



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 6, 2026 – 08:29 AM UTC

PDB ID : 4LFZ / pdb_00004lfz
Title : Crystal Structure of Frameshift Suppressor tRNA SufA6 Bound to Codon CCC-U in the Absence of Paromomycin
Authors : Maehigashi, T.; Dunkle, J.A.; Dunham, C.M.
Deposited on : 2013-06-27
Resolution : 3.92 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity	:	4-5-2 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

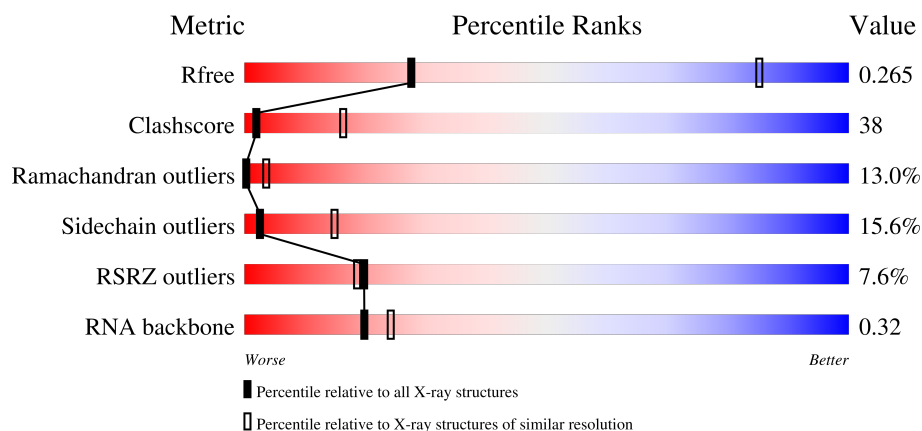
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.92 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	180053	1033 (4.10-3.74)
Clashscore	190562	1070 (4.10-3.74)
Ramachandran outliers	187476	1017 (4.10-3.74)
Sidechain outliers	187428	1010 (4.10-3.74)
RSRZ outliers	180081	1033 (4.10-3.74)
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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	QA	1522	4% 29% 51% 18% ..
1	XA	1522	4% 29% 51% 18% ..
2	QB	256	11% 15% 59% 16% • 7%
2	XB	256	5% 16% 59% 16% • 7%

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Mol	Chain	Length	Quality of chain
3	QC	239	
3	XC	239	
4	QD	209	
4	XD	209	
5	QE	162	
5	XE	162	
6	QF	101	
6	XF	101	
7	QG	156	
7	XG	156	
8	QH	138	
8	XH	138	
9	QI	128	
9	XI	128	
10	QJ	105	
10	XJ	105	
11	QK	129	
11	XK	129	
12	QL	132	
12	XL	132	
13	QM	126	
13	XM	126	
14	QN	61	
14	XN	61	
15	QO	89	

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

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Mol	Chain	Length	Quality of chain
28	RE	206	
28	YE	206	
29	RF	210	
29	YF	210	
30	RG	182	
30	YG	182	
31	RH	180	
31	YH	180	
32	RI	148	
32	YI	148	
33	RN	140	
33	YN	140	
34	RO	122	
34	YO	122	
35	RP	150	
35	YP	150	
36	RQ	141	
36	YQ	141	
37	RR	118	
37	YR	118	
38	RS	112	
38	YS	112	
39	RT	146	
39	YT	146	
40	RU	118	

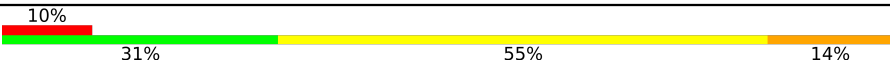
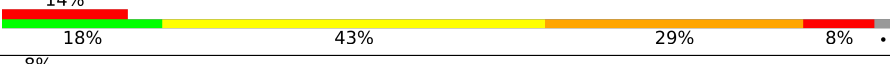
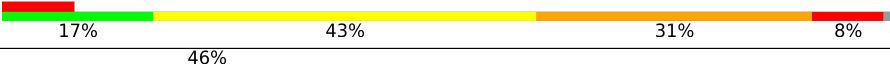
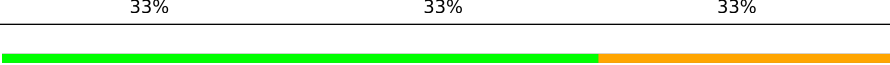
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Mol	Chain	Length	Quality of chain
40	YU	118	
41	RV	101	
41	YV	101	
42	RW	113	
42	YW	113	
43	RX	96	
43	YX	96	
44	RY	110	
44	YY	110	
45	RZ	206	
45	YZ	206	
46	R0	85	
46	Y0	85	
47	R1	98	
47	Y1	98	
48	R2	72	
48	Y2	72	
49	R3	60	
49	Y3	60	
50	R4	71	
50	Y4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

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

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	QA	1602	-	-	-	X
57	MG	QA	1603	-	-	-	X
57	MG	QA	1612	-	-	-	X
57	MG	QA	1613	-	-	-	X
57	MG	QA	1614	-	-	-	X
57	MG	QA	1615	-	-	-	X
57	MG	QA	1618	-	-	-	X
57	MG	QA	1642	-	-	-	X
57	MG	RA	3006	-	-	-	X
57	MG	RA	3010	-	-	-	X
57	MG	RA	3013	-	-	-	X
57	MG	RA	3015	-	-	-	X
57	MG	RA	3020	-	-	-	X
57	MG	RA	3022	-	-	-	X
57	MG	RA	3026	-	-	-	X
57	MG	RA	3029	-	-	-	X
57	MG	RA	3031	-	-	-	X
57	MG	RA	3032	-	-	-	X
57	MG	RA	3034	-	-	-	X
57	MG	RA	3036	-	-	-	X
57	MG	RA	3037	-	-	-	X
57	MG	RA	3039	-	-	-	X
57	MG	RA	3041	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	RA	3046	-	-	-	X
57	MG	RA	3049	-	-	-	X
57	MG	RA	3051	-	-	-	X
57	MG	RA	3052	-	-	-	X
57	MG	RA	3058	-	-	-	X
57	MG	RA	3059	-	-	-	X
57	MG	RA	3062	-	-	-	X
57	MG	RA	3065	-	-	-	X
57	MG	RA	3069	-	-	-	X
57	MG	RA	3070	-	-	-	X
57	MG	RA	3085	-	-	-	X
57	MG	RA	3087	-	-	-	X
57	MG	RA	3092	-	-	-	X
57	MG	RA	3101	-	-	-	X
57	MG	RA	3121	-	-	-	X
57	MG	RA	3122	-	-	-	X
57	MG	RA	3128	-	-	-	X
57	MG	RA	3131	-	-	-	X
57	MG	RA	3140	-	-	-	X
57	MG	RA	3143	-	-	-	X
57	MG	RA	3153	-	-	-	X
57	MG	RA	3163	-	-	-	X
57	MG	RA	3170	-	-	-	X
57	MG	RA	3187	-	-	-	X
57	MG	RA	3201	-	-	-	X
57	MG	RA	3212	-	-	-	X
57	MG	RA	3229	-	-	-	X
57	MG	XA	1618	-	-	-	X
57	MG	XA	1624	-	-	-	X
57	MG	XA	1632	-	-	-	X
57	MG	YA	3001	-	-	-	X
57	MG	YA	3002	-	-	-	X
57	MG	YA	3006	-	-	-	X
57	MG	YA	3009	-	-	-	X
57	MG	YA	3014	-	-	-	X
57	MG	YA	3015	-	-	-	X
57	MG	YA	3018	-	-	-	X
57	MG	YA	3029	-	-	-	X
57	MG	YA	3031	-	-	-	X
57	MG	YA	3032	-	-	-	X
57	MG	YA	3033	-	-	-	X
57	MG	YA	3041	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
57	MG	YA	3043	-	-	-	X
57	MG	YA	3045	-	-	-	X
57	MG	YA	3047	-	-	-	X
57	MG	YA	3049	-	-	-	X
57	MG	YA	3050	-	-	-	X
57	MG	YA	3052	-	-	-	X
57	MG	YA	3053	-	-	-	X
57	MG	YA	3058	-	-	-	X
57	MG	YA	3060	-	-	-	X
57	MG	YA	3068	-	-	-	X
57	MG	YA	3073	-	-	-	X
57	MG	YA	3076	-	-	-	X
57	MG	YA	3078	-	-	-	X
57	MG	YA	3080	-	-	-	X
57	MG	YA	3087	-	-	-	X
57	MG	YA	3088	-	-	-	X
57	MG	YA	3094	-	-	-	X
57	MG	YA	3096	-	-	-	X
57	MG	YA	3099	-	-	-	X
57	MG	YA	3100	-	-	-	X
57	MG	YA	3101	-	-	-	X
57	MG	YA	3106	-	-	-	X
57	MG	YA	3109	-	-	-	X
57	MG	YA	3120	-	-	-	X
57	MG	YA	3121	-	-	-	X
57	MG	YA	3128	-	-	-	X
57	MG	YA	3142	-	-	-	X
57	MG	YA	3167	-	-	-	X
57	MG	YA	3172	-	-	-	X
57	MG	YA	3200	-	-	-	X
57	MG	YA	3201	-	-	-	X
57	MG	YA	3214	-	-	-	X
57	MG	YA	3232	-	-	-	X
57	MG	YA	3237	-	-	-	X
57	MG	YA	3254	-	-	-	X
57	MG	YA	3260	-	-	-	X
57	MG	YB	202	-	-	-	X

2 Entry composition

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 24 is a RNA chain called messenger RNA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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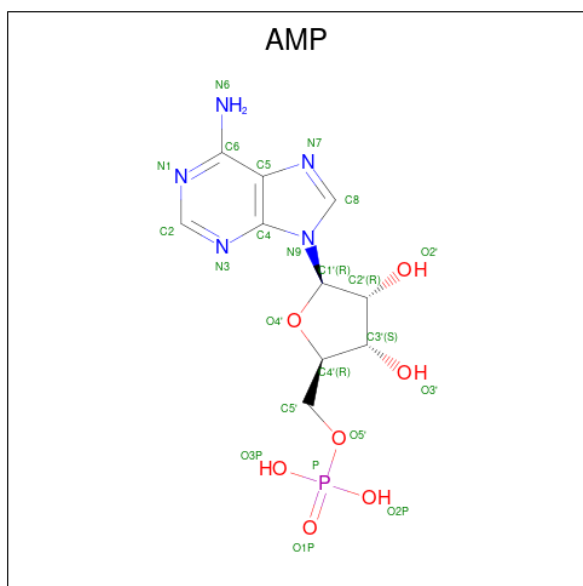
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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	Y5	1	Total	Mg	0	0
			1	1		
57	Y7	1	Total	Mg	0	0
			1	1		

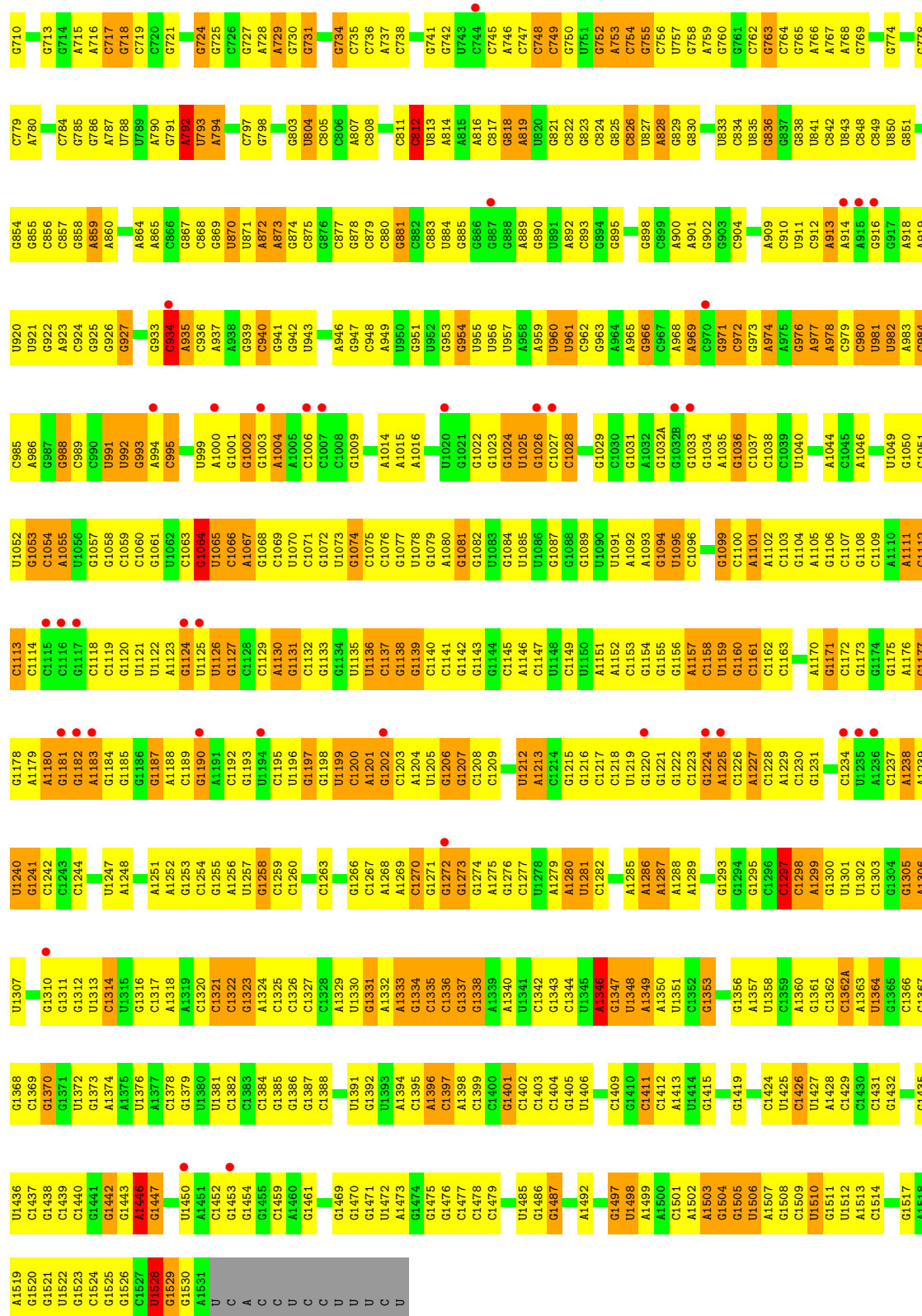
- Molecule 58 is ZINC ION (CCD ID: ZN) (formula: Zn).

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

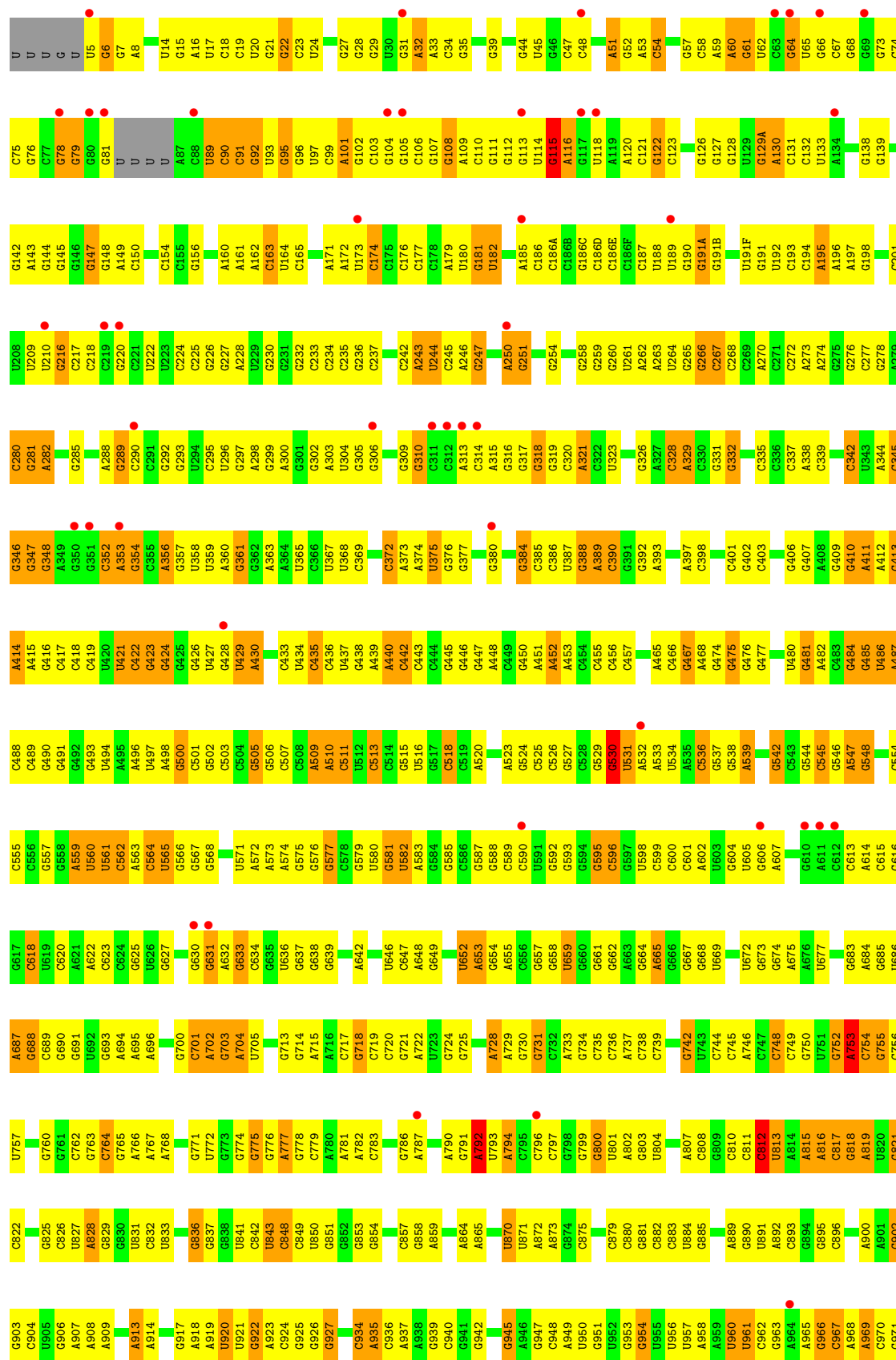
- Molecule 59 is ADENOSINE MONOPHOSPHATE (CCD ID: AMP) (formula: C₁₀H₁₄N₅O₇P).

