35:YS:107:GLU:H	35:YS:110:LEU:HD11	1.60	0.66
43:Y0:7:LEU:C	53:XV:2:G:H4'	2.20	0.66
51:Y8:30:ARG:O	51:Y8:31:HIS:HB2	1.96	0.66
54:QX:5:C:H2'	54:QX:6:C:C6	2.31	0.66
1:QA:762:C:H2'	1:QA:763:G:H8	1.61	0.66
1:QA:1077:G:O6	5:QE:47:LYS:NZ	2.29	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
6:QF:1:MET:HE1	6:QF:68:PRO:HB3	1.78	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
22:RA:1542:G:O6	22:RA:1543:A:N6	2.27	0.66
22:RA:2287:A:H62	22:RA:2344:U:H3	1.43	0.66
27:RG:136:ARG:O	27:RG:154:GLY:HA3	1.95	0.66
29:RI:5:LEU:HD12	29:RI:5:LEU:H	1.59	0.66
41:RY:75:ILE:HG12	41:RY:76:CYS:N	2.10	0.66
44:R1:51:VAL:HG11	44:R1:74:VAL:HG21	1.76	0.66
44:R1:86:SER:N	44:R1:87:PRO:HD2	2.10	0.66
1:XA:941:G:H1	1:XA:1342:C:H42	1.42	0.66
1:XA:1053:G:H5'	1:XA:1054:C:H5'	1.77	0.66
2:XB:24:TRP:H	2:XB:24:TRP:HD1	1.43	0.66
22:YA:2593:U:H2'	22:YA:2594:C:C6	2.31	0.66
24:YD:135:PHE:CD2	24:YD:135:PHE:N	2.62	0.66
32:YP:61:ARG:NH2	51:Y8:13:ARG:HD2	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:47:ASN:H	45:Y2:47:ASN:ND2	1.92	0.66
53:QV:35:A:N1	54:QX:3:G:C4	2.64	0.66
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.66
22:RA:1006:C:H1'	30:RN:106:MET:HE2	1.78	0.66
24:RD:35:LYS:CA	24:RD:64:ILE:HG22	2.26	0.66
24:RD:44:ASN:HB3	24:RD:49:ILE:HG22	1.78	0.66
25:RE:26:ILE:HD13	25:RE:27:LEU:N	2.10	0.66
25:RE:62:PRO:O	25:RE:64:LYS:N	2.28	0.66
30:RN:58:ASP:H	30:RN:60:ILE:CD1	2.08	0.66
33:RQ:33:GLY:HA2	33:RQ:105:GLU:HA	1.76	0.66
35:RS:88:ASP:OD2	35:RS:90:GLY:N	2.28	0.66
41:RY:14:LEU:HD23	41:RY:15:VAL:N	2.10	0.66
41:RY:47:LYS:HG2	41:RY:60:PHE:CE1	2.31	0.66
42:RZ:28:MET:HE1	42:RZ:61:LEU:HD11	1.78	0.66
47:R4:16:CYS:SG	47:R4:33:VAL:HB	2.35	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
22:YA:1794:U:H2'	22:YA:1795:C:H6	1.61	0.66
24:YD:35:LYS:HE3	24:YD:64:ILE:C	2.21	0.66
37:YU:65:ILE:HG12	37:YU:96:ALA:CB	2.26	0.66
53:QV:37:A:C2	54:QX:1:A:C6	2.83	0.66
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.66
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.20	0.66
22:RA:2068:U:H3	22:RA:2430:A:H2	1.41	0.66
35:RS:106:ARG:HA	35:RS:110:LEU:CD2	2.26	0.66
1:XA:372:C:N4	1:XA:389:A:N6	2.44	0.66
1:XA:1086:U:H3	1:XA:1099:G:H22	1.43	0.66
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.66
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
13:XM:121:LYS:NZ	55:XY:39:C:HO2'	1.94	0.66
22:YA:1077:A:H5'	22:YA:1078:U:H5"	1.78	0.66
27:YG:145:THR:HG23	47:Y4:28:LYS:NZ	2.11	0.66
28:YH:125:VAL:CG1	28:YH:126:PRO:HG3	2.25	0.66
41:YY:94:LYS:HE3	41:YY:101:LYS:NZ	2.11	0.66
44:Y1:11:ARG:HB3	44:Y1:11:ARG:HH11	1.61	0.66
44:Y1:80:LEU:HD23	44:Y1:80:LEU:N	2.10	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
24:RD:121:PRO:HB3	24:RD:135:PHE:CE1	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:237:GLU:N	24:RD:237:GLU:OE1	2.29	0.66
36:RT:22:PHE:CD2	36:RT:22:PHE:N	2.63	0.66
51:R8:30:ARG:O	51:R8:31:HIS:HB2	1.96	0.66
24:YD:183:ARG:HH11	24:YD:183:ARG:CG	2.07	0.66
25:YE:13:ARG:NH1	25:YE:21:VAL:HG12	2.11	0.66
30:YN:134:ARG:N	30:YN:135:PRO:HD3	1.97	0.66
33:YQ:20:ALA:HB1	33:YQ:99:PRO:HD2	1.77	0.66
41:YY:47:LYS:HG2	41:YY:60:PHE:CE1	2.31	0.66
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.65
19:QS:42:PRO:CG	47:R4:63:TYR:CE2	2.79	0.65
22:RA:1142(A):A:H4'	30:RN:25:ARG:HH22	1.61	0.65
22:RA:2224:G:OP1	24:RD:268:ARG:HD3	1.96	0.65
32:RP:61:ARG:NH2	51:R8:13:ARG:HD2	2.10	0.65
40:RX:65:ARG:HD3	40:RX:65:ARG:N	2.12	0.65
41:RY:99:CYS:SG	41:RY:100:ALA:N	2.69	0.65
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.77	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:HB2	1.77	0.65
6:XF:1:MET:HE1	6:XF:68:PRO:HB3	1.78	0.65
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.65
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.65
22:YA:2729:G:H1'	25:YE:187:ALA:HB2	1.78	0.65
23:YB:12:C:O2'	43:Y0:74:ARG:HG3	1.95	0.65
24:YD:121:PRO:HB3	24:YD:135:PHE:CE1	2.30	0.65
31:YO:71:ARG:NH1	36:YT:74:ARG:HH21	1.94	0.65
31:YO:86:ILE:H	31:YO:86:ILE:HD12	1.61	0.65
31:YO:110:GLY:HA2	31:YO:112:MET:HE3	1.77	0.65
35:YS:88:ASP:OD2	35:YS:90:GLY:N	2.28	0.65
42:YZ:103:ARG:HB2	42:YZ:138:GLU:HG2	1.77	0.65
1:QA:991:U:O4	1:QA:1212:U:O2'	2.08	0.65
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.65
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
22:RA:2627:G:O2'	22:RA:2781:A:N1	2.26	0.65
41:RY:60:PHE:O	41:RY:61:ILE:HD12	1.95	0.65
45:R2:64:LEU:HD22	45:R2:68:ARG:HD2	1.76	0.65
1:XA:1065:U:O2'	1:XA:1066:C:OP2	2.13	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.60	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.65
25:YE:36:ARG:HH11	25:YE:36:ARG:HB3	1.60	0.65
25:YE:101:ARG:CZ	25:YE:171:GLU:HB2	2.25	0.65
28:YH:124:GLU:HB3	28:YH:132:ARG:HD2	1.77	0.65
31:YO:113:LYS:O	31:YO:117:LEU:HD12	1.96	0.65
34:YR:26:LYS:HE2	34:YR:70:LEU:O	1.95	0.65
39:YW:65:LEU:HD12	39:YW:68:ARG:NH1	2.10	0.65
40:YX:65:ARG:HD3	40:YX:65:ARG:N	2.12	0.65
41:YY:35:TYR:CE1	41:YY:69:ALA:HB3	2.31	0.65
42:YZ:102:LEU:HG	42:YZ:123:ASP:HA	1.78	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.97	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
22:RA:996:A:H4'	37:RU:92:ARG:HE	1.61	0.65
24:RD:183:ARG:HH11	24:RD:183:ARG:CG	2.07	0.65
25:RE:11:MET:HE3	25:RE:186:GLY:HA2	1.79	0.65
31:RO:113:LYS:O	31:RO:117:LEU:HD12	1.96	0.65
32:RP:138:LEU:HD11	32:RP:144:GLU:HG3	1.78	0.65
38:RV:76:LYS:HB2	38:RV:81:TYR:HB3	1.79	0.65
39:RW:25:ARG:NH1	39:RW:25:ARG:HB2	2.11	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
22:YA:2308:G:H22	22:YA:2311:A:H2	1.43	0.65
24:YD:80:ALA:HB3	24:YD:94:LEU:CD1	2.25	0.65
24:YD:145:VAL:HG12	24:YD:146:GLU:O	1.96	0.65
41:YY:42:VAL:CG1	41:YY:65:ALA:HB3	2.26	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.96	0.65
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
22:RA:2250:G:C6	33:RQ:82:ARG:HD2	2.32	0.65
22:RA:2489:G:N2	22:RA:2491:U:O4	2.28	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:86:GLY:C	33:RQ:88:GLY:N	2.52	0.65
38:RV:53:GLU:HG2	38:RV:53:GLU:O	1.94	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.21	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.77	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
22:YA:1434:A:H61	22:YA:1558:A:N6	1.94	0.65
24:YD:27:THR:CG2	24:YD:28:GLU:H	2.08	0.65
28:YH:168:PRO:O	28:YH:169:VAL:HG12	1.96	0.65
32:YP:39:LYS:HA	32:YP:45:LEU:HD13	1.79	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
22:RA:1292:U:H2'	22:RA:1293:C:C6	2.31	0.65
22:RA:1660:C:H2'	22:RA:1661:G:H8	1.62	0.65
24:RD:27:THR:CG2	24:RD:28:GLU:H	2.09	0.65
24:RD:176:ARG:HH11	24:RD:176:ARG:HG2	1.60	0.65
28:RH:128:PRO:CD	28:RH:129:THR:H	2.09	0.65
39:RW:18:ARG:HG3	39:RW:76:VAL:HG13	1.77	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
13:XM:3:ARG:NH1	27:YG:113:ARG:NH2	2.41	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.65	0.65
22:YA:583:G:OP2	37:YU:10:ARG:NH1	2.30	0.65
22:YA:2030:A:H4'	22:YA:2031:A:H8	1.61	0.65
23:YB:18:G:H1	23:YB:65:C:H42	1.44	0.65
32:YP:90:ARG:NE	32:YP:91:PHE:HD1	1.93	0.65
45:Y2:42:GLY:O	45:Y2:44:LEU:N	2.30	0.65
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.21	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
22:RA:186:G:H2'	22:RA:187:G:H8	1.62	0.65
22:RA:635:C:O2'	22:RA:639:U:OP1	2.14	0.65
22:RA:987:G:O2'	22:RA:1000:A:N3	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2208:U:H1'	24:RD:151:LYS:HE2	1.79	0.65
25:RE:4:ILE:C	25:RE:5:LEU:HD23	2.22	0.65
25:RE:28:ALA:O	25:RE:93:VAL:HG23	1.95	0.65
31:RO:71:ARG:NH1	36:RT:74:ARG:HH21	1.94	0.65
32:RP:39:LYS:HA	32:RP:45:LEU:HD13	1.79	0.65
44:R1:11:ARG:HB3	44:R1:11:ARG:HH11	1.61	0.65
47:R4:49:PHE:O	47:R4:50:VAL:HG23	1.97	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.27	0.65
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
22:YA:1251:C:OP1	37:YU:10:ARG:HG3	1.96	0.65
25:YE:201:THR:HG22	25:YE:203:LYS:N	2.07	0.65
44:Y1:80:LEU:C	44:Y1:81:LYS:CD	2.69	0.65
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.65
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
22:RA:498:G:N3	41:RY:47:LYS:NZ	2.42	0.65
26:RF:155:LEU:HD13	26:RF:174:VAL:CG1	2.27	0.65
31:RO:12:ASP:OD1	31:RO:14:THR:HG23	1.97	0.65
37:RU:90:VAL:CG1	37:RU:91:ASP:H	2.00	0.65
44:R1:29:GLY:O	44:R1:30:VAL:HG23	1.97	0.65
48:R5:40:LYS:NZ	48:R5:48:GLU:HB2	2.11	0.65
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.59	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.62	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.96	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
19:XS:67:VAL:CG2	47:Y4:60:GLN:HE22	2.10	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
22:YA:1316:U:H2'	22:YA:1317:A:H8	1.60	0.65
22:YA:2250:G:C6	33:YQ:82:ARG:HD2	2.31	0.65
25:YE:10:GLY:H	25:YE:25:VAL:HG23	1.60	0.65
36:YT:11:GLU:N	36:YT:11:GLU:OE1	2.27	0.65
41:YY:99:CYS:SG	41:YY:100:ALA:N	2.69	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y8:52:LYS:O	51:Y8:52:LYS:HG3	1.97	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.27	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
22:RA:189:G:H2'	22:RA:205:G:N2	2.11	0.65
22:RA:1754:C:OP1	36:RT:96:ARG:NH1	2.26	0.65
23:RB:38:C:H42	23:RB:44:G:H1	1.44	0.65
24:RD:172:TYR:HB3	24:RD:184:LYS:HG2	1.77	0.65
25:RE:13:ARG:NH1	25:RE:21:VAL:HG12	2.11	0.65
25:RE:37:ARG:HA	25:RE:37:ARG:NE	2.11	0.65
25:RE:51:PHE:O	25:RE:52:LEU:C	2.38	0.65
31:RO:7:TYR:CE1	31:RO:20:MET:HB2	2.32	0.65
33:RQ:80:GLU:C	33:RQ:81:VAL:HG13	2.22	0.65
45:R2:40:SER:C	45:R2:42:GLY:N	2.50	0.65
47:R4:36:CYS:O	47:R4:37:SER:O	2.14	0.65
1:XA:703:G:O2'	1:XA:704:A:OP2	2.15	0.65
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.79	0.65
22:YA:704:G:H2'	22:YA:726:G:N2	2.10	0.65
22:YA:1535:U:H5"	22:YA:1537:C:C4	2.31	0.65
28:YH:128:PRO:CD	28:YH:129:THR:H	2.09	0.65
29:YI:79:ILE:HB	29:YI:142:VAL:HA	1.77	0.65
30:YN:43:THR:HB	30:YN:46:VAL:CG1	2.27	0.65
32:YP:113:LYS:HG2	32:YP:115:LEU:HD23	1.79	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
22:RA:1138:G:H21	30:RN:106:MET:HE3	1.60	0.65
26:RF:45:ARG:CG	26:RF:45:ARG:HH11	2.09	0.65
27:RG:145:THR:HG23	47:R4:28:LYS:NZ	2.11	0.65
32:RP:6:LEU:O	32:RP:7:ARG:HG2	1.97	0.65
32:RP:138:LEU:C	32:RP:140:ALA:N	2.55	0.65
33:RQ:88:GLY:C	33:RQ:90:VAL:H	2.02	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:96:ALA:C	37:RU:98:LEU:H	2.04	0.65
44:R1:56:GLN:N	44:R1:56:GLN:HE21	1.93	0.65
45:R2:69:ARG:HB2	45:R2:69:ARG:NH1	2.11	0.65
48:R5:56:LYS:H	48:R5:56:LYS:CD	2.07	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.65
7:XG:141:VAL:HG12	7:XG:141:VAL:O	1.95	0.65
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.65
14:XN:40:CYS:SG	14:XN:43:CYS:CB	2.83	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
22:YA:984:A:H5"	22:YA:985:C:H5	1.60	0.65
22:YA:1903:G:OP2	24:YD:241:PRO:HB2	1.96	0.65
24:YD:44:ASN:HB3	24:YD:49:ILE:HG22	1.78	0.65
32:YP:6:LEU:O	32:YP:7:ARG:HG2	1.97	0.65
32:YP:138:LEU:HD11	32:YP:144:GLU:HG3	1.78	0.65
45:Y2:69:ARG:NH1	45:Y2:69:ARG:HB2	2.11	0.65
51:Y8:56:GLU:N	51:Y8:56:GLU:OE1	2.30	0.65
54:XX:4:C:C4	55:XY:37:1MG:CM1	2.80	0.65
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.61	0.65
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.60	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.65
28:RH:51:ARG:HH11	28:RH:51:ARG:HG3	1.61	0.65
29:RI:133:HIS:HB2	29:RI:134:PRO:HD2	1.79	0.65
37:RU:74:LEU:HD23	37:RU:114:LYS:HD3	1.78	0.65
41:RY:35:TYR:CE1	41:RY:69:ALA:HB3	2.31	0.65
42:RZ:166:SER:HB2	42:RZ:168:GLU:N	2.12	0.65
44:R1:80:LEU:C	44:R1:81:LYS:CD	2.69	0.65
49:R6:7:ILE:HG13	49:R6:8:LYS:N	2.06	0.65
1:XA:1308:U:H2'	1:XA:1309:G:H8	1.61	0.65
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
2:XB:178:ARG:HD2	8:XH:71:GLY:HA2	1.79	0.65
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.65
13:XM:93:ARG:NH1	22:YA:887:A:OP1	2.30	0.65
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.65
22:YA:1265:A:C8	22:YA:1267:U:C2	2.85	0.65
32:YP:97:PRO:HD3	32:YP:126:VAL:O	1.97	0.65
33:YQ:23:GLY:HA3	33:YQ:101:ARG:NH1	2.12	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:28:LEU:HD21	34:YR:114:VAL:HG12	1.79	0.65
37:YU:74:LEU:HD23	37:YU:114:LYS:HD3	1.78	0.65
39:YW:25:ARG:HB2	39:YW:25:ARG:NH1	2.11	0.65
39:YW:59:VAL:HG12	39:YW:60:ASN:N	2.11	0.65
1:QA:973:G:O6	1:QA:974:A:N6	2.30	0.64
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.64
9:QI:128:ARG:CD	53:QV:32:C:OP2	2.45	0.64
32:RP:97:PRO:HD3	32:RP:126:VAL:O	1.97	0.64
44:R1:73:LEU:C	44:R1:75:GLU:H	2.03	0.64
44:R1:80:LEU:HD12	44:R1:81:LYS:HE3	1.78	0.64
48:R5:40:LYS:HD3	48:R5:46:CYS:CB	2.26	0.64
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.31	0.64
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.64
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
14:XN:19:ARG:O	14:XN:20:ALA:C	2.40	0.64
22:YA:583:G:H5”	37:YU:10:ARG:HH12	1.62	0.64
22:YA:1113:U:OP1	28:YH:2:SER:N	2.31	0.64
22:YA:1530:G:O6	22:YA:1542:G:N2	2.30	0.64
22:YA:2882:A:OP1	34:YR:96:ARG:NH1	2.29	0.64
24:YD:77:ALA:HB2	24:YD:97:TYR:HA	1.77	0.64
24:YD:176:ARG:HH11	24:YD:176:ARG:HG2	1.61	0.64
36:YT:22:PHE:N	36:YT:22:PHE:CD2	2.63	0.64
48:Y5:40:LYS:HD3	48:Y5:46:CYS:CB	2.26	0.64
53:QV:6:G:H1	53:QV:67:C:H42	1.45	0.64
54:QX:5:C:H2’	54:QX:6:C:H6	1.62	0.64
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.64
22:RA:827:U:H2’	22:RA:2068:U:O2	1.96	0.64
25:RE:50:GLY:HA3	25:RE:74:PRO:HG3	1.79	0.64
28:RH:105:LEU:H	28:RH:105:LEU:CD1	2.09	0.64
28:RH:148:ILE:O	28:RH:151:ILE:HG12	1.98	0.64
31:RO:110:GLY:HA2	31:RO:112:MET:HE3	1.77	0.64
33:RQ:81:VAL:O	33:RQ:82:ARG:HG2	1.97	0.64
37:RU:65:ILE:HG12	37:RU:96:ALA:CB	2.26	0.64
38:RV:43:GLU:OE2	38:RV:43:GLU:HA	1.95	0.64
47:R4:71:ARG:HH11	47:R4:71:ARG:CG	1.98	0.64
1:XA:601:C:H2’	1:XA:602:A:C8	2.31	0.64
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.30	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:7:ILE:HG13	14:XN:8:GLU:N	2.11	0.64
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
29:YI:8:PRO:HG3	29:YI:14:ASP:HB2	1.78	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
22:RA:637:A:H2'	32:RP:117:GLU:OE2	1.97	0.64
25:RE:35:GLN:CG	25:RE:37:ARG:HE	2.11	0.64
25:RE:104:VAL:HG11	25:RE:188:VAL:CG2	2.27	0.64
36:RT:11:GLU:N	36:RT:11:GLU:OE1	2.27	0.64
37:RU:102:GLU:HG3	38:RV:2:PHE:HE2	1.61	0.64
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.33	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
28:YH:117:PRO:HB3	28:YH:123:PHE:CE1	2.33	0.64
32:YP:98:GLU:O	32:YP:101:VAL:HG12	1.98	0.64
33:YQ:80:GLU:C	33:YQ:81:VAL:HG13	2.22	0.64
33:YQ:86:GLY:C	33:YQ:88:GLY:N	2.52	0.64
37:YU:102:GLU:HG3	38:YV:2:PHE:HE2	1.62	0.64
38:YV:43:GLU:HA	38:YV:43:GLU:OE2	1.95	0.64
38:YV:76:LYS:HB2	38:YV:81:TYR:HB3	1.79	0.64
47:Y4:36:CYS:O	47:Y4:37:SER:O	2.14	0.64
1:QA:243:A:H4'	1:QA:244:U:H3'	1.78	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.97	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64
27:RG:81:LYS:O	27:RG:82:LEU:HB2	1.96	0.64
27:RG:82:LEU:HA	27:RG:86:MET:SD	2.37	0.64
30:RN:15:LEU:HD12	30:RN:136:GLU:HB2	1.79	0.64
30:RN:57:ALA:HA	30:RN:60:ILE:HD11	1.78	0.64
33:RQ:10:ARG:O	33:RQ:11:LYS:HB2	1.98	0.64
1:XA:1002:G:H2'	1:XA:1003:G:C8	2.33	0.64
1:XA:1054:C:C4	55:XY:34:C:H1'	2.32	0.64
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.12	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.64
22:YA:2022:U:O2'	22:YA:2617:C:H5'	1.97	0.64
27:YG:114:ILE:CG2	27:YG:117:PHE:HB2	2.27	0.64
28:YH:105:LEU:H	28:YH:105:LEU:CD1	2.09	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:81:VAL:O	33:YQ:82:ARG:HG2	1.97	0.64
35:YS:78:LEU:HD11	35:YS:107:GLU:O	1.98	0.64
44:Y1:29:GLY:O	44:Y1:30:VAL:HG23	1.97	0.64
53:QV:37:A:N1	54:QX:1:A:N1	2.44	0.64
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.78	0.64
1:QA:662:G:O2'	1:QA:836:G:OP1	2.16	0.64
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.62	0.64
1:QA:1397:C:H1'	54:QX:8:A:C6	2.32	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
24:RD:77:ALA:HB2	24:RD:97:TYR:HA	1.77	0.64
24:RD:236:GLY:C	24:RD:237:GLU:OE1	2.39	0.64
34:RR:2:ARG:HG2	34:RR:5:LYS:NZ	2.13	0.64
34:RR:75:LEU:HD13	34:RR:75:LEU:C	2.22	0.64
39:RW:59:VAL:HG12	39:RW:60:ASN:N	2.11	0.64
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.79	0.64
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.77	0.64
13:XM:121:LYS:NZ	55:XY:40:G:P	2.71	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
22:YA:910:A:N3	22:YA:2264:C:O2'	2.29	0.64
22:YA:942:G:O2'	22:YA:1189:A:N3	2.26	0.64
25:YE:104:VAL:HG11	25:YE:188:VAL:CG2	2.27	0.64
26:YF:155:LEU:HD13	26:YF:174:VAL:CG1	2.27	0.64
26:YF:175:THR:O	26:YF:176:LEU:HB2	1.95	0.64
27:YG:82:LEU:HA	27:YG:86:MET:SD	2.38	0.64
41:YY:56:PRO:HG2	41:YY:57:GLN:OE1	1.98	0.64
47:Y4:35:VAL:O	47:Y4:37:SER:N	2.26	0.64
1:QA:690:G:H2'	1:QA:691:G:O4'	1.98	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
22:RA:270(S):G:H1'	44:R1:78:LYS:HD2	1.79	0.64
39:RW:86:LEU:HD12	39:RW:87:PRO:CD	2.23	0.64
41:RY:56:PRO:HG2	41:RY:57:GLN:OE1	1.98	0.64
51:R8:56:GLU:N	51:R8:56:GLU:OE1	2.30	0.64
1:XA:544:G:H2'	1:XA:545:C:C6	2.32	0.64
1:XA:1305:G:OP1	21:XU:2:GLY:HA2	1.97	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.27	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.64
22:YA:1022:G:H22	22:YA:1142(A):A:H2	1.44	0.64
27:YG:81:LYS:O	27:YG:82:LEU:HB2	1.96	0.64
28:YH:51:ARG:HG3	28:YH:51:ARG:HH11	1.61	0.64
30:YN:1:MET:HE2	38:YV:12:TYR:HA	1.80	0.64
30:YN:15:LEU:HD12	30:YN:136:GLU:HB2	1.79	0.64
31:YO:12:ASP:OD1	31:YO:14:THR:HG23	1.97	0.64
33:YQ:81:VAL:O	33:YQ:82:ARG:HD3	1.98	0.64
33:YQ:86:GLY:C	33:YQ:88:GLY:H	2.03	0.64
34:YR:75:LEU:HD13	34:YR:75:LEU:C	2.22	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
11:QK:103:LEU:H	11:QK:103:LEU:HD22	1.62	0.64
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
22:RA:49:A:H4'	22:RA:50:U:H5"	1.79	0.64
22:RA:769:G:H2'	22:RA:770:G:H8	1.62	0.64
24:RD:35:LYS:HE3	24:RD:64:ILE:C	2.21	0.64
24:RD:182:LEU:H	24:RD:272:ALA:HB3	1.63	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
22:YA:259:G:H21	22:YA:621:A:H8	1.43	0.64
25:YE:69:LYS:O	25:YE:71:GLY:N	2.27	0.64
26:YF:45:ARG:CG	26:YF:45:ARG:HH11	2.09	0.64
28:YH:92:ILE:HD12	28:YH:92:ILE:H	1.63	0.64
37:YU:92:ARG:C	37:YU:94:ASN:H	2.05	0.64
41:YY:86:ARG:O	41:YY:92:ASN:HB2	1.97	0.64
1:QA:377:G:H1	1:QA:386:C:H42	1.46	0.64
1:QA:529:G:O6	12:QL:49:ASN:HA	1.98	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
33:RQ:23:GLY:HA3	33:RQ:101:ARG:NH1	2.12	0.64
1:XA:1049:U:HO2'	14:XN:2:ALA:N	1.96	0.64
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.13	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
22:YA:1681:G:H8	22:YA:1681:G:OP2	1.80	0.64
22:YA:2392:A:H8	32:YP:60:MET:HG3	1.61	0.64
22:YA:2583:G:O2'	56:Z8:76:PPU:H103	1.97	0.64
28:YH:148:ILE:O	28:YH:151:ILE:HG12	1.97	0.64
31:YO:7:TYR:CE1	31:YO:20:MET:HB2	2.32	0.64
35:YS:26:LEU:HD22	35:YS:87:PHE:HD1	1.63	0.64
44:Y1:80:LEU:HD12	44:Y1:81:LYS:HE3	1.78	0.64
1:QA:701:C:H1'	1:QA:703:G:C6	2.33	0.64
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.64
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.10	0.64
22:RA:336:C:HO2'	41:RY:35:TYR:HH	1.43	0.64
22:RA:1678:G:H22	22:RA:1989:G:H22	1.43	0.64
22:RA:2394:C:OP1	32:RP:63:PRO:HD2	1.98	0.64
22:RA:2576:G:O2'	22:RA:2579:C:OP2	2.10	0.64
32:RP:98:GLU:O	32:RP:101:VAL:HG12	1.98	0.64
32:RP:105:LEU:O	32:RP:106:LEU:CB	2.42	0.64
37:RU:92:ARG:C	37:RU:94:ASN:H	2.05	0.64
40:RX:11:PRO:HB3	40:RX:92:LEU:HD21	1.78	0.64
44:R1:91:LYS:HG3	44:R1:92:LYS:H	1.63	0.64
1:XA:720:C:H5"	18:XR:52:PRO:HA	1.79	0.64
2:XB:8:LYS:H	2:XB:8:LYS:CD	2.09	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.97	0.64
24:YD:12:SER:C	24:YD:14:ARG:H	2.06	0.64
24:YD:135:PHE:N	24:YD:135:PHE:HD2	1.96	0.64
26:YF:11:VAL:HG12	26:YF:12:LEU:N	2.13	0.64
34:YR:2:ARG:HG2	34:YR:5:LYS:NZ	2.13	0.64
38:YV:36:PRO:HA	38:YV:56:SER:OG	1.98	0.64
53:QV:35:A:N3	54:QX:3:G:N2	2.46	0.64
25:RE:201:THR:HG21	25:RE:203:LYS:HB3	1.80	0.64
27:RG:114:ILE:CG2	27:RG:117:PHE:HB2	2.28	0.64
28:RH:92:ILE:H	28:RH:92:ILE:HD12	1.63	0.64
32:RP:113:LYS:HG2	32:RP:115:LEU:HD23	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:30:GLY:HA3	33:RQ:106:VAL:O	1.98	0.64
34:RR:79:LEU:HD23	34:RR:79:LEU:C	2.23	0.64
47:R4:63:TYR:C	47:R4:65:ASP:H	2.05	0.64
1:XA:296:U:H2'	1:XA:297:G:C8	2.33	0.64
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
13:XM:62:ASN:HD21	47:Y4:47:GLN:HE22	1.46	0.64
14:XN:18:VAL:HG23	14:XN:19:ARG:H	1.63	0.64
22:YA:918:A:N3	23:YB:80:U:O2'	2.30	0.64
22:YA:2758:A:C4	28:YH:67:LEU:HD21	2.33	0.64
24:YD:18:VAL:HG12	24:YD:19:ALA:O	1.98	0.64
26:YF:46:ARG:HG2	26:YF:46:ARG:NH1	2.00	0.64
28:YH:3:ARG:HA	28:YH:3:ARG:NE	2.12	0.64
30:YN:39:ARG:HB3	30:YN:41:ASP:OD1	1.98	0.64
44:Y1:82:LEU:CD1	44:Y1:83:GLU:CA	2.76	0.64
47:Y4:49:PHE:O	47:Y4:50:VAL:HG23	1.97	0.64
51:Y8:48:PHE:N	51:Y8:48:PHE:CD1	2.66	0.64
53:QV:35:A:C4	54:QX:3:G:C2	2.86	0.64
54:XX:4:C:C5	55:XY:37:1MG:HM11	2.32	0.64
1:QA:573:A:N3	1:QA:883:C:O2'	2.30	0.63
1:QA:1152:A:H5"	10:QJ:13:HIS:HD2	1.63	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
9:QI:47:LEU:N	9:QI:47:LEU:HD22	2.14	0.63
9:QI:97:LYS:HB3	9:QI:98:PRO:HD3	1.79	0.63
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.63
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.63
22:RA:1296:G:OP1	22:RA:2709:G:O2'	2.15	0.63
24:RD:12:SER:C	24:RD:14:ARG:H	2.06	0.63
31:RO:86:ILE:HD12	31:RO:86:ILE:N	2.13	0.63
33:RQ:104:PHE:O	33:RQ:105:GLU:HB3	1.98	0.63
34:RR:28:LEU:HD21	34:RR:114:VAL:HG12	1.79	0.63
35:RS:42:ASP:C	35:RS:44:LYS:H	2.06	0.63
39:RW:74:ALA:O	39:RW:75:TYR:HB3	1.98	0.63
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.63
13:XM:121:LYS:HZ1	55:XY:39:C:HO2'	1.44	0.63
22:YA:852:G:H1	22:YA:925:C:H42	1.45	0.63
22:YA:1336:A:H2'	22:YA:1337:G:H8	1.63	0.63
25:YE:4:ILE:C	25:YE:5:LEU:HD23	2.23	0.63
25:YE:14:ILE:CG1	25:YE:15:PHE:H	2.08	0.63
30:YN:41:ASP:O	30:YN:48:MET:HE3	1.98	0.63
31:YO:104:ARG:HG2	31:YO:104:ARG:NH1	2.14	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:104:PHE:O	33:YQ:105:GLU:HB3	1.98	0.63
37:YU:92:ARG:O	37:YU:94:ASN:N	2.25	0.63
40:YX:57:LEU:HD12	40:YX:78:LYS:HB2	1.77	0.63
1:QA:855:G:OP2	1:QA:871:U:N3	2.28	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
24:RD:35:LYS:HZ1	24:RD:65:ILE:HA	1.62	0.63
30:RN:1:MET:HE1	37:RU:95:LEU:CD2	2.18	0.63
30:RN:43:THR:HB	30:RN:46:VAL:CG1	2.27	0.63
38:RV:52:VAL:CG2	38:RV:55:ALA:HB3	2.28	0.63
40:RX:63:LYS:O	40:RX:64:LYS:HD2	1.98	0.63
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.33	0.63
1:XA:1118:C:H42	1:XA:1155:G:H1	1.46	0.63
2:XB:158:LEU:O	2:XB:158:LEU:HD12	1.97	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
22:YA:191:A:HO2'	22:YA:678:C:HO2'	1.46	0.63
22:YA:566:U:OP1	32:YP:29:LYS:HE2	1.98	0.63
44:Y1:91:LYS:HG3	44:Y1:92:LYS:H	1.62	0.63
1:QA:688:G:H2'	1:QA:689:C:H6	1.62	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.80	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
22:RA:2723:C:H5"	34:RR:1:MET:HG2	1.79	0.63
24:RD:147:LEU:CD1	24:RD:155:LEU:HD11	2.26	0.63
26:RF:132:VAL:HG23	26:RF:133:ASN:N	2.14	0.63
28:RH:3:ARG:HA	28:RH:3:ARG:NE	2.12	0.63
28:RH:117:PRO:HB3	28:RH:123:PHE:CE1	2.33	0.63
35:RS:88:ASP:CG	35:RS:90:GLY:H	2.06	0.63
1:XA:1179:A:O3'	9:XI:103:THR:HG23	1.99	0.63
1:XA:1312:G:P	47:Y4:58:ARG:HH12	2.22	0.63
6:XF:97:PHE:C	6:XF:97:PHE:CD2	2.76	0.63
11:XK:12:ARG:HG2	11:XK:13:GLN:H	1.64	0.63
22:YA:184:C:H2'	22:YA:185:U:C6	2.32	0.63
22:YA:483:A:H4'	41:YY:49:VAL:CA	2.21	0.63
25:YE:11:MET:HE3	25:YE:186:GLY:HA2	1.79	0.63
25:YE:50:GLY:HA3	25:YE:74:PRO:HG3	1.79	0.63
25:YE:201:THR:HG21	25:YE:203:LYS:HB3	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:42:ASP:C	35:YS:44:LYS:H	2.06	0.63
37:YU:96:ALA:C	37:YU:98:LEU:H	2.04	0.63
39:YW:110:LYS:HG3	39:YW:111:HIS:ND1	2.13	0.63
1:QA:489:C:OP1	4:QD:132:ARG:NH2	2.32	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.63
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.81	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
22:RA:224:G:O6	22:RA:419:C:O2'	2.16	0.63
22:RA:1259:G:H2'	22:RA:1260:G:C8	2.33	0.63
24:RD:18:VAL:HG12	24:RD:19:ALA:O	1.98	0.63
24:RD:135:PHE:N	24:RD:135:PHE:HD2	1.96	0.63
30:RN:1:MET:HE2	38:RV:12:TYR:HA	1.80	0.63
30:RN:39:ARG:HB3	30:RN:41:ASP:OD1	1.98	0.63
30:RN:61:ARG:HA	30:RN:61:ARG:HE	1.63	0.63
32:RP:112:LEU:HD11	32:RP:114:ILE:HG23	1.80	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
4:XD:165:MET:HE1	4:XD:168:ARG:HD2	1.80	0.63
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.45	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.63	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
32:YP:106:LEU:O	32:YP:107:LYS:CB	2.46	0.63
47:Y4:63:TYR:C	47:Y4:65:ASP:H	2.05	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
30:RN:22:THR:CG2	30:RN:23:LEU:N	2.61	0.63
35:RS:78:LEU:HD11	35:RS:107:GLU:O	1.98	0.63
37:RU:102:GLU:HG3	38:RV:2:PHE:CE2	2.34	0.63
45:R2:42:GLY:O	45:R2:44:LEU:N	2.30	0.63
51:R8:59:LYS:HZ3	51:R8:59:LYS:HB3	1.63	0.63
1:XA:606:G:H1	1:XA:631:G:H5"	1.63	0.63
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.33	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
22:YA:812:C:HO2'	22:YA:1227:A:HO2'	1.47	0.63
22:YA:1853:A:N3	22:YA:2233:U:O2'	2.30	0.63
22:YA:2723:C:H5"	34:YR:1:MET:HG2	1.79	0.63
24:YD:230:ASP:O	24:YD:231:HIS:HB2	1.98	0.63
32:YP:1:MET:CE	32:YP:5:ASP:HB3	2.25	0.63
1:QA:501:C:OP1	12:QL:117:ARG:NH2	2.30	0.63
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.12	0.63
22:RA:1289:C:H2'	22:RA:1290:C:H6	1.63	0.63
22:RA:1678:G:N2	22:RA:1989:G:H22	1.97	0.63
24:RD:44:ASN:N	24:RD:44:ASN:ND2	2.42	0.63
29:RI:52:ARG:HA	29:RI:55:ALA:HB3	1.80	0.63
33:RQ:81:VAL:O	33:RQ:82:ARG:HD3	1.98	0.63
40:RX:49:VAL:HG13	40:RX:83:VAL:HG13	1.80	0.63
41:RY:95:LYS:CB	41:RY:100:ALA:HA	2.13	0.63
1:XA:321:A:H62	1:XA:328:C:H1'	1.64	0.63
1:XA:939:G:H5"	7:XG:102:ARG:NH2	2.13	0.63
12:XL:46:LYS:CG	12:XL:47:LYS:H	2.11	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
22:YA:2751:G:H8	22:YA:2751:G:O5'	1.81	0.63
24:YD:72:LYS:HG2	24:YD:103:ARG:NH2	2.13	0.63
27:YG:68:PRO:HB2	27:YG:90:LEU:HD12	1.80	0.63
31:YO:86:ILE:HD12	31:YO:86:ILE:N	2.13	0.63
32:YP:138:LEU:C	32:YP:140:ALA:N	2.55	0.63
36:YT:16:ARG:HE	36:YT:19:LEU:HD21	1.62	0.63
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.63
9:QI:128:ARG:NH1	53:QV:33:U:OP2	2.32	0.63
22:RA:336:C:H5"	41:RY:6:HIS:CD2	2.34	0.63
25:RE:131:ALA:HB1	25:RE:135:HIS:CE1	2.34	0.63
26:RF:11:VAL:HG12	26:RF:12:LEU:N	2.13	0.63
26:RF:28:ILE:HG22	26:RF:112:MET:HB3	1.81	0.63
28:RH:153:LYS:HG3	28:RH:161:GLY:HA3	1.81	0.63
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CB	2.29	0.63
33:RQ:66:ILE:CG1	33:RQ:67:ARG:H	2.12	0.63
42:RZ:16:SER:O	42:RZ:20:ARG:HB2	1.97	0.63
44:R1:82:LEU:CD1	44:R1:83:GLU:CA	2.76	0.63
45:R2:46:GLN:HA	45:R2:46:GLN:OE1	1.98	0.63
1:XA:642:A:N3	8:XH:113:SER:OG	2.25	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.12	0.63
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
13:XM:77:ASN:HA	47:Y4:71:ARG:HH21	1.64	0.63
14:XN:42:ILE:C	14:XN:43:CYS:O	2.41	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
26:YF:67:GLN:O	26:YF:67:GLN:CG	2.32	0.63
28:YH:86:GLU:O	28:YH:87:LEU:HB2	1.99	0.63
35:YS:22:GLY:O	35:YS:23:ARG:O	2.17	0.63
36:YT:60:THR:HG22	36:YT:77:PRO:HA	1.80	0.63
45:Y2:46:GLN:OE1	45:Y2:46:GLN:HA	1.97	0.63
47:Y4:71:ARG:HH11	47:Y4:71:ARG:CG	1.98	0.63
53:XV:6:G:H1	53:XV:67:C:H42	1.45	0.63
1:QA:811:C:O2'	1:QA:901:A:N1	2.32	0.63
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.63
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.63
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.63
24:RD:133:LEU:HD21	24:RD:191:ALA:CB	2.29	0.63
30:RN:41:ASP:O	30:RN:48:MET:HE3	1.98	0.63
32:RP:108:LYS:HD2	32:RP:108:LYS:H	1.64	0.63
37:RU:34:LYS:HA	37:RU:34:LYS:CE	2.29	0.63
39:RW:110:LYS:HG3	39:RW:111:HIS:ND1	2.13	0.63
41:RY:86:ARG:O	41:RY:92:ASN:HB2	1.97	0.63
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.14	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.63
25:YE:13:ARG:HH12	25:YE:21:VAL:HG12	1.64	0.63
25:YE:35:GLN:CG	25:YE:37:ARG:NE	2.62	0.63
27:YG:61:ALA:HB2	27:YG:68:PRO:HD2	1.81	0.63
30:YN:7:LYS:H	30:YN:7:LYS:HD2	1.64	0.63
30:YN:61:ARG:HA	30:YN:61:ARG:HE	1.63	0.63
30:YN:87:LEU:O	30:YN:87:LEU:HD23	1.99	0.63
32:YP:64:LYS:HB2	51:Y8:25:MET:HG3	1.80	0.63
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CB	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:30:GLY:HA3	33:YQ:106:VAL:O	1.98	0.63
33:YQ:90:VAL:C	33:YQ:92:GLY:H	2.07	0.63
34:YR:117:VAL:O	34:YR:118:GLU:HB3	1.99	0.63
35:YS:88:ASP:CG	35:YS:90:GLY:H	2.06	0.63
39:YW:74:ALA:O	39:YW:75:TYR:HB3	1.98	0.63
51:Y8:59:LYS:HZ3	51:Y8:59:LYS:HB3	1.62	0.63
1:QA:266:G:H5"	1:QA:267:C:C5	2.33	0.63
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.96	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
22:RA:1428:C:N4	22:RA:1570:A:OP2	2.27	0.63
22:RA:1500:G:O2'	24:RD:100:GLY:O	2.16	0.63
26:RF:119:ARG:HH11	26:RF:119:ARG:HG2	1.64	0.63
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CD	2.29	0.63
42:RZ:58:VAL:O	42:RZ:60:GLU:N	2.31	0.63
49:R6:13:CYS:HB2	49:R6:22:ALA:HB3	1.80	0.63
1:XA:737:A:H2'	1:XA:738:C:C6	2.34	0.63
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.63
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
22:YA:2233:U:H2'	22:YA:2234:G:C8	2.33	0.63
28:YH:153:LYS:HG3	28:YH:161:GLY:HA3	1.81	0.63
32:YP:83:VAL:HG12	32:YP:112:LEU:HD21	1.81	0.63
32:YP:114:ILE:HD11	32:YP:130:PHE:CD1	2.34	0.63
41:YY:87:LYS:O	41:YY:88:LYS:NZ	2.32	0.63
44:Y1:18:ILE:HG12	44:Y1:37:ILE:HG12	1.81	0.63
54:QX:8:A:H8	54:QX:8:A:O5'	1.82	0.63
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.31	0.62
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	1.99	0.62
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.11	0.62
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.62
4:QD:165:MET:HE1	4:QD:168:ARG:HD2	1.81	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.62
22:RA:2015:A:N3	48:R5:2:ALA:N	2.47	0.62
24:RD:44:ASN:HB3	24:RD:49:ILE:CA	2.27	0.62
34:RR:63:ARG:NH1	34:RR:80:PHE:CD1	2.67	0.62
34:RR:117:VAL:O	34:RR:118:GLU:HB3	1.99	0.62
36:RT:16:ARG:HE	36:RT:19:LEU:HD21	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RT:60:THR:HG22	36:RT:77:PRO:HA	1.80	0.62
44:R1:76:ARG:HD2	44:R1:76:ARG:H	1.64	0.62
45:R2:65:ASN:HB3	45:R2:69:ARG:NH1	2.10	0.62
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.62
12:XL:49:ASN:ND2	12:XL:92:ASP:OD2	2.21	0.62
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.62
22:YA:1062:G:H2'	22:YA:1063:G:C8	2.34	0.62
22:YA:1266:G:C5	39:YW:15:ARG:NH1	2.67	0.62
25:YE:4:ILE:CD1	25:YE:28:ALA:HB1	2.29	0.62
33:YQ:10:ARG:O	33:YQ:11:LYS:HB2	1.98	0.62
36:YT:49:VAL:HG13	36:YT:49:VAL:O	1.99	0.62
37:YU:34:LYS:HA	37:YU:34:LYS:CE	2.29	0.62
40:YX:49:VAL:HG13	40:YX:83:VAL:HG13	1.80	0.62
1:QA:1397:C:H1'	54:QX:8:A:N6	2.14	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
9:QI:17:VAL:HG21	9:QI:81:ILE:N	2.14	0.62
11:QK:12:ARG:HG2	11:QK:13:GLN:N	2.14	0.62
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
22:RA:1803:A:H4'	24:RD:259:THR:HG21	1.80	0.62
22:RA:2404:C:O3'	32:RP:77:ARG:NH2	2.32	0.62
26:RF:28:ILE:HD13	26:RF:30:PRO:HD3	1.80	0.62
30:RN:101:HIS:ND1	30:RN:101:HIS:C	2.56	0.62
36:RT:96:ARG:NH1	36:RT:96:ARG:HB2	2.14	0.62
51:R8:52:LYS:O	51:R8:52:LYS:HG3	1.97	0.62
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.62
8:XH:112:LEU:O	8:XH:112:LEU:HD12	1.98	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
22:YA:1270:C:H5"	22:YA:1271:G:H5'	1.81	0.62
26:YF:129:PHE:O	26:YF:130:ALA:HB3	1.99	0.62
32:YP:13:ASN:C	32:YP:15:ARG:N	2.54	0.62
36:YT:22:PHE:N	36:YT:22:PHE:HD2	1.97	0.62
40:YX:31:HIS:CE1	40:YX:33:LYS:HB2	2.34	0.62
42:YZ:126:VAL:HG12	42:YZ:163:LEU:HA	1.80	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
22:RA:709:U:H3	22:RA:722:A:H61	1.46	0.62
22:RA:855:G:H1	22:RA:922:U:H3	1.45	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:136:ILE:H	28:RH:136:ILE:HD12	1.64	0.62
31:RO:8:LEU:HB2	31:RO:19:ILE:HD11	1.81	0.62
33:RQ:90:VAL:C	33:RQ:92:GLY:H	2.07	0.62
35:RS:48:LEU:N	35:RS:48:LEU:HD12	2.14	0.62
1:XA:971:G:N2	1:XA:1363:A:OP2	2.24	0.62
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.12	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.82	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.29	0.62
13:XM:62:ASN:O	47:Y4:49:PHE:HB2	1.99	0.62
26:YF:132:VAL:HG23	26:YF:133:ASN:N	2.14	0.62
27:YG:94:LEU:H	27:YG:94:LEU:HD23	1.64	0.62
36:YT:96:ARG:HB2	36:YT:96:ARG:NH1	2.14	0.62
40:YX:63:LYS:O	40:YX:64:LYS:HD2	1.98	0.62
42:YZ:125:LEU:HG	42:YZ:164:ALA:HB3	1.81	0.62
54:QX:5:C:O2'	54:QX:6:C:H5'	2.00	0.62
55:QY:29:U:H2'	55:QY:30:C:H6	1.61	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.62
22:RA:141:A:H8	22:RA:1595:G:H21	1.48	0.62
22:RA:2131:G:H4'	22:RA:2132:U:H4'	1.81	0.62
22:RA:2438:U:O3'	22:RA:2439:A:H3'	1.99	0.62
22:RA:2580:U:H4'	25:RE:130:GLY:HA3	1.82	0.62
27:RG:94:LEU:HD23	27:RG:94:LEU:N	2.14	0.62
32:RP:65:ARG:HH11	32:RP:65:ARG:CG	2.06	0.62
32:RP:83:VAL:HG12	32:RP:112:LEU:HD21	1.81	0.62
35:RS:26:LEU:HD22	35:RS:87:PHE:HD1	1.63	0.62
36:RT:24:PRO:O	36:RT:94:ALA:HB2	2.00	0.62
39:RW:1:MET:HB3	39:RW:64:MET:HE3	1.81	0.62
1:XA:452:A:H62	1:XA:480:U:H3	1.47	0.62
1:XA:690:G:H22	11:XK:55:LYS:NZ	1.96	0.62
1:XA:1364:U:O2'	1:XA:1365:G:OP1	2.17	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	0.62
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
22:YA:1336:A:H2'	22:YA:1337:G:C8	2.34	0.62
22:YA:1430:C:H2'	22:YA:1431:U:C6	2.34	0.62
24:YD:35:LYS:HA	24:YD:64:ILE:HG22	1.81	0.62
28:YH:136:ILE:HD12	28:YH:136:ILE:H	1.64	0.62
30:YN:26:LEU:O	30:YN:30:ILE:HG13	1.99	0.62
32:YP:65:ARG:HE	51:Y8:15:LYS:HB2	1.64	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:63:ARG:NH1	34:YR:80:PHE:CD1	2.67	0.62
35:YS:48:LEU:HD12	35:YS:48:LEU:N	2.14	0.62
43:Y0:11:ARG:O	43:Y0:14:ARG:NH2	2.32	0.62
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
12:QL:10:LEU:HD13	17:QQ:32:TYR:CD2	2.33	0.62
12:QL:47:LYS:CB	12:QL:48:PRO:HD3	2.29	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.62
24:RD:72:LYS:HG2	24:RD:103:ARG:NH2	2.13	0.62
24:RD:134:ARG:HD3	24:RD:135:PHE:CE2	2.34	0.62
25:RE:13:ARG:HH12	25:RE:21:VAL:HG12	1.64	0.62
25:RE:35:GLN:CG	25:RE:37:ARG:NE	2.62	0.62
26:RF:129:PHE:O	26:RF:130:ALA:HB3	1.99	0.62
27:RG:53:LEU:C	27:RG:53:LEU:HD23	2.25	0.62
27:RG:77:ILE:HD13	27:RG:82:LEU:CD1	2.29	0.62
28:RH:137:ASP:HB3	28:RH:140:LYS:HB2	1.81	0.62
32:RP:61:ARG:H	32:RP:61:ARG:CD	2.09	0.62
40:RX:31:HIS:CE1	40:RX:33:LYS:HB2	2.34	0.62
44:R1:81:LYS:NZ	44:R1:81:LYS:CA	2.31	0.62
1:XA:118:U:H3’	1:XA:288:A:H61	1.64	0.62
1:XA:266:G:H5’	1:XA:268:C:H41	1.63	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
22:YA:503:A:H4’	22:YA:504:U:H5’	1.82	0.62
22:YA:1372:U:H2’	22:YA:1373:A:H5’	1.81	0.62
22:YA:2451:A:HO2’	53:XV:76:A:C2’	2.11	0.62
35:YS:100:ALA:HA	35:YS:103:GLU:CG	2.30	0.62
38:YV:52:VAL:CG2	38:YV:55:ALA:HB3	2.28	0.62
39:YW:1:MET:HB3	39:YW:64:MET:HE3	1.81	0.62
45:Y2:41:ILE:HG12	45:Y2:44:LEU:HD12	1.82	0.62
1:QA:920:U:H2’	1:QA:921:U:C6	2.34	0.62
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.62
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
22:RA:301:G:H1	22:RA:316:C:H42	1.48	0.62
22:RA:380:U:H2’	22:RA:381:G:C8	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2232:U:OP1	44:R1:40:ARG:NH1	2.32	0.62
26:RF:32:LEU:CD1	26:RF:105:VAL:HG13	2.29	0.62
30:RN:96:GLU:O	30:RN:98:VAL:N	2.33	0.62
35:RS:22:GLY:O	35:RS:23:ARG:O	2.17	0.62
36:RT:108:ARG:O	36:RT:111:ARG:HG3	2.00	0.62
38:RV:36:PRO:HA	38:RV:56:SER:OG	1.98	0.62
49:R6:18:ARG:O	49:R6:18:ARG:HD2	2.00	0.62
49:R6:41:PRO:HG2	49:R6:45:LYS:N	2.10	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
10:XJ:29:ARG:HG2	10:XJ:29:ARG:O	2.00	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.11	0.62
22:YA:2529:G:O6	52:Y9:31:LYS:NZ	2.33	0.62
22:YA:2580:U:H4'	25:YE:130:GLY:HA3	1.79	0.62
31:YO:104:ARG:CZ	36:YT:34:VAL:HG11	2.29	0.62
32:YP:105:LEU:O	32:YP:106:LEU:CB	2.42	0.62
44:Y1:91:LYS:HA	44:Y1:91:LYS:HE3	1.82	0.62
45:Y2:69:ARG:HB2	45:Y2:69:ARG:CZ	2.29	0.62
45:Y2:70:GLN:O	45:Y2:71:ASN:HB2	2.00	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.62
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.62
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	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
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
22:RA:2395:C:O2'	44:R1:30:VAL:HG12	1.99	0.62
24:RD:27:THR:O	24:RD:29:PRO:HD2	1.99	0.62
30:RN:7:LYS:HD2	30:RN:7:LYS:H	1.64	0.62
44:R1:18:ILE:HG12	44:R1:37:ILE:HG12	1.81	0.62
47:R4:38:LYS:C	47:R4:40:HIS:N	2.52	0.62
1:XA:376:G:H5"	16:XP:5:ARG:HD2	1.80	0.62
4:XD:96:LEU:H	4:XD:96:LEU:CD2	2.11	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
13:XM:65:LYS:H	47:Y4:50:VAL:HG21	1.63	0.62
22:YA:10:G:N2	22:YA:2802:G:OP1	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:699:A:H2'	22:YA:700:G:O4'	2.00	0.62
22:YA:878:A:N6	22:YA:899:A:O2'	2.33	0.62
22:YA:1600:C:OP1	40:YX:58:HIS:NE2	2.27	0.62
25:YE:131:ALA:HB1	25:YE:135:HIS:CE1	2.34	0.62
26:YF:28:ILE:HD13	26:YF:30:PRO:HD3	1.80	0.62
27:YG:53:LEU:C	27:YG:53:LEU:HD23	2.25	0.62
27:YG:94:LEU:HD23	27:YG:94:LEU:N	2.14	0.62
27:YG:112:PRO:HB3	47:Y4:37:SER:CB	2.25	0.62
27:YG:170:ARG:O	27:YG:174:GLU:HB2	2.00	0.62
31:YO:7:TYR:HE1	31:YO:20:MET:HE3	1.65	0.62
32:YP:112:LEU:HD11	32:YP:114:ILE:HG23	1.80	0.62
36:YT:108:ARG:O	36:YT:111:ARG:HG3	2.00	0.62
41:YY:48:ALA:HB2	41:YY:61:ILE:HD13	1.82	0.62
49:Y6:13:CYS:HB2	49:Y6:22:ALA:HB3	1.81	0.62
49:Y6:27:LYS:HB2	49:Y6:27:LYS:HZ3	1.65	0.62
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
22:RA:2439:A:C8	22:RA:2439:A:H5'	2.34	0.62
24:RD:70:TRP:CH2	24:RD:150:LYS:HA	2.35	0.62
24:RD:137:PRO:HB2	24:RD:140:THR:HG23	1.81	0.62
27:RG:68:PRO:HB2	27:RG:90:LEU:HD12	1.80	0.62
30:RN:26:LEU:O	30:RN:30:ILE:HG13	1.99	0.62
30:RN:87:LEU:O	30:RN:87:LEU:HD23	1.99	0.62
32:RP:64:LYS:HB2	51:R8:25:MET:HG3	1.80	0.62
41:RY:87:LYS:O	41:RY:88:LYS:NZ	2.31	0.62
44:R1:91:LYS:HA	44:R1:91:LYS:HE3	1.82	0.62
45:R2:69:ARG:HB2	45:R2:69:ARG:CZ	2.30	0.62
1:XA:560:U:O2'	1:XA:561:U:OP2	2.13	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
24:YD:133:LEU:HD21	24:YD:191:ALA:CB	2.29	0.62
29:YI:93:THR:N	29:YI:96:ASP:OD1	2.26	0.62
34:YR:79:LEU:HD23	34:YR:79:LEU:C	2.23	0.62
47:Y4:61:ARG:O	47:Y4:63:TYR:N	2.33	0.62
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.31	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.62
22:RA:288:C:H2'	22:RA:289:A:C8	2.31	0.62
22:RA:1006:C:H1'	30:RN:106:MET:CE	2.30	0.62
22:RA:1543:A:O2'	22:RA:1544:C:H3'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2065:C:H1'	22:RA:2449:U:H3	1.64	0.62
25:RE:35:GLN:HG2	25:RE:37:ARG:NE	2.14	0.62
31:RO:78:ARG:HH21	36:RT:103:ARG:NH2	1.98	0.62
35:RS:100:ALA:HA	35:RS:103:GLU:CG	2.30	0.62
36:RT:31:SER:HA	36:RT:44:ASP:OD2	2.00	0.62
36:RT:57:PHE:CD2	36:RT:58:ASN:N	2.66	0.62
36:RT:105:LEU:C	36:RT:107:ASP:H	2.07	0.62
1:XA:370:C:O2'	1:XA:371:G:C5'	2.45	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
13:XM:62:ASN:ND2	47:Y4:47:GLN:NE2	2.48	0.62
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.62
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
22:YA:1697:G:O2'	22:YA:1978:A:OP1	2.16	0.62
22:YA:1803:A:H4'	24:YD:259:THR:HG21	1.82	0.62
22:YA:2040:C:H2'	22:YA:2041:U:C6	2.35	0.62
24:YD:182:LEU:H	24:YD:272:ALA:HB3	1.63	0.62
25:YE:104:VAL:HG11	25:YE:188:VAL:HG23	1.82	0.62
26:YF:28:ILE:HG22	26:YF:112:MET:HB3	1.80	0.62
31:YO:1:MET:HE3	31:YO:67:LYS:HE2	1.82	0.62
45:Y2:40:SER:C	45:Y2:42:GLY:N	2.51	0.62
55:XY:29:U:H2'	55:XY:30:C:H6	1.60	0.62
1:QA:973:G:H3'	1:QA:974:A:H5"	1.80	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.62
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.62
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.62
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.62
22:RA:1667:G:O2'	22:RA:1669:A:N6	2.33	0.62
22:RA:2083:G:C6	22:RA:2084:C:C4	2.88	0.62
22:RA:2416:C:H5"	32:RP:64:LYS:HE3	1.81	0.62
27:RG:6:ALA:HB2	47:R4:23:GLU:OE2	2.00	0.62
27:RG:9:ARG:HG2	27:RG:13:GLU:OE1	2.00	0.62
35:RS:26:LEU:HD12	35:RS:39:ILE:CD1	2.23	0.62
43:R0:48:GLY:HA3	43:R0:80:HIS:CE1	2.35	0.62
44:R1:3:LYS:HD3	44:R1:43:TYR:CD2	2.35	0.62
45:R2:17:SER:HB2	45:R2:18:PRO:CA	2.30	0.62
47:R4:61:ARG:O	47:R4:63:TYR:N	2.33	0.62
47:R4:71:ARG:NH1	47:R4:71:ARG:CG	2.60	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:33:ASN:O	51:R8:34:TRP:C	2.42	0.62
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.34	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.62
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.30	0.62
22:YA:507:A:H5"	22:YA:508:G:H5'	1.82	0.62
22:YA:558:G:P	30:YN:111:PRO:HD2	2.39	0.62
22:YA:1537:C:H2'	22:YA:1538:G:C8	2.35	0.62
22:YA:2607:G:H2'	22:YA:2608:G:O4'	1.99	0.62
24:YD:134:ARG:HD3	24:YD:135:PHE:CE2	2.35	0.62
27:YG:142:PRO:HB2	47:Y4:31:ILE:CD1	2.30	0.62
30:YN:133:GLN:O	30:YN:134:ARG:HB3	1.99	0.62
45:Y2:17:SER:HB2	45:Y2:18:PRO:CA	2.30	0.62
4:QD:13:ARG:HB2	4:QD:33:MET:HE3	1.82	0.61
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
22:RA:642:G:H21	22:RA:646:A:H2	1.47	0.61
22:RA:1139:G:O2'	22:RA:1143:A:N1	2.32	0.61
22:RA:1796:U:H2'	22:RA:1797:C:C6	2.35	0.61
24:RD:230:ASP:O	24:RD:231:HIS:HB2	1.98	0.61
27:RG:111:LEU:HB2	27:RG:112:PRO:HD3	1.82	0.61
27:RG:170:ARG:O	27:RG:174:GLU:HB2	2.00	0.61
28:RH:153:LYS:CB	28:RH:154:PRO:CD	2.69	0.61
32:RP:50:ARG:CB	32:RP:50:ARG:NH2	2.57	0.61
36:RT:22:PHE:N	36:RT:22:PHE:HD2	1.97	0.61
37:RU:92:ARG:HD3	37:RU:94:ASN:HB3	1.82	0.61
47:R4:23:GLU:O	47:R4:25:TYR:N	2.33	0.61
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.82	0.61
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.61
22:YA:1178:C:H2'	22:YA:1179:C:C6	2.35	0.61
23:YB:40:U:H3	23:YB:43:C:H5"	1.65	0.61
33:YQ:54:MET:O	33:YQ:57:HIS:HB3	2.00	0.61
37:YU:102:GLU:HG3	38:YV:2:PHE:CE2	2.34	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.00	0.61
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
22:RA:307:G:H21	22:RA:330:A:H62	1.48	0.61
22:RA:517:C:O2'	39:RW:18:ARG:NH2	2.33	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:995:C:N4	30:RN:2:LYS:HG3	2.15	0.61
24:RD:133:LEU:HD21	24:RD:191:ALA:HB2	1.82	0.61
25:RE:201:THR:HG22	25:RE:203:LYS:N	2.07	0.61
31:RO:1:MET:HE3	31:RO:67:LYS:HE2	1.82	0.61
41:RY:101:LYS:HE3	41:RY:102:CYS:SG	2.40	0.61
49:R6:44:ARG:O	49:R6:45:LYS:HB2	2.00	0.61
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.15	0.61
1:XA:1310:G:H5"	47:Y4:71:ARG:OXT	2.00	0.61
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
22:YA:451:C:H4'	26:YF:52:LYS:HZ1	1.64	0.61
22:YA:746:A:C6	22:YA:2611:U:H5"	2.35	0.61
22:YA:2014:A:O2'	48:Y5:2:ALA:HB2	2.00	0.61
26:YF:32:LEU:CD1	26:YF:105:VAL:HG13	2.29	0.61
32:YP:50:ARG:CB	32:YP:50:ARG:NH2	2.58	0.61
37:YU:79:PHE:CD2	37:YU:79:PHE:C	2.78	0.61
44:Y1:76:ARG:HD2	44:Y1:76:ARG:H	1.64	0.61
50:Y7:31:LEU:O	50:Y7:32:LYS:C	2.43	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
24:RD:72:LYS:HE3	24:RD:75:ILE:HD12	1.82	0.61
32:RP:114:ILE:HD11	32:RP:130:PHE:CD1	2.34	0.61
47:R4:35:VAL:O	47:R4:37:SER:N	2.26	0.61
9:XI:128:ARG:HD3	53:XV:32:C:OP2	2.00	0.61
29:YI:104:GLN:O	29:YI:105:HIS:ND1	2.29	0.61
36:YT:31:SER:HA	36:YT:44:ASP:OD2	2.00	0.61
49:Y6:18:ARG:O	49:Y6:18:ARG:HD2	2.00	0.61
1:QA:939:G:OP1	7:QG:102:ARG:NH1	2.34	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
12:QL:47:LYS:CG	12:QL:48:PRO:HD3	2.29	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.61
22:RA:38:A:N3	26:RF:48:THR:OG1	2.33	0.61
22:RA:1924:C:H4'	53:QV:13:C:O2'	2.00	0.61
24:RD:237:GLU:OE1	24:RD:237:GLU:CA	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:86:GLU:O	28:RH:87:LEU:HB2	1.99	0.61
28:RH:152:ARG:O	28:RH:153:LYS:CD	2.48	0.61
31:RO:97:ARG:N	31:RO:117:LEU:HD22	2.15	0.61
34:RR:38:VAL:HB	34:RR:39:PRO:HD3	1.81	0.61
36:RT:49:VAL:HG13	36:RT:49:VAL:O	1.98	0.61
6:XF:77:ARG:HB2	6:XF:77:ARG:NH1	2.15	0.61
6:XF:89:MET:HE1	18:XR:76:LEU:HD22	1.82	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
19:XS:5:LEU:HD22	47:Y4:67:TYR:CZ	2.35	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
24:YD:27:THR:O	24:YD:29:PRO:HD2	1.99	0.61
24:YD:227:ASN:CB	24:YD:228:PRO:HD2	2.24	0.61
27:YG:6:ALA:HB2	47:Y4:23:GLU:OE2	1.99	0.61
31:YO:8:LEU:HB2	31:YO:19:ILE:HD11	1.81	0.61
31:YO:78:ARG:HH21	36:YT:103:ARG:NH2	1.97	0.61
32:YP:108:LYS:HD2	32:YP:108:LYS:H	1.64	0.61
33:YQ:66:ILE:CG1	33:YQ:67:ARG:H	2.12	0.61
36:YT:105:LEU:C	36:YT:107:ASP:H	2.08	0.61
39:YW:5:ALA:O	39:YW:50:VAL:HG13	2.00	0.61
1:QA:1502:A:H2	1:QA:1505:G:H1	1.49	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
22:RA:1022:G:O2'	22:RA:1023:U:OP2	2.16	0.61
23:RB:88:C:H2'	23:RB:89:G:O4'	2.00	0.61
27:RG:142:PRO:HB2	47:R4:31:ILE:CD1	2.30	0.61
29:RI:130:TYR:HB3	29:RI:136:VAL:HG13	1.83	0.61
30:RN:62:VAL:CG1	30:RN:66:LYS:HD2	2.30	0.61
31:RO:104:ARG:CZ	36:RT:34:VAL:HG11	2.29	0.61
32:RP:65:ARG:HE	51:R8:15:LYS:HB2	1.64	0.61
35:RS:88:ASP:O	35:RS:89:ARG:CB	2.49	0.61
41:RY:48:ALA:HB2	41:RY:61:ILE:HD13	1.82	0.61
46:R3:29:ARG:HH11	46:R3:29:ARG:CB	2.13	0.61
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.17	0.61
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
22:YA:277:C:H3'	22:YA:278:A:C5'	2.31	0.61
22:YA:862:G:H2'	22:YA:863:A:O4'	2.01	0.61
23:YB:44:G:H1'	23:YB:47:C:N4	2.15	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:137:PRO:HB2	24:YD:140:THR:HG23	1.81	0.61
25:YE:35:GLN:HG2	25:YE:37:ARG:NE	2.14	0.61
25:YE:174:ASP:CG	25:YE:175:VAL:N	2.58	0.61
28:YH:6:ARG:HG3	28:YH:7:LEU:N	2.15	0.61
28:YH:152:ARG:O	28:YH:153:LYS:CD	2.48	0.61
30:YN:62:VAL:CG1	30:YN:66:LYS:HD2	2.30	0.61
30:YN:96:GLU:O	30:YN:98:VAL:N	2.33	0.61
33:YQ:2:LEU:HD23	33:YQ:2:LEU:H	1.65	0.61
35:YS:17:ARG:HG3	35:YS:18:ILE:N	2.14	0.61
38:YV:46:VAL:O	38:YV:46:VAL:HG13	2.01	0.61
40:YX:15:GLU:N	40:YX:15:GLU:OE1	2.34	0.61
47:Y4:23:GLU:O	47:Y4:25:TYR:N	2.33	0.61
51:Y8:22:VAL:HG21	51:Y8:53:PRO:HB2	1.83	0.61
51:Y8:29:LYS:HD3	51:Y8:44:LYS:CB	2.30	0.61
51:Y8:33:ASN:O	51:Y8:34:TRP:C	2.42	0.61
1:QA:1124:G:H3'	1:QA:1145:C:N4	2.16	0.61
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.16	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.29	0.61
10:QJ:98:ILE:HD12	10:QJ:98:ILE:N	2.16	0.61
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.61
23:RB:55:U:H4'	27:RG:28:VAL:CG2	2.30	0.61
29:RI:74:ASN:OD1	29:RI:74:ASN:N	2.34	0.61
39:RW:82:LEU:HB2	39:RW:98:LYS:HB2	1.82	0.61
49:R6:25:LYS:HD2	51:R8:34:TRP:CZ2	2.36	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.01	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
22:YA:675:A:C8	22:YA:804:A:C6	2.89	0.61
24:YD:70:TRP:CH2	24:YD:150:LYS:HA	2.35	0.61
27:YG:77:ILE:HD13	27:YG:82:LEU:CD1	2.29	0.61
36:YT:24:PRO:O	36:YT:94:ALA:HB2	2.00	0.61
41:YY:44:ILE:HG13	41:YY:45:VAL:H	1.64	0.61
45:Y2:41:ILE:HD11	45:Y2:44:LEU:HG	1.82	0.61
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.34	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1285:G:N2	22:RA:1329:U:OP1	2.23	0.61
22:RA:2030:A:H4'	22:RA:2031:A:H8	1.66	0.61
23:RB:13:A:N1	23:RB:69:G:O2'	2.28	0.61
24:RD:21:PHE:HB3	24:RD:24:ILE:HG13	1.83	0.61
24:RD:35:LYS:HA	24:RD:64:ILE:HG22	1.82	0.61
24:RD:174:ILE:N	24:RD:174:ILE:HD12	2.16	0.61
39:RW:5:ALA:O	39:RW:50:VAL:HG13	2.00	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61
13:XM:62:ASN:ND2	47:Y4:47:GLN:HE22	1.98	0.61
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
22:YA:628:G:H2'	22:YA:629:G:H8	1.65	0.61
22:YA:1264:G:H5'	48:Y5:11:THR:HG21	1.83	0.61
22:YA:1484:G:H1	22:YA:1505:C:H42	1.46	0.61
24:YD:25:THR:HG21	24:YD:81:ALA:CA	2.31	0.61
24:YD:69:ARG:C	24:YD:71:ASP:H	2.08	0.61
25:YE:52:LEU:HB3	25:YE:54:GLN:OE1	2.00	0.61
25:YE:69:LYS:C	25:YE:71:GLY:H	2.08	0.61
28:YH:137:ASP:HB3	28:YH:140:LYS:HB2	1.81	0.61
29:YI:113:ARG:HB3	29:YI:131:LYS:HD3	1.82	0.61
34:YR:38:VAL:HB	34:YR:39:PRO:HD3	1.81	0.61
35:YS:49:VAL:HG22	35:YS:80:LEU:HD12	1.83	0.61
39:YW:28:SER:O	39:YW:31:GLU:N	2.34	0.61
41:YY:19:LYS:O	41:YY:19:LYS:HG3	2.01	0.61
47:Y4:64:GLY:C	47:Y4:66:SER:H	2.07	0.61
1:QA:1495:U:O4	58:QA:1666:PAR:H222	1.99	0.61
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
22:RA:1441:G:H2'	22:RA:1442:G:H8	1.66	0.61
22:RA:2555:U:O2	56:Z6:74:C:N3	2.32	0.61
22:RA:2773:C:H2'	22:RA:2774:C:H6	1.65	0.61
25:RE:69:LYS:C	25:RE:71:GLY:H	2.09	0.61
28:RH:6:ARG:HG3	28:RH:7:LEU:N	2.15	0.61
30:RN:7:LYS:CD	30:RN:9:VAL:H	2.14	0.61
30:RN:23:LEU:HD12	30:RN:99:LEU:HD23	1.82	0.61
33:RQ:59:ARG:C	33:RQ:60:ARG:CG	2.73	0.61
38:RV:46:VAL:O	38:RV:46:VAL:HG13	2.01	0.61
40:RX:66:LEU:O	40:RX:66:LEU:HD23	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:80:LEU:O	44:R1:81:LYS:HD2	2.01	0.61
51:R8:29:LYS:HD3	51:R8:44:LYS:CB	2.30	0.61
51:R8:48:PHE:N	51:R8:48:PHE:CD1	2.66	0.61
1:XA:688:G:H2'	1:XA:689:C:H6	1.66	0.61
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.16	0.61
1:XA:1321:C:H5"	1:XA:1322:C:H5"	1.83	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.61
22:YA:1310:G:OP2	50:Y7:9:ARG:NH1	2.34	0.61
24:YD:2:ALA:HB3	24:YD:20:ASP:HB3	1.83	0.61
25:YE:95:ILE:HD12	25:YE:95:ILE:N	2.15	0.61
26:YF:164:ARG:HH11	26:YF:164:ARG:HG2	1.66	0.61
31:YO:91:LEU:N	31:YO:91:LEU:HD22	2.16	0.61
32:YP:96:THR:HG22	32:YP:126:VAL:HB	1.82	0.61
37:YU:88:ILE:H	37:YU:88:ILE:CD1	2.05	0.61
1:QA:119:A:H4'	1:QA:120:A:O5'	2.00	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.61
5:QE:78:HIS:HB3	8:QH:104:ARG:O	2.01	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
22:RA:2857:G:N2	22:RA:2860:A:OP2	2.32	0.61
31:RO:7:TYR:HE1	31:RO:20:MET:HE3	1.65	0.61
33:RQ:2:LEU:HD23	33:RQ:2:LEU:H	1.65	0.61
37:RU:69:CYS:HB3	37:RU:106:PHE:CZ	2.36	0.61
38:RV:35:LEU:O	38:RV:35:LEU:HD23	2.01	0.61
39:RW:65:LEU:O	39:RW:66:GLU:C	2.43	0.61
42:RZ:110:GLY:HA2	42:RZ:111:VAL:C	2.26	0.61
46:R3:5:LYS:HB2	46:R3:36:VAL:HG12	1.82	0.61
49:R6:41:PRO:HD2	49:R6:46:HIS:N	2.16	0.61
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.32	0.61
1:XA:757:U:OP1	1:XA:822:C:O2'	2.19	0.61
3:XC:13:GLY:HA3	14:XN:57:ARG:CZ	2.31	0.61
4:XD:196:LEU:HD12	4:XD:196:LEU:N	2.15	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
22:YA:2655:G:N2	22:YA:2665:A:OP2	2.33	0.61
24:YD:133:LEU:HD21	24:YD:191:ALA:HB2	1.82	0.61
25:YE:35:GLN:CG	25:YE:37:ARG:HE	2.11	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:108:LYS:HZ3	26:YF:108:LYS:HA	1.64	0.61
26:YF:119:ARG:HH11	26:YF:119:ARG:HG2	1.64	0.61
30:YN:7:LYS:CD	30:YN:9:VAL:H	2.14	0.61
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CD	2.30	0.61
34:YR:44:LEU:HD22	34:YR:48:VAL:HG23	1.83	0.61
40:YX:14:SER:O	40:YX:17:ALA:N	2.34	0.61
40:YX:66:LEU:O	40:YX:66:LEU:HD23	2.01	0.61
46:Y3:5:LYS:HB2	46:Y3:36:VAL:HG12	1.82	0.61
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.61
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.28	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.61
22:RA:656:G:H2'	22:RA:657:U:O4'	2.00	0.61
22:RA:2401:U:H2'	22:RA:2402:C:H5"	1.83	0.61
23:RB:7:G:N2	35:RS:38:GLN:OE1	2.26	0.61
24:RD:35:LYS:HG2	24:RD:64:ILE:CG2	2.31	0.61
26:RF:63:LYS:HE2	26:RF:67:GLN:HB3	1.83	0.61
26:RF:175:THR:O	26:RF:176:LEU:CB	2.48	0.61
30:RN:58:ASP:N	30:RN:60:ILE:HD11	2.16	0.61
32:RP:96:THR:HG22	32:RP:126:VAL:HB	1.83	0.61
35:RS:49:VAL:HG22	35:RS:80:LEU:HD12	1.82	0.61
38:RV:15:GLU:HG3	38:RV:16:PRO:HD2	1.83	0.61
39:RW:65:LEU:HD12	39:RW:68:ARG:NH1	2.10	0.61
40:RX:14:SER:O	40:RX:17:ALA:N	2.34	0.61
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.65	0.61
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.61
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.61
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	2.00	0.61
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.61
22:YA:363(B):G:H2'	22:YA:363(C):G:H8	1.65	0.61
22:YA:1637:A:H4'	22:YA:2711:A:O2'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:147:LEU:CD1	24:YD:155:LEU:HD11	2.26	0.61
25:YE:131:ALA:HB1	25:YE:135:HIS:HE1	1.65	0.61
27:YG:44:GLY:HA2	27:YG:88:ILE:CG1	2.31	0.61
32:YP:27:HIS:ND1	32:YP:27:HIS:N	2.49	0.61
35:YS:89:ARG:O	35:YS:90:GLY:O	2.19	0.61
42:YZ:91:LEU:HD12	42:YZ:96:VAL:HG11	1.82	0.61
46:Y3:59:VAL:HG12	46:Y3:60:GLU:N	2.16	0.61
49:Y6:7:ILE:HG13	49:Y6:8:LYS:N	2.06	0.61
1:QA:1095:U:P	1:QA:1108:G:H1	2.25	0.60
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.01	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
22:RA:1636:C:O2'	22:RA:1760:A:N3	2.27	0.60
27:RG:28:VAL:O	27:RG:31:VAL:HG12	2.01	0.60
30:RN:6:PRO:HG3	30:RN:41:ASP:HB2	1.83	0.60
39:RW:28:SER:O	39:RW:31:GLU:N	2.34	0.60
45:R2:41:ILE:HD11	45:R2:44:LEU:HG	1.83	0.60
46:R3:59:VAL:HG12	46:R3:60:GLU:N	2.16	0.60
1:XA:1112:C:H1'	3:XC:179:ARG:NH1	2.15	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.60
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.83	0.60
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.60
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.60
22:YA:1287:A:N7	34:YR:107:ASP:HB2	2.16	0.60
22:YA:2306:C:H2'	22:YA:2307:G:N2	2.14	0.60
24:YD:35:LYS:NZ	24:YD:65:ILE:HA	2.15	0.60
24:YD:54:ARG:HH11	24:YD:54:ARG:CG	2.14	0.60
30:YN:99:LEU:O	30:YN:103:VAL:HG23	2.01	0.60
38:YV:41:GLY:H	38:YV:46:VAL:HG13	1.66	0.60
39:YW:82:LEU:HB2	39:YW:98:LYS:HB2	1.82	0.60
49:Y6:41:PRO:HD2	49:Y6:46:HIS:N	2.16	0.60
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
19:QS:68:GLY:CA	47:R4:68:ARG:CG	2.65	0.60
22:RA:527:C:N4	22:RA:2779:U:OP2	2.34	0.60
22:RA:1169:G:H1	22:RA:1180:C:H42	1.49	0.60
22:RA:2562:U:O2'	31:RO:23:ARG:NH1	2.33	0.60
25:RE:52:LEU:HB3	25:RE:54:GLN:OE1	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:104:VAL:HG11	25:RE:188:VAL:HG23	1.82	0.60
31:RO:91:LEU:HD22	31:RO:91:LEU:N	2.16	0.60
33:RQ:66:ILE:CG1	33:RQ:67:ARG:N	2.64	0.60
34:RR:52:ILE:O	34:RR:55:ALA:HB3	2.01	0.60
37:RU:79:PHE:CD2	37:RU:79:PHE:C	2.78	0.60
47:R4:64:GLY:C	47:R4:66:SER:H	2.08	0.60
1:XA:690:G:H2'	1:XA:691:G:O4'	2.02	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.60
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
13:XM:57:ARG:NH2	47:Y4:34:GLU:O	2.34	0.60
22:YA:270(R):G:N3	44:Y1:78:LYS:NZ	2.48	0.60
22:YA:787:U:H5"	22:YA:788:A:H5'	1.83	0.60
33:YQ:66:ILE:CG1	33:YQ:67:ARG:N	2.64	0.60
41:YY:101:LYS:HE3	41:YY:102:CYS:SG	2.40	0.60
1:QA:1493:A:OP1	58:QA:1666:PAR:O41	2.09	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.82	0.60
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.35	0.60
22:RA:507:A:H5"	22:RA:508:G:H5'	1.83	0.60
22:RA:2335:A:O2'	22:RA:2336:A:O5'	2.19	0.60
22:RA:2848:G:O2'	22:RA:2849:U:OP2	2.17	0.60
24:RD:35:LYS:NZ	24:RD:65:ILE:HA	2.15	0.60
27:RG:61:ALA:HB2	27:RG:68:PRO:HD2	1.80	0.60
28:RH:126:PRO:CD	28:RH:127:GLU:N	2.65	0.60
32:RP:13:ASN:C	32:RP:15:ARG:N	2.54	0.60
38:RV:66:ARG:HH12	38:RV:88:ARG:HH11	1.49	0.60
40:RX:43:VAL:CG1	40:RX:51:VAL:HG21	2.31	0.60
45:R2:70:GLN:O	45:R2:71:ASN:HB2	2.00	0.60
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.67	0.60
1:XA:1124:G:H3'	1:XA:1145:C:N4	2.15	0.60
1:XA:1225:A:H5"	1:XA:1226:C:OP2	2.01	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.01	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1103:A:H5'	22:YA:1104:C:H5	1.67	0.60
22:YA:2619:C:H1'	25:YE:156:MET:HE1	1.84	0.60
22:YA:2757:A:OP1	52:Y9:19:ARG:HA	2.02	0.60
24:YD:263:ARG:HH11	24:YD:263:ARG:CB	2.15	0.60
25:YE:37:ARG:NE	25:YE:37:ARG:CA	2.64	0.60
36:YT:34:VAL:HG12	36:YT:36:GLU:HG2	1.84	0.60
37:YU:69:CYS:HB3	37:YU:106:PHE:CZ	2.36	0.60
44:Y1:3:LYS:HD3	44:Y1:43:TYR:CD2	2.35	0.60
1:QA:584:G:H2'	1:QA:585:G:H8	1.64	0.60
1:QA:1312:G:H5"	47:R4:67:TYR:OH	2.00	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.99	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:146:ILE:HD12	4:QD:146:ILE:H	1.66	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
6:QF:89:MET:HE1	18:QR:76:LEU:HD22	1.82	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
16:QP:8:ARG:HH11	16:QP:8:ARG:HG2	1.64	0.60
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.60
24:RD:263:ARG:HH11	24:RD:263:ARG:CB	2.14	0.60
27:RG:94:LEU:HD23	27:RG:94:LEU:H	1.64	0.60
31:RO:104:ARG:HG2	31:RO:104:ARG:NH1	2.14	0.60
35:RS:18:ILE:C	35:RS:19:LYS:O	2.44	0.60
45:R2:41:ILE:HG12	45:R2:44:LEU:HD12	1.81	0.60
2:XB:90:MET:HE2	2:XB:90:MET:HA	1.84	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	0.60
19:XS:11:VAL:O	19:XS:12:ASP:HB2	2.00	0.60
22:YA:451:C:H4'	26:YF:52:LYS:HZ2	1.66	0.60
25:YE:53:PRO:HG2	25:YE:54:GLN:NE2	2.17	0.60
26:YF:34:TRP:CZ3	32:YP:8:PRO:HB3	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:13:ASN:O	32:YP:15:ARG:N	2.34	0.60
35:YS:99:LYS:O	35:YS:102:ALA:N	2.34	0.60
49:Y6:13:CYS:O	49:Y6:21:TYR:HA	2.02	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
22:RA:848:G:H2'	22:RA:849:A:C8	2.35	0.60
22:RA:1263:U:H2'	22:RA:1264:G:C8	2.36	0.60
22:RA:1434:A:H61	22:RA:1558:A:H62	1.50	0.60
22:RA:2277:G:H5'	33:RQ:85:LYS:HG3	1.82	0.60
23:RB:52:A:H62	35:RS:33:LYS:HG3	1.66	0.60
27:RG:50:ALA:O	27:RG:53:LEU:HB3	2.01	0.60
28:RH:44:VAL:HG22	28:RH:44:VAL:O	2.01	0.60
41:RY:19:LYS:O	41:RY:19:LYS:HG3	2.01	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
4:XD:146:ILE:HD12	4:XD:146:ILE:H	1.66	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
18:XR:57:GLY:O	18:XR:58:LEU:C	2.43	0.60
20:XT:104:LEU:HD12	20:XT:105:SER:H	1.66	0.60
22:YA:558:G:OP1	30:YN:111:PRO:HD2	2.02	0.60
24:YD:25:THR:HG21	24:YD:81:ALA:HA	1.83	0.60
24:YD:35:LYS:NZ	24:YD:64:ILE:O	2.32	0.60
24:YD:166:GLN:HE21	24:YD:166:GLN:CA	2.14	0.60
25:YE:63:LEU:CD1	25:YE:64:LYS:H	2.04	0.60
27:YG:28:VAL:O	27:YG:31:VAL:HG12	2.01	0.60
28:YH:44:VAL:HG22	28:YH:44:VAL:O	2.01	0.60
30:YN:16:ILE:O	30:YN:55:VAL:HG22	2.01	0.60
34:YR:52:ILE:O	34:YR:55:ALA:HB3	2.01	0.60
35:YS:11:LYS:HB2	35:YS:91:PRO:HD3	1.84	0.60
39:YW:36:LEU:HD11	39:YW:47:VAL:HG12	1.83	0.60
44:Y1:80:LEU:O	44:Y1:81:LYS:HD2	2.00	0.60
47:Y4:38:LYS:C	47:Y4:40:HIS:N	2.52	0.60
54:XX:8:A:H8	54:XX:8:A:O5'	1.83	0.60
2:QB:90:MET:HE2	2:QB:90:MET:HA	1.83	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.01	0.60
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.60
22:RA:443:A:C5	26:RF:45:ARG:HD2	2.37	0.60
22:RA:1289:C:H2'	22:RA:1290:C:C6	2.36	0.60
22:RA:1826:G:H4'	24:RD:242:ARG:NH2	2.14	0.60
22:RA:2328:A:H2'	22:RA:2329:G:C8	2.36	0.60
27:RG:64:THR:HG23	27:RG:66:GLN:H	1.67	0.60
27:RG:179:PRO:HG3	47:R4:38:LYS:HZ2	1.66	0.60
30:RN:133:GLN:O	30:RN:134:ARG:HB3	1.99	0.60
32:RP:55:ARG:HD2	32:RP:56:SER:O	2.01	0.60
33:RQ:54:MET:O	33:RQ:57:HIS:HB3	2.00	0.60
1:XA:1178:G:N2	1:XA:1181:G:N7	2.49	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
14:XN:44:LEU:HD12	14:XN:48:ALA:HB2	1.84	0.60
22:YA:2287:A:N6	22:YA:2344:U:H3	1.99	0.60
24:YD:35:LYS:HG2	24:YD:64:ILE:CG2	2.31	0.60
30:YN:17:ASP:O	30:YN:18:ALA:HB3	2.01	0.60
30:YN:101:HIS:CD2	30:YN:101:HIS:C	2.79	0.60
31:YO:97:ARG:N	31:YO:117:LEU:HD22	2.15	0.60
37:YU:90:VAL:CG1	37:YU:91:ASP:H	2.00	0.60
38:YV:35:LEU:HD23	38:YV:35:LEU:O	2.01	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.32	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
22:RA:896:A:H2	42:RZ:146:ILE:HD11	1.67	0.60
22:RA:1259:G:H2'	22:RA:1260:G:H8	1.66	0.60
26:RF:34:TRP:CZ3	32:RP:8:PRO:HB3	2.36	0.60
26:RF:164:ARG:HH11	26:RF:164:ARG:HG2	1.66	0.60
27:RG:112:PRO:HB3	47:R4:37:SER:CB	2.25	0.60
30:RN:17:ASP:O	30:RN:18:ALA:HB3	2.01	0.60
30:RN:99:LEU:O	30:RN:103:VAL:HG23	2.02	0.60
34:RR:92:GLY:H	34:RR:94:TYR:HE2	1.49	0.60
41:RY:44:ILE:HG13	41:RY:45:VAL:H	1.65	0.60
1:XA:791:G:N2	1:XA:1497:G:O3'	2.35	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.01	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
9:XI:85:LEU:HD12	9:XI:85:LEU:O	2.02	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.25	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60
22:YA:890:A:HO2'	22:YA:892:G:H8	1.49	0.60
24:YD:35:LYS:HD3	24:YD:63:ARG:CB	2.32	0.60
24:YD:147:LEU:HD13	24:YD:155:LEU:CD1	2.29	0.60
25:YE:93:VAL:N	25:YE:95:ILE:HD12	2.17	0.60
30:YN:23:LEU:HD12	30:YN:99:LEU:HD23	1.82	0.60
37:YU:92:ARG:NH1	37:YU:95:LEU:CD1	2.65	0.60
38:YV:99:ILE:N	38:YV:99:ILE:CD1	2.65	0.60
39:YW:65:LEU:O	39:YW:66:GLU:C	2.43	0.60
40:YX:43:VAL:CG1	40:YX:51:VAL:HG21	2.31	0.60
1:QA:161:A:H2'	1:QA:162:A:C8	2.37	0.60
1:QA:323:U:H5'	20:QT:23:ARG:HB2	1.84	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
5:QE: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
7:QG:148:ASN:C	7:QG:150:ALA:H	2.08	0.60
9:QI:85:LEU:O	9:QI:85:LEU:HD12	2.02	0.60
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.60
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.65	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
22:RA:25:U:H5"	39:RW:80:PRO:HD3	1.84	0.60
22:RA:1081:U:H3'	22:RA:1082:U:H4'	1.84	0.60
23:RB:11:C:H3'	23:RB:12:C:H6	1.67	0.60
24:RD:2:ALA:HB3	24:RD:20:ASP:HB3	1.83	0.60
24:RD:25:THR:HG21	24:RD:81:ALA:CA	2.31	0.60
25:RE:4:ILE:CD1	25:RE:28:ALA:HB1	2.30	0.60
25:RE:37:ARG:NE	25:RE:37:ARG:CA	2.64	0.60
25:RE:95:ILE:HD12	25:RE:95:ILE:N	2.15	0.60
27:RG:44:GLY:HA2	27:RG:88:ILE:CG1	2.30	0.60
32:RP:13:ASN:O	32:RP:15:ARG:N	2.34	0.60
33:RQ:97:VAL:HG21	33:RQ:103:MET:HE3	1.83	0.60
35:RS:17:ARG:HG3	35:RS:18:ILE:N	2.14	0.60
37:RU:76:TYR:CZ	37:RU:80:ILE:HG13	2.37	0.60
43:R0:68:GLU:OE1	43:R0:82:ARG:NH1	2.35	0.60
45:R2:32:LEU:HD11	45:R2:54:LYS:HG3	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
22:YA:1543:A:O2'	22:YA:1544:C:O5'	2.18	0.60
24:YD:21:PHE:HB3	24:YD:24:ILE:HG13	1.83	0.60
24:YD:72:LYS:HE3	24:YD:75:ILE:HD12	1.82	0.60
26:YF:175:THR:O	26:YF:176:LEU:CB	2.49	0.60
27:YG:180:PHE:C	27:YG:182:LYS:H	2.09	0.60
30:YN:1:MET:HE1	37:YU:95:LEU:CD2	2.18	0.60
32:YP:79:ARG:HD3	32:YP:110:TYR:HE1	1.67	0.60
1:QA:1032(A):G:H2'	1:QA:1032(B):G:C8	2.36	0.60
1:QA:1080:A:H5"	5:QE:16:THR:HG21	1.83	0.60
1:QA:1128:C:H42	1:QA:1144:G:H1	1.49	0.60
1:QA:1397:C:C2'	54:QX:8:A:N6	2.65	0.60
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.60
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.32	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
22:RA:2635:C:OP1	25:RE:78:LEU:HD12	2.02	0.60
24:RD:28:GLU:O	24:RD:29:PRO:C	2.45	0.60
24:RD:35:LYS:HD3	24:RD:63:ARG:CB	2.32	0.60
25:RE:53:PRO:HG2	25:RE:54:GLN:NE2	2.16	0.60
26:RF:46:ARG:HH11	26:RF:46:ARG:CG	2.04	0.60
27:RG:128:ARG:HG3	27:RG:128:ARG:NH2	2.17	0.60
28:RH:30:LYS:CD	28:RH:81:GLU:H	2.15	0.60
28:RH:89:ILE:O	28:RH:91:GLY:N	2.35	0.60
28:RH:117:PRO:HB3	28:RH:123:PHE:CD1	2.37	0.60
34:RR:44:LEU:O	34:RR:48:VAL:HG23	2.02	0.60
38:RV:18:LEU:HB3	38:RV:96:ILE:HG12	1.83	0.60
40:RX:15:GLU:N	40:RX:15:GLU:OE1	2.34	0.60
42:RZ:52:SER:O	42:RZ:52:SER:OG	2.13	0.60
1:XA:321:A:N6	1:XA:329:A:OP2	2.33	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.02	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
22:YA:2086:U:H2'	22:YA:2087:G:H8	1.66	0.60
22:YA:2543:G:H2'	22:YA:2544:G:C8	2.35	0.60
24:YD:35:LYS:CG	24:YD:64:ILE:N	2.56	0.60
25:YE:93:VAL:N	25:YE:95:ILE:CD1	2.65	0.60
26:YF:63:LYS:HE2	26:YF:67:GLN:HB3	1.83	0.60
27:YG:9:ARG:HG2	27:YG:13:GLU:OE1	2.01	0.60
32:YP:121:LYS:HG3	32:YP:122:PRO:HD2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:63:LYS:HE2	33:YQ:65:PHE:CE1	2.37	0.60
36:YT:107:ASP:O	36:YT:110:ILE:HG22	2.02	0.60
38:YV:66:ARG:HH12	38:YV:88:ARG:HH11	1.49	0.60
51:Y8:53:PRO:CD	51:Y8:54:GLU:H	2.15	0.60
1:QA:962:C:H2'	1:QA:963:G:H8	1.67	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
25:RE:63:LEU:CD1	25:RE:64:LYS:H	2.04	0.60
25:RE:116:VAL:O	25:RE:117:MET:CB	2.49	0.60
27:RG:180:PHE:C	27:RG:182:LYS:H	2.09	0.60
32:RP:27:HIS:N	32:RP:27:HIS:ND1	2.49	0.60
32:RP:88:LEU:C	32:RP:90:ARG:N	2.60	0.60
34:RR:44:LEU:HD22	34:RR:48:VAL:HG23	1.82	0.60
36:RT:34:VAL:HG12	36:RT:36:GLU:HG2	1.83	0.60
41:RY:4:LYS:O	41:RY:5:MET:HB2	2.01	0.60
42:RZ:70:LEU:HB2	42:RZ:91:LEU:HD21	1.84	0.60
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.37	0.60
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.20	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.60
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.00	0.60
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.60
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.60
25:YE:68:ALA:O	25:YE:69:LYS:HG3	2.02	0.60
27:YG:50:ALA:O	27:YG:53:LEU:HB3	2.01	0.60
32:YP:88:LEU:C	32:YP:90:ARG:N	2.60	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.11	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.59
22:RA:242:G:C8	51:R8:5:LYS:HG2	2.36	0.59
22:RA:384:U:H2'	22:RA:385:C:H6	1.67	0.59
22:RA:1043:C:N3	22:RA:1112:G:N2	2.43	0.59
22:RA:1795:C:O2	24:RD:255:LYS:HE2	2.02	0.59
24:RD:69:ARG:C	24:RD:71:ASP:H	2.08	0.59
24:RD:165:ILE:HA	24:RD:175:LEU:HD23	1.83	0.59
26:RF:155:LEU:CD1	26:RF:174:VAL:HG13	2.32	0.59
27:RG:126:ASP:OD1	27:RG:130:ASN:HB2	2.02	0.59
29:RI:129:THR:HA	29:RI:137:PRO:HA	1.83	0.59
33:RQ:81:VAL:HG23	33:RQ:82:ARG:H	1.67	0.59
36:RT:107:ASP:O	36:RT:110:ILE:HG22	2.02	0.59
38:RV:35:LEU:HB2	38:RV:37:VAL:HG23	1.85	0.59
1:XA:296:U:H2'	1:XA:297:G:H8	1.67	0.59
1:XA:522:C:H41	12:XL:53:ARG:HH22	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1023:G:H3'	1:XA:1024:G:H5"	1.83	0.59
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.59
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.59
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.59
22:YA:1681:G:HO2'	22:YA:1762:A:HO2'	1.48	0.59
22:YA:2562:U:O2'	31:YO:23:ARG:NH1	2.33	0.59
22:YA:2698:U:H2'	22:YA:2699:C:C6	2.36	0.59
27:YG:111:LEU:HB2	27:YG:112:PRO:HD3	1.82	0.59
37:YU:92:ARG:HD3	37:YU:94:ASN:HB3	1.82	0.59
38:YV:35:LEU:HB2	38:YV:37:VAL:HG23	1.84	0.59
1:QA:411:A:N6	1:QA:413:G:H21	1.99	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
5:QE:152:ARG:O	8:QH:64:LYS:NZ	2.35	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.59
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.59
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.59
22:RA:565:C:H4'	22:RA:1253:A:C6	2.37	0.59
22:RA:812:C:HO2'	22:RA:1227:A:HO2'	1.50	0.59
25:RE:26:ILE:HD13	25:RE:26:ILE:C	2.26	0.59
25:RE:131:ALA:HB1	25:RE:135:HIS:HE1	1.65	0.59
28:RH:4:ILE:N	28:RH:4:ILE:HD13	2.18	0.59
32:RP:79:ARG:HD3	32:RP:110:TYR:HE1	1.67	0.59
35:RS:99:LYS:O	35:RS:102:ALA:N	2.34	0.59
44:R1:91:LYS:CG	44:R1:92:LYS:H	2.15	0.59
48:R5:52:TYR:O	48:R5:53:ALA:HB3	2.01	0.59
49:R6:20:ASN:CG	49:R6:21:TYR:H	2.09	0.59
1:XA:356:A:N3	1:XA:368:U:O2'	2.30	0.59
1:XA:891:U:H2'	1:XA:892:A:H8	1.66	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.59
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.59
22:YA:1542:G:O6	22:YA:1543:A:N6	2.35	0.59
28:YH:30:LYS:CD	28:YH:81:GLU:H	2.15	0.59
36:YT:57:PHE:CD2	36:YT:58:ASN:N	2.66	0.59
49:Y6:25:LYS:HD2	51:Y8:34:TRP:CZ2	2.36	0.59
49:Y6:41:PRO:HG2	49:Y6:45:LYS:N	2.10	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y8:22:VAL:CG2	51:Y8:53:PRO:HB2	2.32	0.59
51:Y8:56:GLU:O	51:Y8:59:LYS:N	2.35	0.59
1:QA:18:C:H5"	5:QE:127:ASN:HD21	1.67	0.59
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.36	0.59
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.36	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.83	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.83	0.59
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.67	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59
22:RA:515:A:H1'	22:RA:581:C:H1'	1.85	0.59
22:RA:1980:G:O2'	22:RA:1982:C:OP2	2.20	0.59
24:RD:25:THR:HG21	24:RD:81:ALA:HA	1.84	0.59
24:RD:166:GLN:CA	24:RD:166:GLN:HE21	2.14	0.59
25:RE:61:ARG:HB2	25:RE:62:PRO:CD	2.32	0.59
25:RE:68:ALA:O	25:RE:69:LYS:HG3	2.02	0.59
29:RI:52:ARG:O	29:RI:56:LYS:N	2.34	0.59
30:RN:16:ILE:O	30:RN:55:VAL:HG22	2.01	0.59
32:RP:95:VAL:HG13	32:RP:100:LEU:HD21	1.84	0.59
35:RS:11:LYS:HB2	35:RS:91:PRO:HD3	1.84	0.59
36:RT:6:LEU:O	36:RT:7:ILE:C	2.45	0.59
36:RT:102:ILE:HB	36:RT:110:ILE:HD13	1.84	0.59
37:RU:58:ARG:HA	37:RU:61:TRP:CE3	2.37	0.59
1:XA:1114:C:H1'	14:XN:60:SER:HB2	1.83	0.59
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
24:YD:172:TYR:CD1	24:YD:186:HIS:HA	2.37	0.59
26:YF:123:LEU:HD12	26:YF:124:LEU:N	2.17	0.59
28:YH:55:PRO:HG2	28:YH:61:HIS:CE1	2.37	0.59
30:YN:18:ALA:HB3	30:YN:55:VAL:O	2.03	0.59
30:YN:42:TRP:O	37:YU:64:ARG:NH2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:102:ILE:HB	36:YT:110:ILE:HD13	1.84	0.59
41:YY:96:ILE:CD1	41:YY:98:VAL:HG12	2.32	0.59
49:Y6:20:ASN:CG	49:Y6:21:TYR:H	2.09	0.59
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.37	0.59
4:QD:167:GLY:HA2	24:YD:135:PHE:CZ	2.38	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
20:QT:74:LYS:C	20:QT:76:ALA:H	2.09	0.59
24:RD:172:TYR:CD1	24:RD:186:HIS:HA	2.37	0.59
25:RE:36:ARG:H	25:RE:37:ARG:HH21	1.49	0.59
25:RE:69:LYS:O	25:RE:71:GLY:N	2.27	0.59
27:RG:13:GLU:O	27:RG:14:GLU:CB	2.44	0.59
29:RI:14:ASP:O	29:RI:16:GLY:N	2.35	0.59
32:RP:37:GLY:HA2	32:RP:41:ARG:HE	1.68	0.59
33:RQ:63:LYS:HE2	33:RQ:65:PHE:CE1	2.37	0.59
33:RQ:80:GLU:OE1	43:R0:7:LEU:HB3	2.02	0.59
51:R8:22:VAL:CG2	51:R8:53:PRO:HB2	2.32	0.59
51:R8:22:VAL:HG21	51:R8:53:PRO:HB2	1.83	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.84	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
13:XM:121:LYS:HZ1	55:XY:40:G:P	2.23	0.59
22:YA:2023:G:H5'	22:YA:2617:C:H4'	1.83	0.59
25:YE:26:ILE:HD13	25:YE:26:ILE:C	2.26	0.59
25:YE:51:PHE:HD1	25:YE:52:LEU:HG	1.68	0.59
25:YE:116:VAL:O	25:YE:117:MET:CB	2.49	0.59
26:YF:11:VAL:HG11	26:YF:18:ARG:HE	1.67	0.59
28:YH:86:GLU:O	28:YH:131:VAL:O	2.20	0.59
28:YH:159:GLU:O	28:YH:160:LYS:HG2	2.03	0.59
32:YP:55:ARG:HD2	32:YP:56:SER:O	2.01	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.85	0.59
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
22:RA:580:C:H2'	22:RA:581:C:C6	2.38	0.59
23:RB:15:A:H5'	23:RB:16:G:C8	2.38	0.59
25:RE:174:ASP:CG	25:RE:175:VAL:N	2.58	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:78:TYR:N	30:RN:78:TYR:CD1	2.70	0.59
39:RW:66:GLU:O	39:RW:68:ARG:N	2.33	0.59
44:R1:87:PRO:O	44:R1:91:LYS:N	2.32	0.59
49:R6:13:CYS:O	49:R6:21:TYR:HA	2.02	0.59
50:R7:18:PHE:C	50:R7:18:PHE:CD2	2.81	0.59
1:XA:192:U:H4'	20:XT:102:GLY:O	2.03	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.38	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
13:XM:77:ASN:CG	47:Y4:71:ARG:CZ	2.75	0.59
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.35	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
22:YA:528:A:C2	22:YA:2042:A:H2'	2.37	0.59
22:YA:1129:A:N6	22:YA:2491:U:OP1	2.35	0.59
22:YA:2466:C:OP1	52:Y9:4:ARG:HB2	2.03	0.59
24:YD:174:ILE:HD12	24:YD:174:ILE:N	2.16	0.59
30:YN:78:TYR:N	30:YN:78:TYR:CD1	2.70	0.59
32:YP:95:VAL:HG13	32:YP:100:LEU:HD21	1.84	0.59
33:YQ:97:VAL:HG21	33:YQ:103:MET:HE3	1.83	0.59
34:YR:92:GLY:H	34:YR:94:TYR:HE2	1.49	0.59
36:YT:6:LEU:O	36:YT:7:ILE:C	2.44	0.59
37:YU:58:ARG:HA	37:YU:61:TRP:CE3	2.37	0.59
37:YU:76:TYR:CZ	37:YU:80:ILE:HG13	2.37	0.59
41:YY:4:LYS:O	41:YY:5:MET:HB2	2.01	0.59
41:YY:95:LYS:HD3	41:YY:95:LYS:H	1.67	0.59
46:Y3:29:ARG:HH11	46:Y3:29:ARG:CB	2.13	0.59
49:Y6:44:ARG:O	49:Y6:45:LYS:HB2	2.00	0.59
55:QY:36:G:H2'	55:QY:37:1MG:C8	2.38	0.59
54:XX:4:C:C4	55:XY:37:1MG:HM11	2.37	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
22:RA:769:G:H5'	22:RA:1379:A:H61	1.66	0.59
22:RA:1904:G:H2'	22:RA:1905:C:O4'	2.02	0.59
22:RA:2593:U:H2'	22:RA:2594:C:C6	2.37	0.59
25:RE:116:VAL:CG2	25:RE:122:PHE:CD2	2.86	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:123:LEU:HD12	26:RF:124:LEU:N	2.17	0.59
32:RP:71:VAL:HG13	32:RP:72:PRO:HD3	1.84	0.59
32:RP:106:LEU:O	32:RP:107:LYS:CB	2.46	0.59
48:R5:40:LYS:NZ	48:R5:46:CYS:HB3	2.18	0.59
1:XA:7:G:H5'	1:XA:298:A:O4'	2.03	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.60	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
22:YA:459:U:H2'	22:YA:460:A:C8	2.37	0.59
27:YG:16:ARG:NH2	27:YG:31:VAL:HG11	2.17	0.59
28:YH:4:ILE:N	28:YH:4:ILE:HD13	2.18	0.59
30:YN:6:PRO:HG3	30:YN:41:ASP:HB2	1.83	0.59
30:YN:58:ASP:N	30:YN:60:ILE:HD11	2.16	0.59
37:YU:92:ARG:HH11	37:YU:95:LEU:HD12	1.67	0.59
1:QA:527:G:O2'	1:QA:535:A:N1	2.31	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
22:RA:1327:C:O3'	34:RR:105:ARG:NH2	2.36	0.59
22:RA:2280:G:O2'	22:RA:2388:A:N1	2.32	0.59
22:RA:2591:C:N4	22:RA:2592:G:O6	2.35	0.59
22:RA:2746:U:H5"	28:RH:138:LYS:HE2	1.85	0.59
24:RD:54:ARG:HH11	24:RD:54:ARG:CG	2.14	0.59
24:RD:137:PRO:HB2	24:RD:140:THR:CG2	2.33	0.59
28:RH:82:GLY:O	28:RH:135:GLY:O	2.20	0.59
35:RS:89:ARG:O	35:RS:90:GLY:O	2.19	0.59
39:RW:20:VAL:C	39:RW:22:ASP:N	2.59	0.59
39:RW:36:LEU:HD11	39:RW:47:VAL:HG12	1.83	0.59
41:RY:51:VAL:CG1	41:RY:52:SER:H	2.11	0.59
42:RZ:69:THR:HB	42:RZ:88:PHE:HB3	1.84	0.59
44:R1:53:VAL:O	44:R1:54:ALA:C	2.45	0.59
1:XA:881:G:H2'	1:XA:882:C:O4'	2.01	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
14:XN:15:LYS:HD2	14:XN:16:PHE:CZ	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2562:U:H1'	31:YO:23:ARG:NH1	2.17	0.59
29:YI:3:VAL:HG12	29:YI:38:LEU:HA	1.84	0.59
32:YP:39:LYS:CA	32:YP:45:LEU:CD1	2.80	0.59
32:YP:127:ALA:O	32:YP:147:LEU:HD23	2.02	0.59
33:YQ:81:VAL:HG23	33:YQ:82:ARG:H	1.67	0.59
34:YR:72:ASP:O	34:YR:76:VAL:HB	2.03	0.59
38:YV:15:GLU:HG3	38:YV:16:PRO:HD2	1.83	0.59
44:Y1:53:VAL:O	44:Y1:54:ALA:C	2.45	0.59
47:Y4:48:ARG:NH1	47:Y4:52:THR:H	2.01	0.59
53:QV:53:G:H4'	53:QV:54:U:OP1	2.02	0.59
1:QA:396:G:O2'	1:QA:398:C:OP1	2.15	0.59
1:QA:1339:A:O2'	53:QV:40:C:O2'	2.19	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.59
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.83	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
22:RA:1820:U:C2	24:RD:202:LYS:HB3	2.38	0.59
22:RA:2011:U:OP2	39:RW:16:LYS:NZ	2.35	0.59
22:RA:2315:G:OP1	27:RG:36:LYS:NZ	2.35	0.59
22:RA:2510:C:H2'	22:RA:2511:U:C6	2.38	0.59
23:RB:40:U:H1'	23:RB:45:A:H61	1.68	0.59
23:RB:116:G:H4'	35:RS:54:LEU:HD13	1.83	0.59
25:RE:93:VAL:N	25:RE:95:ILE:CD1	2.65	0.59
30:RN:9:VAL:HG21	30:RN:48:MET:HB3	1.85	0.59
50:R7:31:LEU:O	50:R7:32:LYS:C	2.43	0.59
1:XA:902:G:H2'	1:XA:903:G:H8	1.68	0.59
1:XA:1095:U:P	1:XA:1108:G:H1	2.26	0.59
17:XQ:41:LYS:HZ3	17:XQ:92:ARG:HH22	1.49	0.59
22:YA:2573:C:N4	56:Z8:75:C:O2'	2.35	0.59
24:YD:27:THR:CG2	24:YD:83:GLU:HB3	2.33	0.59
24:YD:177:LEU:HD11	24:YD:183:ARG:HB2	1.85	0.59
25:YE:36:ARG:H	25:YE:37:ARG:HH21	1.49	0.59
27:YG:35:GLU:CD	27:YG:35:GLU:C	2.71	0.59
28:YH:82:GLY:O	28:YH:135:GLY:O	2.20	0.59
28:YH:124:GLU:HB3	28:YH:132:ARG:HG3	1.85	0.59
35:YS:88:ASP:O	35:YS:89:ARG:CB	2.49	0.59
39:YW:20:VAL:C	39:YW:22:ASP:H	2.10	0.59
42:YZ:95:PRO:HG2	42:YZ:127:LYS:HD3	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y4:15:ILE:HG22	47:Y4:19:GLY:O	2.03	0.59
47:Y4:22:ILE:HG22	47:Y4:23:GLU:N	2.18	0.59
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.01	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
28:RH:55:PRO:HG2	28:RH:61:HIS:CE1	2.37	0.59
28:RH:127:GLU:HG2	28:RH:128:PRO:CG	2.33	0.59
36:RT:66:VAL:HG12	36:RT:67:SER:H	1.66	0.59
37:RU:52:ARG:HG2	37:RU:52:ARG:NH1	2.18	0.59
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.36	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
24:YD:137:PRO:HB2	24:YD:140:THR:CG2	2.33	0.59
25:YE:61:ARG:HB2	25:YE:62:PRO:CD	2.33	0.59
28:YH:126:PRO:CD	28:YH:127:GLU:N	2.64	0.59
32:YP:138:LEU:O	32:YP:140:ALA:N	2.33	0.59
34:YR:63:ARG:HH11	34:YR:63:ARG:HG3	1.68	0.59
36:YT:102:ILE:HB	36:YT:110:ILE:HD11	1.84	0.59
40:YX:49:VAL:CG1	40:YX:83:VAL:HG13	2.33	0.59
45:Y2:64:LEU:CD2	45:Y2:68:ARG:HD2	2.33	0.59
47:Y4:3:GLU:HG3	47:Y4:4:GLY:N	2.18	0.59
48:Y5:52:TYR:O	48:Y5:53:ALA:HB3	2.02	0.59
50:Y7:18:PHE:CD2	50:Y7:18:PHE:C	2.81	0.59
1:QA:370:C:H2'	1:QA:371:G:C8	2.38	0.59
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.18	0.59
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.59
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.59
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	2.49	0.59
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.59
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.59
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.59
22:RA:468:G:N7	50:R7:39:ARG:NH2	2.51	0.59
22:RA:2199:A:H3'	22:RA:2205:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:71:ASP:HB3	24:RD:103:ARG:HH22	1.68	0.59
26:RF:89:VAL:HG12	26:RF:90:PHE:N	2.18	0.59
30:RN:18:ALA:HB3	30:RN:55:VAL:O	2.03	0.59
30:RN:114:ARG:O	30:RN:115:ARG:HB3	2.03	0.59
32:RP:127:ALA:O	32:RP:147:LEU:HD23	2.01	0.59
32:RP:138:LEU:O	32:RP:140:ALA:N	2.33	0.59
39:RW:20:VAL:C	39:RW:22:ASP:H	2.10	0.59
40:RX:49:VAL:CG1	40:RX:83:VAL:HG13	2.33	0.59
1:XA:679:C:H2'	1:XA:680:C:C6	2.37	0.59
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.59
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
26:YF:174:VAL:HG13	26:YF:174:VAL:O	2.03	0.59
27:YG:126:ASP:OD1	27:YG:130:ASN:HB2	2.02	0.59
29:YI:120:ILE:HD11	29:YI:126:TYR:CZ	2.38	0.59
38:YV:18:LEU:HB3	38:YV:96:ILE:HG12	1.84	0.59
1:QA:67:C:H2'	1:QA:68:G:C8	2.38	0.58
1:QA:974:A:H1'	14:QN:31:ARG:HE	1.67	0.58
1:QA:1321:C:H5"	1:QA:1322:C:H5"	1.85	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.58
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.18	0.58
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.58
22:RA:1814:G:H4'	24:RD:51:VAL:HG21	1.84	0.58
22:RA:2215:G:H2'	22:RA:2216:G:H8	1.67	0.58
25:RE:72:VAL:O	25:RE:73:GLU:O	2.21	0.58
28:RH:92:ILE:HG22	28:RH:93:GLY:N	2.18	0.58
30:RN:13:TRP:O	30:RN:135:PRO:HD2	2.03	0.58
32:RP:121:LYS:HG3	32:RP:122:PRO:HD2	1.84	0.58
34:RR:72:ASP:O	34:RR:76:VAL:HB	2.03	0.58
36:RT:102:ILE:HB	36:RT:110:ILE:HD11	1.84	0.58
1:XA:666:G:H5'	1:XA:726:C:H1'	1.85	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.58
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	0.58
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.16	0.58
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.58
22:YA:2291:U:H2'	22:YA:2292:C:C6	2.38	0.58
24:YD:27:THR:CG2	24:YD:28:GLU:N	2.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:63:LYS:HE2	26:YF:67:GLN:CB	2.32	0.58
28:YH:4:ILE:HG13	28:YH:6:ARG:CD	2.33	0.58
28:YH:89:ILE:O	28:YH:91:GLY:N	2.35	0.58
28:YH:92:ILE:HG22	28:YH:93:GLY:N	2.18	0.58
32:YP:37:GLY:HA2	32:YP:41:ARG:HE	1.67	0.58
36:YT:66:VAL:HG12	36:YT:67:SER:H	1.67	0.58
39:YW:80:PRO:O	39:YW:100:THR:HG22	2.03	0.58
45:Y2:32:LEU:HD11	45:Y2:54:LYS:HG3	1.84	0.58
48:Y5:40:LYS:NZ	48:Y5:46:CYS:HB3	2.18	0.58
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.18	0.58
1:QA:1450:U:O2'	1:QA:1451:A:N7	2.36	0.58
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.58
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.58
17:QQ:92:ARG:HG3	17:QQ:92:ARG:HH11	1.68	0.58
25:RE:93:VAL:N	25:RE:95:ILE:HD12	2.17	0.58
36:RT:36:GLU:HG3	36:RT:41:ARG:HD3	1.85	0.58
45:R2:64:LEU:CD2	45:R2:68:ARG:HD2	2.33	0.58
47:R4:63:TYR:C	47:R4:65:ASP:N	2.61	0.58
47:R4:65:ASP:O	47:R4:66:SER:CB	2.51	0.58
1:XA:966:G:C2	53:XV:34:C:H5'	2.38	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58
13:XM:3:ARG:CZ	27:YG:113:ARG:HH21	2.16	0.58
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.58
23:YB:28:C:OP1	35:YS:36:TYR:OH	2.15	0.58
25:YE:134:ILE:C	25:YE:134:ILE:HD12	2.28	0.58
27:YG:16:ARG:HB3	27:YG:17:PRO:CD	2.33	0.58
30:YN:70:LYS:C	30:YN:71:ILE:HD13	2.28	0.58
32:YP:71:VAL:HG13	32:YP:72:PRO:HD3	1.84	0.58
33:YQ:66:ILE:HA	33:YQ:104:PHE:HA	1.85	0.58
34:YR:44:LEU:O	34:YR:48:VAL:HG23	2.02	0.58
36:YT:36:GLU:HG3	36:YT:41:ARG:HD3	1.85	0.58
53:XV:35:A:C4	54:XX:3:G:N2	2.71	0.58
1:QA:762:C:H2'	1:QA:763:G:C8	2.38	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
22:RA:607:U:OP1	26:RF:102:PRO:HA	2.03	0.58
22:RA:1262:A:N3	48:R5:10:LYS:HE3	2.17	0.58
24:RD:34:VAL:O	24:RD:34:VAL:CG1	2.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:92:ILE:HD12	24:RD:104:TYR:CD2	2.38	0.58
26:RF:63:LYS:HE2	26:RF:67:GLN:CB	2.33	0.58
26:RF:179:GLU:CD	26:RF:179:GLU:H	2.11	0.58
28:RH:86:GLU:O	28:RH:131:VAL:O	2.21	0.58
31:RO:20:MET:O	31:RO:41:ALA:HB1	2.04	0.58
38:RV:41:GLY:H	38:RV:46:VAL:HG13	1.67	0.58
45:R2:16:LEU:O	45:R2:16:LEU:CG	2.49	0.58
45:R2:16:LEU:O	45:R2:17:SER:HB3	2.04	0.58
45:R2:17:SER:CB	45:R2:18:PRO:HA	2.33	0.58
47:R4:42:PHE:CG	47:R4:43:TYR:N	2.72	0.58
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.58
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:3:ARG:CB	47:Y4:34:GLU:HB3	2.31	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
22:YA:630:G:N2	22:YA:633:A:OP2	2.20	0.58
22:YA:839:U:H2'	22:YA:840:C:C6	2.38	0.58
22:YA:2277:G:H5'	33:YQ:85:LYS:HG3	1.85	0.58
24:YD:44:ASN:HB3	24:YD:49:ILE:CA	2.27	0.58
32:YP:37:GLY:C	32:YP:41:ARG:HD3	2.29	0.58
38:YV:49:THR:CB	38:YV:50:PRO:HD2	2.25	0.58
55:QY:39:C:O2'	55:QY:40:G:OP1	2.21	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.23	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
22:RA:2306:C:H2'	22:RA:2307:G:H21	1.68	0.58
22:RA:2443:C:H2'	22:RA:2444:G:H8	1.67	0.58
23:RB:16:G:H2'	23:RB:17:C:C6	2.38	0.58
24:RD:34:VAL:C	24:RD:35:LYS:HG3	2.28	0.58
24:RD:35:LYS:CG	24:RD:64:ILE:H	2.14	0.58
25:RE:6:GLY:HA3	25:RE:26:ILE:HD11	1.85	0.58
27:RG:16:ARG:NH2	27:RG:31:VAL:HG11	2.17	0.58
27:RG:35:GLU:CD	27:RG:35:GLU:C	2.71	0.58
30:RN:14:VAL:HG12	30:RN:15:LEU:N	2.19	0.58
30:RN:70:LYS:C	30:RN:71:ILE:HD13	2.28	0.58
31:RO:71:ARG:HH11	31:RO:71:ARG:HG3	1.69	0.58
37:RU:47:TYR:C	37:RU:47:TYR:CD2	2.81	0.58
37:RU:92:ARG:NH1	37:RU:95:LEU:CD1	2.65	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:81:LYS:HD3	41:RY:97:ARG:CD	2.34	0.58
45:R2:69:ARG:NH1	45:R2:69:ARG:CB	2.67	0.58
47:R4:12:ALA:CB	47:R4:29:PRO:HA	2.33	0.58
47:R4:48:ARG:NH1	47:R4:52:THR:H	2.01	0.58
1:XA:595:G:H1'	1:XA:596:C:H5	1.69	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
12:XL:45:PRO:HD3	12:XL:51:ALA:O	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
22:YA:704:G:H2'	22:YA:726:G:H22	1.67	0.58
22:YA:1316:U:H2'	22:YA:1317:A:C8	2.38	0.58
22:YA:2414:G:H21	32:YP:67:MET:CE	2.17	0.58
27:YG:64:THR:HG23	27:YG:66:GLN:H	1.67	0.58
30:YN:9:VAL:HG21	30:YN:48:MET:HB3	1.85	0.58
32:YP:65:ARG:HH21	51:Y8:15:LYS:CB	2.17	0.58
45:Y2:51:ARG:HA	45:Y2:54:LYS:HB2	1.86	0.58
49:Y6:27:LYS:HB2	49:Y6:27:LYS:HZ2	1.66	0.58
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.39	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
8:QH:10:LEU:H	8:QH:10:LEU:CD2	2.15	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.02	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.32	0.58
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.58
22:RA:189:G:H2'	22:RA:205:G:H22	1.67	0.58
22:RA:678:C:H2'	22:RA:679:C:H6	1.67	0.58
26:RF:160:ASN:OD1	26:RF:162:LEU:HB2	2.04	0.58
28:RH:4:ILE:HG13	28:RH:6:ARG:CD	2.33	0.58
28:RH:159:GLU:O	28:RH:160:LYS:HG2	2.02	0.58
33:RQ:81:VAL:C	33:RQ:82:ARG:CG	2.76	0.58
37:RU:92:ARG:HH11	37:RU:95:LEU:HD12	1.67	0.58
41:RY:96:ILE:CD1	41:RY:98:VAL:HG12	2.33	0.58
48:R5:60:VAL:HG13	48:R5:60:VAL:OXT	2.03	0.58
51:R8:46:ARG:O	51:R8:47:LYS:HB3	2.03	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.84	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.58
13:XM:57:ARG:HH11	13:XM:57:ARG:CB	2.13	0.58
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.17	0.58
22:YA:2761:G:H1'	28:YH:143:GLN:OE1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:165:ILE:HA	24:YD:175:LEU:HD23	1.83	0.58
26:YF:89:VAL:HG12	26:YF:90:PHE:N	2.18	0.58
28:YH:85:LYS:HA	28:YH:86:GLU:OE1	2.03	0.58
28:YH:117:PRO:HB3	28:YH:123:PHE:CD1	2.37	0.58
31:YO:40:VAL:HG12	31:YO:41:ALA:N	2.19	0.58
33:YQ:55:VAL:HG22	33:YQ:56:ARG:N	2.18	0.58
36:YT:88:ILE:C	36:YT:88:ILE:HD12	2.29	0.58
39:YW:66:GLU:O	39:YW:68:ARG:N	2.33	0.58
40:YX:36:LYS:HE3	40:YX:54:VAL:O	2.04	0.58
47:Y4:65:ASP:O	47:Y4:66:SER:CB	2.51	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
14:QN:23:ARG:O	14:QN:24:CYS:C	2.46	0.58
16:QP:75:ARG:C	16:QP:77:ALA:H	2.11	0.58
17:QQ:32:TYR:O	17:QQ:34:LYS:N	2.37	0.58
22:RA:271(A):C:O2	22:RA:272:G:H1'	2.03	0.58
22:RA:812:C:O2'	22:RA:1227:A:O2'	2.19	0.58
22:RA:2469:A:H2	22:RA:2481:G:H21	1.51	0.58
24:RD:242:ARG:HD2	24:RD:242:ARG:N	2.18	0.58
26:RF:11:VAL:HG11	26:RF:18:ARG:HE	1.67	0.58
31:RO:12:ASP:CG	31:RO:14:THR:HG23	2.29	0.58
32:RP:37:GLY:C	32:RP:41:ARG:HD3	2.29	0.58
34:RR:117:VAL:CG2	34:RR:118:GLU:H	2.15	0.58
35:RS:67:ARG:HB2	35:RS:67:ARG:HH11	1.65	0.58
36:RT:88:ILE:C	36:RT:88:ILE:HD12	2.29	0.58
39:RW:95:ILE:HD12	39:RW:95:ILE:O	2.04	0.58
1:XA:93:U:H2'	1:XA:95:G:O4'	2.04	0.58
1:XA:373:A:O2'	1:XA:374:A:H5'	2.03	0.58
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.38	0.58
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.29	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.85	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
24:YD:34:VAL:C	24:YD:35:LYS:HG3	2.28	0.58
31:YO:7:TYR:C	31:YO:8:LEU:HD22	2.29	0.58
31:YO:12:ASP:CG	31:YO:14:THR:HG23	2.29	0.58
34:YR:2:ARG:HG2	34:YR:5:LYS:HZ1	1.68	0.58
41:YY:81:LYS:HD3	41:YY:97:ARG:CD	2.33	0.58
45:Y2:17:SER:CB	45:Y2:18:PRO:HA	2.33	0.58
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.33	0.58
1:QA:1296:C:HO2'	1:QA:1302:U:H5	1.49	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58