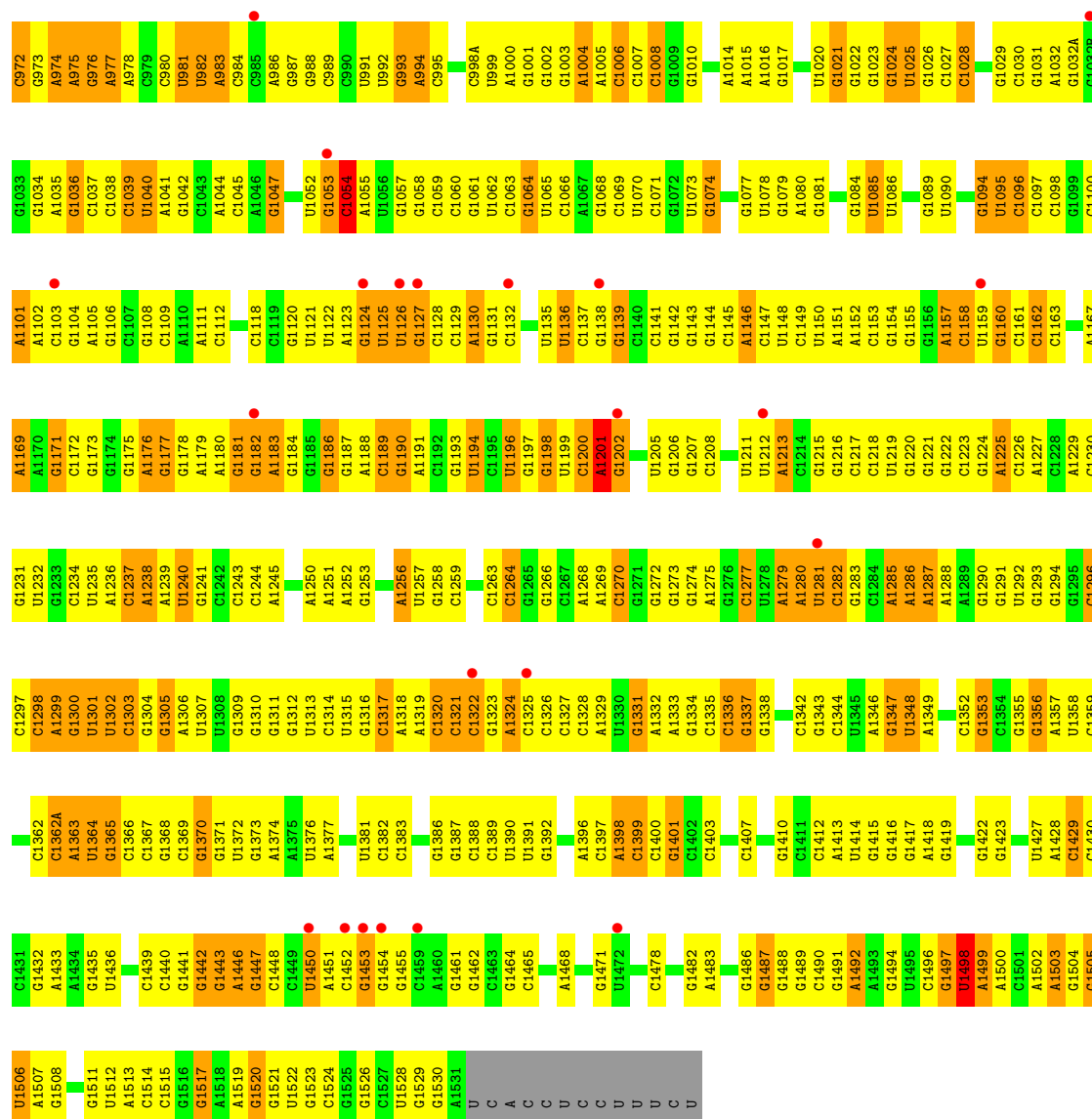


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
59	XX	1	Total	C	N	O	P	0	0
			22	10	5	6	1		

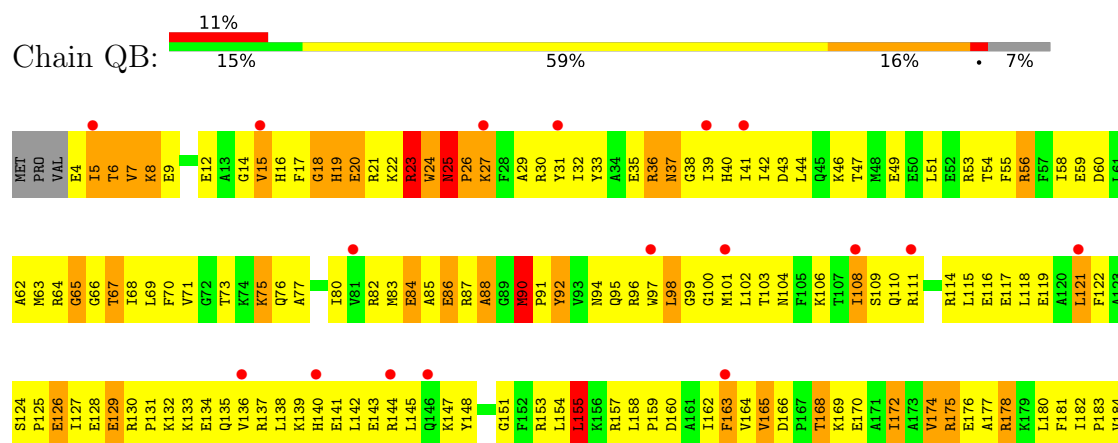


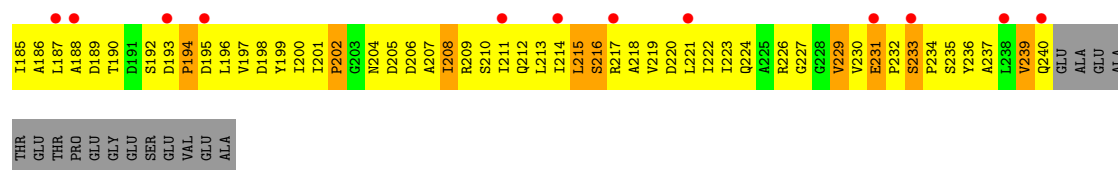
● Molecule 1: 16S rRNA



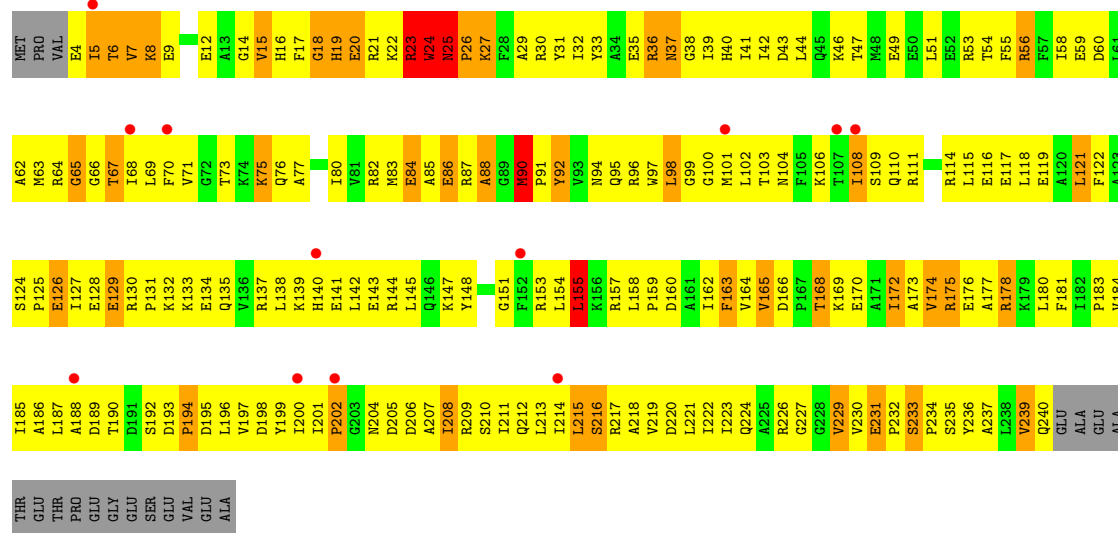
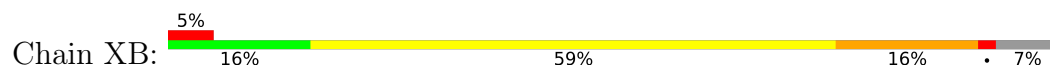


• Molecule 2: 30S ribosomal protein S2

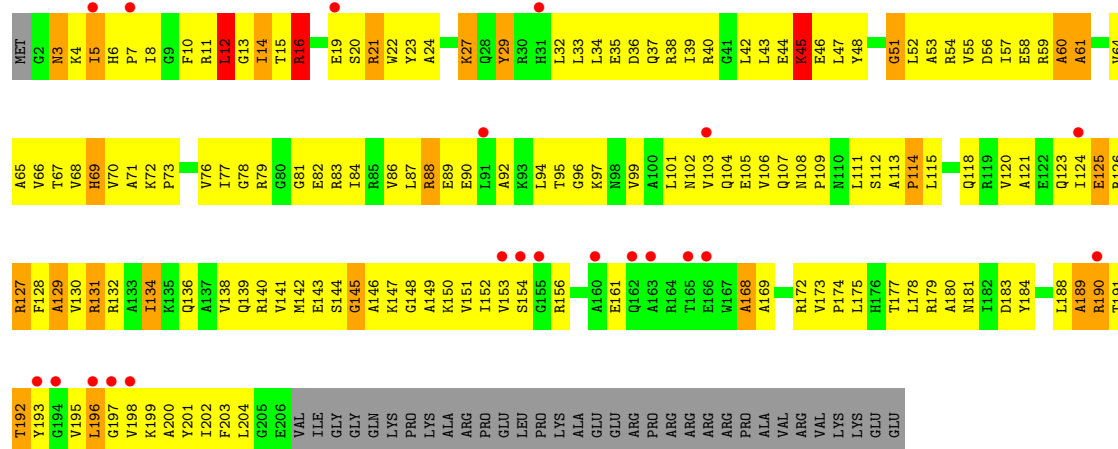




• Molecule 2: 30S ribosomal protein S2

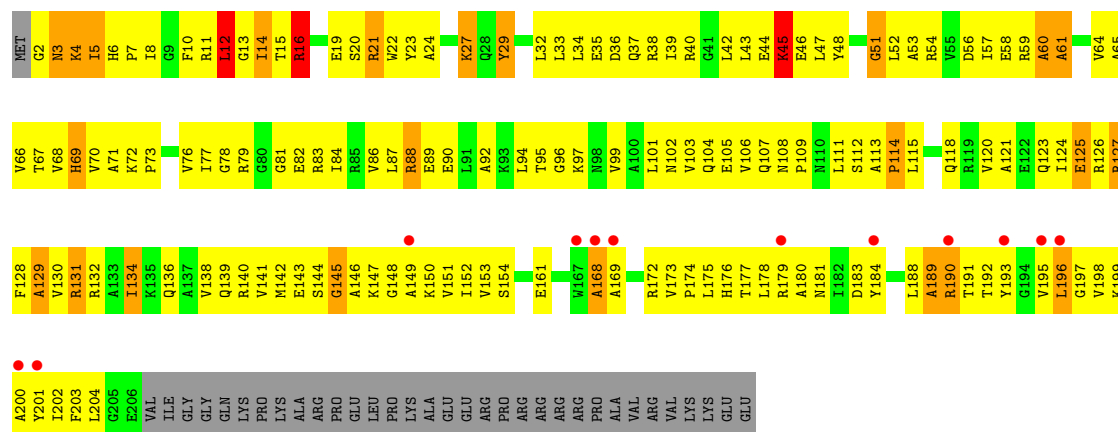


• Molecule 3: 30S ribosomal protein S3

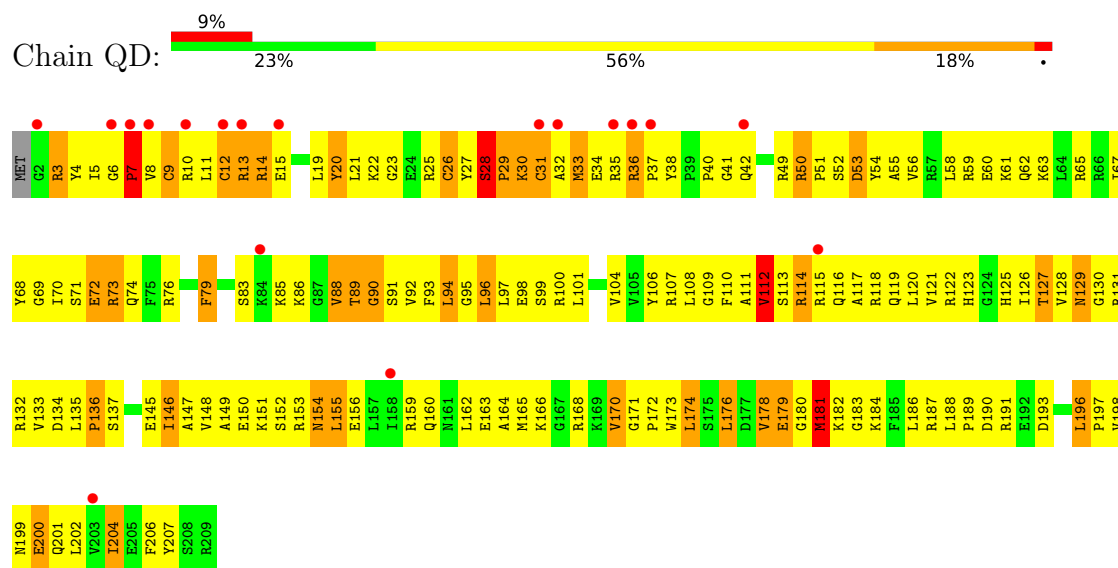


• Molecule 3: 30S ribosomal protein S3

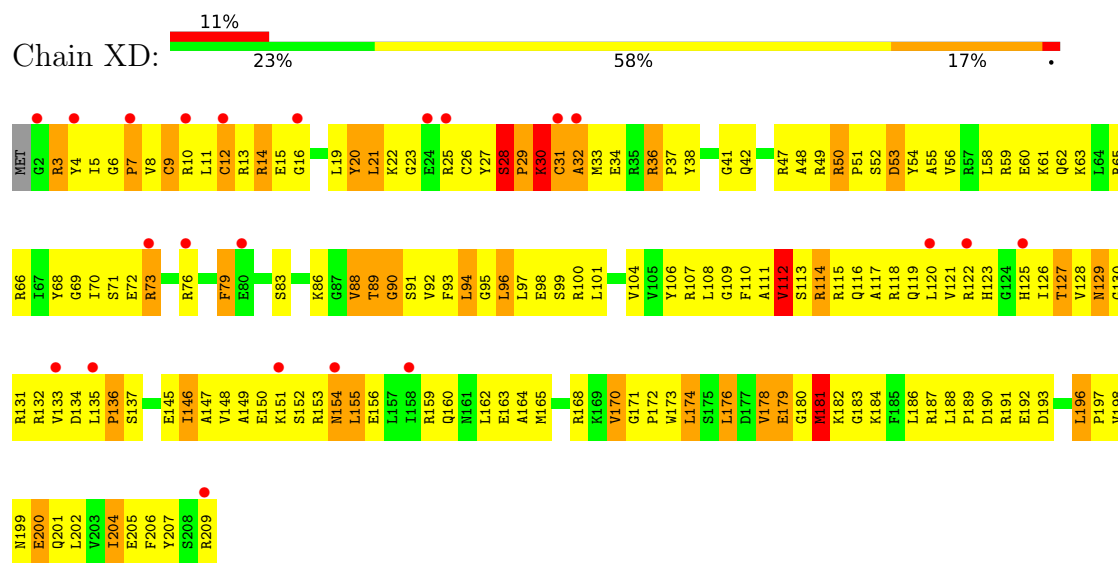




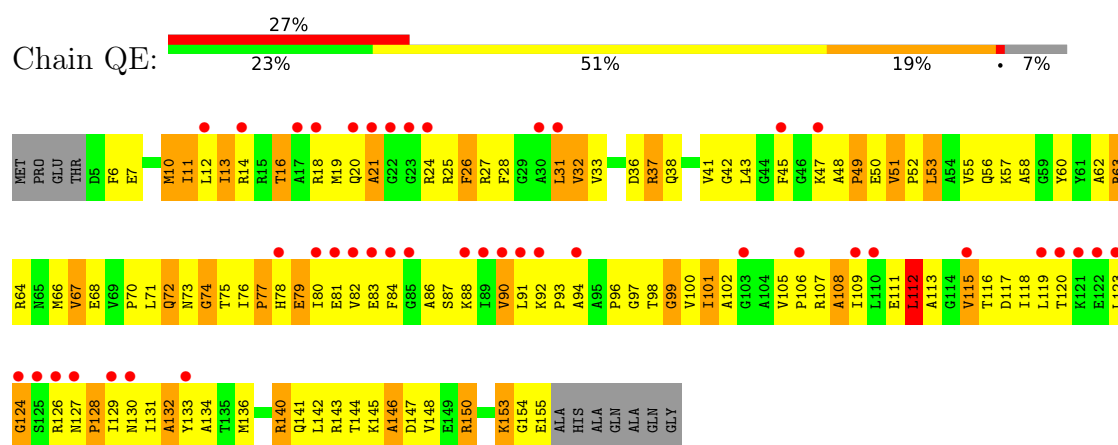
• Molecule 4: 30S ribosomal protein S4



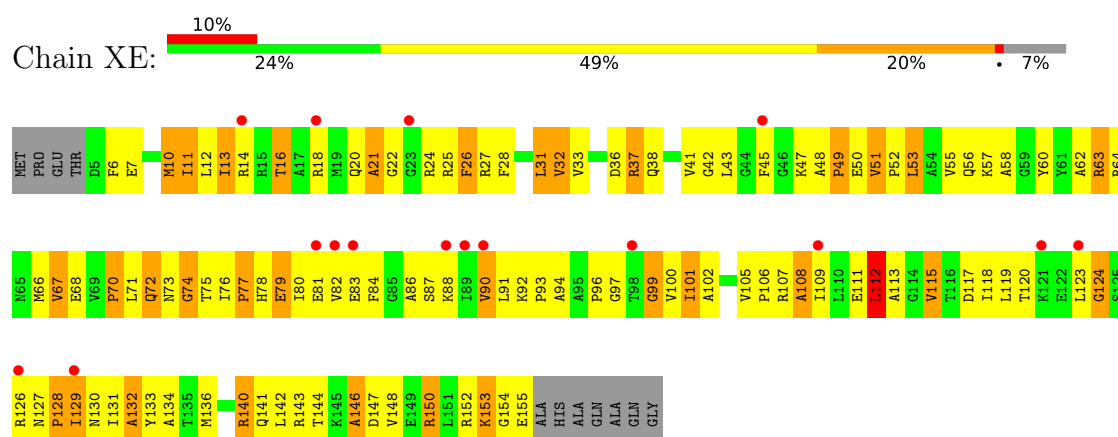
• Molecule 4: 30S ribosomal protein S4



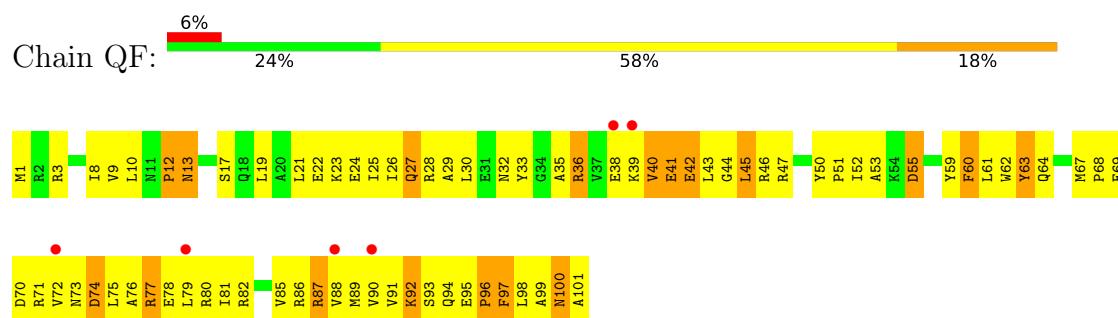
• Molecule 5: 30S ribosomal protein S5



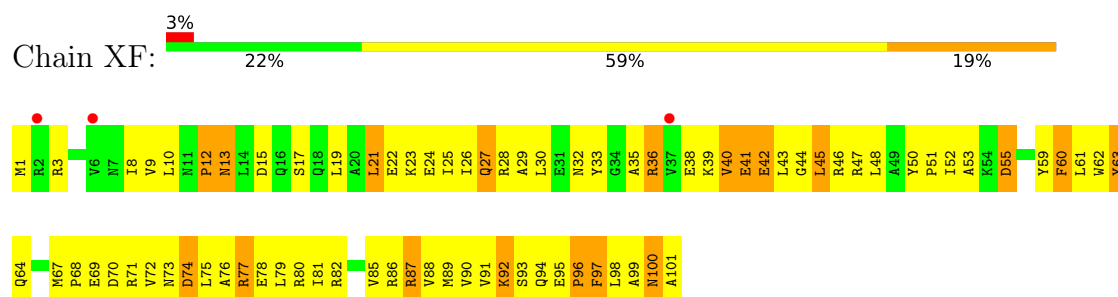
• Molecule 5: 30S ribosomal protein S5



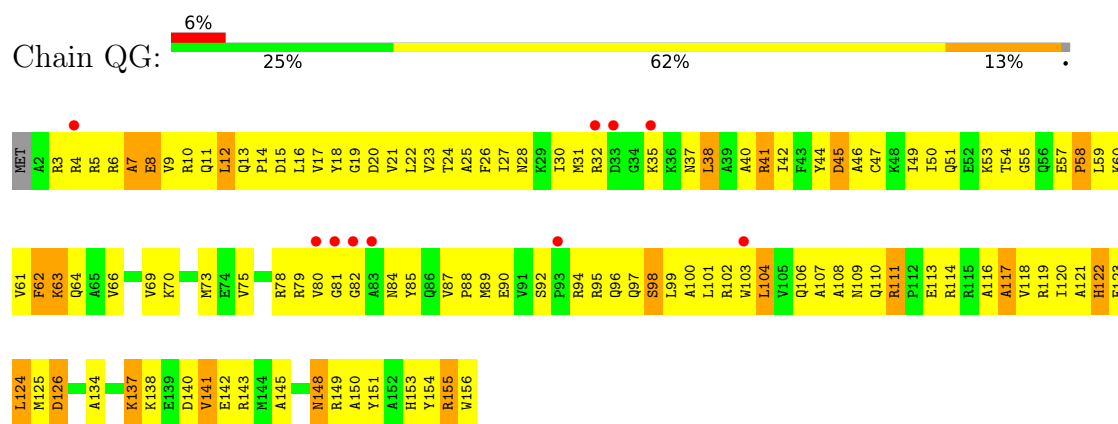
• Molecule 6: 30S ribosomal protein S6



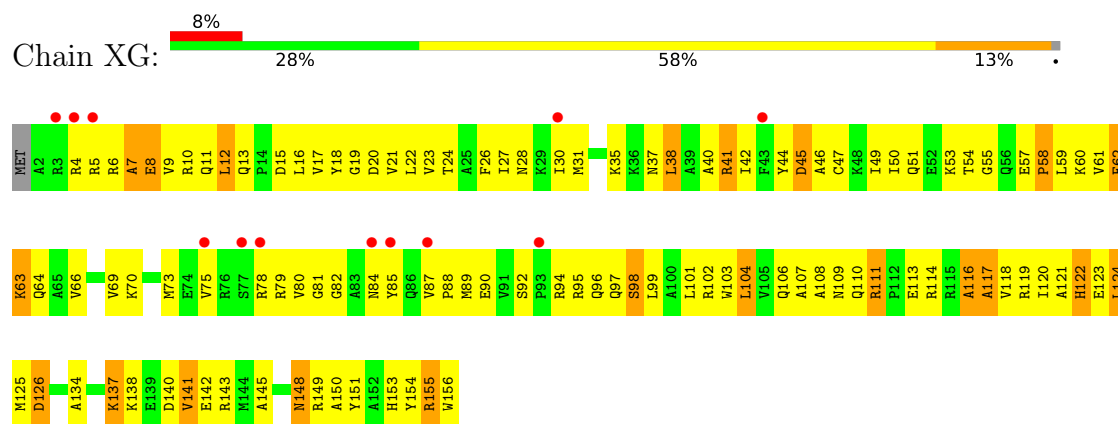
• Molecule 6: 30S ribosomal protein S6



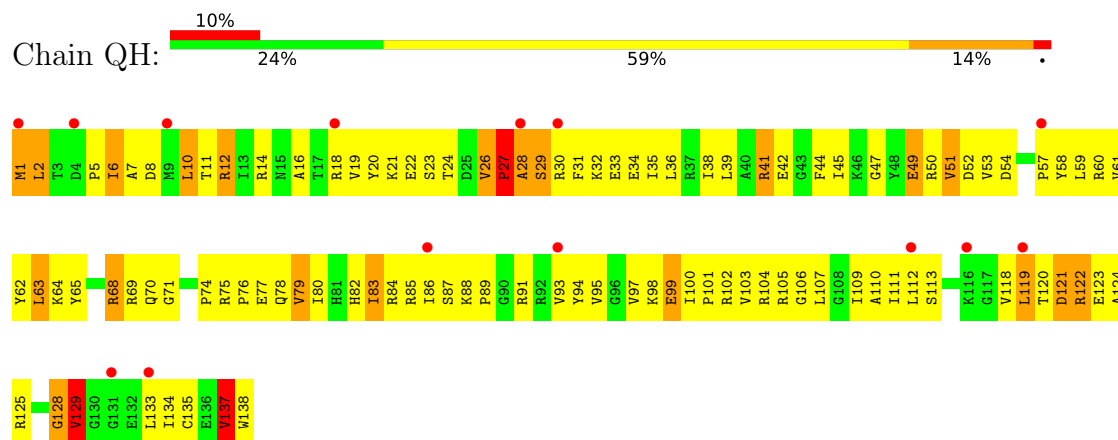
• Molecule 7: 30S ribosomal protein S7



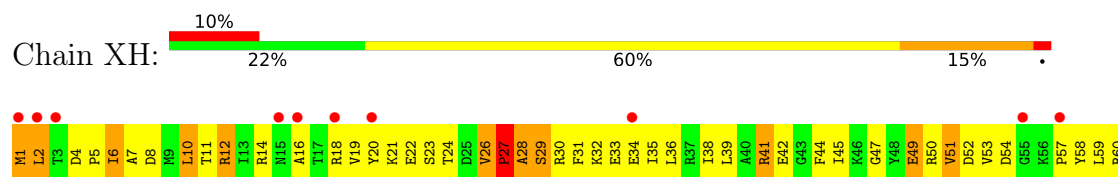
• Molecule 7: 30S ribosomal protein S7

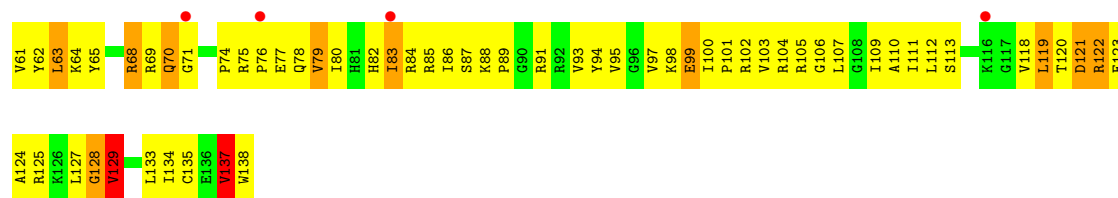


• Molecule 8: 30S ribosomal protein S8

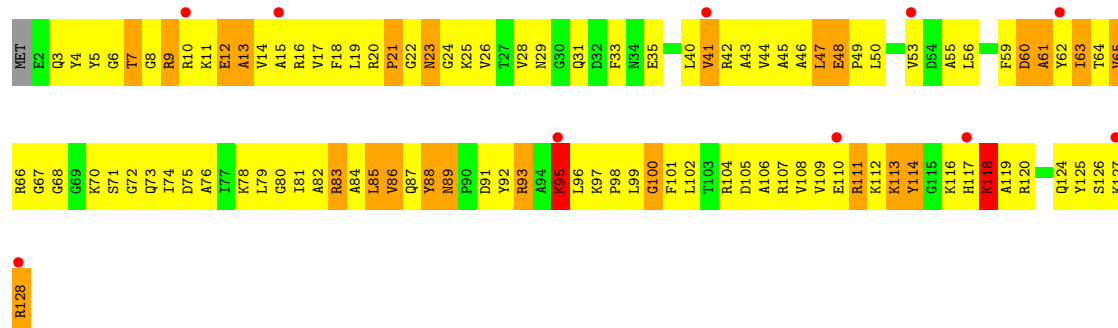


• Molecule 8: 30S ribosomal protein S8

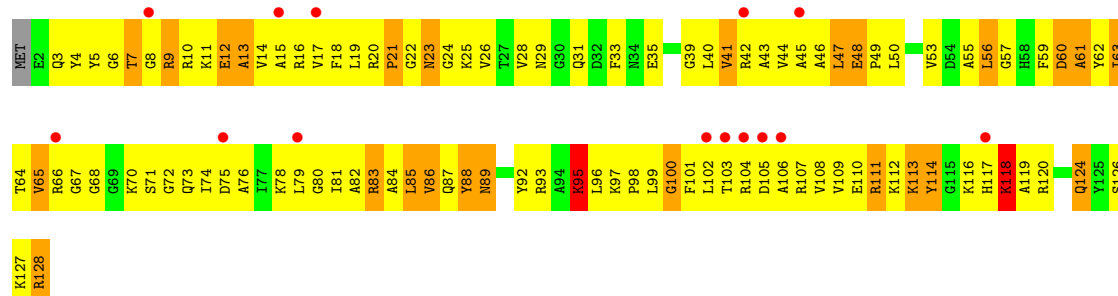




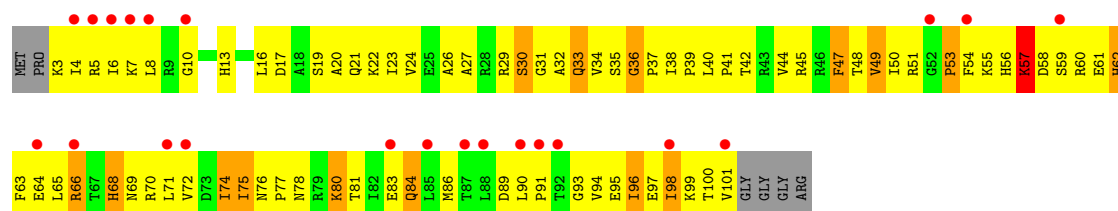
• Molecule 9: 30S ribosomal protein S9



• Molecule 9: 30S ribosomal protein S9

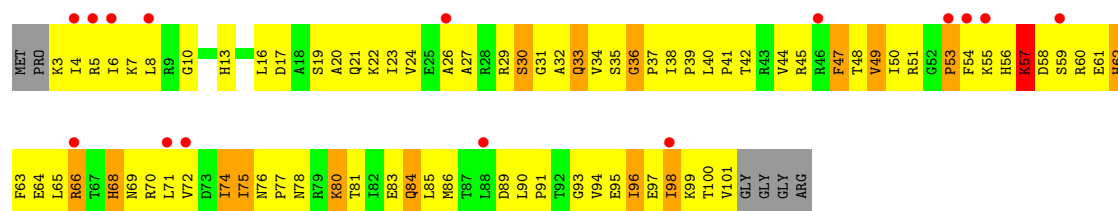


• Molecule 10: 30S ribosomal protein S10

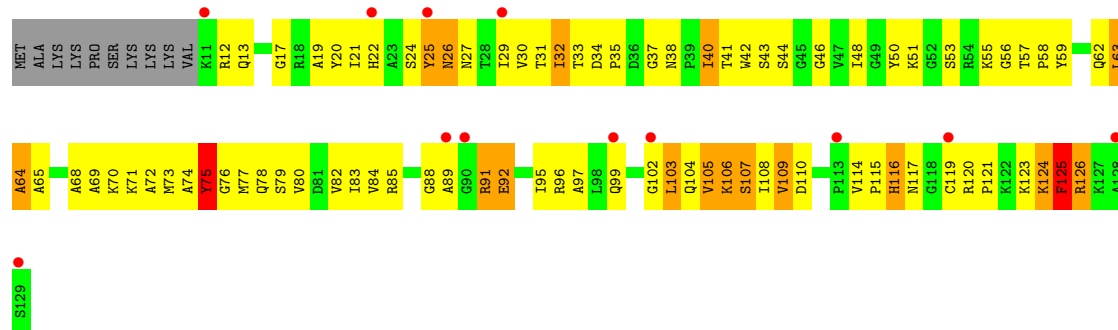


• Molecule 10: 30S ribosomal protein S10

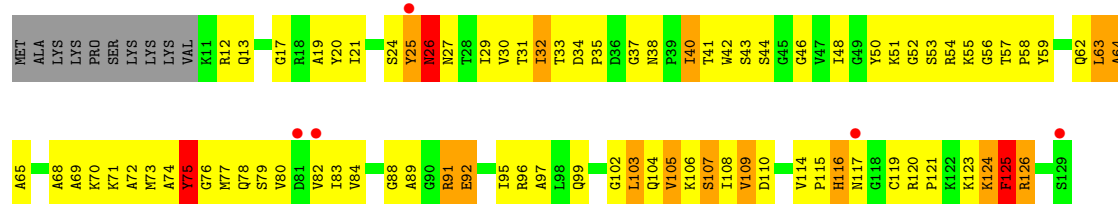




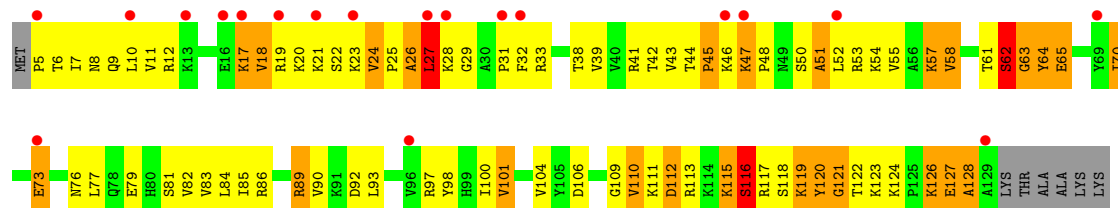
• Molecule 11: 30S ribosomal protein S11



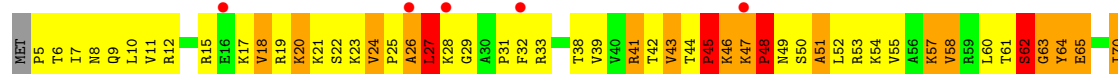
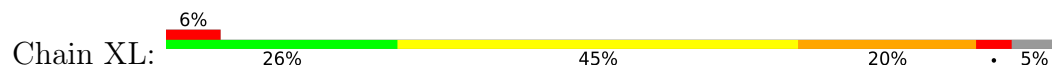
• Molecule 11: 30S ribosomal protein S11



• Molecule 12: 30S ribosomal protein S12

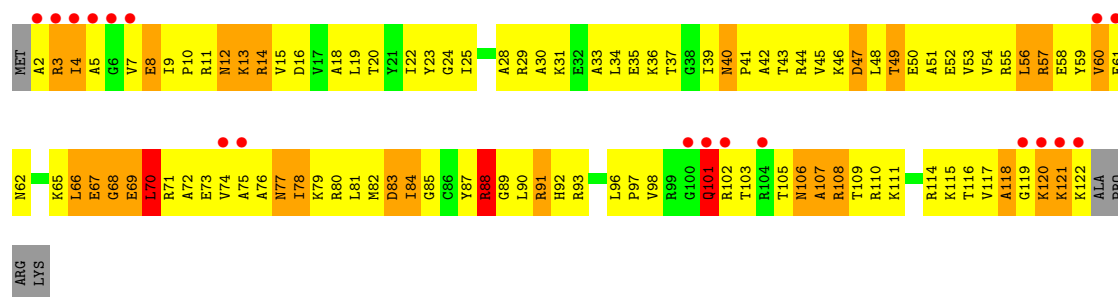
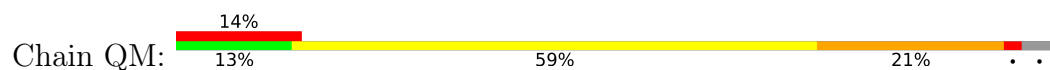


• Molecule 12: 30S ribosomal protein S12

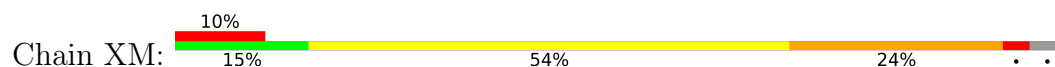




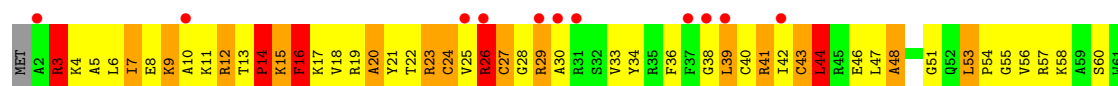
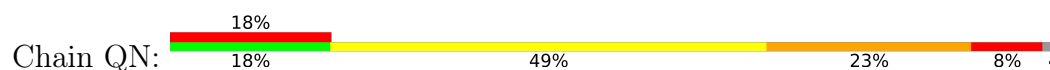
- Molecule 13: 30S ribosomal protein S13



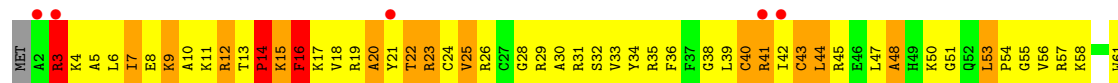
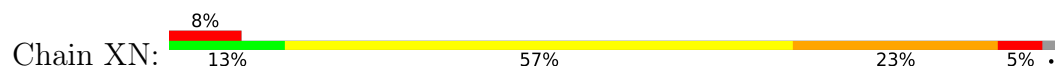
- Molecule 13: 30S ribosomal protein S13



- Molecule 14: 30S ribosomal protein S14



- Molecule 14: 30S ribosomal protein S14

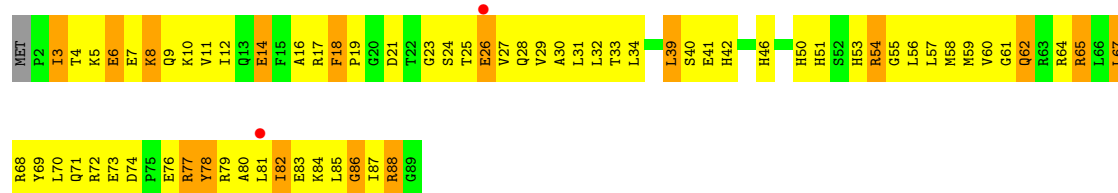


- Molecule 15: 30S ribosomal protein S15

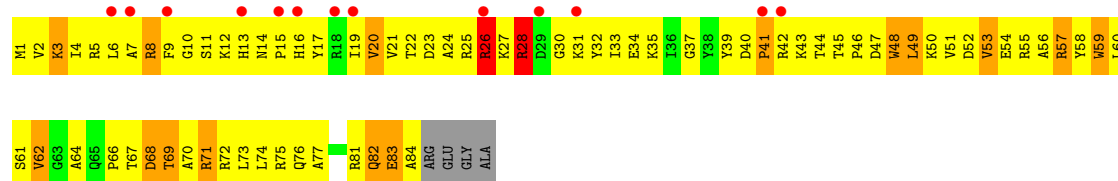
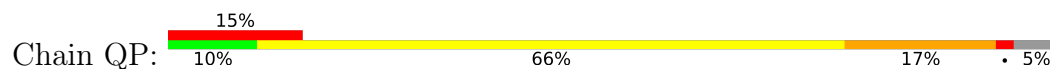




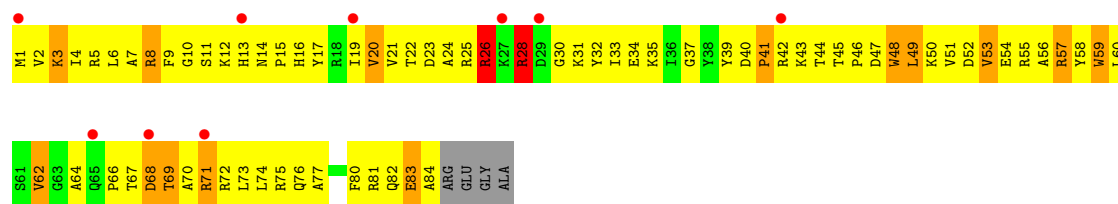
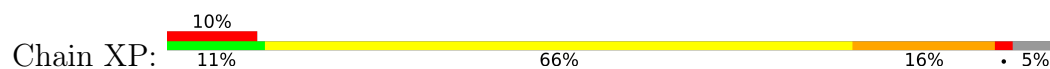
• Molecule 15: 30S ribosomal protein S15



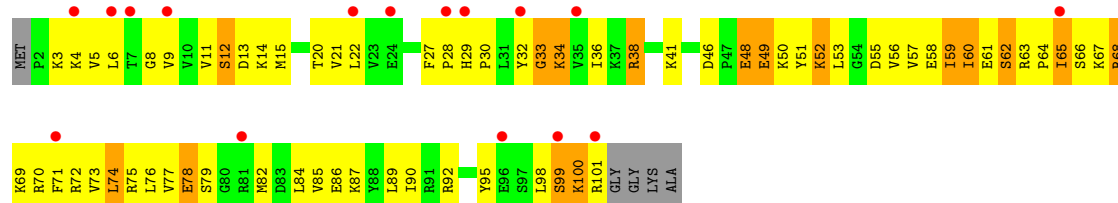
• Molecule 16: 30S ribosomal protein S16



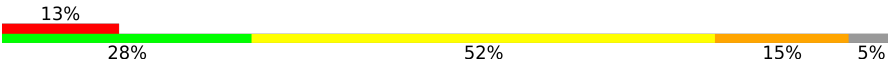
• Molecule 16: 30S ribosomal protein S16

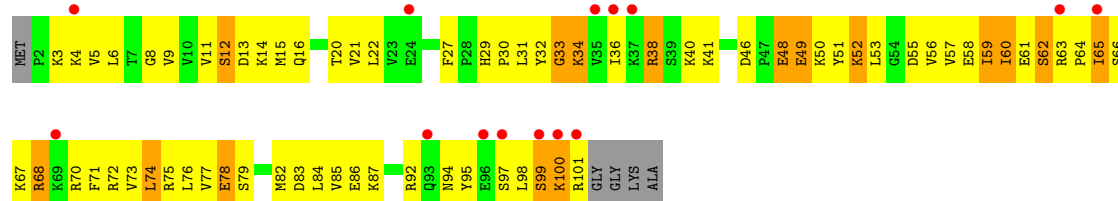


• Molecule 17: 30S ribosomal protein S17

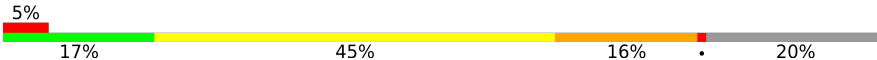


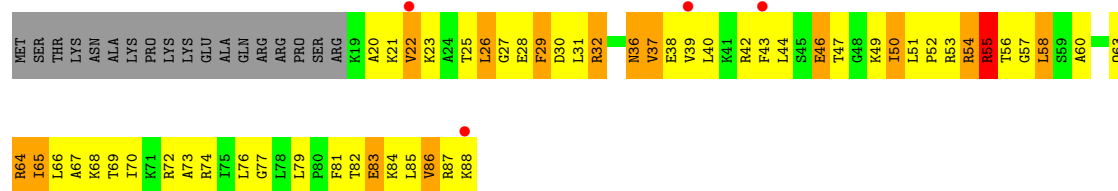
- Molecule 17: 30S ribosomal protein S17