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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
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.58
22:RA:270(T):G:O5'	44:R1:97:LEU:HD22	2.04	0.58
22:RA:1026:U:H4'	22:RA:1027:A:OP1	2.04	0.58
22:RA:2392:A:OP2	22:RA:2422:A:N6	2.37	0.58
32:RP:112:LEU:HD13	32:RP:112:LEU:C	2.29	0.58
41:RY:95:LYS:HD3	41:RY:95:LYS:H	1.67	0.58
47:R4:3:GLU:HG3	47:R4:4:GLY:N	2.18	0.58
47:R4:15:ILE:HG22	47:R4:19:GLY:O	2.03	0.58
1:XA:137:C:H42	1:XA:226:G:H1	1.50	0.58
1:XA:445:G:H1	1:XA:489:C:H42	1.51	0.58
1:XA:1472:U:O4	1:XA:1473:A:N6	2.36	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	2.03	0.58
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
22:YA:278:A:H2'	22:YA:279:C:C6	2.39	0.58
23:YB:80:U:H2'	23:YB:81:G:H21	1.68	0.58
25:YE:51:PHE:CD1	25:YE:52:LEU:HG	2.38	0.58
29:YI:4:ILE:HG12	29:YI:18:VAL:HG22	1.84	0.58
32:YP:71:VAL:CG1	32:YP:72:PRO:HD3	2.33	0.58
32:YP:112:LEU:HD13	32:YP:112:LEU:C	2.29	0.58
37:YU:47:TYR:C	37:YU:47:TYR:CD2	2.81	0.58
38:YV:38:LEU:HD23	38:YV:39:LEU:N	2.19	0.58
39:YW:95:ILE:HD12	39:YW:95:ILE:O	2.04	0.58
41:YY:51:VAL:CG1	41:YY:52:SER:H	2.11	0.58
42:YZ:48:PHE:HE2	42:YZ:71:VAL:HG11	1.69	0.58
46:Y3:22:ALA:O	46:Y3:25:ALA:HB3	2.04	0.58
47:Y4:12:ALA:CB	47:Y4:29:PRO:HA	2.33	0.58
2:QB:75:LYS:HD3	2:QB:75:LYS:C	2.29	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
18:QR:36:ASN:O	18:QR:36:ASN:ND2	2.32	0.58
22:RA:78:A:H2'	22:RA:79:G:H8	1.68	0.58
22:RA:590:A:H2'	22:RA:591:C:C6	2.38	0.58
22:RA:2745:C:O2	28:RH:139:GLN:NE2	2.36	0.58
25:RE:51:PHE:CD1	25:RE:52:LEU:HG	2.39	0.58
25:RE:134:ILE:C	25:RE:134:ILE:HD12	2.28	0.58
26:RF:174:VAL:HG13	26:RF:174:VAL:O	2.03	0.58
29:RI:102:SER:O	29:RI:106:GLY:N	2.36	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:71:VAL:CG1	32:RP:72:PRO:HD3	2.33	0.58
38:RV:81:TYR:C	38:RV:82:ARG:HG3	2.27	0.58
40:RX:7:VAL:O	40:RX:30:VAL:HG12	2.03	0.58
40:RX:27:THR:HB	40:RX:80:ILE:HB	1.84	0.58
47:R4:27:THR:O	47:R4:28:LYS:HB3	2.03	0.58
48:R5:50:GLY:O	48:R5:51:TYR:HB2	2.03	0.58
1:XA:565:U:H5"	1:XA:566:G:H2'	1.86	0.58
1:XA:797:C:OP1	11:XK:124:LYS:HE2	2.04	0.58
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.39	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
22:YA:2450:A:O2'	53:XV:76:A:C2	2.53	0.58
22:YA:2683:C:O2'	25:YE:13:ARG:NH2	2.37	0.58
25:YE:63:LEU:HD13	25:YE:65:GLY:H	1.68	0.58
25:YE:72:VAL:O	25:YE:73:GLU:O	2.21	0.58
25:YE:78:LEU:HD23	25:YE:79:ARG:HD2	1.86	0.58
26:YF:138:GLU:O	26:YF:141:ALA:HB3	2.03	0.58
26:YF:179:GLU:CD	26:YF:179:GLU:H	2.11	0.58
30:YN:13:TRP:O	30:YN:135:PRO:HD2	2.03	0.58
38:YV:81:TYR:C	38:YV:82:ARG:HG3	2.27	0.58
40:YX:7:VAL:O	40:YX:30:VAL:HG12	2.04	0.58
42:YZ:52:SER:O	42:YZ:52:SER:OG	2.21	0.58
45:Y2:15:LYS:H	45:Y2:67:LYS:CE	2.17	0.58
45:Y2:69:ARG:NH1	45:Y2:69:ARG:CB	2.67	0.58
55:XY:39:C:O2'	55:XY:40:G:OP1	2.21	0.58
1:QA:715:A:H2'	1:QA:716:A:C8	2.39	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.58
22:RA:2695:C:H2'	22:RA:2696:U:C6	2.38	0.58
26:RF:53:THR:C	26:RF:55:GLY:H	2.11	0.58
39:RW:80:PRO:O	39:RW:100:THR:HG22	2.03	0.58
51:R8:56:GLU:O	51:R8:59:LYS:N	2.35	0.58
1:XA:191:G:C4	20:XT:105:SER:HB3	2.39	0.58
1:XA:1151:A:N3	10:XJ:39:PRO:HG3	2.19	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:54:LYS:N	12:XL:54:LYS:HD2	2.18	0.58
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.52	0.58
22:YA:1972:A:H2'	22:YA:1973:G:H8	1.69	0.58
22:YA:2252:G:N1	53:XV:74:C:N3	2.44	0.58
24:YD:242:ARG:HD2	24:YD:242:ARG:N	2.18	0.58
33:YQ:47:ILE:CD1	33:YQ:70:PRO:HD3	2.34	0.58
34:YR:117:VAL:CG2	34:YR:118:GLU:H	2.15	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.86	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
22:RA:984:A:H5"	22:RA:985:C:H5	1.69	0.58
22:RA:1161:C:O2'	38:RV:8:GLY:HA2	2.04	0.58
22:RA:1412:A:H2'	22:RA:1413:G:O4'	2.04	0.58
22:RA:2245:U:H5'	22:RA:2246:G:H5'	1.85	0.58
25:RE:111:ARG:NE	25:RE:160:TYR:HE1	2.01	0.58
28:RH:125:VAL:HG12	28:RH:126:PRO:CG	2.34	0.58
33:RQ:47:ILE:CD1	33:RQ:70:PRO:HD3	2.34	0.58
37:RU:24:TYR:HE1	37:RU:39:LEU:HD23	1.69	0.58
47:R4:15:ILE:HG22	47:R4:20:ASN:HA	1.86	0.58
47:R4:39:CYS:O	47:R4:40:HIS:HB2	2.03	0.58
1:XA:266:G:O2'	1:XA:267:C:OP2	2.18	0.58
1:XA:272:C:H2'	1:XA:273:A:C8	2.39	0.58
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.39	0.58
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.58
2:XB:111:ARG:HA	2:XB:111:ARG:NE	2.18	0.58
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.58
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.58
22:YA:2862:G:H2'	22:YA:2863:C:H6	1.69	0.58
25:YE:111:ARG:NE	25:YE:160:TYR:HE1	2.01	0.58
26:YF:53:THR:C	26:YF:55:GLY:H	2.11	0.58
27:YG:39:ILE:HG23	27:YG:155:MET:HG3	1.86	0.58
28:YH:127:GLU:HG2	28:YH:128:PRO:CG	2.32	0.58
30:YN:35:ARG:O	30:YN:37:LYS:N	2.37	0.58
30:YN:114:ARG:O	30:YN:115:ARG:HB3	2.03	0.58
35:YS:26:LEU:CD2	35:YS:87:PHE:HD1	2.17	0.58
36:YT:82:LEU:HD12	36:YT:82:LEU:N	2.19	0.58
53:XV:53:G:H4'	53:XV:54:U:OP1	2.02	0.58
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
22:RA:249:C:O2	51:R8:12:LYS:HE3	2.03	0.57
22:RA:263:C:H2'	22:RA:264:C:O4'	2.04	0.57
22:RA:1021:A:OP2	30:RN:65:LYS:NZ	2.37	0.57
22:RA:1266:G:C5	39:RW:15:ARG:NH1	2.72	0.57
22:RA:1354:A:OP1	24:RD:38:LYS:HE2	2.04	0.57
24:RD:25:THR:HG21	24:RD:81:ALA:HB1	1.85	0.57
24:RD:27:THR:CG2	24:RD:83:GLU:HB3	2.33	0.57
24:RD:147:LEU:HD13	24:RD:155:LEU:CD1	2.29	0.57
26:RF:138:GLU:O	26:RF:141:ALA:HB3	2.04	0.57
28:RH:85:LYS:HA	28:RH:86:GLU:OE1	2.04	0.57
33:RQ:55:VAL:HG22	33:RQ:56:ARG:N	2.18	0.57
35:RS:26:LEU:CD2	35:RS:87:PHE:HD1	2.17	0.57
35:RS:67:ARG:HH11	35:RS:67:ARG:CB	2.17	0.57
39:RW:43:GLY:O	39:RW:44:ALA:C	2.46	0.57
45:R2:15:LYS:H	45:R2:67:LYS:NZ	2.02	0.57
47:R4:22:ILE:HG22	47:R4:23:GLU:N	2.18	0.57
1:XA:243:A:H4'	1:XA:244:U:O5'	2.02	0.57
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.57
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.57
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.57
13:XM:7:VAL:HG21	27:YG:113:ARG:C	2.29	0.57
22:YA:2506:U:H6	56:Z8:76:PPU:HN'3	1.51	0.57
23:YB:101:A:H8	23:YB:101:A:OP2	1.86	0.57
26:YF:160:ASN:OD1	26:YF:162:LEU:HB2	2.04	0.57
28:YH:4:ILE:HD13	28:YH:4:ILE:H	1.68	0.57
35:YS:95:HIS:CG	35:YS:96:GLY:H	2.21	0.57
39:YW:43:GLY:O	39:YW:44:ALA:C	2.46	0.57
45:Y2:21:LEU:O	45:Y2:25:VAL:HG23	2.04	0.57
47:Y4:37:SER:HB3	47:Y4:42:PHE:CE1	2.38	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.85	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.57
22:RA:49:A:H61	22:RA:177:G:H2'	1.69	0.57
22:RA:674:G:C1'	26:RF:74:ARG:HD3	2.30	0.57
24:RD:263:ARG:HB2	24:RD:263:ARG:HH11	1.67	0.57
28:RH:4:ILE:HD13	28:RH:4:ILE:H	1.68	0.57
28:RH:84:SER:O	28:RH:133:VAL:O	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:153:LYS:HA	28:RH:153:LYS:HZ3	1.68	0.57
32:RP:59:LEU:HA	32:RP:61:ARG:CZ	2.34	0.57
35:RS:95:HIS:CG	35:RS:96:GLY:H	2.21	0.57
36:RT:82:LEU:HD12	36:RT:82:LEU:N	2.19	0.57
45:R2:21:LEU:O	45:R2:25:VAL:HG23	2.04	0.57
1:XA:210:U:O2'	1:XA:216:G:N7	2.35	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
11:XK:21:ILE:HD12	11:XK:21:ILE:N	2.19	0.57
16:XP:76:GLN:O	16:XP:76:GLN:HG2	2.04	0.57
19:XS:64:GLU:C	47:Y4:55:ARG:NH1	2.62	0.57
22:YA:141:A:C8	22:YA:1408:C:H1'	2.39	0.57
24:YD:71:ASP:HB3	24:YD:103:ARG:HH22	1.68	0.57
25:YE:6:GLY:HA3	25:YE:26:ILE:HD11	1.85	0.57
25:YE:203:LYS:HE3	25:YE:204:ALA:HB2	1.86	0.57
29:YI:26:ALA:HA	29:YI:30:LEU:HB2	1.86	0.57
33:YQ:79:LEU:CD1	43:Y0:5:LYS:HD3	2.33	0.57
35:YS:67:ARG:NH1	35:YS:67:ARG:CB	2.64	0.57
40:YX:27:THR:HB	40:YX:80:ILE:HB	1.85	0.57
1:QA:895:G:H2'	1:QA:896:C:C6	2.39	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
22:RA:1935:G:H1'	22:RA:1964:G:N2	2.19	0.57
22:RA:2050:C:N4	22:RA:2051:A:N1	2.52	0.57
22:RA:2445:G:OP1	26:RF:74:ARG:NH2	2.37	0.57
24:RD:35:LYS:HG2	24:RD:64:ILE:CA	2.34	0.57
27:RG:125:PHE:C	27:RG:127:GLY:H	2.12	0.57
28:RH:125:VAL:HA	28:RH:126:PRO:CB	2.29	0.57
29:RI:4:ILE:HG12	29:RI:18:VAL:HG22	1.85	0.57
29:RI:88:ILE:HG12	29:RI:122:GLU:H	1.70	0.57
38:RV:35:LEU:HD21	38:RV:57:VAL:CG2	2.31	0.57
38:RV:78:LYS:O	38:RV:79:VAL:HB	2.04	0.57
44:R1:81:LYS:HE2	44:R1:81:LYS:H	1.62	0.57
47:R4:37:SER:HB3	47:R4:42:PHE:CE1	2.38	0.57
48:R5:55:ARG:NH1	48:R5:58:LEU:HD11	2.19	0.57
1:XA:842:C:O2'	1:XA:848:C:N4	2.37	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.05	0.57
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
9:XI:17:VAL:HG13	9:XI:81:ILE:HD13	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.20	0.57
13:XM:57:ARG:NH2	47:Y4:34:GLU:HA	2.19	0.57
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.68	0.57
22:YA:1257:C:H5'	26:YF:75:HIS:CE1	2.40	0.57
25:YE:41:LYS:HE2	25:YE:41:LYS:HA	1.86	0.57
25:YE:63:LEU:HD12	25:YE:65:GLY:H	1.69	0.57
25:YE:116:VAL:CG2	25:YE:122:PHE:CD2	2.86	0.57
34:YR:32:GLY:O	34:YR:115:GLU:HA	2.04	0.57
38:YV:78:LYS:O	38:YV:79:VAL:HB	2.04	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
12:QL:47:LYS:HG2	12:QL:48:PRO:CD	2.33	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
22:RA:566:U:OP1	32:RP:29:LYS:HE2	2.05	0.57
22:RA:2556:C:H2'	22:RA:2557:G:O4'	2.04	0.57
25:RE:74:PRO:HG2	25:RE:77:ILE:HG23	1.86	0.57
27:RG:16:ARG:HB3	27:RG:17:PRO:CD	2.33	0.57
27:RG:39:ILE:HG23	27:RG:155:MET:HG3	1.86	0.57
27:RG:63:ILE:HD11	27:RG:102:PHE:HE2	1.69	0.57
31:RO:20:MET:HG2	31:RO:21:CYS:N	2.20	0.57
33:RQ:58:PHE:O	33:RQ:59:ARG:C	2.43	0.57
47:R4:38:LYS:C	47:R4:40:HIS:H	2.07	0.57
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.37	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.04	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.17	0.57
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.57
19:XS:65:ASN:CA	47:Y4:55:ARG:NH1	2.67	0.57
22:YA:1454:U:H5'	34:YR:63:ARG:NE	2.16	0.57
22:YA:2346:A:H5"	22:YA:2383:G:H1'	1.86	0.57
24:YD:35:LYS:HG2	24:YD:64:ILE:CA	2.34	0.57
28:YH:76:VAL:C	28:YH:78:GLY:H	2.13	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:14:VAL:HG12	30:YN:15:LEU:N	2.18	0.57
31:YO:20:MET:O	31:YO:41:ALA:HB1	2.04	0.57
31:YO:71:ARG:HG3	31:YO:71:ARG:HH11	1.69	0.57
37:YU:24:TYR:HE1	37:YU:39:LEU:HD23	1.70	0.57
37:YU:39:LEU:O	37:YU:40:PHE:C	2.48	0.57
41:YY:94:LYS:HE3	41:YY:101:LYS:HZ3	1.69	0.57
45:Y2:16:LEU:O	45:Y2:17:SER:HB3	2.04	0.57
46:Y3:4:LEU:O	46:Y3:36:VAL:HA	2.04	0.57
1:QA:1152:A:H5"	10:QJ:13:HIS:CD2	2.39	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.05	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
22:RA:1140:C:P	30:RN:66:LYS:HZ3	2.28	0.57
22:RA:1340:U:OP2	40:RX:78:LYS:NZ	2.37	0.57
24:RD:177:LEU:HD11	24:RD:183:ARG:HB2	1.85	0.57
25:RE:63:LEU:HD13	25:RE:65:GLY:H	1.68	0.57
26:RF:29:ASN:N	26:RF:112:MET:HE1	2.19	0.57
27:RG:39:ILE:CG2	27:RG:155:MET:HG3	2.35	0.57
30:RN:35:ARG:O	30:RN:37:LYS:N	2.37	0.57
30:RN:42:TRP:O	37:RU:64:ARG:NH2	2.35	0.57
34:RR:63:ARG:HH11	34:RR:63:ARG:HG3	1.68	0.57
35:RS:106:ARG:O	35:RS:107:GLU:HB2	2.04	0.57
45:R2:17:SER:HB2	45:R2:18:PRO:HA	1.86	0.57
46:R3:22:ALA:O	46:R3:25:ALA:HB3	2.04	0.57
49:R6:6:ARG:O	49:R6:8:LYS:HD2	2.05	0.57
51:R8:53:PRO:CD	51:R8:54:GLU:H	2.15	0.57
52:R9:25:VAL:HB	52:R9:34:GLN:HB2	1.86	0.57
1:XA:1297:C:O2'	7:XG:114:ARG:NH2	2.37	0.57
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.86	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:CB	2.17	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:HB2	1.69	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
22:YA:570:G:H2'	22:YA:2030:A:C5	2.39	0.57
22:YA:594:U:H5'	51:Y8:61:LEU:HD21	1.85	0.57
22:YA:1024:G:OP2	22:YA:1025:G:H3'	2.03	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1799:G:N1	22:YA:1819:A:OP2	2.37	0.57
22:YA:1932:A:H3'	22:YA:1933:G:H8	1.70	0.57
22:YA:2298:A:H2'	22:YA:2299:G:O4'	2.04	0.57
27:YG:63:ILE:HD11	27:YG:102:PHE:HE2	1.69	0.57
27:YG:107:LEU:HD11	27:YG:178:PHE:CE1	2.40	0.57
28:YH:2:SER:O	28:YH:3:ARG:C	2.47	0.57
30:YN:14:VAL:HG12	30:YN:15:LEU:H	1.69	0.57
34:YR:56:LYS:C	34:YR:58:GLY:N	2.61	0.57
35:YS:26:LEU:HD12	35:YS:39:ILE:CD1	2.23	0.57
35:YS:106:ARG:O	35:YS:107:GLU:HB2	2.04	0.57
48:Y5:50:GLY:O	48:Y5:51:TYR:HB2	2.02	0.57
51:Y8:46:ARG:O	51:Y8:47:LYS:HB3	2.03	0.57
55:QY:33:U:N3	55:QY:36:G:OP2	2.27	0.57
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.37	0.57
1:QA:719:C:O2'	18:QR:49:LYS:HB3	2.04	0.57
1:QA:1054:C:H5	55:QY:34:C:O4'	1.87	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
15:QO:8:LYS:HB2	15:QO:8:LYS:HZ2	1.67	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
22:RA:1790:C:H5"	22:RA:1791:A:OP1	2.05	0.57
30:RN:40:PRO:HB3	37:RU:68:ALA:HB2	1.86	0.57
30:RN:133:GLN:O	30:RN:134:ARG:CB	2.53	0.57
31:RO:7:TYR:C	31:RO:8:LEU:HD22	2.29	0.57
31:RO:40:VAL:HG12	31:RO:41:ALA:N	2.19	0.57
33:RQ:66:ILE:HA	33:RQ:104:PHE:HA	1.85	0.57
34:RR:32:GLY:O	34:RR:115:GLU:HA	2.04	0.57
40:RX:36:LYS:HE3	40:RX:54:VAL:O	2.04	0.57
1:XA:665:A:N3	1:XA:732:C:H2'	2.18	0.57
1:XA:1399:C:H4'	1:XA:1400:C:H5"	1.86	0.57
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.57
12:XL:47:LYS:O	12:XL:49:ASN:N	2.37	0.57
16:XP:75:ARG:C	16:XP:77:ALA:H	2.12	0.57
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.57
22:YA:2723:C:OP1	34:YR:3:HIS:HD2	1.88	0.57
24:YD:28:GLU:O	24:YD:29:PRO:C	2.45	0.57
25:YE:152:LYS:HG2	30:YN:78:TYR:CE1	2.39	0.57
30:YN:63:THR:HG22	30:YN:66:LYS:NZ	2.20	0.57
30:YN:133:GLN:O	30:YN:134:ARG:CB	2.53	0.57
35:YS:5:THR:HG23	35:YS:8:GLU:OE2	2.05	0.57
37:YU:52:ARG:HG2	37:YU:52:ARG:NH1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YW:20:VAL:C	39:YW:22:ASP:N	2.60	0.57
41:YY:97:ARG:HG2	41:YY:97:ARG:O	2.05	0.57
46:Y3:31:LEU:O	46:Y3:32:GLN:HB2	2.04	0.57
47:Y4:42:PHE:CG	47:Y4:43:TYR:N	2.72	0.57
48:Y5:55:ARG:NH1	48:Y5:58:LEU:HD11	2.19	0.57
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.57
27:RG:107:LEU:HD11	27:RG:178:PHE:CE1	2.39	0.57
30:RN:14:VAL:HG12	30:RN:15:LEU:H	1.69	0.57
35:RS:103:GLU:O	35:RS:106:ARG:CG	2.53	0.57
42:RZ:150:LEU:HD21	42:RZ:172:ALA:HB3	1.85	0.57
44:R1:70:VAL:O	44:R1:74:VAL:HG23	2.05	0.57
44:R1:86:SER:H	44:R1:87:PRO:CD	2.16	0.57
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.39	0.57
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.04	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.33	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.34	0.57
22:YA:271(B):G:H5"	22:YA:271(B):G:H8	1.70	0.57
22:YA:1441:G:H2'	22:YA:1442:G:H8	1.70	0.57
22:YA:2563:U:H4'	31:YO:28:SER:HA	1.87	0.57
22:YA:2777:G:OP2	22:YA:2781:A:O2'	2.20	0.57
24:YD:34:VAL:O	24:YD:34:VAL:CG1	2.51	0.57
26:YF:32:LEU:HD13	26:YF:105:VAL:CG1	2.33	0.57
28:YH:3:ARG:HA	28:YH:3:ARG:HE	1.69	0.57
44:Y1:86:SER:H	44:Y1:87:PRO:CD	2.16	0.57
1:QA:501:C:H2'	1:QA:502:G:C8	2.37	0.57
1:QA:565:U:H5"	1:QA:566:G:H2'	1.87	0.57
1:QA:1081:G:P	5:QE:16:THR:OG1	2.63	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.04	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
22:RA:71:A:N3	22:RA:73:A:N6	2.53	0.57
22:RA:392:C:H5"	22:RA:409:C:H5"	1.87	0.57
22:RA:660:G:C6	22:RA:661:C:C4	2.93	0.57
22:RA:1291:C:H2'	22:RA:1292:U:C6	2.40	0.57
22:RA:1818:U:O2'	24:RD:154:LYS:O	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2844:G:H3'	22:RA:2845:G:C8	2.40	0.57
25:RE:51:PHE:HD1	25:RE:52:LEU:HG	1.68	0.57
28:RH:76:VAL:C	28:RH:78:GLY:H	2.13	0.57
30:RN:7:LYS:HG2	30:RN:8:GLN:N	2.20	0.57
37:RU:96:ALA:O	37:RU:100:VAL:HG23	2.05	0.57
45:R2:15:LYS:H	45:R2:67:LYS:CE	2.17	0.57
46:R3:31:LEU:O	46:R3:32:GLN:HB2	2.04	0.57
49:R6:48:VAL:HG13	49:R6:49:HIS:N	2.20	0.57
1:XA:686:U:O4	1:XA:703:G:O2'	2.12	0.57
1:XA:833:U:H3	1:XA:853:G:H1	1.51	0.57
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.40	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.37	0.57
24:YD:36:PRO:HB2	24:YD:61:LEU:HG	1.87	0.57
25:YE:102:VAL:HG13	25:YE:172:VAL:CG2	2.34	0.57
27:YG:125:PHE:C	27:YG:127:GLY:H	2.12	0.57
30:YN:7:LYS:HG2	30:YN:8:GLN:N	2.20	0.57
35:YS:72:ALA:O	35:YS:76:LYS:HG3	2.04	0.57
47:Y4:39:CYS:O	47:Y4:40:HIS:HB2	2.03	0.57
55:QY:36:G:H2'	55:QY:37:1MG:H8	1.68	0.57
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.05	0.57
1:QA:1074:G:H4'	2:QB:104:ASN:HB2	1.86	0.57
1:QA:1318:A:H4'	19:QS:11:VAL:CG1	2.35	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.57
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.57
22:RA:826:U:H2'	22:RA:828:U:O4'	2.05	0.57
22:RA:1007:C:O3'	30:RN:108:PRO:HB3	2.05	0.57
22:RA:1496:A:H8	22:RA:1577:C:O2'	1.88	0.57
22:RA:2323:G:H1	22:RA:2332:U:H3	1.51	0.57
25:RE:41:LYS:HA	25:RE:41:LYS:HE2	1.87	0.57
25:RE:63:LEU:HD12	25:RE:65:GLY:H	1.69	0.57
28:RH:124:GLU:HB3	28:RH:132:ARG:HG3	1.85	0.57
31:RO:96:THR:O	31:RO:97:ARG:HB3	2.04	0.57
41:RY:89:PHE:O	41:RY:90:LEU:HD13	2.05	0.57
44:R1:89:GLU:O	44:R1:93:GLU:HB2	2.05	0.57
45:R2:31:GLU:O	45:R2:35:LEU:HG	2.05	0.57
49:R6:11:LEU:HD23	49:R6:26:ASN:HB3	1.87	0.57
1:XA:337:C:H2'	1:XA:338:A:C8	2.40	0.57
1:XA:407:G:H2'	1:XA:408:A:H8	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1128:C:N3	1:XA:1144:G:N2	2.50	0.57
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.73	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
22:YA:1045:A:N3	22:YA:1047:G:N2	2.53	0.57
22:YA:1693:U:H1'	24:YD:14:ARG:NH2	2.20	0.57
30:YN:114:ARG:C	30:YN:116:LEU:H	2.13	0.57
31:YO:96:THR:O	31:YO:97:ARG:HB3	2.04	0.57
35:YS:67:ARG:CB	35:YS:67:ARG:HH11	2.18	0.57
37:YU:83:LEU:HD12	37:YU:113:ALA:HB2	1.86	0.57
41:YY:21:LYS:HG3	41:YY:22:GLY:H	1.69	0.57
44:Y1:70:VAL:O	44:Y1:74:VAL:HG23	2.04	0.57
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.03	0.57
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
12:QL:50:SER:O	12:QL:51:ALA:CB	2.52	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
22:RA:1282:U:H2'	22:RA:1283:G:O4'	2.05	0.57
22:RA:2286:A:H4'	22:RA:2287:A:O4'	2.04	0.57
24:RD:35:LYS:CE	24:RD:104:TYR:HB2	2.35	0.57
25:RE:102:VAL:HG13	25:RE:172:VAL:CG2	2.34	0.57
30:RN:63:THR:HG22	30:RN:66:LYS:NZ	2.20	0.57
30:RN:112:LEU:C	30:RN:112:LEU:HD23	2.30	0.57
30:RN:112:LEU:O	30:RN:114:ARG:O	2.23	0.57
35:RS:32:LEU:O	35:RS:62:LYS:HE2	2.05	0.57
37:RU:68:ALA:O	37:RU:71:GLN:HB2	2.04	0.57
1:XA:57:G:H1	1:XA:355:C:H42	1.51	0.57
1:XA:347:G:O2'	1:XA:348:G:H5"	2.05	0.57
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.69	0.57
1:XA:1213:A:N6	1:XA:1215:G:N3	2.53	0.57
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.57
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
14:XN:13:THR:N	14:XN:14:PRO:CD	2.68	0.57
14:XN:29:ARG:HH11	14:XN:29:ARG:HG3	1.70	0.57
22:YA:2477:C:H2'	52:Y9:1:MET:HG3	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2560:C:H2'	22:YA:2561:A:C8	2.40	0.57
24:YD:25:THR:HG21	24:YD:81:ALA:HB1	1.86	0.57
24:YD:25:THR:HG21	24:YD:82:ILE:H	1.70	0.57
32:YP:59:LEU:HA	32:YP:61:ARG:CZ	2.34	0.57
53:QV:35:A:N6	54:QX:3:G:N1	2.53	0.57
1:QA:838:G:C5	1:QA:842:C:H1'	2.39	0.56
6:QF:92:LYS:HB2	6:QF:92:LYS:HZ2	1.69	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.56
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.56
22:RA:140:A:H8	22:RA:1408:C:HO2'	1.53	0.56
22:RA:1386:C:H2'	22:RA:1387:C:H6	1.69	0.56
22:RA:2729:G:H1'	25:RE:187:ALA:HB2	1.85	0.56
28:RH:3:ARG:HA	28:RH:3:ARG:HE	1.69	0.56
30:RN:82:LEU:HD12	30:RN:83:LYS:H	1.70	0.56
32:RP:13:ASN:O	32:RP:14:LYS:C	2.48	0.56
35:RS:72:ALA:O	35:RS:76:LYS:HG3	2.04	0.56
49:R6:42:TRP:N	49:R6:42:TRP:CD1	2.73	0.56
52:R9:1:MET:HB3	52:R9:4:ARG:CZ	2.35	0.56
1:XA:250:A:H4'	1:XA:251:G:O5'	2.05	0.56
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
22:YA:270(R):G:H1'	44:Y1:78:LYS:HZ1	1.70	0.56
22:YA:1022:G:O2'	22:YA:1023:U:OP2	2.17	0.56
22:YA:1952:A:C5	31:YO:22:ILE:HD12	2.40	0.56
22:YA:2015:A:N3	48:Y5:2:ALA:N	2.53	0.56
24:YD:69:ARG:HD3	24:YD:105:ILE:HD11	1.87	0.56
24:YD:92:ILE:HD12	24:YD:104:TYR:CD2	2.39	0.56
26:YF:118:ALA:O	26:YF:121:GLY:N	2.33	0.56
27:YG:60:LEU:O	27:YG:64:THR:HG22	2.05	0.56
28:YH:84:SER:O	28:YH:133:VAL:O	2.22	0.56
29:YI:40:THR:O	29:YI:44:LEU:HB2	2.04	0.56
34:YR:45:ARG:HA	34:YR:95:THR:HG21	1.87	0.56
40:YX:35:THR:HG22	40:YX:38:GLU:OE1	2.04	0.56
47:Y4:27:THR:O	47:Y4:28:LYS:HB3	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y6:14:THR:O	49:Y6:49:HIS:HA	2.06	0.56
50:Y7:38:GLY:O	50:Y7:39:ARG:C	2.48	0.56
50:Y7:48:LYS:HG2	50:Y7:49:ARG:N	2.19	0.56
1:QA:361:G:H2'	1:QA:362:G:O4'	2.05	0.56
1:QA:429:U:H4'	1:QA:430:A:OP1	2.05	0.56
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.20	0.56
1:QA:1065:U:O5'	1:QA:1190:G:N2	2.39	0.56
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.40	0.56
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.19	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
22:RA:227:A:OP1	32:RP:76:LYS:HE3	2.06	0.56
22:RA:2197:U:H1'	22:RA:2198:A:C8	2.40	0.56
25:RE:152:LYS:HG2	30:RN:78:TYR:CE1	2.39	0.56
26:RF:24:LEU:HB3	26:RF:115:ALA:HB2	1.87	0.56
26:RF:46:ARG:HG2	26:RF:46:ARG:NH1	2.00	0.56
28:RH:2:SER:O	28:RH:3:ARG:C	2.47	0.56
30:RN:114:ARG:C	30:RN:116:LEU:H	2.13	0.56
34:RR:56:LYS:C	34:RR:58:GLY:N	2.62	0.56
35:RS:5:THR:HG23	35:RS:8:GLU:OE2	2.05	0.56
42:RZ:163:LEU:H	42:RZ:163:LEU:HD12	1.70	0.56
47:R4:50:VAL:O	47:R4:51:ASP:C	2.48	0.56
50:R7:13:ALA:O	50:R7:17:GLY:HA3	2.05	0.56
50:R7:19:ARG:HH11	50:R7:19:ARG:HG2	1.70	0.56
50:R7:38:GLY:O	50:R7:39:ARG:C	2.48	0.56
1:XA:1296:C:H3'	1:XA:1297:C:C6	2.40	0.56
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
7:XG:148:ASN:N	7:XG:148:ASN:ND2	2.46	0.56
11:XK:32:ILE:O	11:XK:40:ILE:HG12	2.04	0.56
12:XL:49:ASN:ND2	12:XL:92:ASP:CG	2.62	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
22:YA:309:G:N3	22:YA:329:G:O2'	2.38	0.56
23:YB:44:G:OP1	47:Y4:1:MET:N	2.33	0.56
27:YG:39:ILE:CG2	27:YG:155:MET:HG3	2.35	0.56
36:YT:134:GLU:O	36:YT:135:ALA:HB3	2.05	0.56
37:YU:68:ALA:O	37:YU:71:GLN:HB2	2.04	0.56
37:YU:104:GLN:OE1	37:YU:104:GLN:N	2.35	0.56
45:Y2:17:SER:HB2	45:Y2:18:PRO:HA	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y3:7:LYS:NZ	46:Y3:32:GLN:HE21	2.03	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.56
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.56
9:QI:10:ARG:CD	9:QI:105:ASP:HB2	2.35	0.56
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ2	1.70	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
14:QN:8:GLU:C	14:QN:10:ALA:H	2.14	0.56
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.40	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
22:RA:273:G:H1	22:RA:364:C:N4	2.02	0.56
22:RA:662:G:H5”	32:RP:15:ARG:O	2.06	0.56
22:RA:2199:A:H3’	22:RA:2205:C:H6	1.71	0.56
22:RA:2667:C:H1’	28:RH:109:PHE:HD2	1.70	0.56
24:RD:236:GLY:O	24:RD:237:GLU:OE1	2.24	0.56
25:RE:37:ARG:NE	25:RE:37:ARG:N	2.53	0.56
25:RE:78:LEU:HD23	25:RE:79:ARG:HD2	1.86	0.56
25:RE:183:LEU:HD12	25:RE:183:LEU:N	2.20	0.56
27:RG:34:LEU:HD11	27:RG:99:MET:HE2	1.88	0.56
27:RG:97:ASP:H	27:RG:100:TRP:CD1	2.19	0.56
28:RH:77:LYS:HZ3	28:RH:77:LYS:CB	2.03	0.56
30:RN:56:ASN:N	30:RN:125:GLY:O	2.35	0.56
32:RP:31:ALA:O	32:RP:32:THR:HG23	2.05	0.56
32:RP:65:ARG:HH21	51:R8:15:LYS:CB	2.17	0.56
34:RR:70:LEU:HD13	34:RR:75:LEU:HD11	1.88	0.56
37:RU:39:LEU:O	37:RU:40:PHE:C	2.48	0.56
38:RV:38:LEU:HD23	38:RV:39:LEU:N	2.19	0.56
45:R2:51:ARG:HA	45:R2:54:LYS:HB2	1.86	0.56
46:R3:4:LEU:O	46:R3:36:VAL:HA	2.04	0.56
49:R6:14:THR:O	49:R6:49:HIS:HA	2.06	0.56
51:R8:52:LYS:H	51:R8:53:PRO:HD2	1.66	0.56
52:R9:2:LYS:HD2	52:R9:33:LYS:O	2.04	0.56
1:XA:352:C:O2’	1:XA:354:G:OP1	2.19	0.56
1:XA:1502:A:H2	1:XA:1505:G:H22	1.52	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:178:ARG:CD	8:XH:71:GLY:C	2.78	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
9:XI:118:LYS:HZ2	9:XI:118:LYS:HB2	1.71	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
13:XM:57:ARG:HH21	47:Y4:34:GLU:HA	1.69	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.53	0.56
22:YA:27:G:N2	22:YA:513:A:OP2	2.37	0.56
22:YA:185:U:H4'	22:YA:218:A:H4'	1.87	0.56
22:YA:232:G:H8	22:YA:232:G:OP2	1.87	0.56
22:YA:389:G:H1	32:YP:71:VAL:HG12	1.70	0.56
22:YA:589:C:H2'	22:YA:590:A:C8	2.41	0.56
22:YA:1049:C:H2'	22:YA:1050:A:H5"	1.87	0.56
23:YB:8:U:H3	23:YB:112:G:H1	1.52	0.56
24:YD:183:ARG:HD2	24:YD:270:ILE:HG12	1.88	0.56
25:YE:32:PRO:O	25:YE:34:VAL:HG13	2.06	0.56
27:YG:34:LEU:HD13	27:YG:34:LEU:C	2.30	0.56
30:YN:82:LEU:HD12	30:YN:83:LYS:H	1.70	0.56
33:YQ:37:LEU:HD21	33:YQ:130:LYS:HE3	1.87	0.56
33:YQ:79:LEU:O	33:YQ:79:LEU:CG	2.52	0.56
35:YS:32:LEU:O	35:YS:62:LYS:HE2	2.05	0.56
35:YS:103:GLU:O	35:YS:106:ARG:CG	2.52	0.56
36:YT:26:ASP:CB	36:YT:91:ARG:HA	2.36	0.56
44:Y1:89:GLU:O	44:Y1:93:GLU:HB2	2.04	0.56
47:Y4:15:ILE:HG22	47:Y4:20:ASN:HA	1.86	0.56
52:Y9:2:LYS:HD2	52:Y9:33:LYS:O	2.05	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
22:RA:2335:A:HO2'	22:RA:2336:A:P	2.28	0.56
24:RD:80:ALA:HB3	24:RD:94:LEU:HD13	1.87	0.56
26:RF:198:ALA:CA	26:RF:201:VAL:HG12	2.35	0.56
27:RG:179:PRO:HG3	47:R4:38:LYS:HZ1	1.67	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:48:ARG:O	47:R4:50:VAL:N	2.38	0.56
48:R5:55:ARG:HD3	48:R5:56:LYS:N	2.21	0.56
1:XA:980:C:H5"	1:XA:981:U:C5	2.40	0.56
1:XA:991:U:O4	1:XA:1212:U:O2'	2.12	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.56
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.88	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
22:YA:888:C:H3'	22:YA:889:C:C4'	2.34	0.56
22:YA:1826:G:O2'	24:YD:242:ARG:NH2	2.38	0.56
28:YH:125:VAL:HG12	28:YH:126:PRO:CG	2.34	0.56
30:YN:56:ASN:N	30:YN:125:GLY:O	2.35	0.56
31:YO:3:GLN:CB	31:YO:4:PRO:HD2	2.35	0.56
38:YV:76:LYS:O	38:YV:79:VAL:HG12	2.05	0.56
44:Y1:76:ARG:HG2	44:Y1:76:ARG:NH1	2.20	0.56
45:Y2:31:GLU:O	45:Y2:35:LEU:HG	2.05	0.56
50:Y7:12:ARG:NH2	50:Y7:44:PRO:HB3	2.21	0.56
52:Y9:25:VAL:HB	52:Y9:34:GLN:HB2	1.87	0.56
1:QA:713:G:H2'	1:QA:714:G:C8	2.41	0.56
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	2.19	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.71	0.56
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
22:RA:520:G:H2'	22:RA:521:G:H8	1.70	0.56
22:RA:1278:A:O3'	34:RR:34:ILE:HG23	2.06	0.56
23:RB:65:C:H41	23:RB:108:C:H2'	1.70	0.56
27:RG:41:GLN:HB3	27:RG:43:LEU:HD13	1.87	0.56
31:RO:19:ILE:HD13	31:RO:19:ILE:O	2.06	0.56
32:RP:14:LYS:O	32:RP:16:ARG:N	2.39	0.56
36:RT:26:ASP:CB	36:RT:91:ARG:HA	2.36	0.56
38:RV:75:PHE:C	38:RV:75:PHE:CD1	2.83	0.56
40:RX:65:ARG:HD3	40:RX:65:ARG:H	1.70	0.56
41:RY:97:ARG:O	41:RY:97:ARG:HG2	2.05	0.56
44:R1:53:VAL:HG12	44:R1:54:ALA:N	2.21	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:50:LEU:HD12	51:R8:51:ALA:H	1.70	0.56
1:XA:1484:C:H2'	1:XA:1485:U:H6	1.69	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.05	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
22:YA:1311:G:H21	22:YA:1603:A:H62	1.53	0.56
22:YA:2591:C:OP2	24:YD:238:GLY:HA3	2.05	0.56
24:YD:2:ALA:O	24:YD:3:VAL:HB	2.06	0.56
25:YE:74:PRO:HG2	25:YE:77:ILE:HG23	1.87	0.56
28:YH:6:ARG:C	28:YH:8:PRO:HD2	2.30	0.56
28:YH:77:LYS:HZ3	28:YH:77:LYS:CB	2.11	0.56
32:YP:59:LEU:O	32:YP:59:LEU:HD23	2.06	0.56
33:YQ:60:ARG:HH11	42:YZ:113:ALA:HB3	1.69	0.56
51:Y8:50:LEU:HD12	51:Y8:51:ALA:H	1.70	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.56
22:RA:134:C:H2'	22:RA:135:G:H8	1.70	0.56
22:RA:664:C:OP1	32:RP:18:ARG:NH2	2.27	0.56
22:RA:1286:A:HO2'	22:RA:1288:U:P	2.29	0.56
24:RD:183:ARG:HD2	24:RD:270:ILE:HG12	1.88	0.56
25:RE:32:PRO:O	25:RE:34:VAL:HG13	2.06	0.56
25:RE:117:MET:O	25:RE:117:MET:HG3	2.06	0.56
27:RG:34:LEU:HD13	27:RG:34:LEU:C	2.30	0.56
33:RQ:79:LEU:O	33:RQ:79:LEU:CG	2.52	0.56
34:RR:84:ALA:HB3	34:RR:85:PRO:HD3	1.87	0.56
36:RT:134:GLU:O	36:RT:135:ALA:HB3	2.05	0.56
38:RV:76:LYS:O	38:RV:79:VAL:HG12	2.05	0.56
41:RY:75:ILE:C	41:RY:75:ILE:HD13	2.30	0.56
41:RY:95:LYS:O	41:RY:95:LYS:HE3	2.05	0.56
43:R0:26:TYR:H	43:R0:29:GLN:NE2	2.04	0.56
44:R1:92:LYS:C	44:R1:94:LEU:N	2.62	0.56
47:R4:41:PRO:O	47:R4:42:PHE:CB	2.54	0.56
50:R7:12:ARG:NH2	50:R7:44:PRO:HB3	2.21	0.56
1:XA:976:G:H5"	1:XA:1358:U:O2'	2.06	0.56
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.22	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
13:XM:65:LYS:N	47:Y4:50:VAL:CG2	2.69	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.87	0.56
22:YA:31:C:O3'	22:YA:1238:G:H5"	2.06	0.56
22:YA:631:A:OP2	51:Y8:46:ARG:NH2	2.33	0.56
22:YA:636:G:OP1	32:YP:132:LYS:HB2	2.05	0.56
24:YD:239:ARG:O	24:YD:240:ALA:HB2	2.05	0.56
24:YD:259:THR:O	24:YD:260:ARG:C	2.49	0.56
25:YE:37:ARG:NE	25:YE:37:ARG:N	2.54	0.56
30:YN:112:LEU:O	30:YN:114:ARG:O	2.23	0.56
30:YN:112:LEU:HD23	30:YN:112:LEU:C	2.30	0.56
32:YP:115:LEU:HD12	32:YP:116:GLY:N	2.21	0.56
35:YS:14:VAL:HG13	35:YS:15:ARG:N	2.21	0.56
38:YV:75:PHE:C	38:YV:75:PHE:CD1	2.83	0.56
45:Y2:41:ILE:HD11	45:Y2:44:LEU:CG	2.36	0.56
49:Y6:6:ARG:O	49:Y6:8:LYS:HD2	2.05	0.56
49:Y6:11:LEU:HD23	49:Y6:26:ASN:HB3	1.87	0.56
1:QA:184:G:H2'	1:QA:185:A:H8	1.69	0.56
1:QA:939:G:H5"	7:QG:102:ARG:HH22	1.70	0.56
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.21	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
6:QF:69:GLU:C	6:QF:71:ARG:H	2.13	0.56
7:QG:73:MET:HG2	7:QG:90:GLU:HA	1.87	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.58	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
22:RA:898:C:H2'	22:RA:899:A:H5'	1.88	0.56
22:RA:957:A:H5'	33:RQ:76:LYS:HD2	1.88	0.56
22:RA:2037:G:H2'	22:RA:2038:G:H8	1.69	0.56
26:RF:32:LEU:HD13	26:RF:105:VAL:CG1	2.33	0.56
27:RG:60:LEU:O	27:RG:64:THR:HG22	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RI:4:ILE:HD11	29:RI:44:LEU:HD12	1.87	0.56
32:RP:31:ALA:C	32:RP:32:THR:HG23	2.31	0.56
33:RQ:12:GLN:OE1	33:RQ:72:LYS:HD2	2.06	0.56
40:RX:35:THR:HG22	40:RX:38:GLU:OE1	2.05	0.56
47:R4:48:ARG:HH12	47:R4:52:THR:HG22	1.71	0.56
1:XA:677:U:H3	1:XA:713:G:H22	1.54	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
22:YA:64:A:C4	40:YX:66:LEU:HD13	2.41	0.56
22:YA:323:G:H2'	26:YF:169:ASN:OD1	2.05	0.56
22:YA:1785:A:N1	22:YA:1787:A:H1'	2.21	0.56
25:YE:64:LYS:C	25:YE:66:HIS:H	2.11	0.56
25:YE:77:ILE:O	25:YE:78:LEU:C	2.48	0.56
25:YE:195:LEU:HD12	25:YE:196:VAL:H	1.71	0.56
26:YF:197:ASP:O	26:YF:199:TRP:N	2.38	0.56
27:YG:128:ARG:HG3	27:YG:128:ARG:NH2	2.17	0.56
30:YN:40:PRO:HB3	37:YU:68:ALA:HB2	1.87	0.56
41:YY:75:ILE:C	41:YY:75:ILE:HD13	2.31	0.56
41:YY:95:LYS:HE3	41:YY:95:LYS:O	2.06	0.56
50:Y7:13:ALA:O	50:Y7:17:GLY:HA3	2.05	0.56
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.14	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
22:RA:153:C:OP2	44:R1:88:LYS:HE2	2.06	0.56
26:RF:9:ILE:HD11	26:RF:125:LEU:CG	2.36	0.56
27:RG:120:LEU:HB3	27:RG:131:TYR:OH	2.05	0.56
35:RS:5:THR:OG1	35:RS:7:TYR:HB3	2.06	0.56
37:RU:105:VAL:HA	38:RV:44:LYS:HE3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RV:27:ALA:O	38:RV:28:GLU:O	2.24	0.56
46:R3:59:VAL:CG1	46:R3:60:GLU:N	2.69	0.56
47:R4:37:SER:C	47:R4:39:CYS:N	2.62	0.56
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.06	0.56
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.56
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.56
9:XI:128:ARG:CD	53:XV:32:C:OP2	2.54	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
22:YA:229:A:OP1	22:YA:229:A:H4'	2.05	0.56
22:YA:971:C:O2'	22:YA:983:A:N3	2.36	0.56
22:YA:1657:C:H2'	22:YA:1658:C:C6	2.40	0.56
22:YA:1799:G:OP1	24:YD:260:ARG:HB2	2.05	0.56
22:YA:2452:C:O2	56:Z8:76:PPU:CE1	2.54	0.56
22:YA:2489:G:N2	22:YA:2491:U:O4	2.38	0.56
24:YD:35:LYS:CE	24:YD:104:TYR:HB2	2.35	0.56
26:YF:155:LEU:CD1	26:YF:174:VAL:HG13	2.32	0.56
28:YH:126:PRO:CG	28:YH:127:GLU:N	2.65	0.56
35:YS:5:THR:OG1	35:YS:7:TYR:HB3	2.06	0.56
42:YZ:10:ARG:HH11	42:YZ:36:LYS:HD3	1.71	0.56
54:QX:4:C:C3'	54:QX:5:C:H5'	2.36	0.56
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.56
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.56
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.56
22:RA:1007:C:OP1	30:RN:35:ARG:NH1	2.35	0.56
24:RD:259:THR:O	24:RD:260:ARG:C	2.49	0.56
25:RE:64:LYS:C	25:RE:66:HIS:H	2.12	0.56
25:RE:77:ILE:O	25:RE:78:LEU:C	2.48	0.56
28:RH:59:ARG:HH11	28:RH:59:ARG:CG	2.19	0.56
29:RI:8:PRO:HG3	29:RI:14:ASP:HB2	1.88	0.56
31:RO:3:GLN:CB	31:RO:4:PRO:HD2	2.35	0.56
32:RP:15:ARG:O	32:RP:17:LYS:N	2.39	0.56
34:RR:1:MET:SD	34:RR:1:MET:N	2.75	0.56
41:RY:62:GLU:O	41:RY:63:LYS:O	2.24	0.56
45:R2:50:ILE:CD1	45:R2:51:ARG:N	2.61	0.56
51:R8:30:ARG:O	51:R8:31:HIS:CB	2.54	0.56
1:XA:643:C:H2'	1:XA:644:G:H8	1.69	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.56
13:XM:119:GLY:HA3	53:XV:29:G:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.70	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
22:YA:1729:A:N6	22:YA:1731:G:C2	2.73	0.56
25:YE:183:LEU:HD12	25:YE:183:LEU:N	2.20	0.56
37:YU:96:ALA:O	37:YU:100:VAL:HG23	2.05	0.56
41:YY:84:ARG:NH1	41:YY:97:ARG:HB2	2.11	0.56
47:Y4:41:PRO:O	47:Y4:42:PHE:CB	2.54	0.56
47:Y4:48:ARG:O	47:Y4:50:VAL:N	2.38	0.56
48:Y5:20:ARG:C	48:Y5:22:HIS:H	2.14	0.56
49:Y6:48:VAL:HG13	49:Y6:49:HIS:N	2.20	0.56
1:QA:546:G:P	4:QD:72:GLU:HB3	2.46	0.56
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.56
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.56
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.88	0.56
13:QM:121:LYS:NZ	55:QY:39:C:O2'	2.39	0.56
22:RA:111:A:O3'	45:R2:69:ARG:NH2	2.39	0.56
22:RA:389:G:H1	32:RP:70:GLN:HB3	1.71	0.56
22:RA:1695:G:H1'	24:RD:8:PRO:O	2.05	0.56
22:RA:1899:G:H21	22:RA:1902:C:N4	2.04	0.56
24:RD:94:LEU:HD22	24:RD:95:LEU:H	1.69	0.56
24:RD:239:ARG:O	24:RD:240:ALA:HB2	2.05	0.56
25:RE:203:LYS:HE3	25:RE:204:ALA:HB2	1.86	0.56
30:RN:131:GLN:CG	30:RN:132:ALA:N	2.68	0.56
35:RS:14:VAL:HG13	35:RS:15:ARG:N	2.21	0.56
42:RZ:35:ARG:HH11	42:RZ:35:ARG:HB3	1.71	0.56
46:R3:7:LYS:NZ	46:R3:32:GLN:HE21	2.03	0.56
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.52	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.56
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.56
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.56
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.05	0.56
19:XS:3:ARG:HB3	47:Y4:67:TYR:HD2	1.68	0.56
22:YA:25:U:H5"	39:YW:80:PRO:HD3	1.88	0.56
22:YA:270(M):U:H1'	22:YA:270(N):G:C6	2.41	0.56
22:YA:2377:A:H2'	22:YA:2378:A:C8	2.41	0.56
26:YF:29:ASN:N	26:YF:112:MET:HE1	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:15:LYS:H	45:Y2:67:LYS:NZ	2.02	0.56
45:Y2:43:GLN:O	45:Y2:44:LEU:CG	2.54	0.56
46:Y3:4:LEU:HD21	46:Y3:39:ASP:OD1	2.06	0.56
46:Y3:59:VAL:CG1	46:Y3:60:GLU:N	2.69	0.56
47:Y4:50:VAL:O	47:Y4:51:ASP:C	2.48	0.56
1:QA:191(F):U:O2	20:QT:105:SER:HB2	2.07	0.55
1:QA:191:G:O2'	20:QT:101:GLY:O	2.24	0.55
1:QA:321:A:N6	1:QA:329:A:OP2	2.39	0.55
1:QA:985:C:H2'	1:QA:986:A:H8	1.71	0.55
1:QA:1118:C:OP1	9:QI:9:ARG:HD3	2.06	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.06	0.55
6:QF:89:MET:HE1	18:QR:76:LEU:CD2	2.36	0.55
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.88	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.55
19:QS:9:VAL:HG23	19:QS:9:VAL:O	2.04	0.55
19:QS:18:LYS:O	19:QS:22:LEU:HD13	2.06	0.55
22:RA:551:G:H5'	22:RA:1220:A:H1'	1.88	0.55
22:RA:1085:A:O2'	22:RA:1086:A:OP1	2.24	0.55
22:RA:2864:G:OP1	36:RT:119:LYS:HD2	2.05	0.55
24:RD:35:LYS:NZ	24:RD:64:ILE:O	2.32	0.55
26:RF:108:LYS:HZ3	26:RF:108:LYS:HA	1.72	0.55
33:RQ:37:LEU:HD21	33:RQ:130:LYS:HE3	1.87	0.55
37:RU:83:LEU:HD12	37:RU:113:ALA:HB2	1.86	0.55
42:RZ:102:LEU:HD11	42:RZ:124:ILE:HG22	1.88	0.55
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.55
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.55
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.89	0.55
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
15:XO:24:SER:O	15:XO:28:GLN:HG3	2.06	0.55
16:XP:43:LYS:C	16:XP:45:THR:H	2.14	0.55
22:YA:397:G:OP2	44:Y1:10:LYS:NZ	2.37	0.55
22:YA:482:A:H4'	41:YY:47:LYS:HD2	1.89	0.55
22:YA:2330:G:H2'	22:YA:2331:G:O4'	2.06	0.55
23:YB:116:G:H4'	35:YS:54:LEU:HD13	1.88	0.55
24:YD:94:LEU:HD13	24:YD:94:LEU:C	2.31	0.55
25:YE:117:MET:O	25:YE:117:MET:HG3	2.06	0.55
26:YF:198:ALA:CA	26:YF:201:VAL:HG12	2.34	0.55
27:YG:135:LEU:HD12	27:YG:135:LEU:N	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:13:ASN:O	32:YP:14:LYS:C	2.49	0.55
32:YP:14:LYS:O	32:YP:16:ARG:N	2.39	0.55
32:YP:31:ALA:C	32:YP:32:THR:HG23	2.31	0.55
35:YS:18:ILE:C	35:YS:19:LYS:O	2.44	0.55
37:YU:105:VAL:HA	38:YV:44:LYS:HE3	1.88	0.55
40:YX:18:TYR:C	40:YX:20:GLY:N	2.64	0.55
41:YY:48:ALA:H	41:YY:60:PHE:HA	1.71	0.55
41:YY:62:GLU:O	41:YY:63:LYS:O	2.24	0.55
43:Y0:23:VAL:HA	43:Y0:38:VAL:HG22	1.87	0.55
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.71	0.55
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.41	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.55
7:QG:148:ASN:N	7:QG:148:ASN:ND2	2.46	0.55
8:QH:19:VAL:O	8:QH:20:TYR:HB2	2.05	0.55
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.55
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.74	0.55
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.55
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.55
22:RA:27:G:N2	22:RA:512:G:O2'	2.40	0.55
22:RA:1278:A:H2'	22:RA:1279:G:C8	2.41	0.55
22:RA:2123:G:H2'	22:RA:2124:G:H8	1.71	0.55
23:RB:33:G:O5'	27:RG:2:PRO:HG3	2.06	0.55
39:RW:14:PRO:HG2	39:RW:78:GLU:OE2	2.07	0.55
47:R4:61:ARG:C	47:R4:63:TYR:H	2.14	0.55
1:XA:371:G:O2'	1:XA:372:C:H4'	2.06	0.55
1:XA:1229:A:O2'	53:XV:30:G:OP1	2.24	0.55
1:XA:1305:G:H22	1:XA:1331:G:H2'	1.70	0.55
1:XA:1320:C:H5'	19:XS:70:LYS:HG3	1.87	0.55
1:XA:1376:U:OP1	7:XG:98:SER:HB3	2.06	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
22:YA:658:C:H2'	22:YA:659:C:C6	2.41	0.55
22:YA:2875:C:H4'	36:YT:5:ALA:HB2	1.86	0.55
26:YF:198:ALA:C	26:YF:200:GLU:N	2.62	0.55
27:YG:120:LEU:HB3	27:YG:131:TYR:OH	2.05	0.55
29:YI:11:ASN:O	29:YI:12:LEU:HB2	2.07	0.55
32:YP:15:ARG:O	32:YP:17:LYS:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:19:VAL:CG2	32:YP:20:GLY:H	1.99	0.55
32:YP:31:ALA:O	32:YP:32:THR:HG23	2.05	0.55
33:YQ:12:GLN:OE1	33:YQ:72:LYS:HD2	2.06	0.55
37:YU:92:ARG:NH1	38:YV:11:GLN:HB2	2.22	0.55
41:YY:89:PHE:O	41:YY:90:LEU:HD13	2.05	0.55
44:Y1:4:VAL:HG23	44:Y1:10:LYS:C	2.32	0.55
46:Y3:8:LEU:HD22	46:Y3:31:LEU:CD2	2.36	0.55
46:Y3:35:ARG:HB3	46:Y3:37:LEU:CD2	2.37	0.55
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.71	0.55
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.38	0.55
1:QA:1406:U:O2	1:QA:1517:G:N2	2.33	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.55
22:RA:1885:A:H5'	22:RA:1886:C:OP2	2.07	0.55
22:RA:2585:U:H5	56:Z6:76:PPU:HO2'	1.53	0.55
24:RD:31:LYS:O	24:RD:35:LYS:O	2.24	0.55
24:RD:94:LEU:HD13	24:RD:94:LEU:C	2.31	0.55
24:RD:155:LEU:HD23	24:RD:177:LEU:CD2	2.36	0.55
26:RF:28:ILE:HD12	26:RF:28:ILE:O	2.06	0.55
28:RH:6:ARG:C	28:RH:8:PRO:HD2	2.30	0.55
32:RP:39:LYS:CA	32:RP:45:LEU:CD1	2.80	0.55
38:RV:49:THR:CB	38:RV:50:PRO:HD2	2.25	0.55
41:RY:95:LYS:HB2	41:RY:95:LYS:NZ	2.21	0.55
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.87	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.22	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.17	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.21	0.55
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.55
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:25:ASP:N	33:YQ:102:VAL:HG23	2.22	0.55
36:YT:107:ASP:O	36:YT:111:ARG:NH1	2.39	0.55
44:Y1:91:LYS:CG	44:Y1:92:LYS:H	2.15	0.55
53:QV:35:A:N6	54:QX:3:G:C6	2.74	0.55
1:QA:411:A:C5	1:QA:413:G:H1'	2.41	0.55
1:QA:539:A:H2'	1:QA:540:G:C8	2.42	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.06	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.55
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.54	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.05	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
22:RA:994:C:O2	38:RV:10:LYS:HE2	2.06	0.55
24:RD:36:PRO:HB2	24:RD:61:LEU:HG	1.87	0.55
24:RD:69:ARG:HD3	24:RD:105:ILE:HD11	1.87	0.55
24:RD:118:VAL:HG22	24:RD:119:ALA:H	1.72	0.55
25:RE:4:ILE:HD13	25:RE:5:LEU:H	1.71	0.55
41:RY:21:LYS:HG3	41:RY:22:GLY:H	1.69	0.55
42:RZ:151:HIS:HA	42:RZ:170:THR:HA	1.88	0.55
47:R4:9:LEU:H	47:R4:27:THR:HG22	1.71	0.55
1:XA:1226:C:H2'	13:XM:103:THR:HB	1.89	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
22:YA:518:G:C4'	39:YW:18:ARG:HH12	1.99	0.55
22:YA:1291:C:H2'	22:YA:1292:U:C6	2.42	0.55
22:YA:2404:C:H1'	32:YP:67:MET:HE1	1.88	0.55
27:YG:34:LEU:HD11	27:YG:99:MET:HE2	1.87	0.55
28:YH:152:ARG:C	28:YH:153:LYS:HE2	2.32	0.55
30:YN:131:GLN:CG	30:YN:132:ALA:N	2.68	0.55
32:YP:39:LYS:N	32:YP:45:LEU:HD11	2.21	0.55
34:YR:84:ALA:HB3	34:YR:85:PRO:HD3	1.88	0.55
39:YW:14:PRO:HG2	39:YW:78:GLU:OE2	2.07	0.55
41:YY:91:GLU:HG3	41:YY:92:ASN:H	1.72	0.55
44:Y1:83:GLU:CD	44:Y1:85:LEU:H	2.15	0.55
1:QA:19:C:P	5:QE:127:ASN:HD22	2.30	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:243:A:H4'	1:QA:244:U:O5'	2.05	0.55
1:QA:939:G:H5"	7:QG:102:ARG:NH2	2.22	0.55
1:QA:1070:U:O5'	5:QE:25:ARG:NH1	2.40	0.55
1:QA:1127:G:H21	1:QA:1147:C:H41	1.54	0.55
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.89	0.55
1:QA:1244:C:H42	1:QA:1293:G:H1	1.53	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.06	0.55
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
12:QL:47:LYS:C	12:QL:49:ASN:H	2.15	0.55
13:QM:30:ALA:O	13:QM:31:LYS:C	2.49	0.55
15:QO:65:ARG:HB2	15:QO:65:ARG:NH1	2.20	0.55
21:QU:6:ARG:HH21	21:QU:15:ARG:HE	1.53	0.55
22:RA:2415:G:H4'	32:RP:67:MET:N	2.22	0.55
22:RA:2837:G:H1	22:RA:2881:C:H42	1.53	0.55
25:RE:14:ILE:HD11	36:RT:14:TYR:CZ	2.42	0.55
25:RE:67:PHE:O	25:RE:69:LYS:N	2.39	0.55
26:RF:129:PHE:O	26:RF:130:ALA:CB	2.55	0.55
28:RH:151:ILE:C	28:RH:152:ARG:O	2.49	0.55
28:RH:152:ARG:C	28:RH:153:LYS:HE2	2.32	0.55
31:RO:68:GLU:HA	31:RO:78:ARG:HB3	1.89	0.55
31:RO:79:PHE:HD2	36:RT:72:VAL:HG22	1.72	0.55
32:RP:104:GLY:C	32:RP:105:LEU:HD12	2.31	0.55
32:RP:115:LEU:HD12	32:RP:116:GLY:N	2.21	0.55
38:RV:52:VAL:O	38:RV:54:GLY:N	2.39	0.55
39:RW:88:ARG:HB3	39:RW:92:ARG:HB3	1.88	0.55
42:RZ:76:LEU:HD23	42:RZ:76:LEU:H	1.72	0.55
44:R1:4:VAL:HG23	44:R1:10:LYS:C	2.32	0.55
51:R8:63:PRO:O	51:R8:64:TYR:HB2	2.07	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.21	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.21	0.55
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.41	0.55
22:YA:873:G:H1	22:YA:904:C:H42	1.53	0.55
22:YA:1204:A:H1'	22:YA:1206:G:C8	2.41	0.55
22:YA:2867:G:O2'	22:YA:2868:A:H8	1.89	0.55
23:YB:12:C:O2	43:Y0:74:ARG:HD2	2.06	0.55
32:YP:49:ARG:NE	51:Y8:59:LYS:HG2	2.22	0.55
37:YU:6:THR:O	37:YU:9:VAL:HG23	2.07	0.55
37:YU:73:GLY:O	37:YU:74:LEU:HB3	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
22:RA:856:C:O2'	22:RA:857:C:OP1	2.25	0.55
22:RA:2331:G:H4'	43:R0:43:THR:H	1.70	0.55
25:RE:195:LEU:HD12	25:RE:196:VAL:H	1.71	0.55
27:RG:114:ILE:HD11	27:RG:140:ILE:HD12	1.89	0.55
33:RQ:25:ASP:N	33:RQ:102:VAL:HG23	2.21	0.55
34:RR:12:ARG:HH11	34:RR:12:ARG:HG3	1.71	0.55
46:R3:4:LEU:HD21	46:R3:39:ASP:OD1	2.06	0.55
1:XA:529:G:O6	12:XL:49:ASN:HB3	2.07	0.55
1:XA:779:C:H4'	11:XK:121:PRO:O	2.07	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
10:XJ:16:LEU:HD13	10:XJ:16:LEU:O	2.07	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.54	0.55
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.42	0.55
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.05	0.55
22:YA:861:A:N3	23:YB:79:C:O2'	2.39	0.55
22:YA:1252:G:N3	37:YU:33:ARG:HD2	2.21	0.55
22:YA:1728:G:H8	22:YA:1732:A:H62	1.53	0.55
25:YE:3:GLY:HA3	25:YE:81:ILE:HD12	1.88	0.55
25:YE:20:ALA:O	25:YE:21:VAL:CG2	2.48	0.55
26:YF:24:LEU:HB3	26:YF:115:ALA:HB2	1.87	0.55
30:YN:44:PRO:HG2	30:YN:45:ASN:H	1.71	0.55
31:YO:19:ILE:O	31:YO:19:ILE:HD13	2.06	0.55
37:YU:58:ARG:O	37:YU:62:ILE:HG13	2.06	0.55
38:YV:29:PRO:HA	38:YV:61:VAL:CG2	2.37	0.55
39:YW:88:ARG:HB3	39:YW:92:ARG:HB3	1.88	0.55
41:YY:95:LYS:CB	41:YY:100:ALA:HA	2.13	0.55
47:Y4:61:ARG:C	47:Y4:63:TYR:H	2.14	0.55
49:Y6:42:TRP:N	49:Y6:42:TRP:CD1	2.73	0.55
1:QA:1321:C:H3'	1:QA:1322:C:H5"	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
22:RA:221:A:H4'	22:RA:222:A:O5'	2.07	0.55
22:RA:246:C:N4	51:R8:8:LYS:HG3	2.22	0.55
22:RA:247:G:O6	51:R8:12:LYS:NZ	2.28	0.55
22:RA:270(U):C:H2'	22:RA:270(V):G:H8	1.71	0.55
22:RA:298:G:P	41:RY:85:VAL:HG22	2.47	0.55
22:RA:1348:G:H2'	22:RA:1349:A:H5"	1.89	0.55
22:RA:2014:A:O2'	48:R5:2:ALA:HB2	2.07	0.55
22:RA:2068:U:N3	22:RA:2430:A:H2	2.05	0.55
24:RD:2:ALA:O	24:RD:3:VAL:HB	2.06	0.55
27:RG:3:LEU:HD12	27:RG:4:ASP:N	2.19	0.55
28:RH:143:GLN:HE21	28:RH:143:GLN:C	2.15	0.55
32:RP:2:LYS:O	32:RP:5:ASP:HB2	2.06	0.55
35:RS:36:TYR:HD2	35:RS:52:SER:CB	2.19	0.55
37:RU:27:LEU:O	37:RU:29:SER:N	2.40	0.55
37:RU:104:GLN:OE1	37:RU:104:GLN:N	2.35	0.55
44:R1:80:LEU:C	44:R1:81:LYS:CE	2.77	0.55
1:XA:554:C:H2'	1:XA:555:C:H6	1.71	0.55
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
15:XO:65:ARG:HB2	15:XO:65:ARG:NH1	2.20	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
17:XQ:13:ASP:C	17:XQ:15:MET:H	2.15	0.55
17:XQ:48:GLU:O	17:XQ:49:GLU:C	2.48	0.55
22:YA:459:U:H2'	22:YA:460:A:H8	1.72	0.55
22:YA:513:A:O2'	22:YA:1217:C:OP1	2.20	0.55
22:YA:685:A:C4'	22:YA:687:C:H41	2.20	0.55
22:YA:1693:U:H1'	24:YD:14:ARG:HH22	1.71	0.55
22:YA:2131:G:N2	22:YA:2158:A:N7	2.54	0.55
22:YA:2635:C:H5'	25:YE:77:ILE:HD13	1.87	0.55
24:YD:43:ARG:CB	24:YD:54:ARG:HB2	2.37	0.55
25:YE:53:PRO:O	25:YE:74:PRO:HA	2.07	0.55
26:YF:28:ILE:HD12	26:YF:28:ILE:O	2.06	0.55
31:YO:20:MET:HG2	31:YO:21:CYS:N	2.20	0.55
35:YS:59:LYS:CG	35:YS:60:GLY:H	2.11	0.55
35:YS:107:GLU:N	35:YS:110:LEU:HD11	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:16:ARG:HG2	36:YT:18:ASP:OD1	2.06	0.55
36:YT:123:GLN:O	36:YT:125:ARG:N	2.40	0.55
41:YY:61:ILE:HG23	41:YY:62:GLU:H	1.71	0.55
47:Y4:37:SER:C	47:Y4:39:CYS:N	2.62	0.55
47:Y4:48:ARG:HH12	47:Y4:52:THR:HG22	1.71	0.55
48:Y5:55:ARG:HD3	48:Y5:56:LYS:N	2.21	0.55
50:Y7:19:ARG:HH11	50:Y7:19:ARG:HG2	1.71	0.55
1:QA:1316:G:N2	1:QA:1319:A:H5"	2.22	0.55
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.55
3:QC:188:LEU:N	3:QC:188:LEU:HD22	2.21	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
10:QJ:16:LEU:HD13	10:QJ:16:LEU:O	2.07	0.55
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	2.89	0.55
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.88	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
22:RA:507:A:C5'	22:RA:508:G:H5'	2.36	0.55
22:RA:666:G:H4'	32:RP:49:ARG:NH1	2.22	0.55
26:RF:147:GLY:O	26:RF:148:LEU:HD23	2.07	0.55
32:RP:39:LYS:N	32:RP:45:LEU:HD11	2.21	0.55
37:RU:74:LEU:HD13	37:RU:79:PHE:HB2	1.89	0.55
37:RU:92:ARG:NH1	38:RV:11:GLN:HB2	2.22	0.55
38:RV:99:ILE:N	38:RV:99:ILE:CD1	2.65	0.55
45:R2:41:ILE:HD11	45:R2:44:LEU:CG	2.36	0.55
47:R4:65:ASP:O	47:R4:66:SER:HB3	2.07	0.55
51:R8:56:GLU:O	51:R8:57:ARG:C	2.50	0.55
1:XA:815:A:N3	1:XA:1527:C:O2'	2.36	0.55
1:XA:986:A:N3	19:XS:52:TYR:OH	2.40	0.55
1:XA:1252:A:H2'	1:XA:1253:G:O4'	2.07	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	0.55
6:XF:92:LYS:NZ	6:XF:92:LYS:HB2	2.22	0.55
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
19:XS:5:LEU:HD22	47:Y4:67:TYR:CE2	2.42	0.55
22:YA:70:G:H21	22:YA:71:A:N6	2.05	0.55
22:YA:690:G:H2'	22:YA:691:C:C6	2.42	0.55
22:YA:1164:G:H2'	22:YA:1165:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2469:A:H5”	22:YA:2470:G:C8	2.41	0.55
25:YE:4:ILE:HD13	25:YE:5:LEU:H	1.71	0.55
25:YE:67:PHE:O	25:YE:69:LYS:N	2.39	0.55
28:YH:143:GLN:C	28:YH:143:GLN:HE21	2.15	0.55
29:YI:130:TYR:HB3	29:YI:136:VAL:HG13	1.88	0.55
30:YN:109:LYS:N	30:YN:109:LYS:HD2	2.22	0.55
31:YO:79:PHE:HD2	36:YT:72:VAL:HG22	1.72	0.55
39:YW:25:ARG:HH11	39:YW:25:ARG:CB	2.20	0.55
44:Y1:83:GLU:OE1	44:Y1:85:LEU:HD23	2.07	0.55
47:Y4:51:ASP:OD1	47:Y4:51:ASP:O	2.25	0.55
53:XV:35:A:C2	54:XX:3:G:N3	2.75	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.55
22:RA:1903:G:OP2	24:RD:241:PRO:HB2	2.07	0.55
22:RA:1973:G:H2’	22:RA:1974:C:C6	2.42	0.55
24:RD:65:ILE:HD13	24:RD:65:ILE:C	2.32	0.55
25:RE:3:GLY:HA3	25:RE:81:ILE:HD12	1.88	0.55
26:RF:118:ALA:O	26:RF:121:GLY:N	2.33	0.55
27:RG:135:LEU:HD12	27:RG:135:LEU:N	2.21	0.55
30:RN:87:LEU:HD23	30:RN:87:LEU:C	2.32	0.55
30:RN:109:LYS:N	30:RN:109:LYS:HD2	2.22	0.55
41:RY:48:ALA:H	41:RY:60:PHE:HA	1.72	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
6:XF:89:MET:HE1	18:XR:76:LEU:CD2	2.36	0.55
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
9:XI:127:LYS:CE	53:XV:34:C:OP2	2.55	0.55
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.55
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.15	0.55
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.55
14:XN:8:GLU:C	14:XN:10:ALA:H	2.13	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.72	0.55
22:YA:1061:U:H3’	22:YA:1062:G:H5”	1.88	0.55
22:YA:1564:C:O2’	22:YA:1565:C:H5’	2.07	0.55
22:YA:1614:A:H62	39:YW:93:ALA:HB2	1.72	0.55
22:YA:1651:G:H1	22:YA:2006:C:H42	1.53	0.55
22:YA:2059:A:H5’	22:YA:2060:A:OP2	2.07	0.55
22:YA:2182:G:H2’	22:YA:2183:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YB:15:A:H5'	23:YB:16:G:H8	1.69	0.55
25:YE:21:VAL:HG23	25:YE:22:PRO:HD3	1.89	0.55
27:YG:114:ILE:HD11	27:YG:140:ILE:HD12	1.89	0.55
30:YN:87:LEU:HD23	30:YN:87:LEU:C	2.32	0.55
31:YO:4:PRO:O	31:YO:5:GLN:HB2	2.06	0.55
33:YQ:21:THR:O	33:YQ:22:LYS:O	2.25	0.55
33:YQ:64:ILE:HA	33:YQ:106:VAL:CG1	2.33	0.55
37:YU:27:LEU:O	37:YU:29:SER:N	2.40	0.55
42:YZ:72:ARG:NH2	42:YZ:97:GLU:O	2.32	0.55
44:Y1:92:LYS:C	44:Y1:94:LEU:N	2.62	0.55
47:Y4:9:LEU:H	47:Y4:27:THR:HG22	1.71	0.55
1:QA:560:U:H5'	1:QA:566:G:N2	2.22	0.55
1:QA:624:C:H2'	1:QA:625:G:H8	1.71	0.55
1:QA:881:G:H2'	1:QA:882:C:O4'	2.07	0.55
1:QA:1213:A:N6	1:QA:1215:G:N3	2.55	0.55
2:QB:41:ILE:HD12	2:QB:41:ILE:N	2.21	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.14	0.55
15:QO:77:ARG:HA	15:QO:80:ALA:CB	2.36	0.55
18:QR:30:ASP:C	18:QR:32:ARG:H	2.15	0.55
22:RA:693:C:O2'	22:RA:1353:A:N3	2.32	0.55
22:RA:2146:C:H4'	22:RA:2147:G:C8	2.42	0.55
22:RA:2439:A:H5'	22:RA:2439:A:H8	1.72	0.55
27:RG:7:LEU:HD12	27:RG:104:GLU:HA	1.88	0.55
35:RS:74:ALA:HB1	35:RS:107:GLU:HB3	1.89	0.55
37:RU:58:ARG:O	37:RU:62:ILE:HG13	2.06	0.55
37:RU:73:GLY:O	37:RU:74:LEU:HB3	2.07	0.55
45:R2:47:ASN:ND2	45:R2:47:ASN:N	2.54	0.55
4:XD:94:LEU:H	4:XD:94:LEU:CD1	2.08	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.55
9:XI:114:TYR:O	9:XI:114:TYR:CD2	2.58	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.55
22:YA:484:C:H2'	22:YA:485:C:C6	2.41	0.55
22:YA:1094:U:O2'	22:YA:1096:A:OP1	2.15	0.55
22:YA:2250:G:C5	33:YQ:82:ARG:HD2	2.42	0.55
24:YD:94:LEU:HD22	24:YD:95:LEU:H	1.70	0.55
26:YF:32:LEU:HD12	26:YF:36:VAL:HG23	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:26:VAL:CG1	28:YH:27:LYS:N	2.63	0.55
32:YP:2:LYS:O	32:YP:5:ASP:HB2	2.06	0.55
35:YS:36:TYR:HD2	35:YS:52:SER:CB	2.18	0.55
36:YT:29:ARG:HH11	36:YT:29:ARG:HB2	1.72	0.55
41:YY:95:LYS:HD3	41:YY:95:LYS:N	2.22	0.55
41:YY:95:LYS:HA	41:YY:101:LYS:H	1.72	0.55
41:YY:95:LYS:HB2	41:YY:95:LYS:NZ	2.21	0.55
47:Y4:71:ARG:NH1	47:Y4:71:ARG:CG	2.61	0.55
1:QA:437:U:H2'	1:QA:438:G:O4'	2.08	0.54
1:QA:584:G:H2'	1:QA:585:G:C8	2.42	0.54
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.36	0.54
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	2.37	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.54
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.07	0.54
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.07	0.54
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.54
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.54
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.54
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
24:RD:25:THR:HG21	24:RD:81:ALA:CB	2.38	0.54
27:RG:116:ASP:O	27:RG:117:PHE:CB	2.50	0.54
28:RH:8:PRO:O	28:RH:9:ILE:HG23	2.07	0.54
28:RH:128:PRO:CD	28:RH:129:THR:N	2.71	0.54
30:RN:44:PRO:HG2	30:RN:45:ASN:H	1.71	0.54
32:RP:65:ARG:HH21	51:R8:15:LYS:HB2	1.72	0.54
32:RP:84:ASN:ND2	32:RP:115:LEU:HD12	2.22	0.54
35:RS:13:ARG:O	35:RS:13:ARG:HD2	2.06	0.54
37:RU:6:THR:O	37:RU:9:VAL:HG23	2.07	0.54
38:RV:29:PRO:HA	38:RV:61:VAL:CG2	2.37	0.54
38:RV:49:THR:CB	38:RV:50:PRO:CD	2.83	0.54
39:RW:80:PRO:O	39:RW:100:THR:CG2	2.54	0.54
50:R7:48:LYS:HG2	50:R7:49:ARG:N	2.19	0.54
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.54
4:XD:19:LEU:N	4:XD:19:LEU:HD23	2.23	0.54
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.54
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.54
22:YA:639:U:H2'	22:YA:640:C:C6	2.42	0.54
22:YA:1308:A:H2'	22:YA:1309:G:O4'	2.06	0.54
22:YA:2115:G:N2	22:YA:2165:G:N7	2.49	0.54
22:YA:2695:C:H2'	22:YA:2696:U:H6	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:31:LYS:O	24:YD:35:LYS:O	2.24	0.54
24:YD:155:LEU:HD23	24:YD:177:LEU:CD2	2.36	0.54
25:YE:54:GLN:NE2	25:YE:54:GLN:N	2.56	0.54
27:YG:41:GLN:HB3	27:YG:43:LEU:HD13	1.87	0.54
45:Y2:31:GLU:HB2	45:Y2:53:LEU:HD11	1.89	0.54
51:Y8:30:ARG:O	51:Y8:31:HIS:CB	2.55	0.54
53:XV:68:C:H2'	53:XV:69:C:C6	2.42	0.54
1:QA:192:U:H2'	1:QA:193:C:C6	2.42	0.54
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.47	0.54
1:QA:939:G:H5"	7:QG:102:ARG:HH12	1.72	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
22:RA:102:G:H4'	22:RA:103:A:O5'	2.06	0.54
22:RA:270(H):C:H2'	22:RA:270(I):G:C8	2.43	0.54
22:RA:451:C:H4'	26:RF:52:LYS:NZ	2.22	0.54
22:RA:652:C:N4	22:RA:653:A:N1	2.55	0.54
22:RA:1952:A:OP1	31:RO:44:LYS:NZ	2.27	0.54
22:RA:2061:G:H5"	22:RA:2503:A:C2	2.43	0.54
22:RA:2086:U:H2'	22:RA:2087:G:C8	2.42	0.54
25:RE:21:VAL:HG23	25:RE:22:PRO:HD3	1.89	0.54
27:RG:83:ARG:HB2	27:RG:86:MET:HE3	1.89	0.54
28:RH:86:GLU:HG3	28:RH:165:ALA:CB	2.38	0.54
32:RP:24:GLY:O	32:RP:25:SER:HB3	2.06	0.54
32:RP:49:ARG:NE	51:R8:59:LYS:HG2	2.22	0.54
32:RP:59:LEU:O	32:RP:59:LEU:HD23	2.06	0.54
32:RP:106:LEU:O	32:RP:107:LYS:HD3	2.07	0.54
35:RS:107:GLU:N	35:RS:110:LEU:HD11	2.22	0.54
36:RT:16:ARG:HG2	36:RT:18:ASP:OD1	2.06	0.54
36:RT:29:ARG:HB2	36:RT:29:ARG:HH11	1.72	0.54
36:RT:107:ASP:O	36:RT:111:ARG:NH1	2.40	0.54
44:R1:91:LYS:HA	44:R1:91:LYS:CE	2.38	0.54
46:R3:8:LEU:HD22	46:R3:31:LEU:CD2	2.37	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.54
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.54
22:YA:619:G:H5"	22:YA:620:G:OP2	2.07	0.54
22:YA:695:G:OP1	22:YA:1380:G:O2'	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:962:G:H2'	22:YA:963:U:H6	1.72	0.54
22:YA:1338:G:N7	40:YX:62:LYS:NZ	2.49	0.54
22:YA:2074:U:H2'	22:YA:2075:U:C6	2.42	0.54
22:YA:2611:U:OP2	22:YA:2611:U:H6	1.90	0.54
24:YD:65:ILE:HD13	24:YD:65:ILE:C	2.32	0.54
25:YE:176:ILE:HG22	25:YE:179:GLU:H	1.72	0.54
32:YP:104:GLY:C	32:YP:105:LEU:HD12	2.31	0.54
36:YT:98:LYS:HB3	36:YT:100:TYR:CE1	2.43	0.54
37:YU:95:LEU:HD12	38:YV:11:GLN:HE21	1.72	0.54
38:YV:49:THR:CB	38:YV:50:PRO:CD	2.83	0.54
39:YW:9:TYR:H	39:YW:102:HIS:CE1	2.25	0.54
41:YY:2:ARG:HG2	41:YY:2:ARG:NH1	2.22	0.54
42:YZ:5:LEU:HD11	42:YZ:39:VAL:HB	1.88	0.54
51:Y8:56:GLU:O	51:Y8:57:ARG:C	2.50	0.54
1:QA:7:G:H5'	1:QA:298:A:O4'	2.07	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
9:QI:66:ARG:HG2	9:QI:66:ARG:NH1	2.22	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
12:QL:46:LYS:CG	12:QL:47:LYS:H	2.19	0.54
19:QS:68:GLY:C	47:R4:68:ARG:HG2	2.33	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
22:RA:678:C:H2'	22:RA:679:C:C6	2.42	0.54
22:RA:828:U:H4'	22:RA:831:G:N1	2.22	0.54
22:RA:1022:G:H22	22:RA:1142(A):A:H2	1.55	0.54
22:RA:2528:U:O2'	22:RA:2530:A:OP1	2.23	0.54
24:RD:43:ARG:CB	24:RD:54:ARG:HB2	2.37	0.54
24:RD:72:LYS:O	24:RD:73:VAL:C	2.50	0.54
26:RF:62:ARG:HB3	26:RF:62:ARG:NH1	2.22	0.54
26:RF:197:ASP:O	26:RF:198:ALA:HB3	2.06	0.54
31:RO:53:LYS:HD2	31:RO:56:ASP:OD1	2.08	0.54
33:RQ:39:PRO:HB3	33:RQ:99:PRO:HD3	1.89	0.54
36:RT:3:ARG:HG3	36:RT:7:ILE:CG1	2.36	0.54
39:RW:25:ARG:HH11	39:RW:25:ARG:CB	2.20	0.54
39:RW:70:TYR:CD2	39:RW:70:TYR:N	2.75	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54
13:XM:82:MET:O	13:XM:83:ASP:C	2.49	0.54
13:XM:108:ARG:O	13:XM:109:THR:C	2.50	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
22:YA:1210:A:H5'	22:YA:1210:A:C8	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2537:U:H2'	22:YA:2538:C:C6	2.41	0.54
28:YH:86:GLU:HG3	28:YH:165:ALA:CB	2.38	0.54
30:YN:42:TRP:CD1	37:YU:63:VAL:HG11	2.42	0.54
33:YQ:79:LEU:C	33:YQ:79:LEU:CD2	2.80	0.54
34:YR:12:ARG:HH11	34:YR:12:ARG:HG3	1.71	0.54
38:YV:52:VAL:O	38:YV:54:GLY:N	2.39	0.54
40:YX:65:ARG:HD3	40:YX:65:ARG:H	1.70	0.54
41:YY:97:ARG:NH2	41:YY:98:VAL:CB	2.65	0.54
44:Y1:92:LYS:O	44:Y1:94:LEU:N	2.41	0.54
48:Y5:55:ARG:HD3	48:Y5:56:LYS:H	1.73	0.54
51:Y8:32:LEU:O	51:Y8:36:LYS:HE3	2.06	0.54
1:QA:986:A:N3	19:QS:52:TYR:OH	2.40	0.54
1:QA:1024:G:H4'	1:QA:1024:G:OP1	2.07	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.22	0.54
22:RA:1061:U:H3'	22:RA:1062:G:H5"	1.89	0.54
22:RA:2208:U:O2'	24:RD:151:LYS:HG2	2.06	0.54
22:RA:2696:U:H2'	22:RA:2697:G:C8	2.42	0.54
23:RB:21:G:H1	23:RB:62:C:H42	1.55	0.54
25:RE:61:ARG:O	25:RE:62:PRO:C	2.51	0.54
25:RE:186:GLY:O	25:RE:188:VAL:N	2.40	0.54
37:RU:58:ARG:NH1	37:RU:93:LYS:HE2	2.22	0.54
38:RV:22:VAL:CG1	38:RV:23:GLU:N	2.71	0.54
41:RY:47:LYS:C	41:RY:49:VAL:H	2.16	0.54
41:RY:95:LYS:HD3	41:RY:95:LYS:N	2.23	0.54
42:RZ:19:ARG:NH1	42:RZ:84:GLU:O	2.39	0.54
47:R4:37:SER:HB3	47:R4:42:PHE:CD1	2.43	0.54
1:XA:110:C:O2'	16:XP:25:ARG:O	2.24	0.54
1:XA:922:G:C6	1:XA:923:A:C6	2.96	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
22:YA:287:C:H2'	22:YA:288:C:C6	2.42	0.54
22:YA:1364:G:N7	44:Y1:2:SER:N	2.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1667:G:H2'	22:YA:1991:U:O4	2.08	0.54
22:YA:1826:G:OP1	24:YD:224:ALA:N	2.38	0.54
26:YF:129:PHE:O	26:YF:130:ALA:CB	2.55	0.54
28:YH:8:PRO:O	28:YH:9:ILE:HG23	2.08	0.54
31:YO:53:LYS:HD2	31:YO:56:ASP:OD1	2.08	0.54
32:YP:65:ARG:HH21	51:Y8:15:LYS:HB2	1.72	0.54
32:YP:106:LEU:O	32:YP:107:LYS:HD3	2.07	0.54
32:YP:114:ILE:HD11	32:YP:130:PHE:HE1	1.70	0.54
32:YP:140:ALA:O	32:YP:141:ALA:HB2	2.08	0.54
37:YU:58:ARG:NH1	37:YU:93:LYS:HE2	2.22	0.54
39:YW:80:PRO:O	39:YW:100:THR:CG2	2.55	0.54
44:Y1:53:VAL:HG12	44:Y1:54:ALA:N	2.21	0.54
47:Y4:47:GLN:O	47:Y4:48:ARG:HB2	2.07	0.54
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.40	0.54
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.42	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.37	0.54
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.54
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
22:RA:27:G:H1'	22:RA:513:A:H62	1.72	0.54
22:RA:242:G:C5'	51:R8:3:LYS:HE3	2.36	0.54
22:RA:1062:G:H2'	22:RA:1063:G:C8	2.42	0.54
22:RA:1588:C:H2'	22:RA:1589:C:H6	1.73	0.54
22:RA:2415:G:H4'	32:RP:66:GLY:C	2.33	0.54
22:RA:2749:A:H3'	22:RA:2750:A:H2'	1.89	0.54
24:RD:233:HIS:CD2	24:RD:233:HIS:N	2.75	0.54
25:RE:176:ILE:HG22	25:RE:179:GLU:H	1.71	0.54
26:RF:197:ASP:O	26:RF:199:TRP:N	2.38	0.54
27:RG:139:LEU:HD22	27:RG:146:TYR:HD1	1.73	0.54
33:RQ:21:THR:O	33:RQ:22:LYS:O	2.25	0.54
35:RS:67:ARG:NH1	35:RS:67:ARG:CB	2.64	0.54
36:RT:123:GLN:O	36:RT:125:ARG:N	2.40	0.54
39:RW:9:TYR:H	39:RW:102:HIS:CE1	2.26	0.54
39:RW:38:TYR:OH	48:R5:47:PRO:HG3	2.08	0.54
40:RX:5:TYR:HE2	45:R2:30:ARG:HH11	1.56	0.54
41:RY:47:LYS:O	41:RY:49:VAL:HG23	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:91:GLU:HG3	41:RY:92:ASN:H	1.72	0.54
44:R1:83:GLU:CG	44:R1:84:GLY:N	2.71	0.54
46:R3:35:ARG:HB3	46:R3:37:LEU:CD2	2.37	0.54
48:R5:20:ARG:C	48:R5:22:HIS:H	2.14	0.54
51:R8:32:LEU:O	51:R8:36:LYS:HE3	2.06	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
5:XE:10:MET:HE2	5:XE:13:ILE:HD13	1.90	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.55	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	0.54
13:XM:8:GLU:OE1	27:YG:115:ARG:NE	2.38	0.54
13:XM:57:ARG:NE	47:Y4:35:VAL:HG23	2.19	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.54
22:YA:67:U:H3	22:YA:74:A:H2	1.56	0.54
22:YA:1053:C:H42	22:YA:1106:G:H1	1.56	0.54
22:YA:1257:C:H4'	26:YF:83:PHE:CE2	2.43	0.54
22:YA:1364:G:C8	44:Y1:2:SER:N	2.76	0.54
24:YD:25:THR:O	24:YD:25:THR:HG23	2.07	0.54
24:YD:211:ARG:HD2	24:YD:214:TRP:CZ3	2.43	0.54
25:YE:14:ILE:HG23	25:YE:15:PHE:N	2.23	0.54
38:YV:27:ALA:O	38:YV:28:GLU:O	2.24	0.54
41:YY:47:LYS:O	41:YY:49:VAL:HG23	2.08	0.54
42:YZ:149:SER:HB2	42:YZ:172:ALA:O	2.08	0.54
47:Y4:63:TYR:C	47:Y4:65:ASP:N	2.61	0.54
48:Y5:44:THR:O	48:Y5:46:CYS:N	2.41	0.54
49:Y6:17:LYS:O	49:Y6:18:ARG:HB2	2.08	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	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
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	0.54
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.54
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.89	0.54
22:RA:784:A:N7	24:RD:229:VAL:HG21	2.22	0.54
22:RA:2420:C:N4	51:R8:30:ARG:HD2	2.22	0.54
23:RB:104:A:H2'	23:RB:105:G:O4'	2.08	0.54
26:RF:67:GLN:O	26:RF:68:LYS:CB	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:111:LEU:HB2	47:R4:38:LYS:HZ3	1.72	0.54
28:RH:12:PRO:O	28:RH:13:LYS:HB2	2.07	0.54
28:RH:26:VAL:CG1	28:RH:27:LYS:N	2.64	0.54
32:RP:125:VAL:O	32:RP:145:PRO:HD2	2.08	0.54
34:RR:45:ARG:HA	34:RR:95:THR:HG21	1.87	0.54
44:R1:83:GLU:CD	44:R1:85:LEU:H	2.15	0.54
1:XA:1034:G:H2'	1:XA:1035:A:C8	2.42	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.37	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.54
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.70	0.54
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.54
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.32	0.54
22:YA:74:A:H4'	22:YA:75:G:O5'	2.08	0.54
22:YA:1795:C:O2	24:YD:255:LYS:HE2	2.08	0.54
22:YA:2471:C:H3'	22:YA:2472:G:H8	1.73	0.54
24:YD:118:VAL:HG22	24:YD:119:ALA:H	1.72	0.54
24:YD:124:PRO:HB2	24:YD:126:GLN:NE2	2.22	0.54
26:YF:127:GLU:O	26:YF:129:PHE:N	2.39	0.54
28:YH:126:PRO:HD2	28:YH:127:GLU:H	1.72	0.54
28:YH:153:LYS:CE	28:YH:153:LYS:HA	2.38	0.54
30:YN:68:GLU:HG2	30:YN:88:GLU:CD	2.33	0.54
46:Y3:2:PRO:O	46:Y3:3:ARG:O	2.25	0.54
47:Y4:42:PHE:O	47:Y4:43:TYR:C	2.51	0.54
47:Y4:65:ASP:O	47:Y4:66:SER:HB3	2.07	0.54
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.88	0.54
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.42	0.54
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.40	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
22:RA:728:G:C2	22:RA:730:C:C2	2.95	0.54
22:RA:2298:A:H2'	22:RA:2299:G:O4'	2.06	0.54
25:RE:101:ARG:HB3	25:RE:201:THR:OG1	2.08	0.54
29:RI:31:LEU:HD21	29:RI:38:LEU:HG	1.90	0.54
38:RV:45:THR:HG22	38:RV:45:THR:O	2.08	0.54
38:RV:91:TYR:C	38:RV:91:TYR:HD1	2.16	0.54
40:RX:18:TYR:C	40:RX:20:GLY:N	2.64	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:61:ILE:HG23	41:RY:62:GLU:H	1.71	0.54
45:R2:31:GLU:HB2	45:R2:53:LEU:HD11	1.89	0.54
48:R5:55:ARG:HD3	48:R5:56:LYS:H	1.73	0.54
49:R6:12:GLU:HG2	49:R6:52:VAL:O	2.07	0.54
1:XA:1230:C:H2'	1:XA:1231:G:H8	1.73	0.54
1:XA:1459:C:OP1	20:XT:27:LYS:NZ	2.41	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
4:XD:196:LEU:C	4:XD:198:VAL:N	2.65	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
13:XM:7:VAL:HG22	47:Y4:34:GLU:OE2	2.08	0.54
22:YA:273(F):C:H2'	22:YA:274:G:H5"	1.90	0.54
22:YA:414:C:O2	22:YA:1864:U:O2'	2.24	0.54
22:YA:1824:G:O3'	24:YD:249:PRO:HD3	2.07	0.54
22:YA:2469:A:H5"	22:YA:2470:G:H8	1.72	0.54
22:YA:2556:C:H2'	22:YA:2557:G:O4'	2.08	0.54
24:YD:72:LYS:O	24:YD:73:VAL:C	2.51	0.54
24:YD:206:LEU:O	24:YD:211:ARG:NH1	2.38	0.54
33:YQ:39:PRO:HB3	33:YQ:99:PRO:HD3	1.90	0.54
34:YR:18:LEU:HD13	34:YR:18:LEU:C	2.33	0.54
34:YR:28:LEU:HD13	34:YR:28:LEU:O	2.08	0.54
35:YS:111:GLU:HA	35:YS:111:GLU:OE1	2.07	0.54
38:YV:91:TYR:C	38:YV:91:TYR:HD1	2.16	0.54
41:YY:87:LYS:HB2	41:YY:87:LYS:NZ	2.23	0.54
49:Y6:20:ASN:CG	49:Y6:21:TYR:N	2.66	0.54
53:QV:4:G:HO2'	53:QV:5:G:H8	1.55	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
13:QM:77:ASN:HA	47:R4:71:ARG:CZ	2.37	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
22:RA:1403:C:H5"	22:RA:1471:A:C1'	2.36	0.54
22:RA:2722:G:H4'	34:RR:4:LEU:HB2	1.88	0.54
22:RA:2758:A:C4	28:RH:67:LEU:HD21	2.42	0.54
23:RB:1:U:H2'	23:RB:2:C:H6	1.73	0.54
24:RD:183:ARG:HG2	24:RD:183:ARG:NH1	2.12	0.54
24:RD:227:ASN:HB3	24:RD:228:PRO:CD	2.30	0.54
26:RF:192:LEU:HD21	26:RF:194:MET:CE	2.35	0.54
28:RH:86:GLU:CD	28:RH:86:GLU:H	2.16	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:42:TRP:CD1	37:RU:63:VAL:HG11	2.42	0.54
33:RQ:60:ARG:HH12	33:RQ:113:GLN:HE22	1.55	0.54
34:RR:1:MET:O	34:RR:2:ARG:HG3	2.08	0.54
36:RT:14:TYR:H	36:RT:14:TYR:HD1	1.56	0.54
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.89	0.54
1:XA:188:U:H2'	1:XA:189:U:H5"	1.90	0.54
1:XA:719:C:O2'	18:XR:49:LYS:HB3	2.08	0.54
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.73	0.54
1:XA:1399:C:C2	1:XA:1502:A:N6	2.75	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.54
14:XN:22:THR:HB	14:XN:33:VAL:HG11	1.88	0.54
15:XO:77:ARG:HA	15:XO:80:ALA:CB	2.36	0.54
22:YA:353:G:H2'	22:YA:354:G:H8	1.72	0.54
22:YA:519:U:H2'	22:YA:520:G:C8	2.42	0.54
22:YA:841:A:H2'	22:YA:842:G:C8	2.43	0.54
24:YD:130:ALA:C	24:YD:131:LEU:HD12	2.33	0.54
25:YE:25:VAL:HG11	36:YT:11:GLU:HG2	1.90	0.54
25:YE:51:PHE:O	25:YE:74:PRO:HB3	2.08	0.54
26:YF:62:ARG:HB3	26:YF:62:ARG:NH1	2.23	0.54
27:YG:3:LEU:HD12	27:YG:4:ASP:N	2.19	0.54
27:YG:7:LEU:HD12	27:YG:104:GLU:HA	1.88	0.54
27:YG:81:LYS:O	27:YG:82:LEU:CB	2.56	0.54
28:YH:91:GLY:O	28:YH:94:TYR:HB2	2.08	0.54
31:YO:78:ARG:O	36:YT:73:GLU:HG3	2.08	0.54
32:YP:84:ASN:ND2	32:YP:115:LEU:HD12	2.22	0.54
32:YP:124:LYS:HA	32:YP:143:GLY:O	2.08	0.54
34:YR:38:VAL:HG22	34:YR:112:ALA:HB2	1.90	0.54
36:YT:55:ASN:O	36:YT:57:PHE:O	2.26	0.54
37:YU:24:TYR:O	37:YU:29:SER:HB3	2.08	0.54
37:YU:86:ALA:HB1	37:YU:88:ILE:HD11	1.90	0.54
46:Y3:56:VAL:CG1	46:Y3:57:GLU:H	2.19	0.54
52:Y9:1:MET:HB3	52:Y9:4:ARG:CZ	2.37	0.54
53:QV:68:C:H2'	53:QV:69:C:C6	2.42	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
22:RA:1165:U:H2'	22:RA:1166:C:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2443:C:H2'	22:RA:2444:G:C8	2.42	0.54
24:RD:25:THR:CG2	24:RD:81:ALA:HB1	2.38	0.54
25:RE:54:GLN:NE2	25:RE:54:GLN:N	2.55	0.54
28:RH:91:GLY:O	28:RH:94:TYR:HB2	2.08	0.54
31:RO:4:PRO:O	31:RO:5:GLN:HB2	2.06	0.54
32:RP:124:LYS:HA	32:RP:143:GLY:O	2.08	0.54
34:RR:38:VAL:HG22	34:RR:112:ALA:HB2	1.90	0.54
34:RR:53:HIS:HA	34:RR:56:LYS:HD3	1.90	0.54
35:RS:111:GLU:OE1	35:RS:111:GLU:HA	2.06	0.54
37:RU:95:LEU:HD12	38:RV:11:GLN:HE21	1.72	0.54
47:R4:51:ASP:O	47:R4:51:ASP:OD1	2.25	0.54
1:XA:429:U:H1'	1:XA:430:A:H5"	1.90	0.54
1:XA:881:G:P	12:XL:12:ARG:HH22	2.30	0.54
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.07	0.54
1:XA:1312:G:OP1	47:Y4:58:ARG:NH1	2.39	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
22:YA:771:G:OP1	50:Y7:10:ARG:NH1	2.41	0.54
22:YA:2712:U:O2'	22:YA:2712(A):A:H8	1.89	0.54
23:YB:40:U:O2'	23:YB:45:A:N6	2.37	0.54
25:YE:14:ILE:HD11	36:YT:14:TYR:CZ	2.42	0.54
25:YE:101:ARG:HB3	25:YE:201:THR:OG1	2.08	0.54
29:YI:56:LYS:HE3	29:YI:57:ARG:HG2	1.89	0.54
30:YN:7:LYS:HD3	30:YN:9:VAL:CA	2.38	0.54
31:YO:49:ARG:HB3	31:YO:49:ARG:NH1	2.23	0.54
31:YO:55:GLY:O	31:YO:56:ASP:C	2.50	0.54
31:YO:68:GLU:HA	31:YO:78:ARG:HB3	1.89	0.54
32:YP:24:GLY:O	32:YP:25:SER:HB3	2.06	0.54
32:YP:92:GLU:HA	32:YP:123:LEU:CD2	2.38	0.54
45:Y2:47:ASN:ND2	45:Y2:47:ASN:N	2.54	0.54
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.22	0.54
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.54
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.54
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.54
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.54
22:RA:247:G:H4'	22:RA:386:G:C5	2.43	0.54
22:RA:669:G:H2'	22:RA:669:G:N3	2.23	0.54
22:RA:996:A:OP2	37:RU:94:ASN:ND2	2.41	0.54
22:RA:1291:C:H5'	22:RA:1536:A:H5'	1.90	0.54
22:RA:2404:C:C1'	32:RP:67:MET:HE1	2.31	0.54
24:RD:158:ALA:HB3	24:RD:161:THR:HG21	1.90	0.54
25:RE:51:PHE:O	25:RE:74:PRO:HB3	2.08	0.54
25:RE:53:PRO:O	25:RE:74:PRO:HA	2.07	0.54
26:RF:29:ASN:CB	26:RF:112:MET:HE1	2.38	0.54
32:RP:64:LYS:HG3	51:R8:25:MET:SD	2.48	0.54
34:RR:18:LEU:HD13	34:RR:18:LEU:C	2.33	0.54
41:RY:87:LYS:NZ	41:RY:87:LYS:HB2	2.23	0.54
44:R1:92:LYS:O	44:R1:94:LEU:N	2.41	0.54
49:R6:17:LYS:O	49:R6:18:ARG:HB2	2.08	0.54
1:XA:971:G:C5	1:XA:1365:G:H5'	2.43	0.54
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.88	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
7:XG:12:LEU:HD22	7:XG:12:LEU:N	2.23	0.54
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.54
10:XJ:61:GLU:HG3	14:XN:58:LYS:HE2	1.90	0.54
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.90	0.54
22:YA:26:G:H1'	22:YA:515:A:N6	2.23	0.54
22:YA:275:G:N2	22:YA:276:A:H62	2.04	0.54
22:YA:395:U:H2'	22:YA:396:G:N7	2.23	0.54
22:YA:1169:G:H1	22:YA:1180:C:N4	2.05	0.54
22:YA:2105:C:H2'	22:YA:2106:G:H8	1.73	0.54
26:YF:147:GLY:O	26:YF:148:LEU:HD23	2.08	0.54
26:YF:197:ASP:O	26:YF:198:ALA:HB3	2.06	0.54
27:YG:83:ARG:HB2	27:YG:86:MET:HE3	1.88	0.54
35:YS:13:ARG:O	35:YS:13:ARG:HD2	2.07	0.54
35:YS:74:ALA:HB1	35:YS:107:GLU:HB3	1.89	0.54
38:YV:45:THR:HG22	38:YV:45:THR:O	2.08	0.54
38:YV:66:ARG:HH11	38:YV:66:ARG:CB	2.20	0.54
40:YX:5:TYR:HE2	45:Y2:30:ARG:HH11	1.56	0.54
42:YZ:58:VAL:O	42:YZ:60:GLU:N	2.39	0.54
44:Y1:91:LYS:HA	44:Y1:91:LYS:CE	2.37	0.54
1:QA:1224:G:C6	1:QA:1322:C:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.53
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.53
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.22	0.53
22:RA:153:C:P	44:R1:88:LYS:HE2	2.48	0.53
22:RA:2713:A:OP1	34:RR:14:SER:OG	2.25	0.53
24:RD:227:ASN:CB	24:RD:228:PRO:HD2	2.24	0.53
31:RO:113:LYS:HG2	31:RO:117:LEU:CD1	2.38	0.53
32:RP:140:ALA:O	32:RP:141:ALA:HB2	2.08	0.53
37:RU:24:TYR:O	37:RU:29:SER:HB3	2.08	0.53
44:R1:83:GLU:OE1	44:R1:85:LEU:HD23	2.07	0.53
45:R2:43:GLN:O	45:R2:44:LEU:CG	2.54	0.53
1:XA:503:C:OP2	12:XL:116:SER:HB3	2.07	0.53
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.08	0.53
1:XA:1359:C:H3'	14:XN:35:ARG:HH12	1.73	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.90	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.53
22:YA:76:C:O2'	45:Y2:62:THR:HG21	2.07	0.53
22:YA:83:G:H1	22:YA:102:G:H1'	1.73	0.53
22:YA:2347:C:OP1	49:Y6:39:TYR:HE2	1.92	0.53
22:YA:2467:C:H4'	33:YQ:123:HIS:CD2	2.43	0.53
22:YA:2667:C:H1'	28:YH:109:PHE:HD2	1.72	0.53
24:YD:80:ALA:HB3	24:YD:94:LEU:HD13	1.88	0.53
24:YD:158:ALA:HB3	24:YD:161:THR:HG21	1.90	0.53
24:YD:183:ARG:HG2	24:YD:183:ARG:NH1	2.12	0.53
25:YE:186:GLY:O	25:YE:188:VAL:N	2.41	0.53
31:YO:12:ASP:OD1	31:YO:85:VAL:HG13	2.08	0.53
32:YP:14:LYS:O	32:YP:15:ARG:C	2.51	0.53
36:YT:105:LEU:O	36:YT:107:ASP:N	2.41	0.53
37:YU:74:LEU:HD13	37:YU:79:PHE:HB2	1.89	0.53
38:YV:91:TYR:C	38:YV:91:TYR:CD1	2.87	0.53
44:Y1:80:LEU:C	44:Y1:81:LYS:CE	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:41:ILE:HD11	45:Y2:44:LEU:HB2	1.90	0.53
50:Y7:10:ARG:NH1	50:Y7:14:LYS:HE3	2.23	0.53
1:QA:10:A:H2'	1:QA:11:G:H8	1.73	0.53
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.27	0.53
1:QA:1397:C:O2'	54:QX:8:A:N6	2.41	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.89	0.53
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.90	0.53
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.53
22:RA:242:G:O3'	51:R8:6:THR:HG23	2.08	0.53
22:RA:964:C:O2'	22:RA:2273:A:N3	2.36	0.53
22:RA:1264:G:H5'	48:R5:11:THR:HG21	1.91	0.53
23:RB:15:A:H1'	23:RB:109:G:C4	2.43	0.53
24:RD:85:ASP:OD2	24:RD:88:ARG:HG2	2.07	0.53
24:RD:206:LEU:O	24:RD:211:ARG:NH1	2.38	0.53
24:RD:211:ARG:HD2	24:RD:214:TRP:CZ3	2.43	0.53
26:RF:116:ASP:OD1	26:RF:119:ARG:NH2	2.41	0.53
28:RH:153:LYS:HA	28:RH:153:LYS:CE	2.38	0.53
31:RO:55:GLY:O	31:RO:56:ASP:C	2.50	0.53
31:RO:78:ARG:O	36:RT:73:GLU:HG3	2.08	0.53
32:RP:37:GLY:HA2	32:RP:41:ARG:NE	2.24	0.53
40:RX:53:LYS:NZ	40:RX:55:ASN:HD21	2.06	0.53
44:R1:25:LYS:C	44:R1:27:GLU:H	2.16	0.53
48:R5:60:VAL:OXT	48:R5:60:VAL:CG1	2.56	0.53
1:XA:690:G:H22	11:XK:55:LYS:HZ2	1.57	0.53
1:XA:1130:A:N6	1:XA:1131:G:O6	2.41	0.53
1:XA:1182:G:H4'	1:XA:1183:A:H5"	1.90	0.53
1:XA:1346:A:H5'	9:XI:120:ARG:HH12	1.72	0.53
22:YA:297:C:H5"	41:YY:85:VAL:HG21	1.90	0.53
22:YA:1533:C:H42	22:YA:1538:G:H1	1.56	0.53
22:YA:1754:C:H2'	22:YA:1755:A:C8	2.43	0.53
22:YA:2277:G:OP1	33:YQ:85:LYS:HB2	2.08	0.53
22:YA:2605:U:H2'	22:YA:2606:C:C6	2.43	0.53
24:YD:35:LYS:CG	24:YD:64:ILE:H	2.15	0.53
24:YD:85:ASP:OD2	24:YD:88:ARG:HG2	2.07	0.53
27:YG:139:LEU:HD22	27:YG:146:TYR:HD1	1.73	0.53
28:YH:125:VAL:HA	28:YH:126:PRO:CB	2.29	0.53
28:YH:151:ILE:C	28:YH:152:ARG:O	2.49	0.53
34:YR:70:LEU:C	34:YR:72:ASP:H	2.16	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:70:LEU:HD13	34:YR:75:LEU:HD11	1.88	0.53
34:YR:91:GLN:HG2	34:YR:91:GLN:O	2.08	0.53
38:YV:35:LEU:HD22	38:YV:35:LEU:N	2.23	0.53
44:Y1:87:PRO:O	44:Y1:91:LYS:N	2.31	0.53
49:Y6:11:LEU:CD1	49:Y6:51:GLU:HG3	2.38	0.53
49:Y6:12:GLU:HG2	49:Y6:52:VAL:O	2.07	0.53
53:QV:35:A:C2	54:QX:3:G:N2	2.75	0.53
1:QA:363:A:OP1	12:QL:34:ARG:N	2.38	0.53
1:QA:1023:G:H3'	1:QA:1024:G:H5"	1.89	0.53
1:QA:1297:C:H4'	1:QA:1298:C:H5'	1.91	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.09	0.53
18:QR:58:LEU:HD12	18:QR:58:LEU:H	1.72	0.53
22:RA:2031:A:C6	22:RA:2498:C:H1'	2.44	0.53
22:RA:2645:G:H3'	22:RA:2646:C:H5'	1.90	0.53
24:RD:124:PRO:HB2	24:RD:126:GLN:NE2	2.22	0.53
28:RH:139:GLN:O	28:RH:143:GLN:HB2	2.09	0.53
30:RN:109:LYS:HD2	30:RN:109:LYS:H	1.74	0.53
30:RN:137:LYS:HG3	30:RN:138:LEU:N	2.23	0.53
31:RO:49:ARG:HB3	31:RO:49:ARG:NH1	2.23	0.53
34:RR:28:LEU:HD13	34:RR:28:LEU:O	2.08	0.53
38:RV:7:THR:CG2	38:RV:22:VAL:HG11	2.39	0.53
41:RY:97:ARG:NH2	41:RY:98:VAL:CB	2.65	0.53
46:R3:2:PRO:O	46:R3:3:ARG:O	2.25	0.53
49:R6:20:ASN:CG	49:R6:21:TYR:N	2.66	0.53
50:R7:10:ARG:NH1	50:R7:14:LYS:HE3	2.23	0.53
51:R8:58:ILE:O	51:R8:61:LEU:HG	2.08	0.53
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.11	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
28:YH:59:ARG:HH11	28:YH:59:ARG:CG	2.20	0.53
29:YI:88:ILE:HG12	29:YI:122:GLU:H	1.74	0.53
35:YS:25:ARG:HH12	35:YS:42:ASP:CG	2.16	0.53
41:YY:90:LEU:HD22	41:YY:90:LEU:H	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:Y2:16:LEU:O	45:Y2:16:LEU:CG	2.49	0.53
48:Y5:16:ARG:NH1	48:Y5:17:ASP:OD1	2.41	0.53
49:Y6:13:CYS:O	49:Y6:14:THR:HB	2.08	0.53
51:Y8:63:PRO:O	51:Y8:64:TYR:HB2	2.07	0.53
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.09	0.53
1:QA:1397:C:C1'	54:QX:8:A:N6	2.72	0.53
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.43	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
12:QL:47:LYS:CG	12:QL:48:PRO:CD	2.87	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
22:RA:270(R):G:H1'	44:R1:78:LYS:HZ1	1.74	0.53
22:RA:299:A:OP2	22:RA:299:A:H8	1.91	0.53
22:RA:2711:A:H5"	22:RA:2712:U:H5'	1.90	0.53
24:RD:25:THR:O	24:RD:25:THR:HG23	2.07	0.53
26:RF:32:LEU:HD12	26:RF:36:VAL:HG23	1.90	0.53
27:RG:81:LYS:O	27:RG:82:LEU:CB	2.56	0.53
29:RI:13:GLY:HA3	29:RI:17:GLN:CD	2.32	0.53
34:RR:70:LEU:C	34:RR:72:ASP:H	2.16	0.53
36:RT:135:ALA:C	36:RT:137:LYS:H	2.16	0.53
37:RU:86:ALA:HB1	37:RU:88:ILE:HD11	1.90	0.53
38:RV:66:ARG:HH11	38:RV:66:ARG:CB	2.20	0.53
41:RY:44:ILE:CG1	41:RY:45:VAL:N	2.70	0.53
47:R4:15:ILE:HD13	47:R4:15:ILE:H	1.74	0.53
48:R5:44:THR:O	48:R5:46:CYS:N	2.41	0.53
51:R8:29:LYS:HB2	51:R8:44:LYS:HG2	1.90	0.53
1:XA:411:A:C6	1:XA:429:U:C4	2.97	0.53
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
22:YA:1790:C:H5"	22:YA:1791:A:OP1	2.08	0.53
22:YA:2881:C:H2'	22:YA:2882:A:H8	1.74	0.53
25:YE:61:ARG:O	25:YE:62:PRO:C	2.51	0.53
30:YN:56:ASN:ND2	30:YN:125:GLY:C	2.65	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YN:137:LYS:HG3	30:YN:138:LEU:N	2.23	0.53
33:YQ:112:GLU:CD	33:YQ:112:GLU:H	2.17	0.53
39:YW:28:SER:HB3	39:YW:31:GLU:HB2	1.91	0.53
41:YY:47:LYS:C	41:YY:49:VAL:H	2.16	0.53
1:QA:1322:C:O2'	1:QA:1323:G:H5'	2.09	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
3:QC:173:VAL:HG12	3:QC:173:VAL:O	2.08	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
22:RA:240:G:H3'	22:RA:241:A:H2'	1.90	0.53
22:RA:843:G:N2	22:RA:936:C:C2	2.77	0.53
25:RE:14:ILE:CG1	25:RE:15:PHE:H	2.08	0.53
29:RI:79:ILE:HB	29:RI:142:VAL:HA	1.90	0.53
30:RN:12:ARG:NH1	30:RN:50:ASP:CG	2.67	0.53
32:RP:101:VAL:C	32:RP:103:ALA:H	2.17	0.53
33:RQ:112:GLU:CD	33:RQ:112:GLU:H	2.17	0.53
33:RQ:119:ARG:HG2	33:RQ:119:ARG:NH1	2.20	0.53
34:RR:3:HIS:C	34:RR:5:LYS:H	2.17	0.53
34:RR:91:GLN:O	34:RR:91:GLN:HG2	2.08	0.53
35:RS:10:ARG:O	35:RS:14:VAL:HG12	2.09	0.53
35:RS:25:ARG:HH11	35:RS:25:ARG:CB	2.22	0.53
38:RV:91:TYR:C	38:RV:91:TYR:CD1	2.87	0.53
40:RX:36:LYS:HA	40:RX:39:ILE:HD12	1.90	0.53
47:R4:23:GLU:C	47:R4:24:THR:HG1	2.17	0.53
48:R5:16:ARG:NH1	48:R5:17:ASP:OD1	2.41	0.53
49:R6:11:LEU:CD1	49:R6:51:GLU:HG3	2.39	0.53
1:XA:757:U:H2'	1:XA:758:G:O4'	2.09	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
18:XR:30:ASP:C	18:XR:32:ARG:H	2.15	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
22:YA:242:G:H5'	51:Y8:62:LEU:CD2	2.37	0.53
22:YA:466:A:N3	22:YA:683:C:H1'	2.24	0.53
22:YA:1344:G:H4'	22:YA:1384:A:C5	2.44	0.53
22:YA:1803:A:N6	22:YA:1814:G:O2'	2.31	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2286:A:H4'	22:YA:2287:A:O4'	2.09	0.53
22:YA:2532:G:O2'	22:YA:2657:A:N1	2.38	0.53
24:YD:198:ASN:C	24:YD:198:ASN:HD22	2.16	0.53
24:YD:263:ARG:HB2	24:YD:263:ARG:HH11	1.68	0.53
25:YE:47:VAL:O	25:YE:48:GLN:C	2.52	0.53
28:YH:12:PRO:O	28:YH:13:LYS:HB2	2.07	0.53
30:YN:12:ARG:NH1	30:YN:50:ASP:CG	2.67	0.53
38:YV:22:VAL:CG1	38:YV:23:GLU:N	2.71	0.53
38:YV:41:GLY:HA3	38:YV:46:VAL:CG1	2.38	0.53
51:Y8:58:ILE:O	51:Y8:61:LEU:HG	2.08	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
12:QL:10:LEU:HB3	17:QQ:32:TYR:CZ	2.44	0.53
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
22:RA:189:G:N1	22:RA:206:U:OP2	2.36	0.53
22:RA:945:A:C4	22:RA:2448:A:C2	2.97	0.53
22:RA:2361:A:O5'	51:R8:27:THR:OG1	2.26	0.53
22:RA:2469:A:H5"	22:RA:2470:G:C8	2.43	0.53
23:RB:16:G:H2'	23:RB:17:C:H6	1.73	0.53
26:RF:34:TRP:CH2	32:RP:8:PRO:HB3	2.43	0.53
26:RF:198:ALA:C	26:RF:200:GLU:N	2.62	0.53
30:RN:19:GLU:HA	30:RN:59:LYS:HB2	1.91	0.53
30:RN:95:PRO:O	30:RN:96:GLU:C	2.51	0.53
31:RO:12:ASP:OD1	31:RO:85:VAL:HG13	2.08	0.53
31:RO:14:THR:HG21	31:RO:86:ILE:HD13	1.91	0.53
36:RT:105:LEU:O	36:RT:107:ASP:N	2.41	0.53
40:RX:60:ARG:NH1	50:R7:47:ARG:HH22	2.07	0.53
42:RZ:5:LEU:HB3	42:RZ:59:LEU:HA	1.90	0.53
1:XA:35:G:C2	1:XA:550:G:N3	2.77	0.53
1:XA:658:G:H2'	1:XA:659:U:H6	1.73	0.53
1:XA:1316:G:O2'	1:XA:1318:A:N7	2.40	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
14: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
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
24:YD:25:THR:HG21	24:YD:81:ALA:CB	2.38	0.53
26:YF:29:ASN:CB	26:YF:112:MET:HE1	2.38	0.53
28:YH:12:PRO:HG3	28:YH:48:GLY:O	2.09	0.53
28:YH:40:GLU:O	28:YH:41:MET:HB2	2.08	0.53
32:YP:79:ARG:HD3	32:YP:110:TYR:CE1	2.43	0.53
32:YP:88:LEU:HD23	32:YP:89:ALA:N	2.24	0.53
33:YQ:76:LYS:O	33:YQ:88:GLY:HA3	2.09	0.53
36:YT:135:ALA:C	36:YT:137:LYS:H	2.16	0.53
42:YZ:28:MET:O	42:YZ:34:ASN:HA	2.09	0.53
47:Y4:37:SER:HB3	47:Y4:42:PHE:CD1	2.43	0.53
1:QA:181:G:O2'	1:QA:182:U:O5'	2.26	0.53
1:QA:1397:C:O2	54:QX:8:A:N7	2.42	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.56	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
12:QL:47:LYS:CB	12:QL:48:PRO:CD	2.87	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
22:RA:195:A:H61	22:RA:198:C:H3'	1.74	0.53
22:RA:1728:G:H3'	22:RA:1729:A:H5"	1.91	0.53
23:RB:55:U:HO2'	27:RG:29:TRP:CD1	2.26	0.53
24:RD:25:THR:HG21	24:RD:82:ILE:H	1.70	0.53
25:RE:20:ALA:O	25:RE:21:VAL:CG2	2.48	0.53
30:RN:78:TYR:N	30:RN:78:TYR:HD1	2.07	0.53
30:RN:120:LEU:CD1	30:RN:122:VAL:HG23	2.38	0.53
36:RT:98:LYS:HB3	36:RT:100:TYR:CE1	2.43	0.53
47:R4:42:PHE:O	47:R4:43:TYR:C	2.50	0.53
49:R6:9:LEU:HD13	49:R6:26:ASN:ND2	2.24	0.53
1:XA:96:G:H2'	1:XA:97:U:O4'	2.09	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.91	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
22:YA:524:U:H2'	22:YA:525:U:H6	1.74	0.53
22:YA:676:A:H8	22:YA:2069:G:H21	1.56	0.53
22:YA:1214:A:N6	22:YA:1235:G:O2'	2.40	0.53
22:YA:1728:G:H5"	22:YA:1728:G:N3	2.24	0.53
22:YA:2168:G:N2	22:YA:2170:A:N7	2.56	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2319:G:N7	35:YS:3:ARG:HB3	2.23	0.53
25:YE:119:ARG:HD3	25:YE:160:TYR:HB2	1.91	0.53
28:YH:128:PRO:CD	28:YH:129:THR:N	2.71	0.53
30:YN:19:GLU:HA	30:YN:59:LYS:HB2	1.91	0.53
31:YO:2:ILE:HD12	31:YO:2:ILE:N	2.23	0.53
32:YP:64:LYS:HG3	51:Y8:25:MET:SD	2.48	0.53
32:YP:125:VAL:O	32:YP:145:PRO:HD2	2.08	0.53
47:Y4:49:PHE:N	47:Y4:49:PHE:CD1	2.77	0.53
1:QA:939:G:H5"	7:QG:102:ARG:NH1	2.23	0.53
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.44	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.17	0.53
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.53
12:QL:47:LYS:HB3	12:QL:48:PRO:CD	2.38	0.53
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.53
22:RA:297:C:H5"	41:RY:85:VAL:CG2	2.37	0.53
22:RA:704:G:H1'	22:RA:727:A:N6	2.24	0.53
22:RA:817:C:O2'	22:RA:839:U:H5"	2.09	0.53
22:RA:942:G:O2'	22:RA:1189:A:N3	2.40	0.53
22:RA:1266:G:OP2	48:R5:20:ARG:NE	2.40	0.53
22:RA:2151:G:H2'	22:RA:2152:G:H8	1.74	0.53
22:RA:2723:C:OP1	34:RR:3:HIS:HD2	1.92	0.53
22:RA:2832:U:H4'	22:RA:2833:G:H5"	1.91	0.53
24:RD:36:PRO:HA	24:RD:62:TYR:O	2.09	0.53
25:RE:14:ILE:HG23	25:RE:15:PHE:N	2.23	0.53
25:RE:25:VAL:HG11	36:RT:11:GLU:HG2	1.90	0.53
26:RF:129:PHE:O	26:RF:142:TRP:CD1	2.62	0.53
32:RP:14:LYS:O	32:RP:15:ARG:C	2.51	0.53
32:RP:79:ARG:HD3	32:RP:110:TYR:CE1	2.43	0.53
39:RW:8:ARG:HH11	39:RW:8:ARG:HG3	1.73	0.53
41:RY:84:ARG:NH1	41:RY:97:ARG:HB2	2.11	0.53
41:RY:95:LYS:HA	41:RY:101:LYS:H	1.72	0.53
45:R2:41:ILE:HD11	45:R2:44:LEU:HB2	1.90	0.53
47:R4:54:GLY:O	47:R4:71:ARG:HA	2.08	0.53
49:R6:25:LYS:HE2	49:R6:27:LYS:HE3	1.91	0.53
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.44	0.53
1:XA:745:C:OP1	1:XA:851:G:O2'	2.26	0.53
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
11:XK:125:PHE:HD1	11:XK:125:PHE:N	2.06	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
22:YA:1407:C:H42	22:YA:1595:G:H1	1.56	0.53
24:YD:77:ALA:HB2	24:YD:97:TYR:CG	2.44	0.53
26:YF:116:ASP:OD1	26:YF:119:ARG:NH2	2.41	0.53
30:YN:22:THR:CG2	30:YN:23:LEU:N	2.61	0.53
30:YN:134:ARG:N	30:YN:135:PRO:CD	2.58	0.53
34:YR:1:MET:O	34:YR:2:ARG:HG3	2.08	0.53
34:YR:67:LEU:HD13	34:YR:76:VAL:CG2	2.27	0.53
35:YS:56:LEU:O	35:YS:58:LEU:HD22	2.09	0.53
38:YV:48:GLY:O	38:YV:49:THR:O	2.26	0.53
40:YX:60:ARG:NH1	50:Y7:47:ARG:HH22	2.07	0.53
44:Y1:20:ARG:HG2	44:Y1:20:ARG:NH1	2.24	0.53
47:Y4:56:VAL:HA	47:Y4:60:GLN:CB	2.28	0.53
49:Y6:7:ILE:CG1	49:Y6:8:LYS:H	2.07	0.53
49:Y6:9:LEU:HD13	49:Y6:26:ASN:ND2	2.24	0.53
1:QA:677:U:H3	1:QA:713:G:H1	1.57	0.53
1:QA:911:U:H2'	1:QA:912:C:C6	2.44	0.53
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.43	0.53
1:QA:1339:A:HO2'	53:QV:40:C:HO2'	1.53	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.53
7:QG:8:GLU:CD	7:QG:8:GLU:N	2.67	0.53
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
22:RA:935:C:H2'	22:RA:936:C:C6	2.44	0.53
28:RH:126:PRO:HD2	28:RH:127:GLU:H	1.72	0.53
32:RP:12:ALA:C	32:RP:14:LYS:H	2.17	0.53
38:RV:48:GLY:O	38:RV:49:THR:O	2.26	0.53
39:RW:14:PRO:O	39:RW:17:VAL:N	2.42	0.53
47:R4:47:GLN:O	47:R4:48:ARG:HB2	2.07	0.53
48:R5:55:ARG:HG3	48:R5:57:VAL:H	1.74	0.53
51:R8:52:LYS:N	51:R8:53:PRO:HD2	2.22	0.53
1:XA:738:C:H5"	6:XF:69:GLU:HB2	1.90	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
13:XM:68:GLY:HA2	27:YG:116:ASP:CG	2.33	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.90	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:848:G:H2'	22:YA:849:A:C8	2.43	0.53
22:YA:1140:C:H5"	30:YN:66:LYS:HZ1	1.74	0.53
22:YA:2756:U:OP2	52:Y9:19:ARG:NH2	2.41	0.53
24:YD:25:THR:CG2	24:YD:81:ALA:HB1	2.38	0.53
24:YD:25:THR:O	24:YD:26:LYS:C	2.52	0.53
28:YH:139:GLN:O	28:YH:143:GLN:HB2	2.09	0.53
30:YN:95:PRO:O	30:YN:96:GLU:C	2.51	0.53
32:YP:101:VAL:C	32:YP:103:ALA:H	2.17	0.53
35:YS:10:ARG:O	35:YS:14:VAL:HG12	2.09	0.53
36:YT:34:VAL:CG1	36:YT:36:GLU:HG2	2.39	0.53
37:YU:92:ARG:NH2	37:YU:94:ASN:HD22	2.07	0.53
38:YV:38:LEU:HD13	38:YV:55:ALA:HB3	1.91	0.53
45:Y2:50:ILE:CD1	45:Y2:51:ARG:N	2.60	0.53
47:Y4:36:CYS:O	47:Y4:37:SER:C	2.52	0.53
49:Y6:25:LYS:HE2	49:Y6:27:LYS:HE3	1.91	0.53
1:QA:642:A:N3	8:QH:113:SER:OG	2.37	0.53
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.53
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.53
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
22:RA:582:G:H2'	22:RA:583:G:H8	1.73	0.53
22:RA:2306:C:H3'	22:RA:2307:G:H5"	1.90	0.53
22:RA:2314:C:OP1	27:RG:91:ARG:NH1	2.41	0.53
22:RA:2347:C:OP1	49:R6:39:TYR:HE2	1.92	0.53
24:RD:43:ARG:NH1	24:RD:44:ASN:OD1	2.42	0.53
28:RH:10:PRO:C	28:RH:11:VAL:HG22	2.34	0.53
28:RH:40:GLU:O	28:RH:41:MET:HB2	2.08	0.53
29:RI:69:LYS:HG3	29:RI:136:VAL:HB	1.90	0.53
29:RI:113:ARG:HG3	29:RI:131:LYS:NZ	2.24	0.53
30:RN:75:TYR:C	30:RN:76:SER:O	2.52	0.53
32:RP:125:VAL:O	32:RP:125:VAL:HG13	2.09	0.53
33:RQ:7:MET:HE1	33:RQ:73:PRO:HG3	1.91	0.53
36:RT:55:ASN:O	36:RT:57:PHE:O	2.26	0.53
38:RV:51:VAL:CG1	38:RV:52:VAL:H	2.22	0.53
44:R1:85:LEU:HA	44:R1:87:PRO:HD2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:582:U:H2'	1:XA:583:A:C8	2.44	0.53
1:XA:1147:C:O2	9:XI:16:ARG:NH1	2.41	0.53
1:XA:1346:A:N6	7:XG:10:ARG:HD2	2.25	0.53
2:XB:9:GLU:OE2	2:XB:9:GLU:N	2.42	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.40	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
11:XK:124:LYS:O	11:XK:126:ARG:N	2.39	0.53
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.72	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
22:YA:2432:A:C8	44:Y1:33:LYS:HE2	2.44	0.53
25:YE:64:LYS:C	25:YE:66:HIS:N	2.67	0.53
26:YF:9:ILE:HD11	26:YF:125:LEU:CG	2.36	0.53
27:YG:111:LEU:HB2	47:Y4:38:LYS:HZ3	1.72	0.53
30:YN:131:GLN:CG	30:YN:132:ALA:H	2.20	0.53
32:YP:125:VAL:O	32:YP:125:VAL:HG13	2.09	0.53
33:YQ:81:VAL:C	33:YQ:82:ARG:CG	2.76	0.53
34:YR:107:ASP:C	34:YR:107:ASP:OD2	2.52	0.53
36:YT:3:ARG:HG3	36:YT:7:ILE:CG1	2.36	0.53
38:YV:7:THR:CG2	38:YV:22:VAL:HG11	2.39	0.53
38:YV:35:LEU:HD21	38:YV:57:VAL:CG2	2.30	0.53
40:YX:53:LYS:NZ	40:YX:55:ASN:HD21	2.06	0.53
42:YZ:121:HIS:ND1	42:YZ:123:ASP:O	2.41	0.53
1:QA:21:G:H2'	1:QA:22:G:C8	2.44	0.52
13:QM:8:GLU:C	13:QM:9:ILE:HG23	2.34	0.52
13:QM:73:GLU:O	13:QM:76:ALA:N	2.42	0.52
13:QM:82:MET:HE3	13:QM:93:ARG:HG2	1.91	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.52
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.52
22:RA:1484:G:H2'	22:RA:1485:G:H5"	1.91	0.52
22:RA:1818:U:C2'	24:RD:157:ARG:HG3	2.39	0.52
22:RA:2724:C:P	34:RR:1:MET:HE3	2.49	0.52
22:RA:2784:C:H5"	25:RE:41:LYS:NZ	2.24	0.52
24:RD:25:THR:O	24:RD:26:LYS:C	2.52	0.52
30:RN:18:ALA:O	30:RN:19:GLU:C	2.53	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:56:LEU:C	35:RS:56:LEU:HD23	2.34	0.52
35:RS:106:ARG:HA	35:RS:110:LEU:CG	2.39	0.52
47:R4:49:PHE:N	47:R4:49:PHE:CD1	2.76	0.52
1:XA:292:G:N7	1:XA:293:G:H1'	2.23	0.52
1:XA:1347:G:HO2'	1:XA:1348:U:H6	1.57	0.52
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.09	0.52
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.52
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.52
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.52
9:XI:118:LYS:HZ2	9:XI:118:LYS:CB	2.22	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.23	0.52
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.52
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.35	0.52
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.52
22:YA:270(U):C:H2'	22:YA:270(V):G:H8	1.74	0.52
22:YA:483:A:C5'	41:YY:49:VAL:HG13	2.39	0.52
22:YA:612:G:O2'	22:YA:616:A:N1	2.32	0.52
22:YA:628:G:H2'	22:YA:629:G:C8	2.44	0.52
22:YA:1026:U:H1'	22:YA:1027:A:O5'	2.09	0.52
22:YA:1824:G:OP1	24:YD:52:ARG:HD3	2.08	0.52
22:YA:2349:G:OP2	51:Y8:42:ARG:HD3	2.10	0.52
22:YA:2553:G:N2	56:Z8:76:PPU:H2	2.24	0.52
25:YE:7:VAL:O	25:YE:196:VAL:HG13	2.09	0.52
26:YF:34:TRP:CH2	32:YP:8:PRO:HB3	2.43	0.52
26:YF:129:PHE:O	26:YF:142:TRP:CD1	2.62	0.52
26:YF:140:LEU:O	26:YF:143:ALA:HB3	2.09	0.52
26:YF:192:LEU:HD21	26:YF:194:MET:CE	2.35	0.52
27:YG:16:ARG:HH11	27:YG:16:ARG:HG2	1.74	0.52
28:YH:10:PRO:C	28:YH:11:VAL:HG22	2.34	0.52
32:YP:147:LEU:O	32:YP:148:LEU:CB	2.57	0.52
33:YQ:29:PHE:HB3	33:YQ:65:PHE:CZ	2.44	0.52
34:YR:70:LEU:O	34:YR:72:ASP:N	2.43	0.52
35:YS:56:LEU:C	35:YS:56:LEU:HD23	2.34	0.52
39:YW:38:TYR:OH	48:Y5:47:PRO:HG3	2.08	0.52
49:Y6:14:THR:OG1	49:Y6:19:ARG:NE	2.41	0.52
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
5:QE:10:MET:HE2	5:QE:13:ILE:HD13	1.90	0.52
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
22:RA:928:G:O2'	46:R3:43:ILE:HD11	2.09	0.52
22:RA:2327:A:H2'	22:RA:2328:A:C8	2.44	0.52
24:RD:155:LEU:CD1	24:RD:155:LEU:N	2.71	0.52
25:RE:61:ARG:O	25:RE:63:LEU:N	2.42	0.52
28:RH:44:VAL:O	28:RH:44:VAL:CG2	2.57	0.52
30:RN:12:ARG:NH1	30:RN:50:ASP:OD2	2.40	0.52
30:RN:94:HIS:O	30:RN:95:PRO:O	2.27	0.52
33:RQ:76:LYS:O	33:RQ:88:GLY:HA3	2.09	0.52
34:RR:107:ASP:C	34:RR:107:ASP:OD2	2.52	0.52
35:RS:56:LEU:O	35:RS:58:LEU:HD22	2.09	0.52
35:RS:83:LYS:O	35:RS:109:GLY:CA	2.46	0.52
35:RS:89:ARG:HH11	35:RS:89:ARG:HG2	1.74	0.52
36:RT:14:TYR:CD1	36:RT:14:TYR:N	2.77	0.52
36:RT:100:TYR:HB3	36:RT:103:ARG:NH1	2.25	0.52
36:RT:110:ILE:HG23	36:RT:111:ARG:N	2.24	0.52
41:RY:94:LYS:HE3	41:RY:101:LYS:HZ3	1.73	0.52
46:R3:9:VAL:HG12	46:R3:32:GLN:HE22	1.74	0.52
49:R6:13:CYS:O	49:R6:14:THR:HB	2.08	0.52
51:R8:43:GLN:C	51:R8:44:LYS:HD2	2.34	0.52
1:XA:360:A:H2'	1:XA:361:G:C8	2.44	0.52
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.42	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.40	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.21	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
22:YA:1109:C:O2'	22:YA:1110:G:OP1	2.26	0.52
22:YA:1278:A:OP1	34:YR:36:THR:HG22	2.09	0.52
22:YA:2552:U:H2'	22:YA:2554:U:OP2	2.10	0.52
24:YD:35:LYS:HD3	24:YD:63:ARG:CA	2.39	0.52
25:YE:39:PRO:HG2	25:YE:40:GLU:OE1	2.09	0.52
28:YH:44:VAL:O	28:YH:44:VAL:CG2	2.58	0.52
28:YH:121:ILE:HG12	28:YH:135:GLY:HA3	1.91	0.52
30:YN:75:TYR:C	30:YN:76:SER:O	2.52	0.52
31:YO:107:ARG:CA	31:YO:112:MET:HE1	2.39	0.52
32:YP:37:GLY:HA2	32:YP:41:ARG:NE	2.23	0.52
36:YT:94:ALA:O	36:YT:95:ARG:HB3	2.09	0.52
39:YW:7:ALA:HB2	39:YW:50:VAL:CG2	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YW:25:ARG:HB2	39:YW:25:ARG:HH11	1.74	0.52
44:Y1:25:LYS:C	44:Y1:27:GLU:H	2.17	0.52
46:Y3:6:VAL:HG12	46:Y3:56:VAL:HG22	1.92	0.52
53:QV:15:G:H22	53:QV:48:C:H42	1.57	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.52
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	0.52
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.52
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.10	0.52
19:QS:65:ASN:ND2	19:QS:65:ASN:H	2.08	0.52
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.52
22:RA:186:G:H2'	22:RA:187:G:C8	2.44	0.52
22:RA:273:G:H1	22:RA:364:C:H42	1.57	0.52
22:RA:617:G:OP1	26:RF:40:GLN:NE2	2.40	0.52
22:RA:2232:U:P	44:R1:40:ARG:HH12	2.31	0.52
22:RA:2867:G:O2'	22:RA:2868:A:H8	1.91	0.52
24:RD:130:ALA:C	24:RD:131:LEU:HD12	2.33	0.52
25:RE:7:VAL:O	25:RE:196:VAL:HG13	2.09	0.52
26:RF:53:THR:C	26:RF:55:GLY:N	2.68	0.52
26:RF:125:LEU:HA	26:RF:194:MET:O	2.10	0.52
28:RH:12:PRO:HG3	28:RH:48:GLY:O	2.09	0.52
32:RP:64:LYS:C	32:RP:66:GLY:N	2.56	0.52
32:RP:92:GLU:HA	32:RP:123:LEU:CD2	2.38	0.52
33:RQ:29:PHE:HB3	33:RQ:65:PHE:CZ	2.44	0.52
34:RR:33:ARG:NH2	48:R5:55:ARG:CG	2.66	0.52
47:R4:48:ARG:CZ	47:R4:51:ASP:HA	2.40	0.52
1:XA:1296:C:H3'	1:XA:1297:C:H6	1.75	0.52
1:XA:1493:A:H2'	22:YA:1913:A:N1	2.24	0.52
3:XC:173:VAL:HG12	3:XC:173:VAL:O	2.08	0.52
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.09	0.52
22:YA:594:U:H5'	51:Y8:61:LEU:CD2	2.39	0.52
22:YA:1026:U:H4'	22:YA:1027:A:OP1	2.09	0.52
22:YA:1796:U:H2'	22:YA:1797:C:C6	2.43	0.52
22:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2857:G:N2	22:YA:2859:G:H3'	2.25	0.52
24:YD:155:LEU:CD1	24:YD:155:LEU:N	2.71	0.52
25:YE:7:VAL:CG2	25:YE:8:LYS:H	2.10	0.52
25:YE:137:HIS:HB3	25:YE:138:PRO:CD	2.37	0.52
26:YF:162:LEU:HD23	26:YF:165:ARG:NH2	2.25	0.52
27:YG:97:ASP:H	27:YG:100:TRP:CD1	2.19	0.52
27:YG:179:PRO:HG3	47:Y4:38:LYS:HZ1	1.74	0.52
28:YH:89:ILE:O	28:YH:89:ILE:CG1	2.57	0.52
30:YN:18:ALA:O	30:YN:19:GLU:C	2.53	0.52
30:YN:109:LYS:HD2	30:YN:109:LYS:H	1.74	0.52
39:YW:8:ARG:HG3	39:YW:8:ARG:HH11	1.73	0.52
41:YY:61:ILE:HG23	41:YY:62:GLU:N	2.24	0.52
47:Y4:15:ILE:HD13	47:Y4:15:ILE:H	1.73	0.52
47:Y4:40:HIS:N	47:Y4:41:PRO:CD	2.73	0.52
54:XX:4:C:N4	55:XY:37:1MG:HM13	2.24	0.52
1:QA:35:G:H2'	1:QA:36:C:C6	2.44	0.52
1:QA:997:U:H2'	1:QA:998:G:C8	2.45	0.52
1:QA:1348:U:H4'	9:QI:120:ARG:HD2	1.90	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
22:RA:29:U:H2'	22:RA:30:G:C8	2.44	0.52
22:RA:1005:C:O2'	30:RN:28:THR:HG21	2.09	0.52
22:RA:1258:C:H2'	22:RA:1259:G:H8	1.75	0.52
22:RA:1434:A:H61	22:RA:1558:A:N6	2.07	0.52
22:RA:1833:U:O2'	22:RA:1969:A:N1	2.29	0.52
22:RA:2277:G:OP1	33:RQ:85:LYS:HB2	2.09	0.52
22:RA:2537:U:H2'	22:RA:2538:C:C6	2.45	0.52
24:RD:77:ALA:HB2	24:RD:97:TYR:CG	2.44	0.52
25:RE:64:LYS:C	25:RE:66:HIS:N	2.68	0.52
26:RF:140:LEU:O	26:RF:143:ALA:HB3	2.09	0.52
27:RG:16:ARG:HH11	27:RG:16:ARG:HG2	1.74	0.52
27:RG:124:SER:HB2	27:RG:131:TYR:CE1	2.44	0.52
30:RN:7:LYS:HD3	30:RN:9:VAL:CA	2.38	0.52
30:RN:68:GLU:HG2	30:RN:88:GLU:CD	2.33	0.52
35:RS:86:ALA:O	35:RS:87:PHE:HB3	2.10	0.52
37:RU:88:ILE:H	37:RU:88:ILE:CD1	2.05	0.52
37:RU:91:ASP:O	37:RU:92:ARG:C	2.53	0.52
38:RV:48:GLY:O	38:RV:49:THR:C	2.52	0.52
39:RW:32:ALA:O	39:RW:33:ARG:C	2.52	0.52
44:R1:20:ARG:HG2	44:R1:20:ARG:NH1	2.24	0.52
44:R1:29:GLY:C	44:R1:30:VAL:CG2	2.82	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R3:21:ALA:O	46:R3:25:ALA:N	2.41	0.52
1:XA:1095:U:OP2	1:XA:1108:G:N1	2.37	0.52
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.44	0.52
1:XA:1405:G:OP2	58:XA:1673:PAR:O34	2.24	0.52
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.52
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.52
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	0.52
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.52
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
22:YA:2420:C:N4	51:Y8:30:ARG:HD2	2.24	0.52
24:YD:36:PRO:HA	24:YD:62:TYR:O	2.09	0.52
24:YD:66:ASP:OD2	24:YD:69:ARG:HG2	2.09	0.52
24:YD:233:HIS:N	24:YD:233:HIS:CD2	2.75	0.52
25:YE:93:VAL:C	25:YE:95:ILE:H	2.17	0.52
26:YF:132:VAL:O	26:YF:133:ASN:C	2.51	0.52
26:YF:196:LEU:C	26:YF:197:ASP:O	2.50	0.52
28:YH:24:VAL:HG23	28:YH:24:VAL:O	2.09	0.52
44:Y1:4:VAL:HG22	44:Y1:5:CYS:N	2.25	0.52
54:XX:6:C:O2'	54:XX:7:A:OP1	2.26	0.52
1:QA:738:C:H5"	6:QF:69:GLU:HB2	1.91	0.52
1:QA:778:G:H2'	1:QA:779:C:O4'	2.09	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
22:RA:631:A:H2'	22:RA:632:A:O4'	2.09	0.52
22:RA:1049:C:H2'	22:RA:1050:A:H5"	1.91	0.52
22:RA:1303:G:H1'	22:RA:1641:A:N1	2.25	0.52
24:RD:210:GLY:O	24:RD:213:ARG:N	2.43	0.52
36:RT:23:ARG:HG2	36:RT:120:ARG:HH12	1.75	0.52
36:RT:94:ALA:O	36:RT:95:ARG:HB3	2.09	0.52
38:RV:34:GLU:O	38:RV:36:PRO:HD3	2.09	0.52
47:R4:36:CYS:O	47:R4:37:SER:C	2.52	0.52
1:XA:522:C:H2'	1:XA:523:A:O4'	2.10	0.52
1:XA:790:A:N6	1:XA:791:G:N1	2.57	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.52
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.52
22:YA:656:G:H2'	22:YA:657:U:O4'	2.10	0.52
22:YA:1543:A:HO2'	22:YA:1544:C:P	2.32	0.52
22:YA:2012:G:H4'	39:YW:96:ILE:HD11	1.91	0.52
22:YA:2159:G:H2'	22:YA:2160:G:C8	2.44	0.52
27:YG:124:SER:HB2	27:YG:131:TYR:CE1	2.44	0.52
30:YN:103:VAL:O	30:YN:106:MET:N	2.42	0.52
31:YO:79:PHE:CD2	36:YT:72:VAL:HG22	2.45	0.52
34:YR:53:HIS:HA	34:YR:56:LYS:HD3	1.90	0.52
36:YT:36:GLU:O	36:YT:37:GLY:C	2.53	0.52
36:YT:100:TYR:HB3	36:YT:103:ARG:NH1	2.25	0.52
38:YV:34:GLU:O	38:YV:36:PRO:HD3	2.10	0.52
39:YW:32:ALA:O	39:YW:33:ARG:C	2.52	0.52
41:YY:91:GLU:HG3	41:YY:92:ASN:N	2.25	0.52
45:Y2:7:ARG:HG3	45:Y2:7:ARG:NH1	2.25	0.52
47:Y4:54:GLY:O	47:Y4:71:ARG:HA	2.08	0.52
51:Y8:61:LEU:O	51:Y8:62:LEU:CB	2.57	0.52
1:QA:665:A:H2'	1:QA:725:G:N2	2.25	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
6:QF:22:GLU:CD	6:QF:82:ARG:HH21	2.18	0.52
6:QF:89:MET:O	6:QF:89:MET:HG2	2.09	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
22:RA:134:C:H2'	22:RA:135:G:C8	2.45	0.52
22:RA:210:C:OP2	50:R7:29:LYS:NZ	2.43	0.52
22:RA:1449:A:O2'	22:RA:1530:G:N2	2.33	0.52
22:RA:1678:G:N2	22:RA:1989:G:N2	2.57	0.52
22:RA:2210:G:H3'	22:RA:2211:G:C8	2.43	0.52
22:RA:2698:U:H2'	22:RA:2699:C:C6	2.44	0.52
24:RD:133:LEU:HG	24:RD:189:CYS:O	2.10	0.52
25:RE:39:PRO:HG2	25:RE:40:GLU:OE1	2.09	0.52
30:RN:56:ASN:ND2	30:RN:125:GLY:C	2.66	0.52
30:RN:57:ALA:O	30:RN:58:ASP:HB3	2.09	0.52
30:RN:103:VAL:O	30:RN:106:MET:N	2.42	0.52
35:RS:95:HIS:CG	35:RS:96:GLY:N	2.77	0.52
37:RU:92:ARG:NH2	37:RU:94:ASN:HD22	2.07	0.52
46:R3:7:LYS:HE2	46:R3:32:GLN:NE2	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:R3:56:VAL:CG1	46:R3:57:GLU:H	2.20	0.52
47:R4:55:ARG:C	47:R4:59:PHE:HB3	2.35	0.52
1:XA:437:U:H2'	1:XA:438:G:O4'	2.08	0.52
1:XA:606:G:N2	1:XA:631:G:H8	2.07	0.52
1:XA:1202:G:H1'	14:XN:29:ARG:HD2	1.91	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
2:XB:82:ARG:HB3	2:XB:83:MET:HE2	1.92	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
13:XM:82:MET:HE3	13:XM:93:ARG:HG2	1.91	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
22:YA:1196:C:HO2'	22:YA:1228:G:HO2'	1.44	0.52
22:YA:1479:G:N7	22:YA:1510:A:N6	2.56	0.52
22:YA:1952:A:OP1	31:YO:44:LYS:NZ	2.26	0.52
22:YA:2748:A:C4	22:YA:2757:A:C6	2.98	0.52
31:YO:113:LYS:HG2	31:YO:117:LEU:CD1	2.38	0.52
34:YR:52:ILE:CG2	34:YR:94:TYR:HD1	2.22	0.52
35:YS:25:ARG:HH11	35:YS:25:ARG:CB	2.22	0.52
35:YS:62:LYS:HB3	35:YS:97:ARG:CD	2.39	0.52
36:YT:23:ARG:HG2	36:YT:120:ARG:HH12	1.75	0.52
47:Y4:48:ARG:CZ	47:Y4:51:ASP:HA	2.40	0.52
49:Y6:30:THR:O	49:Y6:30:THR:HG23	2.09	0.52
1:QA:1059:C:H2'	1:QA:1060:C:H6	1.74	0.52
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.90	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.09	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.52
22:RA:608:A:H2'	22:RA:609:A:C8	2.45	0.52
22:RA:1288:U:OP1	22:RA:1289:C:N4	2.34	0.52
22:RA:2106:G:H1	22:RA:2183:C:H42	1.57	0.52
22:RA:2593:U:H2'	22:RA:2594:C:H6	1.74	0.52
24:RD:35:LYS:HG2	24:RD:64:ILE:HG22	1.92	0.52
24:RD:134:ARG:HB2	24:RD:135:PHE:HD2	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:116:VAL:HG22	25:RE:122:PHE:HB2	1.91	0.52
28:RH:121:ILE:HG12	28:RH:135:GLY:HA3	1.91	0.52
36:RT:16:ARG:HD3	36:RT:19:LEU:HG	1.92	0.52
52:R9:27:CYS:SG	52:R9:28:GLU:N	2.83	0.52
1:XA:537:G:H5"	12:XL:113:ARG:NH1	2.24	0.52
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.43	0.52
3:XC:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
22:YA:242:G:H5"	51:Y8:3:LYS:HE3	1.91	0.52
22:YA:279:C:H42	22:YA:361:G:H1	1.58	0.52
22:YA:811:U:O2	22:YA:1250:G:H3'	2.10	0.52
22:YA:1268:A:H2'	22:YA:1269:A:O4'	2.10	0.52
22:YA:1438:U:H2'	22:YA:1439:A:C8	2.45	0.52
22:YA:1825:A:H2'	22:YA:1826:G:C8	2.45	0.52
22:YA:2361:A:P	51:Y8:27:THR:HG1	2.32	0.52
24:YD:174:ILE:N	24:YD:174:ILE:CD1	2.73	0.52
25:YE:176:ILE:HG22	25:YE:176:ILE:O	2.10	0.52
26:YF:29:ASN:H	26:YF:112:MET:HE3	1.75	0.52
30:YN:7:LYS:HD3	30:YN:9:VAL:N	2.25	0.52
30:YN:12:ARG:NH1	30:YN:50:ASP:OD1	2.43	0.52
31:YO:2:ILE:CD1	31:YO:82:ASN:HD22	2.14	0.52
36:YT:99:LEU:HB2	36:YT:101:PHE:CE1	2.45	0.52
39:YW:9:TYR:CD2	39:YW:102:HIS:HE1	2.28	0.52
42:YZ:72:ARG:NH2	42:YZ:97:GLU:HB2	2.24	0.52
46:Y3:9:VAL:HG12	46:Y3:32:GLN:HE22	1.74	0.52
47:Y4:55:ARG:C	47:Y4:59:PHE:HB3	2.35	0.52
1:QA:539:A:H2'	1:QA:540:G:H8	1.75	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.52
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.52
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
22:RA:49:A:H5"	22:RA:50:U:H3'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1250:G:OP2	32:RP:21:ARG:HD3	2.10	0.52
22:RA:1257:C:H5'	26:RF:75:HIS:CE1	2.45	0.52
22:RA:1681:G:O2'	22:RA:1762:A:O2'	2.26	0.52
22:RA:2517:C:N3	22:RA:2542:A:N6	2.57	0.52
22:RA:2784:C:H5"	25:RE:41:LYS:HZ3	1.75	0.52
24:RD:35:LYS:HD3	24:RD:63:ARG:CA	2.39	0.52
24:RD:66:ASP:OD2	24:RD:69:ARG:HG2	2.09	0.52
24:RD:198:ASN:C	24:RD:198:ASN:HD22	2.17	0.52
25:RE:129:HIS:O	25:RE:130:GLY:C	2.53	0.52
25:RE:170:LEU:CD2	25:RE:185:LYS:HB2	2.40	0.52
27:RG:97:ASP:N	27:RG:100:TRP:HD1	2.05	0.52
28:RH:4:ILE:O	28:RH:6:ARG:N	2.43	0.52
38:RV:41:GLY:HA3	38:RV:46:VAL:CG1	2.38	0.52
44:R1:76:ARG:HG2	44:R1:76:ARG:NH1	2.19	0.52
46:R3:6:VAL:HG12	46:R3:56:VAL:HG22	1.91	0.52
47:R4:54:GLY:HA2	47:R4:57:GLU:HG2	1.92	0.52
52:R9:1:MET:HE1	52:R9:32:HIS:HD2	1.75	0.52
1:XA:17:U:H2'	1:XA:18:C:C6	2.45	0.52
1:XA:35:G:C2	1:XA:550:G:C2	2.97	0.52
1:XA:89:U:O2'	1:XA:90:C:OP1	2.27	0.52
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.07	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
22:YA:71:A:N3	22:YA:73:A:N6	2.58	0.52
22:YA:111:A:O3'	45:Y2:69:ARG:NH2	2.43	0.52
22:YA:1020:A:N1	22:YA:1141:U:H2'	2.24	0.52
22:YA:1055:G:H1	22:YA:1104:C:H42	1.58	0.52
22:YA:1187:G:H5"	38:YV:81:TYR:CE2	2.45	0.52
22:YA:1520:U:H2'	22:YA:1521:G:O4'	2.10	0.52
22:YA:1636:C:H2'	22:YA:1637:A:C8	2.44	0.52
22:YA:2208:U:H1'	24:YD:151:LYS:HE2	1.91	0.52
24:YD:43:ARG:NH1	24:YD:44:ASN:OD1	2.42	0.52
25:YE:61:ARG:O	25:YE:63:LEU:N	2.43	0.52
25:YE:170:LEU:CD2	25:YE:185:LYS:HB2	2.40	0.52
26:YF:67:GLN:O	26:YF:68:LYS:CB	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:108:LYS:O	26:YF:112:MET:HG3	2.10	0.52
35:YS:56:LEU:O	35:YS:57:LYS:C	2.53	0.52
35:YS:83:LYS:O	35:YS:109:GLY:CA	2.46	0.52
36:YT:16:ARG:HD3	36:YT:19:LEU:HG	1.92	0.52
36:YT:42:ILE:HD12	36:YT:42:ILE:N	2.25	0.52
41:YY:9:LYS:HG2	41:YY:9:LYS:O	2.10	0.52
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.10	0.52
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.52
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.52
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.56	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.73	0.52
14:QN:36:PHE:C	14:QN:36:PHE:CD1	2.88	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
22:RA:556:G:O5’	22:RA:556:G:H8	1.92	0.52
22:RA:1543:A:O2’	22:RA:1544:C:O5’	2.27	0.52
22:RA:1826:G:H2’	22:RA:1827:C:C6	2.45	0.52
22:RA:2347:C:OP1	49:R6:39:TYR:CE2	2.62	0.52
22:RA:2870:C:H5”	34:RR:65:LEU:HD21	1.91	0.52
23:RB:42:C:N4	27:RG:91:ARG:HH21	2.08	0.52
24:RD:165:ILE:C	24:RD:166:GLN:HE21	2.18	0.52
25:RE:54:GLN:O	25:RE:55:ASN:HB2	2.09	0.52
25:RE:179:GLU:HA	25:RE:179:GLU:OE1	2.10	0.52
31:RO:4:PRO:O	31:RO:5:GLN:CB	2.58	0.52
32:RP:88:LEU:HD23	32:RP:89:ALA:N	2.24	0.52
35:RS:25:ARG:HH12	35:RS:42:ASP:CG	2.16	0.52
37:RU:107:ALA:O	37:RU:111:GLU:OE1	2.28	0.52
38:RV:2:PHE:CD1	38:RV:2:PHE:C	2.88	0.52
38:RV:3:ALA:HB3	38:RV:14:VAL:HG23	1.92	0.52
41:RY:91:GLU:HG3	41:RY:92:ASN:N	2.25	0.52
42:RZ:26:GLY:C	42:RZ:37:VAL:HG22	2.35	0.52
45:R2:9:GLN:O	45:R2:12:GLU:HB3	2.10	0.52
1:XA:1163:C:H42	1:XA:1173:G:H1	1.56	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.52
6:XF:99:ALA:HB1	18:XR:23:LYS:NZ	2.25	0.52
11:XK:102:GLY:O	11:XK:103:LEU:C	2.53	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.52
22:YA:389:G:H22	32:YP:72:PRO:CG	2.23	0.52
22:YA:459:U:OP2	22:YA:469:G:N1	2.31	0.52
22:YA:503:A:H4'	22:YA:504:U:C5'	2.40	0.52
24:YD:133:LEU:HG	24:YD:189:CYS:O	2.10	0.52
25:YE:54:GLN:O	25:YE:55:ASN:HB2	2.09	0.52
29:YI:88:ILE:HG12	29:YI:122:GLU:N	2.24	0.52
31:YO:43:VAL:HG23	31:YO:56:ASP:O	2.10	0.52
34:YR:41:ALA:O	34:YR:43:GLU:N	2.43	0.52
36:YT:110:ILE:HG23	36:YT:111:ARG:N	2.24	0.52
38:YV:35:LEU:CD2	38:YV:57:VAL:HG22	2.32	0.52
38:YV:48:GLY:O	38:YV:49:THR:C	2.52	0.52
44:Y1:83:GLU:CG	44:Y1:84:GLY:N	2.71	0.52
48:Y5:55:ARG:HG3	48:Y5:57:VAL:H	1.74	0.52
1:QA:244:U:H4'	1:QA:245:C:O5'	2.10	0.52
1:QA:347:G:O2'	1:QA:348:G:OP2	2.24	0.52
1:QA:410:G:H2'	1:QA:429:U:C4	2.45	0.52
1:QA:737:A:H2'	1:QA:738:C:C6	2.45	0.52
1:QA:793:U:O2	1:QA:1516:G:H4'	2.10	0.52
1:QA:1065:U:H5	1:QA:1190:G:H1'	1.75	0.52
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.52
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.09	0.52
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.10	0.52
19:QS:68:GLY:CA	47:R4:68:ARG:CB	2.82	0.52
22:RA:395:U:H2'	22:RA:396:G:N7	2.24	0.52
22:RA:769:G:H5'	22:RA:1379:A:N6	2.25	0.52
22:RA:1011:G:C2	22:RA:1151:G:C2	2.98	0.52
22:RA:2150:U:H2'	22:RA:2151:G:C8	2.45	0.52
22:RA:2562:U:H1'	31:RO:23:ARG:NH1	2.25	0.52
24:RD:174:ILE:N	24:RD:174:ILE:CD1	2.73	0.52
25:RE:54:GLN:NE2	25:RE:54:GLN:H	2.08	0.52
25:RE:93:VAL:C	25:RE:95:ILE:H	2.17	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:108:LYS:O	26:RF:112:MET:HG3	2.10	0.52
28:RH:24:VAL:O	28:RH:24:VAL:HG23	2.10	0.52
31:RO:23:ARG:O	31:RO:39:ILE:HB	2.10	0.52
34:RR:41:ALA:O	34:RR:43:GLU:N	2.43	0.52
39:RW:28:SER:HB3	39:RW:31:GLU:HB2	1.91	0.52
49:R6:30:THR:O	49:R6:30:THR:HG23	2.09	0.52
1:XA:827:U:H5	1:XA:870:U:C4	2.28	0.52
1:XA:1224:G:O2'	1:XA:1225:A:P	2.68	0.52
1:XA:1342:C:H4'	9:XI:125:TYR:HB3	1.92	0.52
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.45	0.52
1:XA:1446:A:C2	36:YT:118:ARG:HD2	2.45	0.52
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.52
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.52
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.52
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.52
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.52
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.10	0.52
22:YA:77:C:O3'	45:Y2:14:ARG:NH2	2.43	0.52
22:YA:484:C:OP1	41:YY:51:VAL:HG11	2.10	0.52
22:YA:830:G:H22	22:YA:2446:G:H5'	1.75	0.52
22:YA:855:G:C6	22:YA:856:C:C4	2.97	0.52
22:YA:2028:U:H2'	22:YA:2029:G:C8	2.45	0.52
24:YD:35:LYS:HG2	24:YD:64:ILE:HG22	1.92	0.52
24:YD:165:ILE:C	24:YD:166:GLN:HE21	2.18	0.52
31:YO:16:ALA:HA	31:YO:46:ALA:HB2	1.92	0.52
37:YU:59:ARG:O	37:YU:63:VAL:HG23	2.10	0.52
37:YU:91:ASP:O	37:YU:92:ARG:C	2.52	0.52
37:YU:104:GLN:CD	37:YU:104:GLN:H	2.16	0.52
37:YU:107:ALA:O	37:YU:111:GLU:OE1	2.28	0.52
41:YY:56:PRO:O	41:YY:57:GLN:C	2.53	0.52
44:Y1:91:LYS:HE3	44:Y1:91:LYS:CA	2.40	0.52
47:Y4:14:ILE:O	47:Y4:14:ILE:HG23	2.10	0.52
47:Y4:23:GLU:C	47:Y4:24:THR:HG1	2.18	0.52
47:Y4:68:ARG:HD3	47:Y4:69:LYS:HG2	1.92	0.52
1:QA:757:U:H2'	1:QA:758:G:O4'	2.11	0.51
1:QA:801:U:H2'	1:QA:802:A:C8	2.46	0.51
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.51
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.51
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.51
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
22:RA:1248:G:C4	37:RU:3:ARG:HG3	2.45	0.51
22:RA:1826:G:H2'	22:RA:1827:C:H6	1.74	0.51
22:RA:2779:U:O2'	22:RA:2781:A:N7	2.43	0.51
25:RE:105:THR:HB	25:RE:197:ILE:HG12	1.92	0.51
28:RH:41:MET:HE1	28:RH:64:LEU:HB3	1.91	0.51
28:RH:55:PRO:HG2	28:RH:61:HIS:ND1	2.26	0.51
30:RN:12:ARG:NH1	30:RN:50:ASP:OD1	2.43	0.51
30:RN:108:PRO:O	30:RN:113:GLY:HA3	2.10	0.51
31:RO:2:ILE:HD12	31:RO:2:ILE:N	2.24	0.51
32:RP:147:LEU:O	32:RP:148:LEU:CB	2.57	0.51
34:RR:52:ILE:CG2	34:RR:94:TYR:HD1	2.22	0.51
37:RU:59:ARG:O	37:RU:63:VAL:HG23	2.10	0.51
40:RX:65:ARG:H	40:RX:65:ARG:CD	2.23	0.51
41:RY:9:LYS:HG2	41:RY:9:LYS:O	2.10	0.51
43:R0:37:LEU:N	43:R0:59:LEU:O	2.39	0.51
47:R4:40:HIS:N	47:R4:41:PRO:CD	2.73	0.51
48:R5:20:ARG:C	48:R5:22:HIS:N	2.68	0.51
48:R5:40:LYS:HD3	48:R5:46:CYS:SG	2.50	0.51
49:R6:27:LYS:HB2	49:R6:27:LYS:HZ3	1.73	0.51
1:XA:1301:U:H3'	1:XA:1302:U:H5'	1.92	0.51
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	0.51
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.51
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.51
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.35	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
13:XM:121:LYS:CE	55:XY:40:G:OP1	2.57	0.51
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.51
22:YA:30:G:H2'	22:YA:31:C:C6	2.44	0.51
22:YA:685:A:OP1	50:Y7:11:LYS:NZ	2.36	0.51
22:YA:1434:A:H61	22:YA:1558:A:H62	1.57	0.51
22:YA:2395:C:O2'	44:Y1:30:VAL:HG12	2.10	0.51
22:YA:2401:U:H2'	22:YA:2402:C:H5"	1.92	0.51
22:YA:2794:C:N4	22:YA:2795:G:O6	2.43	0.51
28:YH:153:LYS:HG3	28:YH:161:GLY:HA2	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:67:ARG:HB2	35:YS:67:ARG:HH11	1.65	0.51
35:YS:106:ARG:HA	35:YS:110:LEU:CG	2.39	0.51
40:YX:52:VAL:HG12	40:YX:52:VAL:O	2.09	0.51
41:YY:74:PRO:O	41:YY:80:GLY:HA2	2.10	0.51
44:Y1:29:GLY:C	44:Y1:30:VAL:CG2	2.82	0.51
51:Y8:43:GLN:C	51:Y8:44:LYS:HD2	2.35	0.51
1:QA:958:A:C8	19:QS:55:LYS:HD2	2.44	0.51
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.44	0.51
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.10	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.93	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
22:RA:531:C:H4'	22:RA:532:A:H5"	1.93	0.51
22:RA:1889:A:O2'	22:RA:2087:G:H5'	2.10	0.51
22:RA:2001:A:H5"	22:RA:2689:U:O2'	2.10	0.51
22:RA:2291:U:H2'	22:RA:2292:C:C6	2.45	0.51
24:RD:205:VAL:O	24:RD:206:LEU:C	2.52	0.51
26:RF:196:LEU:C	26:RF:197:ASP:O	2.50	0.51
27:RG:97:ASP:O	27:RG:101:ILE:HG23	2.10	0.51
28:RH:126:PRO:HD2	28:RH:127:GLU:N	2.25	0.51
30:RN:16:ILE:HG22	30:RN:17:ASP:N	2.26	0.51
31:RO:43:VAL:HG23	31:RO:56:ASP:O	2.10	0.51
36:RT:20:PRO:HD2	36:RT:86:ILE:HG23	1.92	0.51
36:RT:42:ILE:HD12	36:RT:42:ILE:N	2.25	0.51
37:RU:8:VAL:O	37:RU:9:VAL:C	2.53	0.51
40:RX:47:PHE:N	40:RX:47:PHE:CD1	2.78	0.51
40:RX:52:VAL:O	40:RX:52:VAL:HG12	2.09	0.51
43:R0:68:GLU:HG2	43:R0:80:HIS:HB2	1.92	0.51
44:R1:4:VAL:HG22	44:R1:5:CYS:N	2.25	0.51
46:R3:17:LYS:HA	46:R3:20:LYS:HD2	1.93	0.51
47:R4:14:ILE:HG23	47:R4:14:ILE:O	2.10	0.51
47:R4:36:CYS:O	47:R4:39:CYS:CB	2.55	0.51
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.25	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.41	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
22:YA:1161:C:O2'	38:YV:8:GLY:HA2	2.11	0.51
22:YA:1344:G:H4'	22:YA:1384:A:N7	2.25	0.51
22:YA:1657:C:H2'	22:YA:1658:C:H6	1.75	0.51
22:YA:1957:C:H2'	22:YA:1958:C:C6	2.45	0.51
24:YD:67:PHE:CE1	24:YD:157:ARG:NH2	2.79	0.51
24:YD:205:VAL:O	24:YD:206:LEU:C	2.52	0.51
24:YD:221:VAL:HG22	24:YD:226:MET:HE2	1.91	0.51
25:YE:203:LYS:HE3	25:YE:204:ALA:CB	2.40	0.51
26:YF:125:LEU:HA	26:YF:194:MET:O	2.10	0.51
30:YN:94:HIS:O	30:YN:95:PRO:O	2.27	0.51
30:YN:120:LEU:CD1	30:YN:122:VAL:HG23	2.38	0.51
31:YO:23:ARG:O	31:YO:39:ILE:HB	2.09	0.51
33:YQ:119:ARG:HG2	33:YQ:119:ARG:NH1	2.20	0.51
35:YS:89:ARG:HG2	35:YS:89:ARG:HH11	1.75	0.51
45:Y2:15:LYS:H	45:Y2:67:LYS:HE2	1.73	0.51
49:Y6:34:LEU:HD23	49:Y6:36:LEU:HD22	1.93	0.51
51:Y8:52:LYS:N	51:Y8:53:PRO:HD2	2.21	0.51
1:QA:115:G:H4'	1:QA:116:A:O5'	2.10	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.10	0.51
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
15:QO:61:GLY:C	15:QO:65:ARG:NH1	2.67	0.51
20:QT:83:ARG:O	20:QT:86:ARG:HB3	2.10	0.51
22:RA:140:A:C6	22:RA:141:A:N6	2.78	0.51
22:RA:307:G:N1	22:RA:310:A:OP2	2.43	0.51
22:RA:2114:A:N6	22:RA:2119:A:H62	2.07	0.51
23:RB:48:A:H4'	35:RS:95:HIS:HD2	1.75	0.51
23:RB:75:G:O3'	42:RZ:10:ARG:NH1	2.41	0.51
25:RE:105:THR:HG23	25:RE:166:THR:OG1	2.10	0.51
31:RO:24:VAL:HG21	31:RO:32:TYR:O	2.10	0.51
32:RP:112:LEU:HD11	32:RP:114:ILE:CG2	2.40	0.51
32:RP:112:LEU:HD22	32:RP:113:LYS:N	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:87:PHE:O	35:RS:88:ASP:O	2.28	0.51
36:RT:99:LEU:HB2	36:RT:101:PHE:CE1	2.45	0.51
38:RV:29:PRO:O	38:RV:61:VAL:O	2.29	0.51
41:RY:61:ILE:HG23	41:RY:62:GLU:N	2.24	0.51
44:R1:8:SER:HB3	44:R1:66:HIS:CE1	2.46	0.51
44:R1:60:PHE:HE2	44:R1:91:LYS:HZ1	1.57	0.51
1:XA:166:G:H2'	1:XA:167:G:H8	1.76	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
3:XC:124:ILE:C	3:XC:126:ARG:H	2.19	0.51
4:XD:83:SER:HA	4:XD:89:THR:HG23	1.92	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
12:XL:24:VAL:O	12:XL:24:VAL:CG1	2.58	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
22:YA:99:U:H1'	22:YA:102:G:C6	2.44	0.51
22:YA:2504:U:O5'	22:YA:2504:U:H6	1.94	0.51
24:YD:30:GLU:HG3	24:YD:63:ARG:NH2	2.26	0.51
24:YD:35:LYS:HD2	24:YD:104:TYR:CD1	2.45	0.51
25:YE:55:ASN:C	25:YE:57:LYS:N	2.62	0.51
27:YG:37:VAL:HG22	27:YG:159:VAL:CA	2.34	0.51
27:YG:97:ASP:O	27:YG:101:ILE:HG23	2.10	0.51
30:YN:134:ARG:O	30:YN:136:GLU:N	2.43	0.51
31:YO:14:THR:HG21	31:YO:86:ILE:HD13	1.91	0.51
32:YP:112:LEU:HD22	32:YP:113:LYS:H	1.75	0.51
36:YT:111:ARG:O	36:YT:112:ARG:CG	2.55	0.51
38:YV:14:VAL:HA	38:YV:18:LEU:HD12	1.93	0.51
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.46	0.51
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.45	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
6:QF:63:TYR:HD2	6:QF:63:TYR:N	2.09	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
22:RA:817:C:H2'	22:RA:818:G:H8	1.75	0.51
22:RA:1335:U:OP2	40:RX:65:ARG:NH2	2.43	0.51
22:RA:1386:C:H2'	22:RA:1387:C:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2563:U:H4'	31:RO:28:SER:HA	1.91	0.51
26:RF:162:LEU:HD23	26:RF:165:ARG:NH2	2.25	0.51
28:RH:89:ILE:O	28:RH:89:ILE:CG1	2.57	0.51
29:RI:94:ALA:H	29:RI:116:LEU:HD13	1.75	0.51
31:RO:79:PHE:CD2	36:RT:72:VAL:HG22	2.45	0.51
32:RP:112:LEU:HD22	32:RP:113:LYS:H	1.74	0.51
33:RQ:25:ASP:HA	33:RQ:100:GLY:O	2.11	0.51
33:RQ:64:ILE:HA	33:RQ:106:VAL:CG1	2.33	0.51
34:RR:28:LEU:CD2	34:RR:114:VAL:HG12	2.41	0.51
36:RT:57:PHE:O	36:RT:58:ASN:C	2.53	0.51
45:R2:15:LYS:H	45:R2:67:LYS:HE2	1.73	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
13:XM:65:LYS:CE	47:Y4:50:VAL:CG1	2.82	0.51
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.51
16:XP:13:HIS:C	16:XP:15:PRO:HD3	2.36	0.51
18:XR:64:ARG:O	18:XR:66:LEU:N	2.43	0.51
22:YA:2126:A:H4'	22:YA:2127:G:O5'	2.11	0.51
22:YA:2485:G:OP1	33:YQ:46:GLN:NE2	2.31	0.51
22:YA:2822:G:H2'	22:YA:2823:A:H5"	1.91	0.51
25:YE:20:ALA:C	25:YE:21:VAL:HG13	2.35	0.51
26:YF:65:TRP:HZ2	26:YF:72:ARG:NH2	2.09	0.51
27:YG:44:GLY:CA	27:YG:88:ILE:HD11	2.40	0.51
31:YO:4:PRO:O	31:YO:5:GLN:CB	2.58	0.51
39:YW:14:PRO:O	39:YW:17:VAL:N	2.42	0.51
41:YY:88:LYS:HZ2	41:YY:88:LYS:HA	1.72	0.51
48:Y5:40:LYS:HD3	48:Y5:46:CYS:SG	2.50	0.51
1:QA:1348:U:C4	1:QA:1374:A:H2	2.28	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
7:QG:140:ASP:C	7:QG:142:GLU:N	2.69	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
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51
22:RA:99:U:H4'	22:RA:101:G:O5'	2.10	0.51
22:RA:1078:U:O2'	22:RA:1079:C:OP2	2.23	0.51
22:RA:2054:A:H5"	22:RA:2055:C:O5'	2.11	0.51
22:RA:2311:A:O2'	22:RA:2312:U:O4'	2.24	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2335:A:O2'	22:RA:2336:A:H2'	2.11	0.51
22:RA:2795:G:H3'	22:RA:2797:U:C5'	2.41	0.51
23:RB:44:G:C2	23:RB:48:A:C2	2.98	0.51
26:RF:32:LEU:O	26:RF:36:VAL:HG23	2.11	0.51
26:RF:127:GLU:O	26:RF:129:PHE:N	2.40	0.51
27:RG:114:ILE:CG2	27:RG:115:ARG:N	2.73	0.51
34:RR:56:LYS:C	34:RR:58:GLY:H	2.18	0.51
34:RR:117:VAL:CG2	34:RR:118:GLU:N	2.74	0.51
38:RV:38:LEU:HD13	38:RV:55:ALA:HB3	1.91	0.51
39:RW:25:ARG:HB2	39:RW:25:ARG:HH11	1.74	0.51
41:RY:75:ILE:CG1	41:RY:76:CYS:N	2.73	0.51
41:RY:95:LYS:O	41:RY:96:ILE:O	2.28	0.51
46:R3:49:LYS:O	46:R3:49:LYS:HG2	2.10	0.51
1:XA:411:A:C4	1:XA:413:G:H1'	2.46	0.51
1:XA:701:C:H1'	1:XA:703:G:C4	2.46	0.51
1:XA:769:G:H4'	1:XA:1513:A:H4'	1.91	0.51
1:XA:1239:A:H62	1:XA:1299:A:N6	2.09	0.51
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
9:XI:112:LYS:HD3	9:XI:112:LYS:C	2.35	0.51
22:YA:443:A:H1'	22:YA:1201:C:O4'	2.10	0.51
22:YA:1291:C:H5'	22:YA:1536:A:H5'	1.91	0.51
22:YA:2308:G:H2'	22:YA:2308:G:N3	2.24	0.51
22:YA:2600:A:N7	24:YD:237:GLU:OE2	2.44	0.51
24:YD:134:ARG:HB2	24:YD:135:PHE:HD2	1.75	0.51
25:YE:51:PHE:CD1	25:YE:52:LEU:N	2.76	0.51
25:YE:95:ILE:H	25:YE:95:ILE:CD1	2.19	0.51
28:YH:41:MET:HE1	28:YH:64:LEU:HB3	1.91	0.51
29:YI:47:LEU:O	29:YI:51:ILE:N	2.39	0.51
30:YN:12:ARG:NH1	30:YN:50:ASP:OD2	2.40	0.51
32:YP:101:VAL:HA	32:YP:105:LEU:O	2.10	0.51
32:YP:112:LEU:HD11	32:YP:114:ILE:CG2	2.40	0.51
34:YR:56:LYS:C	34:YR:58:GLY:H	2.18	0.51
36:YT:14:TYR:H	36:YT:14:TYR:HD1	1.56	0.51
38:YV:2:PHE:CD1	38:YV:2:PHE:C	2.88	0.51
53:XV:58:A:O2'	53:XV:60:U:OP2	2.16	0.51
1:QA:731:G:OP1	1:QA:766:A:H1'	2.10	0.51
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.26	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.26	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	0.51
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.51
19:QS:15:LEU:HD23	19:QS:15:LEU:H	1.75	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
22:RA:49:A:N7	22:RA:120:U:H5	2.09	0.51
22:RA:85:G:C5	22:RA:98:G:C2	2.99	0.51
22:RA:704:G:H2'	22:RA:726:G:N2	2.26	0.51
22:RA:760:G:H2'	22:RA:761:A:O4'	2.11	0.51
22:RA:806:C:OP2	32:RP:41:ARG:NE	2.39	0.51
22:RA:922:U:H2'	22:RA:923:C:C6	2.46	0.51
24:RD:221:VAL:HG22	24:RD:226:MET:HE2	1.91	0.51
25:RE:47:VAL:O	25:RE:48:GLN:C	2.51	0.51
25:RE:119:ARG:HD3	25:RE:160:TYR:HB2	1.92	0.51
27:RG:44:GLY:CA	27:RG:88:ILE:HD11	2.40	0.51
27:RG:95:ARG:O	27:RG:96:ARG:C	2.54	0.51
36:RT:34:VAL:CG1	36:RT:36:GLU:HG2	2.39	0.51
36:RT:36:GLU:O	36:RT:37:GLY:C	2.53	0.51
38:RV:5:VAL:HG22	38:RV:14:VAL:HG22	1.93	0.51
39:RW:7:ALA:HB2	39:RW:50:VAL:CG2	2.40	0.51
39:RW:9:TYR:CD2	39:RW:102:HIS:HE1	2.28	0.51
47:R4:12:ALA:HB1	47:R4:30:GLU:H	1.76	0.51
50:R7:36:GLN:HG2	50:R7:36:GLN:O	2.09	0.51
1:XA:392:G:H2'	1:XA:393:A:C8	2.45	0.51
1:XA:1329:A:P	13:XM:28:ALA:HB3	2.51	0.51
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.51
5:XE:10:MET:HE2	5:XE:13:ILE:CD1	2.41	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.93	0.51
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.51
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
14:XN:36:PHE:CD1	14:XN:36:PHE:C	2.88	0.51
14:XN:44:LEU:O	14:XN:48:ALA:N	2.41	0.51
19:XS:65:ASN:N	47:Y4:55:ARG:NH1	2.59	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
22:YA:2862:G:H2'	22:YA:2863:C:C6	2.46	0.51
28:YH:55:PRO:HG2	28:YH:61:HIS:ND1	2.26	0.51
36:YT:14:TYR:N	36:YT:14:TYR:CD1	2.77	0.51
37:YU:8:VAL:O	37:YU:9:VAL:C	2.53	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:36:LYS:HA	40:YX:39:ILE:HD12	1.91	0.51
40:YX:65:ARG:H	40:YX:65:ARG:CD	2.23	0.51
43:Y0:53:MET:HB3	43:Y0:59:LEU:HD23	1.91	0.51
47:Y4:42:PHE:O	47:Y4:44:THR:N	2.44	0.51
51:Y8:29:LYS:HB2	51:Y8:44:LYS:HG2	1.91	0.51
53:QV:34:C:N4	54:QX:3:G:N1	2.50	0.51
1:QA:940:C:H2'	1:QA:941:G:C8	2.46	0.51
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.46	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
2:QB:187:LEU:HD13	2:QB:187:LEU:O	2.11	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	0.51
5:QE:10:MET:HE2	5:QE:13:ILE:CD1	2.41	0.51
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.51
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.51
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.51
22:RA:443:A:N7	26:RF:45:ARG:HD2	2.26	0.51
22:RA:1462:C:H4'	22:RA:2703:C:H5'	1.93	0.51
22:RA:2529:G:H5"	22:RA:2530:A:H5"	1.93	0.51
22:RA:2892:A:H2'	22:RA:2893:G:O4'	2.11	0.51
23:RB:11:C:H3'	23:RB:12:C:C6	2.46	0.51
24:RD:67:PHE:CE1	24:RD:157:ARG:NH2	2.79	0.51
24:RD:76:PRO:HA	24:RD:118:VAL:HG23	1.93	0.51
26:RF:132:VAL:O	26:RF:133:ASN:C	2.52	0.51
30:RN:6:PRO:HG2	30:RN:43:THR:OG1	2.11	0.51
30:RN:26:LEU:HG	30:RN:30:ILE:HD11	1.93	0.51
30:RN:131:GLN:CG	30:RN:132:ALA:H	2.20	0.51
30:RN:134:ARG:O	30:RN:136:GLU:N	2.43	0.51
31:RO:15:GLY:O	31:RO:46:ALA:HB1	2.10	0.51
31:RO:113:LYS:O	31:RO:116:SER:HB3	2.11	0.51
34:RR:85:PRO:C	34:RR:87:TYR:H	2.19	0.51
40:RX:5:TYR:CE2	45:R2:30:ARG:HG3	2.45	0.51
44:R1:87:PRO:O	44:R1:91:LYS:HB2	2.11	0.51
44:R1:94:LEU:O	44:R1:95:LEU:HG	2.11	0.51
49:R6:9:LEU:HB3	49:R6:26:ASN:O	2.11	0.51
1:XA:1118:C:OP1	9:XI:104:ARG:NH1	2.43	0.51
1:XA:1176:A:H2'	1:XA:1177:G:H5'	1.93	0.51
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.51
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
22:YA:1059:G:H3'	22:YA:1060:U:H5"	1.91	0.51
22:YA:1350:C:N3	22:YA:1382:G:N2	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1443:G:N2	22:YA:1549:C:C2	2.78	0.51
22:YA:1517:G:H2'	22:YA:1518:C:C6	2.46	0.51
22:YA:2441:C:OP2	22:YA:2586:C:O2'	2.27	0.51
22:YA:2751:G:H8	22:YA:2751:G:P	2.33	0.51
24:YD:28:GLU:OE1	24:YD:29:PRO:HD2	2.11	0.51
24:YD:117:VAL:CG2	24:YD:128:GLY:C	2.84	0.51
27:YG:114:ILE:CG2	27:YG:115:ARG:N	2.73	0.51
29:YI:133:HIS:HB2	29:YI:134:PRO:HD2	1.92	0.51
30:YN:57:ALA:O	30:YN:58:ASP:HB3	2.09	0.51
30:YN:108:PRO:O	30:YN:113:GLY:HA3	2.10	0.51
32:YP:95:VAL:HG13	32:YP:100:LEU:CD2	2.41	0.51
39:YW:70:TYR:HD2	39:YW:70:TYR:N	2.06	0.51
51:Y8:40:GLU:C	51:Y8:42:ARG:N	2.68	0.51
52:Y9:1:MET:HE2	52:Y9:10:ILE:HD13	1.92	0.51
53:XV:4:G:HO2'	53:XV:5:G:H8	1.58	0.51
1:QA:983:A:N1	1:QA:1222:G:N2	2.59	0.51
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.46	0.51
1:QA:1080:A:H5"	5:QE:16:THR:CG2	2.40	0.51
1:QA:1149:C:OP1	9:QI:9:ARG:NH2	2.44	0.51
1:QA:1327:C:H2'	1:QA:1328:C:H6	1.75	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
3:QC:124:ILE:C	3:QC:126:ARG:H	2.19	0.51
4:QD:112:VAL:HG12	4:QD:116:GLN:OE1	2.11	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.10	0.51
8:QH:10:LEU:N	8:QH:10:LEU:CD2	2.70	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.45	0.51
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.10	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.59	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
22:RA:1312:U:H4'	22:RA:1313:U:O5'	2.10	0.51
22:RA:1936:A:H4'	22:RA:1937:A:O5'	2.10	0.51
22:RA:2122:U:H2'	22:RA:2123:G:H8	1.75	0.51
22:RA:2219:G:OP1	24:RD:172:TYR:OH	2.20	0.51
22:RA:2351:G:H8	22:RA:2351:G:O5'	1.93	0.51
27:RG:51:ARG:HH11	27:RG:51:ARG:HB3	1.76	0.51
31:RO:16:ALA:HA	31:RO:46:ALA:HB2	1.92	0.51
36:RT:111:ARG:C	36:RT:113:LYS:N	2.64	0.51
51:R8:10:ALA:O	51:R8:14:VAL:HG12	2.11	0.51
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.29	0.51
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.10	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.51
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
9:XI:128:ARG:HH21	53:XV:35:A:P	2.33	0.51
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.76	0.51
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
22:YA:530:G:C5	22:YA:2022:U:H5"	2.46	0.51
22:YA:2562:U:H2'	22:YA:2563:U:O4'	2.10	0.51
22:YA:2681:C:O2'	22:YA:2682:U:OP2	2.27	0.51
24:YD:210:GLY:O	24:YD:213:ARG:N	2.43	0.51
25:YE:37:ARG:HE	25:YE:37:ARG:N	2.09	0.51
27:YG:51:ARG:HH11	27:YG:51:ARG:HB3	1.76	0.51
27:YG:109:VAL:O	27:YG:113:ARG:HG3	2.10	0.51
28:YH:19:VAL:HG13	28:YH:43:VAL:CG2	2.41	0.51
28:YH:72:ILE:O	28:YH:75:ALA:HB3	2.11	0.51
30:YN:78:TYR:N	30:YN:78:TYR:HD1	2.07	0.51
31:YO:24:VAL:HG21	31:YO:32:TYR:O	2.11	0.51
32:YP:12:ALA:C	32:YP:14:LYS:H	2.16	0.51
33:YQ:7:MET:HE1	33:YQ:73:PRO:HG3	1.91	0.51
34:YR:118:GLU:OXT	34:YR:118:GLU:HG3	2.11	0.51
35:YS:87:PHE:O	35:YS:88:ASP:O	2.28	0.51
37:YU:98:LEU:HD23	37:YU:98:LEU:C	2.36	0.51
38:YV:41:GLY:N	38:YV:46:VAL:HG13	2.26	0.51
40:YX:5:TYR:CE2	45:Y2:30:ARG:HG3	2.45	0.51
40:YX:47:PHE:CD1	40:YX:47:PHE:N	2.78	0.51
47:Y4:54:GLY:HA2	47:Y4:57:GLU:HG2	1.92	0.51
48:Y5:54:GLY:O	48:Y5:55:ARG:C	2.54	0.51
49:Y6:20:ASN:O	49:Y6:21:TYR:CB	2.59	0.51
1:QA:271:C:H2'	1:QA:272:C:H6	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:411:A:C4	1:QA:413:G:H1'	2.45	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
13:QM:87:TYR:C	13:QM:89:GLY:H	2.18	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.76	0.51
22:RA:227:A:O2'	22:RA:228:A:OP2	2.20	0.51
22:RA:271(C):U:O2'	22:RA:271:G:OP1	2.27	0.51
22:RA:1012:U:O2	30:RN:25:ARG:NH1	2.44	0.51
22:RA:2633:G:C6	22:RA:2634:G:C5	2.99	0.51
22:RA:2867:G:O2'	22:RA:2868:A:C8	2.63	0.51
25:RE:20:ALA:C	25:RE:21:VAL:HG13	2.36	0.51
26:RF:65:TRP:HZ2	26:RF:72:ARG:NH2	2.08	0.51
30:RN:112:LEU:HD23	30:RN:113:GLY:N	2.26	0.51
31:RO:2:ILE:CD1	31:RO:82:ASN:HD22	2.14	0.51
33:RQ:36:ALA:HB1	33:RQ:127:ILE:HD12	1.93	0.51
35:RS:89:ARG:HD2	35:RS:89:ARG:O	2.11	0.51
45:R2:36:ARG:O	45:R2:40:SER:HB2	2.10	0.51
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.74	0.51
1:XA:407:G:H2'	1:XA:408:A:C8	2.45	0.51
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.10	0.51
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.11	0.51
1:XA:1347:G:N7	9:XI:11:LYS:NZ	2.58	0.51
1:XA:1484:C:H2'	1:XA:1485:U:C6	2.46	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.51
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	0.51
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.51
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.51
13:XM:65:LYS:HZ1	47:Y4:52:THR:CG2	2.22	0.51
13:XM:65:LYS:H	47:Y4:50:VAL:CG2	2.24	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.51
22:YA:950:G:C6	22:YA:951:C:C4	2.99	0.51
22:YA:1021:A:H8	22:YA:1021:A:H3'	1.76	0.51
22:YA:1952:A:C2	31:YO:22:ILE:HG23	2.45	0.51
25:YE:54:GLN:NE2	25:YE:54:GLN:H	2.08	0.51
31:YO:23:ARG:HH11	31:YO:23:ARG:HG2	1.76	0.51
31:YO:24:VAL:O	31:YO:24:VAL:HG13	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:49:ARG:HE	51:Y8:59:LYS:HG2	1.76	0.51
33:YQ:58:PHE:HD1	33:YQ:58:PHE:O	1.94	0.51
33:YQ:83:MET:HB2	43:Y0:7:LEU:HD22	1.93	0.51
39:YW:48:ALA:O	39:YW:49:LYS:C	2.53	0.51
47:Y4:12:ALA:HB1	47:Y4:30:GLU:H	1.76	0.51
48:Y5:20:ARG:C	48:Y5:22:HIS:N	2.68	0.51
48:Y5:36:CYS:C	48:Y5:38:ALA:H	2.19	0.51
1:QA:321:A:H2'	1:QA:322:C:H6	1.75	0.51
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.43	0.51
1:QA:939:G:H1	1:QA:1344:C:N4	2.06	0.51
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.51
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.51
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.51
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.76	0.51
22:RA:55:G:H2'	22:RA:56:A:H8	1.76	0.51
22:RA:78:A:H2'	22:RA:79:G:C8	2.45	0.51
22:RA:580:C:H2'	22:RA:581:C:H6	1.74	0.51
22:RA:583:G:H5"	37:RU:10:ARG:HH12	1.74	0.51
22:RA:1693:U:O4	22:RA:1976:U:O2'	2.23	0.51
22:RA:2224:G:O2'	22:RA:2225:A:O4'	2.26	0.51
22:RA:2655:G:N2	22:RA:2665:A:OP2	2.43	0.51
24:RD:117:VAL:CG2	24:RD:128:GLY:C	2.84	0.51
25:RE:37:ARG:HE	25:RE:37:ARG:N	2.09	0.51
26:RF:127:GLU:OE1	26:RF:127:GLU:HA	2.07	0.51
28:RH:131:VAL:CG1	28:RH:132:ARG:N	2.74	0.51
31:RO:20:MET:HG2	31:RO:21:CYS:O	2.11	0.51
31:RO:23:ARG:HH11	31:RO:23:ARG:HG2	1.76	0.51
31:RO:35:VAL:O	31:RO:35:VAL:HG23	2.11	0.51
36:RT:57:PHE:CG	36:RT:58:ASN:N	2.79	0.51
41:RY:2:ARG:HG2	41:RY:2:ARG:NH1	2.22	0.51
41:RY:56:PRO:O	41:RY:57:GLN:C	2.53	0.51
47:R4:42:PHE:O	47:R4:44:THR:N	2.44	0.51
51:R8:61:LEU:O	51:R8:62:LEU:CB	2.57	0.51
1:XA:56:U:H2'	1:XA:57:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:130:A:N3	1:XA:263:A:O2'	2.37	0.51
1:XA:337:C:H2'	1:XA:338:A:H8	1.76	0.51
1:XA:355:C:H1'	1:XA:388:G:H2'	1.92	0.51
1:XA:909:A:H2'	1:XA:910:C:O4'	2.11	0.51
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.51
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.51
22:YA:554:U:H2'	22:YA:556:G:C8	2.45	0.51
22:YA:1200:C:H1'	37:YU:2:PRO:HG2	1.91	0.51
22:YA:1221:C:OP1	38:YV:68:LYS:HE2	2.10	0.51
22:YA:1794:U:H2'	22:YA:1795:C:C6	2.44	0.51
22:YA:1871:A:H2'	22:YA:1872:A:C8	2.46	0.51
22:YA:2055:C:H4'	22:YA:2056:G:H5"	1.93	0.51
22:YA:2335:A:HO2'	22:YA:2336:A:C5'	2.24	0.51
22:YA:2552:U:C2	22:YA:2554:U:H5"	2.46	0.51
24:YD:10:THR:CG2	24:YD:13:ARG:HB3	2.35	0.51
29:YI:9:LEU:O	29:YI:10:GLU:HG3	2.11	0.51
30:YN:16:ILE:HG22	30:YN:17:ASP:N	2.25	0.51
30:YN:118:LYS:O	30:YN:120:LEU:N	2.43	0.51
31:YO:113:LYS:O	31:YO:116:SER:HB3	2.11	0.51
33:YQ:25:ASP:HA	33:YQ:100:GLY:O	2.11	0.51
33:YQ:133:ARG:HG2	33:YQ:134:ARG:N	2.26	0.51
36:YT:51:ARG:HG3	36:YT:98:LYS:HG3	1.93	0.51
45:Y2:36:ARG:O	45:Y2:40:SER:HB2	2.10	0.51
46:Y3:56:VAL:CG1	46:Y3:57:GLU:N	2.74	0.51
53:XV:68:C:H2'	53:XV:69:C:H6	1.76	0.51
1:QA:173:U:H5"	1:QA:197:A:O4'	2.11	0.50
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.50
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
15:QO:76:GLU:C	15:QO:78:TYR:N	2.69	0.50
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
22:RA:307:G:H21	22:RA:330:A:N6	2.08	0.50
22:RA:807:U:H2'	22:RA:808:G:H8	1.76	0.50
22:RA:1779:U:OP2	22:RA:1784:A:N6	2.35	0.50
22:RA:2469:A:H5"	22:RA:2470:G:H8	1.75	0.50
22:RA:2507:C:H2'	22:RA:2508:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:121:ASN:C	27:RG:123:ASN:H	2.19	0.50
28:RH:72:ILE:O	28:RH:75:ALA:HB3	2.11	0.50
30:RN:7:LYS:HD3	30:RN:9:VAL:N	2.25	0.50
32:RP:101:VAL:HA	32:RP:105:LEU:O	2.10	0.50
33:RQ:23:GLY:O	33:RQ:24:GLY:C	2.54	0.50
35:RS:56:LEU:O	35:RS:57:LYS:C	2.53	0.50
38:RV:14:VAL:HA	38:RV:18:LEU:HD12	1.92	0.50
38:RV:35:LEU:CD2	38:RV:57:VAL:HG22	2.32	0.50
41:RY:46:LYS:HE3	41:RY:63:LYS:HB3	1.94	0.50
42:RZ:97:GLU:HB3	42:RZ:125:LEU:HD11	1.93	0.50
43:R0:40:GLN:NE2	43:R0:59:LEU:HD21	2.26	0.50
48:R5:36:CYS:C	48:R5:38:ALA:H	2.19	0.50
1:XA:376:G:OP1	16:XP:5:ARG:HB2	2.11	0.50
1:XA:1226:C:O2'	13:XM:111:LYS:NZ	2.40	0.50
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
5:XE:126:ARG:HH11	5:XE:126:ARG:CG	2.21	0.50
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.50
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.50
22:YA:357:A:H2'	22:YA:358:U:C6	2.46	0.50
22:YA:1062:G:H2'	22:YA:1063:G:H8	1.74	0.50
22:YA:1398:C:OP1	40:YX:53:LYS:NZ	2.45	0.50
22:YA:2478:A:OP1	52:Y9:31:LYS:HD3	2.10	0.50
22:YA:2712:U:C5	22:YA:2713:A:H5"	2.46	0.50
25:YE:116:VAL:HG22	25:YE:122:PHE:HB2	1.91	0.50
26:YF:108:LYS:HA	26:YF:108:LYS:NZ	2.27	0.50
27:YG:95:ARG:O	27:YG:96:ARG:C	2.54	0.50
28:YH:4:ILE:O	28:YH:6:ARG:N	2.43	0.50
28:YH:103:LEU:CD1	28:YH:131:VAL:HG21	2.41	0.50
28:YH:126:PRO:HD2	28:YH:127:GLU:N	2.25	0.50
30:YN:26:LEU:HG	30:YN:30:ILE:HD11	1.93	0.50
32:YP:62:LEU:CD2	32:YP:62:LEU:H	2.19	0.50
34:YR:92:GLY:N	34:YR:94:TYR:HE2	2.09	0.50
35:YS:26:LEU:CD2	35:YS:87:PHE:CD1	2.94	0.50
35:YS:74:ALA:O	35:YS:75:GLU:C	2.54	0.50
35:YS:95:HIS:CG	35:YS:96:GLY:N	2.77	0.50
41:YY:95:LYS:O	41:YY:96:ILE:O	2.28	0.50
42:YZ:72:ARG:HH22	42:YZ:97:GLU:C	2.18	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:85:LEU:HA	44:Y1:87:PRO:HD2	1.91	0.50
46:Y3:7:LYS:HE2	46:Y3:32:GLN:NE2	2.25	0.50
46:Y3:49:LYS:HG2	46:Y3:49:LYS:O	2.10	0.50
53:XV:15:G:H22	53:XV:48:C:H42	1.57	0.50
1:QA:224:C:H2'	1:QA:225:C:C6	2.45	0.50
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.50
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.50
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.50
22:RA:55:G:H2'	22:RA:56:A:C8	2.47	0.50
22:RA:195:A:OP1	32:RP:46:LYS:HE2	2.10	0.50
22:RA:247:G:N7	22:RA:249:C:C2	2.79	0.50
22:RA:336:C:H5"	41:RY:6:HIS:NE2	2.26	0.50
22:RA:2001:A:H4'	22:RA:2689:U:C2	2.46	0.50
22:RA:2773:C:H2'	22:RA:2774:C:C6	2.45	0.50
24:RD:30:GLU:HG3	24:RD:63:ARG:NH2	2.25	0.50
25:RE:37:ARG:HE	25:RE:37:ARG:H	1.59	0.50
25:RE:137:HIS:HB3	25:RE:138:PRO:CD	2.37	0.50
28:RH:153:LYS:HG3	28:RH:161:GLY:HA2	1.91	0.50
31:RO:47:ILE:CG1	31:RO:48:PRO:HD2	2.41	0.50
31:RO:107:ARG:CA	31:RO:112:MET:HE1	2.39	0.50
33:RQ:133:ARG:HG2	33:RQ:134:ARG:N	2.26	0.50
34:RR:1:MET:O	34:RR:2:ARG:CB	2.60	0.50
34:RR:70:LEU:O	34:RR:72:ASP:N	2.42	0.50
35:RS:35:ILE:CD1	35:RS:101:LEU:HD23	2.41	0.50
35:RS:89:ARG:O	35:RS:90:GLY:C	2.54	0.50
37:RU:112:ARG:HH11	37:RU:112:ARG:HG2	1.76	0.50
39:RW:88:ARG:HB3	39:RW:92:ARG:CB	2.41	0.50
41:RY:74:PRO:O	41:RY:80:GLY:HA2	2.10	0.50
44:R1:91:LYS:HE3	44:R1:91:LYS:CA	2.40	0.50
1:XA:1347:G:O2'	1:XA:1348:U:H6	1.94	0.50
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.11	0.50
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.50
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.50
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.50
22:YA:299:A:H1'	22:YA:322:A:N6	2.26	0.50
22:YA:724:U:H2'	22:YA:725:G:O4'	2.11	0.50
22:YA:1339:G:H21	22:YA:1603:A:H1'	1.76	0.50
24:YD:10:THR:HG23	24:YD:13:ARG:CB	2.34	0.50
25:YE:105:THR:HG23	25:YE:166:THR:OG1	2.10	0.50
30:YN:73:THR:HG22	30:YN:82:LEU:HD11	1.93	0.50
32:YP:114:ILE:HD13	32:YP:125:VAL:CG2	2.41	0.50
34:YR:3:HIS:C	34:YR:5:LYS:H	2.17	0.50
35:YS:86:ALA:O	35:YS:87:PHE:HB3	2.09	0.50
36:YT:57:PHE:CG	36:YT:58:ASN:N	2.79	0.50
37:YU:112:ARG:HG2	37:YU:112:ARG:HH11	1.76	0.50
38:YV:5:VAL:HG22	38:YV:14:VAL:HG22	1.93	0.50
41:YY:75:ILE:CG1	41:YY:76:CYS:N	2.73	0.50
47:Y4:1:MET:HE3	47:Y4:6:HIS:CD2	2.46	0.50
50:Y7:36:GLN:HG2	50:Y7:36:GLN:O	2.09	0.50
1:QA:1316:G:H22	1:QA:1319:A:C5'	2.22	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.50
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.50
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
22:RA:242:G:N2	22:RA:254:G:H2'	2.26	0.50
22:RA:251:A:C5	22:RA:252:G:H1'	2.46	0.50
22:RA:1351:C:H2'	22:RA:1352:U:C6	2.47	0.50
22:RA:1638:C:H4'	22:RA:2710:C:O2	2.11	0.50
22:RA:1660:C:H2'	22:RA:1661:G:C8	2.45	0.50
22:RA:1759:A:H4'	22:RA:2715:C:O4'	2.10	0.50
22:RA:2873:A:N3	34:RR:5:LYS:HA	2.26	0.50
23:RB:15:A:H1'	23:RB:109:G:N9	2.25	0.50
26:RF:45:ARG:CG	26:RF:45:ARG:NH1	2.71	0.50
27:RG:43:LEU:O	27:RG:88:ILE:HG12	2.12	0.50
27:RG:92:VAL:O	27:RG:92:VAL:HG13	2.12	0.50
36:RT:51:ARG:HG3	36:RT:98:LYS:HG3	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RY:44:ILE:CG1	41:RY:45:VAL:H	2.25	0.50
1:XA:224:C:H2'	1:XA:225:C:C6	2.47	0.50
1:XA:577:G:H1'	1:XA:816:A:C4	2.47	0.50
1:XA:662:G:H2'	1:XA:663:A:C8	2.46	0.50
1:XA:859:A:H2'	1:XA:860:A:C8	2.46	0.50
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.44	0.50
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.11	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.74	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
22:YA:957:A:N1	22:YA:2458:G:H4'	2.25	0.50
22:YA:1869:G:H5'	22:YA:1870:C:OP2	2.12	0.50
22:YA:2795:G:H3'	22:YA:2797:U:C5'	2.42	0.50
25:YE:129:HIS:O	25:YE:130:GLY:C	2.53	0.50
26:YF:32:LEU:O	26:YF:36:VAL:HG23	2.11	0.50
35:YS:83:LYS:HG2	35:YS:109:GLY:HA2	1.90	0.50
36:YT:20:PRO:HD2	36:YT:86:ILE:HG23	1.92	0.50
39:YW:22:ASP:HA	39:YW:25:ARG:HH12	1.75	0.50
42:YZ:101:PRO:HA	42:YZ:123:ASP:HB3	1.94	0.50
48:Y5:56:LYS:HD2	48:Y5:56:LYS:N	2.13	0.50
1:QA:481:G:O2'	1:QA:482:A:O5'	2.29	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.50
13:QM:119:GLY:CA	53:QV:29:G:OP1	2.52	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.76	0.50
22:RA:57:C:H2'	22:RA:58:G:O4'	2.11	0.50
22:RA:639:U:H2'	22:RA:640:C:C6	2.47	0.50
22:RA:753:C:O5'	22:RA:753:C:H6	1.94	0.50
22:RA:827:U:O2	22:RA:2246:G:H4'	2.12	0.50
22:RA:884:C:O2	22:RA:892:G:N1	2.43	0.50
22:RA:1204:A:O2'	22:RA:1205:U:O5'	2.29	0.50
22:RA:1754:C:H2'	22:RA:1755:A:C8	2.47	0.50
22:RA:2022:U:O2'	22:RA:2617:C:H5'	2.11	0.50
22:RA:2517:C:C2	22:RA:2542:A:N6	2.79	0.50
23:RB:80:U:O2'	23:RB:81:G:H5"	2.11	0.50
28:RH:169:VAL:HG13	28:RH:170:ARG:N	2.26	0.50
31:RO:24:VAL:O	31:RO:24:VAL:HG13	2.11	0.50
32:RP:95:VAL:HG13	32:RP:100:LEU:CD2	2.40	0.50
35:RS:26:LEU:CD2	35:RS:87:PHE:CD1	2.94	0.50
36:RT:54:ARG:HG2	36:RT:54:ARG:NH1	2.24	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:R5:37:LYS:O	48:R5:37:LYS:HD2	2.12	0.50
1:XA:1127:G:H2'	1:XA:1128:C:C6	2.47	0.50
1:XA:1314:C:N4	19:XS:2:PRO:O	2.43	0.50
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.50
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.75	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.41	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
22:YA:144:C:H2'	22:YA:145:G:H8	1.76	0.50
22:YA:1103:A:H5'	22:YA:1104:C:C5	2.45	0.50
24:YD:241:PRO:O	24:YD:242:ARG:C	2.53	0.50
28:YH:131:VAL:CG1	28:YH:132:ARG:N	2.74	0.50
28:YH:169:VAL:HG13	28:YH:170:ARG:N	2.26	0.50
30:YN:112:LEU:HD23	30:YN:113:GLY:N	2.26	0.50
37:YU:92:ARG:C	37:YU:94:ASN:N	2.69	0.50
41:YY:46:LYS:HE3	41:YY:63:LYS:HB3	1.93	0.50
44:Y1:87:PRO:O	44:Y1:91:LYS:HB2	2.10	0.50
44:Y1:94:LEU:O	44:Y1:95:LEU:HG	2.11	0.50
46:Y3:17:LYS:HA	46:Y3:20:LYS:HD2	1.92	0.50
47:Y4:10:VAL:HG23	47:Y4:11:PRO:HD2	1.94	0.50
53:QV:68:C:H2'	53:QV:69:C:H6	1.76	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.25	0.50
22:RA:458:G:O2'	50:R7:39:ARG:HD3	2.11	0.50
22:RA:871:U:OP1	33:RQ:5:ARG:HG2	2.10	0.50
22:RA:1090:U:H3	22:RA:1102:C:H1'	1.77	0.50
22:RA:1764:G:C6	22:RA:1989:G:C2	2.99	0.50
22:RA:2286:A:OP1	49:R6:28:ARG:NE	2.43	0.50
22:RA:2695:C:H2'	22:RA:2696:U:H6	1.76	0.50
24:RD:35:LYS:HD2	24:RD:104:TYR:CD1	2.45	0.50
25:RE:61:ARG:CB	25:RE:62:PRO:HD3	2.41	0.50
25:RE:176:ILE:HG22	25:RE:176:ILE:O	2.10	0.50
28:RH:16:SER:O	28:RH:17:VAL:HG23	2.12	0.50
30:RN:120:LEU:HD13	30:RN:120:LEU:C	2.37	0.50
32:RP:114:ILE:HD13	32:RP:125:VAL:CG2	2.41	0.50
39:RW:34:ASN:O	39:RW:35:ILE:C	2.55	0.50
41:RY:88:LYS:NZ	41:RY:88:LYS:HA	2.27	0.50
44:R1:80:LEU:HB2	44:R1:81:LYS:CE	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:1:MET:O	47:R4:1:MET:HG3	2.12	0.50
48:R5:48:GLU:HA	48:R5:59:GLU:HG2	1.94	0.50
49:R6:9:LEU:HD13	49:R6:26:ASN:HD22	1.76	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.93	0.50
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.50
22:YA:900:A:H3'	22:YA:901:A:H8	1.75	0.50
22:YA:1354:A:OP1	24:YD:38:LYS:HE2	2.12	0.50
22:YA:2532:G:H1'	22:YA:2663:G:N2	2.25	0.50
22:YA:2712:U:OP1	22:YA:2714:G:H4'	2.10	0.50
27:YG:111:LEU:N	27:YG:112:PRO:CD	2.75	0.50
29:YI:29:TYR:O	29:YI:33:ARG:HB2	2.11	0.50
30:YN:120:LEU:C	30:YN:120:LEU:HD13	2.37	0.50
31:YO:15:GLY:O	31:YO:46:ALA:HB1	2.10	0.50
33:YQ:132:VAL:HG12	33:YQ:133:ARG:N	2.27	0.50
34:YR:85:PRO:C	34:YR:87:TYR:H	2.18	0.50
34:YR:117:VAL:CG2	34:YR:118:GLU:N	2.74	0.50
35:YS:26:LEU:HD22	35:YS:87:PHE:CD1	2.46	0.50
44:Y1:80:LEU:HB2	44:Y1:81:LYS:CE	2.41	0.50
45:Y2:41:ILE:HD11	45:Y2:44:LEU:CB	2.42	0.50
47:Y4:42:PHE:CD1	47:Y4:42:PHE:C	2.90	0.50
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.50
1:QA:260:G:H2'	1:QA:261:U:C6	2.47	0.50
1:QA:1151:A:H2'	1:QA:1152:A:C8	2.46	0.50
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.46	0.50
1:QA:1320:C:N4	19:QS:36:ARG:HG3	2.27	0.50
2:QB:82:ARG:HB3	2:QB:83:MET:HE2	1.92	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:178:VAL:O	4:QD:180:GLY:N	2.44	0.50
4:QD:198:VAL:CG1	4:QD:199:ASN:N	2.75	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50
7:QG:150:ALA:HA	11:QK:59:TYR:CD2	2.47	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
22:RA:30:G:C6	22:RA:31:C:C4	3.00	0.50
22:RA:389:G:N1	32:RP:70:GLN:HB3	2.27	0.50
22:RA:1988:C:H2'	22:RA:1989:G:O4'	2.11	0.50
22:RA:2250:G:C2	33:RQ:82:ARG:HB3	2.47	0.50
22:RA:2377:A:H2'	22:RA:2378:A:C8	2.47	0.50
22:RA:2867:G:HO2'	22:RA:2868:A:H8	1.53	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:31:LYS:C	24:RD:32:SER:O	2.54	0.50
25:RE:203:LYS:HE3	25:RE:204:ALA:CB	2.40	0.50
26:RF:108:LYS:HA	26:RF:108:LYS:NZ	2.27	0.50
27:RG:109:VAL:O	27:RG:113:ARG:HG3	2.10	0.50
34:RR:92:GLY:N	34:RR:94:TYR:HE2	2.09	0.50
35:RS:62:LYS:HB3	35:RS:97:ARG:CD	2.39	0.50
37:RU:92:ARG:NH1	37:RU:95:LEU:HD11	2.26	0.50
37:RU:98:LEU:HD23	37:RU:98:LEU:C	2.36	0.50
39:RW:22:ASP:HA	39:RW:25:ARG:HH12	1.75	0.50
39:RW:40:ASN:C	39:RW:41:LYS:HG2	2.37	0.50
40:RX:35:THR:O	40:RX:36:LYS:C	2.55	0.50
47:R4:1:MET:HE3	47:R4:6:HIS:CD2	2.46	0.50
48:R5:54:GLY:O	48:R5:55:ARG:C	2.54	0.50
1:XA:230:G:C2	1:XA:231:G:H1'	2.46	0.50
1:XA:1268:A:H2'	1:XA:1269:A:C8	2.46	0.50
1:XA:1297:C:O2'	1:XA:1298:C:O5'	2.29	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
5:XE:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.50
12:XL:49:ASN:ND2	12:XL:92:ASP:OD1	2.43	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
22:YA:458:G:O2'	22:YA:469:G:O6	2.24	0.50
22:YA:546:C:OP1	22:YA:547:A:N6	2.45	0.50
24:YD:182:LEU:H	24:YD:272:ALA:CB	2.25	0.50
27:YG:6:ALA:H	47:Y4:23:GLU:CG	2.25	0.50
27:YG:43:LEU:O	27:YG:88:ILE:HG12	2.12	0.50
28:YH:24:VAL:HG21	28:YH:72:ILE:HG12	1.94	0.50
28:YH:133:VAL:HG12	28:YH:141:VAL:HG13	1.93	0.50
31:YO:35:VAL:O	31:YO:35:VAL:HG23	2.11	0.50
32:YP:138:LEU:HD11	32:YP:144:GLU:CG	2.42	0.50
38:YV:29:PRO:O	38:YV:61:VAL:O	2.29	0.50
38:YV:51:VAL:CG1	38:YV:52:VAL:H	2.22	0.50
38:YV:51:VAL:CG1	38:YV:52:VAL:N	2.75	0.50
39:YW:40:ASN:C	39:YW:41:LYS:HG2	2.36	0.50
39:YW:70:TYR:N	39:YW:70:TYR:CD2	2.75	0.50
42:YZ:8:TYR:HD1	42:YZ:38:TYR:CZ	2.29	0.50
46:Y3:7:LYS:CB	46:Y3:34:GLU:HG2	2.41	0.50
47:Y4:57:GLU:O	47:Y4:61:ARG:O	2.30	0.50
53:QV:75:C:H2'	53:QV:76:A:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:XX:4:C:N4	55:XY:37:1MG:CM1	2.74	0.50
1:QA:643:C:H2'	1:QA:644:G:H8	1.77	0.50
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.12	0.50
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.50
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
22:RA:1417:C:H2'	22:RA:1418:G:O4'	2.11	0.50
22:RA:1660:C:H5'	22:RA:2712(A):A:H61	1.76	0.50
22:RA:1882:C:H5'	22:RA:1883:G:OP2	2.12	0.50
22:RA:2283:C:P	49:R6:5:VAL:HG13	2.52	0.50
22:RA:2308:G:H2'	22:RA:2308:G:N3	2.27	0.50
22:RA:2485:G:OP1	33:RQ:46:GLN:NE2	2.38	0.50
24:RD:28:GLU:OE1	24:RD:29:PRO:HD2	2.11	0.50
24:RD:32:SER:O	24:RD:33:LEU:CB	2.60	0.50
25:RE:2:LYS:HG2	25:RE:95:ILE:CG2	2.42	0.50
29:RI:41:GLU:HA	29:RI:44:LEU:HB2	1.93	0.50
30:RN:129:PRO:C	30:RN:131:GLN:H	2.20	0.50
33:RQ:108:GLY:O	33:RQ:109:VAL:HG23	2.12	0.50
35:RS:60:GLY:O	35:RS:61:ASN:CB	2.55	0.50
35:RS:74:ALA:O	35:RS:75:GLU:C	2.54	0.50
36:RT:23:ARG:CB	36:RT:24:PRO:HD2	2.40	0.50
36:RT:38:ASN:O	36:RT:39:ARG:O	2.30	0.50
37:RU:92:ARG:C	37:RU:94:ASN:N	2.69	0.50
41:RY:48:ALA:HB2	41:RY:61:ILE:CD1	2.41	0.50
41:RY:90:LEU:HD22	41:RY:90:LEU:H	1.73	0.50
43:R0:53:MET:HA	43:R0:58:THR:O	2.11	0.50
45:R2:16:LEU:O	45:R2:17:SER:CB	2.56	0.50
48:R5:50:GLY:O	48:R5:51:TYR:CB	2.59	0.50
49:R6:41:PRO:HD2	49:R6:46:HIS:H	1.77	0.50
1:XA:474:G:H2'	1:XA:475:G:H8	1.76	0.50
1:XA:962:C:H1'	1:XA:1201:A:N6	2.27	0.50
3:XC:11:ARG:HG3	3:XC:15:THR:HG21	1.93	0.50
4:XD:54:TYR:CE1	4:XD:206:PHE:HE1	2.29	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.50
22:YA:2524:G:H5'	22:YA:2525:G:OP2	2.11	0.50
23:YB:24:G:O6	23:YB:56:G:O2'	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:49:ASP:OD1	27:YG:51:ARG:HG3	2.12	0.50
28:YH:16:SER:O	28:YH:17:VAL:HG23	2.12	0.50
31:YO:104:ARG:NE	36:YT:34:VAL:HG11	2.26	0.50
33:YQ:23:GLY:O	33:YQ:24:GLY:C	2.54	0.50
33:YQ:36:ALA:HB1	33:YQ:127:ILE:HD12	1.93	0.50
34:YR:10:LEU:O	34:YR:11:ASN:C	2.55	0.50
34:YR:28:LEU:CD2	34:YR:114:VAL:HG12	2.41	0.50
35:YS:35:ILE:CD1	35:YS:101:LEU:HD23	2.41	0.50
35:YS:89:ARG:HD2	35:YS:89:ARG:O	2.11	0.50
42:YZ:158:PRO:O	42:YZ:160:GLY:N	2.44	0.50
45:Y2:9:GLN:O	45:Y2:12:GLU:HB3	2.10	0.50
49:Y6:9:LEU:HB3	49:Y6:26:ASN:O	2.12	0.50
50:Y7:9:ARG:HH12	50:Y7:47:ARG:HG3	1.76	0.50
1:QA:959:A:HO2'	1:QA:984:C:HO2'	1.59	0.50
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.77	0.50
1:QA:1074:G:C4'	2:QB:104:ASN:HB2	2.41	0.50
1:QA:1327:C:H2'	1:QA:1328:C:C6	2.47	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
3:QC:11:ARG:HG3	3:QC:15:THR:HG21	1.94	0.50
3:QC:34:LEU:HD23	3:QC:34:LEU:C	2.37	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
22:RA:782:A:N7	24:RD:221:VAL:HG11	2.26	0.50
22:RA:1398:C:OP1	40:RX:53:LYS:NZ	2.43	0.50
22:RA:1858:G:O2'	22:RA:1884:A:N6	2.45	0.50
24:RD:2:ALA:CB	24:RD:20:ASP:CB	2.90	0.50
27:RG:103:LEU:HD21	27:RG:178:PHE:CZ	2.47	0.50
27:RG:111:LEU:N	27:RG:112:PRO:CD	2.75	0.50
28:RH:133:VAL:HG12	28:RH:141:VAL:HG13	1.93	0.50
28:RH:153:LYS:O	28:RH:154:PRO:O	2.30	0.50
29:RI:129:THR:HG22	29:RI:137:PRO:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:46:VAL:O	30:RN:47:ALA:CB	2.57	0.50
31:RO:104:ARG:NE	36:RT:34:VAL:HG11	2.26	0.50
33:RQ:2:LEU:HD23	33:RQ:2:LEU:N	2.27	0.50
33:RQ:80:GLU:HG3	33:RQ:81:VAL:N	2.27	0.50
34:RR:96:ARG:NH2	34:RR:117:VAL:HG23	2.27	0.50
41:RY:16:ALA:O	41:RY:21:LYS:HD3	2.11	0.50
42:RZ:35:ARG:HB3	42:RZ:35:ARG:NH1	2.26	0.50
43:R0:50:ASN:HB3	43:R0:63:VAL:HG22	1.92	0.50
47:R4:10:VAL:HG23	47:R4:11:PRO:HD2	1.93	0.50
50:R7:46:VAL:HG12	50:R7:47:ARG:N	2.27	0.50
1:XA:339:C:OP2	31:YO:97:ARG:NH1	2.45	0.50
1:XA:1158:C:H4'	2:XB:133:LYS:HZ3	1.76	0.50
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.47	0.50
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.10	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.75	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
22:YA:1266:G:O5'	39:YW:15:ARG:NH2	2.45	0.50
22:YA:1728:G:H3'	22:YA:1729:A:H5"	1.94	0.50
22:YA:1785:A:C6	22:YA:1787:A:H1'	2.46	0.50
24:YD:218:ARG:HB3	24:YD:219:PRO:HD2	1.94	0.50
24:YD:233:HIS:CD2	24:YD:233:HIS:H	2.29	0.50
25:YE:2:LYS:HG2	25:YE:95:ILE:CG2	2.42	0.50
25:YE:105:THR:HB	25:YE:197:ILE:HG12	1.92	0.50
26:YF:53:THR:C	26:YF:55:GLY:N	2.68	0.50
27:YG:16:ARG:HB3	27:YG:17:PRO:HD3	1.94	0.50
31:YO:105:GLU:O	31:YO:108:GLU:HB2	2.12	0.50
33:YQ:108:GLY:O	33:YQ:109:VAL:HG23	2.12	0.50
37:YU:92:ARG:CD	37:YU:94:ASN:HB3	2.42	0.50
39:YW:1:MET:HE2	39:YW:2:GLU:H	1.76	0.50
41:YY:2:ARG:O	41:YY:3:VAL:C	2.55	0.50
41:YY:48:ALA:HB2	41:YY:61:ILE:CD1	2.42	0.50
41:YY:101:LYS:O	41:YY:102:CYS:SG	2.67	0.50
47:Y4:22:ILE:H	47:Y4:22:ILE:HD12	1.77	0.50
48:Y5:37:LYS:O	48:Y5:37:LYS:HD2	2.12	0.50
1:QA:1235:U:O2'	1:QA:1305:G:O5'	2.30	0.50
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.46	0.50
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.39	0.50
1:QA:1296:C:O2'	1:QA:1302:U:H5	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
22:RA:259:G:H2'	22:RA:260:G:H8	1.77	0.50
22:RA:1062:G:H2'	22:RA:1063:G:H8	1.76	0.50
22:RA:1614:A:H62	39:RW:93:ALA:HB2	1.77	0.50
22:RA:2409:G:H2'	22:RA:2410:G:O4'	2.11	0.50
22:RA:2525:G:N2	22:RA:2539:C:C2	2.80	0.50
22:RA:2602:A:H2	56:Z6:76:PPU:C8	2.24	0.50
24:RD:35:LYS:HE2	24:RD:104:TYR:HB2	1.94	0.50
24:RD:218:ARG:HB3	24:RD:219:PRO:HD2	1.94	0.50
24:RD:237:GLU:OE1	24:RD:237:GLU:HA	2.12	0.50
25:RE:119:ARG:HD3	25:RE:160:TYR:CD2	2.47	0.50
26:RF:11:VAL:CG1	26:RF:12:LEU:N	2.75	0.50
30:RN:137:LYS:HG3	30:RN:138:LEU:H	1.77	0.50
32:RP:6:LEU:N	32:RP:6:LEU:CD2	2.75	0.50
32:RP:81:GLN:CD	32:RP:106:LEU:O	2.55	0.50
37:RU:53:ARG:C	37:RU:55:ARG:H	2.19	0.50
37:RU:76:TYR:CD2	37:RU:76:TYR:C	2.90	0.50
37:RU:79:PHE:C	37:RU:79:PHE:HD2	2.18	0.50
49:R6:20:ASN:O	49:R6:21:TYR:CB	2.59	0.50
49:R6:34:LEU:HD23	49:R6:36:LEU:HD22	1.93	0.50
52:R9:7:VAL:HG12	52:R9:25:VAL:HG21	1.94	0.50
1:XA:779:C:H2'	1:XA:780:A:O4'	2.12	0.50
1:XA:1064:G:N2	1:XA:1190:G:H2'	2.27	0.50
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.45	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.50
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.50
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.50
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.50
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.12	0.50
22:YA:1929:G:H3'	22:YA:1929:G:H8	1.77	0.50
22:YA:2688:U:H1'	22:YA:2721:A:N6	2.26	0.50
22:YA:2705:A:O2'	22:YA:2852:G:OP1	2.30	0.50
24:YD:35:LYS:HE2	24:YD:104:TYR:HB2	1.94	0.50
27:YG:114:ILE:HG21	27:YG:117:PHE:HB2	1.93	0.50
28:YH:7:LEU:C	28:YH:7:LEU:HD12	2.37	0.50
32:YP:64:LYS:C	32:YP:66:GLY:N	2.57	0.50
32:YP:112:LEU:HD22	32:YP:113:LYS:N	2.26	0.50
32:YP:147:LEU:O	32:YP:148:LEU:HB2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YY:19:LYS:O	41:YY:19:LYS:CG	2.60	0.50
48:Y5:50:GLY:O	48:Y5:51:TYR:CB	2.59	0.50
50:Y7:12:ARG:NH1	50:Y7:12:ARG:HG3	2.27	0.50
1:QA:41:G:H2'	1:QA:42:G:H8	1.77	0.49
1:QA:310:G:H4'	16:QP:31:LYS:HD3	1.94	0.49
1:QA:828:A:H2'	1:QA:829:G:O4'	2.12	0.49
1:QA:1353:G:C2	1:QA:1370:G:C2	2.99	0.49
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.49
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.49
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.49
22:RA:184:C:H2'	22:RA:185:U:C6	2.46	0.49
22:RA:270(S):G:C2'	22:RA:270(T):G:H5'	2.42	0.49
22:RA:1046:A:H3'	22:RA:1046:A:N3	2.27	0.49
22:RA:1340:U:H4'	22:RA:1394:U:O2'	2.12	0.49
22:RA:2077:A:H2'	22:RA:2078:C:H6	1.77	0.49
25:RE:1:MET:H1	25:RE:1:MET:HE2	1.76	0.49
28:RH:103:LEU:CD1	28:RH:131:VAL:HG21	2.41	0.49
32:RP:88:LEU:C	32:RP:88:LEU:HD23	2.37	0.49
38:RV:41:GLY:N	38:RV:46:VAL:HG13	2.26	0.49
39:RW:29:LEU:HD23	39:RW:29:LEU:O	2.13	0.49
41:RY:2:ARG:O	41:RY:3:VAL:C	2.55	0.49
42:RZ:53:ILE:HG22	42:RZ:71:VAL:HG13	1.94	0.49
44:R1:82:LEU:HD13	44:R1:83:GLU:C	2.36	0.49
50:R7:12:ARG:NH1	50:R7:12:ARG:HG3	2.27	0.49
2:XB:23:ARG:HG2	2:XB:23:ARG:HH11	1.76	0.49
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.49
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.26	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.49
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
13:XM:3:ARG:HH21	27:YG:139:LEU:HD13	1.76	0.49
13:XM:65:LYS:HZ3	13:XM:69:GLU:HG2	1.76	0.49
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.49
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.49
22:YA:117:G:OP2	22:YA:119:A:O2'	2.28	0.49
22:YA:380:U:H2'	22:YA:381:G:H8	1.76	0.49
22:YA:383:U:H5"	22:YA:384:U:OP2	2.12	0.49
22:YA:443:A:H3'	26:YF:45:ARG:NH1	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:507:A:C5'	22:YA:508:G:H5'	2.42	0.49
22:YA:1397:U:OP2	22:YA:1398:C:N4	2.35	0.49
22:YA:1899:G:H21	22:YA:1902:C:H42	1.58	0.49
22:YA:2756:U:H4'	22:YA:2757:A:OP1	2.12	0.49
23:YB:89:G:C6	23:YB:89(A):A:C6	3.00	0.49
26:YF:11:VAL:CG1	26:YF:12:LEU:N	2.75	0.49
27:YG:83:ARG:HH11	27:YG:83:ARG:HG2	1.76	0.49
27:YG:103:LEU:HD21	27:YG:178:PHE:CZ	2.47	0.49
30:YN:137:LYS:HG3	30:YN:138:LEU:H	1.77	0.49
32:YP:36:LYS:HB2	32:YP:40:SER:HB3	1.94	0.49
35:YS:52:SER:O	35:YS:56:LEU:CD2	2.60	0.49
35:YS:89:ARG:O	35:YS:90:GLY:C	2.54	0.49
37:YU:76:TYR:CD2	37:YU:76:TYR:C	2.90	0.49
40:YX:47:PHE:O	40:YX:48:LYS:C	2.55	0.49
41:YY:16:ALA:O	41:YY:21:LYS:HD3	2.11	0.49
44:Y1:81:LYS:O	44:Y1:82:LEU:O	2.30	0.49
49:Y6:44:ARG:O	49:Y6:45:LYS:CB	2.60	0.49
1:QA:999:U:H2'	1:QA:1000:A:C8	2.47	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
3:QC:87:LEU:C	3:QC:89:GLU:H	2.20	0.49
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.49
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.93	0.49
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.49
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.49
9:QI:83:ARG:C	9:QI:86:VAL:HG12	2.36	0.49
11:QK:32:ILE:HD12	11:QK:72:ALA:CB	2.36	0.49
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.49
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
22:RA:486:C:H4'	39:RW:60:ASN:OD1	2.13	0.49
22:RA:1328:G:H8	22:RA:1328:G:O5'	1.95	0.49
22:RA:1517:G:H2'	22:RA:1518:C:C6	2.48	0.49
22:RA:1733:G:C5	22:RA:1734:C:C4	3.00	0.49
22:RA:2037:G:C6	22:RA:2038:G:C6	3.00	0.49
22:RA:2271:G:H2'	22:RA:2272:U:C6	2.46	0.49
22:RA:2392:A:H2	22:RA:2424:C:H42	1.60	0.49
24:RD:10:THR:HG23	24:RD:13:ARG:CB	2.34	0.49
24:RD:25:THR:O	24:RD:27:THR:HG22	2.12	0.49
24:RD:123:ALA:HB3	24:RD:131:LEU:HG	1.94	0.49
28:RH:19:VAL:HG13	28:RH:43:VAL:CG2	2.41	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:19:VAL:HG13	28:RH:43:VAL:HG23	1.93	0.49
29:RI:11:ASN:O	29:RI:12:LEU:HB2	2.12	0.49
30:RN:118:LYS:C	30:RN:120:LEU:H	2.20	0.49
32:RP:61:ARG:HH21	51:R8:13:ARG:HD2	1.77	0.49
35:RS:83:LYS:HG2	35:RS:109:GLY:HA2	1.90	0.49
37:RU:79:PHE:HE2	37:RU:83:LEU:HD22	1.78	0.49
47:R4:9:LEU:H	47:R4:27:THR:CG2	2.25	0.49
1:XA:129(A):G:H1'	1:XA:190:G:H5"	1.93	0.49
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.12	0.49
1:XA:975:A:N6	1:XA:1367:C:O4'	2.44	0.49
1:XA:1349:A:OP2	9:XI:118:LYS:NZ	2.41	0.49
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.27	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
20:XT:10:LEU:C	20:XT:12:ALA:H	2.20	0.49
22:YA:17:G:H21	22:YA:554:U:H5'	1.76	0.49
22:YA:297:C:H2'	22:YA:298:G:O4'	2.12	0.49
22:YA:1125:G:H5'	52:Y9:37:GLY:HA2	1.94	0.49
22:YA:1488:G:C6	22:YA:1489:U:C4	2.99	0.49
22:YA:1567:A:H4'	24:YD:58:HIS:CE1	2.47	0.49
22:YA:1576:U:H2'	22:YA:1577:C:H6	1.77	0.49
22:YA:1742:C:H5'	22:YA:1743:G:OP2	2.12	0.49
22:YA:2179:C:H2'	22:YA:2180:U:C6	2.48	0.49
22:YA:2335:A:O2'	22:YA:2336:A:H2'	2.12	0.49
22:YA:2695:C:H2'	22:YA:2696:U:C6	2.46	0.49
22:YA:2764:A:N7	22:YA:2766:G:C6	2.80	0.49
25:YE:37:ARG:HE	25:YE:37:ARG:H	1.59	0.49
25:YE:46:ALA:HB1	25:YE:80:GLU:HB2	1.94	0.49
30:YN:6:PRO:HG2	30:YN:43:THR:OG1	2.11	0.49
30:YN:63:THR:HG22	30:YN:66:LYS:HZ1	1.76	0.49
31:YO:47:ILE:CG1	31:YO:48:PRO:HD2	2.42	0.49
31:YO:69:ILE:O	31:YO:76:ALA:HA	2.12	0.49
32:YP:81:GLN:CD	32:YP:106:LEU:O	2.55	0.49
32:YP:88:LEU:C	32:YP:88:LEU:HD23	2.37	0.49
35:YS:5:THR:HG1	35:YS:7:TYR:HB3	1.75	0.49
35:YS:60:GLY:O	35:YS:61:ASN:CB	2.55	0.49
37:YU:92:ARG:NH1	37:YU:95:LEU:HD11	2.26	0.49
38:YV:3:ALA:HB3	38:YV:14:VAL:HG23	1.92	0.49
44:Y1:93:GLU:O	44:Y1:97:LEU:HD11	2.12	0.49
47:Y4:36:CYS:O	47:Y4:39:CYS:CB	2.55	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:271:C:H2'	1:QA:272:C:C6	2.46	0.49
1:QA:1238:A:H62	1:QA:1299:A:N6	2.10	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.49
22:RA:270(S):G:O2'	22:RA:270(T):G:H5'	2.12	0.49
22:RA:1839:G:C8	22:RA:1927:A:H1'	2.47	0.49
30:RN:73:THR:HG22	30:RN:82:LEU:HD11	1.93	0.49
31:RO:105:GLU:O	31:RO:108:GLU:HB2	2.12	0.49
34:RR:118:GLU:OXT	34:RR:118:GLU:HG3	2.11	0.49
40:RX:47:PHE:O	40:RX:48:LYS:C	2.55	0.49
40:RX:70:LEU:N	40:RX:70:LEU:CD2	2.72	0.49
41:RY:81:LYS:HD3	41:RY:97:ARG:HD3	1.94	0.49
46:R3:7:LYS:CB	46:R3:34:GLU:HG2	2.41	0.49
1:XA:372:C:C5	1:XA:387:U:C4	2.98	0.49
1:XA:768:A:H2'	1:XA:769:G:O4'	2.13	0.49
1:XA:1192:C:O2	5:XE:25:ARG:NH2	2.42	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	0.49
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.93	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.23	0.49
8:XH:91:ARG:HG2	8:XH:91:ARG:NH1	2.25	0.49
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.56	0.49
22:YA:270(R):G:H2'	22:YA:270(S):G:C8	2.47	0.49
22:YA:931:G:O3'	46:Y3:24:LYS:NZ	2.45	0.49
22:YA:1252:G:O4'	37:YU:33:ARG:HD3	2.13	0.49
22:YA:1567:A:H5'	24:YD:58:HIS:ND1	2.27	0.49
22:YA:1812:A:O2'	24:YD:45:ASN:HB2	2.11	0.49
22:YA:2688:U:H5	22:YA:2720:U:OP2	1.94	0.49
24:YD:2:ALA:CB	24:YD:20:ASP:HB3	2.42	0.49
24:YD:76:PRO:HA	24:YD:118:VAL:HG23	1.93	0.49
24:YD:227:ASN:HB3	24:YD:228:PRO:CD	2.30	0.49
25:YE:18:ASP:O	25:YE:19:ARG:C	2.55	0.49
25:YE:61:ARG:CB	25:YE:62:PRO:CD	2.90	0.49
27:YG:121:ASN:C	27:YG:123:ASN:H	2.20	0.49
28:YH:103:LEU:H	28:YH:103:LEU:HD23	1.77	0.49
30:YN:46:VAL:O	30:YN:47:ALA:CB	2.57	0.49
30:YN:73:THR:CG2	30:YN:82:LEU:HD11	2.43	0.49
30:YN:82:LEU:HD12	30:YN:83:LYS:N	2.27	0.49
30:YN:129:PRO:C	30:YN:131:GLN:H	2.20	0.49
33:YQ:2:LEU:HD23	33:YQ:2:LEU:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YQ:29:PHE:N	33:YQ:105:GLU:OE2	2.41	0.49
36:YT:57:PHE:O	36:YT:58:ASN:C	2.53	0.49
39:YW:28:SER:C	39:YW:30:GLU:N	2.69	0.49
39:YW:29:LEU:O	39:YW:29:LEU:HD23	2.13	0.49
39:YW:51:LEU:HD23	39:YW:105:VAL:HG11	1.95	0.49
41:YY:81:LYS:CD	41:YY:97:ARG:HE	2.20	0.49
42:YZ:124:ILE:HG23	42:YZ:165:VAL:HG21	1.95	0.49
44:Y1:8:SER:HB3	44:Y1:66:HIS:CE1	2.46	0.49
44:Y1:40:ARG:NH2	44:Y1:42:GLN:HG2	2.27	0.49
44:Y1:67:ILE:N	44:Y1:68:PRO:CD	2.76	0.49
46:Y3:21:ALA:O	46:Y3:25:ALA:N	2.41	0.49
47:Y4:9:LEU:H	47:Y4:27:THR:CG2	2.26	0.49
51:Y8:10:ALA:O	51:Y8:14:VAL:HG12	2.11	0.49
52:Y9:1:MET:HE1	52:Y9:32:HIS:HD2	1.77	0.49
1:QA:452:A:C6	1:QA:453:A:C6	3.01	0.49
1:QA:1346:A:C5'	9:QI:120:ARG:HH12	2.22	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
5:QE:36:ASP:C	5:QE:37:ARG:HG2	2.38	0.49
7:QG:40:ALA:O	7:QG:41:ARG:C	2.54	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.49
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.49
22:RA:18:C:O2'	22:RA:553:U:OP1	2.29	0.49
22:RA:730:C:OP1	22:RA:1775:U:O2'	2.22	0.49
22:RA:1450:C:N3	22:RA:1451:C:N4	2.61	0.49
22:RA:1993:U:H4'	25:RE:128:SER:OG	2.12	0.49
22:RA:2645:G:C3'	22:RA:2646:C:H5'	2.41	0.49
24:RD:35:LYS:CG	24:RD:64:ILE:HG22	2.42	0.49
25:RE:23:VAL:HG12	25:RE:173:VAL:HG21	1.94	0.49
28:RH:120:GLY:HA3	28:RH:140:LYS:NZ	2.28	0.49
32:RP:31:ALA:C	32:RP:32:THR:CG2	2.85	0.49
32:RP:49:ARG:HE	51:R8:59:LYS:HG2	1.76	0.49
32:RP:114:ILE:HD11	32:RP:130:PHE:HE1	1.70	0.49
33:RQ:90:VAL:C	33:RQ:92:GLY:N	2.70	0.49
45:R2:33:MET:O	45:R2:37:PHE:HD1	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:57:GLU:O	47:R4:61:ARG:O	2.30	0.49
1:XA:1312:G:H3'	47:Y4:67:TYR:OH	2.11	0.49
1:XA:1517:G:H1'	22:YA:1919:A:O3'	2.13	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	0.49
13:XM:3:ARG:HB3	47:Y4:34:GLU:CB	2.41	0.49
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.33	0.49
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.49
22:YA:483:A:H5'	41:YY:49:VAL:HG13	1.95	0.49
22:YA:2336:A:H61	43:Y0:43:THR:CG2	2.25	0.49
26:YF:144:LYS:C	26:YF:146:ALA:H	2.21	0.49
28:YH:19:VAL:HG13	28:YH:43:VAL:HG23	1.93	0.49
31:YO:1:MET:HE3	31:YO:67:LYS:HG2	1.95	0.49
35:YS:99:LYS:O	35:YS:101:LEU:N	2.45	0.49
36:YT:39:ARG:CG	36:YT:40:THR:H	2.22	0.49
37:YU:81:HIS:CE1	37:YU:117:GLN:HG3	2.48	0.49
41:YY:44:ILE:CG1	41:YY:45:VAL:H	2.24	0.49
42:YZ:182:LYS:CG	42:YZ:183:LEU:HA	2.42	0.49
45:Y2:69:ARG:CB	45:Y2:69:ARG:HH11	2.25	0.49
1:QA:97:U:H2'	1:QA:99:C:C6	2.48	0.49
1:QA:332:G:OP2	20:QT:10:LEU:HD23	2.13	0.49
1:QA:1400:C:C5	53:QV:34:C:C4	3.00	0.49
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.49
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.11	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
22:RA:1670:C:C5	22:RA:1671:U:C4	3.00	0.49
22:RA:2405:G:HO2'	22:RA:2406:U:P	2.34	0.49
24:RD:12:SER:C	24:RD:14:ARG:N	2.70	0.49
24:RD:69:ARG:C	24:RD:71:ASP:N	2.69	0.49
24:RD:241:PRO:O	24:RD:242:ARG:C	2.55	0.49
25:RE:55:ASN:O	25:RE:57:LYS:N	2.45	0.49
27:RG:49:ASP:OD1	27:RG:51:ARG:HG3	2.12	0.49
27:RG:83:ARG:HG2	27:RG:83:ARG:HH11	1.76	0.49
28:RH:23:ARG:HD2	28:RH:34:GLU:OE2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:69:ILE:O	31:RO:76:ALA:HA	2.12	0.49
34:RR:10:LEU:O	34:RR:11:ASN:C	2.55	0.49
34:RR:67:LEU:HD13	34:RR:76:VAL:CG2	2.27	0.49
37:RU:92:ARG:CD	37:RU:94:ASN:HB3	2.42	0.49
41:RY:35:TYR:CD1	41:RY:69:ALA:HB3	2.48	0.49
45:R2:41:ILE:HD11	45:R2:44:LEU:CB	2.42	0.49
47:R4:22:ILE:HD12	47:R4:22:ILE:H	1.77	0.49
1:XA:135:C:H2'	1:XA:136:C:H5'	1.95	0.49
1:XA:753:A:H4'	1:XA:754:C:O5'	2.12	0.49
1:XA:1251:A:N1	1:XA:1354:C:O2'	2.40	0.49
1:XA:1297:C:H4'	1:XA:1298:C:H5'	1.95	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	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:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
22:YA:138:G:N2	40:YX:44:GLU:OE2	2.35	0.49
22:YA:141:A:N6	22:YA:1595:G:O2'	2.41	0.49
22:YA:852:G:H1	22:YA:925:C:N4	2.07	0.49
22:YA:878:A:H61	22:YA:899:A:H1'	1.77	0.49
22:YA:1021:A:H3'	22:YA:1021:A:C8	2.47	0.49
22:YA:1036:G:C2	22:YA:1120:G:C6	3.00	0.49
22:YA:1885:A:H5'	22:YA:1886:C:OP2	2.13	0.49
22:YA:1975:G:H2'	22:YA:1976:U:O4'	2.12	0.49
22:YA:2527:C:C4	22:YA:2528:U:C4	3.00	0.49
22:YA:2591:C:H2'	22:YA:2592:G:C8	2.47	0.49
22:YA:2660:A:H2'	22:YA:2661:G:O4'	2.12	0.49
22:YA:2849:U:H4'	22:YA:2868:A:C2	2.47	0.49
24:YD:2:ALA:CB	24:YD:20:ASP:CB	2.90	0.49
24:YD:35:LYS:CG	24:YD:64:ILE:HG22	2.42	0.49
25:YE:17:ASP:N	25:YE:17:ASP:OD2	2.46	0.49
27:YG:107:LEU:HD11	27:YG:178:PHE:CD1	2.48	0.49
30:YN:95:PRO:O	30:YN:97:ARG:N	2.46	0.49
36:YT:38:ASN:O	36:YT:39:ARG:O	2.30	0.49
40:YX:51:VAL:HG13	40:YX:81:VAL:HG23	1.93	0.49
44:Y1:19:GLN:OE1	44:Y1:19:GLN:HA	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y4:47:GLN:O	47:Y4:48:ARG:CB	2.60	0.49
49:Y6:7:ILE:C	49:Y6:9:LEU:N	2.65	0.49
50:Y7:46:VAL:HG12	50:Y7:47:ARG:N	2.27	0.49
52:Y9:7:VAL:HG12	52:Y9:25:VAL:HG21	1.94	0.49
1:QA:6:G:H4'	1:QA:298:A:H4'	1.94	0.49
1:QA:410:G:H2'	1:QA:429:U:C5	2.48	0.49
1:QA:676:A:H1'	11:QK:115:PRO:HB3	1.93	0.49
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.47	0.49
1:QA:1049:U:C2	1:QA:1201:A:H1'	2.48	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.27	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
4:QD:166:LYS:CG	24:YD:134:ARG:HH12	2.24	0.49
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.13	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
22:RA:66:C:C4	22:RA:67:U:C4	3.01	0.49
22:RA:923:C:H2'	22:RA:924:C:C6	2.48	0.49
22:RA:1026:U:H1'	22:RA:1027:A:H5"	1.94	0.49
22:RA:1535:U:H2'	22:RA:1536:A:C8	2.48	0.49
23:RB:75:G:H1	23:RB:102:G:H22	1.60	0.49
23:RB:75:G:H1	23:RB:102:G:N2	2.10	0.49
24:RD:198:ASN:C	24:RD:198:ASN:ND2	2.69	0.49
27:RG:107:LEU:HD11	27:RG:178:PHE:CD1	2.48	0.49
28:RH:103:LEU:HD23	28:RH:103:LEU:H	1.77	0.49
28:RH:128:PRO:HD2	28:RH:129:THR:N	2.25	0.49
30:RN:30:ILE:O	30:RN:34:LEU:HD23	2.13	0.49
30:RN:120:LEU:HD11	30:RN:122:VAL:CG2	2.42	0.49
32:RP:147:LEU:O	32:RP:148:LEU:HB2	2.11	0.49
33:RQ:29:PHE:N	33:RQ:105:GLU:OE2	2.41	0.49
33:RQ:132:VAL:HG12	33:RQ:133:ARG:N	2.27	0.49
35:RS:18:ILE:O	35:RS:19:LYS:O	2.31	0.49
35:RS:99:LYS:O	35:RS:101:LEU:N	2.45	0.49
36:RT:94:ALA:O	36:RT:95:ARG:CB	2.61	0.49
38:RV:76:LYS:HG3	38:RV:81:TYR:CD1	2.48	0.49
41:RY:77:PRO:O	41:RY:78:ALA:HB2	2.11	0.49
44:R1:67:ILE:N	44:R1:68:PRO:CD	2.76	0.49
47:R4:42:PHE:O	47:R4:44:THR:O	2.31	0.49
47:R4:68:ARG:HD3	47:R4:69:LYS:HG2	1.92	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:R6:37:ARG:HA	49:R6:37:ARG:HE	1.77	0.49
51:R8:15:LYS:HD3	51:R8:15:LYS:C	2.37	0.49
1:XA:58:C:O2'	1:XA:388:G:N7	2.35	0.49
1:XA:418:C:H1'	1:XA:540:G:O2'	2.12	0.49
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.38	0.49
3:XC:42:LEU:HD12	3:XC:45:LYS:HZ3	1.76	0.49
3:XC:178:LEU:N	3:XC:178:LEU:HD22	2.28	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.77	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
22:YA:173:G:C6	22:YA:174:C:C4	3.01	0.49
22:YA:657:U:OP2	22:YA:657:U:H6	1.95	0.49
22:YA:678:C:H2'	22:YA:679:C:C6	2.48	0.49
22:YA:1043:C:H42	22:YA:1112:G:H1	1.59	0.49
22:YA:1971:A:H1'	24:YD:240:ALA:O	2.12	0.49
22:YA:2051:A:H5'	22:YA:2578:G:O4'	2.12	0.49
22:YA:2360:A:H2'	22:YA:2361:A:O4'	2.13	0.49
22:YA:2751:G:O2'	22:YA:2752:C:O5'	2.28	0.49
25:YE:179:GLU:HA	25:YE:179:GLU:OE1	2.10	0.49
27:YG:56:ALA:HB2	27:YG:153:ARG:NE	2.27	0.49
28:YH:153:LYS:O	28:YH:154:PRO:O	2.30	0.49
32:YP:30:THR:O	32:YP:33:ARG:HB2	2.12	0.49
34:YR:1:MET:O	34:YR:2:ARG:CB	2.60	0.49
34:YR:33:ARG:NH2	48:Y5:55:ARG:CG	2.66	0.49
38:YV:29:PRO:O	38:YV:61:VAL:HG22	2.12	0.49
41:YY:61:ILE:HG22	41:YY:62:GLU:N	2.28	0.49
41:YY:84:ARG:HD3	41:YY:86:ARG:NH1	2.28	0.49
41:YY:88:LYS:NZ	41:YY:88:LYS:HA	2.27	0.49
47:Y4:1:MET:HG3	47:Y4:1:MET:O	2.12	0.49
47:Y4:38:LYS:C	47:Y4:40:HIS:H	2.07	0.49
51:Y8:16:ILE:CD1	51:Y8:57:ARG:HG2	2.42	0.49
51:Y8:52:LYS:H	51:Y8:53:PRO:HD2	1.66	0.49
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.49
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.49
22:RA:445:C:O2	22:RA:449:A:H2	1.95	0.49
22:RA:466:A:N1	22:RA:795:C:O2'	2.42	0.49
22:RA:667:U:H2'	22:RA:668:G:O4'	2.12	0.49
22:RA:818:G:O2'	22:RA:838:C:O2'	2.23	0.49
22:RA:827:U:H2'	22:RA:2068:U:C2	2.48	0.49
22:RA:846:C:H42	22:RA:931:G:H1	1.61	0.49
25:RE:95:ILE:H	25:RE:95:ILE:CD1	2.18	0.49
27:RG:143:GLU:HA	47:R4:28:LYS:HD3	1.95	0.49
28:RH:24:VAL:HG21	28:RH:72:ILE:HG12	1.93	0.49
28:RH:54:ARG:HD3	28:RH:65:HIS:ND1	2.27	0.49
28:RH:98:LEU:HD12	28:RH:102:ALA:O	2.13	0.49
30:RN:95:PRO:O	30:RN:97:ARG:N	2.46	0.49
31:RO:8:LEU:N	31:RO:8:LEU:CD2	2.76	0.49
33:RQ:23:GLY:O	33:RQ:24:GLY:O	2.30	0.49
34:RR:41:ALA:C	34:RR:43:GLU:N	2.68	0.49
34:RR:71:GLN:HA	34:RR:71:GLN:HE21	1.77	0.49
36:RT:16:ARG:NE	36:RT:19:LEU:HD21	2.28	0.49
38:RV:7:THR:HG23	38:RV:22:VAL:HG11	1.94	0.49
40:RX:51:VAL:HG13	40:RX:81:VAL:HG23	1.93	0.49
43:R0:29:GLN:O	43:R0:31:VAL:HG13	2.13	0.49
44:R1:40:ARG:NH2	44:R1:42:GLN:HG2	2.27	0.49
44:R1:73:LEU:C	44:R1:75:GLU:N	2.70	0.49
49:R6:7:ILE:C	49:R6:9:LEU:N	2.65	0.49
50:R7:9:ARG:HH12	50:R7:47:ARG:HG3	1.76	0.49
1:XA:987:G:H1	1:XA:1218:C:H42	1.60	0.49
1:XA:1016:A:H2'	1:XA:1017:G:O4'	2.13	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
9:XI:110:GLU:O	9:XI:110:GLU:HG3	2.12	0.49
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	0.49
22:YA:34:C:H41	22:YA:447:A:H61	1.59	0.49
22:YA:422:A:C6	22:YA:423:A:C6	3.01	0.49
22:YA:442:G:H1'	26:YF:48:THR:HG21	1.95	0.49
22:YA:519:U:H2'	22:YA:520:G:H8	1.76	0.49
22:YA:817:C:O2'	22:YA:839:U:OP1	2.23	0.49
22:YA:928:G:O2'	46:Y3:43:ILE:HD11	2.12	0.49
22:YA:1436:G:H2'	22:YA:1437:C:O4'	2.13	0.49
22:YA:1729:A:H2'	22:YA:1730:U:H5"	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2086:U:H3	22:YA:2233:U:H3	1.58	0.49
22:YA:2159:G:H2'	22:YA:2160:G:H8	1.77	0.49
25:YE:179:GLU:O	25:YE:180:ASN:HB2	2.12	0.49
26:YF:51:THR:O	26:YF:93:LYS:NZ	2.38	0.49
28:YH:98:LEU:HD12	28:YH:102:ALA:O	2.13	0.49
31:YO:20:MET:HG2	31:YO:21:CYS:O	2.11	0.49
31:YO:104:ARG:NH1	36:YT:36:GLU:CD	2.71	0.49
34:YR:96:ARG:NH2	34:YR:117:VAL:HG23	2.27	0.49
35:YS:11:LYS:HG2	35:YS:11:LYS:O	2.12	0.49
36:YT:57:PHE:O	36:YT:59:THR:N	2.46	0.49
48:Y5:2:ALA:O	48:Y5:3:LYS:CB	2.60	0.49
51:Y8:15:LYS:HD3	51:Y8:15:LYS:C	2.37	0.49
51:Y8:58:ILE:O	51:Y8:61:LEU:HD12	2.13	0.49
1:QA:190:G:HO2'	1:QA:191(A):G:P	2.34	0.49
1:QA:503:C:OP2	12:QL:116:SER:HB3	2.12	0.49
1:QA:962:C:H2'	1:QA:963:G:C8	2.47	0.49
1:QA:963:G:N3	10:QJ:55:LYS:NZ	2.60	0.49
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.46	0.49
1:QA:1277:C:O2'	1:QA:1279:A:H8	1.96	0.49
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.78	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
9:QI:110:GLU:O	9:QI:110:GLU:HG3	2.12	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
10:QJ:16:LEU:HD13	10:QJ:16:LEU:C	2.38	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
11:QK:91:ARG:NH2	18:QR:88:LYS:HZ1	2.10	0.49
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
20:QT:84:LEU:C	20:QT:84:LEU:HD13	2.36	0.49
22:RA:64:A:C4	40:RX:66:LEU:HD13	2.48	0.49
22:RA:260:G:O4'	22:RA:621:A:H1'	2.13	0.49
22:RA:2602:A:C2	56:Z6:76:PPU:H8	2.48	0.49
22:RA:2636:U:H1'	22:RA:2783:G:N2	2.28	0.49
22:RA:2795:G:H3'	22:RA:2797:U:H5'	1.95	0.49
23:RB:8:U:H3	23:RB:112:G:H1	1.61	0.49
23:RB:44:G:H5"	23:RB:45:A:OP1	2.12	0.49
24:RD:2:ALA:CB	24:RD:20:ASP:HB3	2.42	0.49
24:RD:182:LEU:H	24:RD:272:ALA:CB	2.25	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:38:THR:O	25:RE:42:ASP:HB2	2.13	0.49
25:RE:119:ARG:HD3	25:RE:160:TYR:HD2	1.78	0.49
25:RE:179:GLU:O	25:RE:180:ASN:HB2	2.12	0.49
27:RG:113:ARG:HD2	47:R4:33:VAL:CG1	2.43	0.49
27:RG:114:ILE:HG21	27:RG:117:PHE:HB2	1.93	0.49
28:RH:7:LEU:C	28:RH:7:LEU:HD12	2.37	0.49
30:RN:63:THR:HG22	30:RN:66:LYS:HZ1	1.77	0.49
30:RN:73:THR:CG2	30:RN:82:LEU:HD11	2.43	0.49
32:RP:47:ASP:OD1	32:RP:49:ARG:NH1	2.46	0.49
36:RT:16:ARG:HD3	36:RT:19:LEU:CG	2.43	0.49
39:RW:30:GLU:O	39:RW:34:ASN:ND2	2.46	0.49
39:RW:48:ALA:O	39:RW:49:LYS:C	2.53	0.49
40:RX:44:GLU:OE1	40:RX:50:LYS:HD2	2.13	0.49
41:RY:84:ARG:HD3	41:RY:86:ARG:NH1	2.28	0.49
41:RY:95:LYS:N	41:RY:95:LYS:CD	2.76	0.49
47:R4:10:VAL:CG2	47:R4:11:PRO:HD2	2.43	0.49
48:R5:48:GLU:HA	48:R5:59:GLU:CG	2.43	0.49
48:R5:52:TYR:O	48:R5:53:ALA:CB	2.60	0.49
49:R6:8:LYS:O	49:R6:27:LYS:HA	2.13	0.49
51:R8:33:ASN:O	51:R8:35:GLN:N	2.46	0.49
1:XA:411:A:H62	1:XA:413:G:N2	2.07	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
3:XC:188:LEU:N	3:XC:188:LEU:CD2	2.76	0.49
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.49
10:XJ:63:PHE:CD1	14:XN:58:LYS:HA	2.35	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.94	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
22:YA:524:U:H2'	22:YA:525:U:C6	2.47	0.49
22:YA:565:C:H2'	22:YA:566:U:O4'	2.13	0.49
22:YA:962:G:OP1	22:YA:963:U:OP2	2.31	0.49
22:YA:1139:G:O2'	22:YA:1143:A:N1	2.38	0.49
22:YA:1203:G:H3'	22:YA:1204:A:H5"	1.93	0.49
22:YA:1258:C:O4'	26:YF:84:VAL:HG11	2.13	0.49
22:YA:1270:C:H5"	22:YA:1271:G:C5'	2.42	0.49
22:YA:1790:C:H2'	22:YA:1791:A:C4	2.48	0.49
22:YA:2464:C:H2'	22:YA:2465:C:H6	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:123:ALA:HB3	24:YD:131:LEU:HG	1.94	0.49
25:YE:119:ARG:HD3	25:YE:160:TYR:CD2	2.47	0.49
38:YV:79:VAL:HG22	38:YV:79:VAL:O	2.12	0.49
41:YY:95:LYS:N	41:YY:95:LYS:CD	2.76	0.49
1:QA:581:G:OP1	15:QO:61:GLY:HA3	2.12	0.49
1:QA:1238:A:H62	1:QA:1299:A:H61	1.60	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	0.49
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.49
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.43	0.49
22:RA:189:G:N2	22:RA:206:U:C5	2.80	0.49
22:RA:2405:G:O2'	22:RA:2406:U:OP2	2.29	0.49
22:RA:2630:G:O4'	22:RA:2894:G:H1'	2.12	0.49
22:RA:2790:A:H2'	22:RA:2791:C:H5"	1.94	0.49
24:RD:233:HIS:CD2	24:RD:233:HIS:H	2.29	0.49
25:RE:46:ALA:HB1	25:RE:80:GLU:HB2	1.94	0.49
26:RF:45:ARG:NH1	26:RF:45:ARG:HG2	2.28	0.49
28:RH:12:PRO:HD3	28:RH:48:GLY:O	2.13	0.49
28:RH:137:ASP:CB	28:RH:140:LYS:HB2	2.43	0.49
31:RO:107:ARG:NH1	36:RT:36:GLU:OE1	2.46	0.49
32:RP:101:VAL:CG1	32:RP:102:ARG:N	2.75	0.49
34:RR:52:ILE:CG2	34:RR:94:TYR:CD1	2.96	0.49
35:RS:48:LEU:N	35:RS:48:LEU:CD1	2.76	0.49
42:RZ:48:PHE:CZ	42:RZ:52:SER:HA	2.48	0.49
44:R1:19:GLN:HA	44:R1:19:GLN:OE1	2.12	0.49
48:R5:2:ALA:O	48:R5:3:LYS:CB	2.60	0.49
49:R6:7:ILE:O	49:R6:9:LEU:N	2.46	0.49
1:XA:137:C:N4	1:XA:226:G:H1	2.11	0.49
1:XA:292:G:C5	1:XA:293:G:H1'	2.48	0.49
1:XA:554:C:H2'	1:XA:555:C:C6	2.48	0.49
1:XA:974:A:N3	14:XN:31:ARG:NE	2.60	0.49
1:XA:1317:C:H5"	1:XA:1318:A:OP2	2.12	0.49
1:XA:1453:G:H8	20:XT:39:LYS:HZ1	1.60	0.49
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	0.49
9:XI:79:LEU:O	9:XI:79:LEU:HD13	2.12	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
12:XL:50:SER:O	12:XL:51:ALA:CB	2.60	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.12	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
22:YA:38:A:H2'	22:YA:39:C:C6	2.47	0.49
22:YA:483:A:H5"	22:YA:484:C:OP2	2.13	0.49
22:YA:1036:G:OP1	28:YH:59:ARG:HB2	2.12	0.49
22:YA:1638:C:OP1	22:YA:2710:C:O2'	2.28	0.49
22:YA:1803:A:O2'	24:YD:259:THR:HG21	2.13	0.49
22:YA:2025:C:H2'	22:YA:2026:C:C6	2.48	0.49
24:YD:30:GLU:CD	24:YD:63:ARG:HE	2.21	0.49
24:YD:44:ASN:H	24:YD:44:ASN:ND2	1.97	0.49
24:YD:69:ARG:C	24:YD:71:ASP:N	2.69	0.49
27:YG:3:LEU:HD21	47:Y4:25:TYR:CE1	2.48	0.49
28:YH:54:ARG:HD3	28:YH:65:HIS:ND1	2.27	0.49
28:YH:124:GLU:HB3	28:YH:132:ARG:CG	2.43	0.49
29:YI:5:LEU:H	29:YI:5:LEU:CD1	2.24	0.49
32:YP:31:ALA:C	32:YP:32:THR:CG2	2.85	0.49
32:YP:52:GLU:OE2	32:YP:57:THR:HA	2.13	0.49
36:YT:135:ALA:C	36:YT:137:LYS:N	2.71	0.49
37:YU:64:ARG:CG	37:YU:64:ARG:NH2	2.70	0.49
39:YW:88:ARG:HB3	39:YW:92:ARG:CB	2.41	0.49
41:YY:81:LYS:HD3	41:YY:97:ARG:HD3	1.94	0.49
48:Y5:49:CYS:SG	48:Y5:58:LEU:HB2	2.53	0.49
49:Y6:9:LEU:HD13	49:Y6:26:ASN:HD22	1.76	0.49
49:Y6:37:ARG:HE	49:Y6:37:ARG:HA	1.77	0.49
1:QA:410:G:H3'	4:QD:25:ARG:HH21	1.78	0.49
1:QA:678:U:H2'	1:QA:679:C:C6	2.48	0.49
1:QA:695:A:H2'	1:QA:696:A:C8	2.48	0.49
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.12	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49
11:QK:82:VAL:O	11:QK:108:ILE:HA	2.13	0.49
11:QK:91:ARG:HH22	18:QR:88:LYS:HZ3	1.59	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:47:LYS:NZ	54:QX:6:C:C5'	2.66	0.49
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.49
22:RA:139:G:N2	22:RA:1596:A:H4'	2.28	0.49
22:RA:252:G:OP2	32:RP:50:ARG:NH1	2.46	0.49
22:RA:311:A:C6	22:RA:328:U:C4	3.01	0.49
22:RA:554:U:H2'	22:RA:556:G:C8	2.47	0.49
22:RA:746:A:O2'	22:RA:747:U:OP2	2.29	0.49
22:RA:1359:A:C6	22:RA:1373:A:C5	3.01	0.49
22:RA:1431:U:H2'	22:RA:1432:C:C6	2.48	0.49
22:RA:1497:U:H5"	22:RA:1498:C:H5	1.78	0.49
22:RA:1667:G:N1	22:RA:1992:G:OP2	2.37	0.49
24:RD:30:GLU:CD	24:RD:63:ARG:HE	2.21	0.49
27:RG:6:ALA:H	47:R4:23:GLU:CG	2.25	0.49
27:RG:115:ARG:HG2	27:RG:115:ARG:NH1	2.27	0.49
28:RH:42:ARG:O	28:RH:52:VAL:HA	2.12	0.49
34:RR:44:LEU:HD22	34:RR:48:VAL:CG2	2.42	0.49
35:RS:11:LYS:O	35:RS:11:LYS:HG2	2.12	0.49
36:RT:111:ARG:O	36:RT:112:ARG:CG	2.55	0.49
38:RV:18:LEU:HB3	38:RV:96:ILE:CG1	2.43	0.49
38:RV:29:PRO:O	38:RV:61:VAL:HG22	2.12	0.49
39:RW:1:MET:HE2	39:RW:2:GLU:H	1.77	0.49
39:RW:51:LEU:HD23	39:RW:105:VAL:HG11	1.95	0.49
41:RY:6:HIS:O	41:RY:7:VAL:CG1	2.59	0.49
42:RZ:53:ILE:HG22	42:RZ:71:VAL:O	2.13	0.49
44:R1:81:LYS:O	44:R1:82:LEU:O	2.30	0.49
49:R6:27:LYS:NZ	49:R6:27:LYS:CB	2.73	0.49
49:R6:44:ARG:O	49:R6:45:LYS:CB	2.60	0.49
1:XA:521:G:H4'	12:XL:73:GLU:HG3	1.95	0.49
1:XA:532:A:H2	1:XA:1206:G:H21	1.60	0.49
1:XA:745:C:H2'	1:XA:746:A:C8	2.47	0.49
1:XA:792:A:H4'	1:XA:793:U:O5'	2.13	0.49
1:XA:953:G:H2'	1:XA:954:G:O4'	2.13	0.49
1:XA:1374:A:H2'	1:XA:1375:A:O4'	2.13	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.49
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.49
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.49
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.49
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:53:PRO:C	14:XN:41:ARG:NH2	2.71	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.49
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.49
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.49
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.49
22:YA:270(T):G:OP1	44:Y1:97:LEU:HD13	2.13	0.49
22:YA:1310:G:OP2	50:Y7:9:ARG:CZ	2.60	0.49
22:YA:1484:G:H1	22:YA:1505:C:N4	2.10	0.49
22:YA:1931:U:H6	22:YA:1932:A:C8	2.31	0.49
27:YG:115:ARG:HH11	27:YG:115:ARG:HG2	1.77	0.49
27:YG:143:GLU:HA	47:Y4:28:LYS:HD3	1.95	0.49
33:YQ:23:GLY:O	33:YQ:24:GLY:O	2.30	0.49
35:YS:48:LEU:N	35:YS:48:LEU:CD1	2.76	0.49
35:YS:55:ALA:O	35:YS:56:LEU:HB3	2.13	0.49
38:YV:35:LEU:HD22	38:YV:57:VAL:O	2.13	0.49
47:Y4:53:GLU:O	47:Y4:57:GLU:HG3	2.13	0.49
51:Y8:35:GLN:HA	51:Y8:35:GLN:OE1	2.12	0.49
53:XV:75:C:H2'	53:XV:76:A:O4'	2.12	0.49
1:QA:357:G:O2'	29:YI:89:TYR:O	2.29	0.48
1:QA:438:G:H4'	4:QD:123:HIS:CE1	2.48	0.48
1:QA:505:G:H2'	1:QA:506:G:H8	1.78	0.48
1:QA:889:A:N1	1:QA:907:A:H5"	2.28	0.48
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.48
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.48
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.48
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.86	0.48
22:RA:900:A:H5'	22:RA:901:A:OP2	2.13	0.48
22:RA:1794:U:H2'	22:RA:1795:C:C6	2.48	0.48
22:RA:2053:G:O6	22:RA:2614:A:H2	1.96	0.48
22:RA:2405:G:O2'	22:RA:2411:A:N6	2.45	0.48
22:RA:2553:G:H21	56:Z6:76:PPU:H2	1.68	0.48
26:RF:129:PHE:CD2	26:RF:163:VAL:HG21	2.48	0.48
27:RG:36:LYS:HA	27:RG:95:ARG:HG2	1.95	0.48
27:RG:77:ILE:O	27:RG:81:LYS:O	2.31	0.48
28:RH:124:GLU:HB3	28:RH:132:ARG:CG	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RO:104:ARG:NH1	36:RT:36:GLU:CD	2.71	0.48
32:RP:30:THR:O	32:RP:33:ARG:HB2	2.12	0.48
33:RQ:31:ASP:O	33:RQ:32:TYR:CG	2.66	0.48
34:RR:41:ALA:C	34:RR:43:GLU:H	2.20	0.48
41:RY:101:LYS:O	41:RY:102:CYS:SG	2.66	0.48
44:R1:93:GLU:O	44:R1:97:LEU:HD11	2.12	0.48
47:R4:47:GLN:O	47:R4:48:ARG:CB	2.61	0.48
48:R5:45:VAL:O	48:R5:45:VAL:HG12	2.13	0.48
51:R8:58:ILE:O	51:R8:61:LEU:HD12	2.13	0.48
1:XA:941:G:H1	1:XA:1342:C:N4	2.09	0.48
1:XA:1124:G:H8	1:XA:1124:G:OP2	1.95	0.48
1:XA:1128:C:N4	1:XA:1144:G:H1	2.09	0.48
1:XA:1191:A:OP1	3:XC:4:LYS:HG3	2.12	0.48
1:XA:1365:G:H3'	1:XA:1365:G:OP2	2.13	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.48
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.48
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.48
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
22:YA:540:G:H5'	22:YA:541:C:OP2	2.13	0.48
22:YA:962:G:H2'	22:YA:963:U:C6	2.48	0.48
22:YA:988:A:OP1	46:Y3:11:SER:N	2.43	0.48
22:YA:1788:C:O2'	22:YA:1789:A:H5'	2.13	0.48
22:YA:1805:U:O2	24:YD:50:THR:HB	2.13	0.48
22:YA:2356:C:O3'	43:Y0:20:ARG:HD3	2.13	0.48
24:YD:25:THR:O	24:YD:27:THR:HG22	2.12	0.48
27:YG:77:ILE:O	27:YG:81:LYS:O	2.31	0.48
27:YG:113:ARG:HD2	47:Y4:33:VAL:CG1	2.43	0.48
28:YH:153:LYS:CB	28:YH:154:PRO:CD	2.69	0.48
30:YN:4:TYR:OH	30:YN:7:LYS:NZ	2.46	0.48
32:YP:6:LEU:O	32:YP:7:ARG:O	2.31	0.48
32:YP:47:ASP:OD1	32:YP:49:ARG:NH1	2.46	0.48
32:YP:101:VAL:CG1	32:YP:102:ARG:N	2.75	0.48
32:YP:144:GLU:O	32:YP:144:GLU:OE1	2.31	0.48
33:YQ:34:LEU:HD23	33:YQ:104:PHE:HD1	1.77	0.48
33:YQ:86:GLY:O	33:YQ:88:GLY:N	2.46	0.48
34:YR:41:ALA:C	34:YR:43:GLU:H	2.20	0.48
34:YR:71:GLN:HE21	34:YR:71:GLN:HA	1.77	0.48
38:YV:76:LYS:HG3	38:YV:81:TYR:CD1	2.48	0.48
41:YY:77:PRO:O	41:YY:78:ALA:HB2	2.10	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y6:7:ILE:O	49:Y6:9:LEU:N	2.46	0.48
51:Y8:33:ASN:O	51:Y8:35:GLN:N	2.46	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.95	0.48
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.48
22:RA:1263:U:C4	22:RA:1264:G:C6	3.01	0.48
22:RA:1337:G:H2'	22:RA:1338:G:H8	1.77	0.48
22:RA:1568:G:P	24:RD:63:ARG:HH22	2.36	0.48
22:RA:1788:C:OP1	24:RD:222:ARG:NH2	2.43	0.48
22:RA:2228:G:C6	22:RA:2229:C:C4	3.00	0.48
22:RA:2364:C:H2'	22:RA:2365:G:O4'	2.14	0.48
24:RD:10:THR:O	24:RD:11:PRO:C	2.56	0.48
26:RF:155:LEU:HD23	26:RF:186:ILE:HA	1.95	0.48
27:RG:115:ARG:HG2	27:RG:115:ARG:HH11	1.77	0.48
27:RG:125:PHE:HB3	27:RG:166:ASP:HB2	1.95	0.48
28:RH:119:GLU:CD	28:RH:120:GLY:H	2.22	0.48
28:RH:123:PHE:O	28:RH:125:VAL:HG23	2.13	0.48
30:RN:10:GLU:HA	30:RN:11:PRO:HD3	1.73	0.48
32:RP:35:HIS:O	32:RP:36:LYS:O	2.31	0.48
32:RP:36:LYS:HB2	32:RP:40:SER:HB3	1.94	0.48
34:RR:2:ARG:HG2	34:RR:5:LYS:HZ1	1.76	0.48
36:RT:132:LYS:O	36:RT:136:GLN:HG3	2.13	0.48
37:RU:81:HIS:CE1	37:RU:117:GLN:HG3	2.48	0.48
38:RV:22:VAL:HG12	38:RV:23:GLU:H	1.76	0.48
39:RW:36:LEU:CD1	39:RW:47:VAL:HG12	2.43	0.48
40:RX:11:PRO:HB3	40:RX:92:LEU:CD2	2.43	0.48
48:R5:56:LYS:HD2	48:R5:56:LYS:N	2.13	0.48
1:XA:186(C):G:H2'	1:XA:186(D):C:C6	2.48	0.48
1:XA:502:G:C2	1:XA:503:C:C2	3.01	0.48
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.77	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.27	0.48
4:XD:180:GLY:O	4:XD:181:MET:C	2.54	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
22:YA:239:U:H2'	22:YA:240:G:O4'	2.13	0.48
22:YA:1140:C:H5"	30:YN:66:LYS:NZ	2.28	0.48
22:YA:1213:A:OP2	22:YA:1235:G:N1	2.41	0.48
25:YE:38:THR:O	25:YE:42:ASP:HB2	2.13	0.48
27:YG:92:VAL:O	27:YG:92:VAL:HG13	2.12	0.48
28:YH:13:LYS:HE2	28:YH:13:LYS:CA	2.40	0.48
28:YH:42:ARG:O	28:YH:52:VAL:HA	2.13	0.48
33:YQ:80:GLU:OE1	43:Y0:7:LEU:HG	2.13	0.48
34:YR:41:ALA:C	34:YR:43:GLU:N	2.68	0.48
35:YS:33:LYS:HB3	35:YS:34:HIS:CD2	2.48	0.48
37:YU:91:ASP:O	37:YU:95:LEU:N	2.42	0.48
38:YV:18:LEU:HB3	38:YV:96:ILE:CG1	2.43	0.48
41:YY:97:ARG:HG2	41:YY:97:ARG:NH1	2.28	0.48
53:QV:35:A:C2	54:QX:3:G:C4	2.97	0.48
1:QA:811:C:H4'	1:QA:900:A:N6	2.28	0.48
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.78	0.48
1:QA:1306:A:N6	1:QA:1331:G:H1'	2.28	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.43	0.48
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.48
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
22:RA:483:A:H3'	22:RA:484:C:H6	1.77	0.48
22:RA:689:A:H2'	22:RA:690:G:C8	2.48	0.48
22:RA:857:C:H2'	22:RA:858:U:C6	2.48	0.48
22:RA:1149:G:H2'	22:RA:1150:C:C6	2.49	0.48
22:RA:1203:G:O2'	22:RA:1242:A:N6	2.38	0.48
22:RA:1454:U:O2'	22:RA:1455:G:N7	2.37	0.48
22:RA:1647:G:H3'	22:RA:1647:G:OP2	2.12	0.48
22:RA:2286:A:H2'	49:R6:31:PRO:HG2	1.95	0.48
28:RH:109:PHE:C	28:RH:111:HIS:H	2.21	0.48
34:RR:42:LYS:HA	34:RR:45:ARG:HD2	1.95	0.48
35:RS:33:LYS:HB3	35:RS:34:HIS:CD2	2.48	0.48
35:RS:46:VAL:HG12	35:RS:47:THR:N	2.28	0.48
38:RV:35:LEU:HD22	38:RV:57:VAL:O	2.13	0.48
38:RV:79:VAL:HG22	38:RV:79:VAL:O	2.12	0.48
40:RX:35:THR:O	40:RX:37:THR:N	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RZ:27:VAL:N	42:RZ:37:VAL:HG22	2.28	0.48
42:RZ:153:SER:HB2	42:RZ:167:PRO:HB3	1.93	0.48
48:R5:3:LYS:O	48:R5:4:HIS:C	2.56	0.48
50:R7:12:ARG:HG3	50:R7:12:ARG:HH11	1.78	0.48
1:XA:131:C:H2'	1:XA:132:C:C6	2.48	0.48
1:XA:1422:G:H5"	31:YO:48:PRO:HB3	1.93	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.42	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.76	0.48
22:YA:630:G:N2	22:YA:632:A:H3'	2.28	0.48
22:YA:2151:G:H2'	22:YA:2152:G:H8	1.78	0.48
22:YA:2373:G:H2'	22:YA:2374:C:C6	2.48	0.48
22:YA:2547:U:H2'	22:YA:2548:G:H8	1.78	0.48
26:YF:128:ALA:O	26:YF:129:PHE:HB2	2.13	0.48
27:YG:115:ARG:NH1	27:YG:115:ARG:HG2	2.27	0.48
28:YH:12:PRO:HD3	28:YH:48:GLY:O	2.13	0.48
28:YH:109:PHE:C	28:YH:111:HIS:H	2.21	0.48
28:YH:137:ASP:CB	28:YH:140:LYS:HB2	2.43	0.48
29:YI:27:ARG:HD3	44:Y1:71:TYR:CE1	2.37	0.48
30:YN:30:ILE:O	30:YN:34:LEU:HD23	2.13	0.48
32:YP:71:VAL:HG13	32:YP:72:PRO:CD	2.43	0.48
36:YT:16:ARG:HD3	36:YT:19:LEU:CG	2.43	0.48
36:YT:58:ASN:HD22	36:YT:58:ASN:N	2.10	0.48
37:YU:52:ARG:NH1	37:YU:52:ARG:CG	2.76	0.48
38:YV:7:THR:HG23	38:YV:22:VAL:HG11	1.94	0.48
45:Y2:16:LEU:O	45:Y2:17:SER:CB	2.56	0.48
49:Y6:27:LYS:O	49:Y6:28:ARG:HG2	2.13	0.48
50:Y7:48:LYS:CG	50:Y7:49:ARG:H	2.23	0.48
53:QV:34:C:N3	54:QX:3:G:N2	2.61	0.48
53:XV:4:G:O2'	53:XV:5:G:H8	1.96	0.48
1:QA:707:C:H5"	11:QK:85:ARG:NH1	2.29	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
2:QB:212:GLN:CD	2:QB:212:GLN:C	2.82	0.48
2:QB:214:ILE:O	2:QB:218:ALA:HB2	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
12:QL:47:LYS:CG	12:QL:48:PRO:N	2.75	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
22:RA:49:A:H5"	22:RA:51:G:H5'	1.93	0.48
22:RA:1030:G:OP2	33:RQ:128:LYS:HE2	2.13	0.48
23:RB:13:A:O2'	23:RB:14:U:H3'	2.13	0.48
25:RE:78:LEU:CD2	25:RE:79:ARG:HD2	2.43	0.48
25:RE:93:VAL:H	25:RE:95:ILE:CD1	2.22	0.48
31:RO:1:MET:HE3	31:RO:67:LYS:HG2	1.95	0.48
32:RP:52:GLU:OE2	32:RP:57:THR:HA	2.13	0.48
32:RP:112:LEU:HD12	32:RP:127:ALA:CB	2.44	0.48
36:RT:135:ALA:C	36:RT:137:LYS:N	2.71	0.48
45:R2:69:ARG:HH11	45:R2:69:ARG:HB3	1.79	0.48
47:R4:42:PHE:CD1	47:R4:42:PHE:C	2.90	0.48
49:R6:14:THR:OG1	49:R6:19:ARG:NE	2.40	0.48
1:XA:176:C:O2'	1:XA:1451:A:N1	2.46	0.48
1:XA:626:U:H2'	1:XA:627:G:C8	2.48	0.48
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.28	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.48
3:XC:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.13	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
5:XE:20:GLN:O	5:XE:21:ALA:C	2.57	0.48
7:XG:80:VAL:HG12	7:XG:81:GLY:N	2.28	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.75	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
22:YA:177:G:H3'	22:YA:178:G:C8	2.48	0.48
22:YA:372:G:O2'	22:YA:373:U:P	2.72	0.48
22:YA:464:U:H2'	22:YA:465:G:O4'	2.14	0.48
22:YA:2232:U:P	44:Y1:40:ARG:HH12	2.36	0.48
22:YA:2277:G:OP2	43:Y0:12:ASN:ND2	2.45	0.48
24:YD:48:ARG:HG3	24:YD:48:ARG:HH11	1.78	0.48
26:YF:107:LYS:O	26:YF:110:LEU:N	2.47	0.48
26:YF:155:LEU:HD23	26:YF:186:ILE:HA	1.95	0.48
28:YH:53:GLU:CD	28:YH:54:ARG:H	2.21	0.48
33:YQ:90:VAL:C	33:YQ:92:GLY:N	2.71	0.48
35:YS:18:ILE:O	35:YS:19:LYS:O	2.31	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:56:GLN:NE2	44:Y1:56:GLN:H	2.10	0.48
44:Y1:73:LEU:C	44:Y1:75:GLU:N	2.70	0.48
48:Y5:48:GLU:HA	48:Y5:59:GLU:HG2	1.94	0.48
53:QV:4:G:O2'	53:QV:5:G:H8	1.96	0.48
55:XY:40:G:O2'	55:XY:41:A:H5'	2.13	0.48
1:QA:964:A:N3	1:QA:969:A:O2'	2.36	0.48
1:QA:986:A:H1'	19:QS:54:GLY:O	2.14	0.48
1:QA:1317:C:H5"	1:QA:1318:A:OP2	2.13	0.48
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.48	0.48
1:QA:1443:G:N2	22:RA:2864:G:OP1	2.43	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.27	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.48
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
22:RA:582:G:H2'	22:RA:583:G:C8	2.48	0.48
22:RA:1019:U:O2'	22:RA:1021:A:H2	1.96	0.48
22:RA:1057:A:H62	22:RA:1086:A:H2'	1.78	0.48
22:RA:1153:C:H2'	22:RA:1154:G:O4'	2.14	0.48
22:RA:1433:U:H1'	22:RA:1561:G:N2	2.28	0.48
22:RA:1803:A:O2'	24:RD:259:THR:HG21	2.13	0.48
22:RA:2612:C:C4	22:RA:2613:U:H5	2.32	0.48
22:RA:2815:C:O2'	48:R5:42:PRO:HB2	2.14	0.48
24:RD:35:LYS:HD2	24:RD:104:TYR:CE1	2.49	0.48
26:RF:128:ALA:O	26:RF:129:PHE:HB2	2.13	0.48
26:RF:198:ALA:O	26:RF:201:VAL:HG12	2.13	0.48
27:RG:16:ARG:HB3	27:RG:17:PRO:HD3	1.94	0.48
29:RI:83:ALA:HA	29:RI:88:ILE:HA	1.94	0.48
32:RP:71:VAL:HG13	32:RP:72:PRO:CD	2.43	0.48
33:RQ:87:LYS:O	33:RQ:89:ASN:N	2.43	0.48
35:RS:59:LYS:HG2	35:RS:60:GLY:N	2.13	0.48
36:RT:105:LEU:C	36:RT:107:ASP:OD1	2.56	0.48
38:RV:6:LYS:HD3	38:RV:11:GLN:HG2	1.96	0.48
45:R2:69:ARG:CB	45:R2:69:ARG:HH11	2.25	0.48
47:R4:48:ARG:C	47:R4:49:PHE:HD1	2.22	0.48
51:R8:35:GLN:HA	51:R8:35:GLN:OE1	2.13	0.48
51:R8:41:ILE:HG13	51:R8:42:ARG:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:56:GLU:O	51:R8:58:ILE:N	2.47	0.48
1:XA:119:A:H4'	1:XA:120:A:C8	2.49	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.96	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
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:CB	9:XI:118:LYS:NZ	2.75	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.48
12:XL:46:LYS:HG3	12:XL:47:LYS:N	2.23	0.48
22:YA:666:G:H4'	32:YP:49:ARG:HH12	1.77	0.48
22:YA:869:G:H2'	22:YA:870:A:H8	1.77	0.48
22:YA:1799:G:H4'	22:YA:1800:C:O5'	2.13	0.48
22:YA:2105:C:H2'	22:YA:2106:G:C8	2.48	0.48
22:YA:2335:A:O2'	22:YA:2336:A:O5'	2.27	0.48
22:YA:2415:G:H4'	32:YP:67:MET:N	2.28	0.48
22:YA:2498:C:O2'	22:YA:2499:C:H5'	2.14	0.48
24:YD:10:THR:O	24:YD:11:PRO:C	2.56	0.48
24:YD:35:LYS:HD2	24:YD:104:TYR:CE1	2.48	0.48
24:YD:45:ASN:CG	24:YD:46:GLN:N	2.68	0.48
25:YE:69:LYS:C	25:YE:71:GLY:N	2.71	0.48
25:YE:174:ASP:O	25:YE:182:LEU:HD12	2.14	0.48
28:YH:23:ARG:HD2	28:YH:34:GLU:OE2	2.12	0.48
28:YH:82:GLY:O	28:YH:83:TYR:O	2.31	0.48
30:YN:103:VAL:O	30:YN:104:LYS:C	2.56	0.48
32:YP:6:LEU:N	32:YP:6:LEU:CD2	2.75	0.48
34:YR:52:ILE:CG2	34:YR:94:TYR:CD1	2.96	0.48
41:YY:35:TYR:CD1	41:YY:69:ALA:HB3	2.48	0.48
42:YZ:53:ILE:HG22	42:YZ:71:VAL:HG13	1.96	0.48
43:Y0:70:GLN:CD	43:Y0:72:ARG:HD3	2.39	0.48
48:Y5:52:TYR:O	48:Y5:53:ALA:CB	2.61	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.43	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.96	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
22:RA:50:U:H3'	22:RA:51:G:H5'	1.96	0.48
22:RA:76:C:O2'	45:R2:62:THR:HG21	2.13	0.48
22:RA:336:C:H4'	41:RY:6:HIS:CE1	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:570:G:H2'	22:RA:2030:A:C6	2.49	0.48
22:RA:2875:C:H4'	36:RT:5:ALA:HB2	1.95	0.48
26:RF:107:LYS:O	26:RF:110:LEU:N	2.47	0.48
27:RG:136:ARG:O	27:RG:154:GLY:CA	2.62	0.48
28:RH:7:LEU:N	28:RH:8:PRO:CD	2.77	0.48
32:RP:138:LEU:HD11	32:RP:144:GLU:CG	2.42	0.48
41:RY:44:ILE:O	41:RY:62:GLU:O	2.32	0.48
41:RY:57:GLN:O	41:RY:58:GLY:O	2.32	0.48
42:RZ:30:ASN:N	42:RZ:30:ASN:OD1	2.47	0.48
42:RZ:48:PHE:HE2	42:RZ:71:VAL:HG11	1.78	0.48
44:R1:56:GLN:NE2	44:R1:56:GLN:H	2.10	0.48
44:R1:92:LYS:O	44:R1:93:GLU:C	2.56	0.48
49:R6:27:LYS:O	49:R6:28:ARG:HG2	2.13	0.48
1:XA:827:U:H5	1:XA:870:U:C2	2.32	0.48
1:XA:946:A:H2'	1:XA:947:G:C8	2.49	0.48
1:XA:1054:C:N4	55:XY:34:C:C6	2.71	0.48
1:XA:1067:A:N1	1:XA:1108:G:O2'	2.41	0.48
1:XA:1483:A:H2	22:YA:1959:G:N3	2.11	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.14	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.45	0.48
22:YA:49:A:H4'	22:YA:50:U:H5"	1.96	0.48
22:YA:270(U):C:H2'	22:YA:270(V):G:C8	2.47	0.48
22:YA:821:A:C2	22:YA:946:G:H1'	2.48	0.48
22:YA:855:G:C6	22:YA:856:C:N4	2.81	0.48
22:YA:1203:G:H5'	32:YP:3:LEU:HD12	1.96	0.48
22:YA:1535:U:OP2	22:YA:1537:C:N4	2.47	0.48
22:YA:1543:A:O2'	22:YA:1544:C:P	2.71	0.48
22:YA:1783:A:H5'	22:YA:2608:G:H4'	1.95	0.48
22:YA:1789:A:OP1	24:YD:221:VAL:HA	2.14	0.48
22:YA:2266:A:H4'	22:YA:2267:A:N3	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2394:C:OP1	32:YP:63:PRO:HD2	2.13	0.48
22:YA:2467:C:C2'	22:YA:2468:G:H5'	2.44	0.48
23:YB:71:C:C2	23:YB:72:G:C8	3.01	0.48
25:YE:77:ILE:CD1	25:YE:78:LEU:N	2.70	0.48
26:YF:198:ALA:O	26:YF:201:VAL:HG12	2.13	0.48
27:YG:125:PHE:HB3	27:YG:166:ASP:HB2	1.95	0.48
28:YH:7:LEU:N	28:YH:8:PRO:CD	2.77	0.48
30:YN:87:LEU:C	30:YN:87:LEU:CD2	2.87	0.48
33:YQ:19:GLY:O	33:YQ:98:LYS:HD3	2.14	0.48
36:YT:96:ARG:NH1	36:YT:96:ARG:CB	2.77	0.48
37:YU:79:PHE:C	37:YU:79:PHE:HD2	2.18	0.48
40:YX:35:THR:O	40:YX:36:LYS:C	2.55	0.48
42:YZ:166:SER:HB2	42:YZ:167:PRO:C	2.39	0.48
47:Y4:42:PHE:O	47:Y4:44:THR:O	2.31	0.48
1:QA:105:G:C6	1:QA:106:C:C4	3.01	0.48
1:QA:177:C:H2'	1:QA:178:C:C6	2.49	0.48
1:QA:602:A:H2'	1:QA:603:U:C6	2.49	0.48
1:QA:818:G:H3'	1:QA:819:A:H5"	1.94	0.48
1:QA:1176:A:H2'	1:QA:1177:G:H5'	1.95	0.48
1:QA:1228:C:OP1	13:QM:114:ARG:HA	2.14	0.48
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.20	0.48
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.48
4:QD:163:GLU:O	4:QD:165:MET:N	2.46	0.48
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.48
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.48
8:QH:86:ILE:HG12	8:QH:135:CYS:HA	1.96	0.48
9:QI:95:LYS:HD3	9:QI:95:LYS:C	2.39	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.78	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
22:RA:376:C:H2'	22:RA:377:C:C6	2.48	0.48
22:RA:1041:C:H2'	22:RA:1042:G:C8	2.49	0.48
22:RA:1270:C:H5"	22:RA:1271:G:H5'	1.95	0.48
22:RA:1366:A:H2'	22:RA:1367:A:O4'	2.13	0.48
22:RA:2052:G:C6	22:RA:2053:G:N7	2.82	0.48
22:RA:2227:A:H5"	24:RD:263:ARG:NH1	2.28	0.48
22:RA:2403:C:N3	22:RA:2415:G:C2	2.81	0.48
22:RA:2450:A:C2	22:RA:2451:A:C4	3.02	0.48
24:RD:48:ARG:HG3	24:RD:48:ARG:HH11	1.78	0.48
25:RE:77:ILE:CD1	25:RE:78:LEU:N	2.70	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:144:LYS:C	26:RF:146:ALA:H	2.20	0.48
28:RH:104:GLU:HG3	28:RH:114:VAL:HG22	1.96	0.48
32:RP:144:GLU:OE1	32:RP:144:GLU:O	2.31	0.48
33:RQ:19:GLY:O	33:RQ:98:LYS:HD3	2.14	0.48
33:RQ:34:LEU:HD23	33:RQ:104:PHE:HD1	1.77	0.48
34:RR:61:HIS:O	34:RR:65:LEU:HD13	2.14	0.48
40:RX:14:SER:O	40:RX:15:GLU:C	2.57	0.48
1:XA:431:A:H2'	1:XA:432:A:O4'	2.14	0.48
1:XA:1048:G:OP1	14:XN:3:ARG:HB3	2.14	0.48
1:XA:1443:G:N2	22:YA:2864:G:OP1	2.44	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.96	0.48
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
7:XG:60:LYS:O	7:XG:61:VAL:C	2.57	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
22:YA:869:G:H2'	22:YA:870:A:C8	2.49	0.48
22:YA:898:C:H2'	22:YA:899:A:H5'	1.95	0.48
22:YA:1259:G:H2'	22:YA:1260:G:H8	1.77	0.48
22:YA:1870:C:H2'	22:YA:1871:A:O4'	2.14	0.48
22:YA:2715:C:H2'	22:YA:2716:U:H6	1.79	0.48
22:YA:2786:U:O2'	25:YE:62:PRO:O	2.32	0.48
22:YA:2863:C:H2'	22:YA:2864:G:H8	1.77	0.48
24:YD:198:ASN:C	24:YD:198:ASN:ND2	2.69	0.48
28:YH:120:GLY:HA3	28:YH:140:LYS:NZ	2.27	0.48
28:YH:124:GLU:HB3	28:YH:132:ARG:CD	2.44	0.48
32:YP:35:HIS:O	32:YP:36:LYS:O	2.31	0.48
33:YQ:31:ASP:O	33:YQ:32:TYR:CG	2.66	0.48
34:YR:48:VAL:O	34:YR:49:ASP:C	2.57	0.48
36:YT:105:LEU:C	36:YT:107:ASP:OD1	2.56	0.48
39:YW:34:ASN:O	39:YW:35:ILE:C	2.55	0.48
40:YX:44:GLU:OE1	40:YX:50:LYS:HD2	2.13	0.48
41:YY:11:ASP:HB2	41:YY:27:VAL:HG11	1.94	0.48
45:Y2:33:MET:O	45:Y2:37:PHE:HD1	1.95	0.48
50:Y7:12:ARG:HG3	50:Y7:12:ARG:HH11	1.78	0.48
1:QA:583:A:H2'	1:QA:584:G:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:713:G:H21	1:QA:777:A:H1'	1.79	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.79	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.48
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.43	0.48
22:RA:593:G:C2	22:RA:594:U:C2	3.02	0.48
22:RA:1093:G:OP1	28:RH:170:ARG:HD2	2.13	0.48
22:RA:2090:G:C2	22:RA:2230:G:C5	3.01	0.48
22:RA:2183:C:H2'	22:RA:2184:G:H8	1.79	0.48
22:RA:2277:G:P	33:RQ:85:LYS:HB2	2.53	0.48
22:RA:2555:U:N3	56:Z6:74:C:C5	2.80	0.48
24:RD:130:ALA:HA	24:RD:192:THR:HA	1.95	0.48
26:RF:155:LEU:HA	26:RF:174:VAL:HG12	1.95	0.48
30:RN:34:LEU:O	30:RN:49:GLY:HA3	2.13	0.48
30:RN:103:VAL:O	30:RN:104:LYS:C	2.57	0.48
35:RS:61:ASN:OD1	35:RS:63:THR:OG1	2.29	0.48
36:RT:57:PHE:O	36:RT:59:THR:N	2.46	0.48
37:RU:79:PHE:HE2	37:RU:83:LEU:CD2	2.26	0.48
48:R5:49:CYS:SG	48:R5:58:LEU:HB2	2.53	0.48
1:XA:8:A:N6	4:XD:205:GLU:O	2.46	0.48
1:XA:411:A:C5	1:XA:413:G:H1'	2.49	0.48
1:XA:1330:U:H5"	1:XA:1331:G:OP2	2.14	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
2:XB:212:GLN:CD	2:XB:212:GLN:C	2.82	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
4:XD:114:ARG:HH11	4:XD:114:ARG:CG	2.17	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.13	0.48
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.48
12:XL:52:LEU:O	12:XL:54:LYS:NZ	2.30	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
13:XM:3:ARG:HG3	47:Y4:34:GLU:OE1	2.13	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.48
22:YA:27:G:N2	22:YA:512:G:H2'	2.28	0.48
22:YA:442:G:O4'	26:YF:46:ARG:HD3	2.14	0.48
22:YA:757:U:H2'	22:YA:758:C:H6	1.79	0.48
22:YA:1385:G:H1'	22:YA:1386:C:C6	2.49	0.48
22:YA:1427:A:H4'	22:YA:1428:C:O5'	2.13	0.48
22:YA:1818:U:H2'	24:YD:157:ARG:HG3	1.96	0.48
22:YA:1889:A:N1	22:YA:2234:G:H1'	2.29	0.48
22:YA:2356:C:H2'	22:YA:2357:U:O4'	2.12	0.48
24:YD:35:LYS:CG	24:YD:64:ILE:CG2	2.92	0.48
25:YE:23:VAL:HG12	25:YE:173:VAL:HG21	1.94	0.48
26:YF:45:ARG:NH1	26:YF:45:ARG:HG2	2.28	0.48
28:YH:86:GLU:H	28:YH:86:GLU:CD	2.16	0.48
28:YH:119:GLU:CD	28:YH:120:GLY:H	2.22	0.48
30:YN:34:LEU:O	30:YN:49:GLY:HA3	2.13	0.48
30:YN:118:LYS:C	30:YN:120:LEU:H	2.20	0.48
34:YR:42:LYS:HA	34:YR:45:ARG:HD2	1.95	0.48
35:YS:66:ALA:HA	35:YS:69:VAL:HG12	1.96	0.48
36:YT:16:ARG:NE	36:YT:19:LEU:HD21	2.27	0.48
42:YZ:97:GLU:HB3	42:YZ:125:LEU:HD11	1.95	0.48
47:Y4:8:LYS:O	47:Y4:9:LEU:CB	2.62	0.48
49:Y6:8:LYS:O	49:Y6:27:LYS:HA	2.13	0.48
49:Y6:41:PRO:HD2	49:Y6:46:HIS:H	1.78	0.48
1:QA:881:G:OP1	12:QL:12:ARG:NH2	2.47	0.48
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.77	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.48
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.48
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.48
22:RA:345:A:H2'	22:RA:347:A:H62	1.79	0.48
22:RA:389:G:H1	32:RP:71:VAL:HG12	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1508:A:O2'	22:RA:1509:C:O4'	2.25	0.48
22:RA:2123:G:H2'	22:RA:2124:G:C8	2.48	0.48
22:RA:2518:A:H4'	22:RA:2519:U:OP1	2.12	0.48
25:RE:61:ARG:CB	25:RE:62:PRO:CD	2.90	0.48
26:RF:51:THR:O	26:RF:93:LYS:NZ	2.38	0.48
27:RG:3:LEU:HD21	47:R4:25:TYR:CE1	2.48	0.48
29:RI:95:LYS:HA	29:RI:111:PRO:HG3	1.96	0.48
30:RN:57:ALA:O	30:RN:58:ASP:CB	2.61	0.48
30:RN:82:LEU:HD12	30:RN:83:LYS:N	2.27	0.48
33:RQ:42:ILE:HD12	33:RQ:42:ILE:N	2.29	0.48
37:RU:107:ALA:O	37:RU:110:VAL:HB	2.14	0.48
41:RY:11:ASP:HB2	41:RY:27:VAL:HG11	1.94	0.48
47:R4:60:GLN:O	47:R4:63:TYR:HB3	2.14	0.48
51:R8:40:GLU:O	51:R8:41:ILE:C	2.56	0.48
52:R9:1:MET:HE2	52:R9:10:ILE:HD13	1.95	0.48
1:XA:45:U:H2'	1:XA:46:G:C8	2.49	0.48
1:XA:261:U:H2'	1:XA:263:A:OP2	2.14	0.48
1:XA:406:G:H2'	1:XA:407:G:H8	1.78	0.48
1:XA:981:U:H5'	14:XN:21:TYR:CZ	2.49	0.48
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.48
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.91	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
14:XN:15:LYS:HD2	14:XN:16:PHE:CE2	2.49	0.48
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.48
22:YA:141:A:H8	22:YA:1408:C:H1'	1.78	0.48
22:YA:152:G:H2'	22:YA:153:C:C6	2.48	0.48
22:YA:218:A:C2	22:YA:235:U:H4'	2.49	0.48
22:YA:1798:U:C5'	24:YD:259:THR:HG22	2.43	0.48
22:YA:1827:C:H2'	22:YA:1828:G:O4'	2.14	0.48
22:YA:1916:A:H2'	22:YA:1917:U:O4'	2.14	0.48
22:YA:1930:G:O2'	22:YA:1931:U:O5'	2.31	0.48
22:YA:2052:G:OP1	25:YE:141:ILE:HG12	2.14	0.48
22:YA:2722:G:H4'	34:YR:4:LEU:HB2	1.95	0.48
25:YE:55:ASN:O	25:YE:57:LYS:N	2.44	0.48
25:YE:119:ARG:HD3	25:YE:160:TYR:HD2	1.78	0.48
26:YF:34:TRP:HD1	32:YP:6:LEU:HB3	1.79	0.48
26:YF:129:PHE:CD2	26:YF:163:VAL:HG21	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:127:GLU:HB3	28:YH:128:PRO:HD2	1.92	0.48
34:YR:44:LEU:HD22	34:YR:48:VAL:CG2	2.43	0.48
36:YT:94:ALA:O	36:YT:95:ARG:CB	2.61	0.48
38:YV:21:ARG:HD2	38:YV:91:TYR:CZ	2.49	0.48
40:YX:6:ASP:OD1	45:Y2:29:LYS:NZ	2.47	0.48
42:YZ:69:THR:HB	42:YZ:88:PHE:HB3	1.96	0.48
42:YZ:124:ILE:HG23	42:YZ:165:VAL:CG2	2.44	0.48
44:Y1:8:SER:OG	44:Y1:10:LYS:HG3	2.14	0.48
44:Y1:76:ARG:HD2	44:Y1:76:ARG:N	2.29	0.48
44:Y1:92:LYS:O	44:Y1:93:GLU:C	2.56	0.48
45:Y2:27:GLU:H	45:Y2:27:GLU:CD	2.17	0.48
45:Y2:69:ARG:HH11	45:Y2:69:ARG:HB3	1.79	0.48
47:Y4:10:VAL:CG2	47:Y4:11:PRO:HD2	2.43	0.48
53:XV:19:G:H4'	53:XV:20:U:OP2	2.14	0.48
1:QA:464:G:O6	1:QA:466:C:H5'	2.13	0.48
1:QA:574:A:HO2'	1:QA:882:C:HO2'	1.55	0.48
1:QA:1446:A:N3	36:RT:118:ARG:HD2	2.29	0.48
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.48
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.48
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.48
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.48
7:QG:51:GLN:HA	7:QG:51:GLN:OE1	2.14	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.48
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.48
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.48
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.48
17:QQ:33:GLY:O	17:QQ:34:LYS:C	2.55	0.48
18:QR:31:LEU:HD23	18:QR:31:LEU:N	2.29	0.48
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.43	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
22:RA:744:G:H2'	22:RA:745:G:O4'	2.13	0.48
22:RA:2558:C:H2'	22:RA:2559:C:O4'	2.14	0.48
25:RE:55:ASN:C	25:RE:57:LYS:N	2.62	0.48
25:RE:203:LYS:HD2	25:RE:203:LYS:C	2.39	0.48
26:RF:34:TRP:HD1	32:RP:6:LEU:HB3	1.79	0.48
27:RG:12:TYR:O	27:RG:16:ARG:HB3	2.14	0.48
27:RG:106:LEU:HA	27:RG:110:ALA:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:131:VAL:HG12	28:RH:132:ARG:N	2.29	0.48
30:RN:96:GLU:O	30:RN:97:ARG:C	2.57	0.48
30:RN:97:ARG:HA	30:RN:100:GLU:HB3	1.96	0.48
32:RP:47:ASP:OD1	32:RP:50:ARG:NH2	2.47	0.48
32:RP:75:ILE:H	32:RP:75:ILE:CD1	2.14	0.48
33:RQ:21:THR:HB	33:RQ:22:LYS:H	1.42	0.48
33:RQ:119:ARG:O	33:RQ:123:HIS:HD2	1.97	0.48
34:RR:63:ARG:NH1	34:RR:63:ARG:HG3	2.29	0.48
48:R5:57:VAL:O	48:R5:57:VAL:HG13	2.13	0.48
50:R7:32:LYS:O	50:R7:33:ARG:C	2.56	0.48
1:XA:571:U:O2	1:XA:918:A:H5'	2.14	0.48
1:XA:1059:C:OP1	3:XC:199:LYS:NZ	2.38	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
2:XB:195:ASP:O	8:XH:74:PRO:HG3	2.13	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.48
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.48
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.48
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.48
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
12:XL:47:LYS:HB2	12:XL:48:PRO:HD3	1.96	0.48
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
22:YA:83:G:N1	22:YA:102:G:H1'	2.29	0.48
22:YA:235:U:H2'	22:YA:236:C:C6	2.49	0.48
22:YA:878:A:N6	22:YA:899:A:HO2'	2.11	0.48
22:YA:1403:C:H5"	22:YA:1471:A:H1'	1.96	0.48
22:YA:1408:C:C2	22:YA:1595:G:N2	2.82	0.48
22:YA:2789:C:H1'	22:YA:2892:A:C2	2.39	0.48
24:YD:27:THR:O	24:YD:29:PRO:CD	2.62	0.48
24:YD:130:ALA:HA	24:YD:192:THR:HA	1.95	0.48
28:YH:45:VAL:O	28:YH:45:VAL:HG13	2.14	0.48
30:YN:90:MET:O	30:YN:91:LEU:C	2.57	0.48
30:YN:120:LEU:HD11	30:YN:122:VAL:CG2	2.42	0.48
30:YN:137:LYS:CG	30:YN:138:LEU:H	2.27	0.48
31:YO:107:ARG:NH1	36:YT:36:GLU:OE1	2.46	0.48
33:YQ:42:ILE:HD12	33:YQ:42:ILE:N	2.29	0.48
34:YR:63:ARG:NH1	34:YR:63:ARG:HG3	2.29	0.48
37:YU:79:PHE:HE2	37:YU:83:LEU:CD2	2.27	0.48
40:YX:11:PRO:HB3	40:YX:92:LEU:CD2	2.43	0.48
51:Y8:53:PRO:CD	51:Y8:54:GLU:N	2.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:977:A:O2'	1:QA:981:U:N3	2.39	0.47
3:QC:12:LEU:C	3:QC:14:ILE:H	2.22	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.47
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.47
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.47
13:QM:50:GLU:O	13:QM:54:VAL:HG23	2.13	0.47
15:QO:24:SER:OG	15:QO:25:THR:N	2.47	0.47
22:RA:270(S):G:C1'	44:R1:78:LYS:HD2	2.44	0.47
22:RA:335:C:H4'	41:RY:73:ARG:CZ	2.43	0.47
22:RA:1429:G:H2'	22:RA:1430:C:C6	2.49	0.47
22:RA:2010:G:H5"	39:RW:42:ARG:HB2	1.96	0.47
22:RA:2420:C:H6	22:RA:2420:C:O5'	1.96	0.47
22:RA:2472:G:H22	22:RA:2477:C:H5"	1.79	0.47
22:RA:2883:A:H3'	22:RA:2884:U:H5'	1.95	0.47
23:RB:54:G:H21	27:RG:29:TRP:HZ2	1.56	0.47
24:RD:145:VAL:O	24:RD:153:ALA:HA	2.14	0.47
25:RE:69:LYS:C	25:RE:71:GLY:N	2.71	0.47
25:RE:120:TRP:O	25:RE:121:ASN:HB2	2.14	0.47
29:RI:4:ILE:HG23	29:RI:18:VAL:HG22	1.96	0.47
30:RN:113:GLY:O	30:RN:116:LEU:HB2	2.14	0.47
31:RO:8:LEU:HB2	31:RO:19:ILE:CD1	2.43	0.47
32:RP:6:LEU:O	32:RP:7:ARG:O	2.31	0.47
34:RR:10:LEU:O	34:RR:12:ARG:HG3	2.14	0.47
37:RU:92:ARG:CZ	37:RU:94:ASN:HD22	2.28	0.47
38:RV:35:LEU:O	38:RV:37:VAL:N	2.47	0.47
41:RY:56:PRO:O	41:RY:58:GLY:N	2.47	0.47
42:RZ:141:VAL:HG23	42:RZ:144:LEU:HD23	1.95	0.47
1:XA:383:A:C5	1:XA:384:G:H1'	2.48	0.47
1:XA:510:A:OP2	4:XD:49:ARG:NH2	2.48	0.47
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.14	0.47
3:XC:101:LEU:HD23	3:XC:101:LEU:C	2.39	0.47
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.47
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.47
14:XN:6:LEU:HD22	14:XN:23:ARG:NH2	2.29	0.47
14:XN:26:ARG:NH1	14:XN:43:CYS:SG	2.86	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	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
22:YA:120:U:C5	22:YA:149:A:N6	2.82	0.47
22:YA:559:G:H22	37:YU:49:HIS:CE1	2.32	0.47
22:YA:570:G:H2'	22:YA:2030:A:C6	2.48	0.47
22:YA:729:G:C4	22:YA:1775:U:O2	2.67	0.47
22:YA:1019:U:H3	22:YA:1142(A):A:N6	2.08	0.47
22:YA:2639:A:H1'	22:YA:2778:A:C2	2.49	0.47
24:YD:12:SER:C	24:YD:14:ARG:N	2.70	0.47
25:YE:15:PHE:CD1	25:YE:20:ALA:HB2	2.49	0.47
25:YE:61:ARG:CB	25:YE:62:PRO:HD3	2.41	0.47
28:YH:41:MET:HG3	28:YH:54:ARG:HA	1.96	0.47
30:YN:57:ALA:O	30:YN:58:ASP:CB	2.61	0.47
31:YO:8:LEU:HB2	31:YO:19:ILE:CD1	2.43	0.47
32:YP:61:ARG:HH21	51:Y8:13:ARG:HD2	1.77	0.47
33:YQ:60:ARG:NH2	33:YQ:60:ARG:HB2	2.28	0.47
37:YU:79:PHE:HE2	37:YU:83:LEU:HD22	1.78	0.47
38:YV:38:LEU:HD23	38:YV:39:LEU:H	1.79	0.47
39:YW:30:GLU:O	39:YW:34:ASN:ND2	2.46	0.47
41:YY:57:GLN:O	41:YY:58:GLY:O	2.32	0.47
42:YZ:4:ARG:HH12	42:YZ:58:VAL:HG11	1.79	0.47
44:Y1:94:LEU:O	44:Y1:95:LEU:CB	2.62	0.47
49:Y6:20:ASN:ND2	49:Y6:42:TRP:CZ2	2.82	0.47
1:QA:985:C:H2'	1:QA:986:A:C8	2.49	0.47
1:QA:1054:C:C5	55:QY:34:C:O4'	2.67	0.47
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.42	0.47
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.36	0.47
1:QA:1405:G:N3	1:QA:1518:A:O2'	2.44	0.47
2:QB:33:TYR:C	2:QB:33:TYR:HD1	2.22	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
7:QG:63:LYS:O	7:QG:63:LYS:HD2	2.13	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.47
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.47
20:QT:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:265:A:O2'	22:RA:266:G:H4'	2.15	0.47
22:RA:510:C:H2'	22:RA:511:U:O4'	2.13	0.47
22:RA:1869:G:H5'	22:RA:1870:C:OP2	2.14	0.47
22:RA:2623:G:O2'	22:RA:2825:C:O2'	2.29	0.47
22:RA:2789:C:H1'	22:RA:2892:A:H2	1.79	0.47
24:RD:35:LYS:CG	24:RD:64:ILE:CG2	2.92	0.47
25:RE:18:ASP:O	25:RE:19:ARG:C	2.56	0.47
25:RE:174:ASP:O	25:RE:182:LEU:HD12	2.14	0.47
26:RF:183:VAL:O	26:RF:184:TYR:C	2.56	0.47
28:RH:154:PRO:CG	28:RH:162:ILE:O	2.61	0.47
30:RN:4:TYR:OH	30:RN:7:LYS:NZ	2.46	0.47
30:RN:67:LEU:O	30:RN:88:GLU:HG3	2.14	0.47
30:RN:87:LEU:C	30:RN:87:LEU:CD2	2.87	0.47
30:RN:90:MET:O	30:RN:91:LEU:C	2.57	0.47
30:RN:137:LYS:CG	30:RN:138:LEU:N	2.77	0.47
32:RP:19:VAL:CG2	32:RP:20:GLY:H	1.98	0.47
34:RR:48:VAL:O	34:RR:49:ASP:C	2.57	0.47
35:RS:5:THR:HG1	35:RS:7:TYR:HB3	1.78	0.47
35:RS:55:ALA:O	35:RS:56:LEU:HB3	2.13	0.47
35:RS:105:ALA:C	35:RS:110:LEU:HD21	2.38	0.47
38:RV:4:ILE:HA	38:RV:12:TYR:O	2.14	0.47
38:RV:21:ARG:HD2	38:RV:91:TYR:CZ	2.49	0.47
38:RV:66:ARG:NH1	38:RV:88:ARG:NH1	2.61	0.47
44:R1:8:SER:OG	44:R1:10:LYS:HG3	2.13	0.47
1:XA:34:C:H2'	1:XA:35:G:C8	2.49	0.47
1:XA:107:G:C2	1:XA:108:G:H1'	2.50	0.47
1:XA:191:G:O2'	20:XT:101:GLY:O	2.32	0.47
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.47
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
8:XH:86:ILE:HG22	8:XH:87:SER:N	2.29	0.47
9:XI:22:GLY:O	9:XI:23:ASN:C	2.57	0.47
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
12:XL:47:LYS:C	12:XL:49:ASN:H	2.22	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.46	0.47
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.47
19:XS:68:GLY:N	47:Y4:59:PHE:CE1	2.82	0.47
22:YA:663:G:C6	22:YA:664:C:C4	3.02	0.47
22:YA:1259:G:H2'	22:YA:1260:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1550:C:H2'	22:YA:1551:C:H6	1.79	0.47
22:YA:1858:G:O2'	22:YA:1884:A:N6	2.47	0.47
22:YA:2150:U:H2'	22:YA:2151:G:C8	2.49	0.47
22:YA:2306:C:C2	22:YA:2307:G:N2	2.82	0.47
22:YA:2667:C:H2'	22:YA:2668:G:O4'	2.14	0.47
27:YG:97:ASP:N	27:YG:100:TRP:HD1	2.05	0.47
27:YG:111:LEU:HD22	27:YG:120:LEU:HD21	1.96	0.47
29:YI:78:THR:HG22	29:YI:141:LYS:HD2	1.96	0.47
34:YR:1:MET:SD	34:YR:1:MET:N	2.75	0.47
34:YR:117:VAL:O	34:YR:118:GLU:CB	2.62	0.47
35:YS:46:VAL:HG12	35:YS:47:THR:N	2.28	0.47
47:Y4:48:ARG:C	47:Y4:49:PHE:HD1	2.22	0.47
47:Y4:60:GLN:O	47:Y4:63:TYR:HB3	2.14	0.47
48:Y5:56:LYS:O	48:Y5:57:VAL:C	2.57	0.47
50:Y7:25:PRO:HA	50:Y7:28:ARG:CZ	2.45	0.47
51:Y8:41:ILE:HG13	51:Y8:42:ARG:N	2.28	0.47
51:Y8:56:GLU:O	51:Y8:58:ILE:N	2.47	0.47
1:QA:458:C:H2'	1:QA:464:G:H8	1.80	0.47
1:QA:505:G:H2'	1:QA:506:G:C8	2.49	0.47
1:QA:1314:C:H5	19:QS:4:SER:HB2	1.78	0.47
1:QA:1478:C:H2'	1:QA:1479:C:C6	2.50	0.47
1:QA:1493:A:OP1	58:QA:1666:PAR:H611	2.13	0.47
2:QB:33:TYR:C	2:QB:33:TYR:CD1	2.92	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.97	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
12:QL:7:ILE:HG23	17:QQ:32:TYR:HB3	1.96	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.47
19:QS:68:GLY:HA2	47:R4:68:ARG:HG2	1.90	0.47
22:RA:108:U:H2'	22:RA:109:G:C8	2.50	0.47
22:RA:572:A:H2'	22:RA:573:G:O4'	2.15	0.47
22:RA:1022:G:C6	22:RA:1140:C:C4	3.03	0.47
22:RA:1201:C:N4	22:RA:1244:G:H1	2.12	0.47
22:RA:1729:A:H2'	22:RA:1730:U:H5"	1.96	0.47
22:RA:2151:G:H2'	22:RA:2152:G:C8	2.49	0.47
22:RA:2289:G:N2	22:RA:2344:U:C2	2.82	0.47
22:RA:2481:G:HO2'	22:RA:2482:G:P	2.37	0.47
22:RA:2725:A:O2'	22:RA:2726:U:H5"	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:118:LYS:O	30:RN:120:LEU:N	2.43	0.47
33:RQ:57:HIS:ND1	33:RQ:58:PHE:N	2.62	0.47
38:RV:2:PHE:CD2	38:RV:13:ARG:NH2	2.82	0.47
39:RW:66:GLU:O	39:RW:69:LEU:HG	2.15	0.47
41:RY:81:LYS:NZ	41:RY:98:VAL:HB	2.30	0.47
44:R1:94:LEU:O	44:R1:95:LEU:CB	2.62	0.47
45:R2:15:LYS:H	45:R2:67:LYS:HZ3	1.62	0.47
1:XA:299:G:H2'	1:XA:300:A:C8	2.49	0.47
1:XA:542:G:H2'	1:XA:543:C:H6	1.79	0.47
1:XA:688:G:H2'	1:XA:689:C:C6	2.46	0.47
1:XA:1064:G:H21	1:XA:1190:G:H2'	1.79	0.47
1:XA:1159:U:O2'	1:XA:1160:G:N7	2.45	0.47
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.14	0.47
1:XA:1239:A:H62	1:XA:1299:A:H62	1.60	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	2.00	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.47
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.10	0.47
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
22:YA:516:C:H2'	22:YA:517:C:H6	1.80	0.47
22:YA:534:U:H5'	37:YU:42:ALA:HB1	1.96	0.47
22:YA:740:U:H2'	22:YA:741:G:C8	2.49	0.47
22:YA:2031:A:N3	22:YA:2455:G:O2'	2.44	0.47
22:YA:2215:G:H2'	22:YA:2216:G:H8	1.80	0.47
22:YA:2515:C:O2	22:YA:2570:G:C2	2.67	0.47
22:YA:2711:A:OP1	22:YA:2712(A):A:P	2.72	0.47
23:YB:16:G:H1	23:YB:68:C:H42	1.62	0.47
23:YB:27:C:H5'	23:YB:28:C:OP2	2.14	0.47
29:YI:68:LEU:HA	29:YI:71:ILE:HG22	1.96	0.47
30:YN:9:VAL:HG21	30:YN:48:MET:CB	2.44	0.47
32:YP:13:ASN:C	32:YP:15:ARG:H	2.21	0.47
32:YP:47:ASP:OD1	32:YP:50:ARG:NH2	2.47	0.47
32:YP:112:LEU:HD12	32:YP:127:ALA:CB	2.44	0.47
33:YQ:63:LYS:HD2	42:YZ:175:VAL:HG21	1.97	0.47
35:YS:40:ILE:HG22	35:YS:41:ASP:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:132:LYS:O	36:YT:136:GLN:HG3	2.13	0.47
38:YV:2:PHE:CD2	38:YV:13:ARG:NH2	2.82	0.47
38:YV:35:LEU:O	38:YV:37:VAL:N	2.47	0.47
43:Y0:18:ALA:O	43:Y0:20:ARG:NH1	2.47	0.47
44:Y1:7:ILE:HD12	44:Y1:62:VAL:HG11	1.96	0.47
45:Y2:17:SER:CB	45:Y2:18:PRO:CA	2.92	0.47
48:Y5:3:LYS:O	48:Y5:4:HIS:C	2.56	0.47
50:Y7:32:LYS:O	50:Y7:33:ARG:C	2.56	0.47
52:Y9:27:CYS:SG	52:Y9:28:GLU:N	2.87	0.47
53:QV:19:G:H4'	53:QV:20:U:OP2	2.14	0.47
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.14	0.47
1:QA:1316:G:OP1	14:QN:17:LYS:NZ	2.28	0.47
1:QA:1499:A:H1'	1:QA:1520:G:H5'	1.95	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.47
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.47
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.29	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.47
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.33	0.47
14:QN:43:CYS:O	14:QN:46:GLU:N	2.44	0.47
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47
20:QT:101:GLY:C	20:QT:103:GLY:H	2.22	0.47
22:RA:70:G:H21	22:RA:71:A:N6	2.13	0.47
22:RA:1079:C:H2'	22:RA:1080:C:O4'	2.14	0.47
23:RB:15:A:H5'	23:RB:16:G:H8	1.78	0.47
25:RE:3:GLY:HA3	25:RE:81:ILE:HG21	1.96	0.47
25:RE:195:LEU:HD12	25:RE:196:VAL:N	2.29	0.47
27:RG:5:VAL:HG22	47:R4:25:TYR:CE2	2.50	0.47
27:RG:106:LEU:HA	27:RG:110:ALA:CB	2.44	0.47
28:RH:45:VAL:O	28:RH:45:VAL:HG13	2.14	0.47
28:RH:67:LEU:O	28:RH:71:LEU:HB2	2.14	0.47
28:RH:82:GLY:O	28:RH:83:TYR:O	2.32	0.47
28:RH:124:GLU:HB3	28:RH:132:ARG:CD	2.44	0.47
29:RI:98:ALA:HB2	29:RI:111:PRO:HB3	1.97	0.47
30:RN:15:LEU:C	30:RN:15:LEU:HD13	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RT:96:ARG:NH1	36:RT:96:ARG:CB	2.77	0.47
38:RV:16:PRO:HA	38:RV:96:ILE:O	2.14	0.47
41:RY:75:ILE:HG12	41:RY:76:CYS:H	1.79	0.47
41:RY:97:ARG:HG2	41:RY:97:ARG:NH1	2.28	0.47
42:RZ:143:GLY:C	42:RZ:144:LEU:HD22	2.39	0.47
43:R0:51:VAL:HG21	43:R0:79:VAL:O	2.15	0.47
45:R2:6:VAL:O	45:R2:7:ARG:C	2.57	0.47
1:XA:186:C:H2'	1:XA:186(A):C:C6	2.50	0.47
1:XA:1339:A:H2'	1:XA:1340:A:O4'	2.13	0.47
1:XA:1364:U:HO2'	1:XA:1365:G:P	2.37	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:94:LEU:HD12	4:XD:94:LEU:N	2.12	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
22:YA:27:G:HO2'	22:YA:28:A:H8	1.58	0.47
22:YA:264:C:C2'	22:YA:265:A:H5"	2.44	0.47
22:YA:747:U:C4	22:YA:2613:U:C4	3.03	0.47
22:YA:957:A:H5'	33:YQ:76:LYS:HD2	1.96	0.47
22:YA:1374:G:H2'	22:YA:1375:C:O4'	2.14	0.47
22:YA:1614:A:H2'	22:YA:1615:C:H5'	1.96	0.47
22:YA:1907:G:C6	22:YA:1908:C:C4	3.03	0.47
22:YA:2309:A:H2'	22:YA:2310:A:O4'	2.14	0.47
22:YA:2324:C:H5"	22:YA:2325:G:H5'	1.96	0.47
22:YA:2555:U:N3	56:Z8:74:C:C6	2.75	0.47
22:YA:2815:C:H5'	48:Y5:29:THR:HG21	1.97	0.47
24:YD:33:LEU:HB3	24:YD:34:VAL:H	1.49	0.47
24:YD:134:ARG:HB2	24:YD:135:PHE:CD2	2.49	0.47
25:YE:203:LYS:HD2	25:YE:203:LYS:C	2.39	0.47
26:YF:155:LEU:HA	26:YF:174:VAL:HG12	1.95	0.47
27:YG:12:TYR:O	27:YG:16:ARG:HB3	2.15	0.47
28:YH:123:PHE:O	28:YH:125:VAL:HG23	2.13	0.47
28:YH:127:GLU:OE2	28:YH:130:ARG:NH2	2.48	0.47
32:YP:107:LYS:O	32:YP:108:LYS:C	2.58	0.47
34:YR:10:LEU:O	34:YR:12:ARG:HG3	2.14	0.47
34:YR:56:LYS:HE2	34:YR:94:TYR:OH	2.14	0.47
35:YS:105:ALA:C	35:YS:110:LEU:HD21	2.39	0.47
43:Y0:7:LEU:O	53:XV:2:G:C4'	2.41	0.47
43:Y0:38:VAL:O	43:Y0:58:THR:HG23	2.14	0.47
43:Y0:70:GLN:NE2	43:Y0:72:ARG:HD3	2.30	0.47
45:Y2:6:VAL:O	45:Y2:7:ARG:C	2.57	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y5:48:GLU:HA	48:Y5:59:GLU:CG	2.43	0.47
55:QY:40:G:O2'	55:QY:41:A:H5'	2.13	0.47
1:QA:15:G:H2'	1:QA:16:A:C8	2.49	0.47
1:QA:1060:C:C5	3:QC:2:GLY:HA2	2.48	0.47
1:QA:1300:G:N1	1:QA:1335:C:O4'	2.45	0.47
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.14	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.13	0.47
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.47
22:RA:278:A:H61	22:RA:362:U:H3	1.61	0.47
22:RA:425:G:H2'	22:RA:426:C:H6	1.78	0.47
22:RA:1341:U:OP1	22:RA:1397:U:N3	2.22	0.47
22:RA:2210:G:H2'	22:RA:2210:G:N3	2.30	0.47
22:RA:2228:G:C5	22:RA:2229:C:C4	3.03	0.47
24:RD:72:LYS:CG	24:RD:103:ARG:NH2	2.77	0.47
24:RD:134:ARG:HB2	24:RD:135:PHE:CD2	2.50	0.47
24:RD:177:LEU:C	24:RD:179:SER:H	2.23	0.47
25:RE:56:PRO:O	25:RE:57:LYS:CB	2.61	0.47
27:RG:13:GLU:O	27:RG:13:GLU:HG3	2.14	0.47
30:RN:131:GLN:HE21	30:RN:132:ALA:H	1.58	0.47
32:RP:13:ASN:C	32:RP:15:ARG:H	2.21	0.47
32:RP:126:VAL:HA	32:RP:145:PRO:HD2	1.95	0.47
33:RQ:66:ILE:H	33:RQ:104:PHE:HA	1.80	0.47
40:RX:6:ASP:OD1	45:R2:29:LYS:NZ	2.47	0.47
41:RY:39:VAL:O	41:RY:40:GLU:OE2	2.32	0.47
41:RY:81:LYS:HZ2	41:RY:98:VAL:CG1	2.26	0.47
42:RZ:141:VAL:HA	42:RZ:144:LEU:HD23	1.96	0.47
44:R1:7:ILE:HD12	44:R1:62:VAL:HG11	1.96	0.47
1:XA:262:A:H2'	1:XA:263:A:C8	2.49	0.47
1:XA:294:U:O4	1:XA:295:C:N4	2.46	0.47
1:XA:399:G:H2'	1:XA:400:C:C6	2.49	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
2:XB:109:SER:C	2:XB:111:ARG:H	2.21	0.47
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.47
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
12:XL:43:VAL:HG23	12:XL:93:LEU:HD22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:121:LYS:NZ	55:XY:40:G:O5'	2.45	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
20:XT:50:GLU:CG	20:XT:51:GLU:N	2.76	0.47
22:YA:627:A:H4'	22:YA:628:G:H5'	1.96	0.47
22:YA:860:U:H5	22:YA:917:A:C2	2.32	0.47
22:YA:1666:G:H2'	22:YA:1667:G:H1'	1.97	0.47
24:YD:35:LYS:HD3	24:YD:63:ARG:HB3	1.96	0.47
25:YE:65:GLY:HA2	25:YE:70:ALA:HB3	1.95	0.47
27:YG:5:VAL:HG22	47:Y4:25:TYR:CE2	2.50	0.47
28:YH:131:VAL:HG12	28:YH:132:ARG:N	2.29	0.47
28:YH:154:PRO:CG	28:YH:162:ILE:O	2.61	0.47
30:YN:57:ALA:HA	30:YN:60:ILE:CD1	2.43	0.47
30:YN:67:LEU:O	30:YN:88:GLU:HG3	2.14	0.47
30:YN:137:LYS:CG	30:YN:138:LEU:N	2.77	0.47
32:YP:147:LEU:N	32:YP:147:LEU:HD22	2.29	0.47
37:YU:53:ARG:C	37:YU:55:ARG:H	2.20	0.47
37:YU:92:ARG:CZ	37:YU:94:ASN:HD22	2.27	0.47
38:YV:59:ALA:HB2	38:YV:96:ILE:HD13	1.97	0.47
41:YY:44:ILE:CG1	41:YY:45:VAL:N	2.70	0.47
47:Y4:50:VAL:CG1	47:Y4:50:VAL:O	2.62	0.47
49:Y6:33:LYS:C	49:Y6:35:GLU:H	2.22	0.47
1:QA:41:G:H2'	1:QA:42:G:C8	2.50	0.47
1:QA:339:C:H2'	1:QA:340:U:C6	2.50	0.47
1:QA:347:G:O2'	1:QA:348:G:H5"	2.14	0.47
1:QA:502:G:H2'	1:QA:503:C:O4'	2.15	0.47
1:QA:921:U:O2'	5:QE:19:MET:N	2.46	0.47
1:QA:960:U:O2	1:QA:960:U:H2'	2.13	0.47
1:QA:1128:C:N4	1:QA:1144:G:H1	2.12	0.47
1:QA:1277:C:H1'	1:QA:1282:C:O2	2.15	0.47
1:QA:1298:C:H4'	1:QA:1299:A:C4	2.50	0.47
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.21	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.23	0.47
9:QI:118:LYS:HB3	9:QI:118:LYS:HZ3	1.80	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.43	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
22:RA:586:A:N1	22:RA:809:G:O2'	2.41	0.47
22:RA:784:A:O2'	22:RA:785:G:H5"	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:960:A:C8	22:RA:962:G:C8	3.03	0.47
22:RA:1993:U:H5'	25:RE:128:SER:HB3	1.97	0.47
22:RA:2126:A:H4'	22:RA:2127:G:O5'	2.14	0.47
22:RA:2582:G:N2	22:RA:2583:G:H1'	2.29	0.47
25:RE:54:GLN:N	25:RE:54:GLN:CD	2.73	0.47
26:RF:184:TYR:CD2	26:RF:188:ARG:HD2	2.50	0.47
27:RG:56:ALA:HB2	27:RG:153:ARG:NE	2.28	0.47
28:RH:53:GLU:CD	28:RH:54:ARG:H	2.21	0.47
32:RP:147:LEU:N	32:RP:147:LEU:HD22	2.29	0.47
35:RS:40:ILE:HG22	35:RS:41:ASP:N	2.29	0.47
38:RV:38:LEU:HD23	38:RV:39:LEU:H	1.79	0.47
47:R4:3:GLU:HG3	47:R4:4:GLY:H	1.79	0.47
49:R6:8:LYS:O	49:R6:27:LYS:HG2	2.15	0.47
49:R6:20:ASN:ND2	49:R6:42:TRP:CZ2	2.82	0.47
49:R6:33:LYS:C	49:R6:35:GLU:H	2.22	0.47
51:R8:44:LYS:HD2	51:R8:44:LYS:N	2.30	0.47
1:XA:75:C:H2'	1:XA:76:G:O4'	2.14	0.47
1:XA:316:G:OP2	1:XA:351:G:O2'	2.30	0.47
1:XA:374:A:C6	1:XA:375:U:C4	3.02	0.47
1:XA:1226:C:H4'	1:XA:1227:A:OP1	2.14	0.47
1:XA:1320:C:H42	19:XS:36:ARG:HG3	1.79	0.47
2:XB:172:ILE:O	2:XB:175:ARG:CB	2.63	0.47
2:XB:224:GLN:HA	2:XB:229:VAL:HG23	1.97	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47
22:YA:1655:A:O3'	25:YE:115:GLY:HA3	2.15	0.47
22:YA:2227:A:H5"	24:YD:263:ARG:NH1	2.29	0.47
24:YD:32:SER:O	24:YD:33:LEU:CB	2.60	0.47
25:YE:56:PRO:O	25:YE:57:LYS:CB	2.61	0.47
27:YG:14:GLU:O	27:YG:17:PRO:HG2	2.15	0.47
27:YG:16:ARG:NH2	27:YG:28:VAL:O	2.48	0.47
27:YG:106:LEU:HA	27:YG:110:ALA:CB	2.44	0.47
32:YP:98:GLU:O	32:YP:99:LEU:C	2.57	0.47
33:YQ:59:ARG:CD	33:YQ:59:ARG:N	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YU:106:PHE:O	37:YU:109:LEU:HB2	2.15	0.47
38:YV:36:PRO:HA	38:YV:56:SER:CB	2.45	0.47
47:Y4:50:VAL:O	47:Y4:50:VAL:HG13	2.15	0.47
54:QX:4:C:O2'	54:QX:5:C:C5'	2.60	0.47
1:QA:167:G:O2'	1:QA:168:G:H5'	2.15	0.47
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.97	0.47
1:QA:853:G:H2'	1:QA:854:G:H8	1.79	0.47
1:QA:980:C:H5'	1:QA:981:U:OP2	2.14	0.47
1:QA:1441:G:H4'	1:QA:1442:G:C4	2.49	0.47
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	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:113:ALA:C	3:QC:115:LEU:N	2.73	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.14	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
12:QL:49:ASN:HD22	12:QL:92:ASP:CG	2.22	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
13:QM:72:ALA:O	13:QM:76:ALA:HB2	2.14	0.47
14:QN:47:LEU:O	14:QN:48:ALA:C	2.57	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.77	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
22:RA:391:G:C5	22:RA:392:C:C4	3.02	0.47
22:RA:864:G:C6	22:RA:865:C:N4	2.82	0.47
22:RA:903:C:H2'	22:RA:904:C:C6	2.49	0.47
22:RA:952:G:C6	22:RA:966:G:C6	3.03	0.47
22:RA:1021:A:H8	22:RA:1022:G:H5"	1.78	0.47
22:RA:1084:A:N1	22:RA:1085:A:N6	2.63	0.47
22:RA:1356:G:C6	22:RA:1357:U:C4	3.03	0.47
22:RA:1607:C:H5"	22:RA:1608:A:H5'	1.96	0.47
22:RA:1797:C:O2'	24:RD:259:THR:HB	2.14	0.47
22:RA:2413:G:H21	32:RP:70:GLN:HE22	1.60	0.47
22:RA:2477:C:H2'	52:R9:1:MET:HG3	1.97	0.47
23:RB:57:A:H4'	27:RG:30:GLU:HG2	1.96	0.47
25:RE:121:ASN:O	25:RE:122:PHE:C	2.57	0.47
25:RE:197:ILE:CD1	25:RE:199:ARG:HH12	2.26	0.47
26:RF:162:LEU:HD23	26:RF:165:ARG:HH21	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:44:GLY:HA2	27:RG:88:ILE:HG12	1.96	0.47
27:RG:109:VAL:C	27:RG:112:PRO:HD2	2.39	0.47
29:RI:88:ILE:HG12	29:RI:122:GLU:N	2.29	0.47
30:RN:57:ALA:CA	30:RN:60:ILE:HD11	2.44	0.47
31:RO:37:ASP:O	31:RO:62:VAL:HG23	2.15	0.47
31:RO:120:GLU:OE1	36:RT:67:SER:OG	2.25	0.47
33:RQ:34:LEU:HD11	33:RQ:129:THR:CB	2.35	0.47
34:RR:117:VAL:O	34:RR:118:GLU:CB	2.62	0.47
35:RS:83:LYS:HG2	35:RS:109:GLY:H	1.76	0.47
35:RS:95:HIS:O	35:RS:96:GLY:C	2.57	0.47
35:RS:108:GLY:O	35:RS:110:LEU:N	2.48	0.47
39:RW:14:PRO:O	39:RW:15:ARG:C	2.58	0.47
39:RW:28:SER:C	39:RW:30:GLU:N	2.69	0.47
39:RW:81:ALA:C	39:RW:82:LEU:HD12	2.40	0.47
40:RX:26:TYR:HB3	40:RX:92:LEU:HD12	1.97	0.47
41:RY:19:LYS:HE3	41:RY:20:TYR:CE1	2.49	0.47
42:RZ:108:PRO:HA	42:RZ:142:SER:HA	1.96	0.47
47:R4:8:LYS:O	47:R4:9:LEU:CB	2.62	0.47
52:R9:1:MET:SD	52:R9:31:LYS:O	2.73	0.47
1:XA:62:U:H2'	1:XA:63:C:C6	2.50	0.47
1:XA:243:A:H4'	1:XA:244:U:H3'	1.97	0.47
1:XA:481:G:O2'	1:XA:482:A:O5'	2.33	0.47
1:XA:731:G:H2'	1:XA:732:C:H6	1.80	0.47
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.78	0.47
2:XB:60:ASP:C	2:XB:62:ALA:N	2.72	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.47
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
3:XC:143:GLU:C	3:XC:145:GLY:H	2.23	0.47
3:XC:203:PHE:O	3:XC:204:LEU:HD23	2.14	0.47
4:XD:19:LEU:O	4:XD:20:TYR:C	2.57	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
4:XD:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:51:GLN:OE1	7:XG:51:GLN:HA	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.96	0.47
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
13:XM:28:ALA:C	13:XM:30:ALA:N	2.70	0.47
15:XO:76:GLU:O	15:XO:78:TYR:N	2.48	0.47
16:XP:21:VAL:HG23	16:XP:34:GLU:H	1.79	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:CD	2.45	0.47
17:XQ:82:MET:C	17:XQ:84:LEU:N	2.72	0.47
22:YA:152:G:H2'	22:YA:153:C:H6	1.80	0.47
22:YA:324:A:C2	22:YA:325:G:H1'	2.50	0.47
22:YA:443:A:OP2	22:YA:615:G:N2	2.42	0.47
22:YA:863:A:O2'	22:YA:864:G:H5'	2.15	0.47
22:YA:993:G:OP1	37:YU:50:ARG:NH1	2.47	0.47
22:YA:1007:C:O3'	30:YN:108:PRO:HB3	2.14	0.47
22:YA:1042:G:H1	22:YA:1113:U:H3	1.63	0.47
22:YA:1113:U:H2'	22:YA:1114:G:C8	2.50	0.47
22:YA:1357:U:H2'	22:YA:1358:G:O4'	2.15	0.47
22:YA:1885:A:H3'	22:YA:1886:C:H6	1.80	0.47
22:YA:2151:G:H2'	22:YA:2152:G:C8	2.49	0.47
22:YA:2283:C:P	49:Y6:5:VAL:HG13	2.55	0.47
22:YA:2326:C:H5"	22:YA:2327:A:OP2	2.15	0.47
22:YA:2478:A:H2'	22:YA:2479:G:O4'	2.14	0.47
22:YA:2743:C:OP2	22:YA:2755:C:N4	2.48	0.47
22:YA:2881:C:H2'	22:YA:2882:A:C8	2.50	0.47
23:YB:81:G:C6	23:YB:82:G:C5	3.03	0.47
24:YD:72:LYS:CG	24:YD:103:ARG:NH2	2.76	0.47
24:YD:177:LEU:C	24:YD:179:SER:H	2.23	0.47
25:YE:52:LEU:HB2	25:YE:75:VAL:CG2	2.40	0.47
25:YE:54:GLN:N	25:YE:54:GLN:CD	2.73	0.47
25:YE:78:LEU:CD2	25:YE:79:ARG:HD2	2.43	0.47
25:YE:89:ASP:O	25:YE:90:THR:O	2.33	0.47
26:YF:127:GLU:OE1	26:YF:127:GLU:HA	2.07	0.47
26:YF:162:LEU:HD23	26:YF:165:ARG:HH21	1.79	0.47
27:YG:36:LYS:HA	27:YG:95:ARG:HG2	1.95	0.47
27:YG:88:ILE:O	27:YG:88:ILE:CD1	2.54	0.47
30:YN:15:LEU:C	30:YN:15:LEU:HD13	2.40	0.47
31:YO:104:ARG:HD3	36:YT:36:GLU:OE2	2.15	0.47
32:YP:81:GLN:HB3	32:YP:110:TYR:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:125:VAL:C	32:YP:145:PRO:HD2	2.39	0.47
32:YP:126:VAL:HA	32:YP:145:PRO:HD2	1.95	0.47
36:YT:3:ARG:O	36:YT:4:GLY:C	2.58	0.47
36:YT:29:ARG:NH1	36:YT:46:GLU:OE1	2.48	0.47
36:YT:51:ARG:CG	36:YT:98:LYS:HG3	2.44	0.47
37:YU:107:ALA:O	37:YU:110:VAL:HB	2.14	0.47
38:YV:4:ILE:HA	38:YV:12:TYR:O	2.14	0.47
39:YW:66:GLU:O	39:YW:69:LEU:HG	2.14	0.47
39:YW:81:ALA:C	39:YW:82:LEU:HD12	2.40	0.47
40:YX:35:THR:O	40:YX:37:THR:N	2.47	0.47
40:YX:43:VAL:HG11	40:YX:51:VAL:HG21	1.97	0.47
40:YX:87:GLN:C	40:YX:88:LYS:HG3	2.40	0.47
41:YY:19:LYS:HE3	41:YY:20:TYR:CE1	2.49	0.47
41:YY:39:VAL:O	41:YY:40:GLU:OE2	2.32	0.47
41:YY:44:ILE:O	41:YY:62:GLU:O	2.32	0.47
41:YY:81:LYS:NZ	41:YY:98:VAL:HB	2.29	0.47
42:YZ:169:GLU:HG2	42:YZ:170:THR:N	2.30	0.47
43:Y0:12:ASN:HA	43:Y0:14:ARG:HH21	1.80	0.47
44:Y1:81:LYS:HE2	44:Y1:81:LYS:H	1.62	0.47
45:Y2:48:HIS:O	45:Y2:49:LYS:C	2.57	0.47
47:Y4:33:VAL:CG1	47:Y4:34:GLU:H	2.22	0.47
1:QA:246:A:N6	1:QA:281:G:H1'	2.30	0.47
1:QA:321:A:H2'	1:QA:322:C:C6	2.49	0.47
1:QA:536:C:H2'	1:QA:537:G:H8	1.79	0.47
1:QA:690:G:H22	11:QK:55:LYS:HZ2	1.62	0.47
1:QA:1001:G:H2'	1:QA:1002:G:O4'	2.14	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.38	0.47
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
5:QE:78:HIS:HB2	8:QH:104:ARG:C	2.40	0.47
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
22:RA:49:A:N7	22:RA:120:U:C5	2.83	0.47
22:RA:74:A:H4'	22:RA:75:G:O4'	2.15	0.47
22:RA:171:G:H2'	22:RA:172:C:C6	2.49	0.47
22:RA:249:C:H4'	22:RA:250:G:O5'	2.15	0.47
22:RA:512:G:O2'	22:RA:513:A:OP2	2.31	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1771:C:H2'	22:RA:1772:G:C8	2.50	0.47
25:RE:17:ASP:N	25:RE:17:ASP:OD2	2.46	0.47
25:RE:63:LEU:O	25:RE:64:LYS:CB	2.62	0.47
25:RE:101:ARG:C	25:RE:201:THR:OG1	2.58	0.47
30:RN:137:LYS:CG	30:RN:138:LEU:H	2.27	0.47
32:RP:37:GLY:O	32:RP:41:ARG:HD3	2.15	0.47
33:RQ:86:GLY:O	33:RQ:88:GLY:N	2.46	0.47
34:RR:74:LYS:O	34:RR:76:VAL:N	2.44	0.47
1:XA:102:G:O2'	1:XA:151:A:N3	2.35	0.47
1:XA:376:G:OP2	16:XP:67:THR:HG21	2.14	0.47
1:XA:556:C:H2'	1:XA:557:G:H8	1.80	0.47
1:XA:814:A:N7	1:XA:816:A:C4	2.83	0.47
1:XA:837:G:H1	1:XA:849:C:H42	1.62	0.47
1:XA:958:A:C6	1:XA:959:A:C6	3.03	0.47
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.50	0.47
2:XB:33:TYR:C	2:XB:33:TYR:HD1	2.23	0.47
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.47
5:XE:63:ARG:C	5:XE:66:MET:HE2	2.39	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.47
13:XM:50:GLU:HB3	47:Y4:32:TYR:OH	2.15	0.47
14:XN:41:ARG:NE	14:XN:42:ILE:HG13	2.29	0.47
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.47
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.47
22:YA:227:A:OP1	32:YP:76:LYS:HE3	2.15	0.47
22:YA:272:G:H2'	22:YA:273:G:H8	1.80	0.47
22:YA:807:U:H2'	22:YA:808:G:H8	1.80	0.47
22:YA:1547:C:O2'	22:YA:1548:C:H5'	2.15	0.47
22:YA:1705:G:C6	22:YA:1706:U:C4	3.03	0.47
22:YA:2020:A:O2'	22:YA:2021:C:H2'	2.14	0.47
22:YA:2021:C:OP1	48:Y5:12:SER:OG	2.31	0.47
24:YD:31:LYS:C	24:YD:32:SER:O	2.54	0.47
24:YD:231:HIS:ND1	24:YD:232:PRO:HD2	2.30	0.47
25:YE:22:PRO:O	25:YE:22:PRO:CG	2.63	0.47
27:YG:109:VAL:C	27:YG:112:PRO:HD2	2.40	0.47
28:YH:67:LEU:O	28:YH:71:LEU:HB2	2.15	0.47
28:YH:104:GLU:HG3	28:YH:114:VAL:HG22	1.96	0.47
30:YN:42:TRP:HA	30:YN:48:MET:CE	2.42	0.47
30:YN:57:ALA:CA	30:YN:60:ILE:HD11	2.44	0.47
30:YN:73:THR:HA	30:YN:83:LYS:O	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:115:LEU:CD1	32:YP:116:GLY:N	2.78	0.47
36:YT:111:ARG:C	36:YT:113:LYS:N	2.64	0.47
37:YU:66:ASN:CB	37:YU:76:TYR:HB2	2.44	0.47
41:YY:56:PRO:O	41:YY:58:GLY:N	2.47	0.47
44:Y1:83:GLU:OE1	44:Y1:85:LEU:HB2	2.15	0.47
48:Y5:57:VAL:O	48:Y5:57:VAL:HG13	2.14	0.47
1:QA:746:A:H2'	1:QA:747:C:C6	2.49	0.47
1:QA:1053:G:O6	1:QA:1199:U:H2'	2.15	0.47
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.28	0.47
2:QB:67:THR:C	2:QB:68:ILE:HD12	2.40	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:204:ASN:HD22	2:QB:204:ASN:C	2.22	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.47
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
14:QN:41:ARG:CG	14:QN:41:ARG:HH11	2.28	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
22:RA:70:G:H4'	22:RA:71:A:OP1	2.15	0.47
22:RA:191:A:H2'	22:RA:192:C:C6	2.50	0.47
22:RA:482:A:H4'	41:RY:47:LYS:HD2	1.95	0.47
22:RA:1019:U:C2	22:RA:1144:G:N2	2.82	0.47
22:RA:1833:U:O2	22:RA:1973:G:C2	2.67	0.47
22:RA:1937:A:N7	22:RA:1939:U:H2'	2.30	0.47
22:RA:2331:G:O2'	43:R0:43:THR:HG22	2.15	0.47
22:RA:2528:U:H2'	22:RA:2530:A:O5'	2.14	0.47
24:RD:35:LYS:HD3	24:RD:63:ARG:HB3	1.96	0.47
24:RD:102:LYS:O	24:RD:103:ARG:HG3	2.15	0.47
26:RF:65:TRP:CH2	26:RF:72:ARG:HB3	2.50	0.47
27:RG:16:ARG:NH2	27:RG:28:VAL:O	2.48	0.47
28:RH:18:GLU:HA	28:RH:18:GLU:OE2	2.14	0.47
28:RH:126:PRO:CG	28:RH:127:GLU:N	2.65	0.47
31:RO:53:LYS:CD	31:RO:56:ASP:OD1	2.63	0.47
35:RS:61:ASN:O	35:RS:65:VAL:HG23	2.15	0.47
36:RT:3:ARG:O	36:RT:4:GLY:C	2.58	0.47
38:RV:36:PRO:HA	38:RV:56:SER:CB	2.45	0.47
41:RY:61:ILE:HG22	41:RY:62:GLU:N	2.28	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RZ:60:GLU:HA	42:RZ:66:SER:HA	1.97	0.47
42:RZ:150:LEU:HD23	42:RZ:171:ILE:HG13	1.97	0.47
47:R4:53:GLU:O	47:R4:57:GLU:HG3	2.14	0.47
48:R5:39:MET:C	48:R5:40:LYS:HG3	2.39	0.47
52:R9:19:ARG:NH2	52:R9:26:ILE:HD11	2.29	0.47
1:XA:319:G:H2'	1:XA:320:C:O4'	2.15	0.47
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.48	0.47
1:XA:966:G:O2'	9:XI:127:LYS:O	2.32	0.47
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.50	0.47
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
3:XC:8:ILE:C	3:XC:10:PHE:N	2.69	0.47
3:XC:52:LEU:H	3:XC:52:LEU:CD2	2.20	0.47
3:XC:113:ALA:C	3:XC:115:LEU:N	2.72	0.47
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.47
5:XE:13:ILE:HG22	5:XE:13:ILE:O	2.14	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.81	0.47
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.28	0.47
22:YA:30:G:H2'	22:YA:31:C:O4'	2.15	0.47
22:YA:34:C:N4	22:YA:447:A:H61	2.13	0.47
22:YA:147:U:H2'	22:YA:148:C:C6	2.50	0.47
22:YA:2103:C:H2'	22:YA:2104:G:C8	2.50	0.47
22:YA:2343:C:O2'	22:YA:2373:G:O2'	2.28	0.47
22:YA:2688:U:H1'	22:YA:2721:A:H61	1.80	0.47
24:YD:145:VAL:O	24:YD:153:ALA:HA	2.14	0.47
25:YE:61:ARG:O	25:YE:63:LEU:CG	2.57	0.47
25:YE:120:TRP:O	25:YE:121:ASN:HB2	2.15	0.47
26:YF:109:GLY:O	26:YF:110:LEU:C	2.58	0.47
27:YG:52:ILE:HG22	27:YG:52:ILE:O	2.15	0.47
27:YG:106:LEU:HA	27:YG:110:ALA:HB3	1.95	0.47
29:YI:62:LYS:HE3	29:YI:134:PRO:HG2	1.97	0.47
33:YQ:80:GLU:HG3	33:YQ:81:VAL:N	2.27	0.47
35:YS:95:HIS:O	35:YS:96:GLY:C	2.57	0.47
37:YU:27:LEU:O	37:YU:30:LYS:N	2.41	0.47
40:YX:53:LYS:HZ2	40:YX:55:ASN:HD21	1.62	0.47
49:Y6:8:LYS:O	49:Y6:27:LYS:HG2	2.15	0.47
49:Y6:20:ASN:O	49:Y6:21:TYR:HB2	2.15	0.47
1:QA:262:A:C6	1:QA:263:A:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.26	0.47
1:QA:457:C:H2'	1:QA:458:C:H6	1.80	0.47
1:QA:1397:C:H1'	54:QX:8:A:C5	2.50	0.47
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.47
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.47
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.47
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47
22:RA:142:G:H2'	22:RA:143:C:C6	2.50	0.47
22:RA:323:G:H2'	26:RF:169:ASN:OD1	2.14	0.47
22:RA:654(S):G:H2'	22:RA:654(T):C:C6	2.50	0.47
22:RA:1278:A:OP1	34:RR:36:THR:HG22	2.14	0.47
23:RB:28:C:OP2	35:RS:33:LYS:HE3	2.15	0.47
23:RB:42:C:C6	27:RG:69:ALA:HB2	2.49	0.47
25:RE:65:GLY:HA2	25:RE:70:ALA:HB3	1.95	0.47
29:RI:9:LEU:O	29:RI:10:GLU:HG3	2.15	0.47
30:RN:134:ARG:N	30:RN:135:PRO:CD	2.58	0.47
32:RP:37:GLY:O	32:RP:38:GLN:C	2.58	0.47
35:RS:66:ALA:HA	35:RS:69:VAL:HG12	1.96	0.47
41:RY:68:HIS:O	41:RY:71:LYS:HB2	2.14	0.47
45:R2:17:SER:CB	45:R2:18:PRO:CA	2.92	0.47
50:R7:2:LYS:HG2	50:R7:3:ARG:N	2.30	0.47
50:R7:25:PRO:HA	50:R7:28:ARG:CZ	2.45	0.47
51:R8:56:GLU:C	51:R8:58:ILE:N	2.73	0.47
1:XA:113:G:O2'	1:XA:354:G:H5'	2.15	0.47
1:XA:234:C:H2'	1:XA:235:C:C6	2.49	0.47
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.49	0.47
1:XA:828:A:H2'	1:XA:829:G:O4'	2.15	0.47
1:XA:1160:G:H2'	1:XA:1161:C:H5'	1.97	0.47
1:XA:1305:G:H5'	21:XU:4:GLY:HA3	1.97	0.47
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.37	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.63	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.47
12:XL:47:LYS:C	12:XL:49:ASN:N	2.73	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:195:A:H4'	22:YA:251:A:O2'	2.14	0.47
22:YA:397:G:H2'	22:YA:398:G:H8	1.79	0.47
22:YA:455:C:N3	22:YA:473:G:H5'	2.29	0.47
22:YA:1222:C:H2'	22:YA:1223:C:H6	1.80	0.47
22:YA:2635:C:H5"	25:YE:78:LEU:HA	1.97	0.47
24:YD:136:ILE:HD12	24:YD:136:ILE:N	2.30	0.47
25:YE:101:ARG:HD2	25:YE:171:GLU:HA	1.97	0.47
25:YE:188:VAL:O	25:YE:188:VAL:HG13	2.15	0.47
26:YF:46:ARG:CG	26:YF:46:ARG:NH1	2.71	0.47
27:YG:135:LEU:HD11	27:YG:157:ILE:HD12	1.97	0.47
28:YH:18:GLU:HA	28:YH:18:GLU:OE2	2.15	0.47
30:YN:35:ARG:HG3	30:YN:35:ARG:O	2.15	0.47
30:YN:96:GLU:O	30:YN:97:ARG:C	2.57	0.47
31:YO:37:ASP:O	31:YO:62:VAL:HG23	2.14	0.47
31:YO:50:GLY:O	31:YO:51:ALA:C	2.57	0.47
31:YO:53:LYS:CD	31:YO:56:ASP:OD1	2.63	0.47
33:YQ:34:LEU:HD11	33:YQ:129:THR:CB	2.35	0.47
35:YS:59:LYS:HG2	35:YS:60:GLY:N	2.13	0.47
37:YU:27:LEU:C	37:YU:29:SER:N	2.73	0.47
38:YV:5:VAL:HG13	38:YV:14:VAL:HG21	1.97	0.47
41:YY:81:LYS:HZ2	41:YY:98:VAL:CG1	2.28	0.47
47:Y4:15:ILE:HG22	47:Y4:20:ASN:CA	2.45	0.47
51:Y8:9:GLY:O	51:Y8:13:ARG:HG2	2.15	0.47
51:Y8:40:GLU:O	51:Y8:41:ILE:C	2.56	0.47
1:QA:37:U:O2'	1:QA:500:G:H4'	2.14	0.46
1:QA:108:G:H5"	1:QA:109:A:H5"	1.95	0.46
1:QA:156:G:H1	1:QA:165:C:H42	1.61	0.46
1:QA:355:C:C4	1:QA:356:A:N7	2.83	0.46
1:QA:926:G:N2	54:QX:1:A:P	2.85	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
5:QE:63:ARG:C	5:QE:66:MET:HE2	2.39	0.46
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
15:QO:82:ILE:O	15:QO:86:GLY:N	2.49	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.46
22:RA:723:G:C6	22:RA:724:U:C4	3.03	0.46
22:RA:862:G:H2'	22:RA:863:A:O4'	2.15	0.46
22:RA:1179:C:H2'	22:RA:1180:C:O4'	2.15	0.46
22:RA:1694:C:H6	22:RA:1694:C:H5"	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2198:A:O2'	22:RA:2199:A:O5'	2.28	0.46
22:RA:2566:A:H4'	22:RA:2567:G:O5'	2.16	0.46
22:RA:2749:A:H4'	28:RH:62:LYS:HB3	1.95	0.46
23:RB:13:A:H2'	23:RB:70:C:O2'	2.15	0.46
24:RD:27:THR:O	24:RD:29:PRO:CD	2.62	0.46
24:RD:110:GLY:O	24:RD:111:LEU:C	2.59	0.46
24:RD:231:HIS:ND1	24:RD:232:PRO:HD2	2.30	0.46
26:RF:29:ASN:H	26:RF:112:MET:HE3	1.75	0.46
28:RH:4:ILE:H	28:RH:4:ILE:CD1	2.25	0.46
31:RO:104:ARG:HD3	36:RT:36:GLU:OE2	2.15	0.46
32:RP:98:GLU:O	32:RP:99:LEU:C	2.57	0.46
34:RR:56:LYS:HE2	34:RR:94:TYR:OH	2.15	0.46
42:RZ:52:SER:O	42:RZ:54:HIS:N	2.48	0.46
42:RZ:102:LEU:HB3	42:RZ:104:PHE:CE1	2.50	0.46
44:R1:49:VAL:HG12	44:R1:51:VAL:CG2	2.45	0.46
49:R6:48:VAL:O	49:R6:49:HIS:HB2	2.15	0.46
1:XA:1198:G:H2'	1:XA:1199:U:O4'	2.15	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.15	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.46
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.46
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.46
22:YA:22:C:H2'	22:YA:23:G:O4'	2.15	0.46
22:YA:593:G:H2'	22:YA:594:U:C6	2.50	0.46
22:YA:774:A:HO2'	22:YA:775:G:P	2.38	0.46
22:YA:1838:C:H4'	22:YA:1839:G:C8	2.49	0.46
22:YA:1843:C:H5'	24:YD:253:GLN:CD	2.40	0.46
22:YA:2035:G:H4'	22:YA:2036:C:OP2	2.14	0.46
24:YD:110:GLY:O	24:YD:111:LEU:C	2.58	0.46
24:YD:183:ARG:CG	24:YD:183:ARG:NH1	2.69	0.46
25:YE:103:ASP:OD2	25:YE:168:MET:HG2	2.15	0.46
27:YG:104:GLU:OE1	47:Y4:23:GLU:HB3	2.15	0.46
28:YH:9:ILE:O	28:YH:10:PRO:O	2.33	0.46
28:YH:89:ILE:HD13	28:YH:89:ILE:H	1.80	0.46
28:YH:94:TYR:N	28:YH:94:TYR:CD1	2.82	0.46
33:YQ:87:LYS:O	33:YQ:89:ASN:N	2.43	0.46
34:YR:61:HIS:O	34:YR:65:LEU:HD13	2.14	0.46
38:YV:6:LYS:HD3	38:YV:11:GLN:HG2	1.96	0.46
39:YW:4:LYS:HA	39:YW:106:ILE:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:14:SER:O	40:YX:15:GLU:C	2.57	0.46
41:YY:68:HIS:O	41:YY:71:LYS:HB2	2.14	0.46
45:Y2:4:SER:OG	45:Y2:5:GLU:OE2	2.26	0.46
48:Y5:45:VAL:HG12	48:Y5:45:VAL:O	2.13	0.46
1:QA:684:A:H2'	1:QA:685:G:C8	2.50	0.46
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.40	0.46
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.46
8:QH:74:PRO:O	8:QH:75:ARG:C	2.59	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.96	0.46
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.46
22:RA:241:A:OP1	22:RA:241:A:H8	1.99	0.46
22:RA:242:G:H1'	22:RA:243:U:OP2	2.14	0.46
22:RA:754:C:H2'	22:RA:755:C:C6	2.50	0.46
22:RA:2046:G:H5'	48:R5:19:ARG:HB2	1.97	0.46
22:RA:2637:U:H5"	25:RE:82:ARG:HH21	1.80	0.46
22:RA:2725:A:HO2'	22:RA:2726:U:H5"	1.80	0.46
23:RB:40:U:H1'	23:RB:45:A:N6	2.29	0.46
24:RD:18:VAL:CG1	24:RD:19:ALA:N	2.78	0.46
25:RE:87:GLU:O	25:RE:89:ASP:N	2.48	0.46
26:RF:61:GLY:O	26:RF:62:ARG:C	2.58	0.46
28:RH:41:MET:HG3	28:RH:54:ARG:HA	1.96	0.46
30:RN:9:VAL:HG21	30:RN:48:MET:CB	2.45	0.46
30:RN:27:ALA:O	30:RN:28:THR:C	2.57	0.46
31:RO:50:GLY:O	31:RO:51:ALA:C	2.57	0.46
34:RR:78:LYS:O	34:RR:78:LYS:HG2	2.15	0.46
38:RV:30:GLY:O	38:RV:31:ALA:O	2.34	0.46
40:RX:12:VAL:O	40:RX:12:VAL:HG13	2.15	0.46
40:RX:54:VAL:C	40:RX:55:ASN:HD22	2.24	0.46
40:RX:87:GLN:C	40:RX:88:LYS:HG3	2.40	0.46
42:RZ:104:PHE:CD1	42:RZ:139:VAL:HB	2.50	0.46
44:R1:79:GLY:N	44:R1:80:LEU:HD23	2.30	0.46
48:R5:56:LYS:O	48:R5:57:VAL:C	2.57	0.46
1:XA:338:A:C6	1:XA:339:C:C4	3.04	0.46
1:XA:518:C:H2'	1:XA:530:G:C4	2.50	0.46
1:XA:875:C:C4	1:XA:876:G:N7	2.83	0.46
1:XA:1314:C:H2'	1:XA:1315:U:C6	2.50	0.46
1:XA:1398:A:H5'	1:XA:1401:G:H4'	1.97	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.46
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.86	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.96	0.46
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.46
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.46
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.46
19:XS:67:VAL:HG21	47:Y4:60:GLN:CD	2.38	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.14	0.46
22:YA:581:C:H2'	22:YA:582:G:H8	1.80	0.46
22:YA:674:G:N2	22:YA:2445:G:OP1	2.48	0.46
22:YA:708:C:H42	22:YA:723:G:H1	1.62	0.46
22:YA:1311:G:N2	22:YA:1603:A:H62	2.13	0.46
22:YA:2562:U:H1'	31:YO:23:ARG:HH12	1.79	0.46
23:YB:9:G:H1	23:YB:111:U:H3	1.64	0.46
27:YG:13:GLU:O	27:YG:13:GLU:HG3	2.14	0.46
28:YH:86:GLU:O	28:YH:132:ARG:HA	2.16	0.46
31:YO:61:VAL:O	31:YO:84:ALA:HB1	2.16	0.46
32:YP:46:LYS:O	32:YP:48:PRO:N	2.48	0.46
36:YT:96:ARG:CB	36:YT:96:ARG:HH11	2.29	0.46
44:Y1:76:ARG:H	44:Y1:76:ARG:CD	2.29	0.46
48:Y5:39:MET:C	48:Y5:40:LYS:HG3	2.39	0.46
51:Y8:29:LYS:HE3	51:Y8:41:ILE:O	2.15	0.46
1:QA:164:U:H2'	1:QA:165:C:C6	2.50	0.46
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.30	0.46
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.46
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.48	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
20:QT:26:ASN:N	20:QT:26:ASN:ND2	2.62	0.46
22:RA:270(Y):G:H2'	22:RA:270(Z):U:C6	2.50	0.46
22:RA:271(B):G:N3	22:RA:271:G:H1'	2.31	0.46
22:RA:1027:A:N6	22:RA:1126:A:C4	2.84	0.46
22:RA:1414:G:O6	22:RA:1587:A:N6	2.48	0.46
22:RA:1469:A:H2'	22:RA:1470:G:O4'	2.16	0.46
22:RA:1480:G:C6	22:RA:1482:U:N3	2.83	0.46
22:RA:1543:A:HO2'	22:RA:1544:C:P	2.38	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2074:U:H2'	22:RA:2075:U:C6	2.50	0.46
25:RE:188:VAL:O	25:RE:188:VAL:HG13	2.15	0.46
26:RF:31:HIS:O	26:RF:34:TRP:HB3	2.15	0.46
27:RG:60:LEU:HD23	27:RG:60:LEU:C	2.41	0.46
27:RG:98:ARG:CA	27:RG:101:ILE:HG12	2.40	0.46
28:RH:9:ILE:O	28:RH:10:PRO:O	2.33	0.46
28:RH:153:LYS:HG3	28:RH:162:ILE:H	1.79	0.46
31:RO:112:MET:O	31:RO:115:VAL:CG2	2.64	0.46
35:RS:52:SER:O	35:RS:56:LEU:CD2	2.60	0.46
35:RS:99:LYS:C	35:RS:101:LEU:N	2.73	0.46
36:RT:29:ARG:NH1	36:RT:46:GLU:OE1	2.48	0.46
38:RV:81:TYR:C	38:RV:82:ARG:CG	2.89	0.46
39:RW:4:LYS:HA	39:RW:106:ILE:HA	1.97	0.46
41:RY:35:TYR:CD1	41:RY:35:TYR:O	2.69	0.46
44:R1:83:GLU:OE1	44:R1:85:LEU:HB2	2.15	0.46
47:R4:61:ARG:C	47:R4:63:TYR:N	2.73	0.46
51:R8:29:LYS:HE3	51:R8:41:ILE:O	2.15	0.46
1:XA:13:U:O2	1:XA:914:A:H3'	2.14	0.46
1:XA:110:C:H2'	1:XA:111:G:O4'	2.15	0.46
1:XA:186(C):G:C6	1:XA:191(E):G:C6	3.04	0.46
1:XA:587:G:N2	1:XA:754:C:OP2	2.49	0.46
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.50	0.46
1:XA:1366:C:H2'	1:XA:1367:C:C6	2.48	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
4:XD:110:PHE:HD1	4:XD:110:PHE:H	1.62	0.46
4:XD:135:LEU:O	4:XD:137:SER:N	2.48	0.46
4:XD:146:ILE:N	4:XD:146:ILE:CD1	2.73	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.46
21:XU:2:GLY:C	21:XU:4:GLY:H	2.24	0.46
22:YA:200:U:O2	22:YA:386:G:N2	2.48	0.46
22:YA:294:A:C5	22:YA:345:A:C6	3.03	0.46
22:YA:443:A:H3'	26:YF:45:ARG:HH12	1.80	0.46
22:YA:607:U:N3	22:YA:621:A:H2	2.09	0.46
22:YA:1055:G:O2'	22:YA:1085:A:N1	2.33	0.46
22:YA:1689:A:H62	22:YA:1698:A:H2	1.64	0.46
22:YA:2197:U:O3'	22:YA:2198:A:H8	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2336:A:H61	43:Y0:43:THR:HG21	1.80	0.46
23:YB:63:G:C2	23:YB:64:C:C2	3.04	0.46
25:YE:3:GLY:HA3	25:YE:81:ILE:HG21	1.97	0.46
25:YE:7:VAL:HG11	36:YT:1:MET:CE	2.45	0.46
27:YG:20:ILE:HD13	27:YG:25:TYR:HB2	1.98	0.46
32:YP:37:GLY:O	32:YP:41:ARG:HD3	2.15	0.46
34:YR:1:MET:O	34:YR:2:ARG:HB2	2.15	0.46
34:YR:10:LEU:C	34:YR:12:ARG:N	2.72	0.46
34:YR:28:LEU:HD13	34:YR:28:LEU:C	2.40	0.46
35:YS:28:VAL:HG11	35:YS:98:VAL:HG12	1.97	0.46
35:YS:61:ASN:O	35:YS:65:VAL:HG23	2.15	0.46
35:YS:99:LYS:C	35:YS:101:LEU:N	2.72	0.46
39:YW:17:VAL:O	39:YW:18:ARG:C	2.57	0.46
40:YX:26:TYR:HB3	40:YX:92:LEU:HD12	1.97	0.46
52:Y9:19:ARG:NH2	52:Y9:26:ILE:HD11	2.31	0.46
1:QA:1187:G:H21	14:QN:60:SER:HB3	1.80	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
2:QB:155:LEU:C	2:QB:157:ARG:H	2.23	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.46
11:QK:70:LYS:HA	11:QK:73:MET:HE3	1.97	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.30	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.34	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
22:RA:573:G:O2'	22:RA:574:C:H3'	2.15	0.46
22:RA:868:U:H2'	22:RA:869:G:O4'	2.14	0.46
22:RA:1354:A:H5'	24:RD:38:LYS:NZ	2.30	0.46
22:RA:2366:A:H2'	22:RA:2367:G:O4'	2.16	0.46
22:RA:2776:A:OP1	22:RA:2776:A:H3'	2.15	0.46
23:RB:38:C:N3	23:RB:44:G:N2	2.53	0.46
23:RB:97:G:H2'	23:RB:98:G:O4'	2.15	0.46
24:RD:183:ARG:CG	24:RD:183:ARG:NH1	2.69	0.46
25:RE:54:GLN:CA	25:RE:54:GLN:HE21	2.27	0.46
25:RE:103:ASP:OD2	25:RE:168:MET:HG2	2.15	0.46
29:RI:63:ALA:HA	29:RI:66:GLU:CD	2.41	0.46
29:RI:94:ALA:O	29:RI:97:ILE:N	2.48	0.46
32:RP:81:GLN:HB3	32:RP:110:TYR:HB3	1.97	0.46
34:RR:29:LEU:N	34:RR:29:LEU:CD1	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:26:LEU:HD22	35:RS:87:PHE:CD1	2.46	0.46
40:RX:8:ILE:CD1	40:RX:42:ALA:HB1	2.46	0.46
40:RX:24:GLY:O	40:RX:82:GLN:HA	2.16	0.46
41:RY:15:VAL:O	41:RY:21:LYS:HA	2.16	0.46
42:RZ:158:PRO:HG2	42:RZ:161:VAL:HG21	1.98	0.46
44:R1:76:ARG:HD2	44:R1:76:ARG:N	2.29	0.46
45:R2:7:ARG:HG3	45:R2:7:ARG:NH1	2.25	0.46
48:R5:43:HIS:N	48:R5:43:HIS:ND1	2.63	0.46
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.16	0.46
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.80	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
22:YA:593:G:O2'	51:Y8:61:LEU:HD13	2.15	0.46
22:YA:1324:G:C4	22:YA:1328:G:O6	2.68	0.46
22:YA:1955:U:O4	22:YA:2554:U:H5	1.98	0.46
22:YA:2011:U:OP2	39:YW:16:LYS:NZ	2.47	0.46
22:YA:2391:G:OP2	51:Y8:32:LEU:HD13	2.15	0.46
26:YF:183:VAL:O	26:YF:184:TYR:C	2.57	0.46
26:YF:184:TYR:CD2	26:YF:188:ARG:HD2	2.50	0.46
27:YG:102:PHE:HA	27:YG:105:LYS:HE3	1.98	0.46
28:YH:86:GLU:O	28:YH:87:LEU:CB	2.64	0.46
30:YN:30:ILE:O	30:YN:34:LEU:CD2	2.63	0.46
30:YN:96:GLU:O	30:YN:99:LEU:N	2.34	0.46
31:YO:7:TYR:CD1	31:YO:20:MET:HB2	2.50	0.46
31:YO:92:GLU:O	31:YO:93:PRO:C	2.58	0.46
31:YO:101:PRO:HA	31:YO:120:GLU:O	2.16	0.46
32:YP:85:LEU:HD23	32:YP:88:LEU:HD22	1.96	0.46
32:YP:144:GLU:OE1	32:YP:144:GLU:N	2.48	0.46
33:YQ:66:ILE:H	33:YQ:104:PHE:HA	1.79	0.46
33:YQ:109:VAL:HG13	33:YQ:113:GLN:OE1	2.16	0.46
34:YR:85:PRO:C	34:YR:87:TYR:N	2.73	0.46
37:YU:57:PHE:C	37:YU:59:ARG:N	2.74	0.46
37:YU:73:GLY:O	37:YU:74:LEU:CB	2.63	0.46
39:YW:36:LEU:CD1	39:YW:47:VAL:HG12	2.44	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YX:12:VAL:O	40:YX:12:VAL:HG13	2.15	0.46
1:QA:838:G:C6	1:QA:842:C:H1'	2.50	0.46
1:QA:1162:C:H2'	1:QA:1163:C:O4'	2.16	0.46
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.16	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC:95:THR:CG2	3:QC:97:LYS:HZ3	2.28	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.81	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.33	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
22:RA:900:A:H3'	22:RA:901:A:C8	2.43	0.46
22:RA:1978:A:H2'	22:RA:1979:C:O4'	2.16	0.46
22:RA:2872:G:C2	22:RA:2873:A:N6	2.83	0.46
23:RB:12:C:O2'	23:RB:13:A:OP2	2.31	0.46
25:RE:33:VAL:HG12	25:RE:90:THR:H	1.81	0.46
25:RE:94:GLU:C	25:RE:96:PHE:N	2.73	0.46
28:RH:86:GLU:O	28:RH:132:ARG:HA	2.15	0.46
28:RH:127:GLU:OE2	28:RH:130:ARG:NH2	2.48	0.46
32:RP:125:VAL:C	32:RP:145:PRO:HD2	2.39	0.46
33:RQ:66:ILE:O	33:RQ:104:PHE:N	2.49	0.46
34:RR:75:LEU:HA	34:RR:78:LYS:HB3	1.97	0.46
46:R3:18:ASP:O	46:R3:21:ALA:N	2.49	0.46
46:R3:56:VAL:CG1	46:R3:57:GLU:N	2.74	0.46
49:R6:18:ARG:O	49:R6:19:ARG:O	2.33	0.46
51:R8:52:LYS:O	51:R8:52:LYS:CG	2.64	0.46
1:XA:163:C:H2'	1:XA:164:U:C6	2.51	0.46
1:XA:1350:A:H2'	1:XA:1351:U:O4'	2.15	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.80	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46
22:YA:26:G:C6	22:YA:27:G:N1	2.83	0.46
22:YA:483:A:H5'	41:YY:49:VAL:HG22	1.98	0.46
22:YA:669:G:H2'	22:YA:669:G:N3	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:780:G:N2	22:YA:783:A:H62	2.12	0.46
22:YA:1190:G:H5'	32:YP:32:THR:HA	1.97	0.46
22:YA:2507:C:H2'	22:YA:2508:G:H8	1.81	0.46
22:YA:2540:C:H2'	22:YA:2541:A:O4'	2.14	0.46
24:YD:35:LYS:HE3	24:YD:65:ILE:N	2.31	0.46
24:YD:102:LYS:O	24:YD:103:ARG:HG3	2.15	0.46
24:YD:105:ILE:HG23	24:YD:106:ILE:O	2.15	0.46
24:YD:206:LEU:HD23	24:YD:206:LEU:HA	1.49	0.46
24:YD:211:ARG:HG2	24:YD:211:ARG:HH11	1.80	0.46
27:YG:36:LYS:O	27:YG:37:VAL:HG23	2.15	0.46
27:YG:116:ASP:O	27:YG:117:PHE:CB	2.50	0.46
28:YH:4:ILE:HG13	28:YH:6:ARG:HD3	1.97	0.46
28:YH:106:THR:HG22	28:YH:112:PRO:HB3	1.98	0.46
30:YN:46:VAL:HG13	30:YN:47:ALA:N	2.31	0.46
30:YN:97:ARG:HA	30:YN:100:GLU:HB3	1.97	0.46
31:YO:8:LEU:N	31:YO:8:LEU:CD2	2.76	0.46
31:YO:104:ARG:HG2	31:YO:121:VAL:HG12	1.97	0.46
32:YP:1:MET:O	32:YP:2:LYS:HG3	2.16	0.46
34:YR:79:LEU:HD23	34:YR:79:LEU:O	2.16	0.46
35:YS:24:LEU:HB2	35:YS:85:VAL:HG12	1.98	0.46
36:YT:118:ARG:NH2	36:YT:121:ILE:HD12	2.31	0.46
38:YV:16:PRO:HA	38:YV:96:ILE:O	2.14	0.46
38:YV:61:VAL:HA	38:YV:94:LEU:HD23	1.97	0.46
40:YX:65:ARG:N	40:YX:65:ARG:CD	2.79	0.46
41:YY:15:VAL:O	41:YY:21:LYS:HA	2.15	0.46
42:YZ:5:LEU:HD23	42:YZ:47:VAL:HG21	1.96	0.46
46:Y3:28:LEU:HA	46:Y3:33:GLN:OE1	2.16	0.46
54:QX:6:C:HO2'	54:QX:7:A:P	2.34	0.46
1:QA:266:G:O2'	1:QA:267:C:OP2	2.28	0.46
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.49	0.46
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.79	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.81	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
22:RA:194:G:H2'	22:RA:195:A:O4'	2.15	0.46
22:RA:524:U:H2'	22:RA:525:U:C6	2.50	0.46
22:RA:862:G:N2	22:RA:916:G:H1'	2.31	0.46
22:RA:971:C:H2'	22:RA:972:G:O4'	2.16	0.46
22:RA:2298:A:C2	22:RA:2299:G:H1'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2617:C:H2'	22:RA:2618:G:O4'	2.15	0.46
24:RD:27:THR:CG2	24:RD:28:GLU:N	2.66	0.46
24:RD:136:ILE:HD12	24:RD:136:ILE:N	2.30	0.46
25:RE:89:ASP:O	25:RE:90:THR:O	2.33	0.46
28:RH:4:ILE:HG13	28:RH:6:ARG:HD3	1.97	0.46
29:RI:57:ARG:HA	29:RI:60:GLU:HB3	1.98	0.46
29:RI:60:GLU:O	29:RI:64:GLU:N	2.46	0.46
31:RO:101:PRO:HA	31:RO:120:GLU:O	2.16	0.46
32:RP:107:LYS:O	32:RP:108:LYS:C	2.58	0.46
33:RQ:109:VAL:HG13	33:RQ:113:GLN:OE1	2.16	0.46
35:RS:42:ASP:C	35:RS:44:LYS:N	2.72	0.46
36:RT:51:ARG:CG	36:RT:98:LYS:HG3	2.44	0.46
36:RT:58:ASN:HD22	36:RT:58:ASN:N	2.10	0.46
36:RT:96:ARG:CB	36:RT:96:ARG:HH11	2.29	0.46
38:RV:47:VAL:O	38:RV:48:GLY:O	2.34	0.46
47:R4:15:ILE:HG22	47:R4:20:ASN:CA	2.45	0.46
47:R4:64:GLY:C	47:R4:66:SER:N	2.73	0.46
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.55	0.46
1:XA:811:C:H4'	1:XA:900:A:N6	2.31	0.46
1:XA:964:A:N3	1:XA:969:A:O2'	2.46	0.46
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.46	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
22:YA:1783:A:C6	22:YA:2587:A:C2	3.04	0.46
22:YA:2295:C:OP1	35:YS:10:ARG:HD2	2.15	0.46
22:YA:2563:U:H2'	22:YA:2565:A:OP2	2.16	0.46
22:YA:2645:G:H3'	22:YA:2646:C:H5'	1.97	0.46
23:YB:18:G:H1	23:YB:65:C:N4	2.12	0.46
28:YH:151:ILE:O	28:YH:152:ARG:O	2.34	0.46
30:YN:36:GLY:O	30:YN:42:TRP:HE3	1.98	0.46
30:YN:114:ARG:C	30:YN:116:LEU:N	2.74	0.46
34:YR:75:LEU:HA	34:YR:78:LYS:HB3	1.97	0.46
34:YR:78:LYS:HG2	34:YR:78:LYS:O	2.15	0.46
36:YT:6:LEU:O	36:YT:10:VAL:HG23	2.16	0.46
38:YV:81:TYR:C	38:YV:82:ARG:CG	2.89	0.46
46:Y3:39:ASP:O	46:Y3:40:THR:C	2.59	0.46
49:Y6:15:GLU:HB3	49:Y6:16:CYS:H	1.46	0.46
55:XY:40:G:H2'	55:XY:41:A:C8	2.51	0.46
1:QA:64:G:H4'	1:QA:65:U:O5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:502:G:H4'	1:QA:550:G:H4'	1.97	0.46
1:QA:754:C:H5'	15:QO:72:ARG:NH2	2.19	0.46
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.56	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.46
3:QC:143:GLU:C	3:QC:145:GLY:H	2.23	0.46
4:QD:187:ARG:HH11	4:QD:187:ARG:HG2	1.81	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.46
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	0.46
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.16	0.46
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
22:RA:482:A:O2'	41:RY:47:LYS:NZ	2.48	0.46
22:RA:520:G:H2'	22:RA:521:G:C8	2.49	0.46
22:RA:643:A:N1	22:RA:2369:A:O2'	2.47	0.46
22:RA:898:C:C2'	22:RA:899:A:H5'	2.46	0.46
22:RA:1251:C:OP1	37:RU:10:ARG:HG3	2.15	0.46
22:RA:1478:G:O2'	22:RA:1479:G:H5'	2.16	0.46
22:RA:2436:G:C6	22:RA:2437:U:C4	3.03	0.46
22:RA:2570:G:H2'	22:RA:2571:C:O4'	2.16	0.46
24:RD:61:LEU:HB3	24:RD:63:ARG:NH1	2.31	0.46
25:RE:50:GLY:CA	25:RE:74:PRO:HG3	2.46	0.46
26:RF:111:ALA:O	26:RF:112:MET:C	2.59	0.46
27:RG:14:GLU:O	27:RG:17:PRO:HG2	2.15	0.46
27:RG:111:LEU:HD22	27:RG:120:LEU:HD21	1.97	0.46
30:RN:30:ILE:O	30:RN:34:LEU:CD2	2.63	0.46
30:RN:36:GLY:O	30:RN:42:TRP:HE3	1.98	0.46
32:RP:1:MET:O	32:RP:2:LYS:HG3	2.16	0.46
32:RP:6:LEU:N	32:RP:6:LEU:HD22	2.31	0.46
32:RP:23:PRO:HG2	32:RP:23:PRO:O	2.15	0.46
32:RP:45:LEU:CD1	32:RP:45:LEU:N	2.79	0.46
32:RP:85:LEU:HD23	32:RP:88:LEU:HD22	1.97	0.46
35:RS:13:ARG:O	35:RS:14:VAL:HB	2.16	0.46
35:RS:28:VAL:HG11	35:RS:98:VAL:HG12	1.98	0.46
36:RT:118:ARG:NH2	36:RT:121:ILE:HD12	2.31	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:27:LEU:HD12	37:RU:31:SER:HB3	1.98	0.46
39:RW:17:VAL:O	39:RW:18:ARG:C	2.57	0.46
42:RZ:103:ARG:HD3	42:RZ:136:PHE:CD1	2.50	0.46
43:R0:78:TYR:HB3	43:R0:80:HIS:NE2	2.30	0.46
45:R2:41:ILE:C	45:R2:41:ILE:CD1	2.81	0.46
46:R3:59:VAL:CG1	46:R3:60:GLU:H	2.29	0.46
47:R4:4:GLY:O	47:R4:5:ILE:C	2.59	0.46
1:XA:389:A:H2'	1:XA:390:C:O4'	2.16	0.46
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.15	0.46
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.84	0.46
6:XF:98:LEU:HD12	6:XF:98:LEU:C	2.41	0.46
8:XH:49:GLU:HG3	8:XH:49:GLU:O	2.14	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
15:XO:83:GLU:C	15:XO:85:LEU:N	2.70	0.46
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.46
22:YA:270(G):C:H2'	22:YA:270(H):C:C6	2.50	0.46
22:YA:1028:A:N6	22:YA:1125:G:H2'	2.30	0.46
22:YA:1779:U:OP2	22:YA:1784:A:N6	2.35	0.46
22:YA:2168:G:H2'	22:YA:2168:G:N3	2.31	0.46
24:YD:48:ARG:HG3	24:YD:48:ARG:NH1	2.31	0.46
24:YD:61:LEU:HB3	24:YD:63:ARG:NH1	2.31	0.46
24:YD:79:VAL:HG21	24:YD:111:LEU:HD21	1.98	0.46
25:YE:63:LEU:O	25:YE:64:LYS:CB	2.62	0.46
25:YE:188:VAL:HA	25:YE:189:PRO:HD2	1.79	0.46
25:YE:195:LEU:HD12	25:YE:196:VAL:N	2.29	0.46
27:YG:14:GLU:O	27:YG:17:PRO:HD2	2.16	0.46
29:YI:79:ILE:N	29:YI:141:LYS:O	2.49	0.46
30:YN:27:ALA:O	30:YN:28:THR:C	2.57	0.46
30:YN:28:THR:O	30:YN:29:LYS:C	2.59	0.46
30:YN:128:HIS:HB2	30:YN:129:PRO:CD	2.46	0.46
30:YN:131:GLN:HE21	30:YN:132:ALA:H	1.58	0.46
32:YP:23:PRO:HG2	32:YP:23:PRO:O	2.15	0.46
32:YP:144:GLU:HA	32:YP:145:PRO:HD3	1.76	0.46
33:YQ:11:LYS:HE2	33:YQ:87:LYS:HA	1.98	0.46
33:YQ:63:LYS:HE2	33:YQ:65:PHE:CZ	2.51	0.46
33:YQ:87:LYS:O	33:YQ:87:LYS:HG2	2.15	0.46
37:YU:69:CYS:O	37:YU:74:LEU:HD12	2.16	0.46
39:YW:14:PRO:C	39:YW:16:LYS:N	2.73	0.46
40:YX:35:THR:O	40:YX:35:THR:HG23	2.16	0.46
44:Y1:80:LEU:CB	44:Y1:81:LYS:HE2	2.43	0.46
45:Y2:15:LYS:H	45:Y2:67:LYS:HZ3	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y3:43:ILE:O	46:Y3:47:VAL:HG23	2.16	0.46
46:Y3:59:VAL:CG1	46:Y3:60:GLU:H	2.29	0.46
51:Y8:48:PHE:N	51:Y8:48:PHE:HD1	2.14	0.46
55:QY:36:G:H8	55:QY:36:G:C5'	2.29	0.46
1:QA:597:G:H2'	1:QA:598:U:H5'	1.97	0.46
1:QA:962:C:H42	1:QA:974:A:H61	1.64	0.46
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.80	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.64	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.46
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.46
12:QL:47:LYS:C	12:QL:49:ASN:N	2.72	0.46
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.46
22:RA:412:A:N7	22:RA:2411:A:H2	2.14	0.46
22:RA:1564:C:H2'	22:RA:1565:C:C6	2.51	0.46
22:RA:1681:G:HO2'	22:RA:1762:A:HO2'	1.59	0.46
22:RA:2083:G:C2	22:RA:2084:C:C2	3.04	0.46
23:RB:83:G:H1	23:RB:93:C:H42	1.63	0.46
24:RD:45:ASN:CG	24:RD:46:GLN:N	2.68	0.46
25:RE:172:VAL:HG13	25:RE:182:LEU:HD11	1.98	0.46
27:RG:37:VAL:HG22	27:RG:159:VAL:CA	2.34	0.46
27:RG:88:ILE:O	27:RG:88:ILE:CD1	2.54	0.46
27:RG:104:GLU:OE1	47:R4:23:GLU:HB3	2.15	0.46
27:RG:135:LEU:HD11	27:RG:157:ILE:HD12	1.98	0.46
28:RH:13:LYS:HE2	28:RH:13:LYS:CA	2.40	0.46
28:RH:59:ARG:CG	28:RH:59:ARG:NH1	2.79	0.46
28:RH:66:GLY:O	28:RH:67:LEU:C	2.58	0.46
35:RS:24:LEU:HB2	35:RS:85:VAL:HG12	1.98	0.46
37:RU:69:CYS:O	37:RU:74:LEU:HD12	2.16	0.46
37:RU:106:PHE:O	37:RU:109:LEU:HB2	2.15	0.46
38:RV:51:VAL:CG1	38:RV:52:VAL:N	2.75	0.46
40:RX:43:VAL:HG11	40:RX:51:VAL:HG21	1.97	0.46
44:R1:60:PHE:CE2	44:R1:91:LYS:NZ	2.84	0.46
47:R4:50:VAL:O	47:R4:50:VAL:HG13	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:53:PRO:CD	51:R8:54:GLU:N	2.77	0.46
1:XA:614:A:OP1	4:XD:86:LYS:HE3	2.16	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.46
3:XC:46:GLU:C	3:XC:48:TYR:H	2.24	0.46
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.46	0.46
6:XF:100:ASN:HD22	6:XF:100:ASN:HA	1.47	0.46
9:XI:105:ASP:C	9:XI:107:ARG:N	2.74	0.46
10:XJ:4:ILE:O	10:XJ:74:ILE:HD13	2.16	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.46
22:YA:414:C:H2'	22:YA:415:A:C8	2.50	0.46
22:YA:1339:G:N2	22:YA:1603:A:H1'	2.31	0.46
22:YA:1930:G:H2'	22:YA:1968:G:N1	2.30	0.46
22:YA:1930:G:HO2'	22:YA:1931:U:P	2.39	0.46
22:YA:2308:G:N2	22:YA:2311:A:H2	2.12	0.46
24:YD:148:GLU:HB2	24:YD:151:LYS:HD2	1.98	0.46
25:YE:87:GLU:O	25:YE:89:ASP:N	2.48	0.46
25:YE:137:HIS:CB	25:YE:138:PRO:HD2	2.41	0.46
27:YG:60:LEU:HD23	27:YG:60:LEU:C	2.41	0.46
27:YG:83:ARG:HG3	27:YG:86:MET:CE	2.46	0.46
28:YH:88:LEU:HD22	28:YH:163:TYR:O	2.16	0.46
28:YH:128:PRO:HD2	28:YH:129:THR:N	2.25	0.46
30:YN:36:GLY:O	30:YN:42:TRP:CE3	2.69	0.46
32:YP:98:GLU:HG2	32:YP:99:LEU:N	2.30	0.46
35:YS:108:GLY:O	35:YS:110:LEU:N	2.48	0.46
38:YV:22:VAL:HG12	38:YV:23:GLU:H	1.76	0.46
39:YW:14:PRO:C	39:YW:18:ARG:HD2	2.41	0.46
39:YW:29:LEU:HD23	39:YW:29:LEU:C	2.41	0.46
42:YZ:48:PHE:CE2	42:YZ:71:VAL:HG11	2.49	0.46
42:YZ:152:ALA:HB2	42:YZ:168:GLU:HA	1.98	0.46
44:Y1:82:LEU:HD13	44:Y1:83:GLU:C	2.35	0.46
46:Y3:18:ASP:O	46:Y3:21:ALA:N	2.49	0.46
47:Y4:4:GLY:O	47:Y4:5:ILE:C	2.59	0.46
1:QA:105:G:C5	1:QA:106:C:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:219:C:H2'	1:QA:220:G:O4'	2.16	0.46
1:QA:940:C:H2'	1:QA:941:G:H8	1.80	0.46
1:QA:1100:C:OP2	2:QB:96:ARG:HG2	2.16	0.46
1:QA:1432:G:OP1	36:RT:108:ARG:HB2	2.15	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.46
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.46
5:QE:111:GLU:C	5:QE:113:ALA:N	2.73	0.46
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.15	0.46
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.15	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.46
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
15:QO:74:ASP:C	15:QO:76:GLU:H	2.24	0.46
17:QQ:84:LEU:O	17:QQ:86:GLU:N	2.49	0.46
22:RA:212:G:H2'	22:RA:213:A:C8	2.51	0.46
22:RA:612:G:H2'	22:RA:613:U:O2	2.16	0.46
22:RA:859:G:O2'	22:RA:860:U:O5'	2.34	0.46
22:RA:1268:A:H2'	22:RA:1269:A:O4'	2.16	0.46
22:RA:1796:U:H2'	22:RA:1797:C:H6	1.81	0.46
22:RA:2451:A:N1	56:Z6:76:PPU:HE2	2.30	0.46
22:RA:2692:C:C2	22:RA:2693:A:C8	3.04	0.46
23:RB:34:U:H4'	23:RB:35:U:H5	1.81	0.46
25:RE:7:VAL:HG11	36:RT:1:MET:CE	2.45	0.46
25:RE:47:VAL:O	25:RE:47:VAL:HG23	2.16	0.46
25:RE:61:ARG:O	25:RE:63:LEU:CG	2.57	0.46
27:RG:14:GLU:O	27:RG:17:PRO:HD2	2.16	0.46
27:RG:44:GLY:C	27:RG:46:ALA:N	2.73	0.46
27:RG:52:ILE:HG22	27:RG:52:ILE:O	2.15	0.46
28:RH:88:LEU:HD22	28:RH:163:TYR:O	2.16	0.46
32:RP:90:ARG:HB3	32:RP:91:PHE:H	1.60	0.46
33:RQ:26:TYR:O	33:RQ:27:VAL:O	2.33	0.46
37:RU:79:PHE:CE2	37:RU:83:LEU:HD13	2.51	0.46
41:RY:19:LYS:O	41:RY:19:LYS:CG	2.60	0.46
48:R5:41:PRO:HA	48:R5:42:PRO:HD3	1.82	0.46
1:XA:312:C:H2'	1:XA:313:A:C8	2.51	0.46
1:XA:328:C:H4'	1:XA:329:A:C5'	2.43	0.46
1:XA:575:G:C5	1:XA:881:G:C2	3.04	0.46
1:XA:1002:G:H1	1:XA:1038:C:N4	2.09	0.46
1:XA:1439:C:H42	1:XA:1462:G:H1	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.46
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
7:XG:54:THR:O	7:XG:54:THR:HG23	2.16	0.46
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
22:YA:27:G:H22	22:YA:512:G:H2'	1.79	0.46
22:YA:177:G:H3'	22:YA:178:G:H8	1.81	0.46
22:YA:242:G:H4'	22:YA:243:U:O5'	2.16	0.46
22:YA:1405:U:H2'	22:YA:1406:U:O4'	2.16	0.46
22:YA:1418:G:O2'	22:YA:1580:A:N6	2.40	0.46
22:YA:1532:C:H2'	22:YA:1533:C:O4'	2.16	0.46
22:YA:2072:G:C6	22:YA:2073:C:C4	3.04	0.46
22:YA:2790:A:H2'	22:YA:2791:C:H5"	1.97	0.46
22:YA:2881:C:C2	22:YA:2882:A:C8	3.04	0.46
24:YD:14:ARG:HG3	24:YD:15:PHE:N	2.31	0.46
24:YD:36:PRO:HB3	24:YD:62:TYR:O	2.16	0.46
32:YP:37:GLY:O	32:YP:38:GLN:C	2.58	0.46
35:YS:102:ALA:C	35:YS:104:GLY:N	2.73	0.46
36:YT:107:ASP:HB2	36:YT:108:ARG:H	1.48	0.46
41:YY:11:ASP:HB2	41:YY:27:VAL:CG1	2.46	0.46
42:YZ:182:LYS:HB2	42:YZ:182:LYS:HE3	1.80	0.46
44:Y1:79:GLY:N	44:Y1:80:LEU:HD23	2.30	0.46
49:Y6:11:LEU:HD11	49:Y6:51:GLU:HG3	1.98	0.46
51:Y8:44:LYS:HD2	51:Y8:44:LYS:N	2.30	0.46
53:QV:49:G:O6	53:QV:65:C:N4	2.49	0.46
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.96	0.46
1:QA:1392:G:H21	1:QA:1502:A:H8	1.63	0.46
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.51	0.46
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.46
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.46
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.46
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.46
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.46
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.89	0.46
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.31	0.46
22:RA:250:G:C6	22:RA:251:A:C6	3.04	0.46
22:RA:372:G:H5"	44:R1:66:HIS:CD2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:681:G:H2'	22:RA:682:G:O4'	2.16	0.46
22:RA:2296:U:OP2	35:RS:9:ARG:NH1	2.49	0.46
22:RA:2636:U:OP1	25:RE:79:ARG:HA	2.15	0.46
23:RB:48:A:H4'	35:RS:95:HIS:CD2	2.50	0.46
24:RD:80:ALA:O	24:RD:113:VAL:HG13	2.16	0.46
28:RH:37:VAL:HG11	28:RH:68:THR:HG23	1.98	0.46
29:RI:12:LEU:HG	29:RI:19:VAL:HG11	1.98	0.46
30:RN:73:THR:HA	30:RN:83:LYS:O	2.15	0.46
30:RN:112:LEU:O	30:RN:116:LEU:HG	2.16	0.46
31:RO:7:TYR:CD1	31:RO:20:MET:HB2	2.50	0.46
31:RO:61:VAL:O	31:RO:84:ALA:HB1	2.16	0.46
32:RP:115:LEU:CD1	32:RP:116:GLY:N	2.78	0.46
33:RQ:85:LYS:HD3	33:RQ:86:GLY:H	1.80	0.46
33:RQ:87:LYS:O	33:RQ:87:LYS:HG2	2.15	0.46
35:RS:109:GLY:O	35:RS:110:LEU:HB2	2.16	0.46
38:RV:67:GLY:O	38:RV:68:LYS:C	2.60	0.46
39:RW:14:PRO:C	39:RW:18:ARG:HD2	2.41	0.46
45:R2:18:PRO:C	45:R2:20:GLU:N	2.73	0.46
45:R2:48:HIS:O	45:R2:49:LYS:C	2.57	0.46
45:R2:65:ASN:O	45:R2:66:GLU:C	2.59	0.46
47:R4:56:VAL:HA	47:R4:60:GLN:CB	2.28	0.46
49:R6:15:GLU:OE2	49:R6:44:ARG:NH1	2.49	0.46
1:XA:434:U:H2'	1:XA:435:C:C6	2.51	0.46
1:XA:1069:C:O2'	5:XE:25:ARG:NH1	2.47	0.46
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.56	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
2:XB:122:PHE:HD1	2:XB:139:LYS:NZ	2.09	0.46
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.46
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.98	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.31	0.46
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.80	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.46
14:XN:43:CYS:HB3	14:XN:44:LEU:H	1.66	0.46
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.46
16:XP:40:ASP:O	16:XP:42:ARG:N	2.49	0.46
17:XQ:41:LYS:HZ1	17:XQ:92:ARG:HH22	1.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.46
19:XS:2:PRO:HB2	47:Y4:68:ARG:HH12	1.78	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.46
22:YA:33:U:O2'	22:YA:446:G:N2	2.49	0.46
22:YA:483:A:H3'	22:YA:484:C:H6	1.81	0.46
22:YA:526:A:O2'	22:YA:2043:C:O2	2.28	0.46
22:YA:941:A:H2'	22:YA:942:G:O4'	2.15	0.46
22:YA:1221:C:H2'	22:YA:1222:C:H6	1.81	0.46
22:YA:1798:U:C2	22:YA:1822:G:N2	2.84	0.46
22:YA:1929:G:H4'	22:YA:1930:G:OP1	2.15	0.46
22:YA:2439:A:C8	22:YA:2439:A:H5'	2.51	0.46
24:YD:2:ALA:HB1	24:YD:20:ASP:CB	2.46	0.46
25:YE:36:ARG:O	25:YE:37:ARG:C	2.59	0.46
25:YE:62:PRO:O	25:YE:63:LEU:C	2.59	0.46
25:YE:77:ILE:O	25:YE:78:LEU:O	2.34	0.46
25:YE:111:ARG:NE	25:YE:160:TYR:CE1	2.76	0.46
27:YG:44:GLY:C	27:YG:46:ALA:N	2.73	0.46
27:YG:129:GLY:O	27:YG:130:ASN:OD1	2.34	0.46
28:YH:51:ARG:HG3	28:YH:51:ARG:NH1	2.30	0.46
32:YP:12:ALA:C	32:YP:14:LYS:N	2.73	0.46
32:YP:115:LEU:HA	32:YP:134:ALA:CB	2.46	0.46
35:YS:13:ARG:O	35:YS:14:VAL:HB	2.15	0.46
36:YT:54:ARG:HG2	36:YT:54:ARG:NH1	2.23	0.46
38:YV:5:VAL:HG22	38:YV:14:VAL:CG2	2.46	0.46
41:YY:49:VAL:O	41:YY:50:ARG:C	2.59	0.46
46:Y3:7:LYS:HE2	46:Y3:32:GLN:HA	1.98	0.46
51:Y8:56:GLU:C	51:Y8:58:ILE:N	2.73	0.46
52:Y9:1:MET:SD	52:Y9:31:LYS:O	2.74	0.46
1:QA:1338:G:N3	53:QV:41:C:O2'	2.50	0.45
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.45
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.32	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:167:GLY:HA2	24:YD:135:PHE:CE1	2.51	0.45
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.45
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
22:RA:112:U:P	45:R2:69:ARG:HH21	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:748:G:N3	22:RA:750:A:N6	2.64	0.45
22:RA:2451:A:C2	56:Z6:76:PPU:HD2	2.50	0.45
22:RA:2543:G:H2'	22:RA:2544:G:C8	2.51	0.45
22:RA:2555:U:C5	22:RA:2556:C:C2	3.05	0.45
22:RA:2739:U:O2	22:RA:2766:G:N2	2.49	0.45
24:RD:35:LYS:HE3	24:RD:65:ILE:N	2.31	0.45
24:RD:148:GLU:HB2	24:RD:151:LYS:HD2	1.98	0.45
25:RE:1:MET:HE2	25:RE:1:MET:N	2.31	0.45
27:RG:76:SER:CB	27:RG:83:ARG:HA	2.46	0.45
28:RH:151:ILE:O	28:RH:152:ARG:O	2.34	0.45
30:RN:17:ASP:O	30:RN:55:VAL:O	2.34	0.45
30:RN:114:ARG:C	30:RN:116:LEU:N	2.74	0.45
32:RP:46:LYS:O	32:RP:48:PRO:N	2.48	0.45
32:RP:65:ARG:C	32:RP:66:GLY:O	2.59	0.45
32:RP:98:GLU:HG2	32:RP:99:LEU:N	2.30	0.45
33:RQ:27:VAL:HG22	33:RQ:105:GLU:CD	2.41	0.45
33:RQ:81:VAL:HG23	33:RQ:82:ARG:N	2.32	0.45
41:RY:90:LEU:N	41:RY:90:LEU:CD2	2.73	0.45
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.45
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.45
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.45
5:XE:153:LYS:HD3	5:XE:153:LYS:C	2.40	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.15	0.45
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
13:XM:65:LYS:HZ2	47:Y4:52:THR:CB	2.29	0.45
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.45
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.16	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.16	0.45
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.60	0.45
22:YA:1069:A:H4'	22:YA:1070:A:H5"	1.98	0.45
22:YA:1164:G:H2'	22:YA:1165:U:H6	1.79	0.45
22:YA:1204:A:H2	22:YA:1241:A:N1	2.14	0.45
22:YA:1503:U:H2'	22:YA:1504:C:C6	2.51	0.45
22:YA:1517:G:C6	22:YA:1518:C:C4	3.04	0.45
22:YA:1533:C:H2'	22:YA:1534:G:N7	2.31	0.45
22:YA:1682:G:C2	22:YA:1683:C:C2	3.04	0.45
22:YA:1826:G:H4'	24:YD:242:ARG:HH21	1.82	0.45
22:YA:2331:G:H4'	43:Y0:43:THR:H	1.82	0.45
22:YA:2420:C:H6	22:YA:2420:C:O5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2844:G:C6	22:YA:2845:G:C4	3.04	0.45
23:YB:38:C:H42	23:YB:44:G:H1	1.62	0.45
23:YB:48:A:H2'	23:YB:49:C:C6	2.51	0.45
24:YD:11:PRO:O	24:YD:12:SER:CB	2.65	0.45
24:YD:118:VAL:O	24:YD:129:ASN:HA	2.16	0.45
25:YE:1:MET:HA	25:YE:200:GLU:OE2	2.16	0.45
25:YE:94:GLU:C	25:YE:96:PHE:N	2.73	0.45
26:YF:31:HIS:O	26:YF:34:TRP:HB3	2.15	0.45
27:YG:6:ALA:HB3	27:YG:104:GLU:OE2	2.16	0.45
27:YG:78:SER:O	27:YG:79:ASN:C	2.59	0.45
29:YI:114:LEU:HD13	29:YI:130:TYR:CD1	2.50	0.45
29:YI:129:THR:HA	29:YI:137:PRO:HA	1.98	0.45
31:YO:86:ILE:H	31:YO:86:ILE:CD1	2.28	0.45
31:YO:112:MET:O	31:YO:115:VAL:CG2	2.64	0.45
32:YP:36:LYS:HZ3	32:YP:36:LYS:HG3	1.39	0.45
41:YY:35:TYR:CD1	41:YY:35:TYR:O	2.69	0.45
47:Y4:3:GLU:HG3	47:Y4:4:GLY:H	1.79	0.45
49:Y6:17:LYS:O	49:Y6:18:ARG:CB	2.64	0.45
1:QA:232:G:H2'	1:QA:233:C:O4'	2.15	0.45
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.16	0.45
1:QA:1285:A:H4'	1:QA:1286:A:O5'	2.16	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.52	0.45
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.45
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.45
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.45
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.45
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.59	0.45
20:QT:93:GLU:HG2	20:QT:93:GLU:O	2.15	0.45
22:RA:140:A:C8	22:RA:1408:C:O2'	2.67	0.45
22:RA:528:A:C2	22:RA:2042:A:H2'	2.51	0.45
22:RA:795:C:H2'	22:RA:796:C:C6	2.52	0.45
22:RA:1003:G:O2'	22:RA:1010:A:N1	2.37	0.45
22:RA:2292:C:H2'	22:RA:2293:C:C6	2.51	0.45
22:RA:2578:G:OP2	22:RA:2578:G:H4'	2.16	0.45
22:RA:2662:A:C5	22:RA:2663:G:H1'	2.51	0.45
22:RA:2845:G:O2'	22:RA:2846:G:H5'	2.17	0.45
23:RB:52:A:N6	35:RS:33:LYS:HG3	2.30	0.45
24:RD:105:ILE:HG23	24:RD:106:ILE:O	2.15	0.45
24:RD:154:LYS:C	24:RD:155:LEU:HD12	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RE:1:MET:HA	25:RE:200:GLU:OE2	2.16	0.45
25:RE:15:PHE:CD1	25:RE:20:ALA:HB2	2.50	0.45
25:RE:22:PRO:O	25:RE:22:PRO:CG	2.63	0.45
28:RH:89:ILE:H	28:RH:89:ILE:HD13	1.81	0.45
29:RI:93:THR:O	29:RI:97:ILE:HG12	2.16	0.45
32:RP:21:ARG:HB3	32:RP:22:GLY:H	1.65	0.45
33:RQ:52:VAL:O	33:RQ:53:ALA:C	2.59	0.45
33:RQ:63:LYS:HE2	33:RQ:65:PHE:CZ	2.51	0.45
33:RQ:104:PHE:O	33:RQ:105:GLU:CB	2.65	0.45
34:RR:28:LEU:HD13	34:RR:28:LEU:C	2.40	0.45
36:RT:24:PRO:HD3	36:RT:52:ILE:HD12	1.98	0.45
37:RU:73:GLY:O	37:RU:74:LEU:CB	2.64	0.45
40:RX:53:LYS:HZ2	40:RX:55:ASN:HD21	1.65	0.45
41:RY:47:LYS:O	41:RY:49:VAL:N	2.48	0.45
43:R0:70:GLN:CD	43:R0:72:ARG:HD3	2.41	0.45
44:R1:85:LEU:N	44:R1:85:LEU:HD22	2.31	0.45
46:R3:7:LYS:HE2	46:R3:32:GLN:HA	1.98	0.45
46:R3:60:GLU:HG2	46:R3:60:GLU:O	2.16	0.45
49:R6:20:ASN:O	49:R6:21:TYR:HB2	2.15	0.45
51:R8:48:PHE:N	51:R8:48:PHE:HD1	2.14	0.45
52:R9:25:VAL:HG11	52:R9:34:GLN:HE21	1.80	0.45
1:XA:172:A:H8	1:XA:172:A:OP2	1.99	0.45
1:XA:243:A:H2	1:XA:245:C:H2'	1.82	0.45
1:XA:297:G:H4'	1:XA:557:G:H4'	1.98	0.45
1:XA:312:C:H2'	1:XA:313:A:H8	1.81	0.45
1:XA:986:A:H1'	19:XS:54:GLY:O	2.16	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.50	0.45
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.34	0.45
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.45
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.45
19:XS:2:PRO:HB3	47:Y4:68:ARG:HH12	1.76	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
22:YA:94:G:H2'	22:YA:95:G:O4'	2.17	0.45
22:YA:460:A:C2	22:YA:470:A:C4	3.04	0.45
22:YA:758:C:O2'	22:YA:1981:A:N3	2.44	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1826:G:H5”	24:YD:224:ALA:HB2	1.99	0.45
22:YA:2224:G:O2’	22:YA:2225:A:O4’	2.32	0.45
22:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.51	0.45
24:YD:65:ILE:HD11	24:YD:67:PHE:CE1	2.51	0.45
25:YE:1:MET:N	25:YE:1:MET:HE2	2.31	0.45
25:YE:54:GLN:HE21	25:YE:54:GLN:CA	2.27	0.45
26:YF:7:TYR:CD1	26:YF:7:TYR:N	2.84	0.45
26:YF:65:TRP:CH2	26:YF:72:ARG:HB3	2.50	0.45
27:YG:14:GLU:HB3	27:YG:15:VAL:H	1.56	0.45
27:YG:76:SER:CB	27:YG:83:ARG:HA	2.47	0.45
28:YH:109:PHE:CE1	28:YH:152:ARG:NH1	2.84	0.45
33:YQ:27:VAL:HG22	33:YQ:105:GLU:CD	2.41	0.45
38:YV:47:VAL:O	38:YV:48:GLY:O	2.34	0.45
40:YX:8:ILE:CD1	40:YX:42:ALA:HB1	2.46	0.45
40:YX:24:GLY:O	40:YX:82:GLN:HA	2.16	0.45
40:YX:54:VAL:C	40:YX:55:ASN:HD22	2.24	0.45
41:YY:48:ALA:CB	41:YY:61:ILE:HD13	2.45	0.45
48:Y5:16:ARG:O	48:Y5:20:ARG:HG3	2.16	0.45
48:Y5:43:HIS:ND1	48:Y5:43:HIS:N	2.63	0.45
49:Y6:45:LYS:HD3	49:Y6:45:LYS:HA	1.79	0.45
52:Y9:25:VAL:HG11	52:Y9:34:GLN:HE21	1.81	0.45
55:QY:39:C:O2’	55:QY:40:G:P	2.75	0.45
1:QA:362:G:N2	1:QA:364:A:H3’	2.31	0.45
1:QA:1529:G:H3’	1:QA:1529:G:OP2	2.17	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.45
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.82	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
5:QE:64:ARG:HH11	5:QE:64:ARG:HG3	1.82	0.45
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
16:QP:50:LYS:HD3	16:QP:50:LYS:C	2.42	0.45
22:RA:205:G:O2’	22:RA:206:U:OP2	2.35	0.45
22:RA:631:A:P	51:R8:46:ARG:HH21	2.37	0.45
22:RA:635:C:H2’	22:RA:636:G:O4’	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:674:G:H2'	22:RA:804:A:H61	1.81	0.45
22:RA:1030:G:OP2	33:RQ:128:LYS:HG2	2.16	0.45
22:RA:2009:G:OP1	39:RW:41:LYS:HE2	2.16	0.45
22:RA:2088:G:C2	22:RA:2089:U:C2	3.04	0.45
22:RA:2311:A:H1'	27:RG:82:LEU:HD11	1.98	0.45
24:RD:65:ILE:HD11	24:RD:67:PHE:CE1	2.51	0.45
28:RH:137:ASP:HB2	28:RH:140:LYS:HE3	1.98	0.45
29:RI:110:ASP:HB3	29:RI:112:LYS:N	2.31	0.45
31:RO:104:ARG:HG2	31:RO:121:VAL:HG12	1.97	0.45
32:RP:144:GLU:OE1	32:RP:144:GLU:N	2.48	0.45
33:RQ:30:GLY:CA	33:RQ:107:ALA:HB2	2.39	0.45
33:RQ:134:ARG:HH12	42:RZ:119:GLU:HG3	1.81	0.45
34:RR:1:MET:O	34:RR:2:ARG:HB2	2.15	0.45
34:RR:10:LEU:C	34:RR:12:ARG:N	2.72	0.45
36:RT:6:LEU:O	36:RT:10:VAL:HG23	2.16	0.45
37:RU:27:LEU:C	37:RU:29:SER:N	2.74	0.45
37:RU:57:PHE:O	37:RU:59:ARG:N	2.50	0.45
39:RW:29:LEU:HD23	39:RW:29:LEU:C	2.41	0.45
41:RY:75:ILE:HA	41:RY:80:GLY:HA2	1.99	0.45
41:RY:81:LYS:CD	41:RY:97:ARG:HE	2.20	0.45
46:R3:43:ILE:O	46:R3:47:VAL:HG23	2.16	0.45
49:R6:7:ILE:O	49:R6:8:LYS:HG2	2.16	0.45
1:XA:658:G:H2'	1:XA:659:U:C6	2.51	0.45
2:XB:37:ASN:C	2:XB:39:ILE:N	2.74	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.82	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.45
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.98	0.45
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.45
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.80	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
6:XF:62:TRP:C	6:XF:63:TYR:CD2	2.92	0.45
7:XG:95:ARG:NE	7:XG:99:LEU:HD11	2.30	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
10:XJ:29:ARG:HG2	10:XJ:29:ARG:HH11	1.81	0.45
10:XJ:95:GLU:OE2	10:XJ:95:GLU:HA	2.16	0.45
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.45