Chain XQ: 



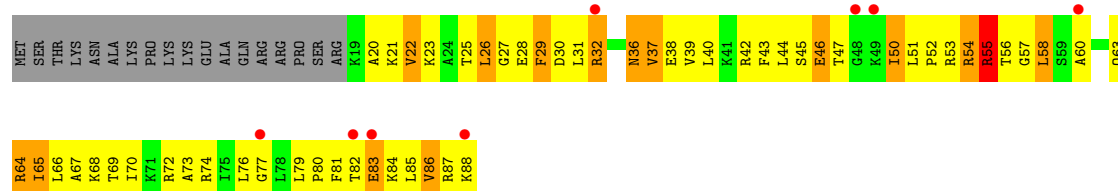
- Molecule 18: 30S ribosomal protein S18

Chain QR: 



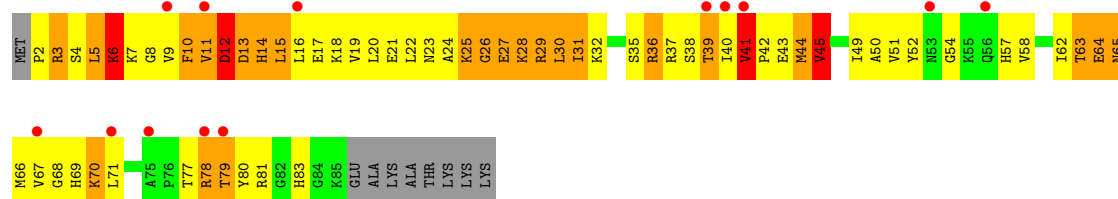
- Molecule 18: 30S ribosomal protein S18

Chain XR: 



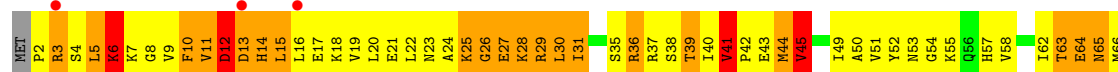
- Molecule 19: 30S ribosomal protein S19

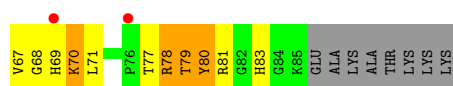
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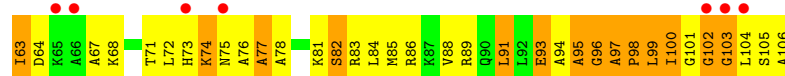
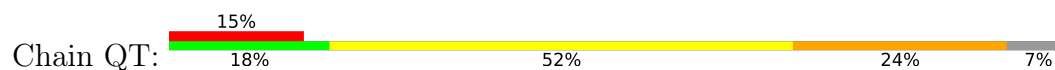
- Molecule 19: 30S ribosomal protein S19

Chain XS: 

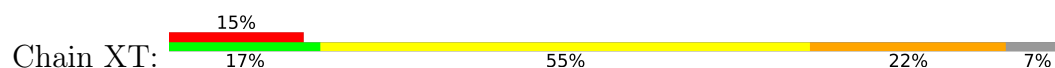




- Molecule 20: 30S ribosomal protein S20



- Molecule 20: 30S ribosomal protein S20



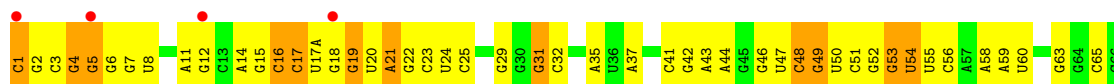
- Molecule 21: 30S ribosomal protein S21



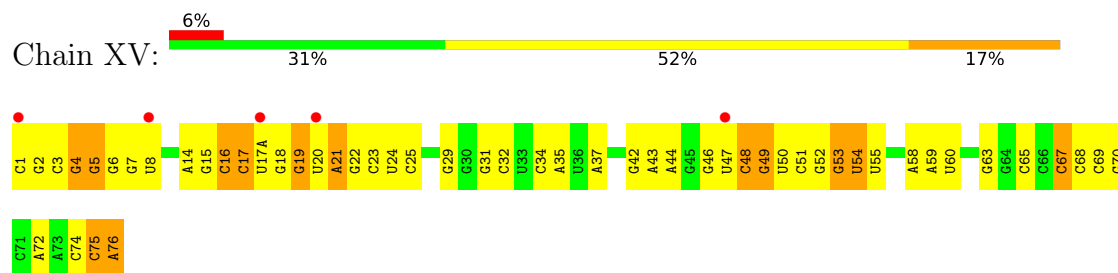
- Molecule 21: 30S ribosomal protein S21



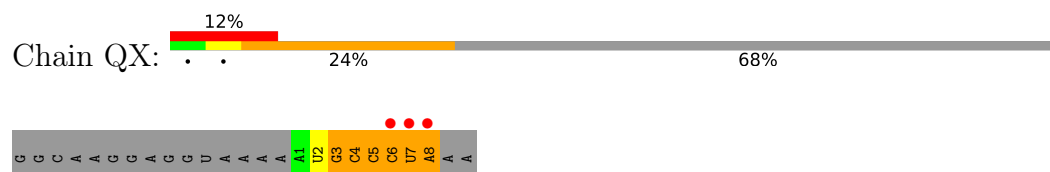
- Molecule 22: P-site tRNA fMet



- Molecule 22: P-site tRNA fMet



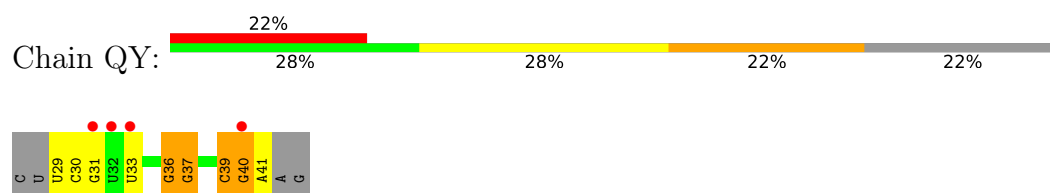
- Molecule 23: A-site ASL SufA6



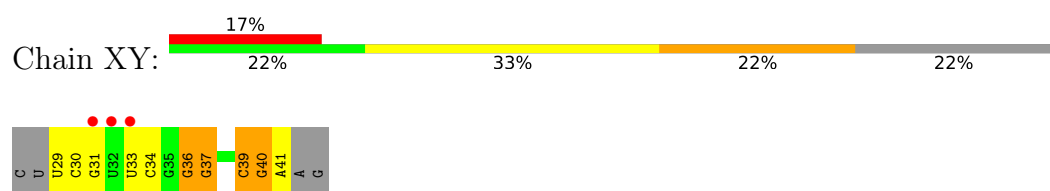
- Molecule 23: A-site ASL SufA6



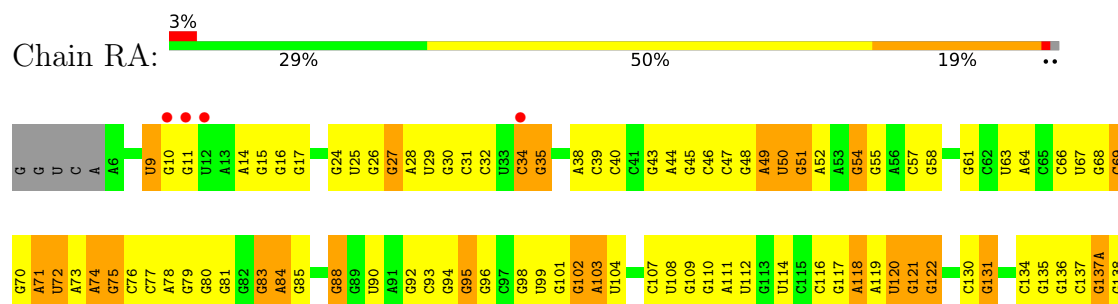
- Molecule 24: messenger RNA



- Molecule 24: messenger RNA



- Molecule 25: 23S rRNA

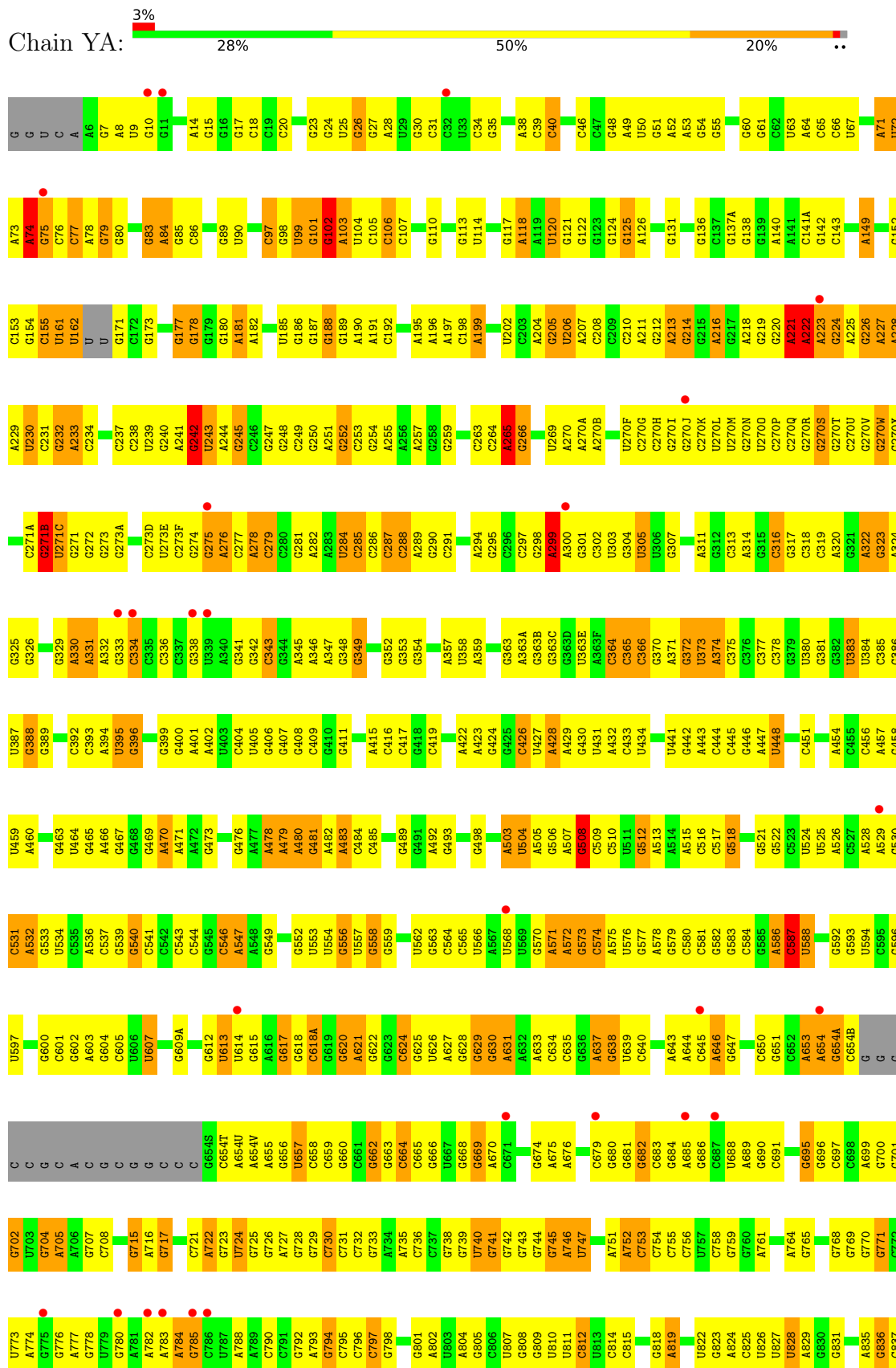


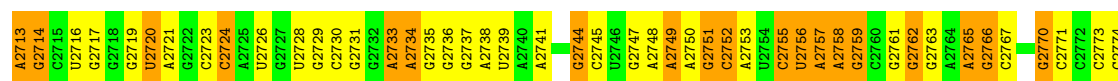
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A2014	U1794	G1861	U1794	G1709	G1627	G1560	U1433	G1366	A1301	G1232	G1165	G1091
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U2017	U1797	G1872	U1797	C1712	G1630	C1565	C1436	U1372	C1307	G1235	G1168	A1094
G2018	U1798	C1878	U1798	G1716	U1632	U1566	U1437	A1373	A1307	G1236	G1169	A1095
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A2020	C1800	C1882	C1800	G1718	G1633	G1568	C1501	A1375	A1309	A1241	A1173	U1097
C2021	G1801	G1883	G1801	G1718	G1633	G1568	C1502	C1376	G1309	A1242	G1174	G1099
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G2023	U1803	G1885	U1803	G1726	C1636	A1570	G1442	G1377	G1311	G1244	U1176	U1101
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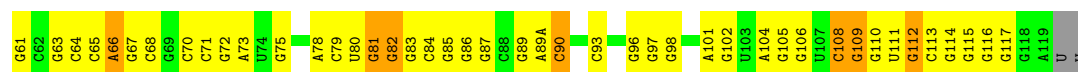
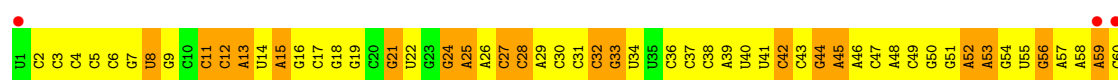


● Molecule 25: 23S rRNA

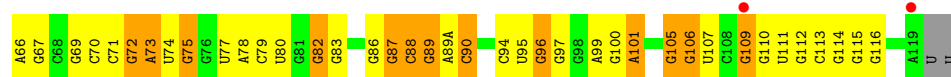
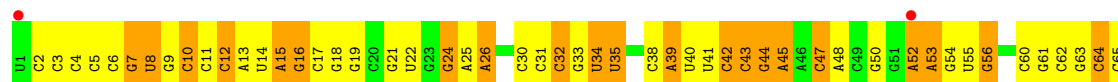




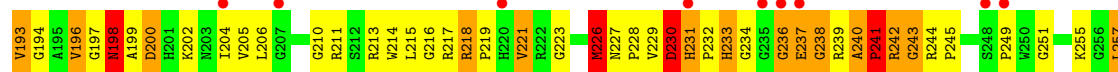
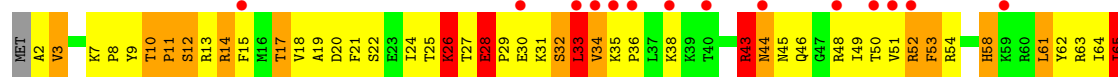
• Molecule 26: 5S rRNA



• Molecule 26: 5S rRNA

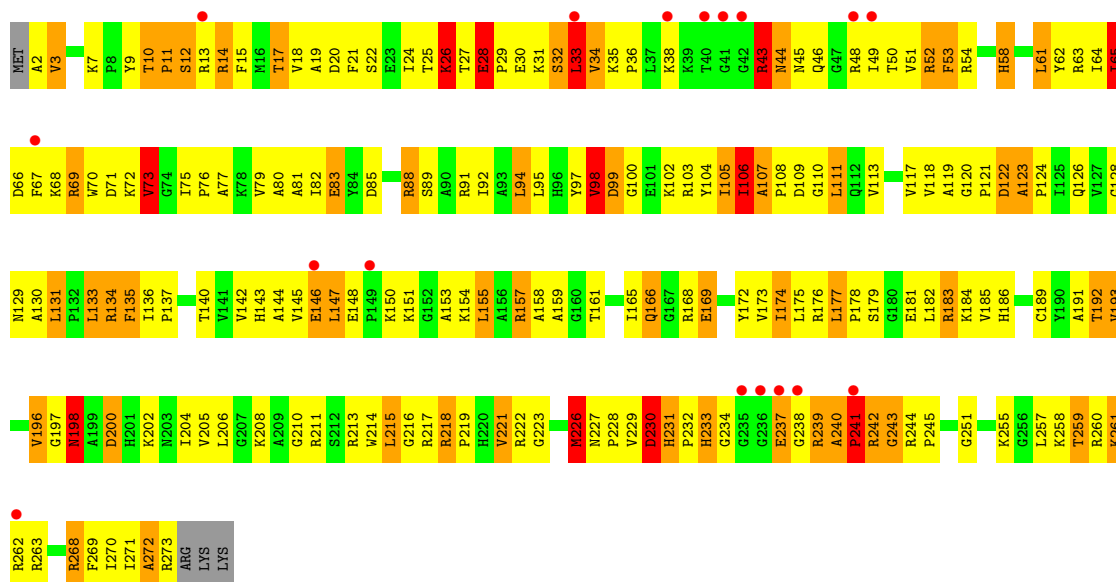


• Molecule 27: 50S ribosomal protein L2

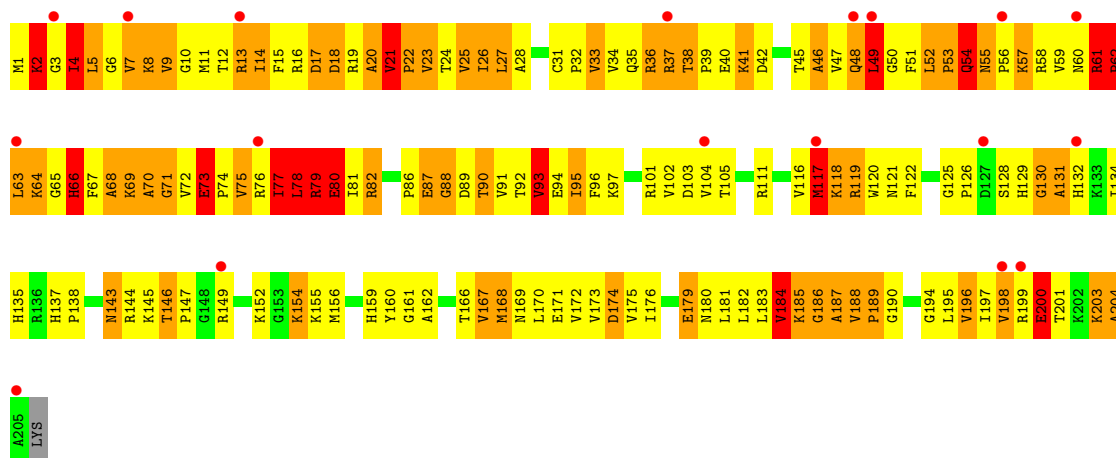
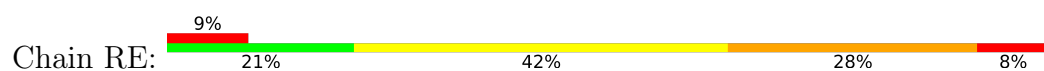




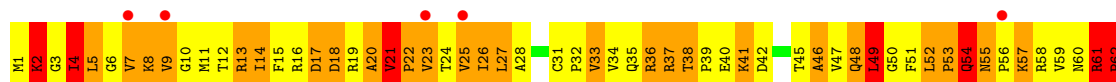
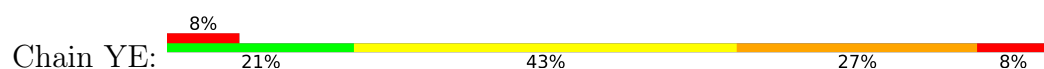
• Molecule 27: 50S ribosomal protein L2