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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	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
20:XT:26:ASN:ND2	20:XT:26:ASN:N	2.62	0.45
22:YA:320:A:H1'	26:YF:169:ASN:HD22	1.81	0.45
22:YA:459:U:OP1	50:Y7:39:ARG:HA	2.15	0.45
22:YA:568:U:N3	22:YA:571:A:OP2	2.31	0.45
22:YA:571:A:H1'	22:YA:573:G:C8	2.51	0.45
22:YA:860:U:C5	22:YA:917:A:C2	3.05	0.45
22:YA:1434:A:H2'	22:YA:1435:G:C8	2.51	0.45
22:YA:1641:A:H2'	22:YA:1642:G:O4'	2.16	0.45
22:YA:2320:A:C8	22:YA:2333:A:N6	2.85	0.45
22:YA:2560:C:H2'	22:YA:2561:A:H8	1.82	0.45
25:YE:13:ARG:HH11	25:YE:13:ARG:HB3	1.82	0.45
25:YE:51:PHE:HD1	25:YE:52:LEU:H	1.59	0.45
25:YE:101:ARG:C	25:YE:201:THR:OG1	2.58	0.45
26:YF:167:ALA:HB1	26:YF:173:VAL:HG11	1.99	0.45
28:YH:16:SER:OG	28:YH:17:VAL:N	2.50	0.45
30:YN:113:GLY:O	30:YN:116:LEU:HB2	2.14	0.45
33:YQ:26:TYR:O	33:YQ:27:VAL:O	2.34	0.45
33:YQ:85:LYS:HD3	33:YQ:86:GLY:H	1.81	0.45
35:YS:5:THR:OG1	35:YS:8:GLU:HG3	2.16	0.45
38:YV:4:ILE:HG22	38:YV:39:LEU:HD23	1.98	0.45
44:Y1:49:VAL:HG12	44:Y1:51:VAL:CG2	2.45	0.45
45:Y2:65:ASN:O	45:Y2:66:GLU:C	2.59	0.45
55:QY:40:G:H2'	55:QY:41:A:C8	2.51	0.45
1:QA:177:C:H2'	1:QA:178:C:H6	1.80	0.45
1:QA:1213:A:N1	1:QA:1215:G:H1'	2.32	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.99	0.45
3:QC:108:ASN:CG	3:QC:111:LEU:HG	2.41	0.45
3:QC:134:ILE:HG23	3:QC:151:VAL:HB	1.98	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
4:QD:101:LEU:HD21	4:QD:121:VAL:HG13	1.98	0.45
4:QD:194:LEU:HD11	6:XF:17:SER:OG	2.16	0.45
8:QH:33:GLU:C	8:QH:35:ILE:H	2.25	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.45
22:RA:17:G:H2'	22:RA:18:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:204:A:OP1	22:RA:204:A:H8	1.99	0.45
22:RA:448:U:O4	22:RA:583:G:H1'	2.17	0.45
22:RA:451:C:H4'	26:RF:52:LYS:HZ1	1.80	0.45
22:RA:464:U:H4'	50:R7:5:TRP:CZ3	2.51	0.45
22:RA:531:C:C5	22:RA:2035:G:C2	3.04	0.45
22:RA:1012:U:O2'	22:RA:1013:C:OP2	2.30	0.45
22:RA:1475:G:C2	22:RA:1519:G:C2	3.05	0.45
22:RA:1506:C:H3'	22:RA:1507:A:H5"	1.98	0.45
22:RA:1570:A:C6	22:RA:1571:A:C6	3.04	0.45
22:RA:1588:C:H2'	22:RA:1589:C:C6	2.51	0.45
22:RA:2285:C:N3	22:RA:2346:A:N6	2.64	0.45
22:RA:2343:C:O2'	22:RA:2373:G:O2'	2.14	0.45
23:RB:55:U:C5'	27:RG:28:VAL:HG21	2.46	0.45
24:RD:2:ALA:HB1	24:RD:20:ASP:CB	2.46	0.45
24:RD:145:VAL:HB	24:RD:155:LEU:HB2	1.99	0.45
24:RD:211:ARG:HH11	24:RD:211:ARG:HG2	1.80	0.45
27:RG:20:ILE:HD13	27:RG:25:TYR:HB2	1.98	0.45
27:RG:51:ARG:NH2	27:RG:52:ILE:HD11	2.32	0.45
27:RG:83:ARG:HG3	27:RG:86:MET:CE	2.46	0.45
28:RH:94:TYR:N	28:RH:94:TYR:CD1	2.82	0.45
28:RH:106:THR:HG22	28:RH:112:PRO:HB3	1.97	0.45
28:RH:109:PHE:CE1	28:RH:152:ARG:NH1	2.84	0.45
29:RI:21:VAL:HG22	29:RI:22:LYS:H	1.81	0.45
30:RN:22:THR:O	30:RN:60:ILE:HG22	2.16	0.45
31:RO:31:LYS:C	31:RO:32:TYR:CD2	2.94	0.45
32:RP:21:ARG:HE	32:RP:21:ARG:HA	1.81	0.45
32:RP:62:LEU:CD2	32:RP:62:LEU:H	2.19	0.45
33:RQ:5:ARG:O	33:RQ:6:ARG:O	2.35	0.45
35:RS:5:THR:OG1	35:RS:8:GLU:HG3	2.17	0.45
39:RW:14:PRO:C	39:RW:16:LYS:N	2.73	0.45
48:R5:16:ARG:O	48:R5:20:ARG:HG3	2.16	0.45
51:R8:40:GLU:C	51:R8:42:ARG:N	2.68	0.45
1:XA:1346:A:C5'	9:XI:120:ARG:HH12	2.29	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.86	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.30	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:43:CYS:C	14:XN:45:ARG:N	2.73	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
19:XS:2:PRO:CB	47:Y4:68:ARG:NH1	2.71	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.31	0.45
22:YA:83:G:O2'	22:YA:84:A:P	2.74	0.45
22:YA:192:C:O2	22:YA:802:A:O2'	2.28	0.45
22:YA:565:C:H4'	22:YA:1253:A:C6	2.51	0.45
22:YA:783:A:H8	22:YA:784:A:H4'	1.81	0.45
22:YA:1654:A:OP1	34:YR:1:MET:O	2.34	0.45
22:YA:2846:G:P	36:YT:54:ARG:HB2	2.57	0.45
24:YD:18:VAL:CG1	24:YD:19:ALA:N	2.78	0.45
27:YG:44:GLY:HA2	27:YG:88:ILE:HG12	1.97	0.45
33:YQ:30:GLY:CA	33:YQ:107:ALA:HB2	2.39	0.45
33:YQ:52:VAL:O	33:YQ:53:ALA:C	2.59	0.45
33:YQ:104:PHE:O	33:YQ:105:GLU:CB	2.65	0.45
35:YS:109:GLY:O	35:YS:110:LEU:HB2	2.16	0.45
36:YT:10:VAL:O	36:YT:11:GLU:C	2.60	0.45
37:YU:57:PHE:O	37:YU:58:ARG:C	2.59	0.45
37:YU:95:LEU:HD13	38:YV:4:ILE:HD12	1.98	0.45
39:YW:14:PRO:O	39:YW:15:ARG:C	2.58	0.45
42:YZ:10:ARG:HD2	42:YZ:36:LYS:HB3	1.99	0.45
44:Y1:54:ALA:O	44:Y1:55:GLY:O	2.35	0.45
44:Y1:60:PHE:CE2	44:Y1:91:LYS:NZ	2.84	0.45
44:Y1:85:LEU:N	44:Y1:85:LEU:HD22	2.31	0.45
45:Y2:18:PRO:C	45:Y2:20:GLU:N	2.74	0.45
50:Y7:24:THR:O	50:Y7:28:ARG:HG3	2.16	0.45
1:QA:771:G:H2'	1:QA:772:U:C6	2.51	0.45
1:QA:977:A:HO2'	1:QA:981:U:H3	1.63	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.81	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.45
5:QE:48:ALA:C	5:QE:50:GLU:H	2.24	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.45
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
22:RA:519:U:H2'	22:RA:520:G:H8	1.81	0.45
22:RA:527:C:C4	22:RA:2779:U:H5"	2.52	0.45
22:RA:779:U:OP1	24:RD:49:ILE:HG23	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:804:A:H2'	22:RA:806:C:C4	2.50	0.45
22:RA:1041:C:H2'	22:RA:1042:G:H8	1.80	0.45
22:RA:1252:G:O4'	37:RU:33:ARG:HD3	2.17	0.45
22:RA:1274:A:H2	22:RA:1644:C:O2	1.99	0.45
22:RA:1427:A:H4'	22:RA:1428:C:O5'	2.16	0.45
22:RA:1659:U:O2'	22:RA:2712(A):A:N1	2.46	0.45
22:RA:2414:G:H21	32:RP:67:MET:CE	2.29	0.45
22:RA:2424:C:O2	22:RA:2429:G:O2'	2.19	0.45
22:RA:2734:A:C8	22:RA:2735:G:C8	3.05	0.45
24:RD:35:LYS:CE	24:RD:64:ILE:C	2.89	0.45
25:RE:62:PRO:O	25:RE:63:LEU:C	2.59	0.45
27:RG:14:GLU:HB3	27:RG:15:VAL:H	1.56	0.45
28:RH:86:GLU:O	28:RH:87:LEU:CB	2.64	0.45
30:RN:5:VAL:O	30:RN:5:VAL:HG13	2.16	0.45
30:RN:128:HIS:HB2	30:RN:129:PRO:CD	2.46	0.45
31:RO:47:ILE:HG13	31:RO:48:PRO:HD2	1.99	0.45
33:RQ:93:TYR:CD1	33:RQ:93:TYR:N	2.85	0.45
36:RT:36:GLU:CG	36:RT:41:ARG:HD3	2.46	0.45
39:RW:65:LEU:CD1	39:RW:68:ARG:NH1	2.75	0.45
41:RY:57:GLN:O	41:RY:58:GLY:C	2.60	0.45
44:R1:80:LEU:CB	44:R1:81:LYS:HE2	2.44	0.45
47:R4:26:SER:C	47:R4:27:THR:O	2.58	0.45
1:XA:148:G:H2'	1:XA:149:A:H8	1.80	0.45
1:XA:411:A:C8	1:XA:413:G:H1'	2.52	0.45
1:XA:985:C:H2'	1:XA:986:A:C8	2.51	0.45
1:XA:1417:G:N2	1:XA:1482:G:H2'	2.32	0.45
2:XB:240:GLN:HG2	2:XB:240:GLN:O	2.16	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
4:XD:101:LEU:HD21	4:XD:121:VAL:HG13	1.99	0.45
4:XD:133:VAL:HG12	4:XD:135:LEU:H	1.82	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.31	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.16	0.45
22:YA:117:G:C6	22:YA:119:A:C6	3.05	0.45
22:YA:389:G:H22	32:YP:72:PRO:HD3	1.82	0.45
22:YA:753:C:O5'	22:YA:753:C:H6	2.00	0.45
22:YA:1256:G:C2	22:YA:1257:C:C2	3.05	0.45
22:YA:1357:U:C4	22:YA:1358:G:C5	3.05	0.45
22:YA:1639:U:H4'	22:YA:2699:C:H4'	1.98	0.45
22:YA:1754:C:N3	22:YA:2716:U:O2'	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1991:U:H2'	22:YA:1992:G:H5"	1.99	0.45
22:YA:2355:C:H5"	22:YA:2356:C:OP2	2.16	0.45
23:YB:15:A:H3'	23:YB:16:G:H5'	1.98	0.45
24:YD:35:LYS:CE	24:YD:64:ILE:C	2.89	0.45
24:YD:68:LYS:HD2	24:YD:70:TRP:CZ2	2.52	0.45
24:YD:109:ASP:HB2	24:YD:197:GLY:CA	2.46	0.45
24:YD:198:ASN:ND2	24:YD:198:ASN:O	2.50	0.45
25:YE:47:VAL:O	25:YE:47:VAL:HG23	2.16	0.45
25:YE:95:ILE:HG22	25:YE:95:ILE:O	2.16	0.45
27:YG:51:ARG:NH2	27:YG:52:ILE:HD11	2.32	0.45
28:YH:66:GLY:O	28:YH:67:LEU:C	2.58	0.45
30:YN:20:GLY:HA2	30:YN:61:ARG:HD2	1.99	0.45
30:YN:114:ARG:O	30:YN:115:ARG:CB	2.65	0.45
33:YQ:65:PHE:O	33:YQ:66:ILE:CG1	2.48	0.45
34:YR:29:LEU:N	34:YR:29:LEU:CD1	2.79	0.45
41:YY:75:ILE:HA	41:YY:80:GLY:HA2	1.99	0.45
45:Y2:28:LYS:HB3	45:Y2:57:ILE:HG12	1.97	0.45
49:Y6:9:LEU:CD1	49:Y6:26:ASN:ND2	2.80	0.45
49:Y6:11:LEU:H	49:Y6:25:LYS:HA	1.81	0.45
1:QA:34:C:H2'	1:QA:35:G:C8	2.51	0.45
1:QA:276:G:O3'	17:QQ:68:ARG:NH1	2.49	0.45
1:QA:378:G:H2'	1:QA:379:C:C6	2.52	0.45
1:QA:921:U:O2	5:QE:19:MET:HB2	2.16	0.45
1:QA:1226:C:N4	13:QM:104:ARG:HD2	2.32	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
3:QC:78:GLY:HA3	3:QC:83:ARG:HB3	1.98	0.45
3:QC:92:ALA:HB2	3:QC:99:VAL:HG11	1.99	0.45
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.45
5:QE:78:HIS:CB	8:QH:104:ARG:HG2	2.46	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.45
12:QL:91:LYS:HB2	12:QL:91:LYS:HE2	1.76	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
22:RA:675:A:H4'	26:RF:67:GLN:OE1	2.17	0.45
22:RA:709:U:H3	22:RA:722:A:N6	2.13	0.45
22:RA:2002:G:OP2	34:RR:9:LYS:HD3	2.17	0.45
22:RA:2306:C:H2'	22:RA:2307:G:N2	2.29	0.45
24:RD:109:ASP:HB2	24:RD:197:GLY:CA	2.46	0.45
25:RE:21:VAL:HG23	25:RE:22:PRO:CD	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RH:6:ARG:C	28:RH:8:PRO:CD	2.90	0.45
30:RN:96:GLU:O	30:RN:99:LEU:N	2.34	0.45
31:RO:40:VAL:CG1	31:RO:41:ALA:N	2.80	0.45
32:RP:65:ARG:O	32:RP:66:GLY:C	2.60	0.45
32:RP:88:LEU:O	32:RP:90:ARG:N	2.50	0.45
38:RV:59:ALA:HB2	38:RV:96:ILE:HD13	1.97	0.45
39:RW:14:PRO:O	39:RW:16:LYS:N	2.50	0.45
46:R3:28:LEU:HA	46:R3:33:GLN:OE1	2.16	0.45
1:XA:537:G:H5"	12:XL:113:ARG:HH12	1.82	0.45
1:XA:953:G:H5'	1:XA:965:A:H61	1.82	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	2.32	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.82	0.45
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
7:XG:103:TRP:O	7:XG:104:LEU:C	2.58	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
11:XK:70:LYS:HA	11:XK:73:MET:HE3	1.98	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
22:YA:242:G:C8	51:Y8:5:LYS:HG2	2.52	0.45
22:YA:419:C:H2'	22:YA:420:C:O4'	2.17	0.45
22:YA:858:U:O2	22:YA:2268:A:H2'	2.17	0.45
22:YA:1231:G:H2'	22:YA:1232:G:C8	2.51	0.45
22:YA:1396:U:H2'	22:YA:1396:U:O2	2.16	0.45
22:YA:2056:G:H2'	22:YA:2056:G:N3	2.31	0.45
22:YA:2347:C:OP1	49:Y6:39:TYR:CE2	2.69	0.45
22:YA:2572:A:H62	25:YE:145:LYS:HG3	1.82	0.45
24:YD:25:THR:CG2	24:YD:25:THR:O	2.65	0.45
26:YF:45:ARG:CG	26:YF:45:ARG:NH1	2.71	0.45
26:YF:117:ARG:NH2	26:YF:189:THR:O	2.50	0.45
29:YI:144:VAL:O	29:YI:145:VAL:HG22	2.16	0.45
30:YN:10:GLU:HA	30:YN:11:PRO:HD3	1.73	0.45
35:YS:78:LEU:HD21	35:YS:108:GLY:HA2	1.99	0.45
35:YS:83:LYS:HG2	35:YS:109:GLY:H	1.76	0.45
37:YU:5:LYS:C	37:YU:7:GLY:N	2.74	0.45
38:YV:30:GLY:O	38:YV:31:ALA:O	2.34	0.45
39:YW:88:ARG:CB	39:YW:92:ARG:HB3	2.47	0.45
41:YY:97:ARG:HG2	41:YY:97:ARG:HH11	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:Y0:57:PHE:CD2	43:Y0:57:PHE:N	2.85	0.45
47:Y4:64:GLY:C	47:Y4:66:SER:N	2.73	0.45
55:XY:39:C:O2'	55:XY:40:G:P	2.74	0.45
1:QA:97:U:O2'	1:QA:99:C:H5'	2.16	0.45
1:QA:574:A:O2'	1:QA:882:C:O2'	2.27	0.45
1:QA:792:A:O2'	1:QA:794:A:N7	2.45	0.45
2:QB:109:SER:C	2:QB:111:ARG:N	2.72	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.46	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.98	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.45
22:RA:1534:G:N3	22:RA:1534:G:H2'	2.32	0.45
22:RA:1551:C:H2'	22:RA:1552:G:O4'	2.17	0.45
22:RA:1814:G:H2'	22:RA:1815:A:C8	2.52	0.45
22:RA:2627:G:H2'	22:RA:2628:C:C6	2.51	0.45
22:RA:2724:C:OP1	25:RE:118:LYS:NZ	2.46	0.45
22:RA:2821:A:H2'	22:RA:2822:G:O4'	2.17	0.45
22:RA:2893:G:H5"	22:RA:2894:G:H5'	1.98	0.45
24:RD:36:PRO:HB3	24:RD:62:TYR:O	2.16	0.45
25:RE:2:LYS:HG2	25:RE:95:ILE:HG22	1.99	0.45
26:RF:123:LEU:HD12	26:RF:124:LEU:H	1.82	0.45
26:RF:184:TYR:CE2	26:RF:188:ARG:HD2	2.52	0.45
32:RP:92:GLU:HA	32:RP:123:LEU:HD23	1.99	0.45
35:RS:102:ALA:C	35:RS:104:GLY:N	2.73	0.45
41:RY:36:ALA:HB1	41:RY:67:LEU:O	2.16	0.45
41:RY:49:VAL:O	41:RY:50:ARG:C	2.59	0.45
41:RY:87:LYS:C	41:RY:88:LYS:NZ	2.75	0.45
42:RZ:111:VAL:HG22	42:RZ:112:ARG:H	1.81	0.45
49:R6:11:LEU:H	49:R6:25:LYS:HA	1.81	0.45
1:XA:390:C:H2'	1:XA:391:G:C8	2.51	0.45
1:XA:701:C:H1'	1:XA:703:G:C2	2.51	0.45
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.51	0.45
1:XA:1200:C:O2'	1:XA:1201:A:OP2	2.25	0.45
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.41	0.45
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.45
22:YA:270(J):G:H2'	22:YA:270(K):C:O4'	2.17	0.45
22:YA:1124:C:H1'	52:Y9:36:GLN:OE1	2.17	0.45
22:YA:1206:G:C6	22:YA:1207:C:C4	3.05	0.45
22:YA:2259:G:C2	22:YA:2282:G:N1	2.84	0.45
23:YB:89:G:H8	23:YB:89:G:OP2	2.00	0.45
24:YD:92:ILE:HD12	24:YD:104:TYR:HD2	1.82	0.45
25:YE:2:LYS:O	25:YE:199:ARG:HA	2.17	0.45
25:YE:33:VAL:HG12	25:YE:90:THR:H	1.81	0.45
25:YE:199:ARG:HH11	25:YE:199:ARG:HG3	1.82	0.45
30:YN:22:THR:O	30:YN:60:ILE:HG22	2.16	0.45
31:YO:104:ARG:NH2	36:YT:34:VAL:HG11	2.32	0.45
34:YR:31:HIS:C	34:YR:33:ARG:H	2.25	0.45
36:YT:24:PRO:HD3	36:YT:52:ILE:HD12	1.98	0.45
37:YU:27:LEU:HD12	37:YU:31:SER:HB3	1.98	0.45
37:YU:79:PHE:CE2	37:YU:83:LEU:HD13	2.51	0.45
39:YW:21:VAL:O	39:YW:21:VAL:HG12	2.17	0.45
42:YZ:53:ILE:HG22	42:YZ:71:VAL:HG22	1.99	0.45
42:YZ:112:ARG:O	42:YZ:114:GLY:N	2.50	0.45
45:Y2:18:PRO:C	45:Y2:20:GLU:H	2.24	0.45
50:Y7:2:LYS:HG2	50:Y7:3:ARG:N	2.31	0.45
51:Y8:52:LYS:O	51:Y8:52:LYS:CG	2.64	0.45
1:QA:730:G:C5	1:QA:731:G:H1'	2.52	0.45
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.39	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.45
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.45
4:QD:11:LEU:O	4:QD:12:CYS:C	2.60	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
13:QM:4:ILE:O	13:QM:5:ALA:C	2.60	0.45
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.17	0.45
22:RA:571:A:H5'	22:RA:2030:A:H62	1.81	0.45
22:RA:748:G:C8	39:RW:89:ALA:HB1	2.52	0.45
22:RA:827:U:H1'	22:RA:2246:G:O2'	2.16	0.45
22:RA:2513:G:C2	22:RA:2514:U:C2	3.05	0.45
24:RD:14:ARG:HG3	24:RD:15:PHE:N	2.31	0.45
24:RD:118:VAL:O	24:RD:129:ASN:HA	2.16	0.45
24:RD:213:ARG:HA	24:RD:213:ARG:HD2	1.60	0.45
25:RE:2:LYS:O	25:RE:199:ARG:HA	2.17	0.45
25:RE:93:VAL:C	25:RE:95:ILE:N	2.75	0.45
27:RG:78:SER:O	27:RG:79:ASN:C	2.59	0.45
27:RG:102:PHE:HA	27:RG:105:LYS:HE3	1.98	0.45
27:RG:143:GLU:C	47:R4:28:LYS:HZ2	2.25	0.45
30:RN:28:THR:O	30:RN:29:LYS:C	2.59	0.45
30:RN:35:ARG:HG3	30:RN:35:ARG:O	2.16	0.45
32:RP:96:THR:HG22	32:RP:126:VAL:CB	2.47	0.45
33:RQ:11:LYS:HE2	33:RQ:87:LYS:HA	1.98	0.45
34:RR:17:ARG:O	34:RR:20:LEU:HB3	2.17	0.45
34:RR:84:ALA:O	34:RR:85:PRO:C	2.59	0.45
36:RT:10:VAL:O	36:RT:11:GLU:C	2.59	0.45
37:RU:97:ASP:HA	37:RU:100:VAL:CG2	2.47	0.45
41:RY:88:LYS:HA	41:RY:88:LYS:HZ2	1.81	0.45
44:R1:49:VAL:HG12	44:R1:51:VAL:HG23	1.99	0.45
49:R6:11:LEU:HD11	49:R6:51:GLU:HG3	1.98	0.45
51:R8:16:ILE:CD1	51:R8:57:ARG:HG2	2.42	0.45
1:XA:405:U:H3'	1:XA:406:G:H5'	1.99	0.45
1:XA:422:C:O2'	1:XA:423:G:H5"	2.16	0.45
1:XA:464:G:C6	1:XA:466:C:H5'	2.52	0.45
1:XA:731:G:OP1	1:XA:766:A:H1'	2.17	0.45
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.44	0.45
1:XA:1368:G:OP1	9:XI:111:ARG:NH2	2.49	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.45
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.45
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.45
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
13:XM:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.45
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.45
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.45
22:YA:83:G:O2'	22:YA:84:A:C8	2.62	0.45
22:YA:210:C:P	50:Y7:29:LYS:NZ	2.90	0.45
22:YA:688:U:H5'	22:YA:1780:A:C2	2.52	0.45
22:YA:997:G:OP1	37:YU:93:LYS:HD3	2.16	0.45
22:YA:1651:G:N7	34:YR:11:ASN:ND2	2.65	0.45
22:YA:1782:C:O2	22:YA:2608:G:O2'	2.22	0.45
22:YA:2735:G:N2	22:YA:2770:G:H1'	2.32	0.45
22:YA:2864:G:H2'	22:YA:2865:U:O4'	2.15	0.45
24:YD:166:GLN:CA	24:YD:166:GLN:NE2	2.78	0.45
25:YE:154:LYS:C	25:YE:154:LYS:HD3	2.42	0.45
26:YF:61:GLY:O	26:YF:62:ARG:C	2.57	0.45
26:YF:155:LEU:HA	26:YF:174:VAL:CG1	2.46	0.45
31:YO:22:ILE:HG12	31:YO:41:ALA:HA	1.98	0.45
31:YO:97:ARG:H	31:YO:117:LEU:CD2	2.24	0.45
31:YO:107:ARG:O	31:YO:112:MET:HE1	2.17	0.45
32:YP:45:LEU:CD1	32:YP:45:LEU:N	2.79	0.45
32:YP:92:GLU:HA	32:YP:123:LEU:HD23	1.99	0.45
33:YQ:58:PHE:O	33:YQ:58:PHE:CD1	2.70	0.45
34:YR:12:ARG:HG3	34:YR:12:ARG:NH1	2.32	0.45
38:YV:95:LEU:C	38:YV:95:LEU:HD13	2.42	0.45
47:Y4:51:ASP:O	47:Y4:51:ASP:CG	2.60	0.45
47:Y4:68:ARG:O	47:Y4:69:LYS:HB2	2.17	0.45
49:Y6:15:GLU:OE2	49:Y6:44:ARG:NH1	2.49	0.45
49:Y6:48:VAL:O	49:Y6:49:HIS:HB2	2.15	0.45
51:Y8:36:LYS:HB3	51:Y8:40:GLU:HG2	1.98	0.45
53:QV:35:A:C6	54:QX:3:G:C6	3.04	0.45
1:QA:16:A:N1	1:QA:920:U:C2	2.85	0.45
1:QA:243:A:N6	1:QA:281:G:O2'	2.50	0.45
1:QA:449:C:H5	16:QP:42:ARG:HH11	1.65	0.45
1:QA:598:U:H4'	8:QH:94:TYR:CD2	2.51	0.45
1:QA:698:G:C6	1:QA:699:C:C4	3.05	0.45
2:QB:75:LYS:C	2:QB:77:ALA:H	2.24	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
10:QJ:22:LYS:C	10:QJ:22:LYS:CD	2.90	0.45
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
19:QS:13:ASP:O	19:QS:14:HIS:C	2.60	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
22:RA:563:G:C6	22:RA:564:C:C4	3.05	0.45
22:RA:2303:G:O2'	22:RA:2304:G:H5'	2.16	0.45
22:RA:2693:A:H2'	22:RA:2694:G:H8	1.82	0.45
24:RD:92:ILE:HD12	24:RD:104:TYR:HD2	1.81	0.45
24:RD:198:ASN:ND2	24:RD:198:ASN:O	2.50	0.45
25:RE:77:ILE:O	25:RE:78:LEU:O	2.34	0.45
25:RE:154:LYS:HD3	25:RE:154:LYS:C	2.42	0.45
26:RF:119:ARG:HH11	26:RF:119:ARG:CG	2.29	0.45
26:RF:196:LEU:O	26:RF:200:GLU:HG2	2.17	0.45
27:RG:6:ALA:HB3	27:RG:104:GLU:OE2	2.16	0.45
27:RG:36:LYS:O	27:RG:37:VAL:HG23	2.16	0.45
27:RG:110:ALA:C	27:RG:112:PRO:HD2	2.42	0.45
28:RH:149:ARG:HA	28:RH:162:ILE:HG21	1.99	0.45
29:RI:144:VAL:HG22	29:RI:145:VAL:H	1.81	0.45
31:RO:107:ARG:O	31:RO:112:MET:HE1	2.17	0.45
32:RP:115:LEU:CB	32:RP:131:SER:HB2	2.47	0.45
33:RQ:10:ARG:O	33:RQ:11:LYS:CB	2.64	0.45
37:RU:15:LYS:O	37:RU:16:LYS:C	2.60	0.45
38:RV:5:VAL:HG22	38:RV:14:VAL:CG2	2.46	0.45
38:RV:5:VAL:HG13	38:RV:14:VAL:HG21	1.98	0.45
38:RV:61:VAL:HA	38:RV:94:LEU:HD23	1.97	0.45
38:RV:95:LEU:HD13	38:RV:95:LEU:C	2.42	0.45
39:RW:67:ASP:OD2	39:RW:67:ASP:N	2.50	0.45
45:R2:28:LYS:HB3	45:R2:57:ILE:HG12	1.98	0.45
48:R5:15:ARG:HA	48:R5:18:ALA:HB3	1.99	0.45
51:R8:36:LYS:HB3	51:R8:40:GLU:HG2	1.99	0.45
1:XA:372:C:C2'	1:XA:373:A:OP2	2.61	0.45
1:XA:546:G:P	4:XD:72:GLU:HB3	2.57	0.45
1:XA:872:A:C8	1:XA:874:G:C8	3.05	0.45
1:XA:1292:U:OP1	7:XG:41:ARG:NH2	2.49	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:29:ALA:O	6:XF:30:LEU:C	2.60	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
13:XM:108:ARG:O	13:XM:111:LYS:N	2.47	0.45
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.45
22:YA:774:A:H2	22:YA:787:U:O2'	2.00	0.45
22:YA:1264:G:C3'	22:YA:1265:A:H5"	2.42	0.45
22:YA:1368:G:C2	22:YA:1369:G:C8	3.05	0.45
22:YA:1426:G:OP2	22:YA:1427:A:O2'	2.32	0.45
22:YA:1646:C:H5"	22:YA:1647:G:H5"	1.98	0.45
22:YA:1726:G:C6	22:YA:1727:U:C4	3.04	0.45
22:YA:1892:C:H2'	22:YA:1893:C:O4'	2.16	0.45
22:YA:1928:A:C2'	22:YA:1929:G:H5'	2.47	0.45
22:YA:2210:G:H5'	22:YA:2211:G:C5	2.51	0.45
22:YA:2246:G:H1'	22:YA:2426:A:C2	2.52	0.45
22:YA:2250:G:C4	33:YQ:82:ARG:HG3	2.52	0.45
22:YA:2678:C:H2'	22:YA:2679:A:O4'	2.16	0.45
22:YA:2818:G:OP2	34:YR:42:LYS:NZ	2.42	0.45
24:YD:154:LYS:C	24:YD:155:LEU:HD12	2.41	0.45
25:YE:4:ILE:HG12	25:YE:91:VAL:HG11	1.99	0.45
26:YF:196:LEU:O	26:YF:200:GLU:HG2	2.17	0.45
26:YF:198:ALA:C	26:YF:200:GLU:H	2.25	0.45
30:YN:7:LYS:HD3	30:YN:9:VAL:H	1.81	0.45
31:YO:31:LYS:C	31:YO:32:TYR:CD2	2.95	0.45
31:YO:53:LYS:N	31:YO:53:LYS:CD	2.69	0.45
32:YP:75:ILE:HG12	32:YP:77:ARG:NH1	2.32	0.45
32:YP:75:ILE:HG12	32:YP:77:ARG:HH12	1.82	0.45
33:YQ:34:LEU:HB2	33:YQ:118:LEU:HD22	1.99	0.45
33:YQ:133:ARG:CG	33:YQ:134:ARG:N	2.78	0.45
35:YS:83:LYS:CE	35:YS:109:GLY:HA2	2.47	0.45
41:YY:25:GLY:HA3	41:YY:39:VAL:CG1	2.47	0.45
41:YY:57:GLN:O	41:YY:58:GLY:C	2.60	0.45
1:QA:53:A:C2	1:QA:54:C:H1'	2.51	0.45
1:QA:188:U:H2'	1:QA:189:U:H5"	1.98	0.45
1:QA:296:U:H2'	1:QA:297:G:C8	2.52	0.45
1:QA:322:C:O3'	20:QT:23:ARG:HG3	2.17	0.45
1:QA:1059:C:H2'	1:QA:1060:C:C6	2.51	0.45
1:QA:1151:A:H1'	10:QJ:39:PRO:CB	2.43	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1412:C:C2	1:QA:1489:G:N2	2.85	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.65	0.45
4:QD:73:ARG:O	4:QD:74:GLN:C	2.58	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
6:QF:29:ALA:O	6:QF:30:LEU:C	2.60	0.45
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.45
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.45
13:QM:57:ARG:HD2	13:QM:61:GLU:OE2	2.17	0.45
16:QP:50:LYS:HD3	16:QP:50:LYS:O	2.17	0.45
16:QP:58:TYR:CD1	16:QP:58:TYR:C	2.94	0.45
19:QS:15:LEU:O	19:QS:16:LEU:C	2.60	0.45
22:RA:30:G:C5	22:RA:31:C:C4	3.05	0.45
22:RA:433:C:H2'	22:RA:434:U:C6	2.52	0.45
22:RA:774:A:HO2'	22:RA:775:G:P	2.39	0.45
22:RA:796:C:H2'	22:RA:797:C:C6	2.52	0.45
22:RA:865:C:O2	22:RA:867:C:N4	2.50	0.45
22:RA:1028:A:N6	22:RA:1125:G:H2'	2.31	0.45
22:RA:1349:A:N6	22:RA:1598:C:H42	2.15	0.45
22:RA:2467:C:O2	33:RQ:124:LYS:NZ	2.49	0.45
22:RA:2742:C:H6	22:RA:2742:C:O5'	2.00	0.45
24:RD:68:LYS:HD2	24:RD:70:TRP:CZ2	2.52	0.45
25:RE:36:ARG:HH11	25:RE:36:ARG:CB	2.28	0.45
27:RG:16:ARG:CZ	27:RG:31:VAL:HG11	2.47	0.45
27:RG:129:GLY:O	27:RG:130:ASN:OD1	2.34	0.45
28:RH:53:GLU:OE1	28:RH:53:GLU:HA	2.16	0.45
30:RN:46:VAL:HG13	30:RN:47:ALA:N	2.31	0.45
30:RN:57:ALA:HA	30:RN:60:ILE:CD1	2.43	0.45
36:RT:118:ARG:O	36:RT:119:LYS:C	2.60	0.45
37:RU:86:ALA:CB	37:RU:88:ILE:HD11	2.47	0.45
38:RV:4:ILE:HG22	38:RV:39:LEU:HD23	1.98	0.45
41:RY:73:ARG:HE	41:RY:73:ARG:HB3	1.51	0.45
41:RY:84:ARG:HD3	41:RY:86:ARG:HH11	1.82	0.45
42:RZ:52:SER:O	42:RZ:53:ILE:HG13	2.17	0.45
45:R2:41:ILE:HD12	45:R2:41:ILE:O	2.16	0.45
51:R8:9:GLY:O	51:R8:13:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:17:THR:O	51:R8:20:GLY:N	2.46	0.45
1:XA:28:G:O2'	1:XA:296:U:OP1	2.33	0.45
1:XA:474:G:H2'	1:XA:475:G:C8	2.51	0.45
1:XA:664:G:H22	1:XA:741:G:H1	1.66	0.45
1:XA:713:G:H2'	1:XA:714:G:C8	2.52	0.45
1:XA:814:A:O2'	1:XA:815:A:H3'	2.17	0.45
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.45
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	0.45
2:XB:229:VAL:HG12	2:XB:229:VAL:O	2.17	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.45
6:XF:75:LEU:HD23	6:XF:75:LEU:C	2.41	0.45
8:XH:122:ARG:O	8:XH:123:GLU:C	2.60	0.45
10:XJ:22:LYS:C	10:XJ:22:LYS:CD	2.90	0.45
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.45
10:XJ:63:PHE:HB3	14:XN:57:ARG:O	2.17	0.45
11:XK:75:TYR:N	11:XK:75:TYR:CD1	2.85	0.45
12:XL:117:ARG:NH2	12:XL:124:LYS:HD3	2.32	0.45
13:XM:11:ARG:HH21	27:YG:146:TYR:HD2	1.60	0.45
13:XM:110:ARG:HH11	13:XM:110:ARG:HG3	1.82	0.45
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.45
15:XO:74:ASP:C	15:XO:76:GLU:H	2.24	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.42	0.45
19:XS:13:ASP:O	19:XS:14:HIS:C	2.60	0.45
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.45
22:YA:271(B):G:O2'	22:YA:271(C):U:OP2	2.31	0.45
22:YA:1022:G:N2	22:YA:1024:G:C2	2.84	0.45
22:YA:1651:G:H1	22:YA:2006:C:N4	2.15	0.45
22:YA:2587:A:H8	22:YA:2587:A:O5'	2.00	0.45
25:YE:21:VAL:HG23	25:YE:22:PRO:CD	2.46	0.45
26:YF:144:LYS:C	26:YF:146:ALA:N	2.75	0.45
28:YH:137:ASP:HB2	28:YH:140:LYS:HE3	1.98	0.45
30:YN:5:VAL:O	30:YN:5:VAL:HG13	2.16	0.45
30:YN:65:LYS:O	30:YN:66:LYS:C	2.60	0.45
30:YN:99:LEU:O	30:YN:100:GLU:C	2.60	0.45
35:YS:78:LEU:HD21	35:YS:108:GLY:CA	2.47	0.45
36:YT:23:ARG:CB	36:YT:24:PRO:HD2	2.40	0.45
37:YU:15:LYS:O	37:YU:16:LYS:C	2.60	0.45
39:YW:14:PRO:O	39:YW:16:LYS:N	2.50	0.45
39:YW:74:ALA:C	39:YW:75:TYR:HD1	2.24	0.45
41:YY:87:LYS:C	41:YY:88:LYS:NZ	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y5:56:LYS:O	48:Y5:58:LEU:N	2.50	0.45
49:Y6:7:ILE:O	49:Y6:8:LYS:HG2	2.16	0.45
49:Y6:7:ILE:HG23	49:Y6:8:LYS:N	2.32	0.45
1:QA:122:G:C6	1:QA:123:C:C4	3.06	0.44
1:QA:743:U:H2'	1:QA:744:C:C6	2.52	0.44
1:QA:957:U:H2'	1:QA:959:A:OP2	2.16	0.44
1:QA:1400:C:C4	53:QV:34:C:C2	3.05	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
2:QB:170:GLU:C	2:QB:172:ILE:N	2.74	0.44
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	1.99	0.44
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.44
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.44
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
9:QI:71:SER:C	9:QI:73:GLN:N	2.74	0.44
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.82	0.44
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	0.44
11:QK:17:GLY:CA	11:QK:77:MET:HE1	2.25	0.44
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.44
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.44
22:RA:372:G:O2'	22:RA:373:U:P	2.74	0.44
22:RA:717:G:H2'	22:RA:718:A:O4'	2.17	0.44
22:RA:991:C:H5'	22:RA:991:C:H6	1.82	0.44
22:RA:1201:C:H42	22:RA:1244:G:H1	1.65	0.44
22:RA:1266:G:O4'	39:RW:15:ARG:NH2	2.47	0.44
22:RA:1421:G:C2	22:RA:1422:G:C8	3.06	0.44
22:RA:1728:G:N1	22:RA:1730:U:OP2	2.50	0.44
22:RA:1871:A:H2'	22:RA:1872:A:C8	2.51	0.44
22:RA:2351:G:O6	51:R8:39:LYS:HG2	2.17	0.44
22:RA:2712:U:OP1	22:RA:2714:G:H4'	2.18	0.44
24:RD:143:HIS:HD2	24:RD:144:ALA:HB2	1.82	0.44
24:RD:176:ARG:HH11	24:RD:176:ARG:CG	2.30	0.44
25:RE:101:ARG:HD2	25:RE:171:GLU:HA	1.98	0.44
26:RF:7:TYR:N	26:RF:7:TYR:CD1	2.85	0.44
27:RG:67:LYS:CE	47:R4:6:HIS:NE2	2.74	0.44
31:RO:22:ILE:HG12	31:RO:41:ALA:HA	1.98	0.44
31:RO:78:ARG:HH21	36:RT:103:ARG:HH22	1.64	0.44
32:RP:75:ILE:HG12	32:RP:77:ARG:HH12	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:115:LEU:HA	32:RP:134:ALA:CB	2.47	0.44
36:RT:49:VAL:O	36:RT:49:VAL:CG1	2.64	0.44
38:RV:69:LYS:HG3	38:RV:87:HIS:O	2.17	0.44
40:RX:35:THR:O	40:RX:35:THR:HG23	2.16	0.44
42:RZ:14:LYS:HA	42:RZ:15:PRO:HD3	1.77	0.44
42:RZ:111:VAL:O	42:RZ:113:ALA:N	2.50	0.44
44:R1:94:LEU:O	44:R1:95:LEU:HB2	2.18	0.44
47:R4:15:ILE:N	47:R4:15:ILE:CD1	2.78	0.44
49:R6:9:LEU:CD1	49:R6:26:ASN:ND2	2.80	0.44
50:R7:24:THR:O	50:R7:28:ARG:HG3	2.16	0.44
1:XA:524:G:C6	1:XA:525:C:N4	2.85	0.44
1:XA:939:G:H5"	7:XG:102:ARG:HH12	1.81	0.44
1:XA:1222:G:H5"	19:XS:78:ARG:NH1	2.32	0.44
2:XB:170:GLU:C	2:XB:172:ILE:N	2.74	0.44
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.44
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.44
16:XP:47:ASP:C	16:XP:49:LEU:N	2.75	0.44
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
22:YA:963:U:H2'	22:YA:964:C:C6	2.52	0.44
22:YA:1662:C:O2'	22:YA:2687:U:H5"	2.16	0.44
22:YA:2313:C:H5"	27:YG:91:ARG:HD3	1.99	0.44
22:YA:2507:C:H2'	22:YA:2508:G:C8	2.52	0.44
22:YA:2588:G:C6	22:YA:2607:G:C2	3.04	0.44
24:YD:52:ARG:HB2	24:YD:53:PHE:CD2	2.53	0.44
24:YD:166:GLN:NE2	24:YD:166:GLN:HA	2.32	0.44
24:YD:214:TRP:C	24:YD:216:GLY:H	2.26	0.44
28:YH:6:ARG:C	28:YH:8:PRO:CD	2.89	0.44
30:YN:112:LEU:O	30:YN:116:LEU:HG	2.16	0.44
31:YO:19:ILE:HD13	31:YO:19:ILE:H	1.83	0.44
31:YO:97:ARG:HA	31:YO:117:LEU:HD22	1.99	0.44
31:YO:112:MET:O	31:YO:113:LYS:C	2.60	0.44
32:YP:65:ARG:O	32:YP:66:GLY:C	2.60	0.44
32:YP:112:LEU:CD1	32:YP:114:ILE:HG23	2.47	0.44
33:YQ:5:ARG:O	33:YQ:6:ARG:O	2.35	0.44
33:YQ:93:TYR:CD1	33:YQ:93:TYR:N	2.85	0.44
34:YR:17:ARG:O	34:YR:20:LEU:HB3	2.17	0.44
35:YS:3:ARG:O	35:YS:4:LEU:O	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:36:GLU:CG	36:YT:41:ARG:HD3	2.46	0.44
38:YV:67:GLY:O	38:YV:68:LYS:C	2.59	0.44
38:YV:69:LYS:HG3	38:YV:87:HIS:O	2.17	0.44
39:YW:31:GLU:O	39:YW:32:ALA:C	2.60	0.44
49:Y6:18:ARG:O	49:Y6:19:ARG:O	2.33	0.44
1:QA:1053:G:H2'	1:QA:1199:U:C5	2.52	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.83	0.44
9:QI:20:ARG:O	9:QI:21:PRO:C	2.59	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.44
17:QQ:78:GLU:O	17:QQ:79:SER:C	2.61	0.44
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
22:RA:182:A:H2'	22:RA:183:C:O4'	2.18	0.44
22:RA:229:A:OP1	22:RA:229:A:H4'	2.15	0.44
22:RA:270(H):C:H2'	22:RA:270(I):G:H8	1.79	0.44
22:RA:553:U:H2'	22:RA:554:U:O4'	2.17	0.44
22:RA:2020:A:C2	22:RA:2022:U:O4'	2.71	0.44
22:RA:2242:G:H2'	22:RA:2243:U:O4'	2.17	0.44
22:RA:2372:G:H4'	49:R6:46:HIS:NE2	2.32	0.44
24:RD:79:VAL:HG21	24:RD:111:LEU:HD21	1.98	0.44
24:RD:166:GLN:HA	24:RD:166:GLN:NE2	2.33	0.44
25:RE:36:ARG:O	25:RE:37:ARG:C	2.59	0.44
27:RG:44:GLY:HA2	27:RG:88:ILE:HD11	1.99	0.44
28:RH:51:ARG:HG3	28:RH:51:ARG:NH1	2.30	0.44
30:RN:67:LEU:HA	30:RN:87:LEU:HD13	2.00	0.44
30:RN:133:GLN:C	30:RN:134:ARG:HG2	2.41	0.44
31:RO:2:ILE:HD11	31:RO:82:ASN:ND2	2.16	0.44
31:RO:19:ILE:HD13	31:RO:19:ILE:H	1.83	0.44
33:RQ:119:ARG:HH11	33:RQ:119:ARG:CG	2.25	0.44
39:RW:21:VAL:O	39:RW:21:VAL:HG12	2.17	0.44
44:R1:48:LYS:HA	44:R1:60:PHE:O	2.17	0.44
44:R1:60:PHE:HZ	44:R1:90:ILE:HG21	1.82	0.44
45:R2:18:PRO:C	45:R2:20:GLU:H	2.24	0.44
46:R3:39:ASP:O	46:R3:40:THR:C	2.59	0.44
47:R4:35:VAL:C	47:R4:37:SER:H	2.19	0.44
47:R4:51:ASP:O	47:R4:51:ASP:CG	2.60	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:31:G:O2'	1:XA:48:C:N4	2.50	0.44
1:XA:95:G:C6	1:XA:96:G:C6	3.05	0.44
1:XA:642:A:H2'	1:XA:643:C:C6	2.52	0.44
1:XA:674:G:H2'	1:XA:675:A:H8	1.81	0.44
1:XA:903:G:N2	1:XA:904:C:C2	2.85	0.44
1:XA:954:G:H21	1:XA:1227:A:H62	1.65	0.44
1:XA:1028(B):C:H42	1:XA:1032(A):G:H1	1.64	0.44
1:XA:1126:U:OP2	1:XA:1281:U:H1'	2.18	0.44
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.52	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.35	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.98	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.86	0.44
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.86	0.44
13:XM:4:ILE:O	13:XM:5:ALA:C	2.60	0.44
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.44
16:XP:58:TYR:C	16:XP:58:TYR:CD1	2.94	0.44
19:XS:15:LEU:O	19:XS:16:LEU:C	2.60	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
22:YA:238:C:C2	22:YA:260:G:C2	3.05	0.44
22:YA:1945:G:C6	22:YA:1946:U:C4	3.05	0.44
22:YA:1977:A:H2'	22:YA:1978:A:O4'	2.17	0.44
22:YA:2422:A:C5	22:YA:2424:C:N4	2.86	0.44
24:YD:80:ALA:O	24:YD:113:VAL:HG13	2.16	0.44
24:YD:177:LEU:O	24:YD:179:SER:N	2.51	0.44
27:YG:19:LEU:HA	27:YG:22:ARG:HB2	1.99	0.44
27:YG:110:ALA:C	27:YG:112:PRO:HD2	2.42	0.44
27:YG:129:GLY:HA2	27:YG:169:ALA:HB2	1.99	0.44
32:YP:21:ARG:HA	32:YP:21:ARG:HE	1.82	0.44
38:YV:61:VAL:O	38:YV:61:VAL:HG22	2.17	0.44
42:YZ:5:LEU:HB3	42:YZ:59:LEU:HD23	1.98	0.44
44:Y1:48:LYS:HA	44:Y1:60:PHE:O	2.17	0.44
47:Y4:15:ILE:CG2	47:Y4:20:ASN:ND2	2.81	0.44
1:QA:327:A:O2'	1:QA:328:C:O4'	2.31	0.44
1:QA:664:G:H2'	1:QA:666:G:OP1	2.17	0.44
1:QA:1112:C:O2	3:QC:179:ARG:HG2	2.17	0.44
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1346:A:C5	7:QG:10:ARG:NH1	2.85	0.44
2:QB:221:LEU:HD13	2:QB:221:LEU:C	2.43	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.32	0.44
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.51	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
22:RA:269:U:C4	22:RA:270(Z):U:C2	3.05	0.44
22:RA:414:C:O2	22:RA:1864:U:O2'	2.33	0.44
22:RA:587:C:H4'	22:RA:588:U:O5'	2.17	0.44
22:RA:724:U:H2'	22:RA:725:G:O4'	2.18	0.44
22:RA:1629:U:O2	22:RA:2698:U:H5"	2.18	0.44
22:RA:2250:G:C8	22:RA:2496:C:H5"	2.53	0.44
22:RA:2633:G:H1'	25:RE:62:PRO:HG2	1.99	0.44
23:RB:104:A:H5'	42:RZ:72:ARG:HD3	1.99	0.44
24:RD:48:ARG:HG3	24:RD:48:ARG:NH1	2.31	0.44
24:RD:145:VAL:HG12	24:RD:146:GLU:N	2.32	0.44
26:RF:155:LEU:HA	26:RF:174:VAL:CG1	2.46	0.44
29:RI:98:ALA:HA	29:RI:109:ILE:HD11	1.99	0.44
30:RN:36:GLY:O	30:RN:42:TRP:CE3	2.69	0.44
31:RO:104:ARG:NH2	36:RT:34:VAL:HG11	2.32	0.44
35:RS:78:LEU:HD21	35:RS:108:GLY:CA	2.47	0.44
37:RU:66:ASN:CB	37:RU:76:TYR:HB2	2.44	0.44
38:RV:61:VAL:O	38:RV:61:VAL:HG22	2.16	0.44
39:RW:1:MET:CE	39:RW:2:GLU:H	2.31	0.44
39:RW:74:ALA:O	39:RW:75:TYR:CB	2.65	0.44
39:RW:88:ARG:HH11	39:RW:88:ARG:HG2	1.82	0.44
44:R1:54:ALA:O	44:R1:55:GLY:O	2.35	0.44
48:R5:56:LYS:O	48:R5:58:LEU:N	2.50	0.44
51:R8:47:LYS:HD2	51:R8:48:PHE:N	2.33	0.44
1:XA:255:G:OP1	17:XQ:69:LYS:NZ	2.47	0.44
1:XA:781:A:C5	1:XA:802:A:C2	3.06	0.44
1:XA:881:G:P	12:XL:12:ARG:NH2	2.91	0.44
1:XA:1000:A:H2'	1:XA:1001:G:H8	1.82	0.44
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.32	0.44
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1190:G:OP1	3:XC:4:LYS:HA	2.17	0.44
2:XB:128:GLU:O	2:XB:129:GLU:C	2.61	0.44
3:XC:140:ARG:HH11	3:XC:140:ARG:CG	2.30	0.44
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
4:XD:94:LEU:O	4:XD:98:GLU:N	2.50	0.44
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
10:XJ:61:GLU:CG	14:XN:58:LYS:HE2	2.47	0.44
16:XP:50:LYS:HD3	16:XP:50:LYS:O	2.17	0.44
16:XP:72:ARG:HD3	16:XP:72:ARG:O	2.18	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
22:YA:110:G:C2	22:YA:111:A:C8	3.06	0.44
22:YA:330:A:H2	22:YA:1210:A:O2'	2.00	0.44
22:YA:589:C:H2'	22:YA:590:A:H8	1.83	0.44
22:YA:1222:C:H2'	22:YA:1223:C:C6	2.52	0.44
22:YA:1517:G:C6	22:YA:1518:C:N4	2.84	0.44
22:YA:1535:U:N3	22:YA:1537:C:H1'	2.32	0.44
22:YA:1676:A:H2'	22:YA:1677:A:O4'	2.17	0.44
22:YA:2294:C:OP2	35:YS:13:ARG:NH1	2.50	0.44
22:YA:2377:A:H4'	35:YS:111:GLU:O	2.18	0.44
22:YA:2601:C:H2'	22:YA:2602:A:OP2	2.18	0.44
22:YA:2732:G:H3'	22:YA:2733:A:O4'	2.18	0.44
23:YB:42:C:N4	27:YG:91:ARG:HH21	2.14	0.44
24:YD:226:MET:H	24:YD:226:MET:HG2	1.53	0.44
25:YE:93:VAL:C	25:YE:95:ILE:N	2.75	0.44
25:YE:121:ASN:O	25:YE:122:PHE:C	2.57	0.44
26:YF:111:ALA:O	26:YF:112:MET:C	2.59	0.44
27:YG:16:ARG:CZ	27:YG:31:VAL:HG11	2.47	0.44
27:YG:63:ILE:HG12	27:YG:64:THR:N	2.33	0.44
31:YO:40:VAL:CG1	31:YO:41:ALA:N	2.80	0.44
32:YP:45:LEU:N	32:YP:45:LEU:HD12	2.32	0.44
33:YQ:66:ILE:O	33:YQ:104:PHE:N	2.49	0.44
34:YR:84:ALA:O	34:YR:85:PRO:C	2.59	0.44
36:YT:80:SER:HA	36:YT:81:PRO:HD3	1.73	0.44
37:YU:91:ASP:C	37:YU:93:LYS:N	2.74	0.44
44:Y1:10:LYS:HD2	44:Y1:66:HIS:HE1	1.82	0.44
46:Y3:60:GLU:HG2	46:Y3:60:GLU:O	2.16	0.44
49:Y6:19:ARG:HD2	49:Y6:19:ARG:HA	1.77	0.44
1:QA:337:C:H2'	1:QA:338:A:C8	2.52	0.44
1:QA:358:U:H2'	1:QA:359:U:H6	1.83	0.44
1:QA:412:A:H1'	1:QA:413:G:OP2	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:468:A:H4'	16:QP:80:PHE:O	2.18	0.44
1:QA:626:U:C2	1:QA:627:G:C8	3.05	0.44
1:QA:722:A:H4'	1:QA:723:U:C4	2.52	0.44
1:QA:1252:A:H61	1:QA:1285:A:H61	1.64	0.44
1:QA:1297:C:O2'	1:QA:1298:C:O5'	2.36	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.17	0.44
3:QC:6:HIS:C	3:QC:8:ILE:N	2.76	0.44
4:QD:49:ARG:O	4:QD:50:ARG:C	2.60	0.44
4:QD:199:ASN:C	4:QD:201:GLN:H	2.25	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.81	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
17:QQ:66:SER:O	17:QQ:67:LYS:C	2.61	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
22:RA:969:U:OP1	46:R3:17:LYS:N	2.50	0.44
22:RA:1378:A:HO2'	22:RA:1379:A:P	2.41	0.44
22:RA:1497:U:H3'	22:RA:1498:C:H6	1.82	0.44
22:RA:1516:U:H2'	22:RA:1517:G:H8	1.81	0.44
22:RA:1753:G:N1	22:RA:1756:G:C2	2.85	0.44
22:RA:2049:G:N2	22:RA:2620:C:C2	2.86	0.44
22:RA:2143:C:H2'	22:RA:2144:U:O4'	2.18	0.44
22:RA:2284:C:C5	49:R6:27:LYS:HE2	2.52	0.44
22:RA:2547:U:O2	31:RO:23:ARG:NH2	2.51	0.44
22:RA:2599:G:OP2	24:RD:236:GLY:HA2	2.18	0.44
22:RA:2658:C:H5"	28:RH:158:HIS:CE1	2.53	0.44
25:RE:4:ILE:HG12	25:RE:91:VAL:HG11	1.99	0.44
25:RE:143:ASN:N	25:RE:143:ASN:ND2	2.65	0.44
27:RG:129:GLY:HA2	27:RG:169:ALA:HB2	1.99	0.44
30:RN:7:LYS:HD3	30:RN:9:VAL:H	1.81	0.44
30:RN:20:GLY:HA2	30:RN:61:ARG:HD2	1.99	0.44
31:RO:92:GLU:O	31:RO:93:PRO:C	2.58	0.44
32:RP:45:LEU:N	32:RP:45:LEU:HD12	2.32	0.44
32:RP:83:VAL:HG11	32:RP:112:LEU:HD21	1.96	0.44
32:RP:144:GLU:N	32:RP:144:GLU:CD	2.75	0.44
35:RS:3:ARG:O	35:RS:4:LEU:O	2.35	0.44
35:RS:78:LEU:HD21	35:RS:108:GLY:HA2	1.98	0.44
37:RU:5:LYS:C	37:RU:7:GLY:N	2.74	0.44
37:RU:92:ARG:HD2	38:RV:11:GLN:CD	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RW:29:LEU:HD11	39:RW:55:ALA:HB2	1.98	0.44
39:RW:74:ALA:C	39:RW:75:TYR:HD1	2.24	0.44
40:RX:70:LEU:HD23	40:RX:70:LEU:H	1.77	0.44
41:RY:95:LYS:HB2	41:RY:99:CYS:O	2.18	0.44
47:R4:15:ILE:CG2	47:R4:20:ASN:ND2	2.81	0.44
49:R6:17:LYS:O	49:R6:18:ARG:CB	2.64	0.44
49:R6:34:LEU:O	49:R6:36:LEU:HD22	2.17	0.44
1:XA:32:A:H2'	1:XA:33:A:C8	2.52	0.44
1:XA:67:C:O2'	1:XA:171:A:N3	2.40	0.44
1:XA:684:A:H2'	1:XA:685:G:C8	2.52	0.44
1:XA:1378:C:N4	1:XA:1379:G:N3	2.66	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
4:XD:49:ARG:O	4:XD:50:ARG:C	2.60	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
16:XP:68:ASP:C	16:XP:70:ALA:N	2.75	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
22:YA:903:C:H2'	22:YA:904:C:O4'	2.18	0.44
22:YA:1655:A:H4'	25:YE:115:GLY:N	2.32	0.44
22:YA:2419:U:OP1	49:Y6:23:THR:HG21	2.18	0.44
22:YA:2635:C:OP1	25:YE:78:LEU:HD12	2.17	0.44
25:YE:50:GLY:CA	25:YE:74:PRO:HG3	2.46	0.44
26:YF:149:ASP:OD2	26:YF:151:SER:HB3	2.17	0.44
26:YF:201:VAL:HG13	26:YF:202:PHE:N	2.33	0.44
32:YP:6:LEU:N	32:YP:6:LEU:HD22	2.31	0.44
33:YQ:21:THR:HB	33:YQ:22:LYS:H	1.42	0.44
33:YQ:60:ARG:HB2	33:YQ:60:ARG:HH21	1.82	0.44
35:YS:56:LEU:O	35:YS:57:LYS:O	2.36	0.44
37:YU:57:PHE:O	37:YU:59:ARG:N	2.50	0.44
38:YV:72:VAL:HG13	38:YV:85:LYS:HB3	2.00	0.44
39:YW:1:MET:CE	39:YW:2:GLU:H	2.31	0.44
39:YW:28:SER:O	39:YW:30:GLU:N	2.51	0.44
43:Y0:12:ASN:HB2	43:Y0:13:GLY:H	1.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:60:PHE:HE2	44:Y1:91:LYS:NZ	2.16	0.44
47:Y4:33:VAL:CG1	47:Y4:34:GLU:N	2.80	0.44
47:Y4:39:CYS:HB3	47:Y4:41:PRO:HD2	2.00	0.44
51:Y8:47:LYS:HD2	51:Y8:48:PHE:N	2.33	0.44
1:QA:1054:C:N4	55:QY:34:C:C1'	2.47	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.50	0.44
2:QB:207:ALA:C	2:QB:209:ARG:N	2.76	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.41	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.47	0.44
20:QT:59:ALA:C	20:QT:61:SER:N	2.75	0.44
22:RA:593:G:O3'	51:R8:61:LEU:HD22	2.18	0.44
22:RA:685:A:H5"	22:RA:788:A:H62	1.82	0.44
22:RA:704:G:O2'	22:RA:705:A:O5'	2.35	0.44
22:RA:727:A:C2	24:RD:9:TYR:CD2	3.06	0.44
22:RA:770:G:N3	22:RA:1354:A:H2	2.16	0.44
22:RA:910:A:N6	22:RA:911:A:N6	2.66	0.44
22:RA:1258:C:H2'	22:RA:1259:G:C8	2.52	0.44
22:RA:1405:U:H2'	22:RA:1406:U:C6	2.52	0.44
22:RA:1578:U:H2'	22:RA:1579:A:H5'	2.00	0.44
22:RA:1750:G:O2'	22:RA:2860:A:N1	2.48	0.44
22:RA:2600:A:C6	22:RA:2601:C:N4	2.86	0.44
22:RA:2776:A:H4'	22:RA:2777:G:O5'	2.16	0.44
24:RD:155:LEU:N	24:RD:155:LEU:HD12	2.32	0.44
26:RF:117:ARG:NH2	26:RF:189:THR:O	2.50	0.44
26:RF:132:VAL:HG23	26:RF:133:ASN:H	1.82	0.44
30:RN:65:LYS:O	30:RN:66:LYS:C	2.60	0.44
30:RN:96:GLU:CG	30:RN:97:ARG:N	2.72	0.44
31:RO:91:LEU:N	31:RO:91:LEU:CD2	2.80	0.44
32:RP:101:VAL:HA	32:RP:106:LEU:HB2	1.99	0.44
38:RV:35:LEU:HD22	38:RV:35:LEU:N	2.23	0.44
40:RX:87:GLN:HE21	40:RX:87:GLN:HB2	1.55	0.44
41:RY:88:LYS:HB3	41:RY:90:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:10:LYS:HD2	44:R1:66:HIS:HE1	1.82	0.44
47:R4:68:ARG:HH11	47:R4:69:LYS:HG2	1.82	0.44
50:R7:48:LYS:CG	50:R7:49:ARG:H	2.23	0.44
1:XA:222:U:H2'	1:XA:223:U:H6	1.83	0.44
1:XA:539:A:OP1	12:XL:114:LYS:HE2	2.16	0.44
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.52	0.44
1:XA:730:G:C5	1:XA:731:G:H1'	2.52	0.44
1:XA:985:C:H2'	1:XA:986:A:H8	1.81	0.44
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.35	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	1.99	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.50	0.44
22:YA:389:G:N1	32:YP:71:VAL:HG12	2.32	0.44
22:YA:424:G:C2	22:YA:425:G:C8	3.06	0.44
22:YA:1207:C:H2'	22:YA:1208:C:H6	1.82	0.44
22:YA:1423:G:H2'	22:YA:1424:G:H8	1.83	0.44
22:YA:1798:U:C4	22:YA:1819:A:C2	3.05	0.44
22:YA:1825:A:H2'	22:YA:1826:G:H8	1.83	0.44
22:YA:2038:G:H2'	22:YA:2039:C:O4'	2.18	0.44
22:YA:2418:A:H2'	22:YA:2419:U:C6	2.53	0.44
22:YA:2464:C:H2'	22:YA:2465:C:C6	2.51	0.44
22:YA:2865:U:C4	22:YA:2866:U:N3	2.85	0.44
25:YE:172:VAL:HG13	25:YE:182:LEU:HD11	1.98	0.44
26:YF:24:LEU:HD12	26:YF:24:LEU:N	2.33	0.44
26:YF:65:TRP:HZ3	26:YF:73:ALA:C	2.26	0.44
30:YN:63:THR:HG23	30:YN:66:LYS:HE3	2.00	0.44
45:Y2:41:ILE:HD12	45:Y2:41:ILE:O	2.16	0.44
47:Y4:23:GLU:O	47:Y4:24:THR:OG1	2.34	0.44
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.52	0.44
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.18	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
22:RA:269:U:C5	22:RA:270(Z):U:C4	3.05	0.44
22:RA:605:C:O2	22:RA:657:U:O2'	2.36	0.44
22:RA:1301:A:H2	22:RA:1626:G:N3	2.14	0.44
22:RA:1359:A:OP2	22:RA:1371:G:N2	2.41	0.44
22:RA:1599:C:H2'	22:RA:1600:C:C6	2.52	0.44
22:RA:1803:A:H2	22:RA:1822:G:N3	2.16	0.44
22:RA:1991:U:H2'	22:RA:1992:G:H5"	2.00	0.44
22:RA:2231:C:H2'	22:RA:2232:U:O4'	2.18	0.44
24:RD:95:LEU:HD12	24:RD:95:LEU:O	2.17	0.44
26:RF:174:VAL:CG1	26:RF:174:VAL:O	2.65	0.44
27:RG:67:LYS:HD2	27:RG:67:LYS:N	2.33	0.44
27:RG:180:PHE:C	27:RG:182:LYS:N	2.76	0.44
28:RH:84:SER:OG	28:RH:85:LYS:N	2.51	0.44
30:RN:57:ALA:O	30:RN:124:ALA:HA	2.18	0.44
34:RR:31:HIS:C	34:RR:33:ARG:H	2.25	0.44
46:R3:50:VAL:HB	46:R3:53:LEU:HD12	2.00	0.44
1:XA:89:U:H2'	1:XA:90:C:C6	2.53	0.44
1:XA:716:A:C6	1:XA:717:C:C4	3.06	0.44
1:XA:1432:G:H8	1:XA:1432:G:O5'	2.01	0.44
1:XA:1507:A:C8	1:XA:1530:G:N2	2.85	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.18	0.44
4:XD:96:LEU:C	4:XD:98:GLU:N	2.72	0.44
4:XD:199:ASN:C	4:XD:201:GLN:H	2.25	0.44
5:XE:27:ARG:C	5:XE:28:PHE:CD1	2.96	0.44
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.44
14:XN:24:CYS:HB3	14:XN:28:GLY:H	1.83	0.44
17:XQ:66:SER:O	17:XQ:67:LYS:C	2.61	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
22:YA:974(A):C:H4'	22:YA:975:G:C5'	2.47	0.44
22:YA:1443:G:H1	22:YA:1548:C:H42	1.66	0.44
22:YA:2370:G:H21	49:Y6:45:LYS:NZ	2.14	0.44
22:YA:2655:G:O2'	22:YA:2656:U:OP2	2.36	0.44
24:YD:44:ASN:CB	24:YD:49:ILE:HG22	2.46	0.44
24:YD:145:VAL:HB	24:YD:155:LEU:HB2	1.99	0.44
25:YE:1:MET:HE2	25:YE:1:MET:H1	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YG:16:ARG:NH2	27:YG:31:VAL:CG1	2.75	0.44
27:YG:51:ARG:HB3	27:YG:51:ARG:NH1	2.33	0.44
28:YH:37:VAL:HG11	28:YH:68:THR:HG23	1.98	0.44
29:YI:30:LEU:HA	29:YI:35:LEU:HD12	2.00	0.44
30:YN:112:LEU:C	30:YN:114:ARG:O	2.61	0.44
30:YN:131:GLN:CD	30:YN:132:ALA:N	2.74	0.44
31:YO:120:GLU:OE1	36:YT:67:SER:OG	2.24	0.44
32:YP:107:LYS:HB2	32:YP:110:TYR:HD2	1.83	0.44
35:YS:110:LEU:HA	35:YS:112:PHE:CE1	2.53	0.44
37:YU:86:ALA:CB	37:YU:88:ILE:HD11	2.48	0.44
37:YU:97:ASP:HA	37:YU:100:VAL:CG2	2.47	0.44
38:YV:35:LEU:C	38:YV:37:VAL:N	2.75	0.44
39:YW:14:PRO:HB3	39:YW:18:ARG:HE	1.83	0.44
41:YY:36:ALA:HB1	41:YY:67:LEU:O	2.16	0.44
41:YY:88:LYS:HB3	41:YY:90:LEU:CD2	2.48	0.44
42:YZ:152:ALA:O	42:YZ:154:ASP:N	2.48	0.44
47:Y4:68:ARG:HH11	47:Y4:69:LYS:HG2	1.82	0.44
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.32	0.44
1:QA:440:A:H3'	1:QA:442:C:H6	1.83	0.44
1:QA:523:A:H8	1:QA:523:A:O5'	2.00	0.44
1:QA:1148:U:H2'	1:QA:1149:C:O4'	2.17	0.44
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.17	0.44
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.52	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
5:QE:27:ARG:C	5:QE:28:PHE:CD1	2.96	0.44
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.46	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.17	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
12:QL:47:LYS:HZ2	54:QX:6:C:C5'	2.28	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
15:QO:55:GLY:HA2	15:QO:58:MET:HE2	2.00	0.44
16:QP:47:ASP:C	16:QP:49:LEU:N	2.75	0.44
22:RA:138:G:N2	40:RX:44:GLU:OE2	2.27	0.44
22:RA:345:A:H5"	22:RA:346:A:OP1	2.18	0.44
22:RA:389:G:OP2	44:R1:26:ARG:HB3	2.17	0.44
22:RA:571:A:C6	22:RA:575:A:C8	3.06	0.44
22:RA:2396:G:OP1	44:R1:25:LYS:NZ	2.28	0.44
22:RA:2505:G:H2'	22:RA:2576:G:O6	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2583:G:C6	22:RA:2584:U:C5	3.05	0.44
24:RD:30:GLU:HG3	24:RD:63:ARG:NE	2.32	0.44
24:RD:52:ARG:HB2	24:RD:53:PHE:CD2	2.53	0.44
24:RD:155:LEU:HD23	24:RD:177:LEU:HD21	2.00	0.44
26:RF:65:TRP:CZ2	26:RF:72:ARG:NH2	2.85	0.44
26:RF:79:GLY:O	26:RF:80:ALA:C	2.61	0.44
31:RO:77:ILE:O	31:RO:77:ILE:HG23	2.17	0.44
34:RR:12:ARG:HG3	34:RR:12:ARG:NH1	2.32	0.44
34:RR:33:ARG:HA	34:RR:114:VAL:O	2.18	0.44
34:RR:79:LEU:HD23	34:RR:79:LEU:O	2.16	0.44
37:RU:52:ARG:NH1	37:RU:52:ARG:CG	2.76	0.44
37:RU:57:PHE:C	37:RU:59:ARG:N	2.74	0.44
37:RU:79:PHE:CE2	37:RU:83:LEU:CD1	3.00	0.44
41:RY:97:ARG:HG2	41:RY:97:ARG:HH11	1.82	0.44
44:R1:8:SER:CB	44:R1:66:HIS:CE1	3.01	0.44
45:R2:4:SER:OG	45:R2:5:GLU:OE2	2.26	0.44
47:R4:33:VAL:CG1	47:R4:34:GLU:H	2.22	0.44
1:XA:163:C:H2'	1:XA:164:U:H6	1.83	0.44
1:XA:246:A:N6	1:XA:281:G:H1'	2.33	0.44
1:XA:556:C:H2'	1:XA:557:G:C8	2.53	0.44
1:XA:591:U:C2	1:XA:592:G:C8	3.06	0.44
1:XA:1132:C:H2'	1:XA:1133:G:H8	1.82	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.65	0.44
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	2.18	0.44
13:XM:3:ARG:C	13:XM:9:ILE:HG21	2.43	0.44
13:XM:3:ARG:HH22	27:YG:113:ARG:NH2	2.15	0.44
15:XO:55:GLY:HA2	15:XO:58:MET:HE2	2.00	0.44
22:YA:49:A:C6	22:YA:118:A:C5	3.06	0.44
22:YA:265:A:C6	22:YA:428:A:C4	3.05	0.44
22:YA:270(T):G:C2	22:YA:270(U):C:C2	3.06	0.44
22:YA:1000:A:C6	22:YA:1155:A:C8	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1006:C:H5'	30:YN:28:THR:HG23	1.99	0.44
22:YA:1305:C:C2	22:YA:1624:G:C2	3.06	0.44
22:YA:1469:A:C4	22:YA:1470:G:C8	3.06	0.44
22:YA:1728:G:H3'	22:YA:1729:A:C5'	2.48	0.44
22:YA:1936:A:C8	22:YA:1945:G:C8	3.06	0.44
22:YA:2093:G:H2'	22:YA:2094:G:H8	1.82	0.44
22:YA:2316:C:H1'	27:YG:128:ARG:HH22	1.82	0.44
22:YA:2356:C:C5	22:YA:2357:U:C4	3.05	0.44
22:YA:2633:G:H1'	25:YE:62:PRO:HG2	2.00	0.44
24:YD:17:THR:HG21	24:YD:204:ILE:HA	1.99	0.44
24:YD:143:HIS:HD2	24:YD:144:ALA:HB2	1.82	0.44
24:YD:145:VAL:HG12	24:YD:146:GLU:N	2.32	0.44
25:YE:120:TRP:CE3	25:YE:155:LYS:HD3	2.53	0.44
26:YF:65:TRP:CZ2	26:YF:72:ARG:NH2	2.86	0.44
27:YG:67:LYS:CE	47:Y4:6:HIS:NE2	2.74	0.44
28:YH:6:ARG:CG	28:YH:7:LEU:N	2.81	0.44
30:YN:109:LYS:H	30:YN:109:LYS:CD	2.26	0.44
32:YP:115:LEU:CB	32:YP:131:SER:HB2	2.47	0.44
33:YQ:81:VAL:HG23	33:YQ:82:ARG:N	2.32	0.44
35:YS:110:LEU:HA	35:YS:112:PHE:CZ	2.53	0.44
36:YT:99:LEU:CD1	36:YT:99:LEU:O	2.65	0.44
37:YU:27:LEU:O	37:YU:28:ARG:C	2.61	0.44
42:YZ:107:THR:HA	42:YZ:108:PRO:HD3	1.89	0.44
47:Y4:35:VAL:C	47:Y4:37:SER:H	2.19	0.44
49:Y6:34:LEU:O	49:Y6:36:LEU:HD22	2.17	0.44
53:QV:58:A:O2'	53:QV:60:U:OP2	2.16	0.44
1:QA:258:G:H1	1:QA:268:C:H42	1.66	0.44
1:QA:543:C:OP1	4:QD:14:ARG:NE	2.51	0.44
1:QA:667:G:H4'	15:QO:51:HIS:CE1	2.53	0.44
1:QA:1321:C:C4	1:QA:1322:C:C4	3.05	0.44
1:QA:1446:A:C4	36:RT:118:ARG:HD2	2.52	0.44
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.18	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
5:QE:80:ILE:C	5:QE:81:GLU:HG2	2.43	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
11:QK:88:GLY:O	11:QK:89:ALA:C	2.61	0.44
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.44
15:QO:50:HIS:O	15:QO:51:HIS:C	2.61	0.44
17:QQ:82:MET:C	17:QQ:84:LEU:H	2.25	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
22:RA:94:G:H2'	22:RA:95:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:530:G:O2'	22:RA:2021:C:O2'	2.35	0.44
22:RA:947:G:H2'	22:RA:948:G:C8	2.53	0.44
22:RA:1599:C:H2'	22:RA:1600:C:H6	1.83	0.44
22:RA:2006:C:O2'	22:RA:2823:A:N3	2.51	0.44
24:RD:44:ASN:H	24:RD:44:ASN:ND2	1.97	0.44
25:RE:52:LEU:HB2	25:RE:75:VAL:CG2	2.40	0.44
25:RE:95:ILE:HG22	25:RE:95:ILE:O	2.16	0.44
25:RE:199:ARG:HH11	25:RE:199:ARG:HG3	1.82	0.44
26:RF:109:GLY:O	26:RF:110:LEU:C	2.58	0.44
26:RF:127:GLU:C	26:RF:129:PHE:H	2.26	0.44
28:RH:125:VAL:CG1	28:RH:126:PRO:CG	2.94	0.44
30:RN:114:ARG:O	30:RN:115:ARG:CB	2.65	0.44
31:RO:86:ILE:H	31:RO:86:ILE:CD1	2.27	0.44
36:RT:105:LEU:C	36:RT:107:ASP:N	2.74	0.44
37:RU:57:PHE:O	37:RU:58:ARG:C	2.59	0.44
47:R4:39:CYS:HB3	47:R4:41:PRO:HD2	2.00	0.44
48:R5:52:TYR:CD1	48:R5:52:TYR:N	2.85	0.44
49:R6:11:LEU:HD12	49:R6:51:GLU:HG3	2.00	0.44
1:XA:35:G:C6	1:XA:36:C:N4	2.86	0.44
1:XA:1001:G:H2'	1:XA:1002:G:O4'	2.18	0.44
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.53	0.44
1:XA:1378:C:O2	7:XG:76:ARG:NH1	2.51	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44
5:XE:80:ILE:HG13	5:XE:82:VAL:HG23	1.99	0.44
5:XE:94:ALA:HB2	5:XE:119:LEU:HG	2.00	0.44
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.44
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
19:XS:5:LEU:HD11	47:Y4:66:SER:HA	1.95	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
22:YA:744:G:H2'	22:YA:745:G:O4'	2.18	0.44
22:YA:809:G:H2'	22:YA:810:U:C6	2.53	0.44
22:YA:868:U:C4	22:YA:869:G:N7	2.86	0.44
22:YA:1333:C:H2'	22:YA:1334:G:H8	1.83	0.44
22:YA:2558:C:H2'	22:YA:2559:C:O4'	2.17	0.44
22:YA:2576:G:O2'	22:YA:2579:C:OP2	2.29	0.44
22:YA:2689:U:P	22:YA:2719:G:H22	2.40	0.44
23:YB:112:G:H2'	23:YB:113:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:44:ASN:HB2	24:YD:49:ILE:HA	1.93	0.44
24:YD:95:LEU:HD12	24:YD:95:LEU:O	2.17	0.44
24:YD:155:LEU:N	24:YD:155:LEU:HD12	2.33	0.44
24:YD:213:ARG:HD2	24:YD:213:ARG:HA	1.59	0.44
25:YE:48:GLN:HE21	25:YE:48:GLN:HB3	1.55	0.44
26:YF:184:TYR:CE2	26:YF:188:ARG:HD2	2.52	0.44
28:YH:153:LYS:HG3	28:YH:162:ILE:H	1.79	0.44
30:YN:67:LEU:HA	30:YN:87:LEU:HD13	2.00	0.44
32:YP:88:LEU:O	32:YP:90:ARG:N	2.50	0.44
33:YQ:132:VAL:HG11	42:YZ:81:ARG:NH1	2.33	0.44
36:YT:114:LEU:HA	36:YT:114:LEU:HD23	1.74	0.44
37:YU:79:PHE:CE2	37:YU:83:LEU:CD1	3.01	0.44
39:YW:88:ARG:HH11	39:YW:88:ARG:HG2	1.82	0.44
47:Y4:39:CYS:O	47:Y4:40:HIS:CB	2.66	0.44
1:QA:134:A:H61	16:QP:25:ARG:NH1	2.16	0.44
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.53	0.44
1:QA:328:C:H1'	1:QA:329:A:OP2	2.18	0.44
1:QA:563:A:N7	1:QA:567:G:H1'	2.33	0.44
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.47	0.44
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.53	0.44
1:QA:1425:U:H1'	1:QA:1476:G:N2	2.33	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
8:QH:122:ARG:O	8:QH:123:GLU:C	2.60	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.44
16:QP:23:ASP:O	16:QP:26:ARG:HB2	2.18	0.44
18:QR:20:ALA:O	18:QR:21:LYS:HG3	2.18	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
22:RA:810:U:C2	32:RP:29:LYS:O	2.71	0.44
22:RA:1069:A:H4'	22:RA:1070:A:H5"	1.99	0.44
22:RA:1502:C:H5'	22:RA:1503:U:OP2	2.18	0.44
22:RA:2168:G:H2'	22:RA:2168:G:N3	2.32	0.44
24:RD:11:PRO:O	24:RD:12:SER:CB	2.65	0.44
24:RD:12:SER:O	24:RD:14:ARG:N	2.51	0.44
24:RD:25:THR:CG2	24:RD:25:THR:O	2.65	0.44
24:RD:237:GLU:HB3	24:RD:238:GLY:H	1.49	0.44
25:RE:11:MET:O	25:RE:12:THR:HB	2.18	0.44
28:RH:58:GLU:O	28:RH:59:ARG:C	2.61	0.44
29:RI:4:ILE:HG22	29:RI:16:GLY:HA2	1.99	0.44
32:RP:75:ILE:HG12	32:RP:77:ARG:NH1	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RQ:20:ALA:C	33:RQ:21:THR:HG23	2.43	0.44
33:RQ:34:LEU:HB2	33:RQ:118:LEU:HD22	1.99	0.44
33:RQ:133:ARG:CG	33:RQ:134:ARG:N	2.78	0.44
36:RT:29:ARG:HA	36:RT:45:PHE:O	2.17	0.44
38:RV:35:LEU:C	38:RV:37:VAL:N	2.75	0.44
38:RV:72:VAL:HG13	38:RV:85:LYS:HB3	2.00	0.44
40:RX:3:THR:HA	40:RX:6:ASP:OD2	2.18	0.44
41:RY:95:LYS:C	41:RY:96:ILE:O	2.61	0.44
47:R4:39:CYS:O	47:R4:40:HIS:CB	2.66	0.44
1:XA:44:G:C2	1:XA:45:U:H1'	2.53	0.44
1:XA:131:C:H2'	1:XA:132:C:H6	1.82	0.44
1:XA:688:G:C6	1:XA:700:G:C6	3.06	0.44
1:XA:775:G:H2'	1:XA:776:G:O4'	2.18	0.44
1:XA:1036:G:C8	1:XA:1037:C:C4	3.06	0.44
1:XA:1224:G:O6	1:XA:1322:C:H1'	2.18	0.44
1:XA:1244:C:C2	1:XA:1294:G:N2	2.86	0.44
1:XA:1417:G:C6	1:XA:1482:G:C6	3.06	0.44
2:XB:33:TYR:HD1	2:XB:33:TYR:O	2.00	0.44
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	2.00	0.44
5:XE:80:ILE:C	5:XE:81:GLU:HG2	2.43	0.44
5:XE:154:GLY:O	5:XE:155:GLU:C	2.61	0.44
10:XJ:96:ILE:HD13	10:XJ:96:ILE:H	1.83	0.44
14:XN:51:GLY:C	14:XN:53:LEU:H	2.26	0.44
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
22:YA:325:G:H2'	22:YA:326:G:H8	1.83	0.44
22:YA:479:A:H4'	22:YA:480:A:OP1	2.18	0.44
22:YA:601:C:O2'	22:YA:605:C:H5"	2.18	0.44
22:YA:846:C:O2'	22:YA:847:U:OP2	2.26	0.44
22:YA:1126:A:OP1	22:YA:1126:A:H8	2.00	0.44
22:YA:1707:G:H2'	22:YA:1708:C:O4'	2.18	0.44
24:YD:30:GLU:HG3	24:YD:63:ARG:NE	2.32	0.44
25:YE:2:LYS:HG2	25:YE:95:ILE:HG22	1.99	0.44
26:YF:42:ALA:O	26:YF:45:ARG:HB2	2.18	0.44
26:YF:108:LYS:O	26:YF:109:GLY:C	2.61	0.44
29:YI:64:GLU:O	29:YI:67:ARG:HB3	2.18	0.44
32:YP:19:VAL:HG22	32:YP:21:ARG:H	1.83	0.44
32:YP:70:GLN:N	32:YP:70:GLN:OE1	2.51	0.44
35:YS:86:ALA:O	35:YS:87:PHE:CB	2.65	0.44
41:YY:95:LYS:C	41:YY:96:ILE:O	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:XV:49:G:O6	53:XV:65:C:N4	2.49	0.44
1:QA:46:G:H2'	1:QA:366:C:C5	2.53	0.43
1:QA:675:A:H2'	1:QA:676:A:H8	1.83	0.43
1:QA:1107:C:C4	1:QA:1108:G:C8	3.06	0.43
1:QA:1527:C:O2'	1:QA:1528:U:H5'	2.17	0.43
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.43
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.43
4:QD:109:GLY:C	4:QD:111:ALA:N	2.76	0.43
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.43
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
9:QI:100:GLY:C	9:QI:102:LEU:H	2.26	0.43
16:QP:68:ASP:C	16:QP:70:ALA:N	2.75	0.43
22:RA:273(C):C:H42	22:RA:363(C):G:H1	1.64	0.43
22:RA:858:U:O2	22:RA:2268:A:H2'	2.17	0.43
22:RA:1593:G:H2'	22:RA:1594:G:C8	2.53	0.43
22:RA:2607:G:H2'	22:RA:2608:G:O4'	2.18	0.43
23:RB:4:C:C2	23:RB:117:G:N2	2.86	0.43
24:RD:102:LYS:O	24:RD:103:ARG:CG	2.66	0.43
24:RD:172:TYR:HD1	24:RD:185:VAL:C	2.26	0.43
24:RD:206:LEU:HD23	24:RD:206:LEU:HA	1.49	0.43
24:RD:214:TRP:C	24:RD:216:GLY:H	2.26	0.43
25:RE:3:GLY:CA	25:RE:81:ILE:HG21	2.48	0.43
25:RE:13:ARG:HH11	25:RE:13:ARG:HB3	1.82	0.43
25:RE:51:PHE:HD1	25:RE:52:LEU:H	1.59	0.43
26:RF:24:LEU:HD12	26:RF:24:LEU:N	2.33	0.43
27:RG:53:LEU:C	27:RG:55:LYS:H	2.27	0.43
27:RG:139:LEU:HA	27:RG:144:ILE:HG21	2.00	0.43
29:RI:86:THR:H	29:RI:123:LEU:HD12	1.83	0.43
31:RO:63:VAL:O	31:RO:63:VAL:HG23	2.18	0.43
32:RP:101:VAL:HG13	32:RP:102:ARG:N	2.33	0.43
35:RS:38:GLN:CG	35:RS:47:THR:HG21	2.48	0.43
36:RT:99:LEU:CD1	36:RT:99:LEU:O	2.65	0.43
39:RW:70:TYR:HD2	39:RW:70:TYR:N	2.06	0.43
40:RX:14:SER:HB2	40:RX:15:GLU:OE1	2.18	0.43
41:RY:11:ASP:HB2	41:RY:27:VAL:CG1	2.46	0.43
41:RY:15:VAL:HB	41:RY:20:TYR:O	2.17	0.43
41:RY:25:GLY:HA3	41:RY:39:VAL:CG1	2.47	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R4:50:VAL:O	47:R4:50:VAL:CG1	2.63	0.43
49:R6:7:ILE:HG23	49:R6:8:LYS:N	2.32	0.43
51:R8:28:GLY:O	51:R8:29:LYS:C	2.61	0.43
51:R8:40:GLU:O	51:R8:43:GLN:N	2.50	0.43
1:XA:136:C:H42	1:XA:227:G:H1	1.65	0.43
1:XA:688:G:O6	1:XA:700:G:C6	2.70	0.43
1:XA:827:U:H5	1:XA:870:U:N3	2.16	0.43
1:XA:1074:G:C6	1:XA:1075:C:C4	3.06	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.43
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.43
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.43
9:XI:100:GLY:C	9:XI:102:LEU:H	2.25	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43
15:XO:58:MET:O	15:XO:59:MET:C	2.61	0.43
16:XP:20:VAL:HG22	16:XP:21:VAL:H	1.83	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
19:XS:2:PRO:CG	47:Y4:68:ARG:HH12	2.31	0.43
20:XT:59:ALA:C	20:XT:61:SER:N	2.75	0.43
22:YA:176:G:C6	22:YA:177:G:N7	2.85	0.43
22:YA:210:C:P	50:Y7:29:LYS:HZ1	2.40	0.43
22:YA:259:G:N2	22:YA:621:A:H8	2.11	0.43
22:YA:715:G:H2'	22:YA:716:A:C8	2.53	0.43
22:YA:950:G:C5	22:YA:951:C:C5	3.06	0.43
22:YA:1263:U:O2'	48:Y5:11:THR:HG23	2.18	0.43
22:YA:1438:U:H2'	22:YA:1439:A:H8	1.82	0.43
22:YA:1756:G:H4'	22:YA:1758:G:O4'	2.18	0.43
22:YA:2845:G:O2'	22:YA:2846:G:H5'	2.18	0.43
24:YD:35:LYS:HB3	24:YD:36:PRO:HA	2.00	0.43
24:YD:102:LYS:O	24:YD:103:ARG:CG	2.66	0.43
27:YG:136:ARG:O	27:YG:137:GLU:C	2.61	0.43
29:YI:73:GLU:HG3	29:YI:136:VAL:HG23	1.98	0.43
29:YI:109:ILE:HB	29:YI:130:TYR:OH	2.18	0.43
31:YO:47:ILE:HG13	31:YO:48:PRO:HD2	1.99	0.43
31:YO:77:ILE:O	31:YO:77:ILE:HG23	2.17	0.43
31:YO:91:LEU:N	31:YO:91:LEU:CD2	2.80	0.43
32:YP:96:THR:HG22	32:YP:126:VAL:CB	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:YP:101:VAL:HA	32:YP:106:LEU:HB2	1.99	0.43
35:YS:57:LYS:O	35:YS:58:LEU:HB3	2.18	0.43
37:YU:81:HIS:O	37:YU:82:GLY:C	2.61	0.43
39:YW:29:LEU:HD11	39:YW:55:ALA:HB2	1.98	0.43
41:YY:15:VAL:HB	41:YY:20:TYR:O	2.17	0.43
41:YY:95:LYS:HB2	41:YY:99:CYS:O	2.17	0.43
44:Y1:49:VAL:HG12	44:Y1:51:VAL:HG23	1.99	0.43
47:Y4:2:LYS:HD2	47:Y4:2:LYS:HA	1.61	0.43
1:QA:524:G:H2'	1:QA:525:C:C6	2.53	0.43
1:QA:597:G:N2	8:QH:94:TYR:OH	2.51	0.43
1:QA:826:C:H2'	1:QA:827:U:O2	2.17	0.43
1:QA:836:G:C6	1:QA:851:G:C6	3.06	0.43
1:QA:1347:G:H2'	1:QA:1373:G:O6	2.18	0.43
1:QA:1360:A:OP1	1:QA:1360:A:H8	2.01	0.43
1:QA:1502:A:H3'	1:QA:1503:A:H3'	2.01	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.51	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.43
4:QD:166:LYS:CD	24:YD:134:ARG:NH1	2.81	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.18	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.43
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.43
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:72:ALA:C	11:QK:74:ALA:H	2.26	0.43
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.43
12:QL:44:THR:HA	12:QL:45:PRO:HD3	1.71	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
22:RA:374:A:C2	22:RA:401:A:C4	3.05	0.43
22:RA:388:G:O2'	22:RA:389:G:N7	2.44	0.43
22:RA:696:G:N2	22:RA:697:C:H1'	2.33	0.43
22:RA:1000:A:H2'	22:RA:1001:A:C8	2.53	0.43
22:RA:1870:C:H2'	22:RA:1871:A:O4'	2.18	0.43
22:RA:2155:G:H2'	22:RA:2156:G:O4'	2.17	0.43
23:RB:111:U:H2'	23:RB:112:G:H8	1.82	0.43
26:RF:149:ASP:OD2	26:RF:151:SER:HB3	2.17	0.43
27:RG:131:TYR:HE2	27:RG:133:LEU:HD22	1.83	0.43
30:RN:30:ILE:HG22	30:RN:34:LEU:CD2	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RN:112:LEU:C	30:RN:114:ARG:O	2.61	0.43
31:RO:97:ARG:HA	31:RO:117:LEU:HD22	2.00	0.43
33:RQ:27:VAL:HG13	33:RQ:28:ALA:N	2.32	0.43
35:RS:86:ALA:O	35:RS:87:PHE:CB	2.65	0.43
38:RV:66:ARG:NH1	38:RV:88:ARG:CD	2.74	0.43
39:RW:14:PRO:HB3	39:RW:18:ARG:HE	1.83	0.43
40:RX:7:VAL:O	40:RX:30:VAL:CG1	2.66	0.43
40:RX:65:ARG:N	40:RX:65:ARG:CD	2.79	0.43
41:RY:48:ALA:CB	41:RY:61:ILE:HD13	2.45	0.43
43:R0:27:GLU:HB2	43:R0:69:PHE:HD1	1.83	0.43
49:R6:15:GLU:HB3	49:R6:16:CYS:H	1.46	0.43
51:R8:58:ILE:O	51:R8:61:LEU:CG	2.66	0.43
1:XA:44:G:C6	1:XA:45:U:C2	3.06	0.43
1:XA:191(D):U:H2'	1:XA:191(E):G:H8	1.82	0.43
1:XA:530:G:H4'	1:XA:531:U:OP2	2.18	0.43
1:XA:678:U:C4	1:XA:679:C:N4	2.86	0.43
1:XA:738:C:H2'	1:XA:739:C:H6	1.83	0.43
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.33	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.43
6:XF:72:VAL:HG23	6:XF:90:VAL:HG11	1.98	0.43
7:XG:23:VAL:C	7:XG:27:ILE:HD13	2.44	0.43
7:XG:78:ARG:HH11	7:XG:78:ARG:CG	2.30	0.43
7:XG:96:GLN:O	7:XG:97:GLN:C	2.61	0.43
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.43
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
14:XN:17:LYS:HG3	14:XN:18:VAL:N	2.33	0.43
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.43
22:YA:821:A:H5"	22:YA:822:U:H6	1.83	0.43
22:YA:1534:G:H2'	22:YA:1534:G:N3	2.33	0.43
22:YA:2436:G:C5	22:YA:2437:U:C5	3.06	0.43
22:YA:2832:U:H4'	22:YA:2833:G:H5"	2.00	0.43
22:YA:2838:G:C4	22:YA:2839:G:C8	3.06	0.43
22:YA:2875:C:C4'	36:YT:5:ALA:HB2	2.47	0.43
25:YE:11:MET:O	25:YE:12:THR:HB	2.18	0.43
26:YF:174:VAL:CG1	26:YF:174:VAL:O	2.65	0.43
28:YH:137:ASP:OD1	28:YH:138:LYS:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YT:29:ARG:HA	36:YT:45:PHE:O	2.17	0.43
36:YT:49:VAL:O	36:YT:49:VAL:CG1	2.64	0.43
36:YT:107:ASP:OD2	36:YT:109:GLU:HB2	2.19	0.43
39:YW:67:ASP:OD2	39:YW:67:ASP:N	2.50	0.43
44:Y1:82:LEU:HD12	44:Y1:82:LEU:O	2.10	0.43
49:Y6:11:LEU:HD12	49:Y6:51:GLU:HG3	2.00	0.43
50:Y7:19:ARG:HG2	50:Y7:19:ARG:NH1	2.33	0.43
55:QY:39:C:H4'	55:QY:40:G:OP1	2.18	0.43
1:QA:19:C:OP1	5:QE:125:SER:OG	2.24	0.43
1:QA:297:G:H4'	1:QA:557:G:H4'	1.99	0.43
2:QB:128:GLU:O	2:QB:129:GLU:C	2.61	0.43
2:QB:204:ASN:ND2	2:QB:204:ASN:C	2.76	0.43
3:QC:27:LYS:NZ	3:QC:27:LYS:HB3	2.34	0.43
4:QD:90:GLY:HA3	4:QD:204:ILE:HD11	2.00	0.43
5:QE:75:THR:CG2	5:QE:76:ILE:N	2.80	0.43
5:QE:152:ARG:HD3	8:QH:44:PHE:CE1	2.53	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
19:QS:12:ASP:CG	19:QS:37:ARG:HD2	2.43	0.43
19:QS:36:ARG:NH1	19:QS:52:TYR:O	2.51	0.43
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
22:RA:173:G:H2'	22:RA:174:C:C6	2.52	0.43
22:RA:512:G:O2'	22:RA:513:A:P	2.76	0.43
22:RA:1519:G:C6	22:RA:1520:U:C4	3.06	0.43
22:RA:1615:C:C2	39:RW:87:PRO:HG3	2.54	0.43
22:RA:1678:G:H22	22:RA:1989:G:N2	2.12	0.43
22:RA:1929:G:H4'	22:RA:1930:G:OP1	2.18	0.43
22:RA:2543:G:H21	22:RA:2646:C:H5"	1.82	0.43
23:RB:3:C:H2'	23:RB:4:C:C6	2.53	0.43
23:RB:56:G:P	27:RG:27:ASN:HD21	2.41	0.43
24:RD:17:THR:HG22	24:RD:204:ILE:HA	1.98	0.43
25:RE:51:PHE:CD1	25:RE:52:LEU:N	2.76	0.43
26:RF:63:LYS:CE	26:RF:67:GLN:HB2	2.48	0.43
26:RF:201:VAL:HG13	26:RF:202:PHE:N	2.33	0.43
28:RH:136:ILE:HD12	28:RH:136:ILE:N	2.32	0.43
28:RH:137:ASP:OD1	28:RH:138:LYS:N	2.51	0.43
30:RN:99:LEU:O	30:RN:100:GLU:C	2.60	0.43
32:RP:81:GLN:HE21	32:RP:81:GLN:HB2	1.59	0.43
32:RP:107:LYS:HB2	32:RP:110:TYR:HD2	1.83	0.43
34:RR:2:ARG:HG2	34:RR:5:LYS:HZ2	1.81	0.43
34:RR:75:LEU:C	34:RR:75:LEU:CD1	2.91	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RR:81:ASP:N	34:RR:81:ASP:OD2	2.50	0.43
35:RS:56:LEU:O	35:RS:57:LYS:O	2.36	0.43
35:RS:110:LEU:HA	35:RS:112:PHE:CE1	2.53	0.43
38:RV:15:GLU:O	38:RV:96:ILE:HB	2.19	0.43
38:RV:25:LEU:H	38:RV:92:THR:CG2	2.28	0.43
40:RX:31:HIS:HA	40:RX:32:PRO:HD3	1.88	0.43
42:RZ:157:LEU:HA	42:RZ:158:PRO:HD2	1.81	0.43
44:R1:53:VAL:CG1	44:R1:54:ALA:N	2.81	0.43
47:R4:49:PHE:N	47:R4:49:PHE:HD1	2.17	0.43
49:R6:20:ASN:O	49:R6:21:TYR:CG	2.71	0.43
50:R7:5:TRP:CD1	50:R7:7:PRO:HG3	2.53	0.43
51:R8:58:ILE:O	51:R8:61:LEU:CD1	2.67	0.43
1:XA:240:C:H2'	1:XA:241:C:C6	2.53	0.43
1:XA:416:G:H2'	1:XA:417:C:C6	2.53	0.43
1:XA:760:G:O2'	17:XQ:98:LEU:HD23	2.18	0.43
1:XA:780:A:H1'	1:XA:803:G:N2	2.32	0.43
1:XA:1100:C:O2'	1:XA:1102:A:OP1	2.34	0.43
1:XA:1264:C:H2'	1:XA:1265:G:H8	1.82	0.43
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.17	0.43
1:XA:1442:G:C5	1:XA:1446:A:C6	3.07	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
2:XB:207:ALA:C	2:XB:209:ARG:N	2.76	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
9:XI:71:SER:C	9:XI:73:GLN:N	2.74	0.43
11:XK:108:ILE:HG21	18:XR:88:LYS:OXT	2.19	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
19:XS:2:PRO:HB2	47:Y4:68:ARG:NH1	2.33	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
22:YA:99:U:H1'	22:YA:102:G:C5	2.53	0.43
22:YA:498:G:N2	22:YA:506:G:O6	2.32	0.43
22:YA:1682:G:C6	22:YA:1683:C:C4	3.06	0.43
22:YA:2013:A:N3	39:YW:88:ARG:NH2	2.65	0.43
22:YA:2310:A:H62	27:YG:77:ILE:HG21	1.83	0.43
22:YA:2329:G:H2'	22:YA:2330:G:C8	2.53	0.43
22:YA:2863:C:H2'	22:YA:2864:G:C8	2.53	0.43
24:YD:272:ALA:HB1	24:YD:273:ARG:H	1.58	0.43
25:YE:3:GLY:HA3	25:YE:81:ILE:CD1	2.48	0.43
26:YF:79:GLY:O	26:YF:80:ALA:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:35:VAL:CG2	28:YH:75:ALA:HB2	2.48	0.43
28:YH:136:ILE:HD12	28:YH:136:ILE:N	2.31	0.43
28:YH:149:ARG:HA	28:YH:162:ILE:HG21	1.99	0.43
33:YQ:80:GLU:C	33:YQ:81:VAL:CG1	2.88	0.43
34:YR:33:ARG:HA	34:YR:114:VAL:O	2.18	0.43
34:YR:75:LEU:C	34:YR:75:LEU:CD1	2.91	0.43
35:YS:14:VAL:CG1	35:YS:15:ARG:N	2.81	0.43
35:YS:38:GLN:CG	35:YS:47:THR:HG21	2.48	0.43
35:YS:88:ASP:CG	35:YS:89:ARG:N	2.77	0.43
37:YU:90:VAL:C	37:YU:92:ARG:N	2.76	0.43
38:YV:27:ALA:O	38:YV:28:GLU:C	2.62	0.43
38:YV:66:ARG:NH1	38:YV:88:ARG:CD	2.74	0.43
38:YV:66:ARG:NH1	38:YV:88:ARG:NH1	2.61	0.43
39:YW:50:VAL:O	39:YW:53:SER:N	2.50	0.43
39:YW:111:HIS:CG	39:YW:112:GLY:H	2.37	0.43
40:YX:3:THR:HA	40:YX:6:ASP:OD2	2.18	0.43
40:YX:14:SER:HB2	40:YX:15:GLU:OE1	2.18	0.43
43:Y0:65:GLY:HA3	43:Y0:82:ARG:O	2.17	0.43
44:Y1:60:PHE:HZ	44:Y1:90:ILE:HG21	1.82	0.43
47:Y4:48:ARG:NH1	47:Y4:51:ASP:HA	2.34	0.43
49:Y6:20:ASN:O	49:Y6:21:TYR:CG	2.71	0.43
51:Y8:40:GLU:O	51:Y8:43:GLN:N	2.50	0.43
51:Y8:58:ILE:O	51:Y8:61:LEU:CD1	2.67	0.43
52:Y9:1:MET:HE1	52:Y9:32:HIS:CD2	2.54	0.43
53:QV:4:G:C6	53:QV:70:G:N1	2.87	0.43
53:QV:15:G:N2	53:QV:48:C:H42	2.17	0.43
1:QA:109:A:C6	1:QA:326:G:C6	3.06	0.43
1:QA:325:A:H2'	1:QA:326:G:O4'	2.18	0.43
1:QA:643:C:H2'	1:QA:644:G:C8	2.52	0.43
1:QA:671:G:H2'	1:QA:672:U:H6	1.84	0.43
1:QA:701:C:H1'	1:QA:703:G:N1	2.33	0.43
1:QA:922:G:N3	1:QA:1398:A:H2	2.16	0.43
1:QA:1077:G:N1	1:QA:1081:G:C6	2.87	0.43
1:QA:1399:C:C2	1:QA:1502:A:N6	2.86	0.43
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.81	0.43
7:QG:23:VAL:C	7:QG:27:ILE:HD13	2.44	0.43
7:QG:49:ILE:C	7:QG:51:GLN:H	2.26	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	0.43
10:QJ:8:LEU:C	10:QJ:16:LEU:HD21	2.44	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.82	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43
13:QM:107:ALA:O	13:QM:108:ARG:C	2.62	0.43
14:QN:51:GLY:C	14:QN:53:LEU:H	2.27	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43
22:RA:1495:A:H2'	22:RA:1496:A:N3	2.34	0.43
22:RA:1759:A:O2'	22:RA:2714:G:O2'	2.36	0.43
22:RA:2226:C:H2'	22:RA:2227:A:O4'	2.18	0.43
22:RA:2341:G:H2'	22:RA:2342:C:O4'	2.17	0.43
24:RD:227:ASN:CB	24:RD:228:PRO:CD	2.93	0.43
25:RE:7:VAL:HG11	36:RT:1:MET:HE3	2.00	0.43
25:RE:36:ARG:HB3	25:RE:36:ARG:NH1	2.31	0.43
25:RE:52:LEU:O	25:RE:74:PRO:HA	2.18	0.43
26:RF:167:ALA:HB1	26:RF:173:VAL:HG11	1.99	0.43
27:RG:19:LEU:HA	27:RG:22:ARG:HB2	1.99	0.43
27:RG:125:PHE:C	27:RG:127:GLY:N	2.76	0.43
28:RH:92:ILE:CD1	28:RH:160:LYS:HD3	2.48	0.43
32:RP:47:ASP:CG	32:RP:49:ARG:NH1	2.77	0.43
35:RS:14:VAL:CG1	35:RS:15:ARG:N	2.81	0.43
35:RS:57:LYS:O	35:RS:58:LEU:HB3	2.18	0.43
36:RT:89:VAL:O	36:RT:90:GLN:HB2	2.19	0.43
36:RT:105:LEU:O	36:RT:105:LEU:HG	2.19	0.43
36:RT:114:LEU:HD23	36:RT:114:LEU:HA	1.74	0.43
41:RY:6:HIS:ND1	41:RY:6:HIS:N	2.66	0.43
41:RY:95:LYS:HA	41:RY:101:LYS:N	2.34	0.43
44:R1:80:LEU:O	44:R1:81:LYS:CD	2.65	0.43
52:R9:7:VAL:HG21	52:R9:36:GLN:HB2	2.00	0.43
1:XA:143:A:H2	1:XA:220:G:H1	1.66	0.43
1:XA:1190:G:OP2	3:XC:5:ILE:HG23	2.18	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.34	0.43
1:XA:1486:G:C6	1:XA:1487:G:C6	3.06	0.43
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.52	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
3:XC:27:LYS:HB3	3:XC:27:LYS:NZ	2.34	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
4:XD:128:VAL:C	4:XD:130:GLY:N	2.76	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
18:XR:67:ALA:O	18:XR:68:LYS:C	2.62	0.43
22:YA:49:A:N7	22:YA:120:U:H5	2.16	0.43
22:YA:190:A:C4	22:YA:207:A:C2	3.06	0.43
22:YA:356:G:H2'	22:YA:357:A:H8	1.82	0.43
22:YA:596:G:H2'	22:YA:597:U:O4'	2.19	0.43
22:YA:675:A:N3	22:YA:2443:C:O2'	2.50	0.43
22:YA:844:C:H2'	22:YA:845:G:O4'	2.18	0.43
22:YA:1030:G:OP2	33:YQ:128:LYS:HE2	2.18	0.43
22:YA:1388:G:C2'	22:YA:1389:G:H5'	2.48	0.43
22:YA:1815:A:OP2	24:YD:54:ARG:NH2	2.46	0.43
22:YA:2263:C:H41	43:Y0:15:ASP:HA	1.83	0.43
22:YA:2322:A:H2'	22:YA:2323:G:O4'	2.19	0.43
22:YA:2489:G:O6	22:YA:2490:G:O6	2.36	0.43
22:YA:2543:G:C6	22:YA:2544:G:C6	3.06	0.43
23:YB:11:C:OP2	23:YB:12:C:N4	2.44	0.43
23:YB:66:A:C6	23:YB:107:U:C4	3.06	0.43
24:YD:44:ASN:HB3	24:YD:49:ILE:CG2	2.47	0.43
24:YD:172:TYR:HD1	24:YD:185:VAL:C	2.26	0.43
25:YE:3:GLY:CA	25:YE:81:ILE:HG21	2.49	0.43
25:YE:25:VAL:HG21	36:YT:8:LYS:HG3	2.00	0.43
27:YG:44:GLY:HA2	27:YG:88:ILE:HD11	2.00	0.43
27:YG:67:LYS:N	27:YG:67:LYS:HD2	2.33	0.43
29:YI:83:ALA:O	29:YI:85:GLU:N	2.51	0.43
30:YN:17:ASP:O	30:YN:55:VAL:O	2.34	0.43
30:YN:133:GLN:C	30:YN:134:ARG:HG2	2.41	0.43
31:YO:63:VAL:O	31:YO:63:VAL:HG23	2.17	0.43
35:YS:99:LYS:C	35:YS:101:LEU:H	2.25	0.43
39:YW:17:VAL:C	39:YW:19:LEU:N	2.76	0.43
40:YX:70:LEU:HD23	40:YX:70:LEU:H	1.77	0.43
41:YY:75:ILE:HG12	41:YY:76:CYS:H	1.79	0.43
42:YZ:112:ARG:C	42:YZ:114:GLY:N	2.76	0.43
45:Y2:59:ARG:O	45:Y2:62:THR:HG23	2.18	0.43
46:Y3:39:ASP:O	46:Y3:39:ASP:CG	2.62	0.43
47:Y4:59:PHE:CE1	47:Y4:70:GLY:N	2.87	0.43
51:Y8:58:ILE:O	51:Y8:61:LEU:CG	2.66	0.43
53:XV:54:U:C4	53:XV:55:U:C4	3.06	0.43
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.36	0.43
1:QA:558:G:H2'	1:QA:559:A:H2	1.84	0.43
1:QA:801:U:H2'	1:QA:802:A:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1084:G:H5'	1:QA:1102:A:OP2	2.18	0.43
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.25	0.43
2:QB:37:ASN:C	2:QB:39:ILE:N	2.73	0.43
4:QD:71:SER:O	4:QD:72:GLU:C	2.60	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.17	0.43
9:QI:41:VAL:HG12	9:QI:41:VAL:O	2.18	0.43
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.19	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
22:RA:646:A:H2'	22:RA:647:G:O4'	2.19	0.43
22:RA:825:C:H2'	22:RA:826:U:O4'	2.19	0.43
22:RA:957:A:N1	22:RA:2459:A:C8	2.86	0.43
22:RA:1086:A:H3'	22:RA:1086:A:N3	2.34	0.43
22:RA:1791:A:H61	22:RA:1828:G:HO2'	1.64	0.43
22:RA:2467:C:H4'	33:RQ:123:HIS:CG	2.53	0.43
24:RD:177:LEU:O	24:RD:179:SER:N	2.51	0.43
25:RE:16:ARG:O	25:RE:18:ASP:O	2.36	0.43
25:RE:16:ARG:C	25:RE:17:ASP:CG	2.86	0.43
25:RE:120:TRP:CE3	25:RE:155:LYS:HD3	2.53	0.43
26:RF:62:ARG:NH1	26:RF:62:ARG:CB	2.82	0.43
26:RF:101:LEU:HD12	26:RF:102:PRO:N	2.33	0.43
26:RF:198:ALA:C	26:RF:200:GLU:H	2.25	0.43
27:RG:59:GLU:O	27:RG:62:LEU:HB3	2.18	0.43
30:RN:1:MET:HG3	30:RN:1:MET:O	2.19	0.43
32:RP:70:GLN:N	32:RP:70:GLN:OE1	2.51	0.43
37:RU:88:ILE:HG22	37:RU:90:VAL:CG2	2.44	0.43
39:RW:31:GLU:O	39:RW:32:ALA:C	2.60	0.43
1:XA:719:C:C2	18:XR:50:ILE:HD13	2.53	0.43
1:XA:947:G:C6	1:XA:948:C:C4	3.07	0.43
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.54	0.43
1:XA:1506:U:N3	1:XA:1522:U:OP1	2.36	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
2:XB:204:ASN:ND2	2:XB:204:ASN:C	2.76	0.43
3:XC:6:HIS:C	3:XC:8:ILE:N	2.76	0.43
4:XD:60:GLU:HG2	4:XD:202:LEU:HD12	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:89:THR:O	4:XD:90:GLY:C	2.60	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
8:XH:45:ILE:C	8:XH:47:GLY:N	2.76	0.43
13:XM:107:ALA:O	13:XM:108:ARG:C	2.62	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
22:YA:298:G:P	41:YY:85:VAL:HG22	2.58	0.43
22:YA:606:U:H4'	22:YA:658:C:H4'	2.01	0.43
22:YA:814:C:H41	32:YP:25:SER:HA	1.83	0.43
22:YA:856:C:H1'	43:Y0:27:GLU:HB3	2.00	0.43
22:YA:1674:G:H1'	22:YA:1676:A:N6	2.33	0.43
22:YA:1786:A:C8	22:YA:1938:A:C6	3.06	0.43
22:YA:1944:U:O2	22:YA:1955:U:H5"	2.19	0.43
23:YB:80:U:O2'	23:YB:81:G:H5'	2.18	0.43
25:YE:51:PHE:O	25:YE:74:PRO:CB	2.67	0.43
25:YE:155:LYS:O	25:YE:156:MET:HG3	2.19	0.43
27:YG:114:ILE:O	27:YG:116:ASP:N	2.51	0.43
27:YG:136:ARG:O	27:YG:154:GLY:CA	2.62	0.43
29:YI:93:THR:HG22	29:YI:119:PRO:HB3	1.99	0.43
30:YN:131:GLN:HE21	30:YN:131:GLN:HB3	1.57	0.43
34:YR:74:LYS:O	34:YR:76:VAL:N	2.45	0.43
35:YS:110:LEU:HD23	35:YS:112:PHE:CE2	2.54	0.43
36:YT:19:LEU:HA	36:YT:20:PRO:HD3	1.88	0.43
37:YU:99:ALA:HA	37:YU:106:PHE:HB2	2.01	0.43
43:Y0:27:GLU:HB2	43:Y0:69:PHE:CD1	2.53	0.43
44:Y1:44:PRO:O	44:Y1:46:LEU:N	2.51	0.43
44:Y1:94:LEU:O	44:Y1:95:LEU:HB2	2.18	0.43
47:Y4:15:ILE:N	47:Y4:15:ILE:CD1	2.78	0.43
47:Y4:26:SER:C	47:Y4:27:THR:O	2.58	0.43
48:Y5:15:ARG:HA	48:Y5:18:ALA:HB3	1.99	0.43
53:QV:53:G:HO2'	53:QV:54:U:H6	1.64	0.43
1:QA:160:A:H1'	1:QA:344:A:N7	2.33	0.43
1:QA:555:C:H2'	1:QA:556:C:C6	2.53	0.43
1:QA:1502:A:H2	1:QA:1505:G:N1	2.14	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
6:QF:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
7:QG:23:VAL:O	7:QG:24:THR:C	2.62	0.43
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.43
10:QJ:51:ARG:HG2	10:QJ:51:ARG:NH1	2.33	0.43
11:QK:62:GLN:O	11:QK:64:ALA:N	2.52	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
22:RA:1222:C:C2	22:RA:1229(A):G:C2	3.07	0.43
22:RA:1728:G:H5'	22:RA:1729:A:OP2	2.18	0.43
22:RA:2166:G:N2	22:RA:2168:G:OP1	2.52	0.43
22:RA:2373:G:H2'	22:RA:2374:C:C6	2.54	0.43
22:RA:2657:A:H1'	22:RA:2665:A:N6	2.33	0.43
25:RE:31:CYS:HB3	25:RE:49:LEU:HG	2.01	0.43
26:RF:144:LYS:C	26:RF:146:ALA:N	2.75	0.43
30:RN:61:ARG:HA	30:RN:61:ARG:NE	2.33	0.43
30:RN:63:THR:HG23	30:RN:66:LYS:HE3	2.00	0.43
31:RO:51:ALA:O	31:RO:53:LYS:HE3	2.19	0.43
34:RR:54:LEU:O	34:RR:62:ALA:HB1	2.19	0.43
35:RS:110:LEU:HD23	35:RS:112:PHE:CE2	2.54	0.43
37:RU:64:ARG:CG	37:RU:64:ARG:NH2	2.70	0.43
41:RY:26:LYS:O	41:RY:27:VAL:C	2.62	0.43
42:RZ:1:MET:HG2	42:RZ:2:GLU:H	1.83	0.43
1:XA:191(D):U:H2'	1:XA:191(E):G:C8	2.53	0.43
1:XA:698:G:C6	1:XA:699:C:C4	3.06	0.43
1:XA:859:A:H2'	1:XA:860:A:H8	1.84	0.43
1:XA:1059:C:O2	10:XJ:53:PRO:HG3	2.18	0.43
1:XA:1187:G:P	9:XI:113:LYS:NZ	2.92	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
7:XG:49:ILE:C	7:XG:51:GLN:H	2.26	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
7:XG:151:TYR:CE1	11:XK:54:ARG:HD3	2.53	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
11:XK:88:GLY:O	11:XK:89:ALA:C	2.61	0.43
12:XL:6:THR:H	12:XL:9:GLN:NE2	1.97	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.43
22:YA:564:C:H2'	22:YA:565:C:O4'	2.18	0.43
22:YA:604:G:C6	22:YA:625:G:C2	3.06	0.43
22:YA:943:U:OP1	32:YP:36:LYS:HG2	2.19	0.43
22:YA:1266:G:N7	39:YW:15:ARG:NH1	2.66	0.43
22:YA:1292:U:H2'	22:YA:1293:C:C6	2.54	0.43
22:YA:1313:U:H4'	22:YA:1332:G:H4'	1.99	0.43
22:YA:2581:G:H2'	22:YA:2581:G:N3	2.34	0.43
23:YB:112:G:H2'	23:YB:113:C:C6	2.54	0.43
24:YD:43:ARG:CZ	24:YD:49:ILE:HG21	2.49	0.43
25:YE:143:ASN:N	25:YE:143:ASN:ND2	2.65	0.43
28:YH:27:LYS:HD2	28:YH:27:LYS:C	2.44	0.43
28:YH:59:ARG:CG	28:YH:59:ARG:NH1	2.79	0.43
28:YH:92:ILE:CD1	28:YH:160:LYS:HD3	2.48	0.43
30:YN:30:ILE:HG22	30:YN:34:LEU:CD2	2.48	0.43
31:YO:51:ALA:O	31:YO:53:LYS:HE3	2.19	0.43
36:YT:89:VAL:O	36:YT:90:GLN:HB2	2.19	0.43
36:YT:118:ARG:O	36:YT:119:LYS:C	2.60	0.43
41:YY:6:HIS:ND1	41:YY:6:HIS:N	2.66	0.43
41:YY:84:ARG:HD3	41:YY:86:ARG:HH11	1.83	0.43
44:Y1:29:GLY:O	44:Y1:31:GLY:N	2.49	0.43
50:Y7:17:GLY:O	50:Y7:20:ALA:HB3	2.19	0.43
53:QV:54:U:C4	53:QV:55:U:C4	3.06	0.43
1:QA:110:C:O2'	16:QP:25:ARG:O	2.35	0.43
1:QA:347:G:OP2	36:RT:68:TYR:OH	2.35	0.43
1:QA:369:C:OP2	1:QA:388:G:N1	2.51	0.43
1:QA:833:U:H2'	1:QA:834:C:C6	2.54	0.43
1:QA:872:A:O2'	1:QA:873:A:H3'	2.17	0.43
1:QA:1186:G:O3'	9:QI:113:LYS:NZ	2.44	0.43
1:QA:1225:A:H2'	1:QA:1225:A:N3	2.34	0.43
1:QA:1298:C:H4'	1:QA:1299:A:C8	2.54	0.43
1:QA:1305:G:N2	1:QA:1332:A:OP2	2.52	0.43
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.18	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	2.28	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
13:QM:3:ARG:C	13:QM:9:ILE:HG21	2.43	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.18	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
22:RA:103:A:O5'	22:RA:103:A:H8	2.01	0.43
22:RA:262:A:H2'	22:RA:263:C:O4'	2.19	0.43
22:RA:391:G:O2'	22:RA:410:G:OP1	2.28	0.43
22:RA:558:G:OP1	30:RN:111:PRO:HD2	2.18	0.43
22:RA:646:A:H5'	22:RA:646:A:N3	2.34	0.43
22:RA:1279:G:H4'	34:RR:31:HIS:HD2	1.84	0.43
22:RA:1688:U:O2	22:RA:1700:A:H5"	2.18	0.43
22:RA:1803:A:N1	22:RA:1822:G:O2'	2.45	0.43
22:RA:1959:G:H2'	22:RA:1960:A:O4'	2.19	0.43
22:RA:2183:C:H2'	22:RA:2184:G:C8	2.53	0.43
22:RA:2712:U:H1'	22:RA:2712(A):A:C8	2.53	0.43
24:RD:69:ARG:NH2	24:RD:130:ALA:HB2	2.20	0.43
25:RE:51:PHE:O	25:RE:74:PRO:CB	2.67	0.43
28:RH:6:ARG:CG	28:RH:7:LEU:N	2.81	0.43
28:RH:119:GLU:CD	28:RH:120:GLY:N	2.77	0.43
32:RP:12:ALA:C	32:RP:14:LYS:N	2.73	0.43
32:RP:120:ALA:HB1	32:RP:138:LEU:CB	2.48	0.43
32:RP:135:LEU:HD13	32:RP:139:LYS:HE3	2.01	0.43
34:RR:85:PRO:C	34:RR:87:TYR:N	2.73	0.43
36:RT:107:ASP:OD2	36:RT:109:GLU:HB2	2.18	0.43
42:RZ:76:LEU:HA	42:RZ:83:PRO:HA	2.01	0.43
44:R1:44:PRO:O	44:R1:46:LEU:N	2.51	0.43
47:R4:68:ARG:O	47:R4:69:LYS:HB2	2.17	0.43
1:XA:891:U:C2	1:XA:892:A:C8	3.07	0.43
1:XA:1129:C:H4'	1:XA:1130:A:H8	1.84	0.43
1:XA:1451:A:N3	1:XA:1451:A:H2'	2.32	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
4:XD:71:SER:O	4:XD:72:GLU:C	2.60	0.43
4:XD:163:GLU:OE2	4:XD:163:GLU:HA	2.19	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
8:XH:29:SER:O	8:XH:30:ARG:C	2.62	0.43
9:XI:127:LYS:NZ	53:XV:34:C:OP2	2.50	0.43
12:XL:76:ASN:O	12:XL:76:ASN:CG	2.62	0.43
13:XM:65:LYS:HB3	47:Y4:50:VAL:HG21	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
20:XT:32:ALA:O	20:XT:33:ILE:C	2.60	0.43
22:YA:214:G:H1'	22:YA:216:A:O2'	2.19	0.43
22:YA:238:C:H2'	22:YA:239:U:O4'	2.19	0.43
22:YA:363(B):G:H2'	22:YA:363(C):G:C8	2.50	0.43
22:YA:448:U:H1'	26:YF:84:VAL:CG2	2.49	0.43
22:YA:529:A:H8	22:YA:530:G:C6	2.37	0.43
22:YA:577:G:O2'	22:YA:1254:A:OP1	2.37	0.43
22:YA:869:G:H1	22:YA:908:C:H42	1.67	0.43
22:YA:1503:U:H2'	22:YA:1504:C:H6	1.84	0.43
22:YA:1695:G:H1'	24:YD:8:PRO:O	2.18	0.43
22:YA:1959:G:C6	22:YA:1960:A:C5	3.07	0.43
22:YA:2281:C:O2'	22:YA:2282:G:H5'	2.19	0.43
22:YA:2415:G:H4'	32:YP:66:GLY:C	2.43	0.43
25:YE:13:ARG:HH11	25:YE:13:ARG:HB2	1.81	0.43
25:YE:16:ARG:O	25:YE:18:ASP:O	2.36	0.43
27:YG:131:TYR:HE2	27:YG:133:LEU:HD22	1.84	0.43
27:YG:139:LEU:C	27:YG:139:LEU:HD12	2.43	0.43
27:YG:145:THR:O	27:YG:146:TYR:HB3	2.19	0.43
29:YI:4:ILE:HG22	29:YI:16:GLY:HA2	2.00	0.43
34:YR:54:LEU:O	34:YR:62:ALA:HB1	2.19	0.43
36:YT:64:ARG:HH11	36:YT:64:ARG:HG2	1.84	0.43
37:YU:43:GLY:HA3	38:YV:73:SER:OG	2.19	0.43
41:YY:26:LYS:O	41:YY:27:VAL:C	2.62	0.43
45:Y2:62:THR:O	45:Y2:65:ASN:HB2	2.18	0.43
47:Y4:43:TYR:O	47:Y4:46:GLN:HA	2.19	0.43
48:Y5:40:LYS:HE2	48:Y5:47:PRO:CG	2.49	0.43
51:Y8:28:GLY:O	51:Y8:29:LYS:C	2.61	0.43
1:QA:335:C:H2'	1:QA:336:C:C6	2.54	0.43
1:QA:720:C:H5"	18:QR:52:PRO:HA	2.00	0.43
1:QA:1036:G:C8	1:QA:1037:C:C4	3.07	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
8:QH:21:LYS:O	8:QH:65:TYR:OH	2.37	0.43
8:QH:45:ILE:C	8:QH:47:GLY:N	2.76	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:77:ASN:HA	47:R4:71:ARG:HH22	1.79	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43
22:RA:270(T):G:P	44:R1:97:LEU:HD13	2.57	0.43
22:RA:298:G:OP2	41:RY:85:VAL:HG22	2.18	0.43
22:RA:623:G:H2'	22:RA:624:C:C6	2.53	0.43
22:RA:890:A:O2'	22:RA:892:G:H8	2.01	0.43
22:RA:1270:C:H5"	22:RA:1271:G:C5'	2.48	0.43
22:RA:1287:A:N7	34:RR:107:ASP:HB2	2.33	0.43
22:RA:1468:C:H2'	22:RA:1469:A:C8	2.53	0.43
22:RA:2355:C:H5"	22:RA:2356:C:OP2	2.19	0.43
22:RA:2370:G:H2'	22:RA:2371:G:C8	2.54	0.43
24:RD:76:PRO:O	24:RD:98:VAL:CG2	2.65	0.43
26:RF:176:LEU:HD11	26:RF:180:GLY:O	2.19	0.43
27:RG:51:ARG:HB3	27:RG:51:ARG:NH1	2.33	0.43
28:RH:35:VAL:CG2	28:RH:75:ALA:HB2	2.48	0.43
29:RI:63:ALA:O	29:RI:66:GLU:HG2	2.19	0.43
31:RO:112:MET:O	31:RO:113:LYS:C	2.60	0.43
31:RO:116:SER:C	31:RO:118:ALA:N	2.76	0.43
32:RP:52:GLU:OE2	32:RP:58:THR:N	2.52	0.43
34:RR:10:LEU:O	34:RR:12:ARG:N	2.52	0.43
35:RS:18:ILE:O	35:RS:19:LYS:C	2.62	0.43
35:RS:52:SER:HB2	35:RS:55:ALA:CB	2.49	0.43
37:RU:95:LEU:HD13	38:RV:4:ILE:HD12	1.98	0.43
39:RW:1:MET:CB	39:RW:64:MET:HE3	2.48	0.43
39:RW:111:HIS:CG	39:RW:112:GLY:H	2.37	0.43
42:RZ:74:VAL:HG13	42:RZ:86:VAL:HG22	2.00	0.43
42:RZ:104:PHE:HB3	42:RZ:141:VAL:CG1	2.49	0.43
47:R4:48:ARG:NH1	47:R4:51:ASP:HA	2.34	0.43
50:R7:19:ARG:HG2	50:R7:19:ARG:NH1	2.33	0.43
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.37	0.43
1:XA:501:C:H2'	1:XA:502:G:C8	2.54	0.43
1:XA:807:A:H2'	1:XA:808:C:C6	2.54	0.43
1:XA:825:G:H2'	1:XA:826:C:O4'	2.18	0.43
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.81	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
9:XI:17:VAL:HG21	9:XI:80:GLY:C	2.44	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	0.43
10:XJ:8:LEU:C	10:XJ:16:LEU:HD21	2.43	0.43
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:70:ARG:HG3	10:XJ:70:ARG:HH11	1.83	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
22:YA:207:A:H2'	22:YA:208:C:O4'	2.19	0.43
22:YA:1085:A:HO2'	22:YA:1086:A:P	2.39	0.43
22:YA:1136:G:H2'	22:YA:1137:G:C8	2.54	0.43
22:YA:1142(A):A:H4'	30:YN:25:ARG:HH22	1.84	0.43
22:YA:1164:G:H2'	22:YA:1165:U:O4'	2.19	0.43
22:YA:1194:A:H8	22:YA:1194:A:OP2	2.02	0.43
23:YB:44:G:H5"	23:YB:45:A:OP1	2.19	0.43
23:YB:99:A:C4	23:YB:100:G:C8	3.06	0.43
23:YB:103:U:O3'	42:YZ:72:ARG:HD3	2.18	0.43
24:YD:11:PRO:O	24:YD:12:SER:OG	2.30	0.43
24:YD:17:THR:HG22	24:YD:204:ILE:HA	1.98	0.43
24:YD:181:GLU:HA	24:YD:272:ALA:CB	2.38	0.43
25:YE:52:LEU:O	25:YE:74:PRO:HA	2.18	0.43
27:YG:59:GLU:O	27:YG:62:LEU:HB3	2.18	0.43
30:YN:26:LEU:HG	30:YN:30:ILE:CD1	2.49	0.43
32:YP:144:GLU:N	32:YP:144:GLU:CD	2.75	0.43
34:YR:51:LEU:HD13	34:YR:66:VAL:HG22	2.01	0.43
35:YS:30:ARG:NH2	35:YS:92:TYR:HD1	2.17	0.43
41:YY:47:LYS:O	41:YY:49:VAL:N	2.48	0.43
43:Y0:11:ARG:H	43:Y0:11:ARG:HG2	1.64	0.43
50:Y7:5:TRP:CD1	50:Y7:7:PRO:HG3	2.53	0.43
53:XV:53:G:HO2'	53:XV:54:U:H6	1.65	0.43
1:QA:601:C:H2'	1:QA:602:A:H8	1.84	0.43
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.18	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
4:QD:89:THR:O	4:QD:90:GLY:C	2.60	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.43
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.22	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.43
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
19:QS:30:LEU:C	19:QS:30:LEU:HD22	2.44	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:44:MET:HE2	19:QS:49:ILE:HD11	2.00	0.43
22:RA:556:G:C6	22:RA:557:U:C4	3.07	0.43
22:RA:695:G:H4'	22:RA:1380:G:H5'	2.01	0.43
22:RA:754:C:H2'	22:RA:755:C:H6	1.84	0.43
22:RA:1077:A:H5'	22:RA:1078:U:H5"	2.00	0.43
22:RA:1526:G:C6	22:RA:1527:G:C2	3.07	0.43
22:RA:1540:G:C6	22:RA:1541:U:C4	3.07	0.43
22:RA:2015:A:C8	22:RA:2016:U:C6	3.07	0.43
22:RA:2075:U:OP2	22:RA:2238:G:O2'	2.35	0.43
22:RA:2228:G:OP1	24:RD:261:LYS:HE2	2.18	0.43
22:RA:2337:G:C2	22:RA:2338:G:C8	3.07	0.43
22:RA:2477:C:H41	52:R9:10:ILE:HG23	1.83	0.43
23:RB:38:C:N4	23:RB:44:G:H1	2.14	0.43
23:RB:42:C:H2'	23:RB:43:C:O4'	2.19	0.43
24:RD:44:ASN:HB3	24:RD:49:ILE:CG2	2.47	0.43
24:RD:44:ASN:CB	24:RD:49:ILE:HG22	2.46	0.43
25:RE:188:VAL:HA	25:RE:189:PRO:HD2	1.79	0.43
26:RF:65:TRP:HZ3	26:RF:73:ALA:C	2.26	0.43
27:RG:25:TYR:CZ	27:RG:32:PRO:HD3	2.54	0.43
30:RN:7:LYS:HD2	30:RN:7:LYS:N	2.29	0.43
31:RO:17:ARG:HH11	31:RO:17:ARG:HG2	1.84	0.43
31:RO:61:VAL:O	31:RO:61:VAL:HG13	2.18	0.43
31:RO:112:MET:HE2	31:RO:112:MET:N	2.34	0.43
35:RS:99:LYS:C	35:RS:101:LEU:H	2.26	0.43
36:RT:64:ARG:HH11	36:RT:64:ARG:HG2	1.84	0.43
36:RT:80:SER:HA	36:RT:81:PRO:HD3	1.73	0.43
38:RV:36:PRO:HA	38:RV:56:SER:HG	1.84	0.43
47:R4:43:TYR:O	47:R4:46:GLN:HA	2.19	0.43
47:R4:59:PHE:CE1	47:R4:70:GLY:N	2.87	0.43
49:R6:50:ARG:HH11	49:R6:50:ARG:HG2	1.84	0.43
50:R7:3:ARG:HA	50:R7:3:ARG:HD3	1.88	0.43
50:R7:47:ARG:HB2	50:R7:48:LYS:H	1.64	0.43
51:R8:28:GLY:O	51:R8:29:LYS:O	2.36	0.43
1:XA:234:C:H2'	1:XA:235:C:H6	1.82	0.43
1:XA:678:U:C4	1:XA:679:C:C4	3.07	0.43
1:XA:827:U:C5	1:XA:870:U:C2	3.06	0.43
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
11:XK:72:ALA:C	11:XK:74:ALA:H	2.27	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
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
22:YA:106:C:H2'	22:YA:107:C:H6	1.84	0.43
22:YA:320:A:H5"	22:YA:321:G:OP1	2.18	0.43
22:YA:349:G:C5	22:YA:350:U:C5	3.06	0.43
22:YA:389:G:H22	32:YP:72:PRO:CD	2.30	0.43
22:YA:468:G:N7	50:Y7:39:ARG:NH2	2.64	0.43
22:YA:709:U:H2'	22:YA:710:G:C8	2.54	0.43
22:YA:1102:C:H2'	22:YA:1103:A:H5"	2.00	0.43
22:YA:1319:G:C6	22:YA:1320:C:N4	2.87	0.43
22:YA:1469:A:C5	22:YA:1470:G:N7	2.87	0.43
22:YA:1857:G:O2'	22:YA:1885:A:N6	2.51	0.43
22:YA:2451:A:C2'	53:XV:76:A:O2'	2.66	0.43
22:YA:2584:U:H5"	56:Z8:76:PPU:H92	2.00	0.43
24:YD:117:VAL:HG21	24:YD:128:GLY:C	2.44	0.43
25:YE:23:VAL:HG12	25:YE:184:VAL:O	2.19	0.43
27:YG:31:VAL:O	27:YG:31:VAL:HG13	2.18	0.43
28:YH:119:GLU:CD	28:YH:120:GLY:N	2.77	0.43
28:YH:120:GLY:O	28:YH:136:ILE:HD12	2.19	0.43
29:YI:88:ILE:HB	29:YI:121:LYS:HG3	1.99	0.43
30:YN:57:ALA:O	30:YN:124:ALA:HA	2.18	0.43
33:YQ:27:VAL:HG13	33:YQ:28:ALA:N	2.32	0.43
33:YQ:57:HIS:ND1	33:YQ:58:PHE:N	2.66	0.43
33:YQ:81:VAL:CG2	43:Y0:7:LEU:HD21	2.45	0.43
36:YT:89:VAL:O	36:YT:90:GLN:CB	2.67	0.43
37:YU:53:ARG:C	37:YU:55:ARG:N	2.77	0.43
46:Y3:50:VAL:HB	46:Y3:53:LEU:HD12	2.00	0.43
1:QA:255:G:C6	1:QA:256:U:C4	3.07	0.43
1:QA:301:G:H2'	1:QA:302:G:H8	1.84	0.43
1:QA:377:G:P	16:QP:5:ARG:HH11	2.39	0.43
1:QA:539:A:OP2	12:QL:115:LYS:HE3	2.19	0.43
1:QA:600:C:H2'	1:QA:601:C:H6	1.84	0.43
1:QA:663:A:H5'	18:QR:61:LYS:NZ	2.34	0.43
1:QA:1043:C:H2'	1:QA:1044:A:H8	1.84	0.43
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.43
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.43
5:QE:148:VAL:HG21	8:QH:107:LEU:HD13	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.43
7:QG:6:ARG:O	7:QG:7:ALA:C	2.62	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
9:QI:17:VAL:HG21	9:QI:80:GLY:C	2.44	0.43
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.47	0.43
13:QM:77:ASN:O	13:QM:78:ILE:C	2.62	0.43
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.43
22:RA:137:C:N4	22:RA:137(A):G:O6	2.52	0.43
22:RA:141:A:H1'	22:RA:1408:C:H1'	2.01	0.43
22:RA:222:A:H3'	22:RA:421:U:H5"	2.01	0.43
22:RA:247:G:O2'	22:RA:250:G:N7	2.47	0.43
22:RA:588:U:H1'	26:RF:90:PHE:CG	2.54	0.43
22:RA:1162:G:H1'	38:RV:23:GLU:OE2	2.18	0.43
22:RA:1416:G:H2'	22:RA:1417:C:C6	2.54	0.43
22:RA:1429:G:N3	22:RA:1568:G:C2	2.87	0.43
22:RA:2277:G:C6	22:RA:2278:A:N7	2.87	0.43
22:RA:2712:U:O2'	22:RA:2712(A):A:H8	2.02	0.43
23:RB:33:G:P	27:RG:2:PRO:HG3	2.59	0.43
25:RE:48:GLN:HE21	25:RE:48:GLN:HB3	1.55	0.43
26:RF:20:LEU:HD12	26:RF:21:ALA:N	2.26	0.43
27:RG:4:ASP:O	27:RG:5:VAL:HB	2.19	0.43
32:RP:19:VAL:HG22	32:RP:21:ARG:H	1.83	0.43
32:RP:112:LEU:CD1	32:RP:114:ILE:HG23	2.47	0.43
36:RT:6:LEU:HD12	36:RT:9:LEU:HD12	2.01	0.43
37:RU:53:ARG:C	37:RU:55:ARG:N	2.77	0.43
37:RU:90:VAL:C	37:RU:92:ARG:N	2.76	0.43
38:RV:27:ALA:O	38:RV:28:GLU:C	2.62	0.43
38:RV:72:VAL:HG13	38:RV:72:VAL:O	2.19	0.43
39:RW:19:LEU:O	39:RW:22:ASP:HB2	2.19	0.43
39:RW:28:SER:O	39:RW:30:GLU:N	2.50	0.43
44:R1:13:ILE:CG1	44:R1:42:GLN:HB2	2.49	0.43
44:R1:29:GLY:C	44:R1:31:GLY:H	2.26	0.43
44:R1:60:PHE:HE2	44:R1:91:LYS:NZ	2.16	0.43
45:R2:62:THR:O	45:R2:65:ASN:HB2	2.19	0.43
50:R7:17:GLY:O	50:R7:20:ALA:HB3	2.19	0.43
52:R9:1:MET:HE2	52:R9:10:ILE:CD1	2.49	0.43
1:XA:310:G:H4'	16:XP:31:LYS:HD3	2.01	0.43
1:XA:693:G:C6	1:XA:694:A:C6	3.07	0.43
1:XA:1053:G:H2'	1:XA:1199:U:C5	2.54	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
4:XD:72:GLU:O	4:XD:73:ARG:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.43
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	0.43
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	0.43
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.43
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.43
22:YA:422:A:C6	22:YA:423:A:C5	3.06	0.43
22:YA:1006:C:O2	30:YN:106:MET:HG2	2.18	0.43
22:YA:1136:G:H2'	22:YA:1137:G:H8	1.84	0.43
22:YA:1239:G:H2'	22:YA:1240:U:O4'	2.19	0.43
22:YA:1352:U:O2	22:YA:1570:A:H2	2.02	0.43
22:YA:1364:G:OP1	44:Y1:3:LYS:HG3	2.19	0.43
22:YA:1508:A:O2'	22:YA:1509:C:O4'	2.34	0.43
22:YA:1770:G:C5	22:YA:1771:C:C5	3.07	0.43
22:YA:2103:C:H2'	22:YA:2104:G:H8	1.84	0.43
22:YA:2114:A:N6	22:YA:2119:A:H62	2.17	0.43
22:YA:2335:A:OP2	35:YS:13:ARG:HB2	2.19	0.43
22:YA:2723:C:OP1	34:YR:3:HIS:CD2	2.70	0.43
22:YA:2865:U:C4	22:YA:2866:U:C4	3.07	0.43
26:YF:63:LYS:CE	26:YF:67:GLN:HB2	2.49	0.43
27:YG:7:LEU:CD2	27:YG:176:LEU:HD22	2.44	0.43
27:YG:25:TYR:CZ	27:YG:32:PRO:HD3	2.54	0.43
27:YG:139:LEU:HA	27:YG:144:ILE:HG21	2.00	0.43
28:YH:58:GLU:O	28:YH:59:ARG:C	2.61	0.43
29:YI:5:LEU:HD11	29:YI:19:VAL:HG12	2.00	0.43
29:YI:98:ALA:HB2	29:YI:111:PRO:HB3	2.01	0.43
30:YN:62:VAL:HG12	30:YN:66:LYS:HB2	2.01	0.43
31:YO:78:ARG:HH21	36:YT:103:ARG:HH22	1.64	0.43
32:YP:101:VAL:HG13	32:YP:102:ARG:N	2.33	0.43
34:YR:81:ASP:N	34:YR:81:ASP:OD2	2.51	0.43
43:Y0:11:ARG:NH2	53:XV:63:G:H5'	2.34	0.43
44:Y1:53:VAL:CG1	44:Y1:54:ALA:N	2.81	0.43
46:Y3:27:GLY:C	46:Y3:28:LEU:HD23	2.43	0.43
47:Y4:45:GLY:O	47:Y4:46:GLN:C	2.62	0.43
1:QA:129(A):G:C2	1:QA:188:U:O2'	2.72	0.42
1:QA:184:G:H2'	1:QA:185:A:C8	2.52	0.42
1:QA:186:C:H4'	20:QT:82:SER:HB3	2.00	0.42
1:QA:782:A:O3'	1:QA:1515:C:H4'	2.19	0.42
1:QA:976:G:N2	1:QA:1362:C:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1324:A:H2'	1:QA:1325:C:O4'	2.19	0.42
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.19	0.42
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.19	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.42
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.42
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.42
5:QE:154:GLY:O	5:QE:155:GLU:C	2.61	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
6:QF:69:GLU:C	6:QF:71:ARG:N	2.77	0.42
12:QL:76:ASN:O	12:QL:76:ASN:CG	2.61	0.42
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.02	0.42
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.84	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
20:QT:81:LYS:C	20:QT:83:ARG:H	2.27	0.42
22:RA:860:U:H5	22:RA:917:A:N1	2.17	0.42
22:RA:1026:U:H1'	22:RA:1027:A:C5'	2.48	0.42
22:RA:1636:C:H2'	22:RA:1637:A:C8	2.54	0.42
22:RA:1655:A:O3'	25:RE:115:GLY:HA3	2.18	0.42
22:RA:1916:A:H2'	22:RA:1917:U:O4'	2.18	0.42
22:RA:2346:A:H5"	22:RA:2383:G:H1'	2.01	0.42
22:RA:2372:G:H4'	49:R6:46:HIS:CD2	2.53	0.42
22:RA:2602:A:H2	56:Z6:76:PPU:H8	1.84	0.42
23:RB:104:A:OP1	42:RZ:72:ARG:NE	2.52	0.42
24:RD:33:LEU:HB3	24:RD:34:VAL:H	1.49	0.42
24:RD:71:ASP:CB	24:RD:103:ARG:HH22	2.32	0.42
24:RD:117:VAL:HG21	24:RD:128:GLY:C	2.44	0.42
25:RE:23:VAL:HG12	25:RE:184:VAL:O	2.19	0.42
25:RE:25:VAL:HG21	36:RT:8:LYS:HG3	2.00	0.42
26:RF:64:ILE:HG23	26:RF:65:TRP:CD1	2.54	0.42
26:RF:135:LYS:O	26:RF:136:THR:C	2.61	0.42
27:RG:31:VAL:O	27:RG:31:VAL:HG13	2.18	0.42
28:RH:16:SER:OG	28:RH:17:VAL:N	2.50	0.42
29:RI:2:LYS:HA	29:RI:20:ASP:HA	2.01	0.42
29:RI:79:ILE:HD13	29:RI:79:ILE:HA	1.88	0.42
29:RI:128:LEU:HA	29:RI:128:LEU:HD13	1.78	0.42
31:RO:31:LYS:O	31:RO:32:TYR:HD2	2.02	0.42
32:RP:49:ARG:HG2	32:RP:49:ARG:HH11	1.84	0.42
34:RR:51:LEU:HD13	34:RR:66:VAL:HG22	2.01	0.42
35:RS:110:LEU:HA	35:RS:112:PHE:CZ	2.53	0.42
36:RT:50:ILE:HD11	36:RT:102:ILE:HG12	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RU:27:LEU:O	37:RU:28:ARG:C	2.61	0.42
41:RY:94:LYS:HE3	41:RY:101:LYS:HZ1	1.80	0.42
48:R5:3:LYS:HA	48:R5:3:LYS:CE	2.36	0.42
1:XA:380:G:N2	1:XA:383:A:OP2	2.52	0.42
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.42
3:XC:125:GLU:CD	3:XC:189:ALA:HA	2.44	0.42
4:XD:90:GLY:HA3	4:XD:204:ILE:HD11	2.01	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.19	0.42
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.19	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.47	0.42
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.42
22:YA:260:G:C6	22:YA:261:G:N7	2.86	0.42
22:YA:582:G:H2'	22:YA:583:G:H8	1.84	0.42
22:YA:770:G:N3	22:YA:1354:A:H2	2.17	0.42
22:YA:772:C:H2'	22:YA:773:U:H6	1.83	0.42
22:YA:842:G:N2	22:YA:937:U:C2	2.86	0.42
22:YA:910:A:C6	22:YA:911:A:C6	3.07	0.42
22:YA:1027:A:C6	22:YA:1126:A:C4	3.06	0.42
22:YA:1165:U:H2'	22:YA:1166:C:C6	2.53	0.42
22:YA:1234:U:H2'	22:YA:1235:G:O4'	2.19	0.42
22:YA:1257:C:O2'	26:YF:84:VAL:HG12	2.20	0.42
22:YA:1309:G:H4'	50:Y7:7:PRO:HB2	1.99	0.42
22:YA:1382:G:H4'	22:YA:1573:G:N2	2.34	0.42
22:YA:1465:G:C4	22:YA:1466:G:C8	3.07	0.42
22:YA:1928:A:O2'	22:YA:1929:G:H5'	2.19	0.42
22:YA:2832:U:H4'	22:YA:2833:G:C5'	2.49	0.42
23:YB:55:U:O2'	23:YB:57:A:N7	2.44	0.42
25:YE:179:GLU:CB	25:YE:181:LEU:HD23	2.24	0.42
26:YF:45:ARG:HH11	26:YF:45:ARG:HG2	1.82	0.42
27:YG:16:ARG:NE	27:YG:31:VAL:HG11	2.34	0.42
27:YG:53:LEU:C	27:YG:55:LYS:H	2.27	0.42
28:YH:125:VAL:HG12	28:YH:126:PRO:CD	2.49	0.42
28:YH:125:VAL:CG1	28:YH:126:PRO:CG	2.94	0.42
29:YI:133:HIS:HB2	29:YI:134:PRO:CD	2.48	0.42
32:YP:52:GLU:OE2	32:YP:58:THR:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YR:94:TYR:N	34:YR:94:TYR:CD2	2.87	0.42
38:YV:38:LEU:CD2	38:YV:39:LEU:N	2.82	0.42
41:YY:97:ARG:HH21	41:YY:98:VAL:CG2	2.32	0.42
42:YZ:9:TYR:CE2	42:YZ:61:LEU:HD13	2.54	0.42
43:Y0:72:ARG:HB3	43:Y0:75:LEU:HB2	2.00	0.42
49:Y6:50:ARG:HH11	49:Y6:50:ARG:HG2	1.84	0.42
53:QV:43:A:H2'	53:QV:44:A:C8	2.54	0.42
55:XY:36:G:C2	55:XY:37:1MG:C4	3.07	0.42
1:QA:284:G:H2'	1:QA:285:G:H8	1.84	0.42
1:QA:408:A:H5'	4:QD:116:GLN:HB2	2.01	0.42
1:QA:736:C:OP1	18:QR:68:LYS:HE3	2.20	0.42
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.20	0.42
1:QA:963:G:H21	10:QJ:55:LYS:HD3	1.83	0.42
1:QA:1305:G:HO2'	1:QA:1306:A:H8	1.66	0.42
1:QA:1417:G:C6	1:QA:1482:G:C6	3.07	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.42
14:QN:24:CYS:SG	14:QN:39:LEU:C	3.02	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
16:QP:20:VAL:CG2	16:QP:21:VAL:N	2.81	0.42
18:QR:40:LEU:C	18:QR:42:ARG:N	2.77	0.42
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.42
22:RA:7:G:H2'	22:RA:8:A:O4'	2.18	0.42
22:RA:1045:A:O2'	22:RA:1046:A:OP2	2.35	0.42
22:RA:1068:G:O2'	22:RA:1096:A:N3	2.53	0.42
22:RA:1728:G:H3'	22:RA:1729:A:C5'	2.49	0.42
22:RA:1805:U:C2	22:RA:1806:C:C5	3.07	0.42
22:RA:2683:C:OP1	36:RT:53:ARG:NH2	2.44	0.42
24:RD:17:THR:HG21	24:RD:204:ILE:HA	1.99	0.42
24:RD:33:LEU:O	24:RD:35:LYS:N	2.52	0.42
24:RD:108:PRO:HG2	24:RD:111:LEU:HB2	2.01	0.42
25:RE:155:LYS:O	25:RE:156:MET:HG3	2.19	0.42
27:RG:27:ASN:HB3	27:RG:30:GLU:OE2	2.19	0.42
30:RN:30:ILE:HG22	30:RN:34:LEU:HD21	2.01	0.42
32:RP:26:GLY:C	32:RP:28:GLY:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RP:119:GLU:OE1	32:RP:119:GLU:HA	2.19	0.42
37:RU:27:LEU:O	37:RU:30:LYS:N	2.41	0.42
37:RU:81:HIS:O	37:RU:82:GLY:C	2.61	0.42
37:RU:91:ASP:O	37:RU:95:LEU:N	2.43	0.42
37:RU:98:LEU:O	37:RU:102:GLU:N	2.49	0.42
39:RW:88:ARG:CB	39:RW:92:ARG:HB3	2.47	0.42
44:R1:29:GLY:C	44:R1:30:VAL:HG23	2.43	0.42
46:R3:27:GLY:C	46:R3:28:LEU:HD23	2.44	0.42
46:R3:39:ASP:O	46:R3:39:ASP:CG	2.62	0.42
47:R4:22:ILE:CG2	47:R4:23:GLU:N	2.81	0.42
47:R4:35:VAL:C	47:R4:37:SER:N	2.77	0.42
1:XA:409:G:H3'	1:XA:410:G:H8	1.84	0.42
1:XA:498:A:C6	1:XA:547:A:C8	3.07	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.42
4:XD:88:VAL:O	4:XD:89:THR:C	2.63	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
14:XN:48:ALA:HA	14:XN:53:LEU:HD12	2.01	0.42
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.82	0.42
17:XQ:13:ASP:C	17:XQ:15:MET:N	2.77	0.42
19:XS:12:ASP:CG	19:XS:37:ARG:HD2	2.43	0.42
19:XS:44:MET:HE2	19:XS:49:ILE:HD11	2.00	0.42
19:XS:62:ILE:HG22	19:XS:63:THR:N	2.34	0.42
22:YA:264:C:O2'	22:YA:265:A:H5"	2.19	0.42
22:YA:569:U:C4	22:YA:570:G:C6	3.07	0.42
22:YA:984:A:H5"	22:YA:985:C:C5	2.48	0.42
22:YA:1027:A:N6	22:YA:1126:A:C4	2.87	0.42
22:YA:1381:G:C6	22:YA:1382:G:C5	3.06	0.42
22:YA:2037:G:H2'	22:YA:2038:G:C8	2.54	0.42
22:YA:2572:A:N3	25:YE:144:ARG:NH2	2.67	0.42
22:YA:2771:C:H5"	25:YE:202:LYS:HG2	2.00	0.42
24:YD:33:LEU:O	24:YD:35:LYS:N	2.52	0.42
27:YG:83:ARG:CB	27:YG:86:MET:HE3	2.49	0.42
27:YG:83:ARG:CG	27:YG:86:MET:HE3	2.49	0.42
33:YQ:25:ASP:H	33:YQ:102:VAL:HG23	1.84	0.42
34:YR:10:LEU:O	34:YR:12:ARG:N	2.52	0.42
37:YU:113:ALA:C	37:YU:115:ALA:H	2.27	0.42
39:YW:65:LEU:CD1	39:YW:68:ARG:NH1	2.75	0.42
42:YZ:177:PRO:HB2	42:YZ:178:GLU:H	1.74	0.42
44:Y1:8:SER:CB	44:Y1:66:HIS:CE1	3.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:13:ILE:CG1	44:Y1:42:GLN:HB2	2.49	0.42
45:Y2:48:HIS:C	45:Y2:50:ILE:N	2.76	0.42
46:Y3:46:ASN:O	46:Y3:50:VAL:HG22	2.19	0.42
53:XV:4:G:C6	53:XV:70:G:N1	2.87	0.42
1:QA:17:U:H2'	1:QA:18:C:C6	2.53	0.42
1:QA:286:G:C6	1:QA:287:U:C4	3.07	0.42
1:QA:452:A:O2'	1:QA:453:A:O4'	2.35	0.42
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.54	0.42
1:QA:974:A:N3	14:QN:31:ARG:NE	2.66	0.42
1:QA:1048:G:OP1	14:QN:3:ARG:HB3	2.20	0.42
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.84	0.42
1:QA:1413:A:N1	1:QA:1488:G:C2	2.87	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.20	0.42
3:QC:125:GLU:CD	3:QC:189:ALA:HA	2.44	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
4:QD:128:VAL:C	4:QD:130:GLY:N	2.76	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
13:QM:65:LYS:HZ2	13:QM:69:GLU:HG2	1.84	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
21:QU:2:GLY:C	21:QU:4:GLY:N	2.77	0.42
22:RA:111:A:C6	22:RA:112:U:C4	3.07	0.42
22:RA:121:G:H4'	22:RA:149:A:H5'	2.01	0.42
22:RA:270(F):U:H2'	22:RA:270(G):C:C6	2.54	0.42
22:RA:686:G:H8	50:R7:6:GLN:O	2.02	0.42
22:RA:751:A:C6	22:RA:789:A:C5	3.06	0.42
22:RA:1273:U:H4'	22:RA:1275:A:OP1	2.19	0.42
22:RA:1394:U:C4	22:RA:1395:A:C6	3.07	0.42
22:RA:1622:G:C2	22:RA:1623:G:C8	3.07	0.42
22:RA:1638:C:H2'	22:RA:1639:U:O4'	2.19	0.42
22:RA:1733:G:C6	22:RA:1734:C:N3	2.88	0.42
22:RA:1820:U:O2'	24:RD:159:ALA:HB3	2.19	0.42
22:RA:1998:G:H4'	22:RA:2724:C:O2'	2.19	0.42
22:RA:2056:G:H2'	22:RA:2056:G:N3	2.34	0.42
22:RA:2252:G:H2'	22:RA:2253:G:C8	2.53	0.42
22:RA:2355:C:H1'	43:R0:39:ARG:NH2	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2455:G:C6	22:RA:2456:C:N4	2.88	0.42
23:RB:43:C:C4	23:RB:45:A:C6	3.07	0.42
24:RD:134:ARG:H	24:RD:134:ARG:HG3	1.55	0.42
25:RE:76:ARG:C	25:RE:78:LEU:N	2.76	0.42
27:RG:41:GLN:NE2	27:RG:154:GLY:O	2.52	0.42
27:RG:83:ARG:CG	27:RG:86:MET:HE3	2.49	0.42
27:RG:83:ARG:CB	27:RG:86:MET:HE3	2.49	0.42
27:RG:114:ILE:O	27:RG:116:ASP:N	2.51	0.42
28:RH:26:VAL:CG1	28:RH:33:LEU:HB2	2.50	0.42
30:RN:10:GLU:OE2	30:RN:11:PRO:CD	2.67	0.42
30:RN:42:TRP:HA	30:RN:48:MET:CE	2.42	0.42
31:RO:2:ILE:N	31:RO:2:ILE:CD1	2.82	0.42
32:RP:114:ILE:CD1	32:RP:130:PHE:CE1	2.98	0.42
33:RQ:63:LYS:HD2	42:RZ:175:VAL:HG21	2.01	0.42
38:RV:44:LYS:C	38:RV:46:VAL:N	2.77	0.42
39:RW:8:ARG:HG3	39:RW:8:ARG:NH1	2.34	0.42
41:RY:42:VAL:HG11	41:RY:65:ALA:HB3	2.02	0.42
43:R0:23:VAL:HG13	43:R0:38:VAL:HG22	2.00	0.42
48:R5:20:ARG:HA	48:R5:23:HIS:CE1	2.54	0.42
48:R5:35:GLU:O	48:R5:36:CYS:C	2.63	0.42
1:XA:16:A:O2'	1:XA:17:U:H5'	2.19	0.42
1:XA:51:A:N3	1:XA:116:A:H1'	2.34	0.42
1:XA:674:G:H2'	1:XA:675:A:C8	2.55	0.42
1:XA:825:G:O4'	8:XH:2:LEU:HD21	2.19	0.42
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.20	0.42
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.34	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.25	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
2:XB:221:LEU:HD13	2:XB:221:LEU:C	2.42	0.42
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
5:XE:56:GLN:C	5:XE:58:ALA:N	2.78	0.42
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.84	0.42
14:XN:9:LYS:HG2	14:XN:9:LYS:O	2.19	0.42
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
22:YA:478:A:C6	22:YA:480:A:C6	3.08	0.42
22:YA:978:G:H2'	22:YA:979:G:O4'	2.19	0.42
22:YA:1199:U:O5'	22:YA:1199:U:H6	2.02	0.42
22:YA:1759:A:H1'	22:YA:2711:A:C2	2.54	0.42
22:YA:2532:G:H1'	22:YA:2663:G:H22	1.84	0.42
22:YA:2585:U:C5	56:Z8:76:PPU:O2'	2.69	0.42
25:YE:36:ARG:HH11	25:YE:36:ARG:CB	2.28	0.42
25:YE:197:ILE:CD1	25:YE:199:ARG:HH12	2.26	0.42
26:YF:128:ALA:O	26:YF:129:PHE:CB	2.67	0.42
26:YF:135:LYS:O	26:YF:136:THR:C	2.62	0.42
27:YG:77:ILE:H	27:YG:82:LEU:HB2	1.85	0.42
27:YG:121:ASN:HA	27:YG:181:ARG:NH2	2.34	0.42
30:YN:43:THR:HA	30:YN:44:PRO:HD2	1.92	0.42
32:YP:26:GLY:C	32:YP:28:GLY:H	2.27	0.42
32:YP:120:ALA:HB1	32:YP:138:LEU:CB	2.49	0.42
35:YS:64:GLU:O	35:YS:68:GLN:HG3	2.19	0.42
36:YT:110:ILE:CG2	36:YT:111:ARG:N	2.82	0.42
39:YW:19:LEU:O	39:YW:22:ASP:HB2	2.19	0.42
42:YZ:92:SER:HB3	42:YZ:93:ASP:H	1.66	0.42
44:Y1:72:GLU:O	44:Y1:75:GLU:HB2	2.19	0.42
48:Y5:20:ARG:HA	48:Y5:23:HIS:CE1	2.54	0.42
55:QY:35:G:H2'	55:QY:36:G:C5'	2.43	0.42
1:QA:31:G:O2'	1:QA:48:C:N4	2.52	0.42
1:QA:362:G:N2	1:QA:365:U:OP2	2.48	0.42
1:QA:857:C:H2'	1:QA:858:G:O4'	2.20	0.42
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.19	0.42
1:QA:1244:C:N4	1:QA:1293:G:H1	2.15	0.42
1:QA:1347:G:H2'	1:QA:1373:G:C6	2.55	0.42
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.19	0.42
1:QA:1517:G:N3	22:RA:1919:A:O2'	2.51	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.42
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
5:QE:123:LEU:O	5:QE:124:GLY:C	2.62	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.35	0.42
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:372:G:H8	44:R1:65:SER:O	2.02	0.42
22:RA:608:A:H2'	22:RA:609:A:H8	1.84	0.42
22:RA:634:C:H2'	22:RA:635:C:C6	2.55	0.42
22:RA:1043:C:H42	22:RA:1112:G:H1	1.67	0.42
22:RA:1425:G:H2'	22:RA:1426:G:C8	2.54	0.42
22:RA:1516:U:H2'	22:RA:1517:G:C8	2.54	0.42
22:RA:1701:A:C8	22:RA:1702:G:C8	3.08	0.42
22:RA:1988:C:H2'	22:RA:1989:G:H8	1.84	0.42
23:RB:6:C:C2	23:RB:115:G:N2	2.87	0.42
24:RD:14:ARG:CG	24:RD:15:PHE:N	2.83	0.42
25:RE:3:GLY:HA3	25:RE:81:ILE:CD1	2.48	0.42
25:RE:72:VAL:O	25:RE:73:GLU:C	2.62	0.42
26:RF:105:VAL:O	26:RF:106:ARG:C	2.63	0.42
26:RF:164:ARG:HG2	26:RF:164:ARG:NH1	2.34	0.42
27:RG:139:LEU:C	27:RG:139:LEU:HD12	2.44	0.42
27:RG:145:THR:O	27:RG:146:TYR:HB3	2.19	0.42
28:RH:89:ILE:CD1	28:RH:89:ILE:H	2.32	0.42
28:RH:120:GLY:O	28:RH:136:ILE:HD12	2.19	0.42
29:RI:133:HIS:HB2	29:RI:134:PRO:CD	2.48	0.42
36:RT:24:PRO:HA	36:RT:49:VAL:CG1	2.39	0.42
37:RU:79:PHE:CD2	37:RU:83:LEU:HD13	2.54	0.42
37:RU:92:ARG:NH2	38:RV:11:GLN:O	2.53	0.42
45:R2:59:ARG:O	45:R2:62:THR:HG23	2.19	0.42
47:R4:6:HIS:O	47:R4:7:PRO:C	2.63	0.42
49:R6:19:ARG:HA	49:R6:19:ARG:HD2	1.76	0.42
52:R9:2:LYS:HD2	52:R9:2:LYS:HA	1.93	0.42
1:XA:64:G:H5"	1:XA:65:U:OP1	2.19	0.42
1:XA:736:C:H2'	1:XA:737:A:C8	2.54	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.19	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
19:XS:30:LEU:C	19:XS:30:LEU:HD22	2.44	0.42
22:YA:106:C:H2'	22:YA:107:C:C6	2.54	0.42
22:YA:174:C:H2'	22:YA:175:G:O4'	2.19	0.42
22:YA:685:A:O4'	22:YA:687:C:N4	2.52	0.42
22:YA:747:U:C4	48:Y5:2:ALA:N	2.88	0.42
22:YA:846:C:C4	22:YA:930:U:C4	3.08	0.42
22:YA:1429:G:H2'	22:YA:1430:C:C6	2.54	0.42
22:YA:1473:G:C6	22:YA:1474:C:C4	3.08	0.42
22:YA:1843:C:H2'	22:YA:1844:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1929:G:H3'	22:YA:1929:G:C8	2.54	0.42
22:YA:2005:A:O2'	22:YA:2049:G:OP1	2.33	0.42
22:YA:2512:C:H4'	25:YE:122:PHE:CE2	2.55	0.42
23:YB:16:G:H2'	23:YB:17:C:C6	2.55	0.42
24:YD:108:PRO:HG2	24:YD:111:LEU:HB2	2.01	0.42
24:YD:155:LEU:HD23	24:YD:177:LEU:HD21	2.00	0.42
25:YE:70:ALA:O	25:YE:71:GLY:C	2.63	0.42
27:YG:110:ALA:O	27:YG:111:LEU:C	2.62	0.42
27:YG:114:ILE:HG22	27:YG:117:PHE:HB2	2.01	0.42
29:YI:39:ALA:HB1	29:YI:44:LEU:HD13	2.00	0.42
32:YP:119:GLU:HA	32:YP:119:GLU:OE1	2.19	0.42
37:YU:91:ASP:OD2	37:YU:96:ALA:HB2	2.19	0.42
38:YV:38:LEU:CD1	38:YV:55:ALA:HB1	2.50	0.42
41:YY:60:PHE:CD2	41:YY:60:PHE:N	2.87	0.42
50:Y7:47:ARG:HB2	50:Y7:48:LYS:H	1.64	0.42
55:XY:39:C:H4'	55:XY:40:G:OP1	2.18	0.42
1:QA:322:C:O2'	20:QT:23:ARG:HD2	2.20	0.42
1:QA:439:A:C5	1:QA:440:A:H1'	2.54	0.42
1:QA:502:G:C2	1:QA:503:C:C2	3.08	0.42
1:QA:600:C:H2'	1:QA:601:C:C6	2.54	0.42
1:QA:1291:G:H4'	9:QI:39:GLY:HA3	2.01	0.42
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.42
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.52	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.01	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
5:QE:56:GLN:C	5:QE:58:ALA:N	2.78	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
15:QO:58:MET:O	15:QO:59:MET:C	2.61	0.42
18:QR:21:LYS:O	18:QR:22:VAL:C	2.63	0.42
18:QR:74:ARG:NH2	18:QR:81:PHE:HA	2.35	0.42
22:RA:96:G:H4'	45:R2:48:HIS:NE2	2.34	0.42
22:RA:779:U:H2'	22:RA:780:G:O4'	2.20	0.42
22:RA:1425:G:H2'	22:RA:1426:G:O4'	2.19	0.42
22:RA:2212:A:H1'	22:RA:2215:G:C5	2.54	0.42
22:RA:2849:U:OP1	36:RT:95:ARG:NH1	2.53	0.42
24:RD:43:ARG:CZ	24:RD:49:ILE:HG21	2.49	0.42
25:RE:24:THR:HB	25:RE:184:VAL:HG23	2.02	0.42
25:RE:143:ASN:HB2	25:RE:147:PRO:HD2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RF:179:GLU:CD	26:RF:179:GLU:N	2.77	0.42
27:RG:55:LYS:O	27:RG:59:GLU:HB2	2.19	0.42
27:RG:63:ILE:HG12	27:RG:64:THR:N	2.32	0.42
28:RH:58:GLU:O	28:RH:60:ARG:N	2.53	0.42
28:RH:125:VAL:HG12	28:RH:126:PRO:CD	2.49	0.42
28:RH:136:ILE:O	28:RH:137:ASP:O	2.37	0.42
29:RI:79:ILE:N	29:RI:141:LYS:O	2.37	0.42
30:RN:26:LEU:HG	30:RN:30:ILE:CD1	2.49	0.42
31:RO:104:ARG:C	31:RO:106:LEU:N	2.77	0.42
34:RR:29:LEU:HD11	34:RR:48:VAL:CG1	2.50	0.42
34:RR:44:LEU:HD23	34:RR:44:LEU:HA	1.79	0.42
37:RU:91:ASP:OD2	37:RU:96:ALA:HB2	2.19	0.42
37:RU:104:GLN:H	37:RU:104:GLN:CD	2.16	0.42
38:RV:29:PRO:C	38:RV:61:VAL:HG22	2.45	0.42
38:RV:44:LYS:HB3	38:RV:45:THR:H	1.56	0.42
41:RY:20:TYR:CE1	41:RY:42:VAL:HA	2.55	0.42
41:RY:75:ILE:C	41:RY:75:ILE:CD1	2.92	0.42
46:R3:46:ASN:O	46:R3:50:VAL:HG22	2.20	0.42
47:R4:54:GLY:HA2	47:R4:57:GLU:CG	2.50	0.42
49:R6:7:ILE:O	49:R6:8:LYS:CG	2.68	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42
7:XG:15:ASP:OD1	7:XG:23:VAL:HG11	2.18	0.42
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.50	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.19	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
17:XQ:78:GLU:O	17:XQ:79:SER:C	2.61	0.42
18:XR:21:LYS:O	18:XR:22:VAL:C	2.63	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
20:XT:50:GLU:O	20:XT:51:GLU:C	2.61	0.42
20:XT:81:LYS:C	20:XT:83:ARG:H	2.28	0.42
22:YA:381:G:OP1	44:Y1:16:ASN:ND2	2.42	0.42
22:YA:452:G:C2	22:YA:458:G:C5	3.08	0.42
22:YA:482:A:O2'	41:YY:47:LYS:NZ	2.50	0.42
22:YA:1061:U:H4'	22:YA:1070:A:H1'	2.00	0.42
22:YA:1360:A:C6	22:YA:1372:U:O4	2.72	0.42
22:YA:1379:A:H4'	22:YA:1380:G:OP2	2.18	0.42
22:YA:1389:G:C2	22:YA:1390:U:C2	3.08	0.42
22:YA:1952:A:C4	31:YO:22:ILE:HD12	2.53	0.42
22:YA:2230:G:C6	22:YA:2231:C:C4	3.08	0.42
22:YA:2392:A:C2	22:YA:2429:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:YB:50:G:OP1	35:YS:63:THR:HG23	2.20	0.42
24:YD:75:ILE:HG21	24:YD:99:ASP:HB2	2.02	0.42
25:YE:104:VAL:CG1	25:YE:188:VAL:HG23	2.49	0.42
25:YE:117:MET:HA	25:YE:122:PHE:N	2.35	0.42
25:YE:176:ILE:HD12	25:YE:176:ILE:N	2.35	0.42
27:YG:73:ALA:O	27:YG:84:LYS:O	2.38	0.42
27:YG:117:PHE:CE1	27:YG:119:GLY:CA	3.03	0.42
28:YH:136:ILE:O	28:YH:137:ASP:O	2.37	0.42
31:YO:1:MET:HG2	31:YO:67:LYS:HG2	2.01	0.42
32:YP:26:GLY:C	32:YP:28:GLY:N	2.78	0.42
33:YQ:20:ALA:C	33:YQ:21:THR:HG23	2.43	0.42
35:YS:42:ASP:C	35:YS:44:LYS:N	2.72	0.42
36:YT:54:ARG:HA	36:YT:59:THR:HG23	2.02	0.42
36:YT:96:ARG:HB2	36:YT:96:ARG:CZ	2.49	0.42
38:YV:59:ALA:HA	38:YV:95:LEU:O	2.19	0.42
42:YZ:24:LEU:HD21	42:YZ:86:VAL:CG2	2.50	0.42
44:Y1:29:GLY:C	44:Y1:31:GLY:H	2.27	0.42
44:Y1:66:HIS:C	44:Y1:68:PRO:CD	2.92	0.42
45:Y2:27:GLU:N	45:Y2:27:GLU:CD	2.77	0.42
50:Y7:12:ARG:HH21	50:Y7:44:PRO:HB3	1.85	0.42
51:Y8:28:GLY:O	51:Y8:29:LYS:O	2.37	0.42
51:Y8:53:PRO:HD2	51:Y8:54:GLU:H	1.84	0.42
53:QV:1:C:O2'	53:QV:2:G:H5'	2.19	0.42
1:QA:608:A:H2'	1:QA:609:A:O4'	2.20	0.42
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.55	0.42
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.55	0.42
1:QA:1312:G:H1	1:QA:1325:C:H42	1.68	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
2:QB:83:MET:C	2:QB:85:ALA:H	2.27	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
4:QD:13:ARG:HB3	4:QD:33:MET:HE3	1.92	0.42
8:QH:26:VAL:O	8:QH:27:PRO:C	2.62	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
11:QK:62:GLN:C	11:QK:64:ALA:N	2.76	0.42
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.32	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
20:QT:14:LYS:O	20:QT:15:ARG:C	2.62	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
22:RA:185:U:H2'	22:RA:186:G:C8	2.55	0.42
22:RA:443:A:H1'	22:RA:1201:C:O4'	2.18	0.42
22:RA:709:U:H2'	22:RA:710:G:C8	2.55	0.42
22:RA:734:A:O2'	22:RA:1635:G:H5'	2.19	0.42
22:RA:735:A:H2'	22:RA:736:C:O4'	2.19	0.42
22:RA:846:C:C4	22:RA:930:U:C4	3.07	0.42
22:RA:1993:U:H2'	22:RA:1994:C:H6	1.84	0.42
25:RE:28:ALA:HB3	25:RE:93:VAL:CG2	2.46	0.42
25:RE:35:GLN:HB3	25:RE:48:GLN:HB2	2.01	0.42
25:RE:104:VAL:CG1	25:RE:188:VAL:HG23	2.49	0.42
26:RF:63:LYS:HE2	26:RF:67:GLN:HB2	2.01	0.42
27:RG:16:ARG:NE	27:RG:31:VAL:HG11	2.34	0.42
28:RH:169:VAL:HG22	28:RH:170:ARG:N	2.26	0.42
29:RI:83:ALA:O	29:RI:85:GLU:N	2.53	0.42
33:RQ:118:LEU:HD23	33:RQ:118:LEU:HA	1.87	0.42
35:RS:51:ALA:HB3	35:RS:73:LEU:HD23	2.01	0.42
37:RU:97:ASP:HA	37:RU:100:VAL:HG23	2.01	0.42
38:RV:59:ALA:HA	38:RV:95:LEU:O	2.19	0.42
44:R1:66:HIS:C	44:R1:68:PRO:CD	2.92	0.42
44:R1:74:VAL:O	44:R1:74:VAL:CG1	2.64	0.42
45:R2:16:LEU:C	45:R2:16:LEU:HD12	2.45	0.42
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.19	0.42
1:XA:372:C:C5	1:XA:387:U:C5	3.07	0.42
1:XA:692:U:O2	1:XA:694:A:C8	2.73	0.42
1:XA:1081:G:P	5:XE:16:THR:OG1	2.78	0.42
1:XA:1095:U:H5'	1:XA:1109:C:O2	2.19	0.42
1:XA:1321:C:C4	1:XA:1322:C:C4	3.07	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:83:MET:C	2:XB:85:ALA:H	2.27	0.42
2:XB:239:VAL:O	2:XB:240:GLN:C	2.62	0.42
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42
5:XE:128:PRO:O	5:XE:129:ILE:C	2.63	0.42
6:XF:45:LEU:O	6:XF:46:ARG:HB2	2.19	0.42
7:XG:64:GLN:C	7:XG:66:VAL:N	2.77	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:6:LEU:HD23	14:XN:6:LEU:C	2.44	0.42
15:XO:50:HIS:O	15:XO:51:HIS:C	2.61	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
19:XS:66:MET:O	19:XS:66:MET:HG3	2.19	0.42
22:YA:307:G:H21	22:YA:330:A:H62	1.66	0.42
22:YA:312:G:H5'	22:YA:331:A:O2'	2.20	0.42
22:YA:536:A:N6	22:YA:556:G:O6	2.52	0.42
22:YA:758:C:O2	22:YA:1981:A:H2	2.02	0.42
22:YA:1707:G:C5	22:YA:1756:G:C6	3.07	0.42
22:YA:2238:G:N3	22:YA:2238:G:H2'	2.34	0.42
22:YA:2283:C:C2	22:YA:2389:G:C2	3.07	0.42
22:YA:2516:G:C6	22:YA:2517:C:N4	2.87	0.42
22:YA:2804:C:H2'	22:YA:2805:G:O4'	2.20	0.42
23:YB:11:C:O5'	23:YB:12:C:H5	2.03	0.42
24:YD:2:ALA:O	24:YD:3:VAL:CB	2.68	0.42
24:YD:12:SER:O	24:YD:14:ARG:N	2.51	0.42
24:YD:25:THR:HG23	24:YD:27:THR:HB	2.02	0.42
25:YE:72:VAL:O	25:YE:73:GLU:C	2.62	0.42
26:YF:183:VAL:HG22	26:YF:184:TYR:N	2.35	0.42
27:YG:55:LYS:O	27:YG:59:GLU:HB2	2.19	0.42
28:YH:26:VAL:CG1	28:YH:33:LEU:HB2	2.50	0.42
29:YI:144:VAL:HG22	29:YI:145:VAL:H	1.85	0.42
32:YP:47:ASP:CG	32:YP:49:ARG:NH1	2.77	0.42
32:YP:64:LYS:HG3	51:Y8:25:MET:CE	2.50	0.42
32:YP:65:ARG:C	32:YP:66:GLY:O	2.59	0.42
33:YQ:20:ALA:HA	33:YQ:98:LYS:HB3	2.02	0.42
33:YQ:51:ARG:O	33:YQ:52:VAL:C	2.63	0.42
35:YS:15:ARG:O	35:YS:19:LYS:HD3	2.20	0.42
37:YU:79:PHE:CD2	37:YU:83:LEU:HD13	2.54	0.42
41:YY:20:TYR:C	41:YY:21:LYS:O	2.62	0.42
42:YZ:16:SER:O	42:YZ:20:ARG:HB2	2.19	0.42
45:Y2:16:LEU:C	45:Y2:16:LEU:HD12	2.45	0.42
47:Y4:54:GLY:HA2	47:Y4:57:GLU:CG	2.50	0.42
55:QY:35:G:C2'	55:QY:36:G:H5"	2.41	0.42
54:XX:6:C:HO2'	54:XX:7:A:P	2.42	0.42
1:QA:474:G:H2'	1:QA:475:G:H8	1.84	0.42
1:QA:475:G:H2'	1:QA:476:G:C8	2.55	0.42
1:QA:559:A:H5"	1:QA:560:U:H3'	2.01	0.42
1:QA:778:G:O2'	11:QK:120:ARG:O	2.37	0.42
1:QA:816:A:OP1	1:QA:1526:G:O2'	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:939:G:H5"	7:QG:102:ARG:CZ	2.49	0.42
1:QA:1314:C:H2'	1:QA:1315:U:C6	2.55	0.42
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
4:QD:33:MET:HE2	4:QD:37:PRO:HA	2.00	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.35	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
13:QM:119:GLY:O	13:QM:120:LYS:C	2.63	0.42
15:QO:18:PHE:O	15:QO:19:PRO:C	2.62	0.42
16:QP:1:MET:O	16:QP:2:VAL:C	2.63	0.42
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.42
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42
22:RA:483:A:H3'	22:RA:484:C:C6	2.54	0.42
22:RA:689:A:H2'	22:RA:690:G:H8	1.85	0.42
22:RA:959:A:N3	22:RA:2457:U:O2'	2.42	0.42
22:RA:1156:A:OP1	37:RU:55:ARG:HD3	2.20	0.42
22:RA:2126:A:H1'	22:RA:2127:G:OP2	2.20	0.42
22:RA:2246:G:H2'	22:RA:2247:A:C8	2.55	0.42
22:RA:2461:C:H2'	22:RA:2462:U:C6	2.54	0.42
22:RA:2543:G:N3	22:RA:2765:A:H2'	2.35	0.42
22:RA:2630:G:N3	22:RA:2894:G:N2	2.68	0.42
27:RG:121:ASN:HA	27:RG:181:ARG:NH2	2.34	0.42
30:RN:75:TYR:HA	30:RN:82:LEU:HA	2.01	0.42
32:RP:26:GLY:C	32:RP:28:GLY:N	2.78	0.42
32:RP:115:LEU:HB3	32:RP:131:SER:HB2	2.02	0.42
32:RP:144:GLU:HA	32:RP:145:PRO:HD3	1.76	0.42
33:RQ:27:VAL:HG11	33:RQ:134:ARG:HG3	2.00	0.42
33:RQ:139:GLU:H	33:RQ:139:GLU:CD	2.28	0.42
35:RS:88:ASP:CG	35:RS:89:ARG:N	2.77	0.42
36:RT:134:GLU:OE1	36:RT:135:ALA:N	2.53	0.42
42:RZ:69:THR:HG22	42:RZ:90:VAL:HA	2.02	0.42
44:R1:72:GLU:O	44:R1:75:GLU:HB2	2.20	0.42
46:R3:37:LEU:HD12	46:R3:43:ILE:CG2	2.50	0.42
1:XA:89:U:HO2'	1:XA:90:C:P	2.41	0.42
1:XA:621:A:H2'	1:XA:622:A:C8	2.55	0.42
1:XA:1224:G:HO2'	1:XA:1225:A:P	2.28	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.34	0.42
1:XA:1508:G:H2'	1:XA:1509:C:C6	2.54	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.33	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.53	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
19:XS:4:SER:CA	47:Y4:67:TYR:HE2	2.33	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
19:XS:58:VAL:O	19:XS:58:VAL:HG23	2.20	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
22:YA:568:U:O2'	22:YA:570:G:N7	2.45	0.42
22:YA:729:G:C4	22:YA:1775:U:C2	3.08	0.42
22:YA:918:A:C5	22:YA:919:G:H1'	2.55	0.42
22:YA:1208:C:C4	22:YA:1209:G:N7	2.88	0.42
22:YA:1353:A:C8	22:YA:1377:G:N2	2.87	0.42
22:YA:1798:U:O2	22:YA:1822:G:N2	2.53	0.42
22:YA:2009:G:H1'	34:YR:107:ASP:O	2.20	0.42
22:YA:2306:C:N4	27:YG:42:GLY:O	2.51	0.42
22:YA:2630:G:O4'	22:YA:2894:G:H1'	2.19	0.42
23:YB:24:G:H1'	23:YB:27:C:N4	2.34	0.42
25:YE:28:ALA:HB3	25:YE:93:VAL:CG2	2.47	0.42
25:YE:36:ARG:HB3	25:YE:36:ARG:NH1	2.30	0.42
25:YE:143:ASN:HB2	25:YE:147:PRO:HD2	2.00	0.42
26:YF:32:LEU:C	26:YF:32:LEU:CD1	2.83	0.42
26:YF:62:ARG:NH1	26:YF:62:ARG:CB	2.82	0.42
27:YG:4:ASP:O	27:YG:5:VAL:HB	2.19	0.42
28:YH:58:GLU:O	28:YH:60:ARG:N	2.53	0.42
28:YH:89:ILE:CD1	28:YH:89:ILE:H	2.32	0.42
29:YI:79:ILE:HG21	29:YI:142:VAL:HG12	2.01	0.42
33:YQ:27:VAL:HG11	33:YQ:134:ARG:HG3	2.00	0.42
34:YR:34:ILE:HG22	34:YR:35:THR:N	2.35	0.42
40:YX:60:ARG:HH12	50:Y7:47:ARG:HH22	1.67	0.42
41:YY:95:LYS:HA	41:YY:101:LYS:N	2.33	0.42
42:YZ:98:MET:HE3	42:YZ:98:MET:HB2	1.89	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y4:12:ALA:HB1	47:Y4:30:GLU:N	2.35	0.42
48:Y5:40:LYS:HE2	48:Y5:47:PRO:HG2	2.02	0.42
49:Y6:7:ILE:O	49:Y6:8:LYS:CG	2.68	0.42
49:Y6:25:LYS:HE2	49:Y6:27:LYS:CD	2.50	0.42
49:Y6:36:LEU:HD13	49:Y6:50:ARG:HH12	1.81	0.42
50:Y7:9:ARG:NH1	50:Y7:47:ARG:HG3	2.35	0.42
52:Y9:17:ILE:CG2	52:Y9:18:ARG:N	2.82	0.42
53:XV:35:A:N3	54:XX:3:G:N2	2.68	0.42
1:QA:18:C:H5"	5:QE:127:ASN:ND2	2.33	0.42
1:QA:222:U:H2'	1:QA:223:U:H6	1.85	0.42
1:QA:565:U:OP2	1:QA:566:G:O2'	2.30	0.42
1:QA:681:C:H2'	1:QA:682:G:C8	2.55	0.42
1:QA:683:G:C6	1:QA:684:A:C5	3.08	0.42
1:QA:792:A:H1'	1:QA:793:U:OP2	2.19	0.42
1:QA:1190:G:OP1	3:QC:4:LYS:HA	2.20	0.42
1:QA:1333:A:C2	1:QA:1334:G:H1'	2.55	0.42
2:QB:25:ASN:C	2:QB:27:LYS:H	2.24	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
4:QD:9:CYS:SG	4:QD:31:CYS:C	2.99	0.42
4:QD:91:SER:O	4:QD:92:VAL:C	2.62	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
8:QH:95:VAL:O	8:QH:95:VAL:HG23	2.20	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
12:QL:61:THR:C	12:QL:63:GLY:H	2.27	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
18:QR:76:LEU:HD22	18:QR:76:LEU:N	2.35	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
22:RA:565:C:H4'	22:RA:1253:A:N6	2.35	0.42
22:RA:570:G:H2'	22:RA:2030:A:C5	2.55	0.42
22:RA:571:A:C5	22:RA:575:A:C8	3.08	0.42
22:RA:802:A:C6	22:RA:803:U:C4	3.07	0.42
22:RA:857:C:H2'	22:RA:858:U:H6	1.84	0.42
22:RA:1079:C:O4'	22:RA:1088:A:N6	2.53	0.42
22:RA:1113:U:H2'	22:RA:1114:G:C8	2.55	0.42
22:RA:1309:G:OP1	50:R7:9:ARG:HD3	2.19	0.42
22:RA:1310:G:OP2	50:R7:9:ARG:NH1	2.52	0.42
22:RA:1488:G:C6	22:RA:1489:U:C4	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:2093:G:OP1	29:RI:23:PRO:HG2	2.19	0.42
22:RA:2119:A:C2	22:RA:2171:A:H1'	2.54	0.42
22:RA:2273:A:H2'	22:RA:2274:A:C8	2.54	0.42
24:RD:9:TYR:CZ	24:RD:13:ARG:HD3	2.54	0.42
24:RD:182:LEU:N	24:RD:272:ALA:HB3	2.32	0.42
25:RE:117:MET:HA	25:RE:122:PHE:N	2.35	0.42
25:RE:128:SER:O	25:RE:129:HIS:HB2	2.19	0.42
30:RN:62:VAL:HG12	30:RN:66:LYS:HB2	2.01	0.42
31:RO:1:MET:HG2	31:RO:67:LYS:HG2	2.02	0.42
31:RO:97:ARG:CA	31:RO:117:LEU:HD22	2.50	0.42
35:RS:49:VAL:HG21	35:RS:77:ALA:HA	2.02	0.42
36:RT:89:VAL:O	36:RT:90:GLN:CB	2.67	0.42
36:RT:110:ILE:CG2	36:RT:111:ARG:N	2.82	0.42
37:RU:39:LEU:O	37:RU:42:ALA:N	2.53	0.42
37:RU:99:ALA:HA	37:RU:106:PHE:HB2	2.01	0.42
37:RU:113:ALA:C	37:RU:115:ALA:H	2.28	0.42
39:RW:71:VAL:HA	39:RW:107:LEU:HD12	2.02	0.42
47:R4:2:LYS:HD2	47:R4:2:LYS:HA	1.61	0.42
48:R5:40:LYS:HE2	48:R5:47:PRO:HG2	2.02	0.42
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.20	0.42
1:XA:134:A:H1'	1:XA:325:A:C5	2.55	0.42
1:XA:542:G:H2'	1:XA:543:C:C6	2.54	0.42
1:XA:626:U:H2'	1:XA:627:G:H8	1.85	0.42
1:XA:908:A:H2'	1:XA:909:A:C8	2.55	0.42
1:XA:1499:A:H1'	1:XA:1520:G:H5'	2.02	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42
4:XD:91:SER:O	4:XD:92:VAL:C	2.63	0.42
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
4:XD:202:LEU:C	4:XD:204:ILE:N	2.78	0.42
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.42
5:XE:56:GLN:C	5:XE:58:ALA:H	2.27	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
7:XG:6:ARG:O	7:XG:7:ALA:C	2.62	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.20	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
21:XU:2:GLY:C	21:XU:4:GLY:N	2.78	0.42
22:YA:213:A:H2'	22:YA:214:G:O4'	2.19	0.42
22:YA:223:A:N1	22:YA:407:G:O2'	2.37	0.42
22:YA:294:A:N6	22:YA:345:A:C4	2.88	0.42
22:YA:449:A:O2'	22:YA:450:G:H5'	2.19	0.42
22:YA:458:G:O2'	50:Y7:39:ARG:HD3	2.20	0.42
22:YA:484:C:OP1	41:YY:51:VAL:CG1	2.68	0.42
22:YA:612:G:N3	22:YA:613:U:O2	2.52	0.42
22:YA:732:C:H2'	22:YA:733:G:O4'	2.20	0.42
22:YA:772:C:H2'	22:YA:773:U:C6	2.55	0.42
22:YA:1432:C:H2'	22:YA:1433:U:O4'	2.20	0.42
22:YA:2450:A:H2'	53:XV:76:A:C2	2.55	0.42
22:YA:2547:U:H2'	22:YA:2548:G:C8	2.53	0.42
22:YA:2655:G:O2'	22:YA:2656:U:P	2.78	0.42
23:YB:37:C:O2	35:YS:95:HIS:NE2	2.52	0.42
24:YD:71:ASP:CB	24:YD:103:ARG:HH22	2.32	0.42
25:YE:7:VAL:HG11	36:YT:1:MET:HE3	2.00	0.42
25:YE:31:CYS:HB3	25:YE:49:LEU:HG	2.01	0.42
25:YE:152:LYS:HG2	30:YN:78:TYR:CD1	2.55	0.42
26:YF:11:VAL:HG12	26:YF:12:LEU:H	1.85	0.42
27:YG:99:MET:O	27:YG:103:LEU:HB2	2.20	0.42
27:YG:126:ASP:CG	27:YG:130:ASN:HB2	2.45	0.42
28:YH:77:LYS:HB3	28:YH:77:LYS:HZ2	1.78	0.42
28:YH:84:SER:O	28:YH:85:LYS:CB	2.64	0.42
30:YN:75:TYR:HA	30:YN:82:LEU:HA	2.02	0.42
31:YO:2:ILE:HG12	31:YO:8:LEU:HD11	2.02	0.42
31:YO:20:MET:O	31:YO:41:ALA:CB	2.67	0.42
31:YO:116:SER:C	31:YO:118:ALA:N	2.76	0.42
32:YP:65:ARG:HH21	51:Y8:15:LYS:HB3	1.84	0.42
32:YP:81:GLN:HE21	32:YP:81:GLN:HB2	1.59	0.42
32:YP:135:LEU:HD13	32:YP:139:LYS:HE3	2.01	0.42
35:YS:26:LEU:HB3	35:YS:87:PHE:HA	2.02	0.42
35:YS:52:SER:HB2	35:YS:55:ALA:CB	2.50	0.42
36:YT:24:PRO:HA	36:YT:49:VAL:CG1	2.39	0.42
38:YV:25:LEU:H	38:YV:92:THR:CG2	2.29	0.42
41:YY:91:GLU:CG	41:YY:92:ASN:N	2.83	0.42
44:Y1:83:GLU:C	44:Y1:83:GLU:CD	2.87	0.42
53:XV:15:G:N2	53:XV:48:C:H42	2.17	0.42
1:QA:149:A:H2'	1:QA:150:C:C6	2.55	0.42
1:QA:186:C:O3'	20:QT:82:SER:HB3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:752:G:H1'	1:QA:754:C:H41	1.85	0.42
1:QA:1151:A:N3	10:QJ:39:PRO:HG3	2.34	0.42
1:QA:1190:G:H5'	3:QC:176:HIS:NE2	2.34	0.42
1:QA:1418:A:H5"	1:QA:1419:G:OP2	2.20	0.42
1:QA:1451:A:N3	1:QA:1451:A:H2'	2.35	0.42
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.42
5:QE:56:GLN:C	5:QE:58:ALA:H	2.27	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.42
9:QI:85:LEU:HD12	9:QI:85:LEU:C	2.45	0.42
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.42
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.42
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
17:QQ:52:LYS:O	17:QQ:53:LEU:C	2.63	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
22:RA:76:C:O2'	22:RA:77:C:H5'	2.19	0.42
22:RA:278:A:N6	22:RA:362:U:H3	2.18	0.42
22:RA:425:G:H2'	22:RA:426:C:C6	2.53	0.42
22:RA:602:G:H1'	22:RA:656:G:N2	2.35	0.42
22:RA:675:A:N3	22:RA:2443:C:O2'	2.46	0.42
22:RA:729:G:N7	24:RD:209:ALA:HB3	2.35	0.42
22:RA:1688:U:H1'	22:RA:1701:A:C6	2.55	0.42
22:RA:1927:A:H2'	22:RA:1928:A:C8	2.54	0.42
22:RA:2059:A:H5'	26:RF:71:GLY:HA2	2.00	0.42
22:RA:2432:A:C6	22:RA:2433:A:C6	3.07	0.42
22:RA:2882:A:OP1	34:RR:96:ARG:NH1	2.53	0.42
24:RD:158:ALA:HB3	24:RD:161:THR:CG2	2.49	0.42
24:RD:165:ILE:O	24:RD:166:GLN:NE2	2.53	0.42
25:RE:10:GLY:HA3	36:RT:8:LYS:HD3	2.02	0.42
25:RE:137:HIS:CB	25:RE:138:PRO:HD2	2.42	0.42
25:RE:176:ILE:HD12	25:RE:176:ILE:N	2.35	0.42
27:RG:51:ARG:NH1	27:RG:51:ARG:CB	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:78:SER:O	27:RG:80:PHE:N	2.53	0.42
27:RG:99:MET:O	27:RG:103:LEU:HB2	2.20	0.42
28:RH:27:LYS:HD2	28:RH:27:LYS:C	2.44	0.42
28:RH:146:ALA:HA	28:RH:164:TYR:OH	2.20	0.42
30:RN:43:THR:HA	30:RN:44:PRO:HD2	1.92	0.42
31:RO:71:ARG:HH11	36:RT:74:ARG:HH21	1.65	0.42
34:RR:55:ALA:HA	34:RR:80:PHE:CE2	2.55	0.42
35:RS:30:ARG:NH2	35:RS:92:TYR:HD1	2.17	0.42
35:RS:83:LYS:HE3	35:RS:84:GLN:CG	2.50	0.42
35:RS:83:LYS:HE3	35:RS:84:GLN:HG3	2.02	0.42
37:RU:43:GLY:HA3	38:RV:73:SER:OG	2.19	0.42
38:RV:21:ARG:HD2	38:RV:91:TYR:CE2	2.55	0.42
38:RV:35:LEU:HB2	38:RV:37:VAL:CG2	2.49	0.42
41:RY:60:PHE:CD2	41:RY:60:PHE:N	2.87	0.42
43:R0:48:GLY:HA3	43:R0:80:HIS:ND1	2.34	0.42
45:R2:50:ILE:H	45:R2:50:ILE:HG13	1.64	0.42
1:XA:640:A:O2'	8:XH:115:SER:HB3	2.20	0.42
1:XA:792:A:C5	1:XA:794:A:C6	3.08	0.42
1:XA:1098:C:C2	1:XA:1099:G:C8	3.08	0.42
1:XA:1161:C:O2'	1:XA:1162:C:H5'	2.20	0.42
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.20	0.42
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
7:XG:108:ALA:C	7:XG:110:GLN:N	2.78	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
12:XL:61:THR:C	12:XL:63:GLY:H	2.27	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
14:XN:3:ARG:CG	14:XN:4:LYS:N	2.83	0.42
15:XO:18:PHE:O	15:XO:19:PRO:C	2.62	0.42
15:XO:41:GLU:O	15:XO:42:HIS:C	2.63	0.42
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.42
22:YA:573:G:N1	22:YA:2031:A:OP2	2.35	0.42
22:YA:813:U:H2'	22:YA:814:C:C6	2.55	0.42
22:YA:1093:G:OP1	28:YH:170:ARG:HD2	2.20	0.42
22:YA:1158:C:H4'	46:Y3:31:LEU:O	2.20	0.42
22:YA:1543:A:O2'	22:YA:1544:C:H3'	2.19	0.42
22:YA:2212:A:H1'	22:YA:2215:G:C5	2.54	0.42
22:YA:2525:G:C2	22:YA:2539:C:N3	2.88	0.42
22:YA:2699:C:H2'	22:YA:2700:C:O4'	2.20	0.42
24:YD:158:ALA:HB3	24:YD:161:THR:CG2	2.49	0.42
24:YD:263:ARG:NH1	24:YD:263:ARG:CB	2.75	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:9:VAL:HB	25:YE:10:GLY:H	1.70	0.42
25:YE:16:ARG:C	25:YE:17:ASP:CG	2.86	0.42
25:YE:25:VAL:CG1	36:YT:11:GLU:HG2	2.50	0.42
25:YE:35:GLN:HB3	25:YE:48:GLN:HB2	2.01	0.42
25:YE:128:SER:O	25:YE:129:HIS:HB2	2.20	0.42
26:YF:101:LEU:HD12	26:YF:102:PRO:N	2.33	0.42
26:YF:105:VAL:O	26:YF:106:ARG:C	2.63	0.42
26:YF:123:LEU:HD12	26:YF:124:LEU:H	1.82	0.42
27:YG:27:ASN:HB3	27:YG:30:GLU:OE2	2.19	0.42
28:YH:84:SER:OG	28:YH:85:LYS:N	2.51	0.42
30:YN:30:ILE:HG22	30:YN:34:LEU:HD21	2.01	0.42
31:YO:61:VAL:O	31:YO:61:VAL:HG13	2.18	0.42
31:YO:97:ARG:CA	31:YO:117:LEU:HD22	2.50	0.42
31:YO:104:ARG:C	31:YO:106:LEU:N	2.77	0.42
32:YP:85:LEU:C	32:YP:87:ASP:N	2.77	0.42
36:YT:67:SER:O	36:YT:68:TYR:C	2.63	0.42
36:YT:105:LEU:O	36:YT:105:LEU:HG	2.18	0.42
39:YW:73:ALA:HB3	39:YW:106:ILE:CG1	2.45	0.42
39:YW:74:ALA:O	39:YW:75:TYR:CB	2.65	0.42
41:YY:20:TYR:CE1	41:YY:42:VAL:HA	2.55	0.42
41:YY:51:VAL:CG1	41:YY:52:SER:N	2.74	0.42
42:YZ:163:LEU:H	42:YZ:163:LEU:HG	1.74	0.42
44:Y1:56:GLN:HB2	44:Y1:57:GLU:H	1.48	0.42
49:Y6:24:GLU:HB3	49:Y6:25:LYS:H	1.56	0.42
50:Y7:25:PRO:HA	50:Y7:28:ARG:NH2	2.35	0.42
52:Y9:1:MET:HE2	52:Y9:10:ILE:CD1	2.49	0.42
1:QA:15:G:H2'	1:QA:16:A:H8	1.85	0.42
1:QA:112:G:H4'	1:QA:389:A:H5"	2.01	0.42
1:QA:782:A:H4'	1:QA:1514:C:O2'	2.20	0.42
1:QA:807:A:H2'	1:QA:808:C:O4'	2.19	0.42
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.42
2:QB:159:PRO:HB2	2:QB:160:ASP:H	1.74	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:178:VAL:O	4:QD:179:GLU:C	2.63	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.42
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.42
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.42
22:RA:335:C:H5'	41:RY:73:ARG:NH1	2.35	0.42
22:RA:935:C:H2'	22:RA:936:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1229:G:N2	22:RA:1229(A):G:H1'	2.35	0.42
22:RA:1309:G:C6	22:RA:1310:G:C5	3.08	0.42
22:RA:1373:A:C6	22:RA:1374:G:C4	3.08	0.42
22:RA:1537:C:H2'	22:RA:1538:G:C8	2.54	0.42
22:RA:1921:G:H2'	22:RA:1922:G:H8	1.85	0.42
22:RA:2255:G:C6	22:RA:2256:G:C5	3.08	0.42
22:RA:2377:A:O2'	35:RS:111:GLU:O	2.26	0.42
22:RA:2697:G:C2	22:RA:2711:A:C2	3.08	0.42
24:RD:35:LYS:HB3	24:RD:36:PRO:HA	2.00	0.42
24:RD:168:ARG:O	24:RD:169:GLU:HB2	2.19	0.42
26:RF:34:TRP:CA	32:RP:6:LEU:HD12	2.47	0.42
26:RF:198:ALA:HA	26:RF:201:VAL:CG1	2.41	0.42
27:RG:22:ARG:HH22	27:RG:175:LEU:HD21	1.85	0.42
27:RG:126:ASP:CG	27:RG:130:ASN:HB2	2.45	0.42
28:RH:76:VAL:C	28:RH:78:GLY:N	2.78	0.42
31:RO:31:LYS:HA	31:RO:31:LYS:HD3	1.92	0.42
31:RO:86:ILE:N	31:RO:86:ILE:CD1	2.82	0.42
35:RS:88:ASP:CG	35:RS:89:ARG:H	2.28	0.42
36:RT:39:ARG:CG	36:RT:40:THR:H	2.22	0.42
36:RT:96:ARG:HB2	36:RT:96:ARG:CZ	2.49	0.42
37:RU:35:ALA:O	37:RU:39:LEU:HG	2.19	0.42
39:RW:19:LEU:HA	39:RW:19:LEU:HD12	1.79	0.42
40:RX:60:ARG:HA	40:RX:75:ASP:OD2	2.20	0.42
41:RY:91:GLU:CG	41:RY:92:ASN:N	2.83	0.42
44:R1:83:GLU:C	44:R1:83:GLU:CD	2.87	0.42
46:R3:37:LEU:N	46:R3:37:LEU:HD23	2.35	0.42
47:R4:38:LYS:HG3	47:R4:44:THR:OG1	2.20	0.42
49:R6:25:LYS:HE2	49:R6:27:LYS:CD	2.49	0.42
50:R7:9:ARG:NH1	50:R7:47:ARG:HG3	2.35	0.42
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.55	0.42
1:XA:632:A:C8	1:XA:633:G:C8	3.08	0.42
1:XA:743:U:H2'	1:XA:744:C:C6	2.54	0.42
1:XA:836:G:C6	1:XA:851:G:C6	3.07	0.42
1:XA:924:C:O2'	1:XA:1502:A:N6	2.53	0.42
1:XA:939:G:H5"	7:XG:102:ARG:NH1	2.35	0.42
1:XA:945:G:C2	1:XA:1337:G:C2	3.08	0.42
1:XA:991:U:O2	1:XA:993:G:H8	2.02	0.42
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.84	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
8:XH:4:ASP:HA	8:XH:5:PRO:HD3	1.85	0.42
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
18:XR:37:VAL:O	18:XR:38:GLU:C	2.63	0.42
20:XT:28:ALA:C	20:XT:30:LYS:H	2.28	0.42
22:YA:270:A:H1'	22:YA:370:G:C2	2.54	0.42
22:YA:273(A):G:C2	22:YA:364:C:C2	3.08	0.42
22:YA:654(A):G:N2	22:YA:654(U):A:H1'	2.35	0.42
22:YA:654(A):G:N2	22:YA:654(U):A:N3	2.67	0.42
22:YA:947:G:N2	22:YA:971:C:C2	2.87	0.42
22:YA:1847:A:H5'	22:YA:1848:A:OP2	2.19	0.42
22:YA:1884:A:H2'	22:YA:1885:A:O4'	2.20	0.42
22:YA:1885:A:H3'	22:YA:1886:C:C6	2.55	0.42
22:YA:1924:C:H4'	53:XV:13:C:O2'	2.20	0.42
22:YA:2072:G:C2	22:YA:2073:C:C2	3.08	0.42
22:YA:2359:C:H2'	22:YA:2360:A:C8	2.55	0.42
22:YA:2522:U:H3	22:YA:2543:G:H1	1.68	0.42
22:YA:2597:G:C5	22:YA:2598:A:C6	3.08	0.42
22:YA:2785:C:O2'	25:YE:64:LYS:HD3	2.20	0.42
24:YD:165:ILE:O	24:YD:166:GLN:NE2	2.53	0.42
25:YE:10:GLY:HA3	36:YT:8:LYS:HD3	2.02	0.42
25:YE:76:ARG:C	25:YE:78:LEU:N	2.76	0.42
26:YF:132:VAL:HG23	26:YF:133:ASN:H	1.83	0.42
27:YG:78:SER:O	27:YG:80:PHE:N	2.53	0.42
28:YH:105:LEU:CD1	28:YH:105:LEU:N	2.81	0.42
30:YN:10:GLU:OE2	30:YN:11:PRO:CD	2.68	0.42
30:YN:52:VAL:CG1	30:YN:53:VAL:N	2.82	0.42
31:YO:2:ILE:N	31:YO:2:ILE:CD1	2.82	0.42
32:YP:39:LYS:HA	32:YP:45:LEU:HD11	1.83	0.42
32:YP:83:VAL:HG11	32:YP:112:LEU:HD21	1.97	0.42
32:YP:114:ILE:CD1	32:YP:130:PHE:CE1	2.98	0.42
32:YP:115:LEU:HB3	32:YP:131:SER:HB2	2.02	0.42
33:YQ:34:LEU:HD23	33:YQ:104:PHE:CD1	2.55	0.42
34:YR:28:LEU:HD12	34:YR:29:LEU:HD12	2.02	0.42
35:YS:18:ILE:O	35:YS:19:LYS:C	2.62	0.42
36:YT:6:LEU:HD12	36:YT:9:LEU:HD12	2.01	0.42
36:YT:50:ILE:HD11	36:YT:102:ILE:HG12	2.01	0.42
37:YU:35:ALA:O	37:YU:39:LEU:HG	2.19	0.42
38:YV:15:GLU:O	38:YV:96:ILE:HB	2.19	0.42
38:YV:47:VAL:HG13	38:YV:48:GLY:N	2.27	0.42
44:Y1:80:LEU:O	44:Y1:81:LYS:CD	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y5:35:GLU:O	48:Y5:36:CYS:C	2.63	0.42
53:XV:43:A:H2'	53:XV:44:A:C8	2.54	0.42
1:QA:106:C:H2'	1:QA:107:G:H8	1.85	0.41
1:QA:452:A:O2'	1:QA:453:A:O5'	2.37	0.41
1:QA:458:C:H2'	1:QA:464:G:C8	2.55	0.41
1:QA:622:A:C8	1:QA:623:C:C6	3.08	0.41
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	0.41
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.49	0.41
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
8:QH:21:LYS:O	8:QH:22:GLU:C	2.63	0.41
8:QH:29:SER:O	8:QH:30:ARG:C	2.62	0.41
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.41
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.41
13:QM:88:ARG:HD2	13:QM:88:ARG:O	2.19	0.41
14:QN:9:LYS:HG2	14:QN:9:LYS:O	2.19	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
15:QO:3:ILE:HD13	15:QO:3:ILE:N	2.22	0.41
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.41
19:QS:5:LEU:HD22	47:R4:67:TYR:CE2	2.55	0.41
22:RA:447:A:C8	22:RA:473:G:C6	3.08	0.41
22:RA:589:C:H2'	22:RA:590:A:C8	2.55	0.41
22:RA:738:G:C2	22:RA:759:G:C5	3.08	0.41
22:RA:937:U:H2'	22:RA:938:G:C8	2.54	0.41
22:RA:1090:U:N3	22:RA:1102:C:H1'	2.34	0.41
22:RA:1582:C:HO2'	22:RA:1586:A:H8	1.65	0.41
22:RA:2271:G:OP1	43:R0:18:ALA:HB1	2.20	0.41
22:RA:2396:G:O2'	22:RA:2397:G:H5'	2.20	0.41
22:RA:2625:G:C2	22:RA:2626:C:C2	3.08	0.41
25:RE:13:ARG:HH11	25:RE:13:ARG:HB2	1.81	0.41
25:RE:144:ARG:HB3	25:RE:145:LYS:H	1.58	0.41
25:RE:152:LYS:HG2	30:RN:78:TYR:CD1	2.55	0.41
26:RF:42:ALA:O	26:RF:45:ARG:HB2	2.18	0.41
26:RF:118:ALA:HA	26:RF:123:LEU:HB3	2.02	0.41
27:RG:73:ALA:O	27:RG:84:LYS:O	2.38	0.41
28:RH:128:PRO:CG	28:RH:129:THR:H	2.33	0.41
30:RN:7:LYS:C	30:RN:9:VAL:H	2.28	0.41
30:RN:131:GLN:HE21	30:RN:131:GLN:HB3	1.57	0.41
31:RO:16:ALA:HA	31:RO:46:ALA:CB	2.50	0.41
32:RP:85:LEU:C	32:RP:87:ASP:N	2.77	0.41
33:RQ:65:PHE:O	33:RQ:66:ILE:CG1	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RS:99:LYS:HE2	35:RS:103:GLU:OE2	2.20	0.41
36:RT:123:GLN:O	36:RT:124:ASP:C	2.63	0.41
37:RU:75:ASN:O	37:RU:76:TYR:C	2.63	0.41
40:RX:60:ARG:HH12	50:R7:47:ARG:HH22	1.67	0.41
41:RY:97:ARG:NE	41:RY:97:ARG:C	2.78	0.41
42:RZ:82:ARG:HA	42:RZ:83:PRO:HD3	1.93	0.41
44:R1:76:ARG:H	44:R1:76:ARG:CD	2.29	0.41
47:R4:68:ARG:HB2	47:R4:69:LYS:H	1.35	0.41
48:R5:40:LYS:HE2	48:R5:47:PRO:CG	2.49	0.41
49:R6:41:PRO:HG3	49:R6:44:ARG:HB2	2.01	0.41
50:R7:25:PRO:HA	50:R7:28:ARG:NH2	2.35	0.41
1:XA:692:U:H5	11:XK:26:ASN:OD1	2.03	0.41
1:XA:832:C:C2	1:XA:855:G:C2	3.08	0.41
1:XA:942:G:C2	1:XA:943:U:C6	3.08	0.41
1:XA:962:C:H1'	1:XA:1201:A:C6	2.55	0.41
1:XA:1034:G:H2'	1:XA:1035:A:H8	1.82	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.01	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
7:XG:23:VAL:O	7:XG:24:THR:C	2.62	0.41
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.02	0.41
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.41
20:XT:74:LYS:C	20:XT:76:ALA:N	2.77	0.41
22:YA:307:G:H21	22:YA:330:A:N6	2.18	0.41
22:YA:532:A:N3	37:YU:28:ARG:NH2	2.67	0.41
22:YA:654:A:O2'	22:YA:654(A):G:N7	2.47	0.41
22:YA:1011:G:OP1	37:YU:75:ASN:HB3	2.20	0.41
22:YA:1048:A:P	22:YA:1110:G:H22	2.43	0.41
22:YA:1206:G:C2	22:YA:1207:C:C2	3.08	0.41
22:YA:1364:G:OP2	44:Y1:2:SER:O	2.38	0.41
22:YA:1543:A:HO2'	22:YA:1544:C:H3'	1.84	0.41
22:YA:1654:A:OP1	34:YR:2:ARG:HD2	2.20	0.41
22:YA:2164:C:H2'	22:YA:2165:G:O4'	2.20	0.41
22:YA:2355:C:O2	43:Y0:39:ARG:NH2	2.46	0.41
22:YA:2638:G:P	25:YE:82:ARG:HH22	2.43	0.41
24:YD:9:TYR:CZ	24:YD:13:ARG:HD3	2.54	0.41
24:YD:109:ASP:HB2	24:YD:197:GLY:HA2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YE:4:ILE:HG22	25:YE:198:VAL:HB	2.02	0.41
26:YF:20:LEU:HD12	26:YF:21:ALA:N	2.26	0.41
26:YF:53:THR:O	26:YF:55:GLY:N	2.53	0.41
27:YG:41:GLN:NE2	27:YG:154:GLY:O	2.52	0.41
29:YI:130:TYR:CG	29:YI:131:LYS:N	2.87	0.41
31:YO:31:LYS:O	31:YO:32:TYR:HD2	2.02	0.41
32:YP:42:SER:O	32:YP:43:GLY:C	2.63	0.41
32:YP:49:ARG:HG2	32:YP:49:ARG:HH11	1.84	0.41
33:YQ:20:ALA:HB2	33:YQ:99:PRO:HD2	1.99	0.41
33:YQ:118:LEU:HD13	33:YQ:131:ILE:HG23	2.02	0.41
35:YS:49:VAL:HG21	35:YS:77:ALA:HA	2.02	0.41
35:YS:92:TYR:HB2	35:YS:98:VAL:HG11	2.02	0.41
37:YU:6:THR:HG21	37:YU:10:ARG:CZ	2.50	0.41
38:YV:35:LEU:HB2	38:YV:37:VAL:CG2	2.49	0.41
38:YV:72:VAL:HG13	38:YV:72:VAL:O	2.19	0.41
40:YX:57:LEU:HD12	40:YX:57:LEU:H	1.85	0.41
40:YX:60:ARG:HH22	50:Y7:47:ARG:HH12	1.68	0.41
41:YY:6:HIS:O	41:YY:7:VAL:CG1	2.59	0.41
47:Y4:6:HIS:O	47:Y4:7:PRO:C	2.63	0.41
48:Y5:41:PRO:HA	48:Y5:42:PRO:HD3	1.82	0.41
49:Y6:41:PRO:HG3	49:Y6:44:ARG:HB2	2.01	0.41
1:QA:190:G:N3	1:QA:190:G:H2'	2.36	0.41
1:QA:607:A:C2	16:QP:31:LYS:HB2	2.56	0.41
1:QA:1089:G:C6	1:QA:1090:U:C4	3.09	0.41
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.35	0.41
1:QA:1190:G:P	3:QC:5:ILE:HG23	2.60	0.41
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.55	0.41
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	2.02	0.41
1:QA:1512:U:N3	1:QA:1513:A:N7	2.68	0.41
2:QB:29:ALA:C	2:QB:31:TYR:H	2.27	0.41
2:QB:163:PHE:CD2	2:QB:185:ILE:HD12	2.54	0.41
2:QB:224:GLN:C	2:QB:226:ARG:H	2.28	0.41
4:QD:13:ARG:NH2	4:QD:36:ARG:CZ	2.83	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
13:QM:82:MET:HE3	13:QM:93:ARG:CG	2.50	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.38	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
22:RA:242:G:H22	22:RA:254:G:H2'	1.85	0.41
22:RA:718:A:H3'	22:RA:719:C:C6	2.55	0.41
22:RA:738:G:H3'	22:RA:739:G:C8	2.55	0.41
22:RA:777:A:C2	22:RA:778:G:C5	3.08	0.41
22:RA:859:G:O2'	22:RA:860:U:P	2.77	0.41
22:RA:997:G:OP1	37:RU:93:LYS:HD3	2.19	0.41
22:RA:1351:C:C2	22:RA:1381:G:C2	3.08	0.41
22:RA:1786:A:C8	22:RA:1938:A:C6	3.07	0.41
25:RE:25:VAL:CG1	36:RT:11:GLU:HG2	2.50	0.41
27:RG:110:ALA:O	27:RG:111:LEU:C	2.62	0.41
28:RH:86:GLU:HG3	28:RH:165:ALA:CA	2.49	0.41
28:RH:105:LEU:CD1	28:RH:105:LEU:N	2.81	0.41
29:RI:48:GLU:O	29:RI:51:ILE:HB	2.20	0.41
29:RI:113:ARG:HG3	29:RI:131:LYS:HZ3	1.85	0.41
32:RP:18:ARG:HD2	32:RP:27:HIS:CD2	2.56	0.41
37:RU:83:LEU:HG	37:RU:88:ILE:HG13	2.02	0.41
38:RV:38:LEU:CD1	38:RV:55:ALA:HB1	2.50	0.41
40:RX:57:LEU:HD12	40:RX:57:LEU:H	1.85	0.41
41:RY:41:GLY:O	41:RY:42:VAL:C	2.63	0.41
42:RZ:45:ASP:O	42:RZ:49:ARG:HG2	2.20	0.41
44:R1:29:GLY:O	44:R1:31:GLY:N	2.49	0.41
44:R1:92:LYS:C	44:R1:94:LEU:H	2.27	0.41
1:XA:51:A:H4'	1:XA:52:G:H5"	2.01	0.41
1:XA:1344:C:H5'	9:XI:120:ARG:O	2.21	0.41
1:XA:1374:A:C4	1:XA:1375:A:C8	3.08	0.41
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.20	0.41
2:XB: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
4:XD:96:LEU:O	4:XD:97:LEU:C	2.63	0.41
7:XG:21:VAL:O	7:XG:22:LEU:C	2.63	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
8:XH:91:ARG:HB2	12:XL:7:ILE:HG13	2.00	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
13:XM:82:MET:HE3	13:XM:93:ARG:CG	2.50	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.41
22:YA:319:C:H2'	22:YA:320:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:356:G:H2'	22:YA:357:A:C8	2.55	0.41
22:YA:674:G:N2	22:YA:2444:G:O3'	2.54	0.41
22:YA:729:G:H2'	22:YA:1775:U:H1'	2.02	0.41
22:YA:784:A:N7	24:YD:229:VAL:HG21	2.34	0.41
22:YA:812:C:H5"	22:YA:1250:G:O2'	2.20	0.41
22:YA:818:G:H3'	22:YA:1187:G:H22	1.84	0.41
22:YA:1196:C:C2	22:YA:1197:G:C8	3.08	0.41
22:YA:1278:A:O3'	34:YR:34:ILE:HG23	2.20	0.41
22:YA:1322:A:C5	22:YA:1323:U:C4	3.08	0.41
22:YA:1381:G:H1'	22:YA:1571:A:N1	2.36	0.41
22:YA:1543:A:C2	22:YA:1545:A:C4	3.08	0.41
22:YA:1778:U:H2'	22:YA:1784:A:N6	2.35	0.41
22:YA:1951:U:O2'	22:YA:1953:A:N7	2.50	0.41
22:YA:2564:A:OP1	22:YA:2648:C:H4'	2.19	0.41
22:YA:2619:C:H5'	25:YE:150:VAL:O	2.20	0.41
22:YA:2667:C:N3	28:YH:110:SER:OG	2.50	0.41
25:YE:167:VAL:CG1	25:YE:189:PRO:HD3	2.50	0.41
26:YF:64:ILE:HG23	26:YF:65:TRP:CD1	2.54	0.41
26:YF:80:ALA:O	26:YF:83:PHE:HB2	2.20	0.41
27:YG:180:PHE:C	27:YG:182:LYS:N	2.76	0.41
29:YI:77:LEU:HD11	29:YI:140:LEU:HD12	2.01	0.41
31:YO:17:ARG:HG2	31:YO:17:ARG:HH11	1.84	0.41
36:YT:123:GLN:O	36:YT:124:ASP:C	2.63	0.41
37:YU:92:ARG:NH2	38:YV:11:GLN:O	2.53	0.41
37:YU:97:ASP:HA	37:YU:100:VAL:HG23	2.01	0.41
38:YV:44:LYS:C	38:YV:46:VAL:N	2.77	0.41
43:Y0:43:THR:HG23	43:Y0:43:THR:O	2.20	0.41
51:Y8:26:LYS:HD3	51:Y8:26:LYS:HA	1.86	0.41
53:QV:17:C:H2'	53:QV:17:C:O2	2.20	0.41
53:QV:23:C:H2'	53:QV:24:U:C6	2.55	0.41
1:QA:410:G:OP2	4:QD:25:ARG:HG3	2.21	0.41
1:QA:579:G:C6	1:QA:580:U:C4	3.09	0.41
1:QA:601:C:C2	1:QA:602:A:C8	3.08	0.41
1:QA:1285:A:H1'	1:QA:1286:A:OP2	2.20	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
4:QD:115:ARG:O	4:QD:116:GLN:C	2.62	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
6:QF:101:ALA:HA	18:QR:28:GLU:CD	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.50	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
17:QQ:74:LEU:O	17:QQ:74:LEU:HD13	2.20	0.41
19:QS:10:PHE:CD2	19:QS:10:PHE:C	2.98	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.54	0.41
22:RA:31:C:O2'	22:RA:1238:G:H5'	2.19	0.41
22:RA:598:G:H2'	22:RA:599:G:O4'	2.21	0.41
22:RA:2150:U:H2'	22:RA:2151:G:H8	1.85	0.41
22:RA:2376:A:H8	22:RA:2376:A:OP1	2.03	0.41
22:RA:2600:A:O2'	22:RA:2601:C:H5'	2.21	0.41
24:RD:13:ARG:HG2	24:RD:13:ARG:O	2.20	0.41
24:RD:166:GLN:CA	24:RD:166:GLN:NE2	2.78	0.41
25:RE:35:GLN:HG3	25:RE:37:ARG:NH2	2.35	0.41
25:RE:179:GLU:CB	25:RE:181:LEU:HD23	2.24	0.41
26:RF:53:THR:O	26:RF:55:GLY:N	2.53	0.41
29:RI:68:LEU:HA	29:RI:71:ILE:HG22	2.01	0.41
30:RN:52:VAL:CG1	30:RN:53:VAL:N	2.82	0.41
30:RN:62:VAL:CG1	30:RN:66:LYS:HB2	2.51	0.41
33:RQ:20:ALA:HA	33:RQ:98:LYS:HB3	2.02	0.41
38:RV:16:PRO:HB3	38:RV:97:LYS:O	2.20	0.41
38:RV:38:LEU:CD1	38:RV:55:ALA:CB	2.98	0.41
40:RX:15:GLU:CD	40:RX:15:GLU:H	2.27	0.41
47:R4:45:GLY:O	47:R4:46:GLN:C	2.62	0.41
51:R8:16:ILE:HD11	51:R8:57:ARG:CG	2.44	0.41
1:XA:148:G:H1	1:XA:174:C:H42	1.68	0.41
1:XA:644:G:H4'	8:XH:92:ARG:HH21	1.85	0.41
1:XA:874:G:C6	1:XA:875:C:C4	3.08	0.41
1:XA:1245:A:H2'	1:XA:1246:C:C6	2.55	0.41
1:XA:1336:C:O2	1:XA:1336:C:H2'	2.20	0.41
2:XB:12:GLU:C	2:XB:14:GLY:H	2.29	0.41
2:XB:60:ASP:C	2:XB:62:ALA:H	2.28	0.41
3:XC:120:VAL:O	3:XC:121:ALA:C	2.63	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
4:XD:115:ARG:O	4:XD:116:GLN:C	2.63	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
5:XE:123:LEU:O	5:XE:124:GLY:C	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.02	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
9:XI:128:ARG:NH2	53:XV:35:A:P	2.93	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.20	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
19:XS:2:PRO:HB2	47:Y4:68:ARG:CZ	2.50	0.41
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.41
22:YA:155:C:H5'	22:YA:161:U:OP2	2.19	0.41
22:YA:385:C:O2	32:YP:71:VAL:HG21	2.20	0.41
22:YA:412:A:N6	22:YA:2412:A:O4'	2.53	0.41
22:YA:582:G:H2'	22:YA:583:G:C8	2.55	0.41
22:YA:686:G:N2	22:YA:788:A:H61	2.18	0.41
22:YA:860:U:H5	22:YA:917:A:N1	2.18	0.41
22:YA:928:G:H5"	22:YA:929:G:OP2	2.19	0.41
22:YA:1022:G:H4'	22:YA:1023:U:H5'	2.02	0.41
22:YA:1071:G:H8	22:YA:1071:G:O5'	2.03	0.41
22:YA:1417:C:H1'	22:YA:1586:A:H62	1.84	0.41
22:YA:1651:G:H2'	22:YA:1652:A:O4'	2.20	0.41
22:YA:1764:G:H2'	22:YA:1765:C:C6	2.56	0.41
22:YA:1929:G:C8	22:YA:1929:G:C3'	3.03	0.41
22:YA:2174:C:H2'	22:YA:2175:C:C6	2.55	0.41
22:YA:2271:G:H5"	43:Y0:18:ALA:HB1	2.02	0.41
22:YA:2316:C:H2'	22:YA:2317:C:C6	2.56	0.41
22:YA:2376:A:H2'	22:YA:2377:A:O4'	2.20	0.41
22:YA:2706:G:N2	22:YA:2707:G:H1'	2.35	0.41
22:YA:2860:A:C8	22:YA:2861:G:H1'	2.55	0.41
27:YG:51:ARG:C	27:YG:53:LEU:H	2.28	0.41
29:YI:116:LEU:O	29:YI:118:LYS:N	2.53	0.41
30:YN:58:ASP:HB3	30:YN:95:PRO:HB3	2.02	0.41
30:YN:113:GLY:C	30:YN:114:ARG:O	2.58	0.41
36:YT:134:GLU:OE1	36:YT:135:ALA:N	2.53	0.41
38:YV:16:PRO:HB3	38:YV:97:LYS:O	2.20	0.41
38:YV:29:PRO:C	38:YV:61:VAL:HG22	2.45	0.41
39:YW:1:MET:HG3	39:YW:2:GLU:N	2.36	0.41
39:YW:8:ARG:HG3	39:YW:8:ARG:NH1	2.34	0.41
39:YW:25:ARG:NH1	39:YW:25:ARG:CB	2.79	0.41
43:Y0:15:ASP:OD1	43:Y0:16:SER:N	2.53	0.41
47:Y4:38:LYS:HG3	47:Y4:44:THR:OG1	2.20	0.41
1:QA:56:U:H2'	1:QA:57:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:96:G:C6	1:QA:97:U:C4	3.08	0.41
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.88	0.41
1:QA:770:C:O2'	1:QA:771:G:H5'	2.21	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:96:LEU:O	4:QD:97:LEU:C	2.64	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
5:QE:144:THR:O	5:QE:145:LYS:C	2.63	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
10:QJ:45:ARG:HG3	10:QJ:45:ARG:HH11	1.86	0.41
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41
15:QO:83:GLU:O	15:QO:84:LYS:C	2.63	0.41
22:RA:181:A:H5"	50:R7:36:GLN:NE2	2.35	0.41
22:RA:396:G:H8	22:RA:396:G:O5'	2.03	0.41
22:RA:823:G:H2'	22:RA:824:A:C8	2.56	0.41
22:RA:1258:C:C2	22:RA:1259:G:C8	3.09	0.41
22:RA:1682:G:OP2	22:RA:1699:G:N2	2.46	0.41
22:RA:2401:U:C2'	22:RA:2402:C:H5"	2.47	0.41
22:RA:2665:A:H2'	22:RA:2666:C:O4'	2.19	0.41
24:RD:269:PHE:CD2	24:RD:269:PHE:N	2.88	0.41
25:RE:7:VAL:CG2	25:RE:8:LYS:H	2.11	0.41
26:RF:133:ASN:O	26:RF:134:GLY:C	2.63	0.41
27:RG:53:LEU:CD1	27:RG:87:PRO:HB2	2.51	0.41
30:RN:21:LYS:O	30:RN:22:THR:O	2.39	0.41
32:RP:64:LYS:HG3	51:R8:25:MET:CE	2.50	0.41
33:RQ:34:LEU:HD23	33:RQ:104:PHE:CD1	2.55	0.41
35:RS:53:SER:HA	35:RS:56:LEU:CD2	2.50	0.41
35:RS:64:GLU:O	35:RS:68:GLN:HG3	2.19	0.41
36:RT:134:GLU:O	36:RT:135:ALA:CB	2.69	0.41
37:RU:91:ASP:OD2	37:RU:96:ALA:CA	2.68	0.41
38:RV:44:LYS:C	38:RV:46:VAL:H	2.29	0.41
39:RW:55:ALA:O	39:RW:58:ALA:HB3	2.21	0.41
41:RY:20:TYR:C	41:RY:21:LYS:O	2.62	0.41
42:RZ:94:GLU:HB2	42:RZ:130:PRO:CD	2.45	0.41
43:R0:18:ALA:HB3	43:R0:20:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:R2:61:LEU:HD23	45:R2:64:LEU:HD12	2.03	0.41
1:XA:25:C:H6	1:XA:25:C:O5'	2.02	0.41
1:XA:44:G:N2	1:XA:399:G:C4	2.89	0.41
1:XA:359:U:H2'	1:XA:360:A:C8	2.56	0.41
1:XA:1239:A:H4'	1:XA:1240:U:H5"	2.03	0.41
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.34	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:29:ALA:C	2:XB:31:TYR:H	2.27	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
2:XB:178:ARG:NH2	8:XH:74:PRO:CB	2.80	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.50	0.41
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
5:XE:144:THR:C	5:XE:146:ALA:N	2.75	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
7:XG:141:VAL:O	7:XG:141:VAL:CG1	2.65	0.41
8:XH:21:LYS:O	8:XH:22:GLU:C	2.63	0.41
8:XH:38:ILE:CD1	8:XH:118:VAL:HG12	2.49	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
12:XL:11:VAL:HG21	17:XQ:34:LYS:HD3	2.02	0.41
13:XM:77:ASN:O	13:XM:78:ILE:C	2.62	0.41
14:XN:9:LYS:HB3	14:XN:9:LYS:HE2	1.85	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
18:XR:40:LEU:C	18:XR:42:ARG:N	2.76	0.41
18:XR:76:LEU:HD22	18:XR:76:LEU:N	2.35	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
20:XT:14:LYS:O	20:XT:15:ARG:C	2.62	0.41
22:YA:388:G:C4	22:YA:390:A:C6	3.08	0.41
22:YA:603:A:N1	22:YA:625:G:O2'	2.52	0.41
22:YA:1156:A:C8	37:YU:51:LYS:HD2	2.54	0.41
22:YA:1382:G:H4'	22:YA:1573:G:C2	2.56	0.41
22:YA:1817:G:C6	22:YA:1818:U:C4	3.08	0.41
22:YA:1899:G:H21	22:YA:1902:C:H41	1.65	0.41
22:YA:2494:G:OP1	43:Y0:3:HIS:HB2	2.20	0.41
22:YA:2635:C:H5'	25:YE:77:ILE:CD1	2.51	0.41
22:YA:2688:U:H2'	22:YA:2719:G:N2	2.35	0.41
22:YA:2718:G:O2'	22:YA:2847:U:OP1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:14:ARG:CG	24:YD:15:PHE:N	2.83	0.41
24:YD:145:VAL:CG1	24:YD:146:GLU:N	2.84	0.41
24:YD:158:ALA:O	24:YD:196:VAL:HG11	2.21	0.41
24:YD:269:PHE:CD2	24:YD:269:PHE:N	2.88	0.41
25:YE:35:GLN:HG3	25:YE:37:ARG:NH2	2.35	0.41
25:YE:186:GLY:C	25:YE:188:VAL:H	2.28	0.41
26:YF:34:TRP:CA	32:YP:6:LEU:HD12	2.46	0.41
26:YF:160:ASN:CG	26:YF:163:VAL:HG23	2.45	0.41
28:YH:169:VAL:HG22	28:YH:170:ARG:N	2.26	0.41
30:YN:7:LYS:C	30:YN:9:VAL:H	2.28	0.41
31:YO:112:MET:HE2	31:YO:112:MET:N	2.34	0.41
32:YP:146:VAL:C	32:YP:147:LEU:HD22	2.45	0.41
35:YS:51:ALA:HB3	35:YS:73:LEU:HD23	2.01	0.41
35:YS:83:LYS:HE3	35:YS:84:GLN:CG	2.50	0.41
36:YT:77:PRO:C	36:YT:79:HIS:H	2.29	0.41
38:YV:21:ARG:HD2	38:YV:91:TYR:CE2	2.55	0.41
41:YY:95:LYS:HB2	41:YY:95:LYS:HZ1	1.86	0.41
46:Y3:37:LEU:HD23	46:Y3:37:LEU:N	2.35	0.41
54:QX:2:U:HO2'	54:QX:3:G:H5'	1.82	0.41
1:QA:51:A:N7	1:QA:114:U:O2'	2.52	0.41
1:QA:64:G:H4'	1:QA:65:U:C5'	2.51	0.41
1:QA:149:A:H4'	1:QA:1450:U:C4	2.56	0.41
1:QA:486:U:H2'	1:QA:487:A:C8	2.55	0.41
1:QA:518:C:H2'	1:QA:530:G:N3	2.35	0.41
1:QA:667:G:O2'	15:QO:49:ASP:OD1	2.32	0.41
1:QA:754:C:C5'	15:QO:72:ARG:HH22	2.23	0.41
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.20	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.39	0.41
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.41
2:QB:239:VAL:O	2:QB:240:GLN:C	2.62	0.41
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.41
6:QF:92:LYS:NZ	6:QF:92:LYS:CB	2.84	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.02	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.35	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.02	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.93	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
22:RA:177:G:H5'	22:RA:178:G:C8	2.55	0.41
22:RA:470:A:H2'	22:RA:471:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:618(A):C:OP2	26:RF:103:LYS:HE2	2.20	0.41
22:RA:684:G:N2	22:RA:788:A:OP2	2.40	0.41
22:RA:754:C:C2	22:RA:755:C:C5	3.08	0.41
22:RA:1449:A:H5'	22:RA:1449(A):G:OP2	2.19	0.41
22:RA:2524:G:H2'	22:RA:2525:G:O4'	2.21	0.41
23:RB:42:C:O2'	27:RG:67:LYS:O	2.31	0.41
23:RB:52:A:O2'	23:RB:53:A:N7	2.44	0.41
24:RD:75:ILE:HG21	24:RD:99:ASP:HB2	2.02	0.41
26:RF:183:VAL:HG22	26:RF:184:TYR:N	2.35	0.41
27:RG:34:LEU:HD11	27:RG:99:MET:CE	2.49	0.41
27:RG:135:LEU:N	27:RG:135:LEU:CD1	2.84	0.41
30:RN:94:HIS:C	30:RN:95:PRO:O	2.64	0.41
34:RR:28:LEU:HD12	34:RR:29:LEU:HD12	2.01	0.41
39:RW:1:MET:HG3	39:RW:2:GLU:N	2.35	0.41
41:RY:5:MET:CE	41:RY:32:PRO:HB3	2.51	0.41
42:RZ:20:ARG:O	42:RZ:20:ARG:HD3	2.20	0.41
49:R6:6:ARG:HA	49:R6:6:ARG:NE	2.36	0.41
1:XA:346:G:H1'	1:XA:347:G:H5'	2.03	0.41
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.21	0.41
1:XA:1036:G:H3'	1:XA:1037:C:C6	2.55	0.41
2:XB:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
4:XD:101:LEU:HD12	4:XD:101:LEU:C	2.45	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.19	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.88	0.41
7:XG:126:ASP:OD2	7:XG:126:ASP:N	2.53	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
14:XN:15:LYS:HD3	14:XN:15:LYS:HA	1.86	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.38	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
22:YA:806:C:OP2	32:YP:41:ARG:NE	2.54	0.41
22:YA:2415:G:O3'	32:YP:66:GLY:HA3	2.21	0.41
22:YA:2418:A:C5	22:YA:2419:U:C4	3.09	0.41
22:YA:2509:G:C6	22:YA:2510:C:C4	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:2873:A:N3	34:YR:5:LYS:HA	2.36	0.41
24:YD:134:ARG:H	24:YD:134:ARG:HG3	1.55	0.41
24:YD:145:VAL:O	24:YD:154:LYS:N	2.48	0.41
24:YD:182:LEU:N	24:YD:272:ALA:HB3	2.32	0.41
24:YD:215:LEU:H	24:YD:215:LEU:HG	1.59	0.41
26:YF:129:PHE:O	26:YF:142:TRP:HD1	2.03	0.41
26:YF:176:LEU:HD11	26:YF:180:GLY:O	2.19	0.41
27:YG:51:ARG:NH1	27:YG:51:ARG:CB	2.83	0.41
28:YH:76:VAL:C	28:YH:78:GLY:N	2.78	0.41
30:YN:109:LYS:N	30:YN:109:LYS:CD	2.83	0.41
31:YO:71:ARG:HH11	36:YT:74:ARG:HH21	1.65	0.41
35:YS:88:ASP:CG	35:YS:89:ARG:H	2.28	0.41
37:YU:39:LEU:O	37:YU:42:ALA:N	2.53	0.41
37:YU:75:ASN:O	37:YU:76:TYR:C	2.63	0.41
37:YU:83:LEU:HG	37:YU:88:ILE:HG13	2.03	0.41
37:YU:98:LEU:C	37:YU:100:VAL:N	2.77	0.41
38:YV:44:LYS:C	38:YV:46:VAL:H	2.28	0.41
40:YX:7:VAL:O	40:YX:30:VAL:CG1	2.67	0.41
40:YX:83:VAL:CG1	40:YX:87:GLN:HB2	2.50	0.41
41:YY:41:GLY:O	41:YY:42:VAL:C	2.63	0.41
41:YY:95:LYS:H	41:YY:95:LYS:CD	2.33	0.41
47:Y4:48:ARG:O	47:Y4:49:PHE:C	2.63	0.41
51:Y8:14:VAL:CG1	51:Y8:60:LEU:HD11	2.50	0.41
53:XV:17:C:O2	53:XV:17:C:H2'	2.20	0.41
1:QA:298:A:H3'	1:QA:299:G:C8	2.55	0.41
1:QA:300:A:O2'	1:QA:564:C:N3	2.44	0.41
1:QA:1292:U:OP1	7:QG:41:ARG:NH2	2.53	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:88:VAL:O	4:QD:89:THR:C	2.63	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.85	0.41
15:QO:33:THR:O	15:QO:34:LEU:C	2.63	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.84	0.41
20:QT:50:GLU:O	20:QT:51:GLU:C	2.62	0.41
22:RA:817:C:H2'	22:RA:818:G:C8	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:1115:G:C6	22:RA:1116:C:C4	3.08	0.41
22:RA:1582:C:O2'	22:RA:1586:A:C8	2.70	0.41
22:RA:2050:C:N4	22:RA:2051:A:C6	2.88	0.41
22:RA:2353:G:H2'	22:RA:2354:G:O4'	2.21	0.41
22:RA:2469:A:OP1	22:RA:2469:A:H4'	2.19	0.41
22:RA:2512:C:H2'	22:RA:2513:G:O4'	2.19	0.41
22:RA:2553:G:N2	56:Z6:76:PPU:N1	2.66	0.41
22:RA:2646:C:H2'	22:RA:2647:U:O4'	2.21	0.41
22:RA:2849:U:H4'	22:RA:2868:A:C2	2.55	0.41
23:RB:57:A:H1'	27:RG:29:TRP:HB2	2.01	0.41
24:RD:2:ALA:O	24:RD:3:VAL:CB	2.68	0.41
24:RD:68:LYS:HG3	24:RD:68:LYS:O	2.20	0.41
24:RD:134:ARG:HD3	24:RD:135:PHE:HE2	1.82	0.41
24:RD:158:ALA:O	24:RD:196:VAL:HG11	2.21	0.41
25:RE:111:ARG:NE	25:RE:160:TYR:CE1	2.76	0.41
25:RE:134:ILE:C	25:RE:134:ILE:CD1	2.94	0.41
25:RE:167:VAL:CG1	25:RE:189:PRO:HD3	2.50	0.41
25:RE:197:ILE:HD11	25:RE:199:ARG:NH1	2.30	0.41
26:RF:108:LYS:O	26:RF:109:GLY:C	2.61	0.41
26:RF:160:ASN:CG	26:RF:163:VAL:HG23	2.45	0.41
27:RG:117:PHE:CE1	27:RG:119:GLY:CA	3.03	0.41
27:RG:146:TYR:C	27:RG:148:MET:H	2.28	0.41
31:RO:48:PRO:O	31:RO:50:GLY:N	2.54	0.41
32:RP:55:ARG:HG2	32:RP:55:ARG:NH2	2.36	0.41
32:RP:146:VAL:C	32:RP:147:LEU:HD22	2.45	0.41
34:RR:47:PHE:O	34:RR:51:LEU:HD23	2.21	0.41
38:RV:38:LEU:CD2	38:RV:39:LEU:N	2.82	0.41
41:RY:2:ARG:O	41:RY:3:VAL:O	2.38	0.41
41:RY:13:VAL:O	41:RY:24:VAL:HA	2.20	0.41
41:RY:97:ARG:HH21	41:RY:98:VAL:CG2	2.32	0.41
47:R4:12:ALA:HB1	47:R4:30:GLU:N	2.35	0.41
47:R4:14:ILE:HA	47:R4:31:ILE:O	2.21	0.41
52:R9:1:MET:HE1	52:R9:32:HIS:CD2	2.53	0.41
1:XA:222:U:H2'	1:XA:223:U:C6	2.56	0.41
1:XA:243:A:C2	1:XA:245:C:H2'	2.56	0.41
1:XA:266:G:H5"	1:XA:267:C:C5	2.56	0.41
1:XA:783:C:H2'	1:XA:784:C:H6	1.85	0.41
1:XA:1072:G:C2	1:XA:1104:G:C2	3.08	0.41
1:XA:1216:G:H5"	14:XN:5:ALA:CB	2.50	0.41
1:XA:1297:C:O2'	1:XA:1298:C:P	2.79	0.41
1:XA:1322:C:O2'	1:XA:1323:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:62:ALA:O	2:XB:65:GLY:N	2.53	0.41
2:XB:224:GLN:C	2:XB:226:ARG:H	2.28	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.34	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
4:XD:109:GLY:C	4:XD:111:ALA:N	2.76	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
11:XK:62:GLN:C	11:XK:64:ALA:N	2.76	0.41
12:XL:25:PRO:HD2	12:XL:97:ARG:HH11	1.86	0.41
12:XL:44:THR:HA	12:XL:45:PRO:HD3	1.71	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
22:YA:449:A:H2'	22:YA:450:G:H8	1.86	0.41
22:YA:851:U:H1'	46:Y3:46:ASN:HD21	1.86	0.41
22:YA:1230:C:H2'	22:YA:1231:G:C8	2.56	0.41
22:YA:1846:G:N2	22:YA:1895:C:C2	2.88	0.41
22:YA:2450:A:C2'	53:XV:76:A:C2	3.03	0.41
22:YA:2467:C:OP1	52:Y9:6:SER:OG	2.26	0.41
22:YA:2545:G:N3	22:YA:2565:A:H2	2.18	0.41
22:YA:2636:U:H2'	22:YA:2637:U:C6	2.56	0.41
22:YA:2776:A:C2	22:YA:2778:A:C4	3.08	0.41
22:YA:2816:C:O3'	34:YR:99:LYS:NZ	2.54	0.41
22:YA:2817:G:N2	22:YA:2830:G:H1'	2.35	0.41
24:YD:168:ARG:O	24:YD:169:GLU:HB2	2.19	0.41
25:YE:161:GLY:O	25:YE:162:ALA:HB3	2.20	0.41
26:YF:133:ASN:O	26:YF:134:GLY:C	2.63	0.41
27:YG:95:ARG:CA	27:YG:99:MET:HB3	2.50	0.41
28:YH:53:GLU:OE1	28:YH:53:GLU:HA	2.16	0.41
28:YH:146:ALA:HB2	28:YH:164:TYR:OH	2.21	0.41
30:YN:9:VAL:HB	30:YN:10:GLU:H	1.70	0.41
30:YN:21:LYS:O	30:YN:22:THR:O	2.39	0.41
30:YN:94:HIS:C	30:YN:95:PRO:O	2.64	0.41
32:YP:96:THR:O	32:YP:97:PRO:C	2.63	0.41
35:YS:61:ASN:OD1	35:YS:63:THR:OG1	2.29	0.41
39:YW:14:PRO:HG3	39:YW:101:SER:OG	2.21	0.41
39:YW:68:ARG:O	39:YW:110:LYS:N	2.46	0.41
40:YX:31:HIS:HA	40:YX:32:PRO:HD3	1.88	0.41
40:YX:60:ARG:HA	40:YX:75:ASP:OD2	2.20	0.41
41:YY:5:MET:HE1	41:YY:32:PRO:HB3	2.02	0.41
42:YZ:24:LEU:HD21	42:YZ:86:VAL:HG23	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:Y1:63:ALA:C	44:Y1:65:SER:N	2.78	0.41
46:Y3:37:LEU:HD12	46:Y3:43:ILE:CG2	2.50	0.41
51:Y8:25:MET:HB3	51:Y8:26:LYS:H	1.69	0.41
54:XX:4:C:O2'	54:XX:5:C:H5'	2.20	0.41
1:QA:36:C:O2'	1:QA:501:C:OP1	2.38	0.41
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.21	0.41
1:QA:401:C:H2'	1:QA:402:G:C8	2.56	0.41
1:QA:1098:C:H2'	1:QA:1099:G:O4'	2.20	0.41
2:QB:86:GLU:C	2:QB:88:ALA:N	2.78	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
3:QC:8:ILE:C	3:QC:10:PHE:H	2.29	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
3:QC:55:VAL:HG12	3:QC:55:VAL:O	2.20	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.02	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
13:QM:20:THR:C	13:QM:22:ILE:H	2.28	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
20:QT:32:ALA:O	20:QT:33:ILE:C	2.61	0.41
22:RA:146:G:H2'	22:RA:147:U:O4'	2.21	0.41
22:RA:299:A:N3	22:RA:319:C:O2'	2.52	0.41
22:RA:702:G:C6	22:RA:703:U:C4	3.08	0.41
22:RA:921:G:H4'	22:RA:2269:A:C5	2.54	0.41
22:RA:1169:G:H1	22:RA:1180:C:N4	2.16	0.41
22:RA:1638:C:H5"	22:RA:2710:C:O2'	2.20	0.41
22:RA:1845:G:OP1	24:RD:258:LYS:NZ	2.43	0.41
22:RA:1952:A:C6	22:RA:1953:A:N1	2.88	0.41
22:RA:2250:G:C4	33:RQ:82:ARG:HG3	2.55	0.41
22:RA:2441:C:H2'	22:RA:2442:C:H6	1.85	0.41
22:RA:2527:C:H5"	52:R9:30:PRO:HB2	2.01	0.41
22:RA:2529:G:O6	52:R9:31:LYS:NZ	2.50	0.41
25:RE:93:VAL:HG21	25:RE:180:ASN:HA	2.03	0.41
25:RE:186:GLY:C	25:RE:188:VAL:H	2.28	0.41
30:RN:133:GLN:CB	30:RN:135:PRO:HD3	2.42	0.41
32:RP:42:SER:O	32:RP:43:GLY:C	2.63	0.41
33:RQ:80:GLU:C	33:RQ:81:VAL:CG1	2.89	0.41
33:RQ:139:GLU:CG	33:RQ:140:ALA:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RT:76:PHE:HA	36:RT:77:PRO:HD3	1.75	0.41
37:RU:33:ARG:O	37:RU:37:GLU:HB2	2.21	0.41
37:RU:76:TYR:O	37:RU:80:ILE:HG12	2.21	0.41
37:RU:89:GLU:C	37:RU:90:VAL:O	2.62	0.41
38:RV:22:VAL:CG1	38:RV:23:GLU:H	2.32	0.41
44:R1:63:ALA:C	44:R1:65:SER:N	2.78	0.41
45:R2:27:GLU:N	45:R2:27:GLU:CD	2.77	0.41
45:R2:27:GLU:CD	45:R2:27:GLU:H	2.17	0.41
45:R2:41:ILE:HD12	45:R2:43:GLN:N	2.35	0.41
45:R2:48:HIS:C	45:R2:50:ILE:N	2.76	0.41
51:R8:14:VAL:CG1	51:R8:60:LEU:HD11	2.50	0.41
1:XA:540:G:N2	1:XA:541:G:H1'	2.35	0.41
1:XA:662:G:H2'	1:XA:663:A:H8	1.84	0.41
1:XA:718:G:H1'	11:XK:116:HIS:HA	2.03	0.41
1:XA:818:G:O2'	1:XA:820:U:OP2	2.35	0.41
1:XA:1220:G:O3'	19:XS:36:ARG:HD3	2.21	0.41
1:XA:1298:C:H4'	1:XA:1299:A:C8	2.55	0.41
2:XB:172:ILE:H	2:XB:172:ILE:CD1	2.18	0.41
2:XB:172:ILE:O	2:XB:173:ALA:C	2.64	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
8:XH:133:LEU:C	8:XH:133:LEU:HD23	2.46	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:74:ALA:C	11:XK:76:GLY:H	2.29	0.41
13:XM:3:ARG:NH2	27:YG:113:ARG:HH21	2.18	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
13:XM:119:GLY:O	13:XM:120:LYS:C	2.63	0.41
14:XN:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
15:XO:83:GLU:O	15:XO:84:LYS:C	2.63	0.41
16:XP:1:MET:O	16:XP:2:VAL:C	2.63	0.41
16:XP:59:TRP:O	16:XP:60:LEU:C	2.63	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
20:XT:47:GLY:C	20:XT:49:ALA:N	2.72	0.41
22:YA:667:U:H2'	22:YA:668:G:O4'	2.20	0.41
22:YA:738:G:C6	22:YA:739:G:C2	3.09	0.41
22:YA:1087:G:C5	22:YA:1089:G:H1'	2.56	0.41
22:YA:1349:A:N6	22:YA:1598:C:H42	2.18	0.41
22:YA:1449:A:O2'	22:YA:1530:G:N2	2.35	0.41
22:YA:1514:U:C4	22:YA:1515:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1769:G:O2'	22:YA:1958:C:OP1	2.32	0.41
22:YA:1949:G:H2'	22:YA:1950:G:O4'	2.20	0.41
25:YE:63:LEU:CD1	25:YE:64:LYS:N	2.71	0.41
27:YG:67:LYS:NZ	47:Y4:6:HIS:CD2	2.89	0.41
27:YG:146:TYR:C	27:YG:148:MET:H	2.28	0.41
28:YH:86:GLU:HG3	28:YH:165:ALA:CA	2.49	0.41
30:YN:62:VAL:CG1	30:YN:66:LYS:HB2	2.51	0.41
33:YQ:60:ARG:HA	42:YZ:178:GLU:C	2.45	0.41
34:YR:55:ALA:HA	34:YR:80:PHE:CE2	2.55	0.41
35:YS:93:LYS:HE3	35:YS:93:LYS:HB2	1.93	0.41
36:YT:28:VAL:HG23	36:YT:87:ASP:O	2.21	0.41
37:YU:92:ARG:O	37:YU:92:ARG:CG	2.54	0.41
37:YU:92:ARG:HD2	38:YV:11:GLN:CD	2.43	0.41
38:YV:38:LEU:O	38:YV:51:VAL:HA	2.21	0.41
42:YZ:5:LEU:O	42:YZ:6:LYS:HB2	2.20	0.41
42:YZ:158:PRO:HG2	42:YZ:161:VAL:HG21	2.03	0.41
44:Y1:86:SER:O	44:Y1:89:GLU:HB2	2.21	0.41
50:Y7:24:THR:HB	50:Y7:25:PRO:HD2	2.03	0.41
51:Y8:53:PRO:C	51:Y8:55:ALA:N	2.76	0.41
53:QV:21:A:N6	53:QV:46:G:H2'	2.36	0.41
54:XX:4:C:C2	55:XY:37:1MG:C2	3.08	0.41
1:QA:190:G:O2'	1:QA:191(A):G:P	2.78	0.41
1:QA:193:C:H5'	20:QT:57:ARG:HG3	2.02	0.41
1:QA:299:G:H2'	1:QA:300:A:C8	2.56	0.41
1:QA:596:C:N4	1:QA:644:G:H1	2.18	0.41
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.55	0.41
1:QA:1228:C:OP1	13:QM:115:LYS:HE3	2.20	0.41
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.36	0.41
2:QB:97:TRP:O	2:QB:98:LEU:C	2.64	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
3:QC:120:VAL:O	3:QC:121:ALA:C	2.63	0.41
4:QD:199:ASN:C	4:QD:201:GLN:N	2.79	0.41
5:QE:10:MET:CE	5:QE:13:ILE:HD13	2.51	0.41
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.41
7:QG:21:VAL:O	7:QG:22:LEU:C	2.62	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.41
11:QK:74:ALA:C	11:QK:76:GLY:H	2.29	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
13:QM:105:THR:O	13:QM:106:ASN:C	2.64	0.41
15:QO:13:GLN:C	15:QO:15:PHE:N	2.79	0.41
15:QO:25:THR:CG2	15:QO:70:LEU:HB2	2.48	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
18:QR:67:ALA:O	18:QR:68:LYS:C	2.62	0.41
22:RA:110:G:C2	22:RA:111:A:C8	3.09	0.41
22:RA:297:C:OP1	41:RY:85:VAL:HG21	2.21	0.41
22:RA:409:C:H2'	22:RA:410:G:H8	1.85	0.41
22:RA:596:G:C6	22:RA:597:U:C4	3.09	0.41
22:RA:805:G:O4'	32:RP:38:GLN:OE1	2.38	0.41
22:RA:910:A:C6	22:RA:911:A:C6	3.09	0.41
22:RA:1287:A:C5	22:RA:1288:U:C4	3.07	0.41
22:RA:1444(A):A:O2'	22:RA:1460:A:N3	2.52	0.41
22:RA:1849:G:C2	22:RA:1850:G:C5	3.09	0.41
22:RA:2116:G:H1	22:RA:2162:G:P	2.44	0.41
22:RA:2635:C:H5"	25:RE:78:LEU:HA	2.02	0.41
22:RA:2662:A:O5'	22:RA:2662:A:H8	2.04	0.41
22:RA:2712:U:O2'	22:RA:2712(A):A:P	2.78	0.41
23:RB:43:C:O5'	27:RG:67:LYS:HE3	2.20	0.41
23:RB:55:U:C4'	27:RG:28:VAL:HG21	2.46	0.41
25:RE:9:VAL:HB	25:RE:10:GLY:H	1.71	0.41
25:RE:71:GLY:O	25:RE:72:VAL:C	2.63	0.41
27:RG:95:ARG:HA	27:RG:99:MET:HB3	2.03	0.41
28:RH:45:VAL:O	28:RH:45:VAL:CG1	2.69	0.41
28:RH:137:ASP:HB2	28:RH:140:LYS:CE	2.51	0.41
31:RO:2:ILE:HG12	31:RO:8:LEU:HD11	2.02	0.41
31:RO:10:VAL:HG21	31:RO:16:ALA:HB3	2.03	0.41
31:RO:111:PHE:N	31:RO:112:MET:HE2	2.36	0.41
33:RQ:20:ALA:HB1	33:RQ:99:PRO:CG	2.51	0.41
34:RR:55:ALA:O	34:RR:58:GLY:HA3	2.21	0.41
35:RS:15:ARG:O	35:RS:19:LYS:HD3	2.20	0.41
35:RS:66:ALA:HA	35:RS:69:VAL:CG1	2.51	0.41
37:RU:6:THR:HG21	37:RU:10:ARG:CZ	2.50	0.41
39:RW:17:VAL:C	39:RW:19:LEU:N	2.76	0.41
40:RX:83:VAL:CG1	40:RX:87:GLN:HB2	2.50	0.41
41:RY:43:ASN:O	41:RY:43:ASN:OD1	2.39	0.41
41:RY:86:ARG:HD2	41:RY:86:ARG:HA	1.92	0.41
43:R0:26:TYR:HB2	43:R0:29:GLN:OE1	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:18:ILE:O	44:R1:18:ILE:HG22	2.21	0.41
47:R4:48:ARG:O	47:R4:49:PHE:C	2.63	0.41
49:R6:8:LYS:O	49:R6:9:LEU:HB2	2.21	0.41
1:XA:113:G:H2'	1:XA:114:U:O4'	2.20	0.41
1:XA:477:G:H2'	1:XA:478:A:C8	2.56	0.41
1:XA:501:C:H2'	1:XA:502:G:H8	1.86	0.41
1:XA:504:C:C2	1:XA:542:G:C2	3.08	0.41
1:XA:538:G:H5"	12:XL:114:LYS:HB2	2.02	0.41
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.86	0.41
1:XA:1392:G:H21	1:XA:1502:A:H8	1.67	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
15:XO:33:THR:O	15:XO:34:LEU:C	2.63	0.41
15:XO:69:TYR:CZ	15:XO:73:GLU:HG3	2.55	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:H	1.85	0.41
17:XQ:52:LYS:O	17:XQ:53:LEU:C	2.62	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
20:XT:28:ALA:O	20:XT:29:LYS:C	2.64	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
22:YA:330:A:O2'	22:YA:331:A:H8	2.03	0.41
22:YA:608:A:C4	22:YA:621:A:C6	3.09	0.41
22:YA:747:U:N1	48:Y5:2:ALA:HB3	2.36	0.41
22:YA:817:C:H4'	22:YA:932:G:C5	2.56	0.41
22:YA:956:G:N2	22:YA:959:A:H3'	2.36	0.41
22:YA:1449:A:H5'	22:YA:1449(A):G:OP2	2.20	0.41
22:YA:1528:A:H2	22:YA:1542:G:C2	2.38	0.41
22:YA:2392:A:C2	22:YA:2429:G:N3	2.89	0.41
24:YD:117:VAL:HG22	24:YD:118:VAL:N	2.35	0.41
24:YD:197:GLY:O	24:YD:198:ASN:HB3	2.21	0.41
25:YE:24:THR:HB	25:YE:184:VAL:HG23	2.02	0.41
27:YG:22:ARG:HH22	27:YG:175:LEU:HD21	1.85	0.41
27:YG:47:LYS:HE3	27:YG:47:LYS:HB2	1.80	0.41
31:YO:10:VAL:HG21	31:YO:16:ALA:HB3	2.03	0.41
31:YO:48:PRO:O	31:YO:50:GLY:N	2.54	0.41
32:YP:101:VAL:O	32:YP:103:ALA:N	2.53	0.41
34:YR:29:LEU:HD11	34:YR:48:VAL:CG1	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YS:53:SER:HA	35:YS:56:LEU:CD2	2.50	0.41
35:YS:66:ALA:HA	35:YS:69:VAL:CG1	2.51	0.41
36:YT:39:ARG:HG2	36:YT:40:THR:N	2.25	0.41
37:YU:57:PHE:O	37:YU:60:LEU:N	2.54	0.41
37:YU:89:GLU:C	37:YU:90:VAL:O	2.62	0.41
41:YY:97:ARG:NE	41:YY:97:ARG:C	2.78	0.41
45:Y2:41:ILE:HD12	45:Y2:43:GLN:N	2.35	0.41
45:Y2:53:LEU:O	45:Y2:57:ILE:HG13	2.21	0.41
53:QV:37:A:N3	54:QX:1:A:C2	2.89	0.41
1:QA:15:G:C2	1:QA:16:A:C4	3.08	0.41
1:QA:198:G:H2'	1:QA:199:G:H8	1.86	0.41
1:QA:420:U:H4'	1:QA:421:U:H5	1.85	0.41
1:QA:475:G:H2'	1:QA:476:G:H8	1.86	0.41
1:QA:748:C:H1'	1:QA:749:C:H5	1.86	0.41
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.54	0.41
1:QA:1080:A:H4'	5:QE:16:THR:HB	2.03	0.41
1:QA:1157:A:O2'	1:QA:1158:C:H5"	2.21	0.41
1:QA:1329:A:H5"	13:QM:29:ARG:HG3	2.03	0.41
1:QA:1352:C:OP1	21:QU:3:LYS:NZ	2.49	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:60:ASP:C	2:QB:62:ALA:H	2.28	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.03	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
4:QD:107:ARG:C	4:QD:109:GLY:N	2.79	0.41
4:QD:202:LEU:C	4:QD:204:ILE:N	2.78	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.41
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.41
5:QE:68:GLU:O	5:QE:68:GLU:CG	2.68	0.41
5:QE:128:PRO:O	5:QE:129:ILE:C	2.63	0.41
6:QF:3:ARG:HB3	6:QF:93:SER:CB	2.47	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
9:QI:91:ASP:C	9:QI:93:ARG:H	2.29	0.41
10:QJ:8:LEU:HD11	10:QJ:23:ILE:CD1	2.37	0.41
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
12:QL:62:SER:C	12:QL:64:TYR:N	2.79	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
14:QN:6:LEU:HD23	14:QN:6:LEU:C	2.45	0.41
14:QN:15:LYS:O	14:QN:16:PHE:C	2.63	0.41
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
18:QR:64:ARG:C	18:QR:66:LEU:N	2.79	0.41
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.41
22:RA:65:C:O2'	22:RA:456:C:N3	2.47	0.41
22:RA:181:A:H1'	22:RA:435:C:H5'	2.02	0.41
22:RA:196:A:N3	22:RA:196:A:H2'	2.34	0.41
22:RA:225:A:N6	22:RA:226:G:C2	2.89	0.41
22:RA:270(T):G:C5'	44:R1:97:LEU:HD22	2.50	0.41
22:RA:301:G:C6	22:RA:317:G:C6	3.09	0.41
22:RA:619:G:H3'	22:RA:620:G:H21	1.84	0.41
22:RA:671:C:H2'	22:RA:672:C:C6	2.55	0.41
22:RA:686:G:C2	50:R7:11:LYS:HE3	2.56	0.41
22:RA:868:U:C4	22:RA:869:G:N7	2.88	0.41
22:RA:1263:U:OP1	48:R5:16:ARG:NE	2.54	0.41
22:RA:1286:A:O2'	22:RA:1288:U:P	2.79	0.41
22:RA:1408:C:C2	22:RA:1595:G:N2	2.89	0.41
22:RA:1569:A:H2'	22:RA:1570:A:O4'	2.20	0.41
22:RA:1658:C:H2'	22:RA:1659:U:C6	2.56	0.41
22:RA:2283:C:OP1	49:R6:5:VAL:HG13	2.20	0.41
22:RA:2293:C:H2'	22:RA:2294:C:O4'	2.21	0.41
22:RA:2311:A:C1'	27:RG:82:LEU:HD11	2.50	0.41
22:RA:2481:G:O2'	22:RA:2482:G:P	2.78	0.41
22:RA:2515:C:O2	22:RA:2570:G:C2	2.73	0.41
22:RA:2629:A:O2'	22:RA:2630:G:H5"	2.21	0.41
22:RA:2633:G:H2'	22:RA:2634:G:O4'	2.21	0.41
24:RD:147:LEU:CD1	24:RD:155:LEU:HD21	2.51	0.41
24:RD:153:ALA:C	24:RD:154:LYS:HG3	2.46	0.41
24:RD:197:GLY:O	24:RD:198:ASN:HB3	2.21	0.41
24:RD:272:ALA:HB1	24:RD:273:ARG:H	1.58	0.41
25:RE:4:ILE:HG22	25:RE:198:VAL:HB	2.02	0.41
25:RE:179:GLU:C	25:RE:181:LEU:H	2.28	0.41
26:RF:28:ILE:HD12	26:RF:28:ILE:C	2.46	0.41
26:RF:46:ARG:CG	26:RF:46:ARG:NH1	2.72	0.41
26:RF:150:GLY:C	26:RF:152:GLU:H	2.29	0.41
27:RG:7:LEU:CD2	27:RG:176:LEU:HD22	2.45	0.41
27:RG:47:LYS:HB2	27:RG:47:LYS:HE3	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RG:51:ARG:C	27:RG:53:LEU:H	2.29	0.41
27:RG:61:ALA:CB	27:RG:67:LYS:HA	2.50	0.41
27:RG:67:LYS:NZ	47:R4:6:HIS:CD2	2.89	0.41
27:RG:77:ILE:H	27:RG:82:LEU:HB2	1.85	0.41
27:RG:136:ARG:O	27:RG:137:GLU:C	2.61	0.41
28:RH:145:ALA:O	28:RH:148:ILE:HB	2.21	0.41
29:RI:29:TYR:C	29:RI:32:PRO:HD2	2.46	0.41
30:RN:10:GLU:OE2	30:RN:11:PRO:HD2	2.21	0.41
30:RN:56:ASN:ND2	30:RN:126:PRO:N	2.69	0.41
30:RN:58:ASP:HB3	30:RN:95:PRO:HB3	2.02	0.41
31:RO:20:MET:O	31:RO:41:ALA:CB	2.67	0.41
32:RP:9:ASN:HB2	32:RP:10:PRO:HD2	2.03	0.41
32:RP:66:GLY:O	32:RP:67:MET:CB	2.63	0.41
32:RP:101:VAL:HG23	32:RP:106:LEU:HB3	2.03	0.41
33:RQ:39:PRO:HA	33:RQ:97:VAL:O	2.21	0.41
33:RQ:139:GLU:HG2	33:RQ:140:ALA:N	2.36	0.41
34:RR:94:TYR:N	34:RR:94:TYR:CD2	2.87	0.41
36:RT:28:VAL:HG23	36:RT:87:ASP:O	2.21	0.41
36:RT:67:SER:O	36:RT:68:TYR:C	2.63	0.41
37:RU:57:PHE:O	37:RU:60:LEU:N	2.54	0.41
37:RU:83:LEU:CD1	37:RU:113:ALA:HB2	2.50	0.41
39:RW:28:SER:C	39:RW:30:GLU:H	2.28	0.41
39:RW:50:VAL:O	39:RW:53:SER:N	2.50	0.41
40:RX:53:LYS:HZ1	40:RX:55:ASN:CG	2.29	0.41
42:RZ:129:SER:C	42:RZ:131:ARG:H	2.29	0.41
43:R0:24:LYS:N	43:R0:37:LEU:O	2.40	0.41
44:R1:94:LEU:HA	44:R1:94:LEU:HD23	1.81	0.41
50:R7:8:ASN:OD1	50:R7:8:ASN:C	2.64	0.41
50:R7:24:THR:HB	50:R7:25:PRO:HD2	2.03	0.41
51:R8:3:LYS:HE2	51:R8:3:LYS:HB3	1.82	0.41
1:XA:35:G:N2	1:XA:550:G:N3	2.69	0.41
1:XA:150:C:O5'	1:XA:150:C:H6	2.04	0.41
1:XA:346:G:N2	1:XA:347:G:C6	2.89	0.41
1:XA:372:C:N4	1:XA:387:U:C2	2.88	0.41
1:XA:403:C:H4'	4:XD:122:ARG:NH2	2.35	0.41
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.36	0.41
1:XA:518:C:O2	12:XL:50:SER:N	2.53	0.41
1:XA:545:C:H5"	4:XD:72:GLU:HG2	2.02	0.41
1:XA:545:C:O2'	1:XA:549:C:OP1	2.39	0.41
1:XA:574:A:N3	1:XA:883:C:H1'	2.36	0.41
1:XA:575:G:O2'	1:XA:821:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:680:C:H2'	1:XA:681:C:C6	2.56	0.41
1:XA:877:C:OP1	8:XH:88:LYS:HD3	2.20	0.41
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.62	0.41
1:XA:1152:A:P	10:XJ:68:HIS:HE2	2.40	0.41
1:XA:1153:C:N3	1:XA:1154:G:C8	2.89	0.41
1:XA:1164:G:C6	1:XA:1165:C:C4	3.09	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
2:XB:213:LEU:C	2:XB:213:LEU:HD23	2.46	0.41
4:XD:15:GLU:N	4:XD:15:GLU:OE1	2.54	0.41
7:XG:62:PHE:C	7:XG:64:GLN:N	2.79	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
8:XH:26:VAL:O	8:XH:27:PRO:C	2.63	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	0.41
12:XL:22:SER:C	12:XL:24:VAL:N	2.79	0.41
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.85	0.41
13:XM:65:LYS:HE3	47:Y4:50:VAL:HG13	2.03	0.41
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
14:XN:15:LYS:O	14:XN:16:PHE:C	2.63	0.41
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.41
19:XS:10:PHE:CD2	19:XS:10:PHE:C	2.98	0.41
22:YA:142:G:H2'	22:YA:143:C:C6	2.56	0.41
22:YA:251:A:C5	22:YA:252:G:H1'	2.55	0.41
22:YA:299:A:C5	22:YA:322:A:C2	3.09	0.41
22:YA:311:A:C6	22:YA:328:U:C4	3.08	0.41
22:YA:353:G:H2'	22:YA:354:G:C8	2.54	0.41
22:YA:364:C:H5"	22:YA:364:C:H6	1.86	0.41
22:YA:445:C:H2'	22:YA:446:G:O4'	2.21	0.41
22:YA:520:G:H2'	22:YA:521:G:C8	2.55	0.41
22:YA:534:U:H2'	22:YA:535:C:C6	2.56	0.41
22:YA:581:C:H2'	22:YA:582:G:C8	2.56	0.41
22:YA:695:G:C6	22:YA:768:G:C6	3.08	0.41
22:YA:910:A:C5	33:YQ:13:GLN:HG3	2.56	0.41
22:YA:995:C:C4	37:YU:57:PHE:CZ	3.08	0.41
22:YA:1027:A:C6	22:YA:1126:A:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:YA:1184:G:C5	22:YA:1185:C:C5	3.09	0.41
22:YA:1469:A:C6	22:YA:1470:G:C5	3.09	0.41
22:YA:1815:A:C8	22:YA:1817:G:C4	3.09	0.41
22:YA:2126:A:H1'	22:YA:2127:G:OP2	2.21	0.41
22:YA:2230:G:C5	22:YA:2231:C:C5	3.08	0.41
22:YA:2392:A:H1'	32:YP:60:MET:CG	2.50	0.41
22:YA:2404:C:O3'	32:YP:77:ARG:NH2	2.53	0.41
22:YA:2520:C:C6	22:YA:2567:G:H1'	2.55	0.41
22:YA:2522:U:O2'	22:YA:2647:U:OP1	2.23	0.41
22:YA:2702:U:H6	22:YA:2702:U:OP1	2.03	0.41
22:YA:2731:G:C6	22:YA:2732:G:O6	2.74	0.41
22:YA:2776:A:C6	22:YA:2778:A:C6	3.09	0.41
23:YB:89(A):A:C5	23:YB:90:C:H1'	2.56	0.41
24:YD:68:LYS:O	24:YD:68:LYS:HG3	2.20	0.41
24:YD:98:VAL:C	24:YD:100:GLY:N	2.79	0.41
25:YE:179:GLU:C	25:YE:181:LEU:H	2.28	0.41
26:YF:28:ILE:HD12	26:YF:28:ILE:C	2.46	0.41
26:YF:59:TYR:HB3	26:YF:60:SER:H	1.70	0.41
26:YF:68:LYS:O	26:YF:69:HIS:HB2	2.21	0.41
27:YG:18:GLU:HA	27:YG:18:GLU:OE2	2.21	0.41
27:YG:34:LEU:HD11	27:YG:99:MET:CE	2.49	0.41
27:YG:53:LEU:CD1	27:YG:87:PRO:HB2	2.51	0.41
28:YH:45:VAL:O	28:YH:45:VAL:CG1	2.69	0.41
28:YH:137:ASP:HB2	28:YH:140:LYS:CE	2.51	0.41
28:YH:145:ALA:O	28:YH:148:ILE:HB	2.21	0.41
28:YH:146:ALA:HA	28:YH:164:TYR:OH	2.21	0.41
29:YI:97:ILE:HD12	29:YI:140:LEU:HD11	2.03	0.41
30:YN:1:MET:O	30:YN:1:MET:HG3	2.19	0.41
31:YO:31:LYS:HA	31:YO:31:LYS:HD3	1.92	0.41
32:YP:18:ARG:HD2	32:YP:27:HIS:CD2	2.56	0.41
32:YP:101:VAL:HG23	32:YP:106:LEU:HB3	2.03	0.41
33:YQ:139:GLU:CD	33:YQ:139:GLU:H	2.28	0.41
34:YR:55:ALA:O	34:YR:58:GLY:HA3	2.21	0.41
36:YT:76:PHE:HA	36:YT:77:PRO:HD3	1.75	0.41
37:YU:91:ASP:OD2	37:YU:96:ALA:CA	2.69	0.41
38:YV:38:LEU:CD1	38:YV:55:ALA:CB	2.98	0.41
39:YW:1:MET:CB	39:YW:64:MET:HE3	2.48	0.41
39:YW:28:SER:C	39:YW:30:GLU:H	2.28	0.41
39:YW:55:ALA:O	39:YW:58:ALA:HB3	2.21	0.41
41:YY:2:ARG:O	41:YY:3:VAL:O	2.38	0.41
41:YY:5:MET:CE	41:YY:32:PRO:HB3	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YY:13:VAL:O	41:YY:24:VAL:HA	2.20	0.41
42:YZ:20:ARG:HD3	42:YZ:20:ARG:O	2.20	0.41
42:YZ:95:PRO:HB2	42:YZ:127:LYS:HG2	2.02	0.41
42:YZ:157:LEU:HA	42:YZ:158:PRO:HD2	1.95	0.41
43:Y0:21:LEU:HD11	43:Y0:41:ARG:CZ	2.51	0.41
45:Y2:61:LEU:HD23	45:Y2:61:LEU:HA	1.85	0.41
47:Y4:60:GLN:HB3	47:Y4:61:ARG:H	1.56	0.41
49:Y6:8:LYS:O	49:Y6:9:LEU:HB2	2.21	0.41
49:Y6:27:LYS:NZ	49:Y6:27:LYS:CB	2.73	0.41
49:Y6:50:ARG:NH1	49:Y6:50:ARG:HG2	2.36	0.41
50:Y7:8:ASN:OD1	50:Y7:8:ASN:C	2.64	0.41
52:Y9:2:LYS:HD2	52:Y9:2:LYS:HA	1.96	0.41
54:XX:6:C:H2'	54:XX:7:A:O5'	2.21	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.41
4:QD:14:ARG:HA	4:QD:14:ARG:HD3	1.89	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
4:QD:29:PRO:HD2	4:QD:30:LYS:HE2	2.03	0.41
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.41
7:QG:96:GLN:O	7:QG:97:GLN:C	2.61	0.41
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.41
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.41
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.41
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.21	0.41
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.56	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.41
14:QN:26:ARG:HB3	14:QN:27:CYS:H	1.64	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
15:QO:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.41
16:QP:59:TRP:O	16:QP:60:LEU:C	2.63	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
20:QT:97:ALA:C	20:QT:99:LEU:HD13	2.46	0.41
22:RA:94:G:N1	22:RA:95:G:C5	2.89	0.41
22:RA:328:U:H4'	41:RY:68:HIS:CG	2.56	0.41
22:RA:445:C:O2'	22:RA:449:A:N3	2.49	0.41
22:RA:468:G:H2'	22:RA:469:G:O4'	2.21	0.41
22:RA:550:G:O2'	22:RA:1220:A:N3	2.48	0.41
22:RA:626:U:H5'	22:RA:627:A:H5'	2.03	0.41
22:RA:686:G:O6	50:R7:12:ARG:HG3	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:RA:765:G:H2'	22:RA:766:C:C6	2.56	0.41
22:RA:1191:G:H2'	22:RA:1192:G:O4'	2.21	0.41
22:RA:1303:G:C6	22:RA:1304:C:C4	3.09	0.41
22:RA:2335:A:C8	22:RA:2337:G:C5	3.09	0.41
22:RA:2637:U:H5"	25:RE:82:ARG:NH2	2.36	0.41
24:RD:31:LYS:O	24:RD:32:SER:O	2.39	0.41
24:RD:145:VAL:CG1	24:RD:146:GLU:N	2.83	0.41
24:RD:177:LEU:C	24:RD:179:SER:N	2.79	0.41
24:RD:263:ARG:NH1	24:RD:263:ARG:CB	2.75	0.41
25:RE:147:PRO:HB2	25:RE:149:ARG:HG2	2.03	0.41
25:RE:161:GLY:O	25:RE:162:ALA:HB3	2.20	0.41
27:RG:95:ARG:CA	27:RG:99:MET:HB3	2.50	0.41
34:RR:22:ARG:O	34:RR:26:LYS:HG3	2.21	0.41
35:RS:6:ALA:O	35:RS:10:ARG:HD3	2.21	0.41
35:RS:100:ALA:CA	35:RS:103:GLU:HG2	2.49	0.41
35:RS:106:ARG:HB2	35:RS:106:ARG:CZ	2.49	0.41
36:RT:39:ARG:HG2	36:RT:40:THR:N	2.25	0.41
39:RW:14:PRO:HG3	39:RW:101:SER:OG	2.21	0.41
42:RZ:15:PRO:HA	42:RZ:18:LEU:HD13	2.03	0.41
47:R4:63:TYR:O	47:R4:65:ASP:N	2.54	0.41
51:R8:64:TYR:HB3	51:R8:65:GLU:H	1.40	0.41
1:XA:300:A:H1'	1:XA:565:U:O2	2.21	0.41
1:XA:1054:C:C4	55:XY:34:C:O4'	2.74	0.41
1:XA:1129:C:C4'	1:XA:1130:A:H5'	2.47	0.41
1:XA:1234:C:H2'	1:XA:1235:U:C6	2.55	0.41
1:XA:1520:G:C2	1:XA:1521:G:C8	3.08	0.41
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.41
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.41
4:XD:165:MET:HE3	4:XD:165:MET:CA	2.44	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
6:XF:101:ALA:HA	18:XR:28:GLU:CD	2.45	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41
9:XI:85:LEU:HD12	9:XI:85:LEU:C	2.45	0.41
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.41
17:XQ:89:LEU:HD23	17:XQ:89:LEU:HA	1.93	0.41
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.41
22:YA:108:U:C2	22:YA:109:G:C8	3.09	0.41
22:YA:270(T):G:C6	22:YA:270(U):C:C4	3.08	0.41
22:YA:278:A:H4'	22:YA:279:C:OP1	2.21	0.41
22:YA:449:A:H2'	22:YA:450:G:C8	2.56	0.41
22:YA:479:A:O2'	22:YA:481:G:H5'	2.21	0.41
22:YA:863:A:H2'	22:YA:864:G:H8	1.85	0.41
22:YA:1410:G:C2	22:YA:1593:G:C2	3.09	0.41
22:YA:1655:A:H2'	22:YA:1656:C:O4'	2.21	0.41
22:YA:2238:G:H5'	22:YA:2239:G:N7	2.36	0.41
22:YA:2561:A:H2'	22:YA:2562:U:O4'	2.20	0.41
22:YA:2712:U:H1'	22:YA:2712(A):A:N7	2.35	0.41
23:YB:105:G:C2	23:YB:106:G:C8	3.08	0.41
24:YD:13:ARG:HG2	24:YD:13:ARG:O	2.20	0.41
24:YD:147:LEU:CD1	24:YD:155:LEU:HD21	2.51	0.41
26:YF:116:ASP:OD2	32:YP:1:MET:N	2.44	0.41
28:YH:20:ALA:HB3	28:YH:23:ARG:HG2	2.03	0.41
28:YH:65:HIS:O	28:YH:66:GLY:C	2.63	0.41
29:YI:93:THR:O	29:YI:97:ILE:HG12	2.21	0.41
30:YN:10:GLU:OE2	30:YN:11:PRO:HD2	2.21	0.41
30:YN:61:ARG:C	30:YN:62:VAL:CG2	2.93	0.41
30:YN:101:HIS:HD2	30:YN:102:ALA:N	2.19	0.41
32:YP:84:ASN:HB2	32:YP:87:ASP:OD2	2.21	0.41
35:YS:89:ARG:HG2	35:YS:89:ARG:NH1	2.36	0.41
39:YW:71:VAL:HA	39:YW:107:LEU:HD12	2.02	0.41
42:YZ:108:PRO:HG3	42:YZ:117:LEU:HD22	2.03	0.41
44:Y1:85:LEU:N	44:Y1:85:LEU:CD2	2.84	0.41
44:Y1:91:LYS:HG3	44:Y1:92:LYS:N	2.32	0.41
45:Y2:11:GLU:HA	45:Y2:14:ARG:HD2	2.02	0.41
47:Y4:63:TYR:O	47:Y4:65:ASP:N	2.53	0.41
49:Y6:6:ARG:HA	49:Y6:6:ARG:NE	2.36	0.41
51:Y8:40:GLU:O	51:Y8:42:ARG:N	2.54	0.41
53:XV:16:C:O2'	53:XV:17:C:OP1	2.39	0.41
53:XV:23:C:H2'	53:XV:24:U:C6	2.55	0.41
54:XX:4:C:N3	55:XY:37:1MG:C2	2.89	0.41
1:QA:360:A:C6	1:QA:361:G:C6	3.09	0.40
1:QA:922:G:C6	1:QA:923:A:C6	3.10	0.40
1:QA:978:A:O2'	1:QA:1322:C:N3	2.47	0.40
1:QA:1178:G:C8	1:QA:1180:A:OP2	2.75	0.40
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.54	0.40
1:QA:1516:G:H2'	1:QA:1518:A:OP2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	0.40
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.40
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.40
6:QF:53:ALA:C	6:QF:55:ASP:N	2.79	0.40
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.01	0.40
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
22:RA:303:U:H2'	22:RA:304:G:C8	2.56	0.40
22:RA:397:G:H1'	22:RA:2231:C:O2'	2.21	0.40
22:RA:443:A:OP1	26:RF:46:ARG:HB2	2.21	0.40
22:RA:871:U:H5'	22:RA:872:A:OP1	2.21	0.40
22:RA:900:A:C5	22:RA:901:A:C5	3.09	0.40
22:RA:1286:A:O2'	22:RA:1288:U:OP2	2.28	0.40
22:RA:1819:A:H3'	24:RD:178:PRO:HB2	2.02	0.40
22:RA:1894:C:H2'	22:RA:1895:C:H6	1.86	0.40
22:RA:2290:G:C6	22:RA:2291:U:C4	3.09	0.40
22:RA:2622:C:O2'	22:RA:2825:C:O2	2.34	0.40
22:RA:2660:A:H2'	22:RA:2661:G:O4'	2.21	0.40
23:RB:31:C:H42	23:RB:51:G:H1	1.68	0.40
25:RE:51:PHE:CG	25:RE:52:LEU:N	2.90	0.40
26:RF:13:SER:OG	26:RF:14:PRO:HD2	2.21	0.40
26:RF:128:ALA:O	26:RF:129:PHE:CB	2.67	0.40
28:RH:26:VAL:HG12	28:RH:33:LEU:HB2	2.03	0.40
31:RO:47:ILE:HD12	31:RO:48:PRO:CD	2.43	0.40
33:RQ:76:LYS:HB3	33:RQ:90:VAL:CG1	2.51	0.40
36:RT:77:PRO:C	36:RT:79:HIS:H	2.29	0.40
38:RV:38:LEU:O	38:RV:51:VAL:HA	2.21	0.40
47:R4:42:PHE:CZ	47:R4:43:TYR:HB3	2.57	0.40
51:R8:53:PRO:HD2	51:R8:54:GLU:H	1.84	0.40
1:XA:254:G:H21	17:XQ:16:GLN:NE2	2.20	0.40
1:XA:266:G:O2'	1:XA:267:C:P	2.79	0.40
1:XA:716:A:N6	1:XA:717:C:N4	2.70	0.40
1:XA:791:G:H22	1:XA:1498:U:P	2.44	0.40
1:XA:1217:C:H2'	1:XA:1218:C:O4'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1465:C:H2'	1:XA:1466:C:O4'	2.20	0.40
1:XA:1508:G:H2'	1:XA:1509:C:H6	1.85	0.40
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.40
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.22	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.20	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.35	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	0.40
9:XI:80:GLY:C	9:XI:82:ALA:H	2.29	0.40
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.40
14:XN:47:LEU:O	14:XN:50:LYS:N	2.52	0.40
14:XN:48:ALA:O	14:XN:51:GLY:N	2.53	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.21	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
22:YA:219:G:N3	22:YA:234:C:O2'	2.54	0.40
22:YA:221:A:H4'	22:YA:222:A:O5'	2.20	0.40
22:YA:607:U:H5	22:YA:619:G:C5	2.39	0.40
22:YA:686:G:C2	50:Y7:11:LYS:HE3	2.56	0.40
22:YA:757:U:H2'	22:YA:758:C:C6	2.55	0.40
22:YA:761:A:O5'	22:YA:761:A:H8	2.04	0.40
22:YA:952:G:P	33:YQ:16:ARG:HH12	2.45	0.40
22:YA:989:G:OP2	46:Y3:11:SER:OG	2.33	0.40
22:YA:1130:U:HO2'	22:YA:1131:G:P	2.45	0.40
22:YA:1439:A:C8	22:YA:1440:G:C8	3.09	0.40
22:YA:1839:G:C8	22:YA:1927:A:H1'	2.56	0.40
22:YA:2292:C:P	35:YS:17:ARG:HH22	2.43	0.40
22:YA:2322:A:H2'	22:YA:2323:G:C8	2.56	0.40
22:YA:2338:G:H2'	22:YA:2339:G:H8	1.86	0.40
22:YA:2689:U:H4'	22:YA:2690:C:O5'	2.21	0.40
23:YB:16:G:C6	23:YB:69:G:C2	3.08	0.40
23:YB:116:G:H2'	23:YB:117:G:O4'	2.20	0.40
24:YD:31:LYS:O	24:YD:32:SER:O	2.39	0.40
24:YD:228:PRO:HD3	24:YD:234:GLY:O	2.21	0.40
25:YE:93:VAL:H	25:YE:95:ILE:CD1	2.22	0.40
25:YE:119:ARG:HG2	25:YE:160:TYR:HB2	2.03	0.40
25:YE:134:ILE:C	25:YE:134:ILE:CD1	2.94	0.40
26:YF:13:SER:OG	26:YF:14:PRO:HD2	2.21	0.40
26:YF:62:ARG:HB3	26:YF:62:ARG:CZ	2.51	0.40
29:YI:71:ILE:O	29:YI:71:ILE:HG12	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YI:109:ILE:HB	29:YI:110:ASP:H	1.65	0.40
29:YI:114:LEU:HD12	29:YI:129:THR:O	2.21	0.40
30:YN:7:LYS:CG	30:YN:8:GLN:N	2.81	0.40
31:YO:13:ASN:HD21	31:YO:97:ARG:HB3	1.86	0.40
33:YQ:139:GLU:CG	33:YQ:140:ALA:N	2.84	0.40
34:YR:61:HIS:CE1	34:YR:65:LEU:HD11	2.56	0.40
37:YU:76:TYR:O	37:YU:80:ILE:HG12	2.21	0.40
41:YY:14:LEU:HD23	41:YY:14:LEU:C	2.46	0.40
41:YY:42:VAL:HG21	41:YY:67:LEU:CD1	2.52	0.40
41:YY:97:ARG:NH2	41:YY:98:VAL:CG2	2.85	0.40
43:Y0:35:ASN:N	43:Y0:35:ASN:OD1	2.54	0.40
43:Y0:72:ARG:N	43:Y0:76:GLY:O	2.52	0.40
54:QX:6:C:O2'	54:QX:7:A:P	2.79	0.40
1:QA:130:A:C8	17:QQ:63:ARG:HG3	2.56	0.40
1:QA:191:G:N9	20:QT:105:SER:HB3	2.36	0.40
1:QA:236:G:C6	1:QA:237:C:C4	3.08	0.40
1:QA:376:G:H5"	16:QP:5:ARG:HD2	2.03	0.40
1:QA:485:G:O2'	1:QA:486:U:H6	2.03	0.40
1:QA:560:U:H4'	1:QA:561:U:O5'	2.19	0.40
1:QA:793:U:C2	1:QA:1516:G:H4'	2.56	0.40
1:QA:858:G:O6	1:QA:869:G:H3'	2.21	0.40
1:QA:1525:G:OP1	11:QK:120:ARG:NH2	2.38	0.40
2:QB:212:GLN:NE2	2:QB:212:GLN:O	2.54	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.01	0.40
5:QE:144:THR:C	5:QE:146:ALA:N	2.76	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.50	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
22:RA:27:G:HO2'	22:RA:28:A:H8	1.66	0.40
22:RA:154:G:C2	22:RA:173:G:C2	3.09	0.40
22:RA:392:C:H2'	22:RA:393:C:C6	2.57	0.40
22:RA:464:U:H2'	22:RA:465:G:O4'	2.21	0.40
22:RA:899:A:H8	22:RA:899:A:OP2	2.05	0.40
22:RA:1047:G:H2'	22:RA:1110:G:N1	2.36	0.40
22:RA:1204:A:HO2'	22:RA:1205:U:P	2.43	0.40
22:RA:1359:A:C6	22:RA:1372:U:O4	2.73	0.40
22:RA:1365:A:N6	22:RA:1366:A:C6	2.89	0.40
22:RA:1579:A:C2	22:RA:1580:A:C4	3.09	0.40
23:RB:5:C:OP1	23:RB:61:G:O2'	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:RD:117:VAL:HG22	24:RD:118:VAL:N	2.35	0.40
24:RD:228:PRO:HD3	24:RD:234:GLY:O	2.21	0.40
25:RE:65:GLY:O	25:RE:66:HIS:C	2.64	0.40
25:RE:70:ALA:O	25:RE:71:GLY:C	2.62	0.40
25:RE:119:ARG:HG2	25:RE:160:TYR:HB2	2.03	0.40
26:RF:62:ARG:HB3	26:RF:62:ARG:CZ	2.51	0.40
26:RF:80:ALA:O	26:RF:83:PHE:HB2	2.20	0.40
29:RI:49:ALA:O	29:RI:52:ARG:HG2	2.21	0.40
30:RN:23:LEU:CD1	30:RN:99:LEU:HD23	2.51	0.40
30:RN:61:ARG:C	30:RN:62:VAL:CG2	2.94	0.40
30:RN:137:LYS:HA	30:RN:137:LYS:HD2	1.89	0.40
32:RP:84:ASN:HB2	32:RP:87:ASP:OD2	2.22	0.40
32:RP:96:THR:O	32:RP:97:PRO:C	2.63	0.40
35:RS:52:SER:HB2	35:RS:55:ALA:HB3	2.03	0.40
37:RU:25:TRP:O	37:RU:26:GLY:C	2.65	0.40
37:RU:34:LYS:CE	37:RU:34:LYS:CA	2.96	0.40
39:RW:88:ARG:HA	39:RW:88:ARG:HD2	1.92	0.40
40:RX:60:ARG:HH22	50:R7:47:ARG:HH12	1.68	0.40
44:R1:85:LEU:N	44:R1:85:LEU:CD2	2.84	0.40
44:R1:96:LYS:O	44:R1:96:LYS:HG2	2.21	0.40
45:R2:32:LEU:O	45:R2:32:LEU:HD23	2.21	0.40
49:R6:50:ARG:NH1	49:R6:50:ARG:HG2	2.36	0.40
52:R9:10:ILE:HD12	52:R9:32:HIS:CG	2.56	0.40
1:XA:96:G:C6	1:XA:97:U:C2	3.09	0.40
1:XA:321:A:N6	1:XA:328:C:H1'	2.32	0.40
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.37	0.40
1:XA:1153:C:C2	1:XA:1154:G:C8	3.09	0.40
1:XA:1254:C:N4	10:XJ:43:ARG:HH22	2.19	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
2:XB:97:TRP:O	2:XB:98:LEU:C	2.64	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.40
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
3:XC:178:LEU:N	3:XC:178:LEU:CD2	2.85	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
6:XF:42:GLU:C	6:XF:44:GLY:H	2.30	0.40
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.40
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:56:LEU:HB3	9:XI:57:GLY:H	1.66	0.40
10:XJ:22:LYS:HZ1	10:XJ:23:ILE:HG12	1.86	0.40
14:XN:44:LEU:HD12	14:XN:53:LEU:HD12	1.94	0.40
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.40
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.40
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
20:XT:97:ALA:C	20:XT:99:LEU:HD13	2.46	0.40
22:YA:716:A:C2	22:YA:717:G:H1'	2.56	0.40
22:YA:1053:C:N4	22:YA:1106:G:H1	2.19	0.40
22:YA:1093:G:H4'	28:YH:170:ARG:NH2	2.36	0.40
22:YA:1262:A:N3	48:Y5:10:LYS:HE3	2.36	0.40
22:YA:1340:U:OP2	40:YX:78:LYS:NZ	2.50	0.40
22:YA:1371:G:O2'	22:YA:1372:U:H5	2.04	0.40
22:YA:1654:A:P	34:YR:2:ARG:HD2	2.62	0.40
22:YA:1872:A:H5'	22:YA:1878:G:OP2	2.21	0.40
22:YA:1918:A:C2	22:YA:1919:A:N6	2.89	0.40
22:YA:2063:C:O2	22:YA:2450:A:N1	2.53	0.40
22:YA:2277:G:C5'	33:YQ:85:LYS:HG3	2.50	0.40
22:YA:2327:A:H2'	22:YA:2328:A:C8	2.57	0.40
22:YA:2469:A:H5'	22:YA:2470:G:OP2	2.21	0.40
22:YA:2506:U:H6	56:Z8:76:PPU:N3'	2.18	0.40
23:YB:3:C:H2'	23:YB:4:C:C6	2.56	0.40
23:YB:77:U:OP1	42:YZ:19:ARG:NH2	2.53	0.40
26:YF:118:ALA:HA	26:YF:123:LEU:HB3	2.02	0.40
26:YF:118:ALA:C	26:YF:120:GLU:N	2.78	0.40
27:YG:112:PRO:CA	47:Y4:37:SER:HB2	2.51	0.40
28:YH:26:VAL:HG12	28:YH:33:LEU:HB2	2.03	0.40
29:YI:8:PRO:HD3	29:YI:15:VAL:HG13	2.02	0.40
30:YN:39:ARG:C	30:YN:41:ASP:H	2.28	0.40
31:YO:16:ALA:HA	31:YO:46:ALA:CB	2.50	0.40
31:YO:86:ILE:N	31:YO:86:ILE:CD1	2.83	0.40
31:YO:106:LEU:HD23	31:YO:106:LEU:HA	1.88	0.40
31:YO:111:PHE:N	31:YO:112:MET:HE2	2.36	0.40
34:YR:79:LEU:C	34:YR:79:LEU:CD2	2.93	0.40
35:YS:20:ARG:HE	35:YS:21:THR:HA	1.87	0.40
36:YT:20:PRO:HG2	36:YT:86:ILE:O	2.21	0.40
36:YT:50:ILE:CG2	36:YT:62:THR:OG1	2.68	0.40
36:YT:55:ASN:O	36:YT:55:ASN:CG	2.64	0.40
38:YV:35:LEU:O	38:YV:36:PRO:C	2.65	0.40
39:YW:66:GLU:HG2	39:YW:67:ASP:N	2.37	0.40
41:YY:97:ARG:O	41:YY:97:ARG:CG	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:Y8:38:GLY:C	51:Y8:40:GLU:N	2.78	0.40
51:Y8:64:TYR:HB3	51:Y8:65:GLU:H	1.40	0.40
1:QA:457:C:H2'	1:QA:458:C:C6	2.57	0.40
1:QA:627:G:H2'	1:QA:628:G:H8	1.87	0.40
1:QA:1187:G:C6	1:QA:1188:A:C5	3.10	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:79:ARG:CZ	11:XK:99:GLN:HB2	2.51	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
4:QD:172:PRO:C	4:QD:174:LEU:H	2.29	0.40
4:QD:206:PHE:CD2	4:QD:207:TYR:HD1	2.37	0.40
5:QE:31:LEU:HD22	5:QE:31:LEU:HA	1.86	0.40
6:QF:42:GLU:C	6:QF:44:GLY:H	2.30	0.40
6:QF:62:TRP:C	6:QF:63:TYR:CD2	2.93	0.40
7:QG:64:GLN:C	7:QG:66:VAL:N	2.77	0.40
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.40
8:QH:133:LEU:C	8:QH:133:LEU:HD23	2.46	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.22	0.40
11:QK:105:VAL:C	11:QK:107:SER:H	2.30	0.40
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.40
12:QL:22:SER:C	12:QL:24:VAL:N	2.79	0.40
12:QL:45:PRO:C	12:QL:46:LYS:O	2.65	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
22:RA:48:G:N2	22:RA:177:G:H21	2.20	0.40
22:RA:234:C:H2'	22:RA:235:U:C6	2.56	0.40
22:RA:579:G:O2'	22:RA:2019:A:OP1	2.35	0.40
22:RA:1503:U:H2'	22:RA:1504:C:C6	2.57	0.40
22:RA:1520:U:H2'	22:RA:1521:G:O4'	2.21	0.40
22:RA:1952:A:C2	31:RO:22:ILE:HG23	2.56	0.40
22:RA:2086:U:H2'	22:RA:2087:G:H8	1.85	0.40
22:RA:2462:U:C2	22:RA:2489:G:N2	2.90	0.40
24:RD:210:GLY:O	24:RD:211:ARG:C	2.64	0.40
25:RE:5:LEU:O	25:RE:28:ALA:HA	2.22	0.40
26:RF:36:VAL:HG11	26:RF:183:VAL:HG11	2.04	0.40
32:RP:19:VAL:HG22	32:RP:21:ARG:N	2.36	0.40
32:RP:65:ARG:HH21	51:R8:15:LYS:HB3	1.85	0.40
35:RS:62:LYS:HD3	35:RS:97:ARG:CZ	2.52	0.40
36:RT:54:ARG:HA	36:RT:59:THR:HG23	2.02	0.40
38:RV:55:ALA:O	38:RV:56:SER:OG	2.31	0.40
41:RY:95:LYS:HA	41:RY:101:LYS:CB	2.51	0.40
42:RZ:166:SER:HB2	42:RZ:167:PRO:C	2.45	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:R1:82:LEU:HD13	44:R1:83:GLU:CA	2.49	0.40
45:R2:11:GLU:HA	45:R2:14:ARG:HD2	2.02	0.40
45:R2:53:LEU:O	45:R2:57:ILE:HG13	2.21	0.40
47:R4:21:VAL:O	47:R4:22:ILE:O	2.40	0.40
47:R4:26:SER:O	47:R4:27:THR:O	2.40	0.40
51:R8:53:PRO:CG	51:R8:54:GLU:N	2.84	0.40
1:XA:60:A:H4'	1:XA:61:G:O5'	2.21	0.40
1:XA:160:A:H2'	1:XA:161:A:O4'	2.22	0.40
1:XA:721:G:C6	1:XA:733:A:C2	3.10	0.40
1:XA:728:A:H2'	1:XA:729:A:C8	2.56	0.40
1:XA:1127:G:N1	1:XA:1145:C:C2	2.88	0.40
1:XA:1161:C:C2'	1:XA:1162:C:H5'	2.52	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.52	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
4:XD:47:ARG:O	4:XD:48:ALA:C	2.65	0.40
4:XD:68:TYR:OH	4:XD:196:LEU:HD21	2.22	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.40
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	2.03	0.40
13:XM:20:THR:C	13:XM:22:ILE:H	2.29	0.40
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	0.40
13:XM:94:ARG:O	13:XM:95:GLY:C	2.64	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.40
22:YA:272:G:H2'	22:YA:273:G:C8	2.54	0.40
22:YA:597:U:H2'	22:YA:598:G:C8	2.56	0.40
22:YA:660:G:O3'	26:YF:38:ARG:NH2	2.54	0.40
22:YA:818:G:N7	22:YA:1187:G:C6	2.89	0.40
22:YA:1422:G:C6	22:YA:1423:G:C5	3.09	0.40
22:YA:1422:G:C1'	22:YA:1495:A:H61	2.35	0.40
22:YA:2081:C:H2'	22:YA:2082:A:H8	1.86	0.40
22:YA:2320:A:C2	22:YA:2333:A:C8	3.10	0.40
22:YA:2512:C:H2'	22:YA:2513:G:O4'	2.21	0.40
22:YA:2572:A:C4	25:YE:144:ARG:NH2	2.88	0.40
23:YB:78:A:C2	23:YB:99:A:C4	3.09	0.40
24:YD:177:LEU:C	24:YD:179:SER:N	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:YD:210:GLY:O	24:YD:211:ARG:C	2.63	0.40
25:YE:71:GLY:O	25:YE:72:VAL:C	2.63	0.40
25:YE:94:GLU:C	25:YE:96:PHE:H	2.29	0.40
26:YF:127:GLU:C	26:YF:129:PHE:H	2.26	0.40
26:YF:198:ALA:HA	26:YF:201:VAL:CG1	2.41	0.40
27:YG:121:ASN:C	27:YG:123:ASN:N	2.80	0.40
28:YH:170:ARG:HB3	28:YH:171:LEU:H	1.47	0.40
31:YO:47:ILE:HD12	31:YO:48:PRO:CD	2.43	0.40
32:YP:85:LEU:HA	32:YP:85:LEU:HD23	1.92	0.40
32:YP:126:VAL:HG12	32:YP:147:LEU:CD2	2.23	0.40
33:YQ:139:GLU:HG2	33:YQ:140:ALA:N	2.36	0.40
36:YT:29:ARG:HB2	36:YT:29:ARG:NH1	2.36	0.40
37:YU:33:ARG:O	37:YU:37:GLU:HB2	2.21	0.40
41:YY:98:VAL:O	41:YY:99:CYS:HB3	2.21	0.40
42:YZ:3:TYR:O	42:YZ:58:VAL:HG23	2.21	0.40
42:YZ:157:LEU:HA	42:YZ:157:LEU:HD23	1.89	0.40
44:Y1:94:LEU:HD23	44:Y1:94:LEU:HA	1.81	0.40
47:Y4:52:THR:O	47:Y4:53:GLU:CB	2.69	0.40
51:Y8:17:THR:O	51:Y8:20:GLY:N	2.47	0.40
51:Y8:32:LEU:HD23	51:Y8:32:LEU:HA	1.94	0.40
51:Y8:53:PRO:O	51:Y8:54:GLU:C	2.64	0.40
53:XV:21:A:N6	53:XV:46:G:H2'	2.36	0.40
1:QA:109:A:H5'	1:QA:110:C:C5	2.57	0.40
1:QA:182:U:C4	1:QA:183:G:H1'	2.56	0.40
1:QA:186(F):C:H2'	1:QA:187:C:O4'	2.22	0.40
1:QA:229:U:H2'	1:QA:230:G:H8	1.87	0.40
1:QA:692:U:H2'	1:QA:694:A:OP2	2.21	0.40
1:QA:815:A:N6	1:QA:1509:C:H1'	2.36	0.40
1:QA:976:G:OP2	1:QA:1358:U:O2'	2.39	0.40
1:QA:1081:G:H2'	1:QA:1082:G:O4'	2.22	0.40
1:QA:1385:G:C6	1:QA:1386:G:N7	2.89	0.40
2:QB:5:ILE:CG2	2:QB:224:GLN:HG2	2.51	0.40
3:QC:13:GLY:O	3:QC:14:ILE:HB	2.21	0.40
3:QC:178:LEU:C	3:QC:180:ALA:H	2.29	0.40
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
4:QD:101:LEU:HD12	4:QD:101:LEU:C	2.45	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
7:QG:122:HIS:ND1	7:QG:122:HIS:N	2.69	0.40
8:QH:109:ILE:HG13	8:QH:120:THR:HB	2.03	0.40
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:122:LYS:HE2	13:QM:122:LYS:O	2.21	0.40
14:QN:41:ARG:CG	14:QN:41:ARG:NH1	2.83	0.40
14:QN:48:ALA:O	14:QN:51:GLY:N	2.53	0.40
16:QP:39:TYR:CD2	16:QP:41:PRO:HD3	2.56	0.40
18:QR:37:VAL:O	18:QR:38:GLU:C	2.63	0.40
22:RA:701:G:N2	22:RA:702:G:H1'	2.35	0.40
22:RA:845:G:H5'	22:RA:846:C:OP1	2.22	0.40
22:RA:911:A:H2'	33:RQ:9:TYR:OH	2.21	0.40
22:RA:1061:U:H5'	22:RA:1070:A:O2'	2.22	0.40
22:RA:1434:A:H2'	22:RA:1435:G:C8	2.56	0.40
22:RA:1509:C:H3'	22:RA:1510:A:C5'	2.48	0.40
22:RA:1988:C:H2'	22:RA:1989:G:C8	2.55	0.40
22:RA:2257:U:H2'	22:RA:2258:C:C6	2.56	0.40
22:RA:2628:C:H1'	22:RA:2781:A:C4	2.57	0.40
22:RA:2693:A:H2'	22:RA:2694:G:C8	2.57	0.40
23:RB:45:A:H2'	23:RB:46:A:O4'	2.20	0.40
23:RB:46:A:C5	23:RB:47:C:C4	3.09	0.40
24:RD:72:LYS:HG3	24:RD:97:TYR:CE2	2.56	0.40
24:RD:92:ILE:CD1	24:RD:104:TYR:CD2	3.05	0.40
24:RD:185:VAL:HG12	24:RD:186:HIS:N	2.37	0.40
26:RF:68:LYS:O	26:RF:69:HIS:HB2	2.21	0.40
27:RG:41:GLN:HB3	27:RG:43:LEU:CD1	2.51	0.40
27:RG:112:PRO:CA	47:R4:37:SER:HB2	2.51	0.40
27:RG:114:ILE:HG22	27:RG:117:PHE:HB2	2.01	0.40
28:RH:20:ALA:HB3	28:RH:23:ARG:HG2	2.03	0.40
28:RH:65:HIS:O	28:RH:66:GLY:C	2.63	0.40
29:RI:3:VAL:O	29:RI:18:VAL:HA	2.22	0.40
30:RN:39:ARG:C	30:RN:41:ASP:H	2.28	0.40
31:RO:13:ASN:HD21	31:RO:97:ARG:HB3	1.86	0.40
35:RS:12:PHE:HD2	35:RS:12:PHE:HA	1.80	0.40
35:RS:20:ARG:HE	35:RS:21:THR:HA	1.86	0.40
35:RS:24:LEU:HD22	35:RS:24:LEU:N	2.37	0.40
35:RS:92:TYR:HB2	35:RS:98:VAL:HG11	2.02	0.40
36:RT:23:ARG:O	36:RT:49:VAL:HG11	2.21	0.40
37:RU:78:THR:O	37:RU:79:PHE:C	2.64	0.40
39:RW:100:THR:O	39:RW:100:THR:HG23	2.22	0.40
41:RY:43:ASN:OD1	41:RY:43:ASN:C	2.64	0.40
42:RZ:166:SER:H	42:RZ:167:PRO:HA	1.86	0.40
48:R5:6:VAL:HA	48:R5:7:PRO:HD3	1.81	0.40
49:R6:24:GLU:HB3	49:R6:25:LYS:H	1.56	0.40
49:R6:36:LEU:CD1	49:R6:50:ARG:NH1	2.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R8:32:LEU:HD23	51:R8:32:LEU:HA	1.94	0.40
1:XA:397:A:H5'	1:XA:398:C:OP1	2.21	0.40
1:XA:1129:C:H41	1:XA:1141:C:N4	2.20	0.40
2:XB:70:PHE:O	2:XB:92:TYR:HA	2.22	0.40
2:XB:86:GLU:C	2:XB:88:ALA:N	2.78	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:178:LEU:C	3:XC:180:ALA:H	2.29	0.40
4:XD:14:ARG:HD3	4:XD:14:ARG:C	2.43	0.40
4:XD:120:LEU:CD2	4:XD:125:HIS:HB2	2.46	0.40
4:XD:199:ASN:C	4:XD:201:GLN:N	2.79	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:101:ILE:CD1	5:XE:119:LEU:HD23	2.36	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.22	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.51	0.40
11:XK:105:VAL:C	11:XK:107:SER:H	2.29	0.40
13:XM:40:ASN:HA	13:XM:41:PRO:HD3	1.84	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
13:XM:88:ARG:HG2	13:XM:98:VAL:CG1	2.52	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.22	0.40
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.40
19:XS:29:ARG:HG2	19:XS:29:ARG:NH1	2.37	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
22:YA:252:G:O2'	22:YA:253:C:H5'	2.21	0.40
22:YA:299:A:C4	22:YA:322:A:C6	3.10	0.40
22:YA:470:A:H2'	22:YA:471:A:O4'	2.21	0.40
22:YA:873:G:H1	22:YA:904:C:N4	2.16	0.40
22:YA:1380:G:H8	22:YA:1380:G:O5'	2.04	0.40
22:YA:1388:G:O2'	22:YA:1389:G:H5'	2.22	0.40
22:YA:1655:A:C8	22:YA:1656:C:C5	3.09	0.40
22:YA:2001:A:H2'	22:YA:2002:G:C8	2.56	0.40
23:YB:16:G:H1	23:YB:68:C:N4	2.20	0.40
23:YB:52:A:N6	35:YS:33:LYS:HG3	2.29	0.40
24:YD:230:ASP:OD2	24:YD:230:ASP:N	2.54	0.40
25:YE:93:VAL:HG21	25:YE:180:ASN:HA	2.03	0.40
26:YF:33:LEU:O	26:YF:37:VAL:HG23	2.21	0.40
26:YF:36:VAL:HG11	26:YF:183:VAL:HG11	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YF:124:LEU:HD12	26:YF:125:LEU:O	2.22	0.40
27:YG:61:ALA:CB	27:YG:67:LYS:HA	2.51	0.40
27:YG:98:ARG:CA	27:YG:101:ILE:HG12	2.40	0.40
28:YH:128:PRO:CG	28:YH:129:THR:H	2.33	0.40
31:YO:7:TYR:CE1	31:YO:20:MET:HE3	2.53	0.40
31:YO:67:LYS:O	31:YO:68:GLU:C	2.63	0.40
33:YQ:20:ALA:HB1	33:YQ:99:PRO:CG	2.51	0.40
33:YQ:39:PRO:HA	33:YQ:97:VAL:O	2.21	0.40
35:YS:24:LEU:HD22	35:YS:24:LEU:N	2.37	0.40
35:YS:83:LYS:HE3	35:YS:84:GLN:HG3	2.02	0.40
36:YT:125:ARG:O	36:YT:128:GLU:N	2.50	0.40
37:YU:30:LYS:HA	37:YU:30:LYS:HD3	1.84	0.40
42:YZ:131:ARG:H	42:YZ:131:ARG:HG2	1.74	0.40
44:Y1:96:LYS:O	44:Y1:96:LYS:HG2	2.21	0.40
45:Y2:37:PHE:O	45:Y2:40:SER:HB3	2.22	0.40
45:Y2:47:ASN:HD22	45:Y2:47:ASN:N	1.99	0.40
47:Y4:21:VAL:O	47:Y4:22:ILE:O	2.40	0.40
47:Y4:61:ARG:C	47:Y4:63:TYR:N	2.73	0.40
53:QV:16:C:O2'	53:QV:17:C:OP1	2.39	0.40
53:QV:74:C:H2'	53:QV:75:C:H5'	2.03	0.40
1:QA:19:C:OP1	5:QE:127:ASN:HB2	2.21	0.40
1:QA:643:C:H5'	8:QH:31:PHE:CD1	2.56	0.40
1:QA:665:A:H2'	1:QA:725:G:H22	1.86	0.40
2:QB:12:GLU:C	2:QB:14:GLY:H	2.29	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
2:QB:132:LYS:HA	2:QB:135:GLN:CG	2.52	0.40
3:QC:70:VAL:CG1	3:QC:71:ALA:H	2.35	0.40
3:QC:138:VAL:HG22	3:QC:151:VAL:HG23	2.03	0.40
4:QD:68:TYR:OH	4:QD:196:LEU:HD21	2.21	0.40
4:QD:129:ASN:CA	4:QD:145:GLU:HB2	2.51	0.40
5:QE:153:LYS:HB2	5:QE:153:LYS:HZ3	1.85	0.40
7:QG:62:PHE:C	7:QG:64:GLN:N	2.79	0.40
8:QH:36:LEU:O	8:QH:45:ILE:HD11	2.21	0.40
8:QH:44:PHE:HA	8:QH:79:VAL:CG1	2.52	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.40
10:QJ:54:PHE:CZ	10:QJ:55:LYS:CE	3.04	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.22	0.40
19:QS:39:THR:O	19:QS:40:ILE:HB	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
22:RA:337:C:O3'	41:RY:4:LYS:HG3	2.22	0.40
22:RA:345:A:O2'	22:RA:347:A:N7	2.49	0.40
22:RA:631:A:H4'	32:RP:65:ARG:HA	2.03	0.40
22:RA:649:G:H2'	22:RA:650:C:C6	2.57	0.40
22:RA:728:G:C5	22:RA:730:C:C4	3.10	0.40
22:RA:1024:G:H1	22:RA:1140:C:H42	1.70	0.40
22:RA:1178:C:H2'	22:RA:1179:C:C6	2.56	0.40
22:RA:1473:G:H2'	22:RA:1474:C:O4'	2.21	0.40
22:RA:1800:C:H5	22:RA:1819:A:H62	1.70	0.40
22:RA:1946:U:H2'	22:RA:1947:C:C6	2.56	0.40
22:RA:1959:G:C2	22:RA:1960:A:C4	3.10	0.40
22:RA:2003:G:C6	22:RA:2004:G:C5	3.09	0.40
22:RA:2359:C:H2'	22:RA:2360:A:O4'	2.22	0.40
22:RA:2417:C:C4	22:RA:2418:A:N7	2.89	0.40
22:RA:2532:G:N2	22:RA:2663:G:O2'	2.54	0.40
24:RD:25:THR:HG23	24:RD:27:THR:HB	2.01	0.40
24:RD:117:VAL:HG21	24:RD:128:GLY:O	2.22	0.40
25:RE:92:THR:HB	25:RE:93:VAL:H	1.57	0.40
26:RF:33:LEU:O	26:RF:37:VAL:HG23	2.21	0.40
26:RF:64:ILE:HD12	26:RF:64:ILE:HA	1.89	0.40
30:RN:89:LYS:O	30:RN:90:MET:C	2.65	0.40
31:RO:112:MET:O	31:RO:115:VAL:HG23	2.22	0.40
32:RP:2:LYS:O	32:RP:5:ASP:CB	2.70	0.40
33:RQ:51:ARG:O	33:RQ:52:VAL:C	2.62	0.40
33:RQ:66:ILE:O	33:RQ:67:ARG:HB2	2.22	0.40
34:RR:34:ILE:HG22	34:RR:35:THR:N	2.35	0.40
35:RS:66:ALA:O	35:RS:67:ARG:C	2.64	0.40
35:RS:89:ARG:HG2	35:RS:89:ARG:NH1	2.36	0.40
36:RT:20:PRO:HG2	36:RT:86:ILE:O	2.21	0.40
36:RT:50:ILE:HD11	36:RT:102:ILE:CG1	2.52	0.40
36:RT:58:ASN:N	36:RT:58:ASN:ND2	2.70	0.40
41:RY:5:MET:HE1	41:RY:32:PRO:HB3	2.02	0.40
41:RY:90:LEU:HB2	41:RY:91:GLU:H	1.53	0.40
42:RZ:100:VAL:HA	42:RZ:101:PRO:HD3	1.85	0.40
44:R1:86:SER:O	44:R1:89:GLU:HB2	2.21	0.40
46:R3:7:LYS:O	46:R3:7:LYS:HG2	2.20	0.40
49:R6:36:LEU:HD23	49:R6:36:LEU:N	2.37	0.40
49:R6:37:ARG:O	49:R6:48:VAL:O	2.39	0.40
51:R8:40:GLU:O	51:R8:42:ARG:N	2.54	0.40
1:XA:52:G:C6	1:XA:53:A:C5	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:345:C:OP2	36:YT:41:ARG:HG2	2.22	0.40
1:XA:406:G:H2'	1:XA:407:G:C8	2.56	0.40
1:XA:544:G:H2'	1:XA:545:C:H6	1.80	0.40
1:XA:690:G:N2	11:XK:55:LYS:HZ1	2.20	0.40
1:XA:768:A:C5	1:XA:769:G:C8	3.09	0.40
1:XA:1000:A:O2'	1:XA:1001:G:H5'	2.21	0.40
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.37	0.40
1:XA:1229:A:OP1	13:XM:116:THR:HG23	2.21	0.40
1:XA:1321:C:C5'	1:XA:1322:C:H5"	2.50	0.40
2:XB:152:PHE:O	2:XB:153:ARG:C	2.64	0.40
2:XB:201:ILE:HG21	2:XB:214:ILE:HG21	2.02	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CD1	2.52	0.40
5:XE:144:THR:O	5:XE:145:LYS:C	2.63	0.40
9:XI:83:ARG:HG2	9:XI:83:ARG:H	1.64	0.40
10:XJ:65:LEU:HA	14:XN:55:GLY:O	2.21	0.40
10:XJ:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
12:XL:9:GLN:O	12:XL:13:LYS:N	2.55	0.40
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.40
15:XO:87:ILE:CG2	15:XO:88:ARG:N	2.71	0.40
20:XT:98:PRO:O	20:XT:100:ILE:N	2.42	0.40
22:YA:51:G:N3	22:YA:119:A:C2	2.90	0.40
22:YA:121:G:H4'	22:YA:148:C:H2'	2.04	0.40
22:YA:161:U:H3'	22:YA:162:U:C5'	2.51	0.40
22:YA:1750:G:O2'	22:YA:1751:C:H5'	2.22	0.40
22:YA:2419:U:C5'	49:Y6:23:THR:HG22	2.43	0.40
22:YA:2857:G:H22	22:YA:2859:G:H3'	1.87	0.40
23:YB:50:G:H8	23:YB:50:G:O5'	2.04	0.40
24:YD:107:ALA:HA	24:YD:108:PRO:HD2	2.01	0.40
25:YE:5:LEU:O	25:YE:28:ALA:HA	2.22	0.40
25:YE:70:ALA:HB1	25:YE:73:GLU:CD	2.47	0.40
26:YF:160:ASN:O	26:YF:161:GLU:C	2.64	0.40
28:YH:101:ARG:O	28:YH:117:PRO:HG3	2.21	0.40
31:YO:34:THR:O	31:YO:35:VAL:C	2.64	0.40
34:YR:22:ARG:O	34:YR:26:LYS:HG3	2.21	0.40
35:YS:99:LYS:HE2	35:YS:103:GLU:OE2	2.20	0.40
36:YT:23:ARG:O	36:YT:24:PRO:C	2.65	0.40
39:YW:82:LEU:N	39:YW:98:LYS:O	2.42	0.40
40:YX:9:LEU:HA	45:Y2:36:ARG:HH21	1.86	0.40
40:YX:15:GLU:CD	40:YX:15:GLU:H	2.27	0.40
41:YY:95:LYS:HA	41:YY:101:LYS:CB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YZ:140:ASP:OD2	42:YZ:140:ASP:N	2.53	0.40
44:Y1:86:SER:O	44:Y1:89:GLU:N	2.54	0.40
47:Y4:42:PHE:CZ	47:Y4:43:TYR:HB3	2.57	0.40
51:Y8:39:LYS:HD2	51:Y8:39:LYS:O	2.22	0.40