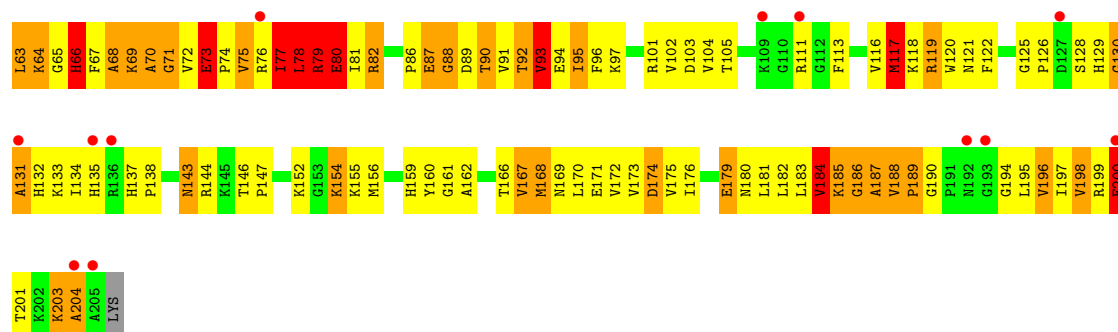


• Molecule 28: 50S ribosomal protein L3

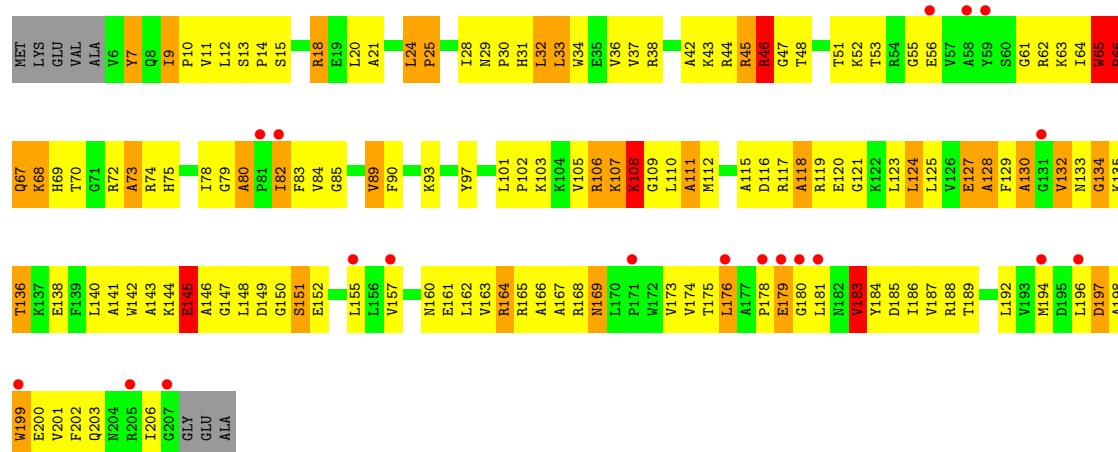


• Molecule 28: 50S ribosomal protein L3

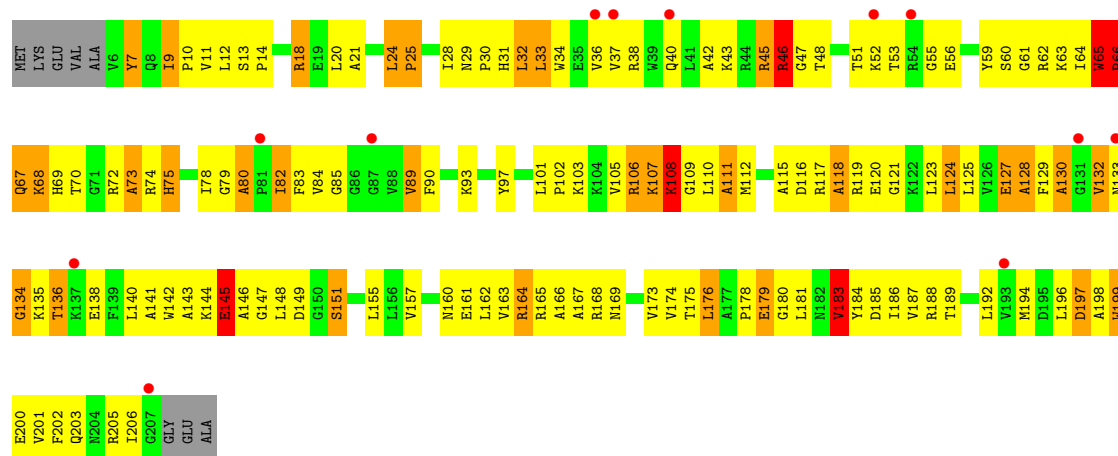




• Molecule 29: 50S ribosomal protein L4

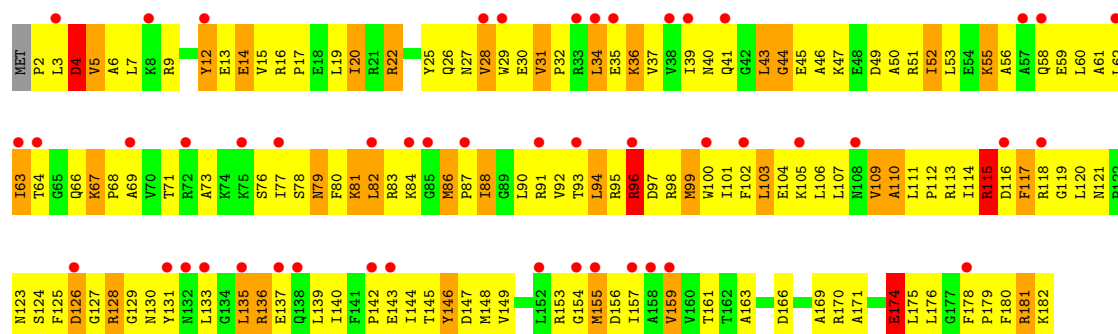


• Molecule 29: 50S ribosomal protein L4

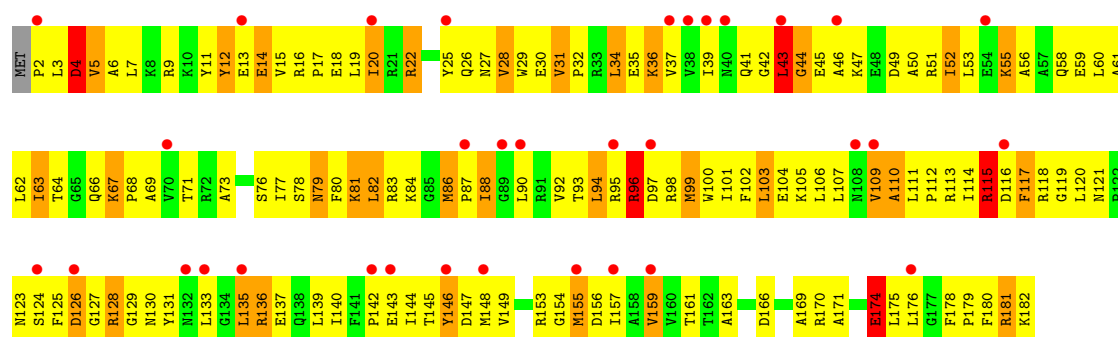


• Molecule 30: 50S ribosomal protein L5

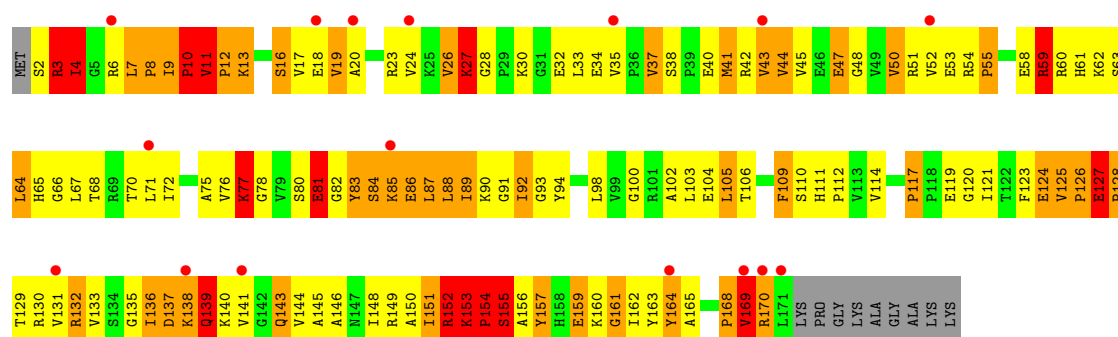
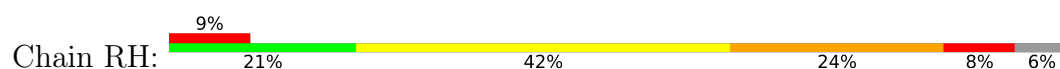




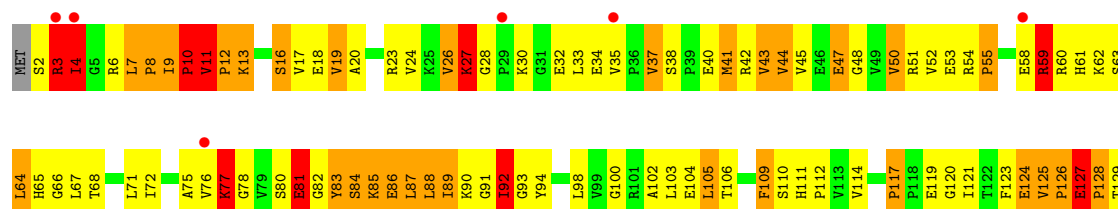
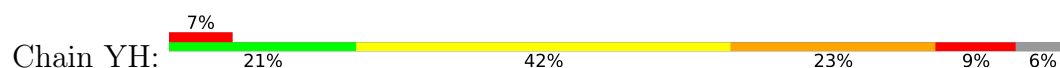
• Molecule 30: 50S ribosomal protein L5

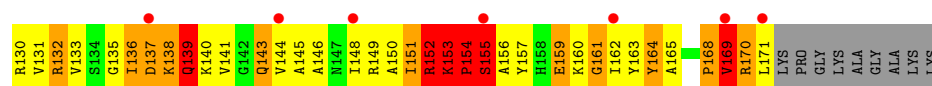


• Molecule 31: 50S ribosomal protein L6

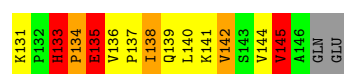
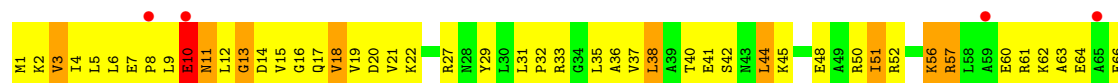


• Molecule 31: 50S ribosomal protein L6

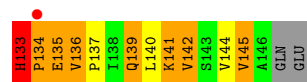
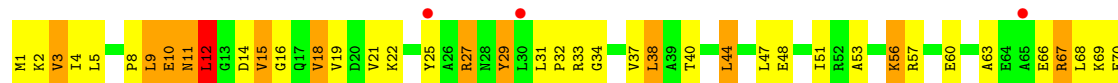




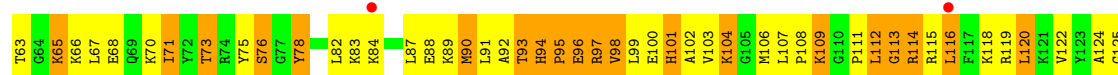
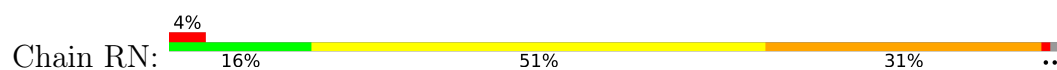
• Molecule 32: 50S ribosomal protein L9



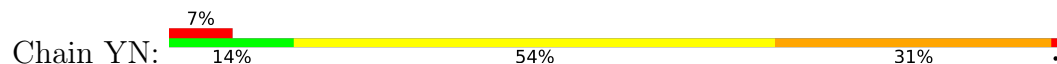
• Molecule 32: 50S ribosomal protein L9



• Molecule 33: 50S ribosomal protein L13

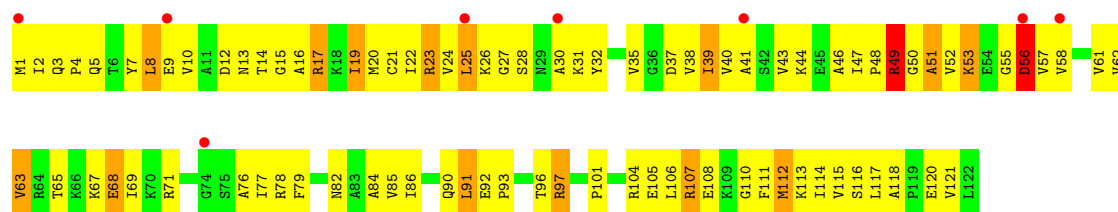


• Molecule 33: 50S ribosomal protein L13

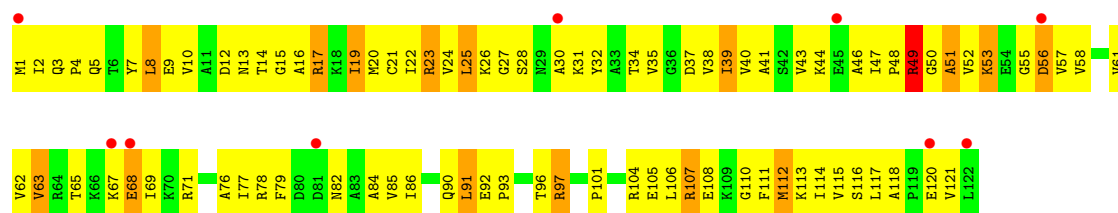




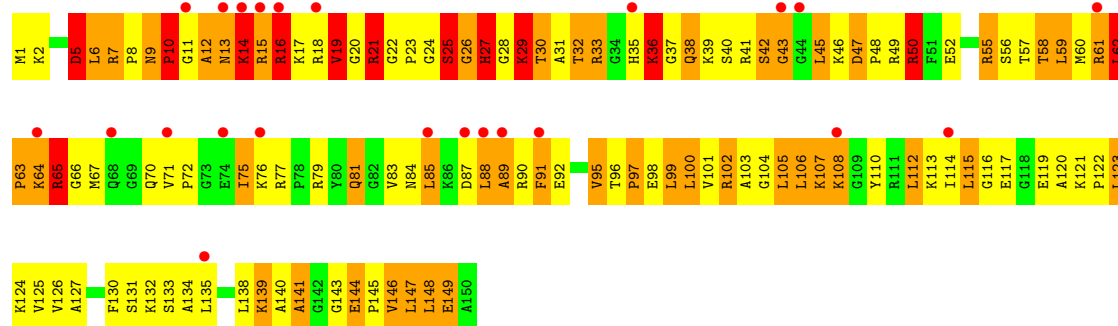
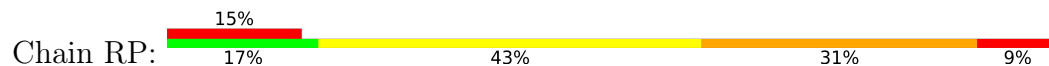
• Molecule 34: 50S ribosomal protein L14



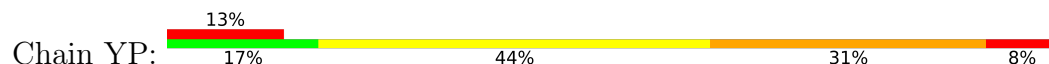
• Molecule 34: 50S ribosomal protein L14

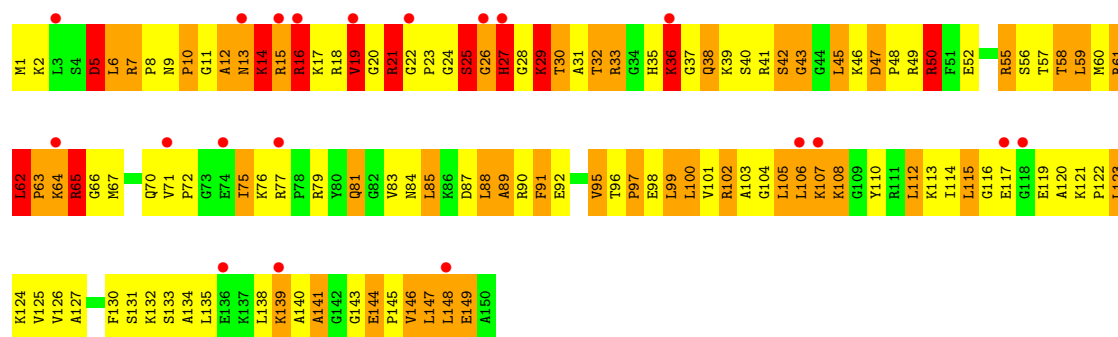


• Molecule 35: 50S ribosomal protein L15

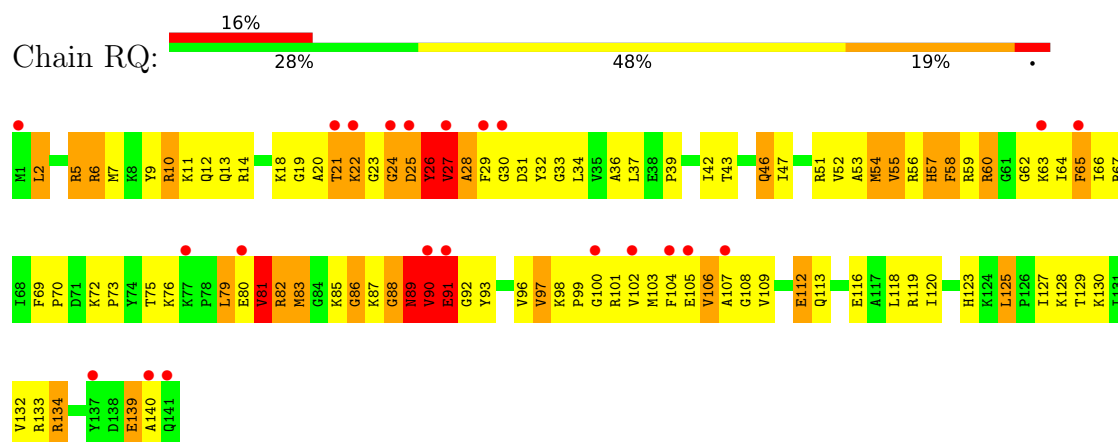


• Molecule 35: 50S ribosomal protein L15

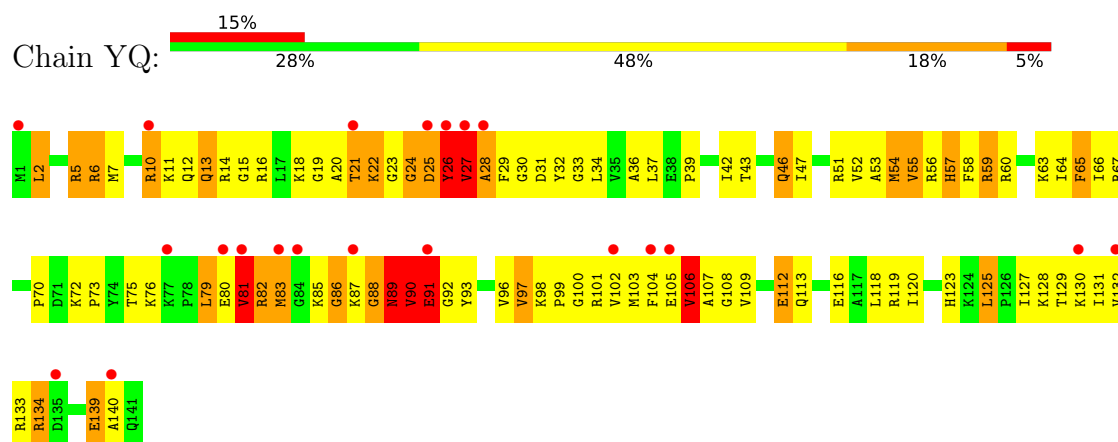




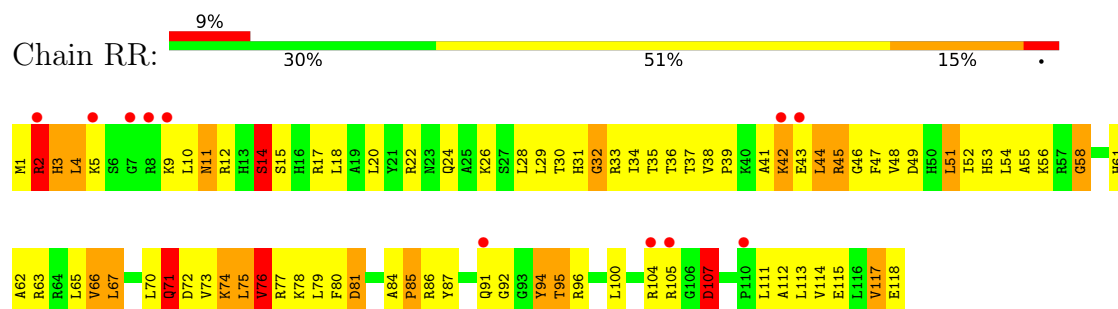
• Molecule 36: 50S ribosomal protein L16



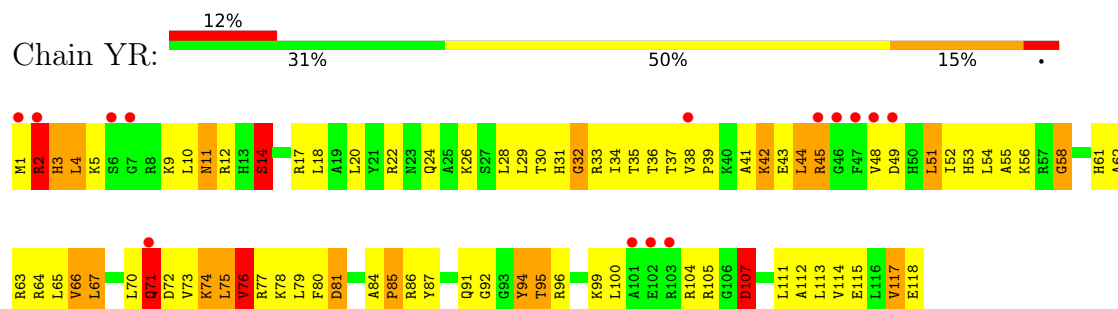
• Molecule 36: 50S ribosomal protein L16