All (5) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YH:45:VAL:O	41:YY:24:VAL:N[4_445]	1.97	0.23
29:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.05	0.15
28:YH:44:VAL:CG2	41:YY:23:ARG:CD[4_445]	2.08	0.12
6:QF:15:ASP:OD2	4:XD:27:TYR:OH[4_555]	2.14	0.06
28:YH:47:GLU:OE2	41:YY:79:CYS:CB[4_445]	2.18	0.02

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	4
2	XB	235/256 (92%)	153 (65%)	52 (22%)	30 (13%)	0	4
3	QC	203/239 (85%)	128 (63%)	56 (28%)	19 (9%)	0	9
3	XC	203/239 (85%)	129 (64%)	55 (27%)	19 (9%)	0	9
4	QD	206/209 (99%)	136 (66%)	50 (24%)	20 (10%)	0	8
4	XD	206/209 (99%)	135 (66%)	48 (23%)	23 (11%)	0	6
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	7
5	XE	149/162 (92%)	103 (69%)	30 (20%)	16 (11%)	0	6
6	QF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	0	9
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	0	9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
7	QG	153/156 (98%)	101 (66%)	37 (24%)	15 (10%)	0 8
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	0 9
8	QH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0 6
8	XH	136/138 (99%)	92 (68%)	29 (21%)	15 (11%)	0 6
9	QI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0 4
9	XI	125/128 (98%)	77 (62%)	32 (26%)	16 (13%)	0 4
10	QJ	97/105 (92%)	68 (70%)	20 (21%)	9 (9%)	0 9
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0 7
11	QK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1 14
11	XK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1 14
12	QL	123/132 (93%)	84 (68%)	23 (19%)	16 (13%)	0 3
12	XL	123/132 (93%)	84 (68%)	24 (20%)	15 (12%)	0 4
13	QM	119/126 (94%)	71 (60%)	29 (24%)	19 (16%)	0 2
13	XM	119/126 (94%)	71 (60%)	27 (23%)	21 (18%)	0 2
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0 1
14	XN	58/61 (95%)	33 (57%)	13 (22%)	12 (21%)	0 1
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1 13
15	XO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1 13
16	QP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0 3
16	XP	82/88 (93%)	48 (58%)	23 (28%)	11 (13%)	0 3
17	QQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	0 11
17	XQ	98/105 (93%)	75 (76%)	15 (15%)	8 (8%)	0 11
18	QR	68/88 (77%)	45 (66%)	15 (22%)	8 (12%)	0 5
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0 5
19	QS	82/93 (88%)	47 (57%)	17 (21%)	18 (22%)	0 1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0 1
20	QT	97/106 (92%)	63 (65%)	16 (16%)	18 (19%)	0 2
20	XT	97/106 (92%)	63 (65%)	15 (16%)	19 (20%)	0 1
21	QU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0 2
21	XU	23/27 (85%)	15 (65%)	4 (17%)	4 (17%)	0 2
24	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1 13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
24	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1 13
25	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0 1
25	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0 1
26	RF	200/210 (95%)	143 (72%)	37 (18%)	20 (10%)	0 7
26	YF	200/210 (95%)	143 (72%)	37 (18%)	20 (10%)	0 7
27	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0 5
27	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0 5
28	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0 1
28	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0 1
29	RI	144/148 (97%)	106 (74%)	21 (15%)	17 (12%)	0 5
29	YI	144/148 (97%)	100 (69%)	27 (19%)	17 (12%)	0 5
30	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0 2
30	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0 2
31	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1 12
31	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1 12
32	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0 1
32	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0 1
33	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0 7
33	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0 7
34	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0 4
34	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0 4
35	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0 2
35	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0 2
36	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0 3
36	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0 3
37	RU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1 12
37	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1 12
38	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0 7
38	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0 7
39	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0 4
39	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0 4

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

All (1487) Ramachandran outliers are listed below:

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

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Mol	Chain	Res	Type
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG
4	QD	28	SER
4	QD	29	PRO
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU
4	QD	178	VAL
5	QE	146	ALA
7	QG	5	ARG
7	QG	7	ALA
8	QH	50	ARG
8	QH	129	VAL
9	QI	23	ASN
9	QI	56	LEU
9	QI	95	LYS
9	QI	111	ARG
9	QI	117	HIS
10	QJ	30	SER
10	QJ	33	GLN
11	QK	91	ARG
12	QL	18	VAL
12	QL	27	LEU
12	QL	47	LYS
12	QL	51	ALA
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU
13	QM	70	LEU

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Mol	Chain	Res	Type
13	QM	83	ASP
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
14	QN	24	CYS
14	QN	44	LEU
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
24	RD	26	LYS
24	RD	28	GLU
24	RD	123	ALA
24	RD	231	HIS
25	RE	4	ILE
25	RE	7	VAL
25	RE	9	VAL
25	RE	22	PRO

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

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

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

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Mol	Chain	Res	Type
41	RY	63	LYS
41	RY	77	PRO
41	RY	78	ALA
41	RY	96	ILE
42	RZ	6	LYS
44	R1	30	VAL
44	R1	54	ALA
44	R1	81	LYS
44	R1	82	LEU
44	R1	95	LEU
45	R2	16	LEU
45	R2	43	GLN
45	R2	47	ASN
45	R2	48	HIS
45	R2	71	ASN
46	R3	3	ARG
47	R4	5	ILE
47	R4	14	ILE
47	R4	16	CYS
47	R4	22	ILE
47	R4	23	GLU
47	R4	36	CYS
47	R4	37	SER
47	R4	40	HIS
47	R4	42	PHE
47	R4	43	TYR
47	R4	49	PHE
47	R4	50	VAL
47	R4	51	ASP
47	R4	53	GLU
47	R4	62	ARG
47	R4	66	SER
47	R4	68	ARG
48	R5	3	LYS
48	R5	4	HIS
48	R5	35	GLU
48	R5	51	TYR
48	R5	53	ALA
49	R6	7	ILE
49	R6	14	THR
49	R6	15	GLU
49	R6	19	ARG

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Mol	Chain	Res	Type
49	R6	21	TYR
49	R6	33	LYS
49	R6	45	LYS
49	R6	48	VAL
51	R8	29	LYS
51	R8	31	HIS
51	R8	34	TRP
51	R8	52	LYS
51	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS
3	XC	12	LEU
3	XC	14	ILE
3	XC	29	TYR
3	XC	61	ALA
3	XC	189	ALA
3	XC	190	ARG
4	XD	28	SER
4	XD	30	LYS
4	XD	51	PRO
4	XD	89	THR
4	XD	129	ASN
4	XD	154	ASN
4	XD	155	LEU
4	XD	178	VAL
5	XE	146	ALA
7	XG	5	ARG
7	XG	7	ALA
8	XH	50	ARG
8	XH	129	VAL
9	XI	23	ASN
9	XI	56	LEU
9	XI	95	LYS
9	XI	111	ARG
9	XI	117	HIS

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Mol	Chain	Res	Type
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	46	LYS
12	XL	51	ALA
12	XL	62	SER
12	XL	121	GLY
13	XM	70	LEU
13	XM	83	ASP
13	XM	106	ASN
13	XM	108	ARG
13	XM	118	ALA
14	XN	3	ARG
14	XN	16	PHE
14	XN	23	ARG
14	XN	43	CYS
14	XN	44	LEU
15	XO	88	ARG
16	XP	44	THR
16	XP	67	THR
17	XQ	34	LYS
17	XQ	49	GLU
18	XR	22	VAL
19	XS	3	ARG
19	XS	12	ASP
19	XS	14	HIS
19	XS	25	LYS
19	XS	26	GLY
19	XS	31	ILE
19	XS	41	VAL
19	XS	70	LYS
19	XS	78	ARG
19	XS	79	THR
20	XT	48	LYS
20	XT	49	ALA
20	XT	74	LYS
20	XT	95	ALA
20	XT	96	GLY
20	XT	100	ILE
21	XU	7	ARG

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

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

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

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

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

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Mol	Chain	Res	Type
6	QF	70	ASP
7	QG	4	ARG
7	QG	63	LYS
7	QG	141	VAL
8	QH	68	ARG
8	QH	69	ARG
8	QH	76	PRO
8	QH	122	ARG
8	QH	128	GLY
9	QI	31	GLN
9	QI	41	VAL
9	QI	100	GLY
9	QI	109	VAL
10	QJ	36	GLY
10	QJ	68	HIS
11	QK	103	LEU
11	QK	107	SER
11	QK	124	LYS
11	QK	125	PHE
11	QK	126	ARG
12	QL	46	LYS
12	QL	48	PRO
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG

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Mol	Chain	Res	Type
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
24	RD	3	VAL
24	RD	32	SER
24	RD	58	HIS
24	RD	122	ASP
24	RD	169	GLU
25	RE	8	LYS
25	RE	20	ALA
25	RE	37	ARG
25	RE	53	PRO
25	RE	61	ARG
25	RE	78	LEU
25	RE	88	GLY
25	RE	186	GLY
25	RE	190	GLY
25	RE	204	ALA
26	RF	18	ARG
26	RF	107	LYS
26	RF	108	LYS
26	RF	111	ALA
26	RF	132	VAL
26	RF	134	GLY
26	RF	168	ARG
27	RG	36	LYS
27	RG	81	LYS
27	RG	82	LEU
27	RG	96	ARG
27	RG	110	ALA
27	RG	115	ARG
27	RG	126	ASP
27	RG	136	ARG
28	RH	3	ARG
28	RH	8	PRO

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

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Mol	Chain	Res	Type
41	RY	41	GLY
41	RY	56	PRO
41	RY	57	GLN
41	RY	99	CYS
42	RZ	59	LEU
42	RZ	108	PRO
42	RZ	111	VAL
42	RZ	112	ARG
42	RZ	116	VAL
42	RZ	177	PRO
44	R1	45	ASN
44	R1	55	GLY
44	R1	84	GLY
45	R2	24	LEU
45	R2	44	LEU
45	R2	70	GLN
47	R4	9	LEU
47	R4	24	THR
48	R5	43	HIS
48	R5	55	ARG
50	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP

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Mol	Chain	Res	Type
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
8	XH	128	GLY
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	67	GLU
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
14	XN	40	CYS
15	XO	77	ARG
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP

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Mol	Chain	Res	Type
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
24	YD	3	VAL
24	YD	32	SER
24	YD	58	HIS
24	YD	122	ASP
24	YD	169	GLU
25	YE	8	LYS
25	YE	20	ALA
25	YE	37	ARG
25	YE	53	PRO
25	YE	61	ARG
25	YE	71	GLY
25	YE	78	LEU
25	YE	88	GLY
25	YE	186	GLY
25	YE	190	GLY
25	YE	204	ALA
26	YF	18	ARG
26	YF	107	LYS
26	YF	108	LYS
26	YF	111	ALA
26	YF	132	VAL
26	YF	134	GLY
26	YF	168	ARG
27	YG	36	LYS
27	YG	81	LYS
27	YG	82	LEU
27	YG	96	ARG
27	YG	110	ALA
27	YG	126	ASP
27	YG	136	ARG
28	YH	3	ARG
28	YH	8	PRO
28	YH	55	PRO
28	YH	59	ARG

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Mol	Chain	Res	Type
28	YH	84	SER
28	YH	151	ILE
28	YH	156	ALA
28	YH	168	PRO
29	YI	11	ASN
29	YI	114	LEU
29	YI	117	GLU
29	YI	133	HIS
30	YN	23	LEU
30	YN	76	SER
31	YO	51	ALA
31	YO	56	ASP
31	YO	68	GLU
32	YP	6	LEU
32	YP	11	GLY
32	YP	12	ALA
32	YP	16	ARG
33	YQ	13	GLN
33	YQ	24	GLY
33	YQ	28	ALA
34	YR	11	ASN
35	YS	61	ASN
35	YS	87	PHE
35	YS	96	GLY
35	YS	100	ALA
35	YS	109	GLY
35	YS	111	GLU
36	YT	4	GLY
36	YT	36	GLU
36	YT	43	GLN
36	YT	67	SER
36	YT	124	ASP
37	YU	9	VAL
37	YU	28	ARG
37	YU	73	GLY
37	YU	90	VAL
39	YW	63	ASP
39	YW	66	GLU
40	YX	67	GLY
41	YY	4	LYS
41	YY	41	GLY
41	YY	53	PRO

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Mol	Chain	Res	Type
41	YY	56	PRO
41	YY	57	GLN
41	YY	91	GLU
41	YY	99	CYS
42	YZ	6	LYS
42	YZ	51	ALA
42	YZ	113	ALA
43	Y0	18	ALA
44	Y1	45	ASN
44	Y1	55	GLY
44	Y1	84	GLY
45	Y2	24	LEU
45	Y2	44	LEU
45	Y2	70	GLN
47	Y4	9	LEU
47	Y4	24	THR
48	Y5	43	HIS
48	Y5	55	ARG
50	Y7	39	ARG
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY
4	QD	26	CYS
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS

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Mol	Chain	Res	Type
15	QO	14	GLU
15	QO	23	GLY
16	QP	8	ARG
16	QP	83	GLU
17	QQ	30	PRO
17	QQ	99	SER
18	QR	55	ARG
19	QS	6	LYS
19	QS	27	GLU
19	QS	64	GLU
20	QT	82	SER
20	QT	98	PRO
24	RD	111	LEU
24	RD	242	ARG
24	RD	262	ARG
25	RE	62	PRO
25	RE	69	LYS
25	RE	71	GLY
25	RE	82	ARG
25	RE	117	MET
25	RE	130	GLY
25	RE	132	HIS
27	RG	5	VAL
27	RG	128	ARG
27	RG	174	GLU
28	RH	50	VAL
28	RH	81	GLU
28	RH	152	ARG
29	RI	11	ASN
29	RI	84	GLY
29	RI	102	SER
29	RI	118	LYS
30	RN	45	ASN
30	RN	130	HIS
30	RN	135	PRO
32	RP	7	ARG
32	RP	14	LYS
32	RP	43	GLY
32	RP	89	ALA
32	RP	102	ARG
32	RP	115	LEU
33	RQ	88	GLY

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Mol	Chain	Res	Type
33	RQ	91	GLU
34	RR	42	LYS
34	RR	45	ARG
34	RR	71	GLN
34	RR	107	ASP
35	RS	19	LYS
35	RS	61	ASN
35	RS	74	ALA
35	RS	75	GLU
36	RT	78	LEU
36	RT	112	ARG
37	RU	46	ALA
37	RU	58	ARG
37	RU	93	LYS
38	RV	54	GLY
39	RW	68	ARG
39	RW	93	ALA
40	RX	48	LYS
40	RX	87	GLN
41	RY	21	LYS
41	RY	39	VAL
41	RY	42	VAL
41	RY	69	ALA
41	RY	91	GLU
41	RY	102	CYS
42	RZ	13	GLU
42	RZ	51	ALA
42	RZ	81	ARG
42	RZ	92	SER
44	R1	74	VAL
44	R1	91	LYS
44	R1	93	GLU
47	R4	8	LYS
47	R4	27	THR
47	R4	46	GLN
49	R6	18	ARG
50	R7	32	LYS
51	R8	46	ARG
51	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG

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Mol	Chain	Res	Type
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG
8	XH	2	LEU
9	XI	12	GLU
9	XI	13	ALA
12	XL	123	LYS
13	XM	12	ASN
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	48	ALA
15	XO	14	GLU
15	XO	23	GLY
16	XP	8	ARG
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
24	YD	111	LEU
24	YD	239	ARG
24	YD	242	ARG
24	YD	262	ARG
25	YE	62	PRO
25	YE	69	LYS
25	YE	82	ARG
25	YE	117	MET
25	YE	130	GLY
25	YE	132	HIS
27	YG	5	VAL

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

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Mol	Chain	Res	Type
41	YY	42	VAL
41	YY	69	ALA
41	YY	102	CYS
42	YZ	13	GLU
42	YZ	177	PRO
42	YZ	179	ASP
42	YZ	181	GLU
44	Y1	74	VAL
44	Y1	91	LYS
44	Y1	93	GLU
47	Y4	27	THR
47	Y4	46	GLN
49	Y6	18	ARG
50	Y7	32	LYS
51	Y8	46	ARG
51	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
11	QK	105	VAL
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG
14	QN	48	ALA

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

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Mol	Chain	Res	Type
48	R5	45	VAL
48	R5	48	GLU
49	R6	8	LYS
49	R6	9	LEU
49	R6	10	LEU
49	R6	49	HIS
51	R8	25	MET
51	R8	53	PRO
51	R8	57	ARG
2	XB	19	HIS
2	XB	131	PRO
2	XB	160	ASP
3	XC	168	ALA
4	XD	151	LYS
5	XE	70	PRO
5	XE	72	GLN
5	XE	124	GLY
6	XF	13	ASN
6	XF	40	VAL
6	XF	42	GLU
7	XG	35	LYS
7	XG	41	ARG
7	XG	116	ALA
7	XG	117	ALA
8	XH	27	PRO
8	XH	29	SER
8	XH	49	GLU
10	XJ	57	LYS
10	XJ	93	GLY
12	XL	64	TYR
13	XM	4	ILE
13	XM	14	ARG
13	XM	69	GLU
13	XM	77	ASN
14	XN	22	THR
15	XO	86	GLY
16	XP	26	ARG
16	XP	28	ARG
16	XP	48	TRP
19	XS	28	LYS
19	XS	44	MET
19	XS	64	GLU

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Mol	Chain	Res	Type
20	XT	40	ALA
20	XT	51	GLU
24	YD	12	SER
24	YD	73	VAL
25	YE	66	HIS
25	YE	126	PRO
26	YF	43	LYS
26	YF	130	ALA
26	YF	136	THR
26	YF	145	GLU
27	YG	12	TYR
27	YG	117	PHE
27	YG	146	TYR
28	YH	13	LYS
28	YH	109	PHE
29	YI	113	ARG
30	YN	96	GLU
30	YN	127	ASP
30	YN	132	ALA
31	YO	17	ARG
31	YO	97	ARG
32	YP	29	LYS
32	YP	47	ASP
32	YP	139	LYS
36	YT	37	GLY
36	YT	95	ARG
37	YU	74	LEU
39	YW	14	PRO
39	YW	48	ALA
42	YZ	7	ALA
42	YZ	59	LEU
42	YZ	61	LEU
47	Y4	8	LYS
48	Y5	14	ALA
48	Y5	37	LYS
48	Y5	45	VAL
48	Y5	48	GLU
49	Y6	8	LYS
49	Y6	9	LEU
49	Y6	10	LEU
49	Y6	49	HIS
51	Y8	25	MET

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Mol	Chain	Res	Type
51	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
7	QG	109	ASN
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	88	TYR
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
24	RD	33	LEU
25	RE	79	ARG
26	RF	47	GLY
26	RF	118	ALA
26	RF	136	THR
27	RG	181	ARG
28	RH	11	VAL
28	RH	27	LYS
28	RH	47	GLU
28	RH	77	LYS
28	RH	170	ARG

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Mol	Chain	Res	Type
30	RN	29	LYS
30	RN	104	LYS
30	RN	127	ASP
30	RN	128	HIS
31	RO	25	LEU
32	RP	50	ARG
32	RP	97	PRO
32	RP	108	LYS
34	RR	85	PRO
37	RU	91	ASP
39	RW	32	ALA
41	RY	7	VAL
42	RZ	61	LEU
42	RZ	66	SER
42	RZ	166	SER
42	RZ	179	ASP
46	R3	13	ILE
47	R4	30	GLU
47	R4	69	LYS
47	R4	70	GLY
48	R5	42	PRO
49	R6	35	GLU
51	R8	64	TYR
2	XB	23	ARG
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
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
24	YD	33	LEU
25	YE	79	ARG
26	YF	47	GLY
26	YF	118	ALA
28	YH	11	VAL
28	YH	27	LYS
28	YH	47	GLU
28	YH	77	LYS
28	YH	170	ARG
29	YI	15	VAL
29	YI	18	VAL
30	YN	29	LYS
30	YN	104	LYS
30	YN	128	HIS
31	YO	25	LEU
32	YP	50	ARG
32	YP	97	PRO
32	YP	108	LYS
34	YR	85	PRO
36	YT	38	ASN
37	YU	91	ASP
39	YW	32	ALA
40	YX	19	ALA
41	YY	7	VAL
42	YZ	53	ILE
42	YZ	153	SER
46	Y3	13	ILE
47	Y4	30	GLU
47	Y4	33	VAL
47	Y4	70	GLY
48	Y5	42	PRO
49	Y6	35	GLU

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

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Mol	Chain	Res	Type
39	YW	11	ARG
39	YW	33	ARG
47	Y4	69	LYS
48	Y5	57	VAL
2	QB	202	PRO
2	QB	239	VAL
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
18	QR	37	VAL
20	QT	63	ILE
25	RE	86	PRO
25	RE	184	VAL
33	RQ	86	GLY
34	RR	32	GLY
39	RW	35	ILE
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
5	XE	49	PRO
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
25	YE	86	PRO
25	YE	184	VAL
33	YQ	86	GLY
34	YR	32	GLY
39	YW	35	ILE
2	QB	227	GLY
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
16	QP	53	VAL
24	RD	241	PRO
29	RI	80	PRO
41	RY	27	VAL

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Mol	Chain	Res	Type
41	RY	32	PRO
42	RZ	130	PRO
42	RZ	146	ILE
48	R5	46	CYS
2	XB	227	GLY
3	XC	134	ILE
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
27	YG	52	ILE
29	YI	71	ILE
41	YY	27	VAL
41	YY	32	PRO
42	YZ	143	GLY
48	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
24	RD	34	VAL
27	RG	52	ILE
29	RI	71	ILE
31	RO	114	ILE
41	RY	51	VAL
48	R5	34	PRO
12	XL	48	PRO
13	XM	84	ILE
24	YD	34	VAL
31	YO	114	ILE
41	YY	51	VAL
43	Y0	48	GLY
48	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
25	RE	52	LEU
25	RE	55	ASN
31	RO	27	GLY
46	R3	40	THR
5	XE	129	ILE
9	XI	21	PRO
13	XM	78	ILE

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Mol	Chain	Res	Type
25	YE	52	LEU
25	YE	55	ASN
31	YO	27	GLY
46	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
16	QP	41	PRO
20	QT	97	ALA
29	RI	109	ILE
42	RZ	39	VAL
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
45	R2	18	PRO
45	Y2	18	PRO

5.3.2 Protein sidechains (i)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	QB	205/220 (93%)	181 (88%)	24 (12%)	5 22
2	XB	205/220 (93%)	182 (89%)	23 (11%)	6 23
3	QC	159/188 (85%)	142 (89%)	17 (11%)	6 24
3	XC	159/188 (85%)	142 (89%)	17 (11%)	6 24
4	QD	180/181 (99%)	156 (87%)	24 (13%)	4 19
4	XD	180/181 (99%)	162 (90%)	18 (10%)	7 27
5	QE	116/123 (94%)	105 (90%)	11 (10%)	8 29
5	XE	116/123 (94%)	105 (90%)	11 (10%)	8 29
6	QF	90/90 (100%)	77 (86%)	13 (14%)	3 17
6	XF	90/90 (100%)	77 (86%)	13 (14%)	3 17
7	QG	126/127 (99%)	112 (89%)	14 (11%)	6 23
7	XG	126/127 (99%)	112 (89%)	14 (11%)	6 23

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
8	QH	119/119 (100%)	105 (88%)	14 (12%)	5 21
8	XH	119/119 (100%)	105 (88%)	14 (12%)	5 21
9	QI	98/99 (99%)	85 (87%)	13 (13%)	4 19
9	XI	98/99 (99%)	85 (87%)	13 (13%)	4 19
10	QJ	89/92 (97%)	80 (90%)	9 (10%)	7 27
10	XJ	89/92 (97%)	80 (90%)	9 (10%)	7 27
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%)	85 (82%)	19 (18%)	2 11
12	XL	104/109 (95%)	86 (83%)	18 (17%)	2 12
13	QM	97/101 (96%)	83 (86%)	14 (14%)	3 17
13	XM	97/101 (96%)	83 (86%)	14 (14%)	3 17
14	QN	49/50 (98%)	40 (82%)	9 (18%)	1 11
14	XN	49/50 (98%)	44 (90%)	5 (10%)	7 26
15	QO	79/80 (99%)	70 (89%)	9 (11%)	5 22
15	XO	79/80 (99%)	70 (89%)	9 (11%)	5 22
16	QP	72/74 (97%)	64 (89%)	8 (11%)	6 23
16	XP	72/74 (97%)	64 (89%)	8 (11%)	6 23
17	QQ	95/97 (98%)	86 (90%)	9 (10%)	8 29
17	XQ	95/97 (98%)	86 (90%)	9 (10%)	8 29
18	QR	61/77 (79%)	51 (84%)	10 (16%)	2 13
18	XR	61/77 (79%)	51 (84%)	10 (16%)	2 13
19	QS	73/80 (91%)	62 (85%)	11 (15%)	3 16
19	XS	73/80 (91%)	62 (85%)	11 (15%)	3 16
20	QT	76/82 (93%)	69 (91%)	7 (9%)	8 30
20	XT	76/82 (93%)	69 (91%)	7 (9%)	8 30
21	QU	20/22 (91%)	20 (100%)	0	100 100
21	XU	20/22 (91%)	20 (100%)	0	100 100
24	RD	214/218 (98%)	174 (81%)	40 (19%)	1 10
24	YD	214/218 (98%)	174 (81%)	40 (19%)	1 10
25	RE	165/166 (99%)	125 (76%)	40 (24%)	1 4

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
25	YE	165/166 (99%)	125 (76%)	40 (24%)	1 4
26	RF	161/166 (97%)	138 (86%)	23 (14%)	3 17
26	YF	161/166 (97%)	138 (86%)	23 (14%)	3 17
27	RG	155/156 (99%)	133 (86%)	22 (14%)	3 17
27	YG	155/156 (99%)	134 (86%)	21 (14%)	4 18
28	RH	142/148 (96%)	111 (78%)	31 (22%)	1 6
28	YH	142/148 (96%)	111 (78%)	31 (22%)	1 6
29	RI	122/124 (98%)	97 (80%)	25 (20%)	1 8
29	YI	122/124 (98%)	99 (81%)	23 (19%)	1 10
30	RN	117/119 (98%)	97 (83%)	20 (17%)	2 12
30	YN	117/119 (98%)	97 (83%)	20 (17%)	2 12
31	RO	100/100 (100%)	88 (88%)	12 (12%)	5 21
31	YO	100/100 (100%)	89 (89%)	11 (11%)	6 24
32	RP	116/116 (100%)	88 (76%)	28 (24%)	1 4
32	YP	116/116 (100%)	88 (76%)	28 (24%)	1 4
33	RQ	111/111 (100%)	95 (86%)	16 (14%)	3 17
33	YQ	111/111 (100%)	96 (86%)	15 (14%)	4 18
34	RR	101/101 (100%)	85 (84%)	16 (16%)	2 15
34	YR	101/101 (100%)	85 (84%)	16 (16%)	2 15
35	RS	87/88 (99%)	73 (84%)	14 (16%)	2 14
35	YS	87/88 (99%)	73 (84%)	14 (16%)	2 14
36	RT	120/127 (94%)	99 (82%)	21 (18%)	2 12
36	YT	120/127 (94%)	99 (82%)	21 (18%)	2 12
37	RU	93/94 (99%)	81 (87%)	12 (13%)	4 20
37	YU	93/94 (99%)	81 (87%)	12 (13%)	4 20
38	RV	82/82 (100%)	66 (80%)	16 (20%)	1 9
38	YV	82/82 (100%)	67 (82%)	15 (18%)	2 11
39	RW	92/92 (100%)	76 (83%)	16 (17%)	2 12
39	YW	92/92 (100%)	76 (83%)	16 (17%)	2 12
40	RX	74/78 (95%)	61 (82%)	13 (18%)	2 12
40	YX	74/78 (95%)	61 (82%)	13 (18%)	2 12

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
41	RY	85/91 (93%)	67 (79%)	18 (21%)	1 7
41	YY	85/91 (93%)	66 (78%)	19 (22%)	1 6
42	RZ	162/179 (90%)	140 (86%)	22 (14%)	3 18
42	YZ	162/179 (90%)	136 (84%)	26 (16%)	2 14
43	R0	65/67 (97%)	55 (85%)	10 (15%)	2 15
43	Y0	65/67 (97%)	57 (88%)	8 (12%)	4 20
44	R1	82/83 (99%)	70 (85%)	12 (15%)	3 16
44	Y1	82/83 (99%)	70 (85%)	12 (15%)	3 16
45	R2	64/67 (96%)	56 (88%)	8 (12%)	4 20
45	Y2	64/67 (96%)	56 (88%)	8 (12%)	4 20
46	R3	51/52 (98%)	41 (80%)	10 (20%)	1 9
46	Y3	51/52 (98%)	41 (80%)	10 (20%)	1 9
47	R4	63/63 (100%)	46 (73%)	17 (27%)	0 3
47	Y4	63/63 (100%)	46 (73%)	17 (27%)	0 3
48	R5	51/52 (98%)	40 (78%)	11 (22%)	1 6
48	Y5	50/52 (96%)	39 (78%)	11 (22%)	1 6
49	R6	48/52 (92%)	36 (75%)	12 (25%)	0 4
49	Y6	48/52 (92%)	36 (75%)	12 (25%)	0 4
50	R7	42/42 (100%)	38 (90%)	4 (10%)	8 29
50	Y7	42/42 (100%)	38 (90%)	4 (10%)	8 29
51	R8	54/55 (98%)	40 (74%)	14 (26%)	0 4
51	Y8	54/55 (98%)	40 (74%)	14 (26%)	0 4
52	R9	34/34 (100%)	32 (94%)	2 (6%)	18 44
52	Y9	34/34 (100%)	32 (94%)	2 (6%)	18 44
All	All	9701/10066 (96%)	8218 (85%)	1483 (15%)	3 15

All (1483) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	5	ILE
2	QB	8	LYS
2	QB	20	GLU
2	QB	23	ARG
2	QB	24	TRP

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Mol	Chain	Res	Type
2	QB	36	ARG
2	QB	63	MET
2	QB	67	THR
2	QB	73	THR
2	QB	75	LYS
2	QB	90	MET
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	215	LEU
2	QB	222	ILE
3	QC	3	ASN
3	QC	5	ILE
3	QC	12	LEU
3	QC	16	ARG
3	QC	21	ARG
3	QC	27	LYS
3	QC	45	LYS
3	QC	56	ASP
3	QC	69	HIS
3	QC	82	GLU
3	QC	127	ARG
3	QC	131	ARG
3	QC	154	SER
3	QC	192	THR
3	QC	193	TYR
3	QC	196	LEU
3	QC	198	VAL
4	QD	3	ARG
4	QD	7	PRO
4	QD	9	CYS
4	QD	12	CYS
4	QD	13	ARG
4	QD	14	ARG

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Mol	Chain	Res	Type
4	QD	30	LYS
4	QD	31	CYS
4	QD	33	MET
4	QD	50	ARG
4	QD	53	ASP
4	QD	58	LEU
4	QD	73	ARG
4	QD	79	PHE
4	QD	86	LYS
4	QD	94	LEU
4	QD	96	LEU
4	QD	112	VAL
4	QD	114	ARG
4	QD	127	THR
4	QD	131	ARG
4	QD	146	ILE
4	QD	181	MET
4	QD	196	LEU
5	QE	10	MET
5	QE	13	ILE
5	QE	16	THR
5	QE	31	LEU
5	QE	51	VAL
5	QE	53	LEU
5	QE	79	GLU
5	QE	101	ILE
5	QE	112	LEU
5	QE	140	ARG
5	QE	153	LYS
6	QF	17	SER
6	QF	21	LEU
6	QF	27	GLN
6	QF	36	ARG
6	QF	45	LEU
6	QF	55	ASP
6	QF	63	TYR
6	QF	74	ASP
6	QF	77	ARG
6	QF	92	LYS
6	QF	94	GLN
6	QF	97	PHE
6	QF	100	ASN

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Mol	Chain	Res	Type
7	QG	8	GLU
7	QG	12	LEU
7	QG	30	ILE
7	QG	38	LEU
7	QG	84	ASN
7	QG	98	SER
7	QG	104	LEU
7	QG	111	ARG
7	QG	122	HIS
7	QG	124	LEU
7	QG	126	ASP
7	QG	137	LYS
7	QG	148	ASN
7	QG	155	ARG
8	QH	1	MET
8	QH	6	ILE
8	QH	10	LEU
8	QH	26	VAL
8	QH	27	PRO
8	QH	41	ARG
8	QH	52	ASP
8	QH	63	LEU
8	QH	83	ILE
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	47	LEU
9	QI	48	GLU
9	QI	65	VAL
9	QI	83	ARG
9	QI	85	LEU
9	QI	95	LYS
9	QI	104	ARG
9	QI	113	LYS
9	QI	114	TYR
9	QI	118	LYS
9	QI	128	ARG
10	QJ	47	PHE

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Mol	Chain	Res	Type
10	QJ	49	VAL
10	QJ	57	LYS
10	QJ	62	HIS
10	QJ	74	ILE
10	QJ	80	LYS
10	QJ	84	GLN
10	QJ	96	ILE
10	QJ	98	ILE
11	QK	25	TYR
11	QK	26	ASN
11	QK	32	ILE
11	QK	63	LEU
11	QK	75	TYR
11	QK	92	GLU
11	QK	109	VAL
11	QK	114	VAL
11	QK	125	PHE
12	QL	17	LYS
12	QL	20	LYS
12	QL	24	VAL
12	QL	27	LEU
12	QL	41	ARG
12	QL	46	LYS
12	QL	47	LYS
12	QL	57	LYS
12	QL	62	SER
12	QL	70	ILE
12	QL	73	GLU
12	QL	81	SER
12	QL	101	VAL
12	QL	104	VAL
12	QL	110	VAL
12	QL	112	ASP
12	QL	116	SER
12	QL	120	TYR
12	QL	126	LYS
13	QM	3	ARG
13	QM	8	GLU
13	QM	13	LYS
13	QM	35	GLU
13	QM	47	ASP
13	QM	56	LEU

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Mol	Chain	Res	Type
13	QM	57	ARG
13	QM	66	LEU
13	QM	70	LEU
13	QM	88	ARG
13	QM	101	GLN
13	QM	115	LYS
13	QM	116	THR
13	QM	122	LYS
14	QN	3	ARG
14	QN	12	ARG
14	QN	14	PRO
14	QN	16	PHE
14	QN	26	ARG
14	QN	29	ARG
14	QN	41	ARG
14	QN	43	CYS
14	QN	44	LEU
15	QO	3	ILE
15	QO	6	GLU
15	QO	8	LYS
15	QO	26	GLU
15	QO	39	LEU
15	QO	62	GLN
15	QO	65	ARG
15	QO	67	LEU
15	QO	82	ILE
16	QP	11	SER
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	82	GLN
17	QQ	9	VAL
17	QQ	12	SER
17	QQ	38	ARG
17	QQ	48	GLU
17	QQ	52	LYS
17	QQ	59	ILE
17	QQ	65	ILE
17	QQ	68	ARG

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Mol	Chain	Res	Type
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
18	QR	69	THR
18	QR	83	GLU
18	QR	86	VAL
19	QS	5	LEU
19	QS	10	PHE
19	QS	12	ASP
19	QS	15	LEU
19	QS	29	ARG
19	QS	30	LEU
19	QS	41	VAL
19	QS	63	THR
19	QS	65	ASN
19	QS	81	ARG
19	QS	83	HIS
20	QT	10	LEU
20	QT	24	LEU
20	QT	26	ASN
20	QT	41	ILE
20	QT	73	HIS
20	QT	75	ASN
20	QT	93	GLU
24	RD	10	THR
24	RD	17	THR
24	RD	26	LYS
24	RD	28	GLU
24	RD	33	LEU
24	RD	43	ARG
24	RD	44	ASN
24	RD	52	ARG
24	RD	61	LEU
24	RD	65	ILE
24	RD	73	VAL
24	RD	94	LEU
24	RD	98	VAL

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Mol	Chain	Res	Type
24	RD	105	ILE
24	RD	106	ILE
24	RD	131	LEU
24	RD	134	ARG
24	RD	135	PHE
24	RD	147	LEU
24	RD	155	LEU
24	RD	157	ARG
24	RD	166	GLN
24	RD	173	VAL
24	RD	177	LEU
24	RD	183	ARG
24	RD	192	THR
24	RD	198	ASN
24	RD	200	ASP
24	RD	215	LEU
24	RD	217	ARG
24	RD	218	ARG
24	RD	221	VAL
24	RD	226	MET
24	RD	230	ASP
24	RD	233	HIS
24	RD	237	GLU
24	RD	257	LEU
24	RD	259	THR
24	RD	261	LYS
24	RD	271	ILE
25	RE	2	LYS
25	RE	4	ILE
25	RE	5	LEU
25	RE	13	ARG
25	RE	14	ILE
25	RE	17	ASP
25	RE	21	VAL
25	RE	25	VAL
25	RE	26	ILE
25	RE	27	LEU
25	RE	33	VAL
25	RE	36	ARG
25	RE	38	THR
25	RE	41	LYS
25	RE	45	THR

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Mol	Chain	Res	Type
25	RE	48	GLN
25	RE	49	LEU
25	RE	54	GLN
25	RE	59	VAL
25	RE	61	ARG
25	RE	62	PRO
25	RE	66	HIS
25	RE	73	GLU
25	RE	75	VAL
25	RE	77	ILE
25	RE	78	LEU
25	RE	79	ARG
25	RE	80	GLU
25	RE	93	VAL
25	RE	117	MET
25	RE	119	ARG
25	RE	143	ASN
25	RE	146	THR
25	RE	154	LYS
25	RE	167	VAL
25	RE	179	GLU
25	RE	184	VAL
25	RE	196	VAL
25	RE	200	GLU
25	RE	203	LYS
26	RF	7	TYR
26	RF	9	ILE
26	RF	25	PRO
26	RF	32	LEU
26	RF	33	LEU
26	RF	45	ARG
26	RF	46	ARG
26	RF	65	TRP
26	RF	66	PRO
26	RF	67	GLN
26	RF	70	THR
26	RF	82	ILE
26	RF	106	ARG
26	RF	108	LYS
26	RF	124	LEU
26	RF	127	GLU
26	RF	145	GLU

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Mol	Chain	Res	Type
26	RF	161	GLU
26	RF	164	ARG
26	RF	179	GLU
26	RF	181	LEU
26	RF	183	VAL
26	RF	206	ILE
27	RG	4	ASP
27	RG	22	ARG
27	RG	26	GLN
27	RG	34	LEU
27	RG	40	ASN
27	RG	43	LEU
27	RG	45	GLU
27	RG	63	ILE
27	RG	67	LYS
27	RG	71	THR
27	RG	88	ILE
27	RG	94	LEU
27	RG	96	ARG
27	RG	103	LEU
27	RG	115	ARG
27	RG	118	ARG
27	RG	135	LEU
27	RG	147	ASP
27	RG	155	MET
27	RG	156	ASP
27	RG	159	VAL
27	RG	174	GLU
28	RH	3	ARG
28	RH	4	ILE
28	RH	9	ILE
28	RH	10	PRO
28	RH	11	VAL
28	RH	16	SER
28	RH	27	LYS
28	RH	32	GLU
28	RH	37	VAL
28	RH	41	MET
28	RH	43	VAL
28	RH	44	VAL
28	RH	47	GLU
28	RH	59	ARG

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Mol	Chain	Res	Type
28	RH	64	LEU
28	RH	77	LYS
28	RH	81	GLU
28	RH	88	LEU
28	RH	89	ILE
28	RH	105	LEU
28	RH	124	GLU
28	RH	132	ARG
28	RH	136	ILE
28	RH	139	GLN
28	RH	143	GLN
28	RH	144	VAL
28	RH	152	ARG
28	RH	153	LYS
28	RH	154	PRO
28	RH	155	SER
28	RH	169	VAL
29	RI	2	LYS
29	RI	7	GLU
29	RI	10	GLU
29	RI	27	ARG
29	RI	38	LEU
29	RI	40	THR
29	RI	44	LEU
29	RI	56	LYS
29	RI	57	ARG
29	RI	67	ARG
29	RI	70	GLU
29	RI	74	ASN
29	RI	86	THR
29	RI	88	ILE
29	RI	92	VAL
29	RI	93	THR
29	RI	101	LEU
29	RI	118	LYS
29	RI	128	LEU
29	RI	129	THR
29	RI	135	GLU
29	RI	138	ILE
29	RI	139	GLN
29	RI	142	VAL
29	RI	145	VAL

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Mol	Chain	Res	Type
30	RN	2	LYS
30	RN	7	LYS
30	RN	43	THR
30	RN	48	MET
30	RN	60	ILE
30	RN	61	ARG
30	RN	65	LYS
30	RN	73	THR
30	RN	78	TYR
30	RN	90	MET
30	RN	93	THR
30	RN	94	HIS
30	RN	98	VAL
30	RN	101	HIS
30	RN	109	LYS
30	RN	112	LEU
30	RN	120	LEU
30	RN	127	ASP
30	RN	131	GLN
30	RN	136	GLU
31	RO	8	LEU
31	RO	9	GLU
31	RO	19	ILE
31	RO	23	ARG
31	RO	39	ILE
31	RO	49	ARG
31	RO	52	VAL
31	RO	53	LYS
31	RO	56	ASP
31	RO	63	VAL
31	RO	65	THR
31	RO	91	LEU
32	RP	5	ASP
32	RP	9	ASN
32	RP	10	PRO
32	RP	14	LYS
32	RP	16	ARG
32	RP	21	ARG
32	RP	27	HIS
32	RP	29	LYS
32	RP	30	THR
32	RP	32	THR

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Mol	Chain	Res	Type
32	RP	33	ARG
32	RP	36	LYS
32	RP	50	ARG
32	RP	55	ARG
32	RP	61	ARG
32	RP	62	LEU
32	RP	64	LYS
32	RP	65	ARG
32	RP	75	ILE
32	RP	81	GLN
32	RP	88	LEU
32	RP	91	PHE
32	RP	99	LEU
32	RP	100	LEU
32	RP	105	LEU
32	RP	144	GLU
32	RP	146	VAL
32	RP	149	GLU
33	RQ	2	LEU
33	RQ	25	ASP
33	RQ	26	TYR
33	RQ	27	VAL
33	RQ	46	GLN
33	RQ	54	MET
33	RQ	55	VAL
33	RQ	58	PHE
33	RQ	60	ARG
33	RQ	79	LEU
33	RQ	83	MET
33	RQ	89	ASN
33	RQ	90	VAL
33	RQ	91	GLU
33	RQ	112	GLU
33	RQ	139	GLU
34	RR	14	SER
34	RR	37	THR
34	RR	44	LEU
34	RR	51	LEU
34	RR	66	VAL
34	RR	67	LEU
34	RR	71	GLN
34	RR	75	LEU

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Mol	Chain	Res	Type
34	RR	76	VAL
34	RR	81	ASP
34	RR	95	THR
34	RR	100	LEU
34	RR	104	ARG
34	RR	105	ARG
34	RR	107	ASP
34	RR	113	LEU
35	RS	4	LEU
35	RS	12	PHE
35	RS	17	ARG
35	RS	18	ILE
35	RS	20	ARG
35	RS	44	LYS
35	RS	56	LEU
35	RS	57	LYS
35	RS	73	LEU
35	RS	89	ARG
35	RS	101	LEU
35	RS	103	GLU
35	RS	106	ARG
35	RS	111	GLU
36	RT	2	ASN
36	RT	14	TYR
36	RT	22	PHE
36	RT	23	ARG
36	RT	27	THR
36	RT	42	ILE
36	RT	48	ILE
36	RT	50	ILE
36	RT	58	ASN
36	RT	65	LYS
36	RT	73	GLU
36	RT	78	LEU
36	RT	86	ILE
36	RT	87	ASP
36	RT	100	TYR
36	RT	104	ASN
36	RT	107	ASP
36	RT	111	ARG
36	RT	112	ARG
36	RT	128	GLU

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Mol	Chain	Res	Type
36	RT	134	GLU
37	RU	5	LYS
37	RU	9	VAL
37	RU	31	SER
37	RU	52	ARG
37	RU	60	LEU
37	RU	64	ARG
37	RU	79	PHE
37	RU	88	ILE
37	RU	92	ARG
37	RU	98	LEU
37	RU	108	GLU
37	RU	117	GLN
38	RV	14	VAL
38	RV	18	LEU
38	RV	24	LYS
38	RV	35	LEU
38	RV	37	VAL
38	RV	38	LEU
38	RV	39	LEU
38	RV	40	LEU
38	RV	47	VAL
38	RV	57	VAL
38	RV	61	VAL
38	RV	66	ARG
38	RV	70	ILE
38	RV	75	PHE
38	RV	91	TYR
38	RV	99	ILE
39	RW	11	ARG
39	RW	14	PRO
39	RW	16	LYS
39	RW	19	LEU
39	RW	20	VAL
39	RW	23	LEU
39	RW	63	ASP
39	RW	67	ASP
39	RW	69	LEU
39	RW	70	TYR
39	RW	87	PRO
39	RW	88	ARG
39	RW	92	ARG

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Mol	Chain	Res	Type
39	RW	95	ILE
39	RW	107	LEU
39	RW	109	GLU
40	RX	3	THR
40	RX	15	GLU
40	RX	27	THR
40	RX	30	VAL
40	RX	49	VAL
40	RX	57	LEU
40	RX	65	ARG
40	RX	70	LEU
40	RX	72	LYS
40	RX	76	ARG
40	RX	80	ILE
40	RX	81	VAL
40	RX	88	LYS
41	RY	7	VAL
41	RY	26	LYS
41	RY	27	VAL
41	RY	42	VAL
41	RY	45	VAL
41	RY	57	GLN
41	RY	61	ILE
41	RY	64	GLU
41	RY	72	VAL
41	RY	75	ILE
41	RY	77	PRO
41	RY	79	CYS
41	RY	87	LYS
41	RY	88	LYS
41	RY	89	PHE
41	RY	90	LEU
41	RY	95	LYS
41	RY	97	ARG
42	RZ	2	GLU
42	RZ	20	ARG
42	RZ	37	VAL
42	RZ	52	SER
42	RZ	53	ILE
42	RZ	60	GLU
42	RZ	71	VAL
42	RZ	81	ARG

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Mol	Chain	Res	Type
42	RZ	87	ASP
42	RZ	94	GLU
42	RZ	117	LEU
42	RZ	119	GLU
42	RZ	121	HIS
42	RZ	128	VAL
42	RZ	145	GLU
42	RZ	150	LEU
42	RZ	151	HIS
42	RZ	168	GLU
42	RZ	174	VAL
42	RZ	179	ASP
42	RZ	182	LYS
42	RZ	183	LEU
43	R0	4	LYS
43	R0	7	LEU
43	R0	10	THR
43	R0	11	ARG
43	R0	36	ILE
43	R0	41	ARG
43	R0	59	LEU
43	R0	64	ASP
43	R0	66	VAL
43	R0	74	ARG
44	R1	2	SER
44	R1	11	ARG
44	R1	30	VAL
44	R1	41	ARG
44	R1	56	GLN
44	R1	75	GLU
44	R1	80	LEU
44	R1	81	LYS
44	R1	83	GLU
44	R1	87	PRO
44	R1	91	LYS
44	R1	97	LEU
45	R2	7	ARG
45	R2	9	GLN
45	R2	16	LEU
45	R2	24	LEU
45	R2	47	ASN
45	R2	53	LEU

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Mol	Chain	Res	Type
45	R2	62	THR
45	R2	64	LEU
46	R3	4	LEU
46	R3	8	LEU
46	R3	9	VAL
46	R3	10	LYS
46	R3	30	ARG
46	R3	31	LEU
46	R3	32	GLN
46	R3	37	LEU
46	R3	40	THR
46	R3	44	ARG
47	R4	6	HIS
47	R4	15	ILE
47	R4	18	CYS
47	R4	21	VAL
47	R4	23	GLU
47	R4	39	CYS
47	R4	42	PHE
47	R4	49	PHE
47	R4	50	VAL
47	R4	53	GLU
47	R4	57	GLU
47	R4	61	ARG
47	R4	62	ARG
47	R4	63	TYR
47	R4	68	ARG
47	R4	69	LYS
47	R4	71	ARG
48	R5	3	LYS
48	R5	4	HIS
48	R5	6	VAL
48	R5	11	THR
48	R5	19	ARG
48	R5	25	LEU
48	R5	36	CYS
48	R5	37	LYS
48	R5	52	TYR
48	R5	56	LYS
48	R5	58	LEU
49	R6	6	ARG
49	R6	8	LYS

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Mol	Chain	Res	Type
49	R6	10	LEU
49	R6	18	ARG
49	R6	19	ARG
49	R6	27	LYS
49	R6	33	LYS
49	R6	34	LEU
49	R6	37	ARG
49	R6	42	TRP
49	R6	44	ARG
49	R6	53	LYS
50	R7	1	MET
50	R7	9	ARG
50	R7	14	LYS
50	R7	43	THR
51	R8	16	ILE
51	R8	30	ARG
51	R8	35	GLN
51	R8	39	LYS
51	R8	43	GLN
51	R8	47	LYS
51	R8	48	PHE
51	R8	49	VAL
51	R8	52	LYS
51	R8	53	PRO
51	R8	59	LYS
51	R8	62	LEU
51	R8	63	PRO
51	R8	65	GLU
52	R9	1	MET
52	R9	17	ILE
2	XB	5	ILE
2	XB	8	LYS
2	XB	20	GLU
2	XB	23	ARG
2	XB	24	TRP
2	XB	36	ARG
2	XB	63	MET
2	XB	67	THR
2	XB	73	THR
2	XB	75	LYS
2	XB	90	MET
2	XB	92	TYR

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Mol	Chain	Res	Type
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	215	LEU
2	XB	222	ILE
3	XC	3	ASN
3	XC	5	ILE
3	XC	12	LEU
3	XC	16	ARG
3	XC	21	ARG
3	XC	27	LYS
3	XC	45	LYS
3	XC	56	ASP
3	XC	69	HIS
3	XC	82	GLU
3	XC	127	ARG
3	XC	131	ARG
3	XC	154	SER
3	XC	192	THR
3	XC	193	TYR
3	XC	196	LEU
3	XC	198	VAL
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	58	LEU
4	XD	79	PHE
4	XD	86	LYS
4	XD	94	LEU
4	XD	96	LEU
4	XD	112	VAL
4	XD	114	ARG
4	XD	127	THR

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Mol	Chain	Res	Type
4	XD	131	ARG
4	XD	146	ILE
4	XD	181	MET
4	XD	196	LEU
5	XE	10	MET
5	XE	13	ILE
5	XE	16	THR
5	XE	31	LEU
5	XE	51	VAL
5	XE	53	LEU
5	XE	79	GLU
5	XE	101	ILE
5	XE	112	LEU
5	XE	140	ARG
5	XE	153	LYS
6	XF	17	SER
6	XF	21	LEU
6	XF	27	GLN
6	XF	36	ARG
6	XF	45	LEU
6	XF	55	ASP
6	XF	63	TYR
6	XF	74	ASP
6	XF	77	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	30	ILE
7	XG	38	LEU
7	XG	84	ASN
7	XG	98	SER
7	XG	104	LEU
7	XG	111	ARG
7	XG	122	HIS
7	XG	124	LEU
7	XG	126	ASP
7	XG	137	LYS
7	XG	148	ASN
7	XG	155	ARG

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Mol	Chain	Res	Type
8	XH	1	MET
8	XH	10	LEU
8	XH	26	VAL
8	XH	27	PRO
8	XH	41	ARG
8	XH	52	ASP
8	XH	63	LEU
8	XH	83	ILE
8	XH	99	GLU
8	XH	119	LEU
8	XH	121	ASP
8	XH	127	LEU
8	XH	129	VAL
8	XH	137	VAL
9	XI	7	THR
9	XI	9	ARG
9	XI	47	LEU
9	XI	48	GLU
9	XI	65	VAL
9	XI	83	ARG
9	XI	85	LEU
9	XI	95	LYS
9	XI	104	ARG
9	XI	113	LYS
9	XI	114	TYR
9	XI	118	LYS
9	XI	128	ARG
10	XJ	47	PHE
10	XJ	49	VAL
10	XJ	57	LYS
10	XJ	62	HIS
10	XJ	74	ILE
10	XJ	80	LYS
10	XJ	84	GLN
10	XJ	96	ILE
10	XJ	98	ILE
11	XK	25	TYR
11	XK	26	ASN
11	XK	32	ILE
11	XK	63	LEU
11	XK	75	TYR
11	XK	92	GLU

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Mol	Chain	Res	Type
11	XK	109	VAL
11	XK	114	VAL
11	XK	125	PHE
12	XL	17	LYS
12	XL	20	LYS
12	XL	24	VAL
12	XL	27	LEU
12	XL	41	ARG
12	XL	46	LYS
12	XL	57	LYS
12	XL	62	SER
12	XL	70	ILE
12	XL	73	GLU
12	XL	81	SER
12	XL	101	VAL
12	XL	104	VAL
12	XL	110	VAL
12	XL	112	ASP
12	XL	116	SER
12	XL	120	TYR
12	XL	126	LYS
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	66	LEU
13	XM	70	LEU
13	XM	88	ARG
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	6	GLU

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Mol	Chain	Res	Type
15	XO	8	LYS
15	XO	26	GLU
15	XO	39	LEU
15	XO	62	GLN
15	XO	65	ARG
15	XO	67	LEU
15	XO	82	ILE
16	XP	11	SER
16	XP	26	ARG
16	XP	28	ARG
16	XP	59	TRP
16	XP	62	VAL
16	XP	69	THR
16	XP	71	ARG
16	XP	82	GLN
17	XQ	9	VAL
17	XQ	12	SER
17	XQ	38	ARG
17	XQ	48	GLU
17	XQ	52	LYS
17	XQ	59	ILE
17	XQ	65	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
18	XR	69	THR
18	XR	83	GLU
18	XR	86	VAL
19	XS	5	LEU
19	XS	10	PHE
19	XS	12	ASP
19	XS	15	LEU
19	XS	29	ARG
19	XS	30	LEU
19	XS	41	VAL
19	XS	63	THR

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Mol	Chain	Res	Type
19	XS	65	ASN
19	XS	81	ARG
19	XS	83	HIS
20	XT	10	LEU
20	XT	24	LEU
20	XT	26	ASN
20	XT	41	ILE
20	XT	73	HIS
20	XT	75	ASN
20	XT	93	GLU
24	YD	10	THR
24	YD	17	THR
24	YD	26	LYS
24	YD	28	GLU
24	YD	33	LEU
24	YD	43	ARG
24	YD	44	ASN
24	YD	52	ARG
24	YD	61	LEU
24	YD	65	ILE
24	YD	73	VAL
24	YD	94	LEU
24	YD	98	VAL
24	YD	105	ILE
24	YD	106	ILE
24	YD	131	LEU
24	YD	134	ARG
24	YD	135	PHE
24	YD	147	LEU
24	YD	155	LEU
24	YD	157	ARG
24	YD	166	GLN
24	YD	173	VAL
24	YD	177	LEU
24	YD	183	ARG
24	YD	192	THR
24	YD	198	ASN
24	YD	200	ASP
24	YD	215	LEU
24	YD	217	ARG
24	YD	218	ARG
24	YD	221	VAL

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Mol	Chain	Res	Type
24	YD	226	MET
24	YD	230	ASP
24	YD	233	HIS
24	YD	237	GLU
24	YD	257	LEU
24	YD	259	THR
24	YD	261	LYS
24	YD	271	ILE
25	YE	2	LYS
25	YE	4	ILE
25	YE	5	LEU
25	YE	13	ARG
25	YE	14	ILE
25	YE	17	ASP
25	YE	21	VAL
25	YE	25	VAL
25	YE	26	ILE
25	YE	27	LEU
25	YE	33	VAL
25	YE	36	ARG
25	YE	38	THR
25	YE	41	LYS
25	YE	45	THR
25	YE	48	GLN
25	YE	49	LEU
25	YE	54	GLN
25	YE	59	VAL
25	YE	61	ARG
25	YE	62	PRO
25	YE	66	HIS
25	YE	73	GLU
25	YE	75	VAL
25	YE	77	ILE
25	YE	78	LEU
25	YE	79	ARG
25	YE	80	GLU
25	YE	93	VAL
25	YE	117	MET
25	YE	119	ARG
25	YE	143	ASN
25	YE	146	THR
25	YE	154	LYS

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Mol	Chain	Res	Type
25	YE	167	VAL
25	YE	179	GLU
25	YE	184	VAL
25	YE	196	VAL
25	YE	200	GLU
25	YE	203	LYS
26	YF	7	TYR
26	YF	9	ILE
26	YF	25	PRO
26	YF	32	LEU
26	YF	33	LEU
26	YF	45	ARG
26	YF	46	ARG
26	YF	65	TRP
26	YF	66	PRO
26	YF	67	GLN
26	YF	70	THR
26	YF	82	ILE
26	YF	106	ARG
26	YF	108	LYS
26	YF	124	LEU
26	YF	127	GLU
26	YF	145	GLU
26	YF	161	GLU
26	YF	164	ARG
26	YF	179	GLU
26	YF	181	LEU
26	YF	183	VAL
26	YF	206	ILE
27	YG	4	ASP
27	YG	22	ARG
27	YG	26	GLN
27	YG	34	LEU
27	YG	43	LEU
27	YG	45	GLU
27	YG	63	ILE
27	YG	67	LYS
27	YG	71	THR
27	YG	88	ILE
27	YG	94	LEU
27	YG	96	ARG
27	YG	103	LEU

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Mol	Chain	Res	Type
27	YG	115	ARG
27	YG	118	ARG
27	YG	135	LEU
27	YG	147	ASP
27	YG	155	MET
27	YG	156	ASP
27	YG	159	VAL
27	YG	174	GLU
28	YH	3	ARG
28	YH	4	ILE
28	YH	9	ILE
28	YH	10	PRO
28	YH	11	VAL
28	YH	16	SER
28	YH	27	LYS
28	YH	32	GLU
28	YH	37	VAL
28	YH	41	MET
28	YH	43	VAL
28	YH	44	VAL
28	YH	47	GLU
28	YH	59	ARG
28	YH	64	LEU
28	YH	77	LYS
28	YH	81	GLU
28	YH	88	LEU
28	YH	89	ILE
28	YH	105	LEU
28	YH	124	GLU
28	YH	132	ARG
28	YH	136	ILE
28	YH	139	GLN
28	YH	143	GLN
28	YH	144	VAL
28	YH	152	ARG
28	YH	153	LYS
28	YH	154	PRO
28	YH	155	SER
28	YH	169	VAL
29	YI	1	MET
29	YI	2	LYS
29	YI	5	LEU

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Mol	Chain	Res	Type
29	YI	27	ARG
29	YI	35	LEU
29	YI	38	LEU
29	YI	56	LYS
29	YI	67	ARG
29	YI	70	GLU
29	YI	72	LEU
29	YI	81	VAL
29	YI	85	GLU
29	YI	96	ASP
29	YI	101	LEU
29	YI	112	LYS
29	YI	118	LYS
29	YI	134	PRO
29	YI	135	GLU
29	YI	136	VAL
29	YI	138	ILE
29	YI	139	GLN
29	YI	142	VAL
29	YI	145	VAL
30	YN	2	LYS
30	YN	7	LYS
30	YN	43	THR
30	YN	48	MET
30	YN	60	ILE
30	YN	61	ARG
30	YN	65	LYS
30	YN	73	THR
30	YN	78	TYR
30	YN	90	MET
30	YN	93	THR
30	YN	94	HIS
30	YN	98	VAL
30	YN	101	HIS
30	YN	109	LYS
30	YN	112	LEU
30	YN	120	LEU
30	YN	127	ASP
30	YN	131	GLN
30	YN	136	GLU
31	YO	8	LEU
31	YO	9	GLU

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Mol	Chain	Res	Type
31	YO	19	ILE
31	YO	23	ARG
31	YO	39	ILE
31	YO	49	ARG
31	YO	52	VAL
31	YO	53	LYS
31	YO	63	VAL
31	YO	65	THR
31	YO	91	LEU
32	YP	5	ASP
32	YP	9	ASN
32	YP	10	PRO
32	YP	14	LYS
32	YP	16	ARG
32	YP	21	ARG
32	YP	27	HIS
32	YP	29	LYS
32	YP	30	THR
32	YP	32	THR
32	YP	33	ARG
32	YP	36	LYS
32	YP	50	ARG
32	YP	55	ARG
32	YP	61	ARG
32	YP	62	LEU
32	YP	64	LYS
32	YP	65	ARG
32	YP	75	ILE
32	YP	81	GLN
32	YP	88	LEU
32	YP	91	PHE
32	YP	99	LEU
32	YP	100	LEU
32	YP	105	LEU
32	YP	144	GLU
32	YP	146	VAL
32	YP	149	GLU
33	YQ	2	LEU
33	YQ	25	ASP
33	YQ	26	TYR
33	YQ	27	VAL
33	YQ	54	MET

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Mol	Chain	Res	Type
33	YQ	55	VAL
33	YQ	59	ARG
33	YQ	79	LEU
33	YQ	83	MET
33	YQ	89	ASN
33	YQ	90	VAL
33	YQ	91	GLU
33	YQ	106	VAL
33	YQ	112	GLU
33	YQ	139	GLU
34	YR	14	SER
34	YR	37	THR
34	YR	44	LEU
34	YR	51	LEU
34	YR	66	VAL
34	YR	67	LEU
34	YR	71	GLN
34	YR	75	LEU
34	YR	76	VAL
34	YR	81	ASP
34	YR	95	THR
34	YR	100	LEU
34	YR	104	ARG
34	YR	105	ARG
34	YR	107	ASP
34	YR	113	LEU
35	YS	4	LEU
35	YS	12	PHE
35	YS	17	ARG
35	YS	18	ILE
35	YS	20	ARG
35	YS	44	LYS
35	YS	56	LEU
35	YS	57	LYS
35	YS	73	LEU
35	YS	89	ARG
35	YS	101	LEU
35	YS	103	GLU
35	YS	106	ARG
35	YS	111	GLU
36	YT	2	ASN
36	YT	14	TYR

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Mol	Chain	Res	Type
36	YT	22	PHE
36	YT	23	ARG
36	YT	27	THR
36	YT	42	ILE
36	YT	48	ILE
36	YT	50	ILE
36	YT	58	ASN
36	YT	65	LYS
36	YT	73	GLU
36	YT	78	LEU
36	YT	86	ILE
36	YT	87	ASP
36	YT	100	TYR
36	YT	104	ASN
36	YT	107	ASP
36	YT	111	ARG
36	YT	112	ARG
36	YT	128	GLU
36	YT	134	GLU
37	YU	5	LYS
37	YU	9	VAL
37	YU	31	SER
37	YU	52	ARG
37	YU	60	LEU
37	YU	64	ARG
37	YU	79	PHE
37	YU	88	ILE
37	YU	92	ARG
37	YU	98	LEU
37	YU	108	GLU
37	YU	117	GLN
38	YV	14	VAL
38	YV	18	LEU
38	YV	24	LYS
38	YV	35	LEU
38	YV	38	LEU
38	YV	39	LEU
38	YV	40	LEU
38	YV	47	VAL
38	YV	57	VAL
38	YV	61	VAL
38	YV	66	ARG

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Mol	Chain	Res	Type
38	YV	70	ILE
38	YV	75	PHE
38	YV	91	TYR
38	YV	99	ILE
39	YW	11	ARG
39	YW	14	PRO
39	YW	16	LYS
39	YW	19	LEU
39	YW	20	VAL
39	YW	23	LEU
39	YW	63	ASP
39	YW	67	ASP
39	YW	69	LEU
39	YW	70	TYR
39	YW	87	PRO
39	YW	88	ARG
39	YW	92	ARG
39	YW	95	ILE
39	YW	107	LEU
39	YW	109	GLU
40	YX	3	THR
40	YX	15	GLU
40	YX	27	THR
40	YX	30	VAL
40	YX	49	VAL
40	YX	57	LEU
40	YX	65	ARG
40	YX	70	LEU
40	YX	72	LYS
40	YX	76	ARG
40	YX	80	ILE
40	YX	81	VAL
40	YX	88	LYS
41	YY	7	VAL
41	YY	26	LYS
41	YY	27	VAL
41	YY	42	VAL
41	YY	43	ASN
41	YY	45	VAL
41	YY	57	GLN
41	YY	61	ILE
41	YY	64	GLU

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Mol	Chain	Res	Type
41	YY	72	VAL
41	YY	75	ILE
41	YY	77	PRO
41	YY	79	CYS
41	YY	87	LYS
41	YY	88	LYS
41	YY	89	PHE
41	YY	90	LEU
41	YY	95	LYS
41	YY	97	ARG
42	YZ	2	GLU
42	YZ	5	LEU
42	YZ	19	ARG
42	YZ	20	ARG
42	YZ	24	LEU
42	YZ	39	VAL
42	YZ	41	LEU
42	YZ	52	SER
42	YZ	60	GLU
42	YZ	66	SER
42	YZ	71	VAL
42	YZ	81	ARG
42	YZ	87	ASP
42	YZ	91	LEU
42	YZ	94	GLU
42	YZ	111	VAL
42	YZ	123	ASP
42	YZ	139	VAL
42	YZ	140	ASP
42	YZ	141	VAL
42	YZ	144	LEU
42	YZ	150	LEU
42	YZ	151	HIS
42	YZ	156	LYS
42	YZ	163	LEU
42	YZ	182	LYS
43	Y0	12	ASN
43	Y0	30	VAL
43	Y0	35	ASN
43	Y0	36	ILE
43	Y0	41	ARG
43	Y0	74	ARG

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Mol	Chain	Res	Type
43	Y0	80	HIS
43	Y0	82	ARG
44	Y1	2	SER
44	Y1	11	ARG
44	Y1	30	VAL
44	Y1	41	ARG
44	Y1	56	GLN
44	Y1	75	GLU
44	Y1	80	LEU
44	Y1	81	LYS
44	Y1	83	GLU
44	Y1	87	PRO
44	Y1	91	LYS
44	Y1	97	LEU
45	Y2	7	ARG
45	Y2	9	GLN
45	Y2	16	LEU
45	Y2	24	LEU
45	Y2	47	ASN
45	Y2	53	LEU
45	Y2	62	THR
45	Y2	64	LEU
46	Y3	4	LEU
46	Y3	8	LEU
46	Y3	9	VAL
46	Y3	10	LYS
46	Y3	30	ARG
46	Y3	31	LEU
46	Y3	32	GLN
46	Y3	37	LEU
46	Y3	40	THR
46	Y3	44	ARG
47	Y4	6	HIS
47	Y4	15	ILE
47	Y4	18	CYS
47	Y4	21	VAL
47	Y4	23	GLU
47	Y4	39	CYS
47	Y4	42	PHE
47	Y4	49	PHE
47	Y4	50	VAL
47	Y4	53	GLU

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Mol	Chain	Res	Type
47	Y4	57	GLU
47	Y4	61	ARG
47	Y4	62	ARG
47	Y4	63	TYR
47	Y4	68	ARG
47	Y4	69	LYS
47	Y4	71	ARG
48	Y5	3	LYS
48	Y5	4	HIS
48	Y5	6	VAL
48	Y5	11	THR
48	Y5	19	ARG
48	Y5	25	LEU
48	Y5	36	CYS
48	Y5	37	LYS
48	Y5	52	TYR
48	Y5	56	LYS
48	Y5	58	LEU
49	Y6	6	ARG
49	Y6	8	LYS
49	Y6	10	LEU
49	Y6	18	ARG
49	Y6	19	ARG
49	Y6	27	LYS
49	Y6	33	LYS
49	Y6	34	LEU
49	Y6	37	ARG
49	Y6	42	TRP
49	Y6	44	ARG
49	Y6	53	LYS
50	Y7	1	MET
50	Y7	9	ARG
50	Y7	14	LYS
50	Y7	43	THR
51	Y8	16	ILE
51	Y8	30	ARG
51	Y8	35	GLN
51	Y8	39	LYS
51	Y8	43	GLN
51	Y8	47	LYS
51	Y8	48	PHE
51	Y8	49	VAL

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Mol	Chain	Res	Type
51	Y8	52	LYS
51	Y8	53	PRO
51	Y8	59	LYS
51	Y8	62	LEU
51	Y8	63	PRO
51	Y8	65	GLU
52	Y9	1	MET
52	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (156) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	19	HIS
2	QB	95	GLN
2	QB	135	GLN
2	QB	204	ASN
2	QB	212	GLN
2	QB	224	GLN
3	QC	181	ASN
5	QE	72	GLN
5	QE	73	ASN
5	QE	78	HIS
5	QE	127	ASN
6	QF	64	GLN
6	QF	100	ASN
7	QG	28	ASN
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
9	QI	73	GLN
10	QJ	13	HIS
10	QJ	76	ASN
10	QJ	78	ASN
11	QK	117	ASN
12	QL	9	GLN
13	QM	101	GLN
15	QO	53	HIS
19	QS	47	HIS
19	QS	65	ASN
20	QT	26	ASN
24	RD	44	ASN
24	RD	87	ASN

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Mol	Chain	Res	Type
24	RD	112	GLN
24	RD	164	GLN
24	RD	166	GLN
24	RD	198	ASN
25	RE	55	ASN
25	RE	180	ASN
27	RG	123	ASN
28	RH	143	GLN
28	RH	147	ASN
28	RH	158	HIS
30	RN	56	ASN
30	RN	130	HIS
30	RN	131	GLN
31	RO	5	GLN
31	RO	82	ASN
32	RP	35	HIS
32	RP	81	GLN
32	RP	84	ASN
36	RT	58	ASN
36	RT	90	GLN
37	RU	94	ASN
38	RV	11	GLN
38	RV	80	GLN
38	RV	87	HIS
39	RW	40	ASN
39	RW	61	ASN
39	RW	102	HIS
40	RX	55	ASN
40	RX	87	GLN
41	RY	57	GLN
42	RZ	121	HIS
43	R0	29	GLN
44	R1	56	GLN
44	R1	66	HIS
45	R2	47	ASN
46	R3	19	GLN
46	R3	32	GLN
46	R3	52	HIS
49	R6	26	ASN
51	R8	33	ASN
52	R9	34	GLN
2	XB	95	GLN

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Mol	Chain	Res	Type
2	XB	204	ASN
2	XB	212	GLN
2	XB	224	GLN
3	XC	181	ASN
4	XD	43	HIS
5	XE	72	GLN
5	XE	73	ASN
5	XE	78	HIS
6	XF	64	GLN
6	XF	100	ASN
7	XG	28	ASN
7	XG	37	ASN
7	XG	86	GLN
7	XG	148	ASN
9	XI	31	GLN
9	XI	73	GLN
10	XJ	76	ASN
10	XJ	78	ASN
11	XK	99	GLN
11	XK	117	ASN
12	XL	9	GLN
13	XM	62	ASN
13	XM	77	ASN
13	XM	101	GLN
19	XS	47	HIS
19	XS	65	ASN
20	XT	26	ASN
24	YD	44	ASN
24	YD	87	ASN
24	YD	112	GLN
24	YD	164	GLN
24	YD	166	GLN
24	YD	198	ASN
25	YE	55	ASN
25	YE	135	HIS
25	YE	159	HIS
25	YE	180	ASN
27	YG	123	ASN
28	YH	143	GLN
28	YH	147	ASN
28	YH	158	HIS
29	YI	43	ASN

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Mol	Chain	Res	Type
30	YN	56	ASN
30	YN	101	HIS
30	YN	130	HIS
30	YN	131	GLN
31	YO	5	GLN
31	YO	29	ASN
31	YO	82	ASN
32	YP	13	ASN
32	YP	81	GLN
32	YP	84	ASN
34	YR	3	HIS
34	YR	50	HIS
34	YR	61	HIS
36	YT	58	ASN
36	YT	90	GLN
37	YU	75	ASN
37	YU	94	ASN
38	YV	11	GLN
38	YV	80	GLN
39	YW	61	ASN
39	YW	102	HIS
40	YX	55	ASN
40	YX	87	GLN
41	YY	57	GLN
42	YZ	32	HIS
42	YZ	132	ASN
43	Y0	29	GLN
43	Y0	70	GLN
44	Y1	56	GLN
44	Y1	66	HIS
45	Y2	38	GLN
45	Y2	46	GLN
45	Y2	47	ASN
46	Y3	19	GLN
46	Y3	32	GLN
46	Y3	46	ASN
47	Y4	47	GLN
48	Y5	22	HIS
49	Y6	26	ASN
49	Y6	32	ASN
51	Y8	33	ASN
52	Y9	34	GLN

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1499/1522 (98%)	281 (18%)	47 (3%)
1	XA	1498/1522 (98%)	299 (19%)	52 (3%)
22	RA	2879/2916 (98%)	659 (22%)	65 (2%)
22	YA	2880/2916 (98%)	639 (22%)	65 (2%)
23	RB	119/122 (97%)	20 (16%)	2 (1%)
23	YB	119/122 (97%)	25 (21%)	1 (0%)
53	QV	76/77 (98%)	30 (39%)	1 (1%)
53	XV	76/77 (98%)	30 (39%)	1 (1%)
54	QX	7/25 (28%)	5 (71%)	2 (28%)
54	XX	7/25 (28%)	4 (57%)	1 (14%)
55	QY	13/18 (72%)	6 (46%)	2 (15%)
55	XY	13/18 (72%)	5 (38%)	1 (7%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9188/9366 (98%)	2003 (21%)	240 (2%)

All (2003) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	9	G
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	50	A
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	76	G
1	QA	79	G
1	QA	80	G
1	QA	90	C
1	QA	91	C
1	QA	92	G
1	QA	95	G
1	QA	101	A
1	QA	108	G
1	QA	116	A

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Mol	Chain	Res	Type
1	QA	120	A
1	QA	121	C
1	QA	122	G
1	QA	129(A)	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	163	C
1	QA	171	A
1	QA	174	C
1	QA	182	U
1	QA	190	G
1	QA	191(A)	G
1	QA	195	A
1	QA	197	A
1	QA	209	U
1	QA	216	G
1	QA	231	G
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	266	G
1	QA	267	C
1	QA	281	G
1	QA	289	G
1	QA	316	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	388	G
1	QA	389	A

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Mol	Chain	Res	Type
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	419	C
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	429	U
1	QA	430	A
1	QA	435	C
1	QA	440	A
1	QA	442	C
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	482	A
1	QA	485	G
1	QA	486	U
1	QA	496	A
1	QA	497	U
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	517	G
1	QA	518	C
1	QA	521	G
1	QA	527	G
1	QA	532	A
1	QA	533	A
1	QA	534	U
1	QA	547	A
1	QA	559	A
1	QA	561	U
1	QA	564	C
1	QA	566	G
1	QA	572	A

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Mol	Chain	Res	Type
1	QA	573	A
1	QA	576	G
1	QA	579	G
1	QA	596	C
1	QA	614	A
1	QA	615	C
1	QA	623	C
1	QA	630	G
1	QA	631	G
1	QA	633	G
1	QA	653	A
1	QA	665	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	704	A
1	QA	723	U
1	QA	729	A
1	QA	731	G
1	QA	748	C
1	QA	749	C
1	QA	752	G
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	777	A
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	813	U
1	QA	817	C
1	QA	819	A
1	QA	821	G
1	QA	828	A
1	QA	836	G
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	871	U
1	QA	872	A

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Mol	Chain	Res	Type
1	QA	885	G
1	QA	902	G
1	QA	914	A
1	QA	926	G
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	974	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1008	C
1	QA	1009	G
1	QA	1020	U
1	QA	1021	G
1	QA	1024	G
1	QA	1025	U
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1040	U
1	QA	1054	C
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1094	G

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Mol	Chain	Res	Type
1	QA	1095	U
1	QA	1101	A
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1163	C
1	QA	1171	G
1	QA	1178	G
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1187	G
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1212	U
1	QA	1213	A
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1270	C
1	QA	1273	G

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Mol	Chain	Res	Type
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1302	U
1	QA	1305	G
1	QA	1317	C
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1347	G
1	QA	1348	U
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1363	A
1	QA	1364	U
1	QA	1370	G
1	QA	1397	C
1	QA	1401	G
1	QA	1419	G
1	QA	1442	G
1	QA	1446	A
1	QA	1447	G
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1487	G
1	QA	1492	A
1	QA	1499	A
1	QA	1504	G

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Mol	Chain	Res	Type
1	QA	1505	G
1	QA	1506	U
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
22	RA	9	U
22	RA	15	G
22	RA	27	G
22	RA	34	C
22	RA	35	G
22	RA	46	C
22	RA	49	A
22	RA	51	G
22	RA	55	G
22	RA	63	U
22	RA	72	U
22	RA	74	A
22	RA	75	G
22	RA	96	G
22	RA	97	C
22	RA	99	U
22	RA	101	G
22	RA	102	G
22	RA	103	A
22	RA	118	A
22	RA	120	U
22	RA	124	G
22	RA	131	G
22	RA	138	G
22	RA	161	U
22	RA	177	G
22	RA	181	A
22	RA	196	A
22	RA	199	A
22	RA	205	G
22	RA	206	U
22	RA	215	G
22	RA	216	A
22	RA	221	A
22	RA	222	A

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Mol	Chain	Res	Type
22	RA	223	A
22	RA	224	G
22	RA	228	A
22	RA	229	A
22	RA	230	U
22	RA	232	G
22	RA	233	A
22	RA	242	G
22	RA	243	U
22	RA	248	G
22	RA	249	C
22	RA	250	G
22	RA	252	G
22	RA	265	A
22	RA	266	G
22	RA	270(L)	U
22	RA	270(M)	U
22	RA	270(N)	G
22	RA	270(P)	C
22	RA	270(T)	G
22	RA	271(C)	U
22	RA	271	G
22	RA	275	G
22	RA	276	A
22	RA	277	C
22	RA	278	A
22	RA	299	A
22	RA	306	U
22	RA	311	A
22	RA	316	C
22	RA	323	G
22	RA	324	A
22	RA	327	G
22	RA	329	G
22	RA	330	A
22	RA	331	A
22	RA	332	A
22	RA	335	C
22	RA	342	G
22	RA	343	C
22	RA	346	A
22	RA	347	A

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Mol	Chain	Res	Type
22	RA	352	G
22	RA	364	C
22	RA	371	A
22	RA	372	G
22	RA	373	U
22	RA	386	G
22	RA	393	C
22	RA	395	U
22	RA	405	U
22	RA	411	G
22	RA	412	A
22	RA	428	A
22	RA	444	C
22	RA	448	U
22	RA	449	A
22	RA	451	C
22	RA	454	A
22	RA	457	A
22	RA	470	A
22	RA	481	G
22	RA	494	G
22	RA	503	A
22	RA	504	U
22	RA	505	A
22	RA	509	C
22	RA	512	G
22	RA	513	A
22	RA	518	G
22	RA	519	U
22	RA	527	C
22	RA	529	A
22	RA	532	A
22	RA	533	G
22	RA	537	C
22	RA	539	G
22	RA	540	G
22	RA	546	C
22	RA	547	A
22	RA	549	G
22	RA	563	G
22	RA	571	A
22	RA	573	G

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Mol	Chain	Res	Type
22	RA	575	A
22	RA	588	U
22	RA	599	G
22	RA	603	A
22	RA	604	G
22	RA	607	U
22	RA	614	U
22	RA	615	G
22	RA	617	G
22	RA	621	A
22	RA	627	A
22	RA	637	A
22	RA	638	G
22	RA	645	C
22	RA	646	A
22	RA	651	G
22	RA	652	C
22	RA	654	A
22	RA	654(A)	G
22	RA	654(B)	C
22	RA	657	U
22	RA	668	G
22	RA	669	G
22	RA	686	G
22	RA	702	G
22	RA	705	A
22	RA	717	G
22	RA	722	A
22	RA	728	G
22	RA	730	C
22	RA	747	U
22	RA	753	C
22	RA	764	A
22	RA	765	G
22	RA	771	G
22	RA	775	G
22	RA	776	G
22	RA	782	A
22	RA	784	A
22	RA	785	G
22	RA	789	A
22	RA	790	C

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Mol	Chain	Res	Type
22	RA	792	G
22	RA	793	A
22	RA	800	A
22	RA	805	G
22	RA	806	C
22	RA	812	C
22	RA	818	G
22	RA	819	A
22	RA	822	U
22	RA	827	U
22	RA	828	U
22	RA	831	G
22	RA	833	U
22	RA	846	C
22	RA	847	U
22	RA	856	C
22	RA	857	C
22	RA	859	G
22	RA	860	U
22	RA	866	A
22	RA	869	G
22	RA	872	A
22	RA	880	G
22	RA	881	G
22	RA	882	G
22	RA	884	C
22	RA	885	C
22	RA	886	C
22	RA	888	C
22	RA	889	C
22	RA	893	C
22	RA	896	A
22	RA	897	C
22	RA	899	A
22	RA	900	A
22	RA	901	A
22	RA	904	C
22	RA	906	G
22	RA	907	U
22	RA	910	A
22	RA	911	A
22	RA	917	A

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Mol	Chain	Res	Type
22	RA	932	G
22	RA	938	G
22	RA	941	A
22	RA	944	G
22	RA	945	A
22	RA	946	G
22	RA	959	A
22	RA	961	C
22	RA	973	A
22	RA	974	G
22	RA	974(A)	C
22	RA	975	G
22	RA	980	A
22	RA	983	A
22	RA	989	G
22	RA	990	A
22	RA	991	C
22	RA	996	A
22	RA	1003	G
22	RA	1005	C
22	RA	1011	G
22	RA	1012	U
22	RA	1013	C
22	RA	1015	G
22	RA	1023	U
22	RA	1025	G
22	RA	1026	U
22	RA	1027	A
22	RA	1033	U
22	RA	1044	G
22	RA	1045	A
22	RA	1046	A
22	RA	1050	A
22	RA	1054	A
22	RA	1055	G
22	RA	1057	A
22	RA	1059	G
22	RA	1060	U
22	RA	1061	U
22	RA	1066	U
22	RA	1067	A
22	RA	1068	G

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Mol	Chain	Res	Type
22	RA	1070	A
22	RA	1071	G
22	RA	1076	C
22	RA	1077	A
22	RA	1078	U
22	RA	1079	C
22	RA	1082	U
22	RA	1083	U
22	RA	1084	A
22	RA	1085	A
22	RA	1086	A
22	RA	1087	G
22	RA	1088	A
22	RA	1091	G
22	RA	1093	G
22	RA	1095	A
22	RA	1096	A
22	RA	1099	G
22	RA	1104	C
22	RA	1110	G
22	RA	1111	A
22	RA	1112	G
22	RA	1122	G
22	RA	1126	A
22	RA	1130	U
22	RA	1131	G
22	RA	1135	C
22	RA	1136	G
22	RA	1142	U
22	RA	1142(A)	A
22	RA	1151	G
22	RA	1155	A
22	RA	1170	G
22	RA	1173	G
22	RA	1174	A
22	RA	1175	U
22	RA	1176	G
22	RA	1178	C
22	RA	1179	C
22	RA	1180	C
22	RA	1183	G
22	RA	1190	G

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Mol	Chain	Res	Type
22	RA	1191	G
22	RA	1195	G
22	RA	1204	A
22	RA	1205	U
22	RA	1206	G
22	RA	1210	A
22	RA	1211	U
22	RA	1212	G
22	RA	1220	A
22	RA	1221	C
22	RA	1236	G
22	RA	1238	G
22	RA	1247	A
22	RA	1248	G
22	RA	1253	A
22	RA	1256	G
22	RA	1265	A
22	RA	1271	G
22	RA	1272	A
22	RA	1282	U
22	RA	1300	U
22	RA	1301	A
22	RA	1302	A
22	RA	1303	G
22	RA	1306	C
22	RA	1309	G
22	RA	1312	U
22	RA	1313	U
22	RA	1314	C
22	RA	1319	G
22	RA	1321	A
22	RA	1329	U
22	RA	1332	G
22	RA	1349	A
22	RA	1352	U
22	RA	1365	A
22	RA	1368	G
22	RA	1370	C
22	RA	1372	U
22	RA	1379	A
22	RA	1380	G
22	RA	1384	A

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Mol	Chain	Res	Type
22	RA	1385	G
22	RA	1386	C
22	RA	1396	U
22	RA	1407	C
22	RA	1408	C
22	RA	1411	C
22	RA	1412	A
22	RA	1413	G
22	RA	1416	G
22	RA	1419	A
22	RA	1420	U
22	RA	1421	G
22	RA	1428	C
22	RA	1444(A)	A
22	RA	1445	C
22	RA	1449	A
22	RA	1449(A)	G
22	RA	1455	G
22	RA	1458	C
22	RA	1459	G
22	RA	1460	A
22	RA	1461	G
22	RA	1467	C
22	RA	1471	A
22	RA	1474	C
22	RA	1482	U
22	RA	1483	G
22	RA	1485	G
22	RA	1493	C
22	RA	1497	U
22	RA	1502	C
22	RA	1504	C
22	RA	1506	C
22	RA	1507	A
22	RA	1508	A
22	RA	1510	A
22	RA	1514	U
22	RA	1522	G
22	RA	1525	G
22	RA	1534	G
22	RA	1535	U
22	RA	1536	A

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Mol	Chain	Res	Type
22	RA	1537	C
22	RA	1538	G
22	RA	1543	A
22	RA	1544	C
22	RA	1545	A
22	RA	1547	C
22	RA	1558	A
22	RA	1559	G
22	RA	1566	A
22	RA	1569	A
22	RA	1578	U
22	RA	1579	A
22	RA	1581	G
22	RA	1585	C
22	RA	1586	A
22	RA	1591	G
22	RA	1598	C
22	RA	1608	A
22	RA	1609	A
22	RA	1610	A
22	RA	1616	A
22	RA	1617	C
22	RA	1618	A
22	RA	1622	G
22	RA	1630(A)	C
22	RA	1647	G
22	RA	1648	C
22	RA	1654	A
22	RA	1667	G
22	RA	1668	A
22	RA	1674	G
22	RA	1694	C
22	RA	1695	G
22	RA	1698	A
22	RA	1699	G
22	RA	1701	A
22	RA	1725	G
22	RA	1729	A
22	RA	1730	U
22	RA	1731	G
22	RA	1733	G
22	RA	1742	C

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Mol	Chain	Res	Type
22	RA	1743	G
22	RA	1754	C
22	RA	1756	G
22	RA	1763	G
22	RA	1764	G
22	RA	1769	G
22	RA	1773	A
22	RA	1780	A
22	RA	1787	A
22	RA	1791	A
22	RA	1799	G
22	RA	1800	C
22	RA	1801	G
22	RA	1811	G
22	RA	1816	G
22	RA	1820	U
22	RA	1829	A
22	RA	1835	G
22	RA	1847	A
22	RA	1848	A
22	RA	1858	G
22	RA	1869	G
22	RA	1870	C
22	RA	1872	A
22	RA	1878	G
22	RA	1882	C
22	RA	1888	G
22	RA	1889	A
22	RA	1896	G
22	RA	1903	G
22	RA	1906	G
22	RA	1926	U
22	RA	1927	A
22	RA	1930	G
22	RA	1931	U
22	RA	1934	C
22	RA	1936	A
22	RA	1937	A
22	RA	1938	A
22	RA	1939	U
22	RA	1955	U
22	RA	1963	U

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Mol	Chain	Res	Type
22	RA	1964	G
22	RA	1965	C
22	RA	1967	C
22	RA	1969	A
22	RA	1970	A
22	RA	1971	A
22	RA	1972	A
22	RA	1981	A
22	RA	1982	C
22	RA	1991	U
22	RA	1992	G
22	RA	1993	U
22	RA	1996	C
22	RA	2020	A
22	RA	2023	G
22	RA	2031	A
22	RA	2032	G
22	RA	2033	A
22	RA	2039	C
22	RA	2043	C
22	RA	2049	G
22	RA	2054	A
22	RA	2055	C
22	RA	2056	G
22	RA	2059	A
22	RA	2060	A
22	RA	2061	G
22	RA	2062	A
22	RA	2069	G
22	RA	2089	U
22	RA	2092	U
22	RA	2093	G
22	RA	2096	U
22	RA	2099	U
22	RA	2108	C
22	RA	2111	C
22	RA	2113	U
22	RA	2114	A
22	RA	2115	G
22	RA	2116	G
22	RA	2117	A
22	RA	2120	G

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Mol	Chain	Res	Type
22	RA	2126	A
22	RA	2127	G
22	RA	2128	C
22	RA	2131	G
22	RA	2132	U
22	RA	2133	G
22	RA	2136	C
22	RA	2146	C
22	RA	2148	G
22	RA	2157	G
22	RA	2158	A
22	RA	2161	C
22	RA	2166	G
22	RA	2168	G
22	RA	2169	A
22	RA	2173	A
22	RA	2176	A
22	RA	2190	G
22	RA	2192	G
22	RA	2198	A
22	RA	2199	A
22	RA	2210	G
22	RA	2211	G
22	RA	2212	A
22	RA	2213	U
22	RA	2215	G
22	RA	2225	A
22	RA	2238	G
22	RA	2239	G
22	RA	2243	U
22	RA	2268	A
22	RA	2275	C
22	RA	2283	C
22	RA	2287	A
22	RA	2288	A
22	RA	2303	G
22	RA	2305	A
22	RA	2307	G
22	RA	2308	G
22	RA	2311	A
22	RA	2314	C
22	RA	2319	G

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Mol	Chain	Res	Type
22	RA	2320	A
22	RA	2322	A
22	RA	2325	G
22	RA	2326	C
22	RA	2334	G
22	RA	2336	A
22	RA	2346	A
22	RA	2347	C
22	RA	2350	C
22	RA	2382	G
22	RA	2383	G
22	RA	2385	C
22	RA	2392	A
22	RA	2394	C
22	RA	2399	G
22	RA	2400	G
22	RA	2402	C
22	RA	2403	C
22	RA	2406	U
22	RA	2423	U
22	RA	2424	C
22	RA	2425	A
22	RA	2429	G
22	RA	2430	A
22	RA	2435	A
22	RA	2439	A
22	RA	2440	C
22	RA	2441	C
22	RA	2445	G
22	RA	2448	A
22	RA	2450	A
22	RA	2469	A
22	RA	2470	G
22	RA	2474	C
22	RA	2475	C
22	RA	2476	A
22	RA	2482	G
22	RA	2483	C
22	RA	2484	G
22	RA	2494	G
22	RA	2502	G
22	RA	2505	G

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Mol	Chain	Res	Type
22	RA	2506	U
22	RA	2507	C
22	RA	2519	U
22	RA	2529	G
22	RA	2535	G
22	RA	2542	A
22	RA	2543	G
22	RA	2554	U
22	RA	2566	A
22	RA	2567	G
22	RA	2569	G
22	RA	2573	C
22	RA	2574	G
22	RA	2581	G
22	RA	2582	G
22	RA	2586	C
22	RA	2601	C
22	RA	2602	A
22	RA	2609	U
22	RA	2611	U
22	RA	2612	C
22	RA	2614	A
22	RA	2623	G
22	RA	2629	A
22	RA	2646	C
22	RA	2655	G
22	RA	2665	A
22	RA	2673	G
22	RA	2681	C
22	RA	2682	U
22	RA	2689	U
22	RA	2690	C
22	RA	2691	C
22	RA	2702	U
22	RA	2703	C
22	RA	2707	G
22	RA	2712	U
22	RA	2712(A)	A
22	RA	2713	A
22	RA	2714	G
22	RA	2724	C
22	RA	2726	U

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Mol	Chain	Res	Type
22	RA	2733	A
22	RA	2734	A
22	RA	2748	A
22	RA	2750	A
22	RA	2751	G
22	RA	2752	C
22	RA	2758	A
22	RA	2761	G
22	RA	2764	A
22	RA	2765	A
22	RA	2777	G
22	RA	2778	A
22	RA	2779	U
22	RA	2780	G
22	RA	2790	A
22	RA	2791	C
22	RA	2797	U
22	RA	2807	G
22	RA	2810	A
22	RA	2818	G
22	RA	2820	A
22	RA	2821	A
22	RA	2823	A
22	RA	2833	G
22	RA	2834	G
22	RA	2835	A
22	RA	2846	G
22	RA	2849	U
22	RA	2867	G
22	RA	2868	A
22	RA	2872	G
22	RA	2879	C
22	RA	2880	C
22	RA	2891	G
22	RA	2892	A
22	RA	2894	G
23	RB	8	U
23	RB	9	G
23	RB	13	A
23	RB	15	A
23	RB	16	G
23	RB	19	G

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Mol	Chain	Res	Type
23	RB	21	G
23	RB	22	U
23	RB	25	A
23	RB	27	C
23	RB	32	C
23	RB	33	G
23	RB	42	C
23	RB	45	A
23	RB	52	A
23	RB	56	G
23	RB	67	G
23	RB	73	A
23	RB	81	G
23	RB	109	G
1	XA	6	G
1	XA	7	G
1	XA	32	A
1	XA	39	G
1	XA	47	C
1	XA	48	C
1	XA	50	A
1	XA	51	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	76	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	122	G
1	XA	129(A)	G

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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	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	222	U
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	251	G
1	XA	262	A
1	XA	267	C
1	XA	270	A
1	XA	281	G
1	XA	289	G
1	XA	305	G
1	XA	315	A
1	XA	316	G
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	349	A
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	371	G
1	XA	372	C
1	XA	373	A

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Mol	Chain	Res	Type
1	XA	384	G
1	XA	388	G
1	XA	390	C
1	XA	397	A
1	XA	398	C
1	XA	406	G
1	XA	411	A
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	421	U
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	435	C
1	XA	440	A
1	XA	442	C
1	XA	452	A
1	XA	465	A
1	XA	466	C
1	XA	467	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	496	A
1	XA	497	U
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	518	C
1	XA	527	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U
1	XA	563	A
1	XA	564	C

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Mol	Chain	Res	Type
1	XA	568	G
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	595	G
1	XA	596	C
1	XA	630	G
1	XA	631	G
1	XA	633	G
1	XA	652	U
1	XA	653	A
1	XA	665	A
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	703	G
1	XA	704	A
1	XA	723	U
1	XA	731	G
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	774	G
1	XA	777	A
1	XA	784	C
1	XA	786	G
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	836	G
1	XA	841	U

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Mol	Chain	Res	Type
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	871	U
1	XA	872	A
1	XA	885	G
1	XA	902	G
1	XA	914	A
1	XA	916	G
1	XA	922	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	936	C
1	XA	940	C
1	XA	942	G
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	982	U
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	1001	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1009	G
1	XA	1021	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G

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Mol	Chain	Res	Type
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1040	U
1	XA	1054	C
1	XA	1055	A
1	XA	1066	C
1	XA	1094	G
1	XA	1095	U
1	XA	1101	A
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1151	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1187	G
1	XA	1190	G
1	XA	1193	G
1	XA	1196	U
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1212	U
1	XA	1214	C
1	XA	1225	A

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Mol	Chain	Res	Type
1	XA	1227	A
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1270	C
1	XA	1273	G
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1305	G
1	XA	1317	C
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1331	G
1	XA	1334	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1347	G
1	XA	1348	U
1	XA	1349	A
1	XA	1353	G
1	XA	1362(A)	C
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1397	C
1	XA	1398	A
1	XA	1419	G

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Mol	Chain	Res	Type
1	XA	1442	G
1	XA	1446	A
1	XA	1447	G
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1497	G
1	XA	1499	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	YA	9	U
22	YA	11	G
22	YA	15	G
22	YA	27	G
22	YA	34	C
22	YA	46	C
22	YA	49	A
22	YA	55	G
22	YA	63	U
22	YA	72	U
22	YA	74	A
22	YA	75	G
22	YA	84	A
22	YA	97	C
22	YA	99	U
22	YA	101	G
22	YA	102	G
22	YA	103	A
22	YA	118	A
22	YA	120	U
22	YA	124	G
22	YA	131	G
22	YA	161	U

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Mol	Chain	Res	Type
22	YA	162	U
22	YA	181	A
22	YA	188	G
22	YA	196	A
22	YA	199	A
22	YA	206	U
22	YA	214	G
22	YA	215	G
22	YA	216	A
22	YA	221	A
22	YA	222	A
22	YA	223	A
22	YA	228	A
22	YA	229	A
22	YA	230	U
22	YA	232	G
22	YA	233	A
22	YA	242	G
22	YA	243	U
22	YA	245	G
22	YA	248	G
22	YA	252	G
22	YA	265	A
22	YA	266	G
22	YA	269	U
22	YA	270(L)	U
22	YA	270(M)	U
22	YA	270(P)	C
22	YA	271(B)	G
22	YA	271(C)	U
22	YA	271	G
22	YA	274	G
22	YA	275	G
22	YA	276	A
22	YA	278	A
22	YA	279	C
22	YA	287	C
22	YA	299	A
22	YA	305	U
22	YA	311	A
22	YA	315	G
22	YA	323	G

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Mol	Chain	Res	Type
22	YA	324	A
22	YA	329	G
22	YA	330	A
22	YA	332	A
22	YA	342	G
22	YA	352	G
22	YA	363	G
22	YA	364	C
22	YA	371	A
22	YA	372	G
22	YA	373	U
22	YA	386	G
22	YA	387	U
22	YA	396	G
22	YA	405	U
22	YA	406	G
22	YA	411	G
22	YA	412	A
22	YA	421	U
22	YA	428	A
22	YA	442	G
22	YA	443	A
22	YA	444	C
22	YA	448	U
22	YA	457	A
22	YA	470	A
22	YA	479	A
22	YA	481	G
22	YA	483	A
22	YA	504	U
22	YA	505	A
22	YA	509	C
22	YA	512	G
22	YA	518	G
22	YA	527	C
22	YA	529	A
22	YA	531	C
22	YA	532	A
22	YA	533	G
22	YA	537	C
22	YA	539	G
22	YA	540	G

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Mol	Chain	Res	Type
22	YA	546	C
22	YA	547	A
22	YA	549	G
22	YA	563	G
22	YA	573	G
22	YA	575	A
22	YA	586	A
22	YA	588	U
22	YA	603	A
22	YA	607	U
22	YA	613	U
22	YA	614	U
22	YA	615	G
22	YA	617	G
22	YA	620	G
22	YA	622	G
22	YA	624	C
22	YA	626	U
22	YA	627	A
22	YA	629	G
22	YA	631	A
22	YA	634	C
22	YA	637	A
22	YA	638	G
22	YA	645	C
22	YA	646	A
22	YA	648	G
22	YA	651	G
22	YA	654	A
22	YA	654(A)	G
22	YA	654(B)	C
22	YA	654(V)	A
22	YA	657	U
22	YA	664	C
22	YA	668	G
22	YA	686	G
22	YA	702	G
22	YA	704	G
22	YA	708	C
22	YA	709	U
22	YA	717	G
22	YA	722	A

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Mol	Chain	Res	Type
22	YA	730	C
22	YA	747	U
22	YA	753	C
22	YA	765	G
22	YA	775	G
22	YA	776	G
22	YA	782	A
22	YA	784	A
22	YA	785	G
22	YA	790	C
22	YA	791	C
22	YA	792	G
22	YA	805	G
22	YA	812	C
22	YA	817	C
22	YA	818	G
22	YA	819	A
22	YA	827	U
22	YA	828	U
22	YA	831	G
22	YA	833	U
22	YA	847	U
22	YA	856	C
22	YA	857	C
22	YA	860	U
22	YA	866	A
22	YA	872	A
22	YA	880	G
22	YA	881	G
22	YA	882	G
22	YA	884	C
22	YA	885	C
22	YA	886	C
22	YA	888	C
22	YA	889	C
22	YA	890	A
22	YA	896	A
22	YA	899	A
22	YA	900	A
22	YA	901	A
22	YA	907	U
22	YA	910	A

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Mol	Chain	Res	Type
22	YA	914	C
22	YA	915	C
22	YA	917	A
22	YA	918	A
22	YA	932	G
22	YA	938	G
22	YA	941	A
22	YA	945	A
22	YA	946	G
22	YA	959	A
22	YA	961	C
22	YA	965	C
22	YA	973	A
22	YA	974	G
22	YA	974(A)	C
22	YA	975	G
22	YA	980	A
22	YA	983	A
22	YA	990	A
22	YA	991	C
22	YA	996	A
22	YA	1003	G
22	YA	1005	C
22	YA	1008	C
22	YA	1011	G
22	YA	1012	U
22	YA	1013	C
22	YA	1020	A
22	YA	1022	G
22	YA	1023	U
22	YA	1024	G
22	YA	1025	G
22	YA	1026	U
22	YA	1027	A
22	YA	1033	U
22	YA	1045	A
22	YA	1046	A
22	YA	1050	A
22	YA	1054	A
22	YA	1055	G
22	YA	1057	A
22	YA	1059	G

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Mol	Chain	Res	Type
22	YA	1060	U
22	YA	1061	U
22	YA	1066	U
22	YA	1067	A
22	YA	1068	G
22	YA	1071	G
22	YA	1076	C
22	YA	1077	A
22	YA	1078	U
22	YA	1079	C
22	YA	1082	U
22	YA	1083	U
22	YA	1084	A
22	YA	1085	A
22	YA	1086	A
22	YA	1088	A
22	YA	1090	U
22	YA	1093	G
22	YA	1095	A
22	YA	1096	A
22	YA	1097	U
22	YA	1099	G
22	YA	1103	A
22	YA	1104	C
22	YA	1105	U
22	YA	1110	G
22	YA	1111	A
22	YA	1122	G
22	YA	1128	A
22	YA	1131	G
22	YA	1135	C
22	YA	1136	G
22	YA	1142	U
22	YA	1142(A)	A
22	YA	1151	G
22	YA	1170	G
22	YA	1173	G
22	YA	1174	A
22	YA	1175	U
22	YA	1176	G
22	YA	1178	C
22	YA	1179	C