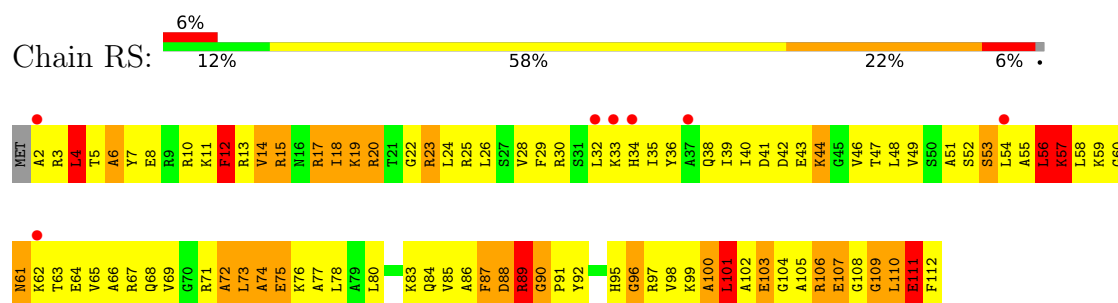
• Molecule 37: 50S ribosomal protein L17



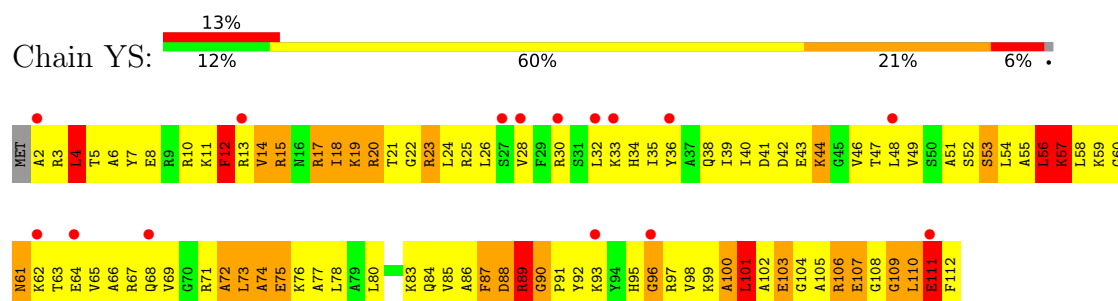
- Molecule 37: 50S ribosomal protein L17



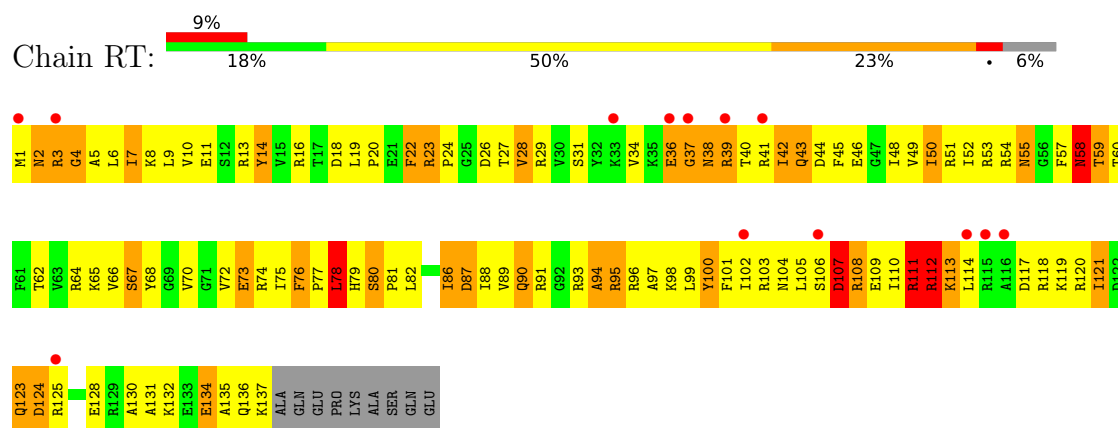
- Molecule 38: 50S ribosomal protein L18



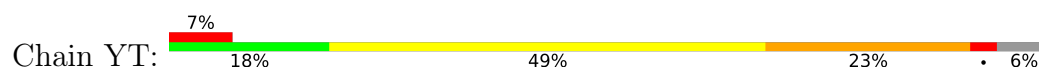
- Molecule 38: 50S ribosomal protein L18

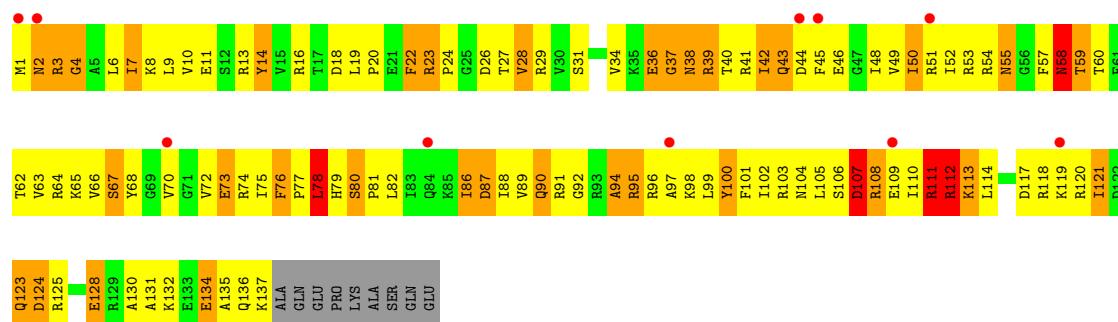


- Molecule 39: 50S ribosomal protein L19

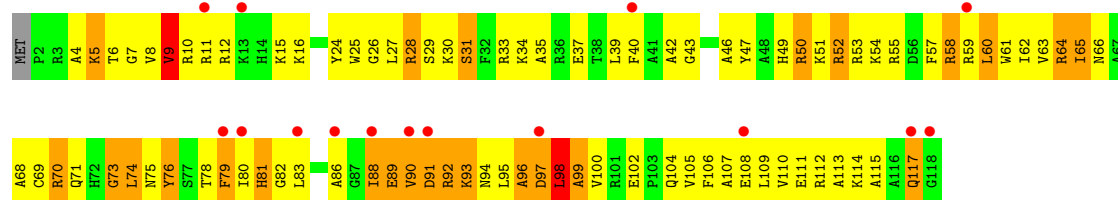


- Molecule 39: 50S ribosomal protein L19

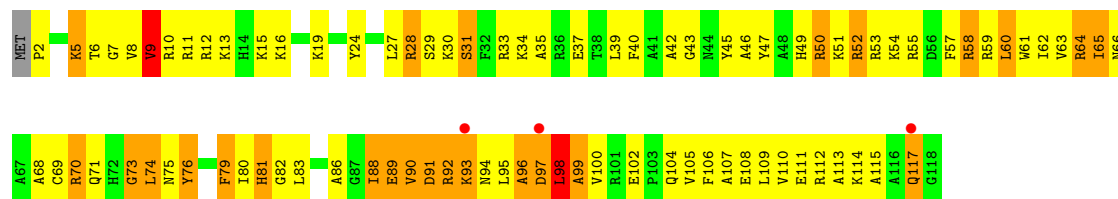




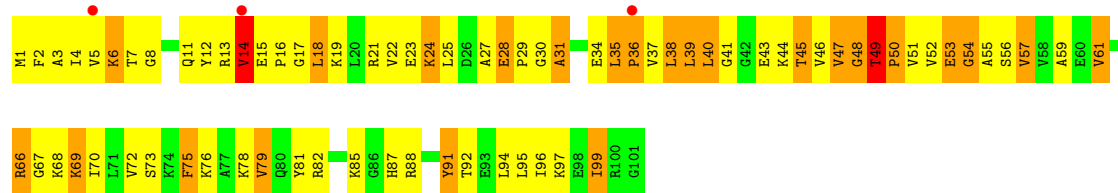
• Molecule 40: 50S ribosomal protein L20



• Molecule 40: 50S ribosomal protein L20

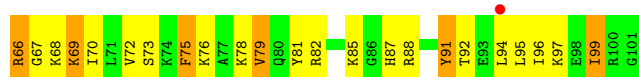


• Molecule 41: 50S ribosomal protein L21

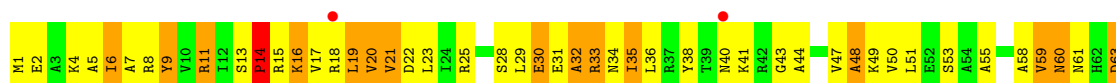


• Molecule 41: 50S ribosomal protein L21

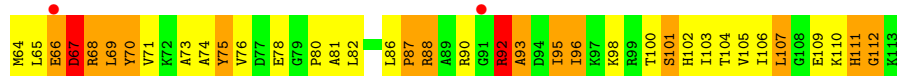




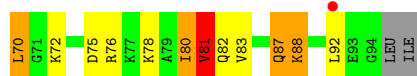
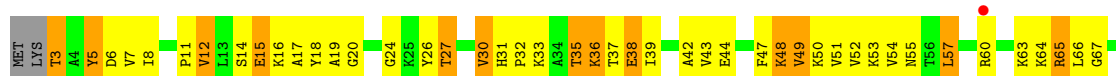
- Molecule 42: 50S ribosomal protein L22



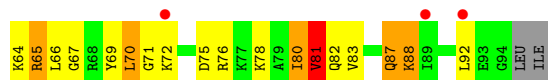
- Molecule 42: 50S ribosomal protein L22



- Molecule 43: 50S ribosomal protein L23

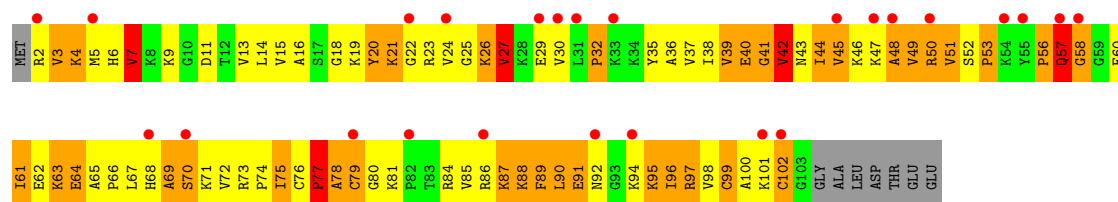


- Molecule 43: 50S ribosomal protein L23

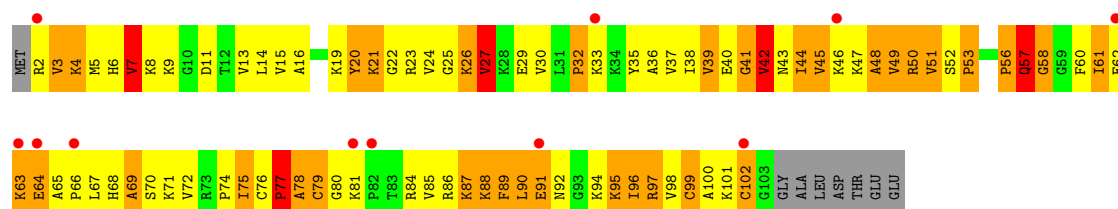
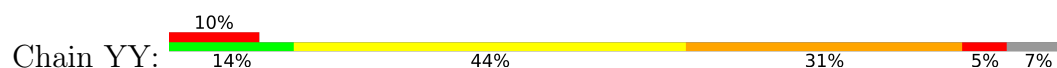


- Molecule 44: 50S ribosomal protein L24

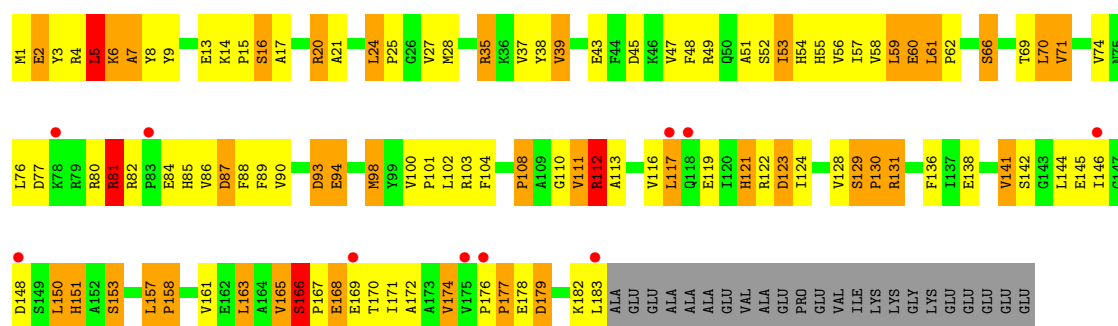




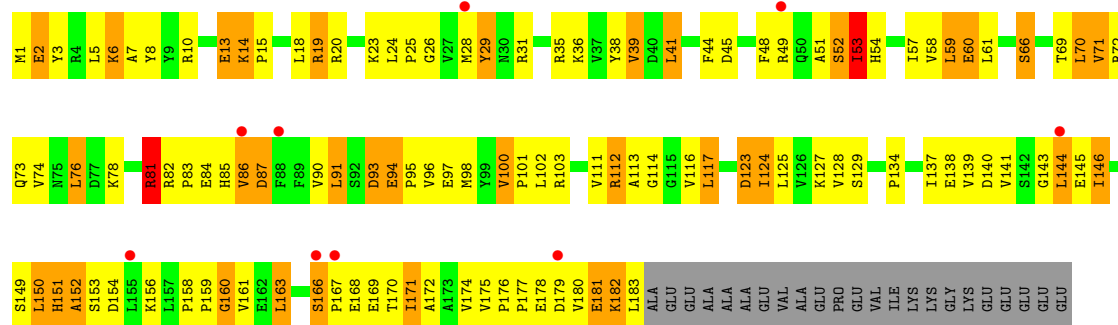
• Molecule 44: 50S ribosomal protein L24



• Molecule 45: 50S ribosomal protein L25

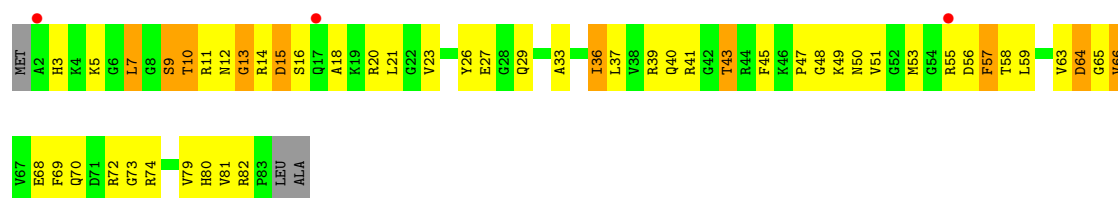


• Molecule 45: 50S ribosomal protein L25

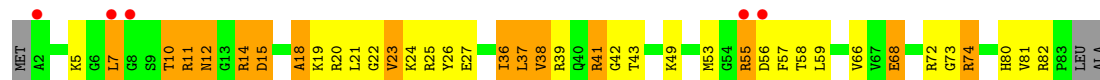


• Molecule 46: 50S ribosomal protein L27

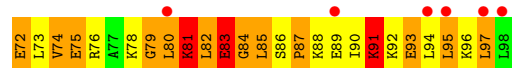
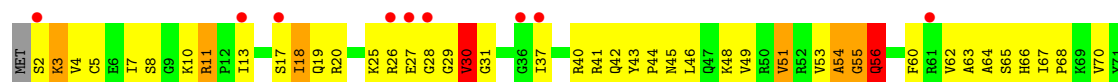




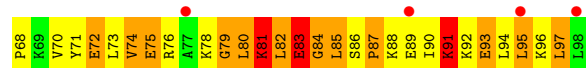
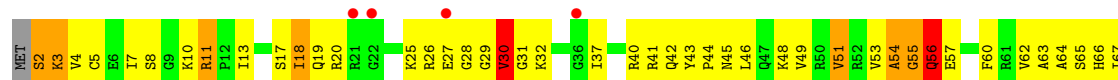
- Molecule 46: 50S ribosomal protein L27



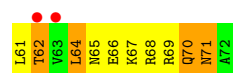
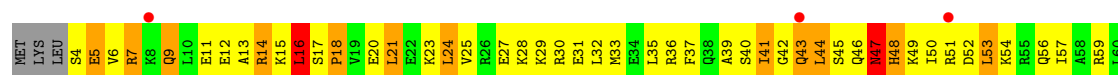
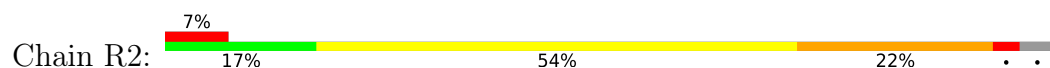
- Molecule 47: 50S ribosomal protein L28



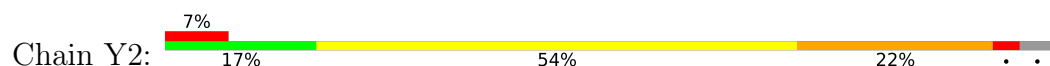
- Molecule 47: 50S ribosomal protein L28

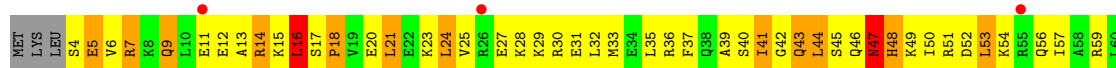


- Molecule 48: 50S ribosomal protein L29



- Molecule 48: 50S ribosomal protein L29





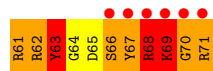
- Molecule 49: 50S ribosomal protein L30



- Molecule 49: 50S ribosomal protein L30



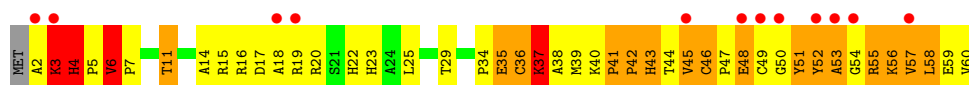
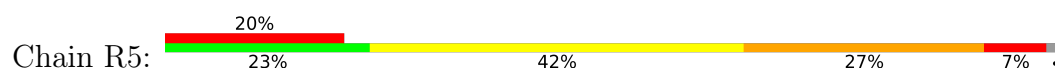
- Molecule 50: 50S ribosomal protein L31



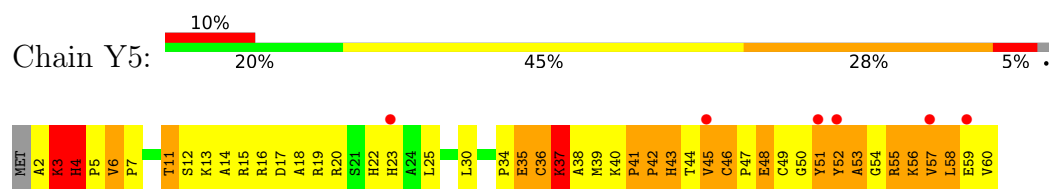
- Molecule 50: 50S ribosomal protein L31



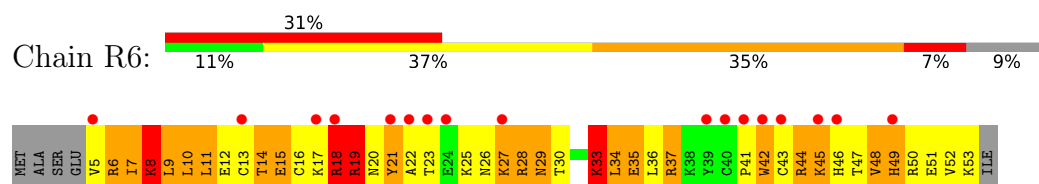
- Molecule 51: 50S ribosomal protein L32



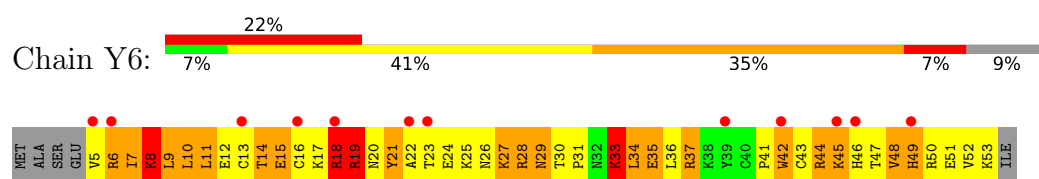
- Molecule 51: 50S ribosomal protein L32



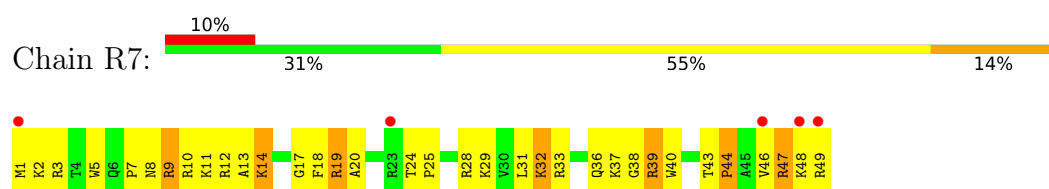
- Molecule 52: 50S ribosomal protein L33