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Mol	Chain	Res	Type
22	YA	1180	C
22	YA	1195	G
22	YA	1198	U
22	YA	1204	A
22	YA	1205	U
22	YA	1206	G
22	YA	1211	U
22	YA	1220	A
22	YA	1221	C
22	YA	1236	G
22	YA	1238	G
22	YA	1240	U
22	YA	1244	G
22	YA	1248	G
22	YA	1250	G
22	YA	1253	A
22	YA	1256	G
22	YA	1265	A
22	YA	1271	G
22	YA	1272	A
22	YA	1273	U
22	YA	1276	A
22	YA	1282	U
22	YA	1300	U
22	YA	1301	A
22	YA	1304	C
22	YA	1313	U
22	YA	1321	A
22	YA	1329	U
22	YA	1349	A
22	YA	1352	U
22	YA	1365	A
22	YA	1368	G
22	YA	1370	C
22	YA	1379	A
22	YA	1384	A
22	YA	1385	G
22	YA	1386	C
22	YA	1389	G
22	YA	1391	U
22	YA	1398	C
22	YA	1402	C

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Mol	Chain	Res	Type
22	YA	1407	C
22	YA	1411	C
22	YA	1412	A
22	YA	1416	G
22	YA	1419	A
22	YA	1420	U
22	YA	1421	G
22	YA	1428	C
22	YA	1444(A)	A
22	YA	1445	C
22	YA	1449	A
22	YA	1449(A)	G
22	YA	1455	G
22	YA	1458	C
22	YA	1460	A
22	YA	1461	G
22	YA	1467	C
22	YA	1471	A
22	YA	1482	U
22	YA	1483	G
22	YA	1485	G
22	YA	1490	A
22	YA	1493	C
22	YA	1494	A
22	YA	1497	U
22	YA	1505	C
22	YA	1506	C
22	YA	1507	A
22	YA	1508	A
22	YA	1510	A
22	YA	1511	A
22	YA	1513	C
22	YA	1514	U
22	YA	1522	G
22	YA	1534	G
22	YA	1535	U
22	YA	1536	A
22	YA	1537	C
22	YA	1540	G
22	YA	1543	A
22	YA	1544	C
22	YA	1545	A

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Mol	Chain	Res	Type
22	YA	1558	A
22	YA	1559	G
22	YA	1569	A
22	YA	1578	U
22	YA	1579	A
22	YA	1585	C
22	YA	1586	A
22	YA	1592	C
22	YA	1597	A
22	YA	1598	C
22	YA	1608	A
22	YA	1609	A
22	YA	1616	A
22	YA	1617	C
22	YA	1618	A
22	YA	1640	C
22	YA	1646	C
22	YA	1648	C
22	YA	1654	A
22	YA	1667	G
22	YA	1669	A
22	YA	1674	G
22	YA	1695	G
22	YA	1699	G
22	YA	1700	A
22	YA	1725	G
22	YA	1728	G
22	YA	1729	A
22	YA	1730	U
22	YA	1731	G
22	YA	1733	G
22	YA	1734	C
22	YA	1742	C
22	YA	1743	G
22	YA	1753	G
22	YA	1754	C
22	YA	1756	G
22	YA	1762	A
22	YA	1763	G
22	YA	1764	G
22	YA	1772	G
22	YA	1773	A

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Mol	Chain	Res	Type
22	YA	1780	A
22	YA	1781	C
22	YA	1784	A
22	YA	1787	A
22	YA	1791	A
22	YA	1799	G
22	YA	1800	C
22	YA	1801	G
22	YA	1815	A
22	YA	1816	G
22	YA	1819	A
22	YA	1820	U
22	YA	1829	A
22	YA	1835	G
22	YA	1836	C
22	YA	1839	G
22	YA	1847	A
22	YA	1848	A
22	YA	1850	G
22	YA	1858	G
22	YA	1869	G
22	YA	1872	A
22	YA	1878	G
22	YA	1882	C
22	YA	1884	A
22	YA	1889	A
22	YA	1896	G
22	YA	1903	G
22	YA	1906	G
22	YA	1913	A
22	YA	1923	U
22	YA	1924	C
22	YA	1930	G
22	YA	1931	U
22	YA	1936	A
22	YA	1939	U
22	YA	1944	U
22	YA	1955	U
22	YA	1956	U
22	YA	1960	A
22	YA	1963	U
22	YA	1964	G

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Mol	Chain	Res	Type
22	YA	1966	A
22	YA	1967	C
22	YA	1968	G
22	YA	1969	A
22	YA	1970	A
22	YA	1971	A
22	YA	1972	A
22	YA	1982	C
22	YA	1991	U
22	YA	1993	U
22	YA	2020	A
22	YA	2021	C
22	YA	2023	G
22	YA	2031	A
22	YA	2033	A
22	YA	2039	C
22	YA	2043	C
22	YA	2055	C
22	YA	2056	G
22	YA	2059	A
22	YA	2060	A
22	YA	2061	G
22	YA	2062	A
22	YA	2069	G
22	YA	2097	C
22	YA	2100	G
22	YA	2111	C
22	YA	2113	U
22	YA	2114	A
22	YA	2115	G
22	YA	2116	G
22	YA	2117	A
22	YA	2119	A
22	YA	2120	G
22	YA	2126	A
22	YA	2127	G
22	YA	2128	C
22	YA	2131	G
22	YA	2132	U
22	YA	2133	G
22	YA	2136	C
22	YA	2146	C

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Mol	Chain	Res	Type
22	YA	2148	G
22	YA	2157	G
22	YA	2158	A
22	YA	2166	G
22	YA	2168	G
22	YA	2173	A
22	YA	2176	A
22	YA	2190	G
22	YA	2192	G
22	YA	2198	A
22	YA	2199	A
22	YA	2205	C
22	YA	2210	G
22	YA	2211	G
22	YA	2212	A
22	YA	2213	U
22	YA	2215	G
22	YA	2225	A
22	YA	2238	G
22	YA	2246	G
22	YA	2275	C
22	YA	2280	G
22	YA	2283	C
22	YA	2287	A
22	YA	2288	A
22	YA	2304	G
22	YA	2307	G
22	YA	2308	G
22	YA	2310	A
22	YA	2311	A
22	YA	2319	G
22	YA	2320	A
22	YA	2325	G
22	YA	2326	C
22	YA	2334	G
22	YA	2336	A
22	YA	2343	C
22	YA	2345	G
22	YA	2346	A
22	YA	2347	C
22	YA	2350	C
22	YA	2355	C

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Mol	Chain	Res	Type
22	YA	2372	G
22	YA	2379	G
22	YA	2382	G
22	YA	2383	G
22	YA	2385	C
22	YA	2394	C
22	YA	2402	C
22	YA	2403	C
22	YA	2406	U
22	YA	2410	G
22	YA	2423	U
22	YA	2424	C
22	YA	2425	A
22	YA	2426	A
22	YA	2429	G
22	YA	2430	A
22	YA	2435	A
22	YA	2439	A
22	YA	2440	C
22	YA	2441	C
22	YA	2446	G
22	YA	2448	A
22	YA	2450	A
22	YA	2469	A
22	YA	2470	G
22	YA	2475	C
22	YA	2476	A
22	YA	2482	G
22	YA	2494	G
22	YA	2502	G
22	YA	2504	U
22	YA	2505	G
22	YA	2506	U
22	YA	2518	A
22	YA	2519	U
22	YA	2524	G
22	YA	2525	G
22	YA	2529	G
22	YA	2542	A
22	YA	2543	G
22	YA	2554	U
22	YA	2562	U

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Mol	Chain	Res	Type
22	YA	2567	G
22	YA	2569	G
22	YA	2573	C
22	YA	2602	A
22	YA	2609	U
22	YA	2611	U
22	YA	2612	C
22	YA	2621	A
22	YA	2623	G
22	YA	2629	A
22	YA	2632	A
22	YA	2641	G
22	YA	2646	C
22	YA	2655	G
22	YA	2656	U
22	YA	2665	A
22	YA	2673	G
22	YA	2682	U
22	YA	2689	U
22	YA	2690	C
22	YA	2691	C
22	YA	2702	U
22	YA	2703	C
22	YA	2707	G
22	YA	2712	U
22	YA	2712(A)	A
22	YA	2713	A
22	YA	2714	G
22	YA	2724	C
22	YA	2726	U
22	YA	2730	C
22	YA	2733	A
22	YA	2734	A
22	YA	2744	G
22	YA	2748	A
22	YA	2752	C
22	YA	2758	A
22	YA	2761	G
22	YA	2765	A
22	YA	2766	G
22	YA	2770	G
22	YA	2777	G

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Mol	Chain	Res	Type
22	YA	2778	A
22	YA	2779	U
22	YA	2789	C
22	YA	2790	A
22	YA	2791	C
22	YA	2797	U
22	YA	2807	G
22	YA	2808	U
22	YA	2818	G
22	YA	2820	A
22	YA	2821	A
22	YA	2823	A
22	YA	2833	G
22	YA	2834	G
22	YA	2835	A
22	YA	2846	G
22	YA	2847	U
22	YA	2849	U
22	YA	2859	G
22	YA	2867	G
22	YA	2868	A
22	YA	2872	G
22	YA	2874	C
22	YA	2880	C
22	YA	2891	G
22	YA	2892	A
22	YA	2893	G
22	YA	2894	G
23	YB	8	U
23	YB	9	G
23	YB	13	A
23	YB	15	A
23	YB	16	G
23	YB	19	G
23	YB	21	G
23	YB	25	A
23	YB	26	A
23	YB	27	C
23	YB	33	G
23	YB	40	U
23	YB	41	U
23	YB	42	C

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Mol	Chain	Res	Type
23	YB	44	G
23	YB	45	A
23	YB	52	A
23	YB	56	G
23	YB	67	G
23	YB	73	A
23	YB	82	G
23	YB	88	C
23	YB	89	G
23	YB	105	G
23	YB	109	G
53	QV	3	C
53	QV	4	G
53	QV	5	G
53	QV	7	G
53	QV	8	U
53	QV	14	A
53	QV	16	C
53	QV	17	C
53	QV	17(A)	U
53	QV	18	G
53	QV	19	G
53	QV	21	A
53	QV	22	G
53	QV	25	C
53	QV	31	G
53	QV	37	A
53	QV	42	G
53	QV	47	U
53	QV	48	C
53	QV	49	G
53	QV	50	U
53	QV	51	C
53	QV	52	G
53	QV	54	U
53	QV	59	A
53	QV	63	G
53	QV	67	C
53	QV	72	A
53	QV	75	C
53	QV	76	A
54	QX	3	G

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

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Mol	Chain	Res	Type
54	XX	7	A
54	XX	8	A
55	XY	31	G
55	XY	33	U
55	XY	36	G
55	XY	39	C
55	XY	40	G

All (240) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	5	U
1	QA	31	G
1	QA	64	G
1	QA	115	G
1	QA	119	A
1	QA	181	G
1	QA	190	G
1	QA	243	A
1	QA	244	U
1	QA	250	A
1	QA	251	G
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	428	G
1	QA	429	U
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	509	A
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	703	G
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	884	U

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Mol	Chain	Res	Type
1	QA	913	A
1	QA	934	C
1	QA	960	U
1	QA	992	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1285	A
1	QA	1297	C
1	QA	1336	C
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	RA	74	A
22	RA	99	U
22	RA	102	G
22	RA	205	G
22	RA	221	A
22	RA	222	A
22	RA	227	A
22	RA	229	A
22	RA	241	A
22	RA	242	G
22	RA	271(B)	G
22	RA	271(C)	U
22	RA	277	C
22	RA	345	A
22	RA	372	G
22	RA	404	C
22	RA	503	A
22	RA	512	G
22	RA	587	C
22	RA	637	A
22	RA	704	G
22	RA	752	A
22	RA	774	A
22	RA	846	C
22	RA	856	C
22	RA	859	G

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Mol	Chain	Res	Type
22	RA	974(A)	C
22	RA	1012	U
22	RA	1022	G
22	RA	1026	U
22	RA	1045	A
22	RA	1078	U
22	RA	1085	A
22	RA	1130	U
22	RA	1178	C
22	RA	1204	A
22	RA	1210	A
22	RA	1312	U
22	RA	1427	A
22	RA	1543	A
22	RA	1558	A
22	RA	1653	G
22	RA	1694	C
22	RA	1698	A
22	RA	1799	G
22	RA	1819	A
22	RA	1929	G
22	RA	1930	G
22	RA	1936	A
22	RA	1980	G
22	RA	1992	G
22	RA	2060	A
22	RA	2126	A
22	RA	2405	G
22	RA	2439	A
22	RA	2481	G
22	RA	2518	A
22	RA	2566	A
22	RA	2610	C
22	RA	2689	U
22	RA	2712	U
22	RA	2776	A
22	RA	2832	U
22	RA	2848	G
22	RA	2867	G
23	RB	24	G
23	RB	66	A
1	XA	31	G

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Mol	Chain	Res	Type
1	XA	60	A
1	XA	64	G
1	XA	78	G
1	XA	89	U
1	XA	115	G
1	XA	181	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	328	C
1	XA	345	C
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	530	G
1	XA	560	U
1	XA	575	G
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	753	A
1	XA	792	A
1	XA	812	C
1	XA	815	A
1	XA	913	A
1	XA	934	C
1	XA	960	U
1	XA	992	U
1	XA	993	G
1	XA	1027	C
1	XA	1065	U
1	XA	1094	G
1	XA	1200	C
1	XA	1201	A
1	XA	1224	G
1	XA	1285	A

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Mol	Chain	Res	Type
1	XA	1297	C
1	XA	1301	U
1	XA	1319	A
1	XA	1336	C
1	XA	1347	G
1	XA	1364	U
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A
22	YA	74	A
22	YA	83	G
22	YA	99	U
22	YA	102	G
22	YA	196	A
22	YA	205	G
22	YA	221	A
22	YA	222	A
22	YA	227	A
22	YA	229	A
22	YA	241	A
22	YA	242	G
22	YA	271(B)	G
22	YA	278	A
22	YA	372	G
22	YA	404	C
22	YA	503	A
22	YA	508	G
22	YA	587	C
22	YA	637	A
22	YA	653	A
22	YA	669	G
22	YA	752	A
22	YA	774	A
22	YA	846	C
22	YA	856	C
22	YA	859	G
22	YA	974(A)	C
22	YA	1022	G
22	YA	1026	U
22	YA	1045	A
22	YA	1078	U
22	YA	1085	A

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Mol	Chain	Res	Type
22	YA	1109	C
22	YA	1130	U
22	YA	1178	C
22	YA	1210	A
22	YA	1275	A
22	YA	1427	A
22	YA	1543	A
22	YA	1558	A
22	YA	1653	G
22	YA	1694	C
22	YA	1698	A
22	YA	1786	A
22	YA	1799	G
22	YA	1819	A
22	YA	1929	G
22	YA	1930	G
22	YA	1955	U
22	YA	1992	G
22	YA	2126	A
22	YA	2439	A
22	YA	2481	G
22	YA	2518	A
22	YA	2566	A
22	YA	2610	C
22	YA	2655	G
22	YA	2681	C
22	YA	2689	U
22	YA	2712	U
22	YA	2751	G
22	YA	2776	A
22	YA	2832	U
22	YA	2867	G
23	YB	66	A
53	QV	53	G
54	QX	4	C
54	QX	6	C
55	QY	36	G
55	QY	39	C
53	XV	53	G
54	XX	6	C
55	XY	39	C

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
55	1MG	QY	37	55	23,26,27	1.07	2 (8%)	33,39,42	1.44	3 (9%)
56	PPU	Z6	76	22,56	37,40,41	2.58	8 (21%)	47,57,60	2.57	15 (31%)
55	1MG	XY	37	55	23,26,27	2.63	4 (17%)	33,39,42	2.02	8 (24%)
56	PPU	Z8	76	22,56	37,40,41	2.58	8 (21%)	47,57,60	2.56	15 (31%)

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
55	1MG	QY	37	55	-	0/7/25/26	0/3/3/3
56	PPU	Z6	76	22,56	-	2/25/43/44	0/4/4/4
55	1MG	XY	37	55	-	0/7/25/26	0/3/3/3
56	PPU	Z8	76	22,56	-	2/25/43/44	0/4/4/4

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	O-C	9.63	1.41	1.23
56	Z8	76	PPU	O-C	9.60	1.41	1.23
55	XY	37	1MG	C2-N2	8.10	1.48	1.34
55	XY	37	1MG	C4-N3	6.52	1.49	1.34
56	Z6	76	PPU	C9-N6	-6.28	1.31	1.45
56	Z8	76	PPU	C9-N6	-6.21	1.32	1.45
56	Z8	76	PPU	C10-N6	-5.88	1.32	1.45
56	Z6	76	PPU	C-N3'	5.85	1.46	1.34
56	Z6	76	PPU	C10-N6	-5.85	1.32	1.45
56	Z8	76	PPU	C-N3'	5.82	1.46	1.34
55	XY	37	1MG	C2-N1	5.79	1.47	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z8	76	PPU	C5-N7	-3.58	1.32	1.39
56	Z6	76	PPU	C5-N7	-3.57	1.32	1.39
56	Z8	76	PPU	C8-N9	-3.24	1.32	1.37
56	Z6	76	PPU	C8-N9	-3.19	1.32	1.37
56	Z8	76	PPU	C1'-N9	2.73	1.53	1.46
56	Z6	76	PPU	C1'-N9	2.72	1.53	1.46
55	XY	37	1MG	C5-N7	-2.65	1.33	1.39
55	QY	37	1MG	C5-C6	2.32	1.51	1.45
56	Z6	76	PPU	C4-N9	-2.19	1.33	1.37
56	Z8	76	PPU	C4-N9	-2.17	1.33	1.37
55	QY	37	1MG	C4-N9	2.06	1.43	1.38

All (41) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	Z6	76	PPU	C3'-N3'-C	-8.55	110.20	123.20
56	Z8	76	PPU	C3'-N3'-C	-8.51	110.25	123.20
55	XY	37	1MG	N2-C2-N1	6.18	123.75	118.79
56	Z6	76	PPU	C2'-C1'-N9	-5.95	98.52	113.30
56	Z8	76	PPU	C2'-C1'-N9	-5.94	98.56	113.30
56	Z6	76	PPU	C5-C4-N3	-5.03	119.79	126.72
56	Z8	76	PPU	C5-C4-N3	-4.99	119.85	126.72
56	Z8	76	PPU	N3-C2-N1	-4.78	121.34	128.58
56	Z6	76	PPU	N3-C2-N1	-4.73	121.42	128.58
55	QY	37	1MG	CM1-N1-C2	4.61	125.48	120.70
55	QY	37	1MG	N2-C2-N1	-4.34	115.30	118.79
56	Z6	76	PPU	CA-C-N3'	4.08	121.74	116.21
56	Z8	76	PPU	CA-C-N3'	4.08	121.73	116.21
56	Z8	76	PPU	C2-N1-C6	4.08	121.78	111.83
56	Z6	76	PPU	C4-C5-N7	-4.07	105.93	110.58
56	Z6	76	PPU	C2-N1-C6	4.02	121.66	111.83
56	Z8	76	PPU	C4-C5-N7	-4.00	106.01	110.58
55	XY	37	1MG	C5-C4-N3	-3.84	122.27	128.39
55	XY	37	1MG	C8-N7-C5	3.71	110.88	104.26
56	Z6	76	PPU	C2-N3-C4	3.70	120.86	111.83
56	Z8	76	PPU	C2-N3-C4	3.69	120.85	111.83
55	XY	37	1MG	C2-N1-C6	3.59	123.98	120.99
56	Z6	76	PPU	C5-N7-C8	3.59	109.08	103.45
56	Z8	76	PPU	C5-N7-C8	3.54	109.01	103.45
56	Z6	76	PPU	CM-OC-CZ	-3.45	110.09	117.50
56	Z8	76	PPU	CM-OC-CZ	-3.41	110.19	117.50
56	Z6	76	PPU	N9-C8-N7	-3.39	109.13	113.94

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	Z8	76	PPU	N9-C8-N7	-3.37	109.16	113.94
55	XY	37	1MG	N9-C4-N3	3.36	132.66	125.95
55	XY	37	1MG	N9-C8-N7	-3.16	107.55	113.40
55	QY	37	1MG	CM1-N1-C6	-3.13	112.80	117.64
56	Z6	76	PPU	O4'-C1'-N9	-3.00	102.33	108.09
56	Z8	76	PPU	O4'-C1'-N9	-2.99	102.36	108.09
56	Z6	76	PPU	N3-C4-N9	2.87	132.06	127.17
56	Z8	76	PPU	N3-C4-N9	2.87	132.05	127.17
55	XY	37	1MG	C2-N3-C4	2.67	117.97	111.98
55	XY	37	1MG	C4-C5-N7	-2.46	106.77	110.67
56	Z6	76	PPU	C4-C5-C6	2.46	118.45	115.91
56	Z8	76	PPU	C4-C5-C6	2.41	118.41	115.91
56	Z6	76	PPU	C5-C4-N9	2.15	108.15	105.81
56	Z8	76	PPU	C5-C4-N9	2.10	108.10	105.81

There are no chirality outliers.

All (4) torsion outliers are listed below:

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

There are no ring outliers.

4 monomers are involved in 34 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
55	QY	37	1MG	2	0
56	Z6	76	PPU	14	0
55	XY	37	1MG	8	0
56	Z8	76	PPU	10	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 684 ligands modelled in this entry, 682 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
58	PAR	QA	1666	-	44,45,45	1.28	6 (13%)	63,67,67	1.33	8 (12%)
58	PAR	XA	1673	-	44,45,45	1.33	6 (13%)	63,67,67	1.30	4 (6%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
58	PAR	QA	1666	-	-	8/18/94/94	0/4/4/4
58	PAR	XA	1673	-	-	6/18/94/94	0/4/4/4

All (12) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
58	QA	1666	PAR	C52-C42	3.10	1.58	1.52
58	XA	1673	PAR	C52-C42	2.98	1.58	1.52
58	XA	1673	PAR	O54-C14	2.90	1.49	1.41
58	QA	1666	PAR	O54-C14	2.86	1.49	1.41
58	XA	1673	PAR	C11-C21	2.84	1.57	1.52
58	XA	1673	PAR	O51-C11	2.60	1.48	1.41
58	XA	1673	PAR	C14-C24	2.29	1.56	1.52
58	QA	1666	PAR	O51-C11	2.28	1.47	1.41
58	QA	1666	PAR	C11-C21	2.28	1.56	1.52
58	QA	1666	PAR	C31-C21	2.18	1.56	1.53
58	QA	1666	PAR	C14-C24	2.14	1.56	1.52
58	XA	1673	PAR	C31-C21	2.06	1.56	1.53

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	XA	1673	PAR	O33-C14-C24	5.06	116.36	108.08
58	XA	1673	PAR	C14-O54-C54	4.32	122.15	113.72

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
58	QA	1666	PAR	O33-C14-C24	4.03	114.67	108.08
58	QA	1666	PAR	C14-O54-C54	3.84	121.21	113.72
58	QA	1666	PAR	O11-C42-C52	3.15	115.42	107.42
58	QA	1666	PAR	O11-C42-C32	-3.15	101.67	109.18
58	QA	1666	PAR	O54-C54-C64	2.87	111.59	106.07
58	XA	1673	PAR	O54-C54-C64	2.76	111.36	106.07
58	XA	1673	PAR	C11-O51-C51	2.60	118.80	113.72
58	QA	1666	PAR	O54-C54-C44	-2.16	105.81	109.70
58	QA	1666	PAR	C22-C32-C42	2.11	114.67	109.50
58	QA	1666	PAR	O41-C41-C51	2.00	114.25	109.32

There are no chirality outliers.

All (14) torsion outliers are listed below:

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

There are no ring outliers.

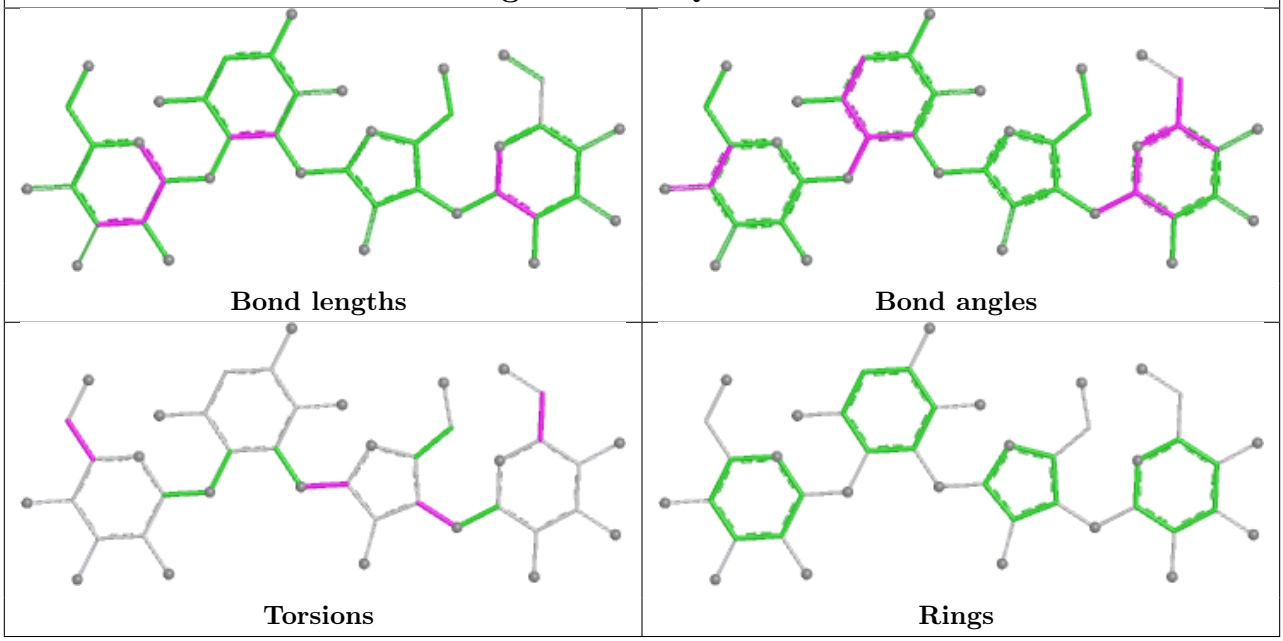
2 monomers are involved in 6 short contacts:

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

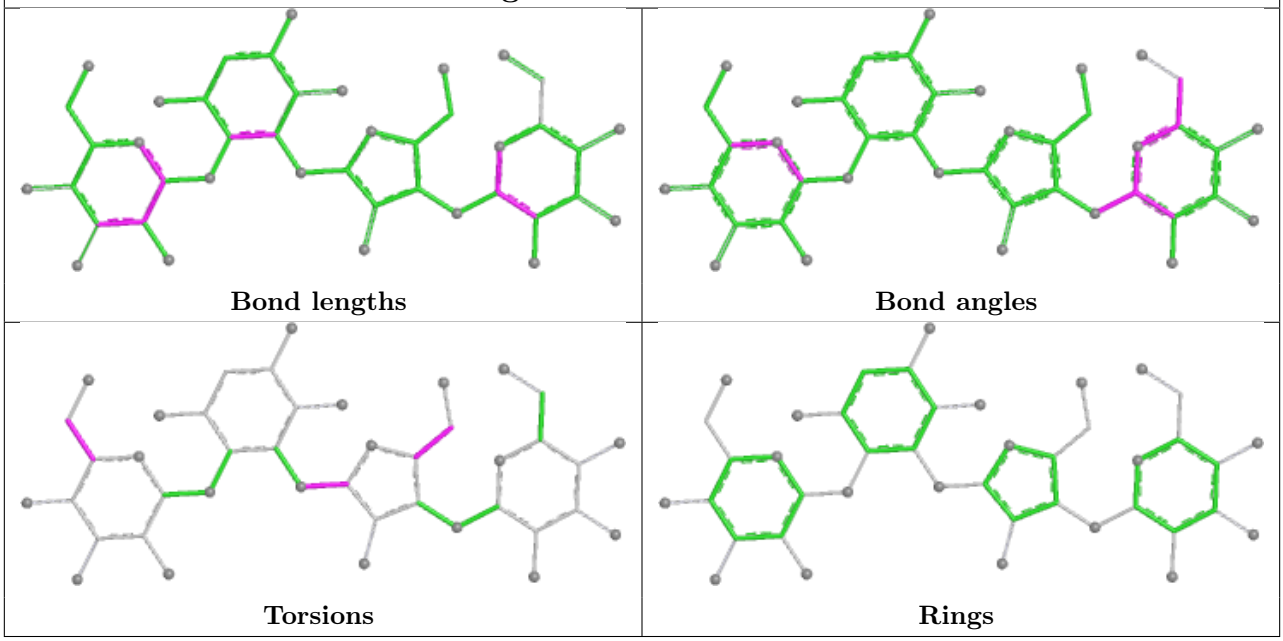
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.

Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

Ligand PAR QA 1666



Ligand PAR XA 1673



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

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

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	QA	1500/1522 (98%)	0.12	36 (2%) 59 42	22, 75, 152, 231	0
1	XA	1500/1522 (98%)	-0.07	16 (1%) 78 57	7, 55, 142, 232	0
2	QB	237/256 (92%)	0.50	9 (3%) 44 32	47, 109, 145, 182	0
2	XB	237/256 (92%)	0.27	2 (0%) 82 64	38, 88, 133, 159	0
3	QC	205/239 (85%)	0.35	9 (4%) 39 29	39, 98, 133, 150	0
3	XC	205/239 (85%)	0.10	5 (2%) 59 42	20, 67, 110, 138	0
4	QD	208/209 (99%)	0.65	18 (8%) 16 17	29, 79, 128, 167	0
4	XD	208/209 (99%)	0.69	17 (8%) 17 18	10, 72, 110, 139	0
5	QE	151/162 (93%)	0.48	11 (7%) 21 19	25, 85, 122, 159	0
5	XE	151/162 (93%)	0.44	8 (5%) 32 25	1, 62, 104, 134	0
6	QF	101/101 (100%)	0.35	0 100 100	16, 74, 116, 131	0
6	XF	101/101 (100%)	0.16	0 100 100	16, 65, 110, 133	0
7	QG	155/156 (99%)	0.46	11 (7%) 22 20	30, 84, 125, 149	0
7	XG	155/156 (99%)	0.13	4 (2%) 57 40	20, 71, 109, 131	0
8	QH	138/138 (100%)	0.73	12 (8%) 16 17	45, 88, 124, 156	0
8	XH	138/138 (100%)	0.41	4 (2%) 53 37	19, 70, 102, 125	0
9	QI	127/128 (99%)	0.88	14 (11%) 10 13	46, 97, 137, 144	0
9	XI	127/128 (99%)	0.88	16 (12%) 8 11	16, 79, 119, 129	0
10	QJ	99/105 (94%)	1.15	17 (17%) 4 7	44, 108, 142, 161	0
10	XJ	99/105 (94%)	0.81	7 (7%) 22 20	9, 83, 129, 147	0
11	QK	119/129 (92%)	0.56	7 (5%) 28 24	18, 71, 123, 149	0
11	XK	119/129 (92%)	0.34	5 (4%) 40 30	15, 63, 110, 147	0
12	QL	125/132 (94%)	0.87	14 (11%) 10 13	20, 72, 108, 139	0
12	XL	125/132 (94%)	0.56	15 (12%) 9 12	0, 48, 91, 134	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
13	QM	121/126 (96%)	0.88	17 (14%) 6 9	39, 96, 131, 170	0
13	XM	121/126 (96%)	0.53	9 (7%) 20 19	4, 68, 125, 149	0
14	QN	60/61 (98%)	1.42	17 (28%) 1 3	52, 98, 137, 146	0
14	XN	60/61 (98%)	0.85	6 (10%) 12 15	4, 60, 100, 120	0
15	QO	88/89 (98%)	0.51	4 (4%) 38 28	30, 79, 120, 136	0
15	XO	88/89 (98%)	0.27	3 (3%) 48 34	10, 64, 93, 107	0
16	QP	84/88 (95%)	0.94	10 (11%) 9 12	12, 68, 103, 138	0
16	XP	84/88 (95%)	0.67	4 (4%) 35 27	30, 70, 106, 135	0
17	QQ	100/105 (95%)	0.99	16 (16%) 5 8	33, 82, 115, 141	0
17	XQ	100/105 (95%)	0.61	6 (6%) 27 23	14, 64, 102, 124	0
18	QR	70/88 (79%)	0.33	2 (2%) 53 37	18, 78, 119, 147	0
18	XR	70/88 (79%)	0.27	3 (4%) 40 30	22, 67, 109, 135	0
19	QS	84/93 (90%)	1.05	14 (16%) 4 7	60, 102, 132, 147	0
19	XS	84/93 (90%)	0.40	4 (4%) 35 27	15, 73, 112, 164	0
20	QT	99/106 (93%)	0.86	12 (12%) 8 12	3, 77, 111, 131	0
20	XT	99/106 (93%)	0.90	15 (15%) 5 8	19, 77, 117, 126	0
21	QU	25/27 (92%)	1.24	7 (28%) 1 3	37, 85, 131, 145	0
21	XU	25/27 (92%)	1.53	8 (32%) 1 2	30, 75, 103, 134	0
22	RA	2882/2916 (98%)	-0.13	57 (1%) 65 45	2, 45, 174, 236	0
22	YA	2883/2916 (98%)	-0.18	44 (1%) 72 50	1, 35, 165, 227	0
23	RB	120/122 (98%)	0.19	1 (0%) 82 64	46, 89, 131, 152	0
23	YB	120/122 (98%)	-0.13	2 (1%) 69 48	18, 58, 93, 139	0
24	RD	272/276 (98%)	0.48	20 (7%) 20 19	4, 41, 81, 123	0
24	YD	272/276 (98%)	0.61	20 (7%) 20 19	1, 33, 74, 140	0
25	RE	205/206 (99%)	0.83	24 (11%) 9 12	7, 62, 112, 141	0
25	YE	205/206 (99%)	0.41	6 (2%) 53 37	6, 56, 103, 125	0
26	RF	202/210 (96%)	0.39	6 (2%) 52 36	1, 64, 110, 129	0
26	YF	202/210 (96%)	0.48	6 (2%) 52 36	1, 47, 95, 112	0
27	RG	181/182 (99%)	0.95	19 (10%) 11 14	34, 99, 142, 166	0
27	YG	181/182 (99%)	0.37	6 (3%) 49 34	9, 66, 115, 163	0
28	RH	170/180 (94%)	0.65	13 (7%) 20 19	32, 108, 152, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
28	YH	170/180 (94%)	0.61	10 (5%) 28 24	14, 68, 110, 133	0
29	RI	146/148 (98%)	0.30	7 (4%) 35 27	16, 78, 122, 154	0
29	YI	146/148 (98%)	0.16	4 (2%) 56 39	8, 72, 119, 159	0
30	RN	138/140 (98%)	0.61	7 (5%) 33 26	14, 70, 110, 124	0
30	YN	138/140 (98%)	0.68	10 (7%) 21 20	8, 55, 103, 128	0
31	RO	122/122 (100%)	0.73	13 (10%) 11 14	5, 56, 97, 126	0
31	YO	122/122 (100%)	0.24	3 (2%) 58 41	0, 42, 79, 94	0
32	RP	150/150 (100%)	0.94	21 (14%) 6 9	6, 65, 126, 159	0
32	YP	150/150 (100%)	0.70	12 (8%) 18 18	5, 53, 105, 154	0
33	RQ	141/141 (100%)	0.76	16 (11%) 10 13	2, 62, 106, 142	0
33	YQ	141/141 (100%)	0.59	15 (10%) 11 14	3, 42, 94, 132	0
34	RR	118/118 (100%)	0.65	11 (9%) 14 16	8, 50, 92, 118	0
34	YR	118/118 (100%)	0.40	5 (4%) 40 30	6, 43, 89, 109	0
35	RS	111/112 (99%)	0.56	5 (4%) 38 28	35, 78, 114, 141	0
35	YS	111/112 (99%)	0.24	4 (3%) 46 33	7, 61, 94, 111	0
36	RT	137/146 (93%)	0.59	6 (4%) 39 29	13, 64, 125, 165	0
36	YT	137/146 (93%)	0.43	5 (3%) 46 33	10, 58, 111, 158	0
37	RU	117/118 (99%)	0.76	13 (11%) 10 13	10, 61, 104, 147	0
37	YU	117/118 (99%)	0.68	6 (5%) 33 26	0, 44, 108, 129	0
38	RV	101/101 (100%)	0.44	5 (4%) 34 26	20, 75, 116, 144	0
38	YV	101/101 (100%)	0.56	8 (7%) 18 18	11, 65, 104, 156	0
39	RW	113/113 (100%)	0.39	4 (3%) 47 33	3, 43, 93, 149	0
39	YW	113/113 (100%)	0.12	1 (0%) 81 62	2, 42, 91, 144	0
40	RX	92/96 (95%)	0.66	8 (8%) 16 17	15, 52, 96, 125	0
40	YX	92/96 (95%)	0.38	3 (3%) 49 34	3, 37, 76, 96	0
41	RY	102/110 (92%)	1.35	22 (21%) 2 4	26, 88, 132, 159	0
41	YY	102/110 (92%)	0.76	12 (11%) 9 12	9, 63, 120, 140	0
42	RZ	183/206 (88%)	0.41	7 (3%) 44 32	21, 88, 132, 152	0
42	YZ	183/206 (88%)	0.22	3 (1%) 70 49	20, 70, 123, 155	0
43	R0	82/85 (96%)	0.36	2 (2%) 59 42	14, 48, 79, 112	0
43	Y0	82/85 (96%)	0.02	0 100 100	3, 36, 66, 97	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
44	R1	97/98 (98%)	0.96	12 (12%) 8 11	5, 53, 126, 159	0
44	Y1	97/98 (98%)	0.56	8 (8%) 17 18	5, 43, 104, 139	0
45	R2	69/72 (95%)	0.64	4 (5%) 29 24	13, 72, 111, 129	0
45	Y2	69/72 (95%)	0.41	4 (5%) 29 24	5, 50, 104, 121	0
46	R3	59/60 (98%)	0.52	2 (3%) 48 34	12, 63, 111, 138	0
46	Y3	59/60 (98%)	0.52	2 (3%) 48 34	2, 44, 101, 174	0
47	R4	71/71 (100%)	0.80	6 (8%) 16 17	75, 131, 170, 189	0
47	Y4	71/71 (100%)	0.71	5 (7%) 22 20	46, 102, 154, 161	0
48	R5	59/60 (98%)	0.42	2 (3%) 48 34	6, 55, 133, 141	0
48	Y5	58/60 (96%)	0.62	7 (12%) 8 12	10, 59, 143, 162	0
49	R6	49/54 (90%)	1.18	12 (24%) 2 4	83, 118, 150, 157	0
49	Y6	49/54 (90%)	0.94	5 (10%) 12 15	51, 109, 141, 149	0
50	R7	49/49 (100%)	0.67	5 (10%) 12 15	8, 35, 87, 146	0
50	Y7	49/49 (100%)	0.51	4 (8%) 17 18	1, 29, 71, 121	0
51	R8	64/65 (98%)	1.02	11 (17%) 4 7	1, 52, 96, 158	0
51	Y8	64/65 (98%)	0.97	7 (10%) 10 13	5, 40, 81, 149	0
52	R9	37/37 (100%)	2.60	23 (62%) 0 0	66, 110, 156, 168	0
52	Y9	37/37 (100%)	2.59	28 (75%) 0 0	78, 107, 132, 166	0
53	QV	77/77 (100%)	0.93	11 (14%) 6 9	46, 99, 145, 169	0
53	XV	77/77 (100%)	0.68	8 (10%) 11 14	28, 72, 119, 180	0
54	QX	8/25 (32%)	3.85	8 (100%) 0 0	103, 130, 144, 183	0
54	XX	8/25 (32%)	3.19	5 (62%) 0 0	56, 75, 115, 190	0
55	QY	13/18 (72%)	1.90	5 (38%) 1 1	112, 161, 199, 206	0
55	XY	13/18 (72%)	1.21	2 (15%) 5 8	72, 116, 180, 193	0
56	Z6	2/3 (66%)	0.90	0 100 100	52, 52, 52, 57	0
56	Z8	2/3 (66%)	0.70	0 100 100	46, 46, 46, 46	0
All	All	20870/21494 (97%)	0.30	1072 (5%) 33 26	0, 61, 135, 236	0

All (1072) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
54	XX	8	A	9.5
11	XK	129	SER	7.7

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Mol	Chain	Res	Type	RSRZ
50	Y7	48	LYS	7.2
52	R9	11	CYS	6.9
11	QK	129	SER	6.9
32	YP	13	ASN	6.9
52	R9	14	CYS	6.7
50	R7	49	ARG	6.6
21	XU	26	LYS	6.5
43	R0	2	ALA	6.4
17	QQ	35	VAL	6.2
8	QH	1	MET	6.2
51	R8	65	GLU	6.1
33	YQ	80	GLU	5.8
42	YZ	113	ALA	5.8
52	R9	37	GLY	5.7
44	R1	98	LEU	5.7
47	R4	69	LYS	5.5
41	RY	22	GLY	5.4
22	YA	2121	G	5.2
47	Y4	66	SER	5.2
32	RP	76	LYS	5.2
54	QX	5	C	5.1
14	XN	41	ARG	5.1
22	RA	1060	U	5.0
33	YQ	5	ARG	5.0
14	QN	29	ARG	5.0
10	QJ	4	ILE	4.9
52	Y9	2	LYS	4.9
52	R9	24	TYR	4.9
52	Y9	26	ILE	4.9
54	QX	8	A	4.9
52	R9	26	ILE	4.9
22	RA	2145	C	4.8
41	RY	45	VAL	4.8
21	XU	15	ARG	4.8
25	YE	204	ALA	4.8
50	R7	1	MET	4.8
8	QH	87	SER	4.8
37	YU	117	GLN	4.7
5	XE	81	GLU	4.7
45	R2	8	LYS	4.7
22	YA	614	U	4.6
21	XU	10	ARG	4.6

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Mol	Chain	Res	Type	RSRZ
37	RU	56	ASP	4.6
20	QT	9	ASN	4.6
12	XL	28	LYS	4.6
9	QI	127	LYS	4.5
9	QI	62	TYR	4.5
30	YN	138	LEU	4.5
5	XE	129	ILE	4.5
32	RP	14	LYS	4.5
12	XL	19	ARG	4.5
8	QH	86	ILE	4.5
52	Y9	34	GLN	4.5
11	XK	127	LYS	4.4
38	RV	74	LYS	4.4
12	QL	23	LYS	4.4
22	YA	1060	U	4.4
22	YA	1536	A	4.4
47	Y4	68	ARG	4.4
11	XK	128	ALA	4.3
12	QL	19	ARG	4.3
14	QN	30	ALA	4.3
13	XM	100	GLY	4.3
54	QX	7	A	4.3
54	QX	3	G	4.3
14	XN	2	ALA	4.3
17	QQ	32	TYR	4.3
22	RA	1059	G	4.3
13	QM	88	ARG	4.3
13	QM	75	ALA	4.3
45	Y2	11	GLU	4.3
25	YE	76	ARG	4.2
16	QP	9	PHE	4.2
16	XP	69	THR	4.2
20	XT	23	ARG	4.2
40	YX	92	LEU	4.1
12	XL	89	ARG	4.1
38	RV	80	GLN	4.1
52	Y9	31	LYS	4.1
41	YY	2	ARG	4.1
47	R4	68	ARG	4.1
52	Y9	9	ARG	4.1
50	R7	48	LYS	4.1
28	RH	171	LEU	4.1

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Mol	Chain	Res	Type	RSRZ
52	R9	2	LYS	4.0
5	XE	83	GLU	4.0
4	XD	50	ARG	4.0
4	XD	12	CYS	4.0
54	QX	6	C	4.0
32	RP	18	ARG	4.0
10	QJ	59	SER	4.0
4	QD	32	ALA	4.0
32	RP	13	ASN	4.0
7	QG	5	ARG	4.0
8	XH	1	MET	3.9
54	XX	6	C	3.9
44	R1	95	LEU	3.9
14	QN	7	ILE	3.9
21	QU	26	LYS	3.9
53	QV	1	C	3.9
31	RO	1	MET	3.9
22	RA	1026	U	3.9
17	QQ	24	GLU	3.9
11	QK	117	ASN	3.9
5	QE	81	GLU	3.9
14	QN	31	ARG	3.9
13	QM	97	PRO	3.9
3	QC	162	GLN	3.9
32	YP	26	GLY	3.9
32	RP	108	LYS	3.9
8	QH	91	ARG	3.8
27	RG	155	MET	3.8
20	XT	9	ASN	3.8
22	RA	1061	U	3.8
52	R9	20	HIS	3.8
9	QI	117	HIS	3.8
7	QG	81	GLY	3.8
47	R4	67	TYR	3.8
12	XL	23	LYS	3.8
22	YA	887	A	3.8
32	RP	109	GLY	3.8
33	RQ	80	GLU	3.8
22	RA	1536	A	3.7
29	RI	4	ILE	3.7
9	QI	41	VAL	3.7
20	QT	73	HIS	3.7

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Mol	Chain	Res	Type	RSRZ
55	QY	34	C	3.7
14	QN	25	VAL	3.7
38	YV	36	PRO	3.7
32	RP	91	PHE	3.7
25	RE	10	GLY	3.7
32	RP	79	ARG	3.7
9	XI	64	THR	3.7
9	XI	110	GLU	3.7
11	QK	127	LYS	3.7
24	YD	26	LYS	3.7
49	R6	22	ALA	3.6
4	XD	2	GLY	3.6
41	RY	33	LYS	3.6
52	Y9	20	HIS	3.6
24	RD	55	GLY	3.6
25	RE	23	VAL	3.6
22	RA	1094	U	3.6
4	QD	50	ARG	3.6
52	Y9	15	LYS	3.6
20	XT	29	LYS	3.6
1	QA	1451	A	3.6
1	XA	210	U	3.6
22	YA	2122	U	3.6
54	QX	4	C	3.6
20	XT	75	ASN	3.6
4	XD	24	GLU	3.5
48	Y5	51	TYR	3.5
1	QA	82	U	3.5
41	RY	92	ASN	3.5
33	RQ	18	LYS	3.5
12	XL	96	VAL	3.5
7	XG	5	ARG	3.5
13	XM	94	ARG	3.5
21	QU	14	TRP	3.5
7	QG	82	GLY	3.5
19	QS	39	THR	3.5
29	RI	18	VAL	3.5
8	QH	9	MET	3.5
25	RE	78	LEU	3.5
52	R9	18	ARG	3.5
52	R9	35	ARG	3.5
12	QL	16	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
34	RR	5	LYS	3.5
9	XI	7	THR	3.5
16	XP	22	THR	3.5
45	R2	7	ARG	3.5
17	QQ	29	HIS	3.5
9	XI	17	VAL	3.4
17	QQ	81	ARG	3.4
52	R9	19	ARG	3.4
44	R1	10	LYS	3.4
52	Y9	21	GLY	3.4
52	R9	15	LYS	3.4
55	QY	32	U	3.4
33	YQ	90	VAL	3.4
32	RP	69	GLY	3.4
10	XJ	46	ARG	3.4
1	QA	980	C	3.4
4	XD	73	ARG	3.4
40	RX	60	ARG	3.4
51	Y8	48	PHE	3.4
5	XE	80	ILE	3.4
16	QP	10	GLY	3.4
13	QM	121	LYS	3.4
20	QT	21	LYS	3.4
34	RR	8	ARG	3.4
5	QE	122	GLU	3.3
32	YP	59	LEU	3.3
48	Y5	2	ALA	3.3
22	RA	275	G	3.3
22	RA	1093	G	3.3
22	RA	2121	G	3.3
34	YR	7	GLY	3.3
22	RA	1103	A	3.3
28	YH	169	VAL	3.3
41	YY	46	LYS	3.3
49	R6	5	VAL	3.3
7	QG	32	ARG	3.3
24	YD	238	GLY	3.3
22	YA	2112	G	3.3
30	YN	53	VAL	3.3
41	RY	24	VAL	3.3
14	QN	61	TRP	3.3
9	XI	66	ARG	3.3

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Mol	Chain	Res	Type	RSRZ
15	QO	2	PRO	3.3
12	QL	18	VAL	3.3
13	XM	96	LEU	3.3
19	XS	11	VAL	3.3
49	R6	13	CYS	3.3
24	RD	181	GLU	3.3
45	R2	66	GLU	3.3
50	R7	47	ARG	3.3
32	RP	74	GLU	3.3
52	Y9	32	HIS	3.3
29	YI	65	ALA	3.2
22	YA	1061	U	3.2
4	XD	154	ASN	3.2
38	RV	76	LYS	3.2
10	QJ	46	ARG	3.2
41	RY	16	ALA	3.2
28	YH	155	SER	3.2
52	Y9	1	MET	3.2
52	Y9	13	LYS	3.2
36	YT	104	ASN	3.2
52	Y9	28	GLU	3.2
8	QH	92	ARG	3.2
4	QD	198	VAL	3.2
12	XL	48	PRO	3.2
22	RA	2062	A	3.2
22	YA	2598	A	3.2
20	QT	69	GLY	3.2
22	RA	1068	G	3.2
5	QE	49	PRO	3.2
38	YV	68	LYS	3.2
22	RA	1078	U	3.2
44	Y1	98	LEU	3.2
33	RQ	5	ARG	3.2
51	Y8	64	TYR	3.2
41	RY	62	GLU	3.2
1	QA	974	A	3.2
53	QV	34	C	3.2
12	QL	129	ALA	3.2
14	XN	59	ALA	3.2
51	Y8	55	ALA	3.2
29	YI	116	LEU	3.2
1	QA	81	G	3.2

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Mol	Chain	Res	Type	RSRZ
20	QT	25	ARG	3.2
39	RW	92	ARG	3.2
4	XD	22	LYS	3.2
36	RT	46	GLU	3.2
51	R8	54	GLU	3.2
52	R9	23	VAL	3.2
53	QV	36	U	3.2
2	QB	163	PHE	3.1
24	YD	236	GLY	3.1
53	XV	75	C	3.1
13	QM	101	GLN	3.1
40	RX	38	GLU	3.1
10	XJ	4	ILE	3.1
17	XQ	36	ILE	3.1
52	Y9	18	ARG	3.1
4	QD	84	LYS	3.1
20	XT	12	ALA	3.1
28	RH	167	GLU	3.1
22	RA	2135	A	3.1
10	QJ	52	GLY	3.1
24	YD	156	ALA	3.1
9	XI	105	ASP	3.1
33	YQ	10	ARG	3.1
52	Y9	8	LYS	3.1
25	YE	106	GLY	3.1
22	RA	2117	A	3.1
1	QA	328	C	3.1
12	QL	128	ALA	3.1
25	RE	131	ALA	3.1
32	YP	71	VAL	3.1
41	RY	42	VAL	3.1
44	R1	70	VAL	3.1
52	R9	17	ILE	3.1
8	QH	4	ASP	3.1
41	RY	46	LYS	3.1
1	XA	1125	U	3.1
14	QN	13	THR	3.1
1	QA	1202	G	3.1
31	RO	30	ALA	3.1
13	XM	111	LYS	3.1
5	XE	18	ARG	3.1
22	RA	1057	A	3.1

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Mol	Chain	Res	Type	RSRZ
22	YA	2801	A	3.1
14	QN	38	GLY	3.1
23	YB	88	C	3.1
38	RV	5	VAL	3.0
35	YS	2	ALA	3.0
13	XM	102	ARG	3.0
50	Y7	49	ARG	3.0
1	QA	1323	G	3.0
13	QM	122	LYS	3.0
29	RI	83	ALA	3.0
35	RS	37	ALA	3.0
24	RD	36	PRO	3.0
32	YP	54	GLY	3.0
1	XA	5	U	3.0
53	QV	24	U	3.0
4	QD	73	ARG	3.0
49	R6	42	TRP	3.0
51	R8	59	LYS	3.0
10	XJ	59	SER	3.0
3	XC	164	ARG	3.0
21	QU	15	ARG	3.0
24	RD	37	LEU	3.0
25	RE	149	ARG	3.0
52	Y9	35	ARG	3.0
47	Y4	67	TYR	3.0
33	RQ	105	GLU	3.0
27	RG	142	PRO	3.0
37	RU	13	LYS	3.0
18	QR	43	PHE	3.0
19	QS	16	LEU	3.0
32	RP	106	LEU	3.0
46	Y3	59	VAL	3.0
9	QI	66	ARG	3.0
1	XA	87	A	3.0
22	RA	2110	G	3.0
13	XM	115	LYS	3.0
20	XT	74	LYS	3.0
40	RX	33	LYS	3.0
33	RQ	6	ARG	3.0
55	QY	33	U	3.0
12	QL	93	LEU	2.9
4	QD	118	ARG	2.9

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Mol	Chain	Res	Type	RSRZ
48	R5	45	VAL	2.9
16	QP	29	ASP	2.9
20	QT	54	LYS	2.9
24	RD	64	ILE	2.9
30	YN	88	GLU	2.9
9	XI	115	GLY	2.9
50	Y7	1	MET	2.9
19	QS	3	ARG	2.9
9	QI	27	THR	2.9
13	QM	103	THR	2.9
52	Y9	12	ASP	2.9
28	YH	171	LEU	2.9
9	QI	110	GLU	2.9
24	RD	15	PHE	2.9
21	XU	2	GLY	2.9
27	RG	96	ARG	2.9
48	Y5	54	GLY	2.9
1	QA	631	G	2.9
47	Y4	69	LYS	2.9
8	XH	2	LEU	2.9
33	RQ	104	PHE	2.9
30	RN	9	VAL	2.9
46	Y3	58	VAL	2.9
13	QM	4	ILE	2.9
49	Y6	40	CYS	2.9
31	RO	32	TYR	2.9
19	QS	69	HIS	2.9
25	RE	121	ASN	2.9
1	QA	1310	G	2.9
25	YE	21	VAL	2.9
41	YY	70	SER	2.9
4	XD	111	ALA	2.9
12	QL	70	ILE	2.9
17	XQ	32	TYR	2.9
24	RD	249	PRO	2.9
26	RF	171	PRO	2.9
12	XL	7	ILE	2.8
9	XI	106	ALA	2.8
24	YD	15	PHE	2.8
13	QM	102	ARG	2.8
1	QA	973	G	2.8
22	RA	2116	G	2.8

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Mol	Chain	Res	Type	RSRZ
22	YA	2125	G	2.8
35	RS	93	LYS	2.8
4	QD	26	CYS	2.8
44	Y1	70	VAL	2.8
5	QE	23	GLY	2.8
44	Y1	95	LEU	2.8
49	R6	7	ILE	2.8
1	XA	1286	A	2.8
17	QQ	99	SER	2.8
28	YH	64	LEU	2.8
1	QA	1194	U	2.8
1	QA	1240	U	2.8
41	RY	83	THR	2.8
22	RA	2174	C	2.8
2	QB	114	ARG	2.8
22	YA	1176	G	2.8
10	XJ	98	ILE	2.8
44	Y1	38	SER	2.8
33	YQ	91	GLU	2.8
41	YY	91	GLU	2.8
42	YZ	162	GLU	2.8
24	RD	38	LYS	2.8
1	XA	1364	U	2.8
14	XN	42	ILE	2.8
27	RG	157	ILE	2.8
19	XS	76	PRO	2.8
14	QN	21	TYR	2.8
22	RA	2137	C	2.8
53	QV	75	C	2.8
41	RY	91	GLU	2.8
4	XD	110	PHE	2.8
17	QQ	7	THR	2.8
52	R9	1	MET	2.8
40	RX	63	LYS	2.8
52	R9	13	LYS	2.8
3	XC	179	ARG	2.8
55	QY	35	G	2.8
42	RZ	163	LEU	2.8
22	RA	1069	A	2.8
19	QS	80	TYR	2.8
4	XD	163	GLU	2.8
12	QL	32	PHE	2.8

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Mol	Chain	Res	Type	RSRZ
28	RH	32	GLU	2.8
36	YT	1	MET	2.8
16	QP	64	ALA	2.8
52	Y9	29	ASN	2.8
22	YA	2167	U	2.8
5	QE	24	ARG	2.7
1	QA	1397	C	2.7
49	Y6	13	CYS	2.7
12	XL	22	SER	2.7
24	RD	246	PRO	2.7
37	RU	9	VAL	2.7
17	QQ	100	LYS	2.7
4	XD	156	GLU	2.7
38	YV	77	ALA	2.7
50	Y7	45	ALA	2.7
4	QD	209	ARG	2.7
7	QG	4	ARG	2.7
8	XH	119	LEU	2.7
17	QQ	101	ARG	2.7
39	RW	6	ILE	2.7
55	XY	32	U	2.7
52	Y9	3	VAL	2.7
14	QN	4	LYS	2.7
34	YR	102	GLU	2.7
9	XI	111	ARG	2.7
28	YH	3	ARG	2.7
41	YY	71	LYS	2.7
22	RA	2799	A	2.7
22	YA	1110	G	2.7
22	YA	1177	A	2.7
53	QV	35	A	2.7
33	RQ	137	TYR	2.7
39	RW	5	ALA	2.7
51	R8	64	TYR	2.7
24	RD	262	ARG	2.7
29	YI	117	GLU	2.7
5	QE	80	ILE	2.7
24	RD	35	LYS	2.7
31	YO	1	MET	2.7
21	XU	14	TRP	2.7
1	QA	1192	C	2.7
51	Y8	2	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
44	R1	42	GLN	2.7
30	RN	104	LYS	2.7
37	RU	22	LYS	2.7
44	Y1	96	LYS	2.7
54	QX	1	A	2.7
44	R1	38	SER	2.7
25	RE	52	LEU	2.7
29	RI	15	VAL	2.7
49	R6	48	VAL	2.7
1	QA	1124	G	2.7
20	QT	66	ALA	2.7
51	R8	16	ILE	2.7
35	YS	7	TYR	2.7
4	XD	31	CYS	2.7
22	YA	2145	C	2.7
53	XV	51	C	2.7
13	QM	7	VAL	2.6
27	RG	72	ARG	2.6
20	XT	106	ALA	2.6
26	YF	207	GLY	2.6
35	RS	2	ALA	2.6
22	RA	1095	A	2.6
38	RV	81	TYR	2.6
41	RY	14	LEU	2.6
2	QB	165	VAL	2.6
20	QT	15	ARG	2.6
25	RE	79	ARG	2.6
22	RA	34	C	2.6
22	RA	1064	C	2.6
22	RA	2175	C	2.6
13	QM	32	GLU	2.6
25	RE	171	GLU	2.6
10	QJ	47	PHE	2.6
20	XT	11	SER	2.6
22	RA	1070	A	2.6
22	RA	1096	A	2.6
32	RP	35	HIS	2.6
1	QA	723	U	2.6
22	YA	2118	U	2.6
42	RZ	83	PRO	2.6
42	RZ	167	PRO	2.6
34	YR	1	MET	2.6

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Mol	Chain	Res	Type	RSRZ
1	XA	1182	G	2.6
22	RA	2125	G	2.6
22	RA	2319	G	2.6
24	YD	237	GLU	2.6
3	XC	195	VAL	2.6
17	XQ	81	ARG	2.6
28	RH	162	ILE	2.6
25	RE	69	LYS	2.6
12	XL	5	PRO	2.6
25	RE	159	HIS	2.6
27	YG	142	PRO	2.6
24	RD	33	LEU	2.6
9	QI	28	VAL	2.6
48	Y5	57	VAL	2.6
24	YD	31	LYS	2.6
52	R9	33	LYS	2.6
32	RP	27	HIS	2.6
8	QH	99	GLU	2.6
49	R6	24	GLU	2.6
13	XM	122	LYS	2.6
14	QN	41	ARG	2.6
27	YG	150	ASP	2.6
34	YR	38	VAL	2.6
22	RA	1420	U	2.6
17	XQ	101	ARG	2.5
34	RR	9	LYS	2.5
10	QJ	34	VAL	2.5
29	RI	37	VAL	2.5
2	QB	160	ASP	2.5
42	RZ	87	ASP	2.5
22	RA	101	G	2.5
54	XX	3	G	2.5
51	Y8	45	GLY	2.5
16	XP	67	THR	2.5
25	RE	107	THR	2.5
31	RO	114	ILE	2.5
12	QL	15	ARG	2.5
41	RY	52	SER	2.5
4	XD	112	VAL	2.5
33	YQ	81	VAL	2.5
1	QA	1196	U	2.5
19	QS	15	LEU	2.5

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Mol	Chain	Res	Type	RSRZ
22	RA	1847	A	2.5
41	YY	14	LEU	2.5
7	QG	108	ALA	2.5
13	QM	100	GLY	2.5
21	XU	9	ARG	2.5
34	RR	22	ARG	2.5
13	QM	61	GLU	2.5
29	RI	116	LEU	2.5
51	R8	50	LEU	2.5
33	YQ	89	ASN	2.5
49	R6	16	CYS	2.5
28	RH	123	PHE	2.5
51	R8	48	PHE	2.5
5	QE	20	GLN	2.5
36	RT	97	ALA	2.5
10	QJ	74	ILE	2.5
41	RY	103	GLY	2.5
47	R4	70	GLY	2.5
48	R5	3	LYS	2.5
22	RA	1066	U	2.5
22	YA	2062	A	2.5
37	RU	11	ARG	2.5
37	RU	50	ARG	2.5
52	R9	22	ARG	2.5
3	QC	91	LEU	2.5
9	QI	36	TYR	2.5
27	YG	59	GLU	2.5
33	YQ	1	MET	2.5
38	YV	5	VAL	2.5
12	XL	129	ALA	2.5
14	QN	2	ALA	2.5
24	YD	228	PRO	2.5
16	QP	8	ARG	2.5
25	RE	13	ARG	2.5
27	RG	33	ARG	2.5
39	YW	92	ARG	2.5
46	R3	55	ARG	2.5
51	R8	4	MET	2.5
52	R9	25	VAL	2.5
1	QA	1234	C	2.5
1	XA	631	G	2.5
24	RD	30	GLU	2.5

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Mol	Chain	Res	Type	RSRZ
1	QA	532	A	2.5
24	YD	208	LYS	2.5
54	XX	7	A	2.5
47	Y4	60	GLN	2.5
5	XE	123	LEU	2.5
36	YT	25	GLY	2.5
52	Y9	11	CYS	2.5
31	RO	61	VAL	2.5
37	YU	90	VAL	2.5
41	YY	72	VAL	2.5
19	XS	47	HIS	2.4
12	XL	47	LYS	2.4
24	YD	38	LYS	2.4
37	RU	37	GLU	2.4
20	XT	72	LEU	2.4
27	RG	106	LEU	2.4
32	YP	70	GLN	2.4
24	RD	273	ARG	2.4
36	YT	51	ARG	2.4
45	Y2	55	ARG	2.4
47	R4	71	ARG	2.4
40	RX	61	GLY	2.4
51	Y8	9	GLY	2.4
1	QA	979	C	2.4
39	RW	13	SER	2.4
53	XV	47	U	2.4
1	QA	1280	A	2.4
19	QS	67	VAL	2.4
22	RA	2894	G	2.4
9	QI	114	TYR	2.4
9	XI	5	TYR	2.4
17	XQ	37	LYS	2.4
27	RG	102	PHE	2.4
30	YN	118	LYS	2.4
35	RS	11	LYS	2.4
37	YU	76	TYR	2.4
52	Y9	17	ILE	2.4
9	QI	15	ALA	2.4
24	YD	33	LEU	2.4
32	YP	148	LEU	2.4
20	XT	17	ARG	2.4
25	RE	192	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
12	QL	31	PRO	2.4
36	RT	77	PRO	2.4
25	RE	139	GLY	2.4
9	XI	75	ASP	2.4
20	QT	29	LYS	2.4
7	QG	38	LEU	2.4
10	QJ	64	GLU	2.4
19	QS	71	LEU	2.4
32	YP	27	HIS	2.4
22	YA	1771	C	2.4
53	XV	34	C	2.4
4	QD	77	ASN	2.4
22	YA	2126	A	2.4
33	RQ	89	ASN	2.4
44	Y1	36	GLY	2.4
1	XA	1453	G	2.4
22	RA	2147	G	2.4
10	QJ	72	VAL	2.4
24	RD	34	VAL	2.4
41	RY	3	VAL	2.4
15	XO	3	ILE	2.4
52	R9	32	HIS	2.4
42	RZ	172	ALA	2.4
26	YF	81	PRO	2.4
49	R6	29	ASN	2.4
32	RP	53	GLY	2.4
40	RX	3	THR	2.4
22	RA	614	U	2.4
22	YA	271(C)	U	2.4
2	XB	160	ASP	2.4
22	YA	2612	C	2.4
1	XA	1183	A	2.4
22	YA	783	A	2.4
28	RH	164	TYR	2.4
14	XN	3	ARG	2.4
16	QP	28	ARG	2.4
40	YX	65	ARG	2.4
9	QI	70	LYS	2.4
22	RA	1063	G	2.4
35	RS	57	LYS	2.4
26	YF	131	GLY	2.4
36	RT	104	ASN	2.4

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Mol	Chain	Res	Type	RSRZ
24	YD	40	THR	2.4
27	YG	15	VAL	2.4
28	YH	47	GLU	2.4
45	Y2	72	ALA	2.4
52	R9	31	LYS	2.4
52	R9	34	GLN	2.3
34	RR	4	LEU	2.3
53	QV	39	C	2.3
5	QE	82	VAL	2.3
8	QH	24	THR	2.3
50	R7	23	ARG	2.3
1	QA	377	G	2.3
1	QA	1053	G	2.3
41	YY	63	LYS	2.3
4	QD	145	GLU	2.3
17	QQ	44	ALA	2.3
33	RQ	140	ALA	2.3
44	R1	57	GLU	2.3
31	RO	55	GLY	2.3
31	RO	93	PRO	2.3
40	RX	31	HIS	2.3
21	QU	16	GLY	2.3
49	Y6	23	THR	2.3
22	YA	9	U	2.3
32	YP	18	ARG	2.3
51	R8	46	ARG	2.3
49	R6	38	LYS	2.3
1	QA	1286	A	2.3
11	XK	68	ALA	2.3
10	QJ	61	GLU	2.3
20	XT	18	GLN	2.3
22	YA	1537	C	2.3
26	RF	56	GLU	2.3
27	RG	35	GLU	2.3
33	YQ	45	GLN	2.3
37	YU	89	GLU	2.3
8	QH	2	LEU	2.3
31	YO	122	LEU	2.3
48	Y5	58	LEU	2.3
7	XG	81	GLY	2.3
25	RE	115	GLY	2.3
33	RQ	19	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
37	RU	7	GLY	2.3
38	YV	48	GLY	2.3
4	QD	3	ARG	2.3
24	YD	264	LYS	2.3
26	RF	62	ARG	2.3
30	RN	84	LYS	2.3
31	RO	97	ARG	2.3
34	RR	68	ARG	2.3
37	RU	5	LYS	2.3
30	RN	138	LEU	2.3
5	QE	83	GLU	2.3
10	QJ	12	ASP	2.3
22	YA	1026	U	2.3
47	R4	66	SER	2.3
28	RH	5	GLY	2.3
41	RY	77	PRO	2.3
27	RG	149	VAL	2.3
41	YY	6	HIS	2.3
31	YO	29	ASN	2.3
1	XA	1451	A	2.3
20	XT	25	ARG	2.3
22	RA	278	A	2.3
33	RQ	1	MET	2.3
44	R1	3	LYS	2.3
53	QV	73	A	2.3
3	QC	175	LEU	2.3
32	RP	88	LEU	2.3
4	QD	48	ALA	2.3
9	XI	94	ALA	2.3
44	R1	13	ILE	2.3
30	YN	69	GLN	2.3
4	QD	7	PRO	2.3
12	XL	90	VAL	2.3
29	RI	16	GLY	2.3
51	R8	23	VAL	2.3
3	QC	30	ARG	2.3
9	XI	10	ARG	2.3
11	QK	126	ARG	2.3
25	RE	19	ARG	2.3
22	RA	1058	G	2.3
11	QK	128	ALA	2.3
24	RD	46	GLN	2.3

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Mol	Chain	Res	Type	RSRZ
32	RP	68	GLN	2.3
33	YQ	93	TYR	2.3
1	QA	1032	A	2.3
1	QA	1183	A	2.3
4	QD	80	GLU	2.3
12	QL	95	GLY	2.3
21	QU	2	GLY	2.3
26	YF	193	VAL	2.3
37	YU	13	LYS	2.3
4	XD	118	ARG	2.3
8	XH	18	ARG	2.3
30	RN	115	ARG	2.3
44	R1	11	ARG	2.3
49	Y6	46	HIS	2.2
13	QM	78	ILE	2.2
32	RP	75	ILE	2.2
10	XJ	55	LYS	2.2
14	XN	58	LYS	2.2
24	RD	59	LYS	2.2
24	YD	12	SER	2.2
51	Y8	3	LYS	2.2
30	YN	96	GLU	2.2
10	QJ	60	ARG	2.2
12	QL	97	ARG	2.2
22	YA	2072	G	2.2
52	Y9	4	ARG	2.2
54	XX	2	U	2.2
33	YQ	21	THR	2.2
33	YQ	25	ASP	2.2
15	QO	3	ILE	2.2
2	QB	161	ALA	2.2
13	QM	118	ALA	2.2
1	QA	796	C	2.2
1	XA	526	C	2.2
10	XJ	57	LYS	2.2
22	YA	2804	C	2.2
38	YV	84	LYS	2.2
53	QV	23	C	2.2
26	RF	59	TYR	2.2
52	Y9	24	TYR	2.2
38	YV	37	VAL	2.2
38	YV	53	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
46	R3	34	GLU	2.2
3	QC	148	GLY	2.2
52	Y9	25	VAL	2.2
12	XL	25	PRO	2.2
33	YQ	79	LEU	2.2
42	YZ	130	PRO	2.2
20	QT	75	ASN	2.2
3	QC	160	ALA	2.2
22	RA	1065	U	2.2
30	YN	84	LYS	2.2
41	YY	4	LYS	2.2
49	Y6	38	LYS	2.2
53	QV	47	U	2.2
5	QE	110	LEU	2.2
13	XM	104	ARG	2.2
25	RE	72	VAL	2.2
31	RO	24	VAL	2.2
41	RY	50	ARG	2.2
42	RZ	155	LEU	2.2
2	QB	4	GLU	2.2
3	XC	166	GLU	2.2
41	RY	29	GLU	2.2
52	Y9	23	VAL	2.2
24	RD	236	GLY	2.2
28	RH	161	GLY	2.2
32	RP	43	GLY	2.2
22	RA	2119	A	2.2
16	QP	19	ILE	2.2
4	XD	9	CYS	2.2
25	RE	15	PHE	2.2
1	XA	842	C	2.2
1	XA	1322	C	2.2
24	RD	45	ASN	2.2
12	XL	91	LYS	2.2
34	RR	42	LYS	2.2
15	QO	30	ALA	2.2
25	YE	205	ALA	2.2
7	QG	11	GLN	2.2
33	RQ	115	MET	2.2
10	QJ	43	ARG	2.2
10	QJ	71	LEU	2.2
24	YD	268	ARG	2.2

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Mol	Chain	Res	Type	RSRZ
25	RE	63	LEU	2.2
41	YY	86	ARG	2.2
7	QG	105	VAL	2.2
3	XC	159	GLY	2.2
12	QL	72	GLY	2.2
1	QA	1126	U	2.2
1	XA	1126	U	2.2
10	QJ	54	PHE	2.2
24	YD	269	PHE	2.2
9	XI	11	LYS	2.2
19	XS	85	LYS	2.2
52	Y9	33	LYS	2.2
15	XO	50	HIS	2.2
16	XP	68	ASP	2.2
31	RO	21	CYS	2.2
37	RU	97	ASP	2.2
1	QA	388	G	2.2
1	QA	1182	G	2.2
4	QD	155	LEU	2.2
22	RA	1098	A	2.2
22	RA	2126	A	2.2
22	YA	2061	G	2.2
22	YA	2799	A	2.2
11	QK	120	ARG	2.2
32	YP	65	ARG	2.2
17	QQ	9	VAL	2.2
25	RE	104	VAL	2.2
28	RH	169	VAL	2.2
1	XA	1397	C	2.2
7	QG	146	GLU	2.2
22	RA	1104	C	2.2
22	RA	2108	C	2.2
33	RQ	84	GLY	2.2
17	QQ	71	PHE	2.2
27	RG	84	LYS	2.2
30	YN	104	LYS	2.2
49	R6	47	THR	2.2
5	XE	91	LEU	2.2
27	RG	148	MET	2.2
19	QS	75	ALA	2.1
4	QD	12	CYS	2.1
16	QP	18	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
22	RA	161	U	2.1
23	YB	1	U	2.1
53	XV	24	U	2.1
7	XG	154	TYR	2.1
27	YG	157	ILE	2.1
32	RP	19	VAL	2.1
42	RZ	74	VAL	2.1
44	Y1	7	ILE	2.1
27	RG	80	PHE	2.1
29	YI	111	PRO	2.1
36	YT	69	GLY	2.1
37	RU	34	LYS	2.1
40	YX	67	GLY	2.1
22	RA	276	A	2.1
53	XV	76	A	2.1
1	QA	1047	G	2.1
19	QS	5	LEU	2.1
22	RA	2112	G	2.1
22	YA	11	G	2.1
45	Y2	21	LEU	2.1
34	RR	19	ALA	2.1
9	QI	104	ARG	2.1
9	QI	128	ARG	2.1
21	QU	9	ARG	2.1
21	XU	6	ARG	2.1
24	YD	13	ARG	2.1
28	YH	51	ARG	2.1
34	RR	2	ARG	2.1
36	RT	3	ARG	2.1
19	QS	4	SER	2.1
22	YA	806	C	2.1
22	YA	2178	C	2.1
10	QJ	50	ILE	2.1
27	RG	97	ASP	2.1
52	R9	12	ASP	2.1
4	QD	31	CYS	2.1
28	YH	49	VAL	2.1
41	YY	3	VAL	2.1
14	QN	36	PHE	2.1
20	QT	68	LYS	2.1
30	RN	75	TYR	2.1
19	QS	82	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
32	YP	69	GLY	2.1
22	YA	1175	U	2.1
32	RP	135	LEU	2.1
8	QH	104	ARG	2.1
17	QQ	25	ARG	2.1
30	YN	115	ARG	2.1
48	Y5	24	ALA	2.1
11	XK	13	GLN	2.1
8	QH	26	VAL	2.1
14	QN	17	LYS	2.1
19	QS	70	LYS	2.1
20	XT	27	LYS	2.1
22	YA	529	A	2.1
5	QE	22	GLY	2.1
25	YE	193	GLY	2.1
44	Y1	9	GLY	2.1
4	XD	135	LEU	2.1
13	XM	8	GLU	2.1
17	XQ	78	GLU	2.1
27	RG	135	LEU	2.1
33	RQ	139	GLU	2.1
22	RA	859	G	2.1
22	RA	1099	G	2.1
22	RA	1176	G	2.1
22	YA	254	G	2.1
22	YA	2116	G	2.1
53	QV	52	G	2.1
1	QA	1195	C	2.1
22	YA	1790	C	2.1
22	YA	2606	C	2.1
53	XV	1	C	2.1
4	XD	168	ARG	2.1
25	RE	76	ARG	2.1
28	RH	170	ARG	2.1
32	YP	16	ARG	2.1
40	RX	65	ARG	2.1
13	QM	5	ALA	2.1
13	QM	18	ALA	2.1
26	YF	130	ALA	2.1
52	Y9	10	ILE	2.1
27	YG	26	GLN	2.1
30	RN	8	GLN	2.1

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Mol	Chain	Res	Type	RSRZ
37	RU	93	LYS	2.1
52	Y9	36	GLN	2.1
17	QQ	5	VAL	2.1
18	XR	22	VAL	2.1
18	XR	39	VAL	2.1
28	RH	141	VAL	2.1
52	R9	16	VAL	2.1
2	QB	167	PRO	2.1
16	QP	15	PRO	2.1
33	RQ	83	MET	2.1
36	RT	1	MET	2.1
9	XI	12	GLU	2.1
33	YQ	48	GLU	2.1
49	R6	23	THR	2.1
10	QJ	75	ILE	2.1
14	QN	9	LYS	2.1
24	YD	258	LYS	2.1
28	YH	123	PHE	2.1
33	YQ	104	PHE	2.1
27	RG	34	LEU	2.1
35	YS	48	LEU	2.1
1	QA	1496	C	2.1
1	QA	1181	G	2.1
11	QK	90	GLY	2.1
20	QT	56	MET	2.1
22	YA	1075	C	2.1
22	RA	2123	G	2.1
48	Y5	52	TYR	2.1
3	QC	7	PRO	2.1
25	RE	127	ASP	2.1
16	QP	22	THR	2.1
18	XR	83	GLU	2.1
24	YD	140	THR	2.1
28	RH	81	GLU	2.1
17	QQ	91	ARG	2.1
14	QN	15	LYS	2.1
41	RY	34	LYS	2.1
53	XV	20	U	2.1
27	RG	178	PHE	2.1
5	XE	90	VAL	2.1
7	XG	84	ASN	2.1
7	QG	16	LEU	2.1

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Mol	Chain	Res	Type	RSRZ
27	RG	28	VAL	2.1
28	RH	52	VAL	2.1
30	YN	46	VAL	2.1
34	RR	117	VAL	2.1
3	QC	6	HIS	2.0
22	RA	2602	A	2.0
22	YA	2119	A	2.0
26	RF	207	GLY	2.0
32	RP	110	TYR	2.0
34	RR	7	GLY	2.0
55	QY	41	A	2.0
18	QR	42	ARG	2.0
19	QS	64	GLU	2.0
20	XT	22	ARG	2.0
34	YR	69	ASP	2.0
24	RD	31	LYS	2.0
31	RO	2	ILE	2.0
25	RE	20	ALA	2.0
35	YS	6	ALA	2.0
45	R2	4	SER	2.0
1	QA	307	C	2.0
4	QD	162	LEU	2.0
22	RA	1092	C	2.0
22	YA	790	C	2.0
52	Y9	16	VAL	2.0
27	RG	108	ASN	2.0
22	YA	10	G	2.0
55	XY	31	G	2.0
2	QB	179	LYS	2.0
21	QU	10	ARG	2.0
37	RU	16	LYS	2.0
51	R8	3	LYS	2.0
2	QB	170	GLU	2.0
3	QC	161	GLU	2.0
20	XT	64	ASP	2.0
44	R1	6	GLU	2.0
10	XJ	47	PHE	2.0
2	XB	238	LEU	2.0
24	YD	212	SER	2.0
26	YF	156	LEU	2.0
31	RO	41	ALA	2.0
22	RA	2134	A	2.0

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Mol	Chain	Res	Type	RSRZ
28	YH	43	VAL	2.0
41	RY	43	ASN	2.0
9	XI	42	ARG	2.0
15	QO	88	ARG	2.0
15	XO	68	ARG	2.0
17	QQ	38	ARG	2.0
21	XU	25	LYS	2.0
26	RF	131	GLY	2.0
37	YU	36	ARG	2.0
41	RY	47	LYS	2.0
41	RY	88	LYS	2.0
12	XL	6	THR	2.0
43	R0	3	HIS	2.0
22	YA	691	C	2.0
23	RB	88	C	2.0
14	QN	37	PHE	2.0
54	QX	2	U	2.0
31	RO	35	VAL	2.0
33	RQ	90	VAL	2.0
44	R1	49	VAL	2.0

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

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
55	1MG	QY	37	24/25	0.88	0.14	125,125,125,125	0
55	1MG	XY	37	24/25	0.90	0.10	64,64,64,64	0
56	PPU	Z6	76	37/38	0.91	0.18	51,51,51,51	0
56	PPU	Z8	76	37/38	0.92	0.13	48,48,48,48	0

6.3 Carbohydrates (i)

There are no oligosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3041	1/1	0.34	0.66	50,50,50,50	0
57	MG	QA	1655	1/1	0.35	0.15	66,66,66,66	0
57	MG	YA	3043	1/1	0.35	0.65	50,50,50,50	0
57	MG	YA	3098	1/1	0.35	0.53	50,50,50,50	0
57	MG	RA	3157	1/1	0.36	0.20	39,39,39,39	0
57	MG	RA	3140	1/1	0.36	0.21	61,61,61,61	0
57	MG	RA	3064	1/1	0.39	1.03	50,50,50,50	0
57	MG	YA	3014	1/1	0.40	0.49	1,1,1,1	0
57	MG	RA	3032	1/1	0.41	0.38	50,50,50,50	0
57	MG	XA	1658	1/1	0.45	0.20	17,17,17,17	0
57	MG	RA	3027	1/1	0.46	1.05	50,50,50,50	0
57	MG	YA	3067	1/1	0.48	0.45	7,7,7,7	0
57	MG	RA	3123	1/1	0.48	0.50	50,50,50,50	0
57	MG	RA	3230	1/1	0.49	0.18	45,45,45,45	0
57	MG	RA	3039	1/1	0.52	0.40	50,50,50,50	0
57	MG	QA	1605	1/1	0.52	0.25	4,4,4,4	0
57	MG	RA	3002	1/1	0.54	0.17	8,8,8,8	0
57	MG	QA	1617	1/1	0.54	0.30	2,2,2,2	0
57	MG	RA	3219	1/1	0.54	0.16	40,40,40,40	0
57	MG	YA	3033	1/1	0.54	0.68	50,50,50,50	0
57	MG	XA	1635	1/1	0.55	0.75	50,50,50,50	0
57	MG	RA	3071	1/1	0.55	0.58	50,50,50,50	0
57	MG	YA	3053	1/1	0.55	0.60	50,50,50,50	0
57	MG	RA	3229	1/1	0.55	0.17	50,50,50,50	0
57	MG	RA	3051	1/1	0.55	0.67	50,50,50,50	0
57	MG	YA	3250	1/1	0.55	0.54	50,50,50,50	0
57	MG	QA	1628	1/1	0.57	0.12	21,21,21,21	0
57	MG	XA	1621	1/1	0.57	0.46	6,6,6,6	0
57	MG	YA	3082	1/1	0.57	0.42	50,50,50,50	0
57	MG	RA	3222	1/1	0.57	0.29	4,4,4,4	0
57	MG	YA	3148	1/1	0.57	0.15	38,38,38,38	0
57	MG	RA	3031	1/1	0.57	0.62	50,50,50,50	0
57	MG	QA	1608	1/1	0.58	0.15	63,63,63,63	0
57	MG	RA	3139	1/1	0.58	0.27	18,18,18,18	0
57	MG	QH	201	1/1	0.58	0.12	27,27,27,27	0
57	MG	RA	3043	1/1	0.59	0.48	50,50,50,50	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3012	1/1	0.59	0.62	50,50,50,50	0
57	MG	XA	1624	1/1	0.59	0.32	8,8,8,8	0
57	MG	YA	3224	1/1	0.59	0.57	50,50,50,50	0
57	MG	RA	3093	1/1	0.59	0.40	50,50,50,50	0
57	MG	RA	3041	1/1	0.60	0.55	50,50,50,50	0
57	MG	YA	3220	1/1	0.60	0.15	26,26,26,26	0
57	MG	YA	3099	1/1	0.60	0.43	50,50,50,50	0
57	MG	YA	3117	1/1	0.60	0.65	50,50,50,50	0
59	ZN	R9	101	1/1	0.60	0.36	177,177,177,177	0
57	MG	YA	3080	1/1	0.61	0.45	50,50,50,50	0
57	MG	RE	302	1/1	0.61	0.29	15,15,15,15	0
57	MG	YA	3113	1/1	0.62	0.49	50,50,50,50	0
57	MG	YA	3009	1/1	0.62	0.54	50,50,50,50	0
57	MG	YA	3081	1/1	0.62	0.29	7,7,7,7	0
57	MG	RA	3096	1/1	0.62	0.49	11,11,11,11	0
57	MG	YA	3085	1/1	0.62	0.78	50,50,50,50	0
57	MG	RP	202	1/1	0.62	0.15	75,75,75,75	0
57	MG	RA	3217	1/1	0.62	0.28	16,16,16,16	0
57	MG	RA	3023	1/1	0.63	0.55	50,50,50,50	0
57	MG	QA	1610	1/1	0.63	0.54	50,50,50,50	0
57	MG	RA	3013	1/1	0.63	0.30	0,0,0,0	0
57	MG	RA	3194	1/1	0.64	0.09	82,82,82,82	0
57	MG	RA	3127	1/1	0.64	0.34	15,15,15,15	0
57	MG	RA	3007	1/1	0.64	0.67	50,50,50,50	0
57	MG	YA	3156	1/1	0.64	0.23	8,8,8,8	0
57	MG	YA	3191	1/1	0.64	0.24	14,14,14,14	0
57	MG	YA	3045	1/1	0.64	0.26	0,0,0,0	0
57	MG	RA	3065	1/1	0.64	0.74	50,50,50,50	0
57	MG	RA	3030	1/1	0.64	0.41	50,50,50,50	0
57	MG	YA	3107	1/1	0.64	0.45	2,2,2,2	0
57	MG	YA	3021	1/1	0.65	0.47	50,50,50,50	0
57	MG	YA	3119	1/1	0.65	0.20	66,66,66,66	0
57	MG	YA	3049	1/1	0.65	0.69	50,50,50,50	0
57	MG	XA	1616	1/1	0.66	0.57	50,50,50,50	0
57	MG	RA	3035	1/1	0.67	0.69	50,50,50,50	0
57	MG	RA	3042	1/1	0.67	0.41	50,50,50,50	0
57	MG	XA	1662	1/1	0.67	0.59	50,50,50,50	0
57	MG	YA	3001	1/1	0.67	0.54	50,50,50,50	0
57	MG	RA	3016	1/1	0.67	0.44	50,50,50,50	0
57	MG	RA	3111	1/1	0.67	0.39	4,4,4,4	0
57	MG	YA	3083	1/1	0.67	0.12	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	ZN	Y9	101	1/1	0.67	0.37	158,158,158,158	0
57	MG	QA	1612	1/1	0.68	0.38	4,4,4,4	0
57	MG	YA	3059	1/1	0.68	0.38	3,3,3,3	0
57	MG	YA	3134	1/1	0.68	0.49	50,50,50,50	0
57	MG	RA	3239	1/1	0.68	0.34	10,10,10,10	0
57	MG	XA	1643	1/1	0.68	0.54	50,50,50,50	0
57	MG	YA	3164	1/1	0.68	0.43	97,97,97,97	0
57	MG	YA	3137	1/1	0.69	0.18	22,22,22,22	0
57	MG	YA	3094	1/1	0.69	0.36	8,8,8,8	0
57	MG	YA	3197	1/1	0.69	0.72	50,50,50,50	0
57	MG	XA	1614	1/1	0.69	0.30	25,25,25,25	0
57	MG	RA	3231	1/1	0.70	0.22	3,3,3,3	0
57	MG	YA	3061	1/1	0.70	0.34	9,9,9,9	0
57	MG	RA	3233	1/1	0.70	0.51	50,50,50,50	0
57	MG	RA	3052	1/1	0.70	0.27	50,50,50,50	0
57	MG	RA	3005	1/1	0.70	0.63	50,50,50,50	0
57	MG	YA	3132	1/1	0.70	0.24	26,26,26,26	0
57	MG	XA	1656	1/1	0.71	0.22	12,12,12,12	0
57	MG	RA	3003	1/1	0.71	0.68	50,50,50,50	0
57	MG	YA	3201	1/1	0.71	0.25	10,10,10,10	0
57	MG	YA	3202	1/1	0.71	0.36	13,13,13,13	0
57	MG	YA	3079	1/1	0.71	0.80	50,50,50,50	0
57	MG	RA	3021	1/1	0.71	0.65	50,50,50,50	0
57	MG	YA	3018	1/1	0.71	0.59	50,50,50,50	0
57	MG	RA	3006	1/1	0.71	0.49	50,50,50,50	0
57	MG	YA	3006	1/1	0.71	0.77	50,50,50,50	0
57	MG	RA	3081	1/1	0.72	0.44	10,10,10,10	0
57	MG	RA	3180	1/1	0.72	0.11	1,1,1,1	0
57	MG	YA	3022	1/1	0.72	0.68	50,50,50,50	0
57	MG	YA	3253	1/1	0.72	0.67	50,50,50,50	0
57	MG	YA	3261	1/1	0.72	0.81	50,50,50,50	0
57	MG	XA	1615	1/1	0.72	0.61	50,50,50,50	0
57	MG	RA	3145	1/1	0.72	0.39	3,3,3,3	0
57	MG	QA	1664	1/1	0.73	0.15	10,10,10,10	0
57	MG	RA	3033	1/1	0.73	0.33	16,16,16,16	0
57	MG	YA	3057	1/1	0.73	0.34	8,8,8,8	0
57	MG	RA	3186	1/1	0.73	0.23	51,51,51,51	0
57	MG	YA	3026	1/1	0.73	1.55	50,50,50,50	0
57	MG	QA	1621	1/1	0.73	0.18	35,35,35,35	0
57	MG	XA	1602	1/1	0.73	0.54	50,50,50,50	0
57	MG	XX	101	1/1	0.73	0.13	88,88,88,88	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1612	1/1	0.73	0.32	23,23,23,23	0
57	MG	RA	3060	1/1	0.73	0.67	13,13,13,13	0
57	MG	RA	3212	1/1	0.74	0.16	33,33,33,33	0
57	MG	YA	3125	1/1	0.74	0.24	15,15,15,15	0
57	MG	YA	3211	1/1	0.74	0.16	3,3,3,3	0
57	MG	YA	3213	1/1	0.74	0.11	15,15,15,15	0
57	MG	RA	3232	1/1	0.74	0.24	5,5,5,5	0
57	MG	RA	3182	1/1	0.74	0.28	10,10,10,10	0
57	MG	RA	3142	1/1	0.74	0.26	8,8,8,8	0
57	MG	QA	1603	1/1	0.74	0.14	10,10,10,10	0
57	MG	YA	3040	1/1	0.74	0.79	50,50,50,50	0
57	MG	RA	3201	1/1	0.74	0.09	41,41,41,41	0
57	MG	RR	201	1/1	0.74	0.32	9,9,9,9	0
57	MG	RA	3206	1/1	0.74	0.21	11,11,11,11	0
57	MG	YA	3050	1/1	0.75	0.57	50,50,50,50	0
57	MG	QA	1622	1/1	0.75	0.30	52,52,52,52	0
57	MG	YA	3255	1/1	0.75	0.80	50,50,50,50	0
57	MG	YA	3025	1/1	0.75	0.39	3,3,3,3	0
57	MG	YA	3002	1/1	0.75	0.66	50,50,50,50	0
57	MG	YA	3151	1/1	0.75	0.51	50,50,50,50	0
57	MG	YA	3235	1/1	0.75	0.10	34,34,34,34	0
57	MG	RA	3099	1/1	0.76	0.49	20,20,20,20	0
57	MG	YA	3172	1/1	0.76	0.21	19,19,19,19	0
57	MG	YA	3176	1/1	0.76	0.16	11,11,11,11	0
57	MG	RA	3014	1/1	0.76	0.66	50,50,50,50	0
57	MG	YA	3054	1/1	0.76	0.49	50,50,50,50	0
57	MG	XA	1605	1/1	0.76	0.34	16,16,16,16	0
57	MG	RA	3077	1/1	0.76	0.37	50,50,50,50	0
57	MG	RA	3170	1/1	0.76	0.28	2,2,2,2	0
57	MG	YA	3030	1/1	0.76	0.45	50,50,50,50	0
57	MG	YA	3074	1/1	0.76	0.30	4,4,4,4	0
57	MG	RA	3048	1/1	0.76	0.63	50,50,50,50	0
57	MG	RA	3057	1/1	0.76	0.73	50,50,50,50	0
57	MG	XA	1618	1/1	0.76	0.26	4,4,4,4	0
57	MG	YA	3144	1/1	0.76	0.39	6,6,6,6	0
57	MG	RA	3220	1/1	0.76	0.19	25,25,25,25	0
57	MG	YA	3150	1/1	0.76	0.22	16,16,16,16	0
57	MG	RA	3067	1/1	0.76	0.32	6,6,6,6	0
57	MG	XA	1633	1/1	0.76	0.16	13,13,13,13	0
57	MG	YA	3159	1/1	0.76	0.27	22,22,22,22	0
57	MG	YA	3019	1/1	0.77	0.55	50,50,50,50	0
57	MG	QA	1618	1/1	0.77	0.21	8,8,8,8	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3138	1/1	0.77	0.41	4,4,4,4	0
57	MG	RA	3020	1/1	0.77	0.46	50,50,50,50	0
57	MG	YA	3024	1/1	0.77	0.61	50,50,50,50	0
57	MG	YA	3198	1/1	0.77	0.27	2,2,2,2	0
57	MG	RA	3038	1/1	0.77	0.60	50,50,50,50	0
57	MG	RA	3100	1/1	0.77	0.60	50,50,50,50	0
57	MG	YA	3093	1/1	0.77	0.24	4,4,4,4	0
57	MG	RA	3092	1/1	0.77	0.21	59,59,59,59	0
57	MG	XA	1654	1/1	0.78	0.19	17,17,17,17	0
57	MG	YA	3124	1/1	0.78	0.28	13,13,13,13	0
57	MG	YA	3149	1/1	0.78	0.34	7,7,7,7	0
57	MG	YA	3252	1/1	0.78	0.21	4,4,4,4	0
57	MG	RA	3078	1/1	0.78	0.37	50,50,50,50	0
57	MG	RA	3146	1/1	0.78	0.28	7,7,7,7	0
57	MG	YA	3072	1/1	0.78	0.64	50,50,50,50	0
57	MG	RU	201	1/1	0.78	0.13	86,86,86,86	0
57	MG	YA	3010	1/1	0.78	0.42	50,50,50,50	0
57	MG	YA	3139	1/1	0.78	0.19	13,13,13,13	0
57	MG	RA	3008	1/1	0.79	0.08	0,0,0,0	0
57	MG	RA	3124	1/1	0.79	0.27	19,19,19,19	0
57	MG	YA	3076	1/1	0.79	0.32	1,1,1,1	0
57	MG	RA	3181	1/1	0.79	0.09	9,9,9,9	0
57	MG	YA	3187	1/1	0.79	0.12	47,47,47,47	0
57	MG	YA	3188	1/1	0.79	0.20	36,36,36,36	0
57	MG	YA	3029	1/1	0.79	0.34	6,6,6,6	0
57	MG	RA	3019	1/1	0.79	0.46	50,50,50,50	0
57	MG	XA	1622	1/1	0.79	0.20	6,6,6,6	0
57	MG	Y7	101	1/1	0.79	0.32	14,14,14,14	0
57	MG	XA	1606	1/1	0.79	0.41	13,13,13,13	0
58	PAR	QA	1666	42/42	0.79	0.31	104,104,104,104	0
57	MG	RA	3207	1/1	0.79	0.31	5,5,5,5	0
57	MG	RA	3184	1/1	0.79	0.30	40,40,40,40	0
57	MG	RA	3084	1/1	0.80	0.26	6,6,6,6	0
57	MG	YA	3232	1/1	0.80	0.16	15,15,15,15	0
57	MG	YA	3182	1/1	0.80	0.34	14,14,14,14	0
57	MG	YA	3103	1/1	0.80	0.17	31,31,31,31	0
57	MG	YA	3031	1/1	0.80	0.74	50,50,50,50	0
57	MG	RA	3095	1/1	0.80	0.30	24,24,24,24	0
57	MG	RA	3234	1/1	0.80	0.83	50,50,50,50	0
57	MG	YA	3260	1/1	0.80	0.77	50,50,50,50	0
57	MG	QA	1604	1/1	0.80	0.21	7,7,7,7	0
57	MG	YA	3084	1/1	0.80	0.18	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1625	1/1	0.80	0.21	50,50,50,50	0
57	MG	RA	3193	1/1	0.80	0.19	17,17,17,17	0
57	MG	XA	1670	1/1	0.80	0.16	44,44,44,44	0
57	MG	YA	3015	1/1	0.80	0.70	50,50,50,50	0
57	MG	RA	3068	1/1	0.81	0.28	4,4,4,4	0
57	MG	XA	1626	1/1	0.81	0.24	1,1,1,1	0
57	MG	YA	3032	1/1	0.81	0.65	50,50,50,50	0
57	MG	YA	3126	1/1	0.81	0.34	50,50,50,50	0
57	MG	YA	3127	1/1	0.81	0.27	12,12,12,12	0
57	MG	RA	3034	1/1	0.81	0.85	50,50,50,50	0
57	MG	YA	3092	1/1	0.81	0.38	2,2,2,2	0
57	MG	RA	3025	1/1	0.81	0.24	7,7,7,7	0
57	MG	XA	1641	1/1	0.81	0.25	14,14,14,14	0
57	MG	RA	3141	1/1	0.81	0.30	5,5,5,5	0
57	MG	YA	3044	1/1	0.81	0.53	16,16,16,16	0
57	MG	RA	3066	1/1	0.81	0.36	23,23,23,23	0
57	MG	YA	3047	1/1	0.81	0.54	50,50,50,50	0
57	MG	RA	3202	1/1	0.81	0.23	2,2,2,2	0
57	MG	RA	3001	1/1	0.81	0.24	1,1,1,1	0
57	MG	RA	3010	1/1	0.82	0.27	56,56,56,56	0
57	MG	RA	3235	1/1	0.82	0.15	2,2,2,2	0
57	MG	QA	1648	1/1	0.82	0.17	16,16,16,16	0
57	MG	QA	1625	1/1	0.82	0.08	74,74,74,74	0
57	MG	XA	1632	1/1	0.82	0.31	2,2,2,2	0
57	MG	RA	3059	1/1	0.82	0.60	50,50,50,50	0
57	MG	RA	3208	1/1	0.82	0.20	50,50,50,50	0
57	MG	XA	1636	1/1	0.82	0.24	9,9,9,9	0
57	MG	RA	3168	1/1	0.82	0.24	10,10,10,10	0
57	MG	RA	3073	1/1	0.82	0.24	36,36,36,36	0
57	MG	XA	1603	1/1	0.82	0.64	50,50,50,50	0
57	MG	RA	3171	1/1	0.82	0.27	15,15,15,15	0
57	MG	RA	3024	1/1	0.82	0.26	15,15,15,15	0
57	MG	XA	1607	1/1	0.82	0.24	17,17,17,17	0
57	MG	XA	1663	1/1	0.82	0.07	3,3,3,3	0
57	MG	XA	1666	1/1	0.82	0.13	34,34,34,34	0
57	MG	RA	3061	1/1	0.82	0.42	50,50,50,50	0
57	MG	RA	3063	1/1	0.82	0.13	19,19,19,19	0
57	MG	QA	1613	1/1	0.82	0.30	1,1,1,1	0
57	MG	RA	3086	1/1	0.82	0.34	50,50,50,50	0
57	MG	RA	3089	1/1	0.82	0.35	0,0,0,0	0
57	MG	XA	1619	1/1	0.82	0.25	8,8,8,8	0
57	MG	QF	201	1/1	0.82	0.12	40,40,40,40	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3052	1/1	0.83	0.23	5,5,5,5	0
57	MG	RA	3225	1/1	0.83	0.12	47,47,47,47	0
57	MG	RA	3172	1/1	0.83	0.13	17,17,17,17	0
57	MG	RA	3173	1/1	0.83	0.20	3,3,3,3	0
57	MG	YA	3243	1/1	0.83	0.77	50,50,50,50	0
57	MG	YA	3245	1/1	0.83	0.19	3,3,3,3	0
57	MG	YA	3179	1/1	0.83	0.37	20,20,20,20	0
57	MG	YA	3035	1/1	0.83	0.56	50,50,50,50	0
57	MG	RA	3044	1/1	0.83	0.25	8,8,8,8	0
57	MG	QA	1637	1/1	0.83	0.14	3,3,3,3	0
57	MG	YA	3042	1/1	0.83	0.49	50,50,50,50	0
57	MG	YA	3023	1/1	0.83	0.26	5,5,5,5	0
57	MG	RA	3062	1/1	0.83	0.37	2,2,2,2	0
57	MG	RA	3205	1/1	0.83	0.09	33,33,33,33	0
57	MG	RA	3221	1/1	0.83	0.30	79,79,79,79	0
57	MG	RA	3070	1/1	0.83	0.16	21,21,21,21	0
57	MG	RA	3241	1/1	0.83	0.29	0,0,0,0	0
57	MG	QA	1626	1/1	0.84	0.09	17,17,17,17	0
57	MG	RA	3240	1/1	0.84	0.27	12,12,12,12	0
57	MG	YA	3003	1/1	0.84	0.35	50,50,50,50	0
57	MG	RA	3153	1/1	0.84	0.29	36,36,36,36	0
57	MG	RA	3244	1/1	0.84	0.15	9,9,9,9	0
57	MG	YA	3249	1/1	0.84	0.29	5,5,5,5	0
57	MG	XA	1655	1/1	0.84	0.14	7,7,7,7	0
57	MG	YA	3011	1/1	0.84	0.24	3,3,3,3	0
57	MG	RD	301	1/1	0.84	0.17	15,15,15,15	0
57	MG	YA	3013	1/1	0.84	0.31	1,1,1,1	0
57	MG	YA	3257	1/1	0.84	0.57	50,50,50,50	0
57	MG	YA	3096	1/1	0.84	0.19	17,17,17,17	0
57	MG	XA	1608	1/1	0.84	0.08	50,50,50,50	0
57	MG	XA	1659	1/1	0.84	0.16	15,15,15,15	0
57	MG	RA	3087	1/1	0.84	0.34	0,0,0,0	0
57	MG	RA	3125	1/1	0.84	0.19	14,14,14,14	0
57	MG	RA	3213	1/1	0.84	0.20	10,10,10,10	0
57	MG	RA	3174	1/1	0.84	0.09	40,40,40,40	0
57	MG	RA	3121	1/1	0.85	0.21	0,0,0,0	0
57	MG	RA	3026	1/1	0.85	0.13	13,13,13,13	0
57	MG	RA	3158	1/1	0.85	0.29	15,15,15,15	0
57	MG	YA	3204	1/1	0.85	0.14	11,11,11,11	0
57	MG	RA	3166	1/1	0.85	0.41	9,9,9,9	0
57	MG	RA	3167	1/1	0.85	0.10	26,26,26,26	0
57	MG	RA	3185	1/1	0.85	0.21	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3074	1/1	0.85	0.18	20,20,20,20	0
57	MG	RA	3218	1/1	0.85	0.27	10,10,10,10	0
57	MG	QA	1611	1/1	0.85	0.22	4,4,4,4	0
57	MG	YA	3153	1/1	0.85	0.23	16,16,16,16	0
57	MG	RA	3143	1/1	0.85	0.16	12,12,12,12	0
57	MG	YA	3157	1/1	0.85	0.14	8,8,8,8	0
57	MG	YA	3071	1/1	0.85	0.18	6,6,6,6	0
57	MG	XA	1649	1/1	0.85	0.17	16,16,16,16	0
57	MG	RA	3243	1/1	0.85	0.32	18,18,18,18	0
57	MG	YA	3174	1/1	0.85	0.29	3,3,3,3	0
57	MG	YA	3075	1/1	0.85	0.61	50,50,50,50	0
57	MG	YA	3122	1/1	0.85	0.54	50,50,50,50	0
57	MG	RA	3196	1/1	0.85	0.14	22,22,22,22	0
57	MG	YA	3183	1/1	0.85	0.11	17,17,17,17	0
57	MG	XA	1617	1/1	0.85	0.25	2,2,2,2	0
57	MG	QA	1639	1/1	0.85	0.09	27,27,27,27	0
57	MG	RA	3223	1/1	0.85	0.07	16,16,16,16	0
57	MG	RA	3138	1/1	0.85	0.34	8,8,8,8	0
57	MG	YA	3007	1/1	0.86	0.25	1,1,1,1	0
57	MG	QA	1656	1/1	0.86	0.14	63,63,63,63	0
57	MG	XA	1650	1/1	0.86	0.18	22,22,22,22	0
57	MG	XA	1651	1/1	0.86	0.10	84,84,84,84	0
57	MG	YA	3208	1/1	0.86	0.22	0,0,0,0	0
57	MG	XA	1620	1/1	0.86	0.19	0,0,0,0	0
57	MG	YA	3100	1/1	0.86	0.23	0,0,0,0	0
57	MG	RA	3116	1/1	0.86	0.18	0,0,0,0	0
57	MG	RA	3160	1/1	0.86	0.29	2,2,2,2	0
57	MG	RA	3162	1/1	0.86	0.24	18,18,18,18	0
57	MG	YA	3234	1/1	0.86	0.14	2,2,2,2	0
57	MG	YA	3116	1/1	0.86	0.26	11,11,11,11	0
57	MG	QA	1614	1/1	0.86	0.25	21,21,21,21	0
57	MG	YA	3118	1/1	0.86	0.33	12,12,12,12	0
57	MG	YA	3247	1/1	0.86	0.27	16,16,16,16	0
57	MG	YA	3168	1/1	0.86	0.16	13,13,13,13	0
57	MG	RA	3053	1/1	0.86	0.60	50,50,50,50	0
57	MG	YA	3121	1/1	0.86	0.25	8,8,8,8	0
57	MG	XA	1629	1/1	0.86	0.16	32,32,32,32	0
57	MG	RA	3083	1/1	0.86	0.16	3,3,3,3	0
57	MG	YA	3180	1/1	0.86	0.28	5,5,5,5	0
57	MG	YA	3181	1/1	0.86	0.39	5,5,5,5	0
57	MG	RA	3009	1/1	0.86	0.20	7,7,7,7	0
57	MG	RA	3046	1/1	0.86	0.21	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RA	3215	1/1	0.86	0.17	14,14,14,14	0
57	MG	RA	3216	1/1	0.86	0.22	1,1,1,1	0
57	MG	YA	3086	1/1	0.86	0.50	19,19,19,19	0
57	MG	QA	1643	1/1	0.86	0.09	20,20,20,20	0
57	MG	RA	3190	1/1	0.87	0.20	4,4,4,4	0
57	MG	RA	3094	1/1	0.87	0.39	3,3,3,3	0
57	MG	RA	3004	1/1	0.87	0.21	9,9,9,9	0
57	MG	YA	3089	1/1	0.87	0.17	13,13,13,13	0
57	MG	YA	3048	1/1	0.87	0.48	50,50,50,50	0
57	MG	XA	1611	1/1	0.87	0.22	1,1,1,1	0
57	MG	YA	3185	1/1	0.87	0.09	74,74,74,74	0
57	MG	YA	3248	1/1	0.87	0.26	15,15,15,15	0
57	MG	QA	1631	1/1	0.87	0.04	63,63,63,63	0
57	MG	XA	1601	1/1	0.87	0.69	50,50,50,50	0
57	MG	YA	3154	1/1	0.87	0.23	5,5,5,5	0
57	MG	YA	3193	1/1	0.87	0.23	7,7,7,7	0
57	MG	RA	3119	1/1	0.87	0.17	88,88,88,88	0
57	MG	YA	3256	1/1	0.87	0.18	9,9,9,9	0
57	MG	QA	1650	1/1	0.87	0.21	8,8,8,8	0
57	MG	YA	3056	1/1	0.87	0.54	50,50,50,50	0
57	MG	YA	3163	1/1	0.87	0.18	9,9,9,9	0
57	MG	YB	201	1/1	0.87	0.15	14,14,14,14	0
57	MG	RA	3178	1/1	0.87	0.16	5,5,5,5	0
57	MG	YA	3106	1/1	0.87	0.41	50,50,50,50	0
57	MG	YA	3171	1/1	0.87	0.15	7,7,7,7	0
57	MG	YA	3135	1/1	0.87	0.24	9,9,9,9	0
57	MG	XM	201	1/1	0.87	0.07	78,78,78,78	0
57	MG	YA	3111	1/1	0.88	0.25	7,7,7,7	0
57	MG	YA	3140	1/1	0.88	0.21	19,19,19,19	0
57	MG	YA	3112	1/1	0.88	0.18	19,19,19,19	0
57	MG	QA	1602	1/1	0.88	0.38	11,11,11,11	0
57	MG	YA	3114	1/1	0.88	0.17	16,16,16,16	0
57	MG	QA	1601	1/1	0.88	0.12	21,21,21,21	0
57	MG	XA	1660	1/1	0.88	0.17	19,19,19,19	0
57	MG	YA	3189	1/1	0.88	0.25	7,7,7,7	0
57	MG	RA	3227	1/1	0.88	0.22	39,39,39,39	0
57	MG	RA	3133	1/1	0.88	0.25	4,4,4,4	0
57	MG	RA	3137	1/1	0.88	0.09	3,3,3,3	0
57	MG	YA	3062	1/1	0.88	0.24	0,0,0,0	0
57	MG	RA	3147	1/1	0.88	0.12	6,6,6,6	0
57	MG	YA	3259	1/1	0.88	0.37	2,2,2,2	0
57	MG	XA	1647	1/1	0.88	0.24	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1635	1/1	0.88	0.08	11,11,11,11	0
57	MG	QA	1644	1/1	0.88	0.18	24,24,24,24	0
57	MG	YP	202	1/1	0.88	0.22	5,5,5,5	0
57	MG	YQ	201	1/1	0.88	0.20	79,79,79,79	0
57	MG	RA	3090	1/1	0.88	0.27	4,4,4,4	0
57	MG	QA	1659	1/1	0.88	0.22	4,4,4,4	0
57	MG	XA	1628	1/1	0.88	0.14	2,2,2,2	0
57	MG	R5	101	1/1	0.88	0.21	14,14,14,14	0
57	MG	XA	1657	1/1	0.88	0.16	4,4,4,4	0
57	MG	YA	3039	1/1	0.89	0.22	0,0,0,0	0
57	MG	YA	3231	1/1	0.89	0.27	11,11,11,11	0
57	MG	YA	3131	1/1	0.89	0.26	17,17,17,17	0
57	MG	YA	3233	1/1	0.89	0.08	3,3,3,3	0
57	MG	RA	3228	1/1	0.89	0.10	7,7,7,7	0
57	MG	YA	3068	1/1	0.89	0.26	1,1,1,1	0
57	MG	YA	3070	1/1	0.89	0.11	33,33,33,33	0
57	MG	RA	3037	1/1	0.89	0.26	0,0,0,0	0
57	MG	YA	3101	1/1	0.89	0.15	11,11,11,11	0
57	MG	RA	3197	1/1	0.89	0.08	9,9,9,9	0
57	MG	YA	3184	1/1	0.89	0.36	50,50,50,50	0
57	MG	RA	3183	1/1	0.89	0.18	11,11,11,11	0
57	MG	RA	3011	1/1	0.89	0.25	7,7,7,7	0
57	MG	RA	3203	1/1	0.89	0.12	34,34,34,34	0
57	MG	YA	3077	1/1	0.89	0.31	0,0,0,0	0
57	MG	RA	3204	1/1	0.89	0.23	15,15,15,15	0
57	MG	QA	1629	1/1	0.89	0.14	38,38,38,38	0
57	MG	RA	3238	1/1	0.89	0.29	3,3,3,3	0
57	MG	RA	3122	1/1	0.89	0.24	19,19,19,19	0
57	MG	RA	3045	1/1	0.89	0.20	0,0,0,0	0
57	MG	YA	3265	1/1	0.89	0.36	11,11,11,11	0
57	MG	QA	1658	1/1	0.89	0.14	46,46,46,46	0
57	MG	YE	301	1/1	0.89	0.18	1,1,1,1	0
57	MG	RA	3211	1/1	0.89	0.14	11,11,11,11	0
57	MG	YA	3205	1/1	0.89	0.29	40,40,40,40	0
57	MG	XA	1627	1/1	0.89	0.27	9,9,9,9	0
57	MG	XA	1609	1/1	0.89	0.27	8,8,8,8	0
57	MG	RA	3047	1/1	0.89	0.21	2,2,2,2	0
58	PAR	XA	1673	42/42	0.89	0.34	132,132,132,132	0
57	MG	YA	3036	1/1	0.89	0.22	3,3,3,3	0
57	MG	YA	3223	1/1	0.89	0.32	11,11,11,11	0
57	MG	YA	3240	1/1	0.90	0.30	15,15,15,15	0
57	MG	YA	3190	1/1	0.90	0.19	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3244	1/1	0.90	0.34	6,6,6,6	0
57	MG	RA	3036	1/1	0.90	0.25	0,0,0,0	0
57	MG	YA	3102	1/1	0.90	0.21	6,6,6,6	0
57	MG	RA	3117	1/1	0.90	0.19	4,4,4,4	0
57	MG	YA	3060	1/1	0.90	0.18	9,9,9,9	0
57	MG	YA	3170	1/1	0.90	0.09	8,8,8,8	0
57	MG	XA	1638	1/1	0.90	0.11	27,27,27,27	0
57	MG	YA	3203	1/1	0.90	0.37	29,29,29,29	0
57	MG	RA	3161	1/1	0.90	0.20	8,8,8,8	0
57	MG	YA	3008	1/1	0.90	0.20	1,1,1,1	0
57	MG	RA	3134	1/1	0.90	0.07	23,23,23,23	0
57	MG	YA	3087	1/1	0.90	0.28	6,6,6,6	0
57	MG	RA	3164	1/1	0.90	0.15	15,15,15,15	0
57	MG	YA	3214	1/1	0.90	0.19	23,23,23,23	0
57	MG	YA	3218	1/1	0.90	0.23	5,5,5,5	0
57	MG	YA	3091	1/1	0.90	0.18	12,12,12,12	0
57	MG	RA	3226	1/1	0.90	0.16	29,29,29,29	0
57	MG	XA	1664	1/1	0.90	0.21	27,27,27,27	0
57	MG	YA	3225	1/1	0.90	0.27	23,23,23,23	0
57	MG	YA	3226	1/1	0.90	0.09	10,10,10,10	0
57	MG	XV	101	1/1	0.90	0.24	1,1,1,1	0
57	MG	RE	301	1/1	0.90	0.15	2,2,2,2	0
57	MG	XA	1668	1/1	0.90	0.09	6,6,6,6	0
57	MG	RA	3103	1/1	0.90	0.16	8,8,8,8	0
57	MG	RF	301	1/1	0.90	0.17	10,10,10,10	0
57	MG	RA	3085	1/1	0.90	0.21	27,27,27,27	0
57	MG	YA	3128	1/1	0.91	0.11	0,0,0,0	0
57	MG	YA	3169	1/1	0.91	0.35	7,7,7,7	0
57	MG	RA	3072	1/1	0.91	0.26	0,0,0,0	0
57	MG	RA	3040	1/1	0.91	0.19	11,11,11,11	0
57	MG	XA	1648	1/1	0.91	0.14	10,10,10,10	0
57	MG	RA	3242	1/1	0.91	0.32	8,8,8,8	0
57	MG	XA	1604	1/1	0.91	0.71	50,50,50,50	0
57	MG	RA	3015	1/1	0.91	0.18	15,15,15,15	0
57	MG	RA	3075	1/1	0.91	0.21	37,37,37,37	0
57	MG	RB	202	1/1	0.91	0.15	15,15,15,15	0
57	MG	YA	3221	1/1	0.91	0.09	7,7,7,7	0
57	MG	RA	3155	1/1	0.91	0.20	9,9,9,9	0
57	MG	RA	3156	1/1	0.91	0.18	7,7,7,7	0
57	MG	RA	3076	1/1	0.91	0.10	3,3,3,3	0
57	MG	XA	1630	1/1	0.91	0.21	1,1,1,1	0
57	MG	QA	1651	1/1	0.91	0.12	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	RP	201	1/1	0.91	0.66	85,85,85,85	0
57	MG	QA	1619	1/1	0.91	0.10	29,29,29,29	0
57	MG	YA	3123	1/1	0.91	0.24	0,0,0,0	0
57	MG	RA	3236	1/1	0.91	0.32	2,2,2,2	0
57	MG	XA	1637	1/1	0.91	0.19	13,13,13,13	0
57	MG	QA	1640	1/1	0.91	0.14	6,6,6,6	0
57	MG	RA	3113	1/1	0.91	0.17	1,1,1,1	0
57	MG	YA	3165	1/1	0.91	0.15	42,42,42,42	0
57	MG	RA	3108	1/1	0.92	0.19	5,5,5,5	0
57	MG	XA	1672	1/1	0.92	0.13	5,5,5,5	0
57	MG	RA	3120	1/1	0.92	0.11	31,31,31,31	0
57	MG	RA	3098	1/1	0.92	0.29	4,4,4,4	0
57	MG	YA	3173	1/1	0.92	0.12	14,14,14,14	0
57	MG	YA	3142	1/1	0.92	0.17	9,9,9,9	0
57	MG	RA	3159	1/1	0.92	0.18	18,18,18,18	0
57	MG	YA	3178	1/1	0.92	0.27	32,32,32,32	0
57	MG	YA	3147	1/1	0.92	0.10	0,0,0,0	0
57	MG	YA	3217	1/1	0.92	0.10	52,52,52,52	0
57	MG	RA	3136	1/1	0.92	0.18	14,14,14,14	0
57	MG	YA	3219	1/1	0.92	0.10	22,22,22,22	0
57	MG	YA	3095	1/1	0.92	0.16	8,8,8,8	0
57	MG	QA	1630	1/1	0.92	0.09	14,14,14,14	0
57	MG	RA	3114	1/1	0.92	0.14	3,3,3,3	0
57	MG	XA	1634	1/1	0.92	0.14	11,11,11,11	0
57	MG	YB	202	1/1	0.92	0.18	5,5,5,5	0
57	MG	RA	3175	1/1	0.92	0.12	12,12,12,12	0
57	MG	RA	3176	1/1	0.92	0.10	30,30,30,30	0
57	MG	RA	3195	1/1	0.92	0.11	23,23,23,23	0
57	MG	RA	3177	1/1	0.92	0.11	30,30,30,30	0
57	MG	RA	3029	1/1	0.92	0.23	5,5,5,5	0
57	MG	XA	1642	1/1	0.92	0.24	11,11,11,11	0
57	MG	RA	3200	1/1	0.92	0.05	31,31,31,31	0
57	MG	YA	3239	1/1	0.92	0.09	13,13,13,13	0
57	MG	YA	3167	1/1	0.92	0.29	39,39,39,39	0
57	MG	QA	1646	1/1	0.92	0.20	11,11,11,11	0
57	MG	QA	1645	1/1	0.93	0.11	37,37,37,37	0
57	MG	QA	1636	1/1	0.93	0.17	11,11,11,11	0
57	MG	YA	3038	1/1	0.93	0.20	5,5,5,5	0
57	MG	YA	3160	1/1	0.93	0.07	4,4,4,4	0
57	MG	YA	3194	1/1	0.93	0.11	15,15,15,15	0
57	MG	YA	3195	1/1	0.93	0.15	21,21,21,21	0
57	MG	YA	3162	1/1	0.93	0.25	30,30,30,30	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	YA	3065	1/1	0.93	0.31	8,8,8,8	0
57	MG	YA	3200	1/1	0.93	0.09	35,35,35,35	0
57	MG	XA	1665	1/1	0.93	0.10	18,18,18,18	0
57	MG	RA	3209	1/1	0.93	0.10	44,44,44,44	0
57	MG	YA	3251	1/1	0.93	0.65	50,50,50,50	0
57	MG	RA	3028	1/1	0.93	0.15	23,23,23,23	0
57	MG	YA	3097	1/1	0.93	0.61	50,50,50,50	0
57	MG	RA	3097	1/1	0.93	0.22	11,11,11,11	0
57	MG	YA	3020	1/1	0.93	0.36	6,6,6,6	0
57	MG	YA	3073	1/1	0.93	0.17	4,4,4,4	0
57	MG	RA	3022	1/1	0.93	0.19	5,5,5,5	0
57	MG	RA	3163	1/1	0.93	0.26	38,38,38,38	0
57	MG	YA	3046	1/1	0.93	0.30	12,12,12,12	0
57	MG	YA	3105	1/1	0.93	0.16	8,8,8,8	0
57	MG	RA	3199	1/1	0.93	0.12	1,1,1,1	0
57	MG	RA	3128	1/1	0.93	0.18	10,10,10,10	0
57	MG	RA	3131	1/1	0.93	0.07	25,25,25,25	0
57	MG	QA	1647	1/1	0.93	0.07	55,55,55,55	0
57	MG	YA	3028	1/1	0.93	0.19	8,8,8,8	0
57	MG	RA	3118	1/1	0.93	0.15	1,1,1,1	0
57	MG	RA	3237	1/1	0.93	0.24	4,4,4,4	0
57	MG	XV	102	1/1	0.93	0.10	16,16,16,16	0
57	MG	YA	3229	1/1	0.93	0.16	5,5,5,5	0
57	MG	YA	3230	1/1	0.93	0.28	19,19,19,19	0
57	MG	QA	1627	1/1	0.93	0.09	1,1,1,1	0
57	MG	RA	3012	1/1	0.93	0.18	1,1,1,1	0
57	MG	RA	3105	1/1	0.93	0.13	1,1,1,1	0
57	MG	QA	1623	1/1	0.94	0.15	13,13,13,13	0
57	MG	RA	3191	1/1	0.94	0.13	38,38,38,38	0
57	MG	YA	3246	1/1	0.94	0.31	2,2,2,2	0
57	MG	XA	1613	1/1	0.94	0.08	16,16,16,16	0
57	MG	RA	3154	1/1	0.94	0.20	6,6,6,6	0
57	MG	RA	3088	1/1	0.94	0.16	10,10,10,10	0
57	MG	RA	3058	1/1	0.94	0.14	0,0,0,0	0
57	MG	YA	3104	1/1	0.94	0.21	11,11,11,11	0
57	MG	RA	3101	1/1	0.94	0.07	9,9,9,9	0
57	MG	RA	3079	1/1	0.94	0.20	0,0,0,0	0
57	MG	RA	3104	1/1	0.94	0.13	5,5,5,5	0
57	MG	YA	3109	1/1	0.94	0.12	9,9,9,9	0
57	MG	QA	1632	1/1	0.94	0.07	71,71,71,71	0
57	MG	XA	1644	1/1	0.94	0.16	11,11,11,11	0
57	MG	RA	3082	1/1	0.94	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	QA	1634	1/1	0.94	0.05	44,44,44,44	0
57	MG	RA	3054	1/1	0.94	0.28	4,4,4,4	0
57	MG	RA	3055	1/1	0.94	0.15	12,12,12,12	0
57	MG	YA	3004	1/1	0.94	0.26	5,5,5,5	0
57	MG	YA	3227	1/1	0.94	0.09	15,15,15,15	0
57	MG	RA	3165	1/1	0.94	0.19	3,3,3,3	0
57	MG	XA	1652	1/1	0.94	0.14	50,50,50,50	0
57	MG	YA	3158	1/1	0.94	0.10	6,6,6,6	0
57	MG	XA	1653	1/1	0.94	0.07	29,29,29,29	0
57	MG	YA	3063	1/1	0.94	0.15	15,15,15,15	0
57	MG	YA	3161	1/1	0.94	0.19	14,14,14,14	0
57	MG	RA	3130	1/1	0.94	0.16	19,19,19,19	0
57	MG	RA	3069	1/1	0.94	0.20	9,9,9,9	0
57	MG	RB	201	1/1	0.94	0.06	38,38,38,38	0
57	MG	RA	3148	1/1	0.94	0.14	0,0,0,0	0
57	MG	YA	3145	1/1	0.95	0.27	25,25,25,25	0
57	MG	YA	3146	1/1	0.95	0.16	6,6,6,6	0
57	MG	YA	3210	1/1	0.95	0.07	30,30,30,30	0
57	MG	RA	3049	1/1	0.95	0.16	1,1,1,1	0
57	MG	RA	3112	1/1	0.95	0.15	2,2,2,2	0
57	MG	RA	3129	1/1	0.95	0.16	19,19,19,19	0
57	MG	YA	3215	1/1	0.95	0.15	2,2,2,2	0
57	MG	RA	3050	1/1	0.95	0.10	8,8,8,8	0
57	MG	XA	1667	1/1	0.95	0.24	4,4,4,4	0
57	MG	YA	3254	1/1	0.95	0.28	0,0,0,0	0
57	MG	YA	3051	1/1	0.95	0.19	5,5,5,5	0
57	MG	QA	1642	1/1	0.95	0.16	9,9,9,9	0
57	MG	YA	3155	1/1	0.95	0.20	8,8,8,8	0
57	MG	QA	1662	1/1	0.95	0.07	39,39,39,39	0
57	MG	YA	3078	1/1	0.95	0.18	10,10,10,10	0
57	MG	YA	3034	1/1	0.95	0.33	7,7,7,7	0
57	MG	YA	3055	1/1	0.95	0.10	24,24,24,24	0
57	MG	YA	3129	1/1	0.95	0.16	1,1,1,1	0
57	MG	XA	1671	1/1	0.95	0.07	28,28,28,28	0
57	MG	YA	3016	1/1	0.95	0.10	8,8,8,8	0
57	MG	YA	3133	1/1	0.95	0.16	12,12,12,12	0
57	MG	RA	3189	1/1	0.95	0.15	16,16,16,16	0
57	MG	Y5	101	1/1	0.95	0.14	2,2,2,2	0
57	MG	QA	1606	1/1	0.95	0.09	23,23,23,23	0
57	MG	RA	3214	1/1	0.95	0.07	43,43,43,43	0
57	MG	QA	1665	1/1	0.95	0.07	37,37,37,37	0
57	MG	RA	3126	1/1	0.95	0.21	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	XA	1645	1/1	0.95	0.19	8,8,8,8	0
57	MG	YA	3242	1/1	0.95	0.14	5,5,5,5	0
57	MG	XA	1646	1/1	0.95	0.21	8,8,8,8	0
57	MG	XA	1631	1/1	0.95	0.12	10,10,10,10	0
57	MG	YA	3212	1/1	0.96	0.07	8,8,8,8	0
57	MG	RA	3192	1/1	0.96	0.19	27,27,27,27	0
57	MG	XA	1610	1/1	0.96	0.16	1,1,1,1	0
57	MG	XA	1640	1/1	0.96	0.08	119,119,119,119	0
57	MG	RA	3150	1/1	0.96	0.23	4,4,4,4	0
57	MG	RA	3132	1/1	0.96	0.30	7,7,7,7	0
57	MG	RA	3210	1/1	0.96	0.09	11,11,11,11	0
57	MG	YB	203	1/1	0.96	0.10	17,17,17,17	0
57	MG	YA	3199	1/1	0.96	0.07	11,11,11,11	0
57	MG	RA	3091	1/1	0.96	0.15	2,2,2,2	0
57	MG	QA	1649	1/1	0.96	0.08	19,19,19,19	0
57	MG	YA	3088	1/1	0.96	0.14	3,3,3,3	0
57	MG	YA	3027	1/1	0.96	0.09	1,1,1,1	0
57	MG	YA	3186	1/1	0.96	0.12	10,10,10,10	0
57	MG	YA	3090	1/1	0.96	0.14	17,17,17,17	0
57	MG	YA	3206	1/1	0.96	0.27	20,20,20,20	0
57	MG	YA	3207	1/1	0.96	0.09	0,0,0,0	0
57	MG	RA	3107	1/1	0.96	0.15	9,9,9,9	0
59	ZN	QN	101	1/1	0.96	0.04	56,56,56,56	0
57	MG	YA	3064	1/1	0.96	0.16	4,4,4,4	0
57	MG	QA	1615	1/1	0.96	0.10	54,54,54,54	0
57	MG	RA	3110	1/1	0.97	0.07	15,15,15,15	0
57	MG	YA	3209	1/1	0.97	0.10	9,9,9,9	0
57	MG	RA	3018	1/1	0.97	0.20	3,3,3,3	0
57	MG	YA	3115	1/1	0.97	0.24	15,15,15,15	0
57	MG	XA	1669	1/1	0.97	0.06	15,15,15,15	0
57	MG	RA	3135	1/1	0.97	0.14	28,28,28,28	0
57	MG	RA	3080	1/1	0.97	0.11	5,5,5,5	0
57	MG	RA	3179	1/1	0.97	0.11	10,10,10,10	0
57	MG	YA	3216	1/1	0.97	0.14	30,30,30,30	0
57	MG	YA	3152	1/1	0.97	0.09	7,7,7,7	0
57	MG	YA	3120	1/1	0.97	0.09	16,16,16,16	0
57	MG	YA	3069	1/1	0.97	0.06	8,8,8,8	0
57	MG	RA	3151	1/1	0.97	0.27	37,37,37,37	0
57	MG	RA	3198	1/1	0.97	0.04	35,35,35,35	0
57	MG	RA	3102	1/1	0.97	0.06	10,10,10,10	0
57	MG	YA	3262	1/1	0.97	0.17	9,9,9,9	0
57	MG	YA	3264	1/1	0.97	0.20	14,14,14,14	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	QA	1633	1/1	0.97	0.27	1,1,1,1	0
57	MG	QA	1652	1/1	0.97	0.12	24,24,24,24	0
57	MG	RA	3169	1/1	0.97	0.03	19,19,19,19	0
57	MG	QA	1654	1/1	0.97	0.07	17,17,17,17	0
57	MG	RA	3106	1/1	0.97	0.18	3,3,3,3	0
57	MG	YA	3196	1/1	0.97	0.12	76,76,76,76	0
57	MG	RA	3187	1/1	0.97	0.08	10,10,10,10	0
57	MG	YX	101	1/1	0.97	0.06	50,50,50,50	0
57	MG	XA	1661	1/1	0.97	0.05	14,14,14,14	0
57	MG	QA	1620	1/1	0.97	0.04	21,21,21,21	0
57	MG	XA	1623	1/1	0.97	0.11	23,23,23,23	0
57	MG	RA	3224	1/1	0.97	0.07	16,16,16,16	0
57	MG	YA	3058	1/1	0.97	0.09	13,13,13,13	0
57	MG	YA	3108	1/1	0.97	0.04	10,10,10,10	0
57	MG	QA	1663	1/1	0.97	0.04	19,19,19,19	0
57	MG	YA	3110	1/1	0.97	0.08	5,5,5,5	0
57	MG	YA	3037	1/1	0.97	0.22	3,3,3,3	0
57	MG	RA	3109	1/1	0.97	0.13	11,11,11,11	0
57	MG	YA	3237	1/1	0.98	0.23	38,38,38,38	0
57	MG	YA	3238	1/1	0.98	0.07	33,33,33,33	0
57	MG	YA	3136	1/1	0.98	0.15	1,1,1,1	0
57	MG	YA	3017	1/1	0.98	0.18	7,7,7,7	0
57	MG	QA	1607	1/1	0.98	0.04	30,30,30,30	0
57	MG	RA	3144	1/1	0.98	0.13	29,29,29,29	0
57	MG	YA	3222	1/1	0.98	0.04	2,2,2,2	0
57	MG	QA	1641	1/1	0.98	0.06	3,3,3,3	0
57	MG	RA	3188	1/1	0.98	0.09	16,16,16,16	0
57	MG	YP	201	1/1	0.98	0.05	83,83,83,83	0
57	MG	YA	3192	1/1	0.98	0.04	15,15,15,15	0
57	MG	QA	1609	1/1	0.98	0.08	10,10,10,10	0
57	MG	QA	1661	1/1	0.98	0.05	44,44,44,44	0
57	MG	YA	3228	1/1	0.98	0.12	67,67,67,67	0
57	MG	QM	201	1/1	0.98	0.03	34,34,34,34	0
57	MG	QX	101	1/1	0.98	0.06	6,6,6,6	0
57	MG	YA	3130	1/1	0.98	0.05	3,3,3,3	0
57	MG	QA	1638	1/1	0.98	0.14	8,8,8,8	0
57	MG	QA	1616	1/1	0.98	0.11	10,10,10,10	0
57	MG	RA	3017	1/1	0.98	0.18	0,0,0,0	0
57	MG	XA	1639	1/1	0.98	0.06	11,11,11,11	0
57	MG	RA	3115	1/1	0.98	0.14	8,8,8,8	0
57	MG	YA	3258	1/1	0.98	0.33	4,4,4,4	0
59	ZN	XD	301	1/1	0.98	0.30	50,50,50,50	0

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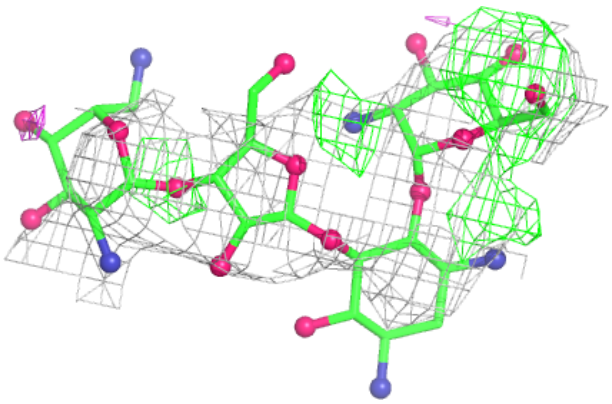
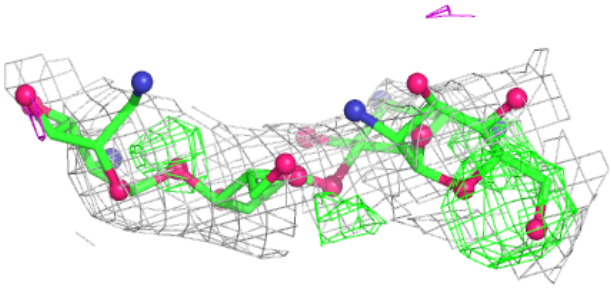
Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
59	ZN	XN	101	1/1	0.98	0.06	59,59,59,59	0
57	MG	YA	3236	1/1	0.98	0.20	12,12,12,12	0
57	MG	QA	1660	1/1	0.99	0.03	16,16,16,16	0
57	MG	YA	3241	1/1	0.99	0.15	13,13,13,13	0
57	MG	QA	1657	1/1	0.99	0.04	19,19,19,19	0
57	MG	YA	3066	1/1	0.99	0.11	9,9,9,9	0
57	MG	RA	3152	1/1	0.99	0.04	26,26,26,26	0
57	MG	QA	1653	1/1	0.99	0.04	6,6,6,6	0
57	MG	YA	3175	1/1	0.99	0.04	2,2,2,2	0
57	MG	YA	3141	1/1	0.99	0.04	18,18,18,18	0
57	MG	YA	3263	1/1	0.99	0.29	2,2,2,2	0
57	MG	YA	3177	1/1	0.99	0.04	92,92,92,92	0
57	MG	R8	101	1/1	0.99	0.21	6,6,6,6	0
57	MG	YA	3143	1/1	0.99	0.14	11,11,11,11	0
57	MG	YA	3166	1/1	0.99	0.06	14,14,14,14	0
57	MG	YA	3005	1/1	0.99	0.09	2,2,2,2	0
57	MG	QA	1624	1/1	0.99	0.07	16,16,16,16	0
57	MG	RA	3149	1/1	0.99	0.57	17,17,17,17	0
59	ZN	QD	301	1/1	1.00	0.08	12,12,12,12	0
57	MG	RA	3056	1/1	1.00	0.13	0,0,0,0	0

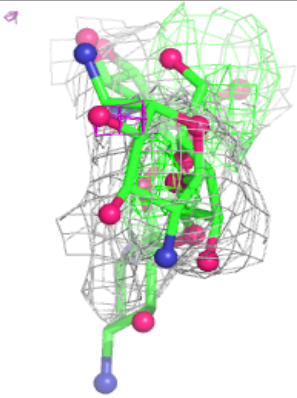
The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation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

Electron density around PAR QA 1666:

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

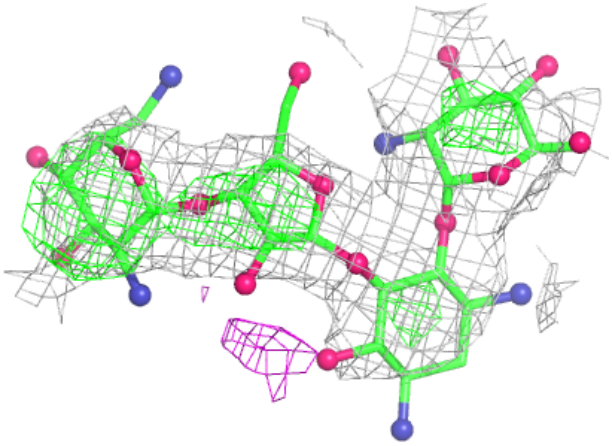


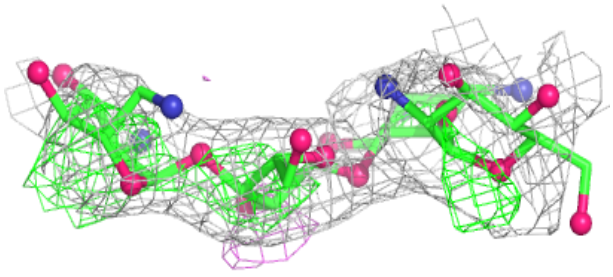


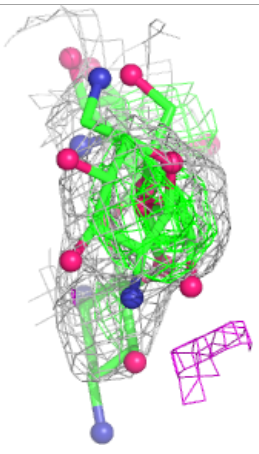


Electron density around PAR XA 1673:

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







6.5 Other polymers (i)

There are no such residues in this entry.