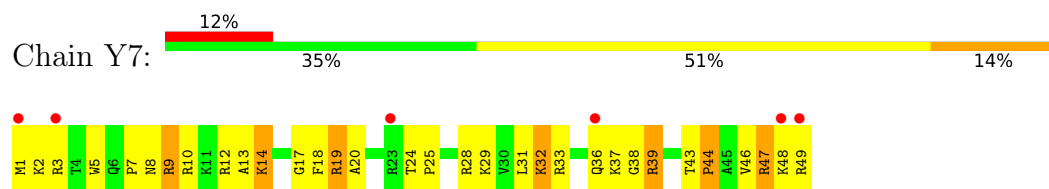
- Molecule 52: 50S ribosomal protein L33



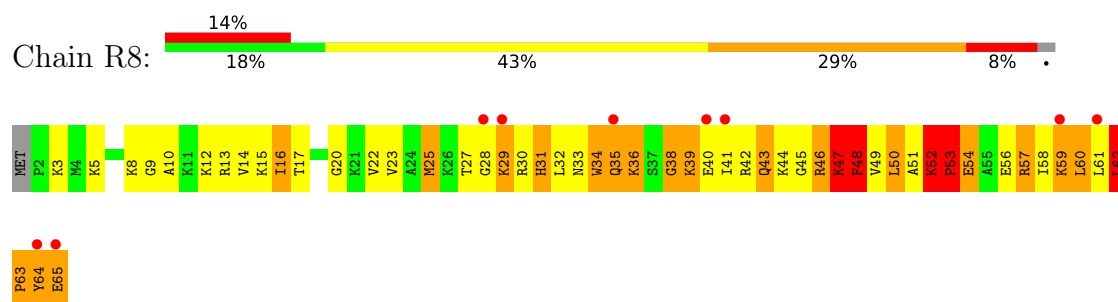
- Molecule 53: 50S ribosomal protein L34



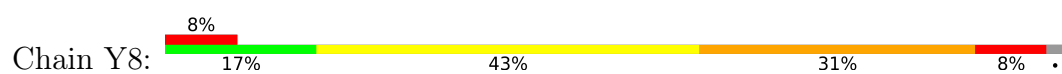
- Molecule 53: 50S ribosomal protein L34



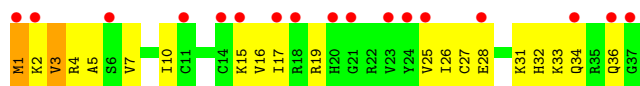
- Molecule 54: 50S ribosomal protein L35



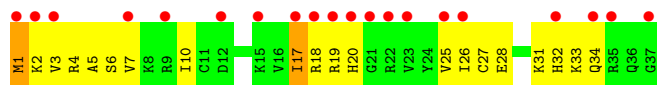
- Molecule 54: 50S ribosomal protein L35



- Molecule 55: 50S ribosomal protein L36



- Molecule 55: 50S ribosomal protein L36



- Molecule 56: tRNA acceptor end mimic



- Molecule 56: tRNA acceptor end mimic



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.38Å 451.02Å 621.09Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	34.77 – 3.92 34.77 – 3.92	Depositor EDS
% Data completeness (in resolution range)	99.7 (34.77-3.92) 99.6 (34.77-3.92)	Depositor EDS
R_{merge}	0.34	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.60 (at 3.76Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.208 , 0.265 0.208 , 0.265	Depositor DCC
R_{free} test set	25594 reflections (4.46%)	wwPDB-VP
Wilson B-factor (Å ²)	94.6	Xtriage
Anisotropy	0.150	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.24 , 42.3	EDS
L-test for twinning ²	$\langle L \rangle = 0.41$, $\langle L^2 \rangle = 0.24$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.90	EDS
Total number of atoms	291868	wwPDB-VP
Average B, all atoms (Å ²)	57.0	wwPDB-VP

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

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 1MG, AMP, MG, 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	0.47	0/36098	0.72	18/56341 (0.0%)
1	XA	0.49	5/36101 (0.0%)	0.74	19/56346 (0.0%)
2	QB	0.42	0/1959	1.05	13/2642 (0.5%)
2	XB	0.42	0/1959	1.06	13/2642 (0.5%)
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	0.46	0/1171	1.01	8/1576 (0.5%)
5	XE	0.46	0/1171	1.01	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	0.42	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	1.06	5/1527 (0.3%)
9	QI	0.40	0/1029	1.02	8/1379 (0.6%)
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	0.47	0/900	1.04	6/1213 (0.5%)
12	QL	0.56	0/991	1.18	7/1327 (0.5%)
12	XL	0.62	1/991 (0.1%)	1.20	8/1327 (0.6%)
13	QM	0.43	0/974	1.05	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	0.99	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	0.42	0/847	1.07	7/1131 (0.6%)
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	6/1007 (0.6%)
20	XT	0.41	0/765	1.09	4/1007 (0.4%)
21	QU	0.42	0/221	1.01	1/288 (0.3%)
21	XU	0.42	0/221	1.01	1/288 (0.3%)
22	QV	0.34	1/1836 (0.1%)	0.44	0/2859
22	XV	0.34	1/1836 (0.1%)	0.43	0/2859
23	QX	0.38	0/185	0.64	0/285
23	XX	0.41	0/160	0.69	0/246
24	QY	0.36	0/311	0.46	0/483
24	XY	0.38	0/311	0.49	0/483
25	RA	0.55	1/69521 (0.0%)	0.79	31/108529 (0.0%)
25	YA	0.63	1/69543 (0.0%)	0.85	44/108563 (0.0%)
26	RB	0.45	0/2878	0.69	0/4490
26	YB	0.47	0/2878	0.74	0/4490
27	RD	0.79	2/2165 (0.1%)	1.30	35/2919 (1.2%)
27	YD	0.72	1/2165 (0.0%)	1.30	33/2919 (1.1%)
28	RE	0.62	0/1601	1.35	29/2160 (1.3%)
28	YE	0.62	0/1601	1.35	29/2160 (1.3%)
29	RF	0.62	0/1620	1.19	19/2194 (0.9%)
29	YF	0.62	0/1620	1.19	19/2194 (0.9%)
30	RG	0.47	0/1499	0.99	8/2016 (0.4%)
30	YG	0.47	0/1499	0.99	9/2016 (0.4%)
31	RH	0.58	0/1332	1.22	14/1802 (0.8%)
31	YH	0.57	0/1332	1.22	15/1802 (0.8%)
32	RI	0.64	0/1151	1.15	7/1558 (0.4%)
32	YI	0.62	0/1151	1.13	7/1558 (0.4%)
33	RN	0.55	0/1131	1.18	10/1525 (0.7%)
33	YN	0.54	0/1131	1.18	10/1525 (0.7%)
34	RO	0.65	0/943	1.03	5/1269 (0.4%)
34	YO	0.65	0/943	1.04	5/1269 (0.4%)
35	RP	0.63	0/1162	1.37	17/1544 (1.1%)
35	YP	0.63	1/1162 (0.1%)	1.37	17/1544 (1.1%)
36	RQ	0.71	0/1143	1.36	19/1527 (1.2%)
36	YQ	0.71	0/1143	1.35	19/1527 (1.2%)
37	RR	0.55	0/982	1.17	10/1312 (0.8%)
37	YR	0.55	0/982	1.17	10/1312 (0.8%)
38	RS	0.53	0/892	1.18	8/1187 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YS	0.52	0/892	1.18	8/1187 (0.7%)
39	RT	0.56	0/1155	1.18	16/1542 (1.0%)
39	YT	0.56	0/1155	1.18	17/1542 (1.1%)
40	RU	0.59	0/982	1.21	10/1306 (0.8%)
40	YU	0.59	0/982	1.21	10/1306 (0.8%)
41	RV	0.56	0/790	1.10	6/1057 (0.6%)
41	YV	0.55	0/790	1.10	6/1057 (0.6%)
42	RW	0.58	0/911	1.18	13/1220 (1.1%)
42	YW	0.57	0/911	1.18	13/1220 (1.1%)
43	RX	0.62	0/739	1.13	5/993 (0.5%)
43	YX	0.62	0/739	1.14	5/993 (0.5%)
44	RY	0.64	0/798	1.17	4/1064 (0.4%)
44	YY	0.64	0/798	1.16	3/1064 (0.3%)
45	RZ	0.60	1/1493 (0.1%)	1.06	7/2026 (0.3%)
45	YZ	0.60	0/1493	1.06	6/2026 (0.3%)
46	R0	0.67	0/657	1.06	2/874 (0.2%)
46	Y0	0.71	0/657	1.15	3/874 (0.3%)
47	R1	0.58	0/770	1.20	9/1022 (0.9%)
47	Y1	0.58	0/770	1.20	9/1022 (0.9%)
48	R2	0.60	0/583	1.32	9/771 (1.2%)
48	Y2	0.60	0/583	1.32	9/771 (1.2%)
49	R3	0.62	1/474 (0.2%)	1.04	0/635
49	Y3	0.53	0/474	1.04	0/635
50	R4	0.47	0/594	1.24	10/795 (1.3%)
50	Y4	0.47	0/594	1.23	10/795 (1.3%)
51	R5	0.65	0/473	1.22	6/639 (0.9%)
51	Y5	0.65	0/473	1.21	7/639 (1.1%)
52	R6	0.53	0/431	1.06	3/575 (0.5%)
52	Y6	0.53	0/431	1.06	3/575 (0.5%)
53	R7	0.73	0/438	1.19	2/575 (0.3%)
53	Y7	0.73	0/438	1.19	2/575 (0.3%)
54	R8	0.79	0/525	1.41	9/691 (1.3%)
54	Y8	0.79	0/525	1.41	9/691 (1.3%)
55	R9	0.42	0/310	0.92	1/407 (0.2%)
55	Y9	0.44	0/310	0.92	1/407 (0.2%)
56	Z6	0.46	0/40	0.62	0/60
56	Z8	0.46	0/40	0.63	0/60
All	All	0.55	17/316298 (0.0%)	0.89	921/472872 (0.2%)

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

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

All (17) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
27	RD	236	GLY	C-N	14.29	1.53	1.33
1	XA	1201	A	C3'-C2'	8.85	1.66	1.52
1	XA	1054	C	C4'-C3'	8.36	1.65	1.53
1	XA	1054	C	C2'-O2'	7.37	1.52	1.41
22	QV	1	C	OP3-P	6.57	1.61	1.48
25	RA	654(T)	C	C1'-N1	6.37	1.58	1.48
22	XV	1	C	OP3-P	6.33	1.61	1.48
45	RZ	176	PRO	CA-C	5.78	1.57	1.52
25	YA	1543	A	C3'-C2'	5.64	1.61	1.52
1	XA	1054	C	C2'-C1'	-5.39	1.45	1.53
14	XN	25	VAL	C-N	5.33	1.44	1.33
49	R3	10	LYS	C-O	-5.32	1.17	1.23
27	RD	241	PRO	N-CD	5.28	1.55	1.47
1	XA	1201	A	C1'-N9	5.24	1.54	1.47
12	XL	48	PRO	N-CD	5.09	1.54	1.47
27	YD	241	PRO	N-CD	5.08	1.54	1.47
35	YP	19	VAL	CA-C	5.05	1.59	1.52

All (921) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	RP	59	LEU	N-CA-C	-14.61	91.40	111.56
35	YP	59	LEU	N-CA-C	-14.61	91.40	111.56
50	Y4	39	CYS	N-CA-C	-13.55	96.00	112.54
50	R4	39	CYS	N-CA-C	-13.53	96.04	112.54
28	YE	58	ARG	N-CA-C	-11.81	95.23	113.89
28	RE	58	ARG	N-CA-C	-11.79	95.26	113.89
48	R2	5	GLU	N-CA-C	-11.62	99.58	113.88
48	Y2	5	GLU	N-CA-C	-11.59	99.63	113.88
40	YU	96	ALA	N-CA-C	-11.54	98.63	113.17
40	RU	96	ALA	N-CA-C	-11.54	98.63	113.17
33	RN	114	ARG	N-CA-C	-11.49	95.94	110.19
33	YN	114	ARG	N-CA-C	-11.39	96.07	110.19
52	R6	29	ASN	N-CA-C	-10.65	99.03	113.30
52	Y6	29	ASN	N-CA-C	-10.60	99.10	113.30
12	XL	119	LYS	N-CA-C	-10.37	95.17	110.52
36	RQ	89	ASN	N-CA-C	-10.34	100.47	112.87
12	QL	119	LYS	N-CA-C	-10.33	95.23	110.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
36	YQ	89	ASN	N-CA-C	-10.32	100.48	112.87
28	YE	21	VAL	C-N-CD	-10.10	98.38	120.60
28	RE	21	VAL	C-N-CD	-10.07	98.45	120.60
36	YQ	81	VAL	CB-CA-C	-10.04	94.83	111.29
36	RQ	81	VAL	CB-CA-C	-9.95	94.97	111.29
36	RQ	81	VAL	N-CA-C	9.95	130.04	109.34
36	YQ	81	VAL	N-CA-C	9.94	130.01	109.34
2	XB	25	ASN	CA-C-N	9.87	132.18	119.84
2	XB	25	ASN	C-N-CA	9.87	132.18	119.84
2	QB	25	ASN	CA-C-N	9.86	132.16	119.84
2	QB	25	ASN	C-N-CA	9.86	132.16	119.84
1	XA	1201	A	O4'-C1'-C2'	9.76	115.56	105.80
35	RP	13	ASN	N-CA-C	-9.66	101.51	113.20
35	YP	13	ASN	N-CA-C	-9.60	101.59	113.20
29	RF	197	ASP	N-CA-C	-9.30	98.66	110.19
29	YF	197	ASP	N-CA-C	-9.28	98.68	110.19
12	QL	26	ALA	N-CA-C	-9.28	102.54	113.21
1	XA	1054	C	C4'-C3'-C2'	-9.15	93.45	102.60
12	XL	26	ALA	N-CA-C	-9.14	102.70	113.21
50	R4	45	GLY	N-CA-C	-9.09	102.78	115.32
50	Y4	45	GLY	N-CA-C	-9.09	102.78	115.32
11	QK	40	ILE	N-CA-C	-9.08	103.75	111.56
38	YS	110	LEU	CB-CA-C	-8.98	105.01	117.23
38	RS	110	LEU	CB-CA-C	-8.96	105.05	117.23
47	R1	3	LYS	N-CA-C	-8.93	99.73	110.44
47	Y1	3	LYS	N-CA-C	-8.92	99.73	110.44
11	XK	40	ILE	N-CA-C	-8.91	103.90	111.56
53	Y7	47	ARG	N-CA-C	8.83	119.58	108.19
40	RU	97	ASP	N-CA-C	-8.80	103.64	112.97
53	R7	47	ARG	N-CA-C	8.79	119.53	108.19
40	YU	97	ASP	N-CA-C	-8.77	103.67	112.97
27	YD	91	ARG	N-CA-C	-8.76	98.72	110.55
27	RD	91	ARG	N-CA-C	-8.75	98.73	110.55
1	QA	1064	G	C1'-O4'-C4'	8.74	118.64	109.90
40	RU	98	LEU	N-CA-C	-8.73	102.42	113.43
40	YU	98	LEU	N-CA-C	-8.69	102.48	113.43
54	Y8	36	LYS	N-CA-C	-8.66	96.72	110.14
36	RQ	125	LEU	CA-C-N	8.64	130.65	119.84
36	RQ	125	LEU	C-N-CA	8.64	130.65	119.84
36	YQ	125	LEU	CA-C-N	8.64	130.64	119.84
36	YQ	125	LEU	C-N-CA	8.64	130.64	119.84
54	R8	36	LYS	N-CA-C	-8.63	96.77	110.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
8	XH	79	VAL	N-CA-C	-8.60	102.03	110.72
8	QH	79	VAL	N-CA-C	-8.48	102.15	110.72
39	YT	59	THR	N-CA-C	-8.48	97.28	110.42
28	RE	23	VAL	N-CA-C	8.46	120.98	108.96
37	RR	9	LYS	N-CA-C	-8.46	94.72	108.52
25	RA	2848	G	C2'-C3'-O3'	8.46	122.18	109.50
28	YE	23	VAL	N-CA-C	8.45	120.96	108.96
39	RT	59	THR	N-CA-C	-8.43	97.35	110.42
37	YR	9	LYS	N-CA-C	-8.43	94.78	108.52
16	XP	3	LYS	N-CA-C	8.38	120.67	108.86
39	RT	7	ILE	N-CA-C	-8.36	101.53	110.23
16	QP	3	LYS	N-CA-C	8.35	120.64	108.86
29	RF	75	HIS	N-CA-C	8.32	122.41	109.52
47	R1	79	GLY	N-CA-C	-8.29	93.52	113.18
1	XA	1054	C	C3'-C2'-C1'	8.29	109.79	101.50
47	Y1	79	GLY	N-CA-C	-8.28	93.56	113.18
29	YF	75	HIS	N-CA-C	8.26	122.32	109.52
27	RD	193	VAL	N-CA-C	8.25	120.23	109.58
39	YT	7	ILE	N-CA-C	-8.24	101.66	110.23
1	QA	1346	A	O4'-C1'-C2'	8.22	114.02	105.80
34	YO	107	ARG	N-CA-C	-8.21	102.28	111.07
39	YT	13	ARG	N-CA-C	-8.21	102.71	114.12
39	RT	13	ARG	N-CA-C	-8.20	102.72	114.12
34	RO	107	ARG	N-CA-C	-8.19	102.31	111.07
25	YA	1992	G	C2'-C3'-O3'	8.18	121.77	109.50
27	YD	193	VAL	N-CA-C	8.15	120.09	109.58
4	QD	72	GLU	CA-C-N	-8.07	109.99	120.65
4	QD	72	GLU	C-N-CA	-8.07	109.99	120.65
31	YH	19	VAL	N-CA-C	8.07	117.91	106.53
29	YF	65	TRP	CA-C-N	8.06	129.92	119.84
29	YF	65	TRP	C-N-CA	8.06	129.92	119.84
31	RH	19	VAL	N-CA-C	8.03	117.86	106.53
44	YY	20	TYR	N-CA-C	-8.03	101.97	113.21
29	RF	65	TRP	CA-C-N	8.02	129.87	119.84
29	RF	65	TRP	C-N-CA	8.02	129.87	119.84
50	R4	63	TYR	N-CA-C	-8.02	102.75	112.54
44	RY	20	TYR	N-CA-C	-7.96	102.06	113.21
54	Y8	45	GLY	N-CA-C	-7.94	101.85	112.81
54	R8	45	GLY	N-CA-C	-7.93	101.87	112.81
1	QA	189	U	C1'-O4'-C4'	7.90	117.80	109.90
34	YO	112	MET	N-CA-C	7.87	119.55	110.97
51	R5	6	VAL	CA-C-N	7.86	129.09	119.98

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
51	R5	6	VAL	C-N-CA	7.86	129.09	119.98
34	RO	112	MET	N-CA-C	7.83	119.50	110.97
36	YQ	5	ARG	N-CA-C	-7.78	96.89	109.96
31	YH	100	GLY	N-CA-C	-7.76	99.68	111.24
20	QT	9	ASN	N-CA-C	7.75	121.96	110.48
36	RQ	5	ARG	N-CA-C	-7.75	96.94	109.96
11	XK	123	LYS	N-CA-C	-7.75	102.43	111.03
1	XA	1201	A	C1'-O4'-C4'	-7.74	101.96	109.70
50	Y4	63	TYR	N-CA-C	-7.73	102.85	111.82
51	Y5	6	VAL	CA-C-N	7.72	128.94	119.98
51	Y5	6	VAL	C-N-CA	7.72	128.94	119.98
37	YR	30	THR	N-CA-C	-7.72	105.82	114.62
4	XD	36	ARG	CA-C-N	7.71	128.68	120.12
4	XD	36	ARG	C-N-CA	7.71	128.68	120.12
46	Y0	7	LEU	CB-CA-C	-7.71	104.77	114.40
25	RA	1130	U	C2'-C3'-O3'	7.70	121.05	109.50
4	QD	36	ARG	CA-C-N	7.70	128.66	120.12
4	QD	36	ARG	C-N-CA	7.70	128.66	120.12
31	RH	100	GLY	N-CA-C	-7.70	99.77	111.24
15	QO	78	TYR	N-CA-C	-7.68	101.33	111.24
15	XO	78	TYR	N-CA-C	-7.67	101.34	111.24
37	RR	30	THR	N-CA-C	-7.67	105.88	114.62
17	XQ	57	VAL	N-CA-C	7.67	118.18	108.82
20	XT	9	ASN	N-CA-C	7.67	121.83	110.48
48	R2	14	ARG	N-CA-C	-7.66	99.93	110.35
48	Y2	14	ARG	N-CA-C	-7.64	99.95	110.35
52	R6	28	ARG	N-CA-C	7.64	120.48	108.79
25	YA	1130	U	C2'-C3'-O3'	7.63	120.94	109.50
33	YN	116	LEU	N-CA-C	-7.62	102.63	112.23
54	R8	38	GLY	N-CA-C	-7.61	103.17	113.37
17	QQ	57	VAL	N-CA-C	7.61	118.10	108.82
27	RD	251	GLY	N-CA-C	7.61	126.75	115.64
52	Y6	28	ARG	N-CA-C	7.61	120.43	108.79
40	YU	70	ARG	N-CA-C	-7.60	103.74	113.16
27	YD	251	GLY	N-CA-C	7.59	126.72	115.64
11	QK	123	LYS	N-CA-C	-7.58	102.61	111.03
31	YH	157	TYR	N-CA-C	-7.56	103.13	112.88
40	RU	70	ARG	N-CA-C	-7.55	103.79	113.16
31	RH	157	TYR	N-CA-C	-7.55	103.14	112.88
54	Y8	38	GLY	N-CA-C	-7.55	103.25	113.37
28	YE	185	LYS	N-CA-C	7.54	119.87	109.54
48	Y2	21	LEU	N-CA-C	-7.53	103.01	111.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	RN	116	LEU	N-CA-C	-7.53	102.74	112.23
45	RZ	176	PRO	N-CA-C	7.53	119.88	110.70
28	RE	185	LYS	N-CA-C	7.53	119.85	109.54
12	QL	58	VAL	N-CA-C	7.51	118.89	107.77
5	XE	11	ILE	N-CA-C	7.51	117.98	111.90
35	YP	26	GLY	N-CA-C	-7.51	98.55	111.47
45	YZ	112	ARG	N-CA-C	-7.49	100.17	110.35
12	XL	58	VAL	N-CA-C	7.48	118.84	107.77
35	RP	26	GLY	N-CA-C	-7.48	98.61	111.47
25	RA	1130	U	P-O3'-C3'	7.46	131.39	120.20
31	RH	117	PRO	N-CA-C	7.45	119.78	110.70
48	R2	41	ILE	N-CA-C	-7.44	103.31	112.76
27	RD	43	ARG	N-CA-C	7.41	121.97	113.15
48	R2	21	LEU	N-CA-C	-7.40	103.15	111.07
48	Y2	41	ILE	N-CA-C	-7.38	103.38	112.76
31	YH	117	PRO	N-CA-C	7.38	119.70	110.70
43	YX	81	VAL	N-CA-C	7.33	119.63	108.71
54	R8	54	GLU	N-CA-C	-7.30	102.50	111.33
17	QQ	60	ILE	N-CA-C	7.29	118.62	108.12
27	YD	43	ARG	N-CA-C	7.28	122.01	113.20
41	YV	49	THR	CA-C-N	-7.28	110.74	119.84
41	YV	49	THR	C-N-CA	-7.28	110.74	119.84
16	XP	68	ASP	N-CA-C	-7.27	102.37	112.12
16	QP	68	ASP	N-CA-C	-7.27	102.38	112.12
31	RH	139	GLN	N-CA-C	-7.25	103.37	111.28
17	XQ	60	ILE	N-CA-C	7.25	118.56	108.12
40	RU	76	TYR	N-CA-C	-7.25	102.41	111.11
54	Y8	54	GLU	N-CA-C	-7.25	102.56	111.33
43	RX	81	VAL	N-CA-C	7.25	119.50	108.71
9	XI	63	ILE	N-CA-C	7.24	118.49	107.77
4	XD	14	ARG	CA-C-N	-7.24	107.83	122.31
4	XD	14	ARG	C-N-CA	-7.24	107.83	122.31
41	RV	49	THR	CA-C-N	-7.23	110.80	119.84
41	RV	49	THR	C-N-CA	-7.23	110.80	119.84
40	YU	76	TYR	N-CA-C	-7.23	102.44	111.11
27	RD	53	PHE	N-CA-C	7.21	121.66	112.86
35	YP	112	LEU	N-CA-C	7.21	121.42	109.46
1	QA	1528	U	C2'-C3'-O3'	7.19	120.29	109.50
9	QI	63	ILE	N-CA-C	7.19	118.41	107.77
48	Y2	16	LEU	N-CA-C	-7.19	95.48	110.80
32	YI	124	GLY	N-CA-C	7.19	119.58	110.38
48	R2	16	LEU	N-CA-C	-7.19	95.49	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
14	XN	53	LEU	CA-C-N	7.18	127.59	119.83
14	XN	53	LEU	C-N-CA	7.18	127.59	119.83
31	YH	139	GLN	N-CA-C	-7.17	103.46	111.28
25	YA	1130	U	P-O3'-C3'	7.17	130.95	120.20
4	QD	112	VAL	N-CA-C	7.17	117.25	110.30
35	RP	112	LEU	N-CA-C	7.17	121.36	109.46
19	XS	6	LYS	N-CA-C	-7.16	95.54	110.80
13	QM	11	ARG	N-CA-C	7.16	117.97	107.88
53	Y7	19	ARG	N-CA-C	-7.13	103.55	111.82
25	YA	1694	C	C4'-C3'-O3'	7.13	120.09	109.40
13	XM	11	ARG	N-CA-C	7.13	117.93	107.88
27	YD	53	PHE	N-CA-C	7.12	121.55	112.86
9	XI	86	VAL	N-CA-C	-7.10	102.34	112.35
25	RA	227	A	C2'-C3'-O3'	7.08	120.12	109.50
19	QS	6	LYS	N-CA-C	-7.08	95.72	110.80
28	YE	168	MET	N-CA-C	7.07	121.04	109.94
28	RE	168	MET	N-CA-C	7.07	121.03	109.94
29	YF	203	GLN	N-CA-C	-7.07	103.27	110.97
14	QN	53	LEU	CA-C-N	7.06	127.46	119.83
14	QN	53	LEU	C-N-CA	7.06	127.46	119.83
29	RF	203	GLN	N-CA-C	-7.05	103.29	110.97
25	RA	2848	G	P-O3'-C3'	7.05	130.77	120.20
15	QO	9	GLN	N-CA-C	-7.04	103.53	111.07
53	R7	19	ARG	N-CA-C	-7.03	103.67	111.82
19	QS	36	ARG	N-CA-C	-7.02	104.69	113.18
19	XS	36	ARG	N-CA-C	-7.00	104.71	113.18
9	QI	86	VAL	N-CA-C	-7.00	102.48	112.35
4	XD	112	VAL	N-CA-C	6.99	117.08	110.30
34	YO	90	GLN	N-CA-C	-6.98	104.37	113.17
28	YE	188	VAL	CA-C-N	6.96	128.54	119.84
28	YE	188	VAL	C-N-CA	6.96	128.54	119.84
15	XO	9	GLN	N-CA-C	-6.95	103.64	111.07
18	XR	50	ILE	N-CA-C	-6.95	100.62	109.58
28	RE	188	VAL	CA-C-N	6.95	128.52	119.84
28	RE	188	VAL	C-N-CA	6.95	128.52	119.84
25	YA	2602	A	C2'-C3'-O3'	-6.94	99.09	109.50
1	XA	115	G	P-O3'-C3'	6.92	130.58	120.20
25	YA	587	C	C4'-C3'-O3'	6.92	119.78	109.40
18	QR	50	ILE	N-CA-C	-6.91	100.67	109.58
29	YF	24	LEU	CA-C-N	6.90	128.46	119.84
29	YF	24	LEU	C-N-CA	6.90	128.46	119.84
25	YA	1694	C	P-O3'-C3'	6.88	130.51	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	YA	2681	C	C2'-C3'-O3'	6.88	119.81	109.50
39	RT	80	SER	CA-C-N	6.87	126.55	119.82
39	RT	80	SER	C-N-CA	6.87	126.55	119.82
36	YQ	10	ARG	N-CA-C	-6.87	99.11	110.17
36	YQ	116	GLU	N-CA-C	-6.87	103.24	111.69
42	YW	9	TYR	N-CA-C	6.87	120.99	112.47
36	RQ	10	ARG	N-CA-C	-6.85	99.14	110.17
38	RS	110	LEU	N-CA-C	6.85	120.11	108.67
1	XA	812	C	P-O3'-C3'	6.85	130.47	120.20
33	YN	71	ILE	N-CA-C	6.84	117.75	108.17
29	RF	24	LEU	CA-C-N	6.84	128.38	119.84
29	RF	24	LEU	C-N-CA	6.84	128.38	119.84
45	RZ	157	LEU	CA-C-N	6.83	127.42	120.38
45	RZ	157	LEU	C-N-CA	6.83	127.42	120.38
34	RO	90	GLN	N-CA-C	-6.83	104.56	113.17
39	YT	80	SER	CA-C-N	6.83	126.51	119.82
39	YT	80	SER	C-N-CA	6.83	126.51	119.82
42	RW	9	TYR	N-CA-C	6.82	120.92	112.47
6	QF	60	PHE	N-CA-C	6.81	120.61	110.52
36	RQ	116	GLU	N-CA-C	-6.81	103.31	111.69
38	YS	110	LEU	N-CA-C	6.81	120.04	108.67
35	RP	25	SER	N-CA-C	-6.80	96.31	110.80
18	QR	87	ARG	N-CA-C	6.78	118.84	110.91
33	RN	71	ILE	N-CA-C	6.78	117.66	108.17
6	XF	60	PHE	N-CA-C	6.77	120.55	110.52
40	RU	81	HIS	N-CA-C	-6.77	103.82	111.07
40	YU	81	HIS	N-CA-C	-6.77	103.82	111.07
35	YP	25	SER	N-CA-C	-6.77	96.38	110.80
27	YD	198	ASN	N-CA-C	-6.71	102.22	111.28
39	RT	111	ARG	N-CA-C	-6.69	99.35	109.79
36	YQ	46	GLN	N-CA-C	-6.69	105.12	113.55
39	YT	111	ARG	N-CA-C	-6.69	99.35	109.79
27	RD	198	ASN	N-CA-C	-6.69	102.25	111.28
18	XR	87	ARG	N-CA-C	6.69	118.74	110.91
36	RQ	46	GLN	N-CA-C	-6.69	105.12	113.55
27	RD	223	GLY	N-CA-C	-6.68	104.40	112.49
17	QQ	62	SER	N-CA-C	6.68	116.87	108.45
37	RR	76	VAL	N-CA-C	-6.67	102.71	111.05
25	YA	2712	U	P-O3'-C3'	6.67	127.70	119.70
5	XE	99	GLY	N-CA-C	-6.67	102.23	111.76
25	YA	271(B)	G	C2'-C3'-O3'	6.63	119.45	109.50
37	YR	74	LYS	N-CA-C	-6.63	101.77	110.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	YR	76	VAL	N-CA-C	-6.63	102.77	111.05
25	YA	265	A	O4'-C1'-N9	6.62	118.44	108.50
25	YA	221	A	N9-C1'-C2'	-6.62	104.07	114.00
27	YD	223	GLY	N-CA-C	-6.62	104.48	112.49
52	R6	11	LEU	N-CA-C	6.62	120.31	109.72
5	QE	99	GLY	N-CA-C	-6.61	102.30	111.76
25	YA	271(B)	G	P-O3'-C3'	6.61	127.63	119.70
52	Y6	11	LEU	N-CA-C	6.61	120.29	109.72
1	XA	812	C	C2'-C3'-O3'	6.60	119.40	109.50
38	RS	15	ARG	N-CA-C	-6.60	103.57	111.69
25	YA	1543	A	C4'-C3'-C2'	-6.59	96.01	102.60
36	RQ	65	PHE	N-CA-C	6.58	121.84	113.55
38	YS	15	ARG	N-CA-C	-6.58	103.60	111.69
28	YE	95	ILE	N-CA-C	-6.58	104.45	113.00
28	RE	95	ILE	N-CA-C	-6.57	104.45	113.00
36	YQ	65	PHE	N-CA-C	6.57	121.83	113.55
25	RA	1992	G	C2'-C3'-O3'	6.57	119.36	109.50
27	YD	14	ARG	N-CA-C	-6.55	104.34	112.72
37	RR	74	LYS	N-CA-C	-6.54	101.89	110.33
25	YA	508	G	N9-C1'-C2'	6.54	121.81	112.00
47	Y1	83	GLU	N-CA-C	6.54	120.50	110.36
36	RQ	82	ARG	N-CA-C	6.53	123.82	114.16
47	R1	83	GLU	N-CA-C	6.53	120.48	110.36
39	RT	131	ALA	N-CA-C	-6.53	104.89	112.92
1	QA	792	A	P-O3'-C3'	6.52	129.99	120.20
14	XN	7	ILE	N-CA-C	-6.52	104.13	110.72
39	YT	113	LYS	N-CA-C	-6.51	102.85	111.24
19	XS	79	THR	N-CA-C	-6.50	96.95	110.80
36	YQ	82	ARG	N-CA-C	6.50	123.78	114.16
25	RA	1022	G	C2'-C3'-O3'	6.48	119.22	109.50
27	RD	14	ARG	N-CA-C	-6.46	104.44	112.72
42	YW	112	GLY	N-CA-C	-6.46	106.76	115.36
31	YH	164	TYR	N-CA-C	-6.46	100.72	110.28
28	YE	125	GLY	CA-C-N	6.46	127.91	119.84
28	YE	125	GLY	C-N-CA	6.46	127.91	119.84
31	RH	164	TYR	N-CA-C	-6.45	100.73	110.28
17	XQ	62	SER	N-CA-C	6.45	116.58	108.45
40	RU	89	GLU	N-CA-C	-6.45	103.93	113.61
42	RW	112	GLY	N-CA-C	-6.45	106.79	115.36
1	QA	1297	C	C2'-C3'-O3'	6.44	119.16	109.50
19	QS	79	THR	N-CA-C	-6.44	97.08	110.80
30	RG	28	VAL	N-CA-C	6.44	117.96	110.62

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	Y8	48	PHE	N-CA-C	6.43	118.88	108.34
40	YU	89	GLU	N-CA-C	-6.43	103.97	113.61
14	QN	7	ILE	N-CA-C	-6.42	104.23	110.72
28	RE	125	GLY	CA-C-N	6.42	127.86	119.84
28	RE	125	GLY	C-N-CA	6.42	127.86	119.84
27	YD	83	GLU	N-CA-C	6.42	118.93	109.69
30	RG	55	LYS	N-CA-C	-6.41	102.93	111.96
39	RT	113	LYS	N-CA-C	-6.41	102.98	111.24
30	YG	55	LYS	N-CA-C	-6.40	102.94	111.96
27	RD	83	GLU	N-CA-C	6.39	118.89	109.69
4	XD	12	CYS	N-CA-C	-6.39	104.31	111.28
25	RA	1653	G	P-O3'-C3'	6.38	129.77	120.20
30	YG	28	VAL	N-CA-C	6.38	117.89	110.62
54	R8	50	LEU	N-CA-C	6.38	118.88	108.55
39	YT	123	GLN	N-CA-C	-6.36	97.25	110.80
33	YN	113	GLY	N-CA-C	-6.36	105.10	112.73
36	YQ	106	VAL	N-CA-C	6.35	116.28	108.53
54	R8	23	VAL	N-CA-C	6.35	117.16	107.77
54	R8	48	PHE	N-CA-C	6.34	118.74	108.34
39	YT	131	ALA	N-CA-C	-6.33	105.13	112.92
33	RN	113	GLY	N-CA-C	-6.33	105.14	112.73
39	RT	130	ALA	N-CA-C	-6.33	106.15	114.31
40	YU	65	ILE	CB-CA-C	-6.33	103.90	111.81
36	RQ	106	VAL	N-CA-C	6.32	116.23	108.53
25	RA	242	G	P-O3'-C3'	6.31	129.67	120.20
40	RU	65	ILE	CB-CA-C	-6.31	103.92	111.81
54	Y8	50	LEU	N-CA-C	6.31	118.78	108.55
5	QE	32	VAL	N-CA-C	6.31	117.57	108.48
39	RT	123	GLN	N-CA-C	-6.31	97.36	110.80
13	XM	91	ARG	N-CA-C	-6.31	105.44	113.01
16	XP	74	LEU	N-CA-C	-6.29	105.77	113.50
25	YA	242	G	P-O3'-C3'	6.28	129.62	120.20
16	QP	74	LEU	N-CA-C	-6.28	105.77	113.50
1	XA	115	G	C4'-C3'-O3'	6.28	118.82	109.40
39	YT	130	ALA	N-CA-C	-6.28	106.21	114.31
1	QA	701	C	C2'-C3'-O3'	6.28	118.92	109.50
4	QD	21	LEU	N-CA-C	-6.28	104.93	112.59
5	XE	32	VAL	N-CA-C	6.28	117.52	108.48
33	RN	107	LEU	N-CA-C	-6.27	101.88	109.72
54	Y8	23	VAL	N-CA-C	6.27	117.05	107.77
25	YA	1992	G	P-O3'-C3'	6.27	129.60	120.20
4	XD	21	LEU	N-CA-C	-6.26	104.95	112.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
33	YN	107	LEU	N-CA-C	-6.26	101.90	109.72
27	YD	69	ARG	N-CA-C	6.25	120.91	113.28
1	QA	812	C	P-O3'-C3'	6.24	129.56	120.20
12	XL	89	ARG	N-CA-C	6.23	118.57	110.53
27	RD	272	ALA	N-CA-C	6.23	124.08	110.80
27	YD	272	ALA	N-CA-C	6.23	124.07	110.80
9	QI	60	ASP	N-CA-C	-6.23	99.93	109.65
25	RA	1694	C	C4'-C3'-O3'	6.22	118.73	109.40
33	YN	13	TRP	N-CA-C	6.20	118.71	109.59
13	QM	91	ARG	N-CA-C	-6.20	105.57	113.01
25	RA	1022	G	P-O3'-C3'	6.20	129.50	120.20
12	QL	89	ARG	N-CA-C	6.19	118.52	110.53
50	R4	68	ARG	N-CA-C	6.19	123.98	110.80
37	YR	24	GLN	N-CA-C	-6.18	104.47	111.14
25	YA	746	A	C4'-C3'-O3'	-6.18	103.73	113.00
27	RD	226	MET	N-CA-C	6.17	117.85	110.19
50	Y4	68	ARG	N-CA-C	6.17	123.95	110.80
21	QU	8	THR	N-CA-C	6.17	116.71	108.38
14	QN	39	LEU	CA-C-N	-6.17	112.06	122.92
14	QN	39	LEU	C-N-CA	-6.17	112.06	122.92
27	RD	69	ARG	N-CA-C	6.17	120.80	113.28
27	YD	226	MET	N-CA-C	6.17	117.84	110.19
37	RR	24	GLN	N-CA-C	-6.16	104.48	111.14
4	XD	31	CYS	N-CA-C	-6.16	97.67	110.80
9	XI	60	ASP	N-CA-C	-6.16	100.03	109.65
30	YG	44	GLY	N-CA-C	-6.16	105.11	113.37
31	YH	127	GLU	N-CA-C	-6.14	96.24	109.81
31	RH	127	GLU	N-CA-C	-6.14	96.24	109.81
30	RG	44	GLY	N-CA-C	-6.14	105.14	113.37
27	RD	88	ARG	N-CA-C	6.13	117.55	108.60
21	XU	8	THR	N-CA-C	6.13	116.66	108.38
35	YP	63	PRO	N-CA-C	6.13	120.75	112.48
35	RP	63	PRO	N-CA-C	6.12	120.75	112.48
27	YD	22	SER	N-CA-C	-6.12	103.93	111.40
1	XA	1201	A	P-O3'-C3'	6.12	129.38	120.20
32	YI	135	GLU	N-CA-C	6.12	120.21	109.80
33	RN	57	ALA	N-CA-C	-6.12	100.60	109.59
19	XS	39	THR	N-CA-C	-6.11	102.89	108.75
19	QS	39	THR	N-CA-C	-6.10	102.89	108.75
4	XD	41	GLY	N-CA-C	6.10	120.37	112.68
33	YN	57	ALA	N-CA-C	-6.10	100.62	109.59
39	RT	76	PHE	CA-C-N	6.10	127.47	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
39	RT	76	PHE	C-N-CA	6.10	127.47	119.84
43	RX	5	TYR	N-CA-C	-6.10	106.10	112.93
42	YW	60	ASN	N-CA-C	6.10	123.79	110.80
36	YQ	96	VAL	N-CA-C	6.10	116.03	107.37
4	QD	41	GLY	N-CA-C	6.09	120.36	112.68
42	RW	60	ASN	N-CA-C	6.09	123.77	110.80
33	RN	13	TRP	N-CA-C	6.09	118.54	109.59
35	RP	58	THR	N-CA-C	-6.08	102.98	110.65
4	XD	204	ILE	N-CA-C	-6.08	105.79	111.45
39	YT	76	PHE	CA-C-N	6.08	127.44	119.84
39	YT	76	PHE	C-N-CA	6.08	127.44	119.84
27	YD	230	ASP	N-CA-C	6.08	119.95	111.56
2	XB	37	ASN	N-CA-C	-6.08	105.82	113.23
42	YW	92	ARG	N-CA-C	6.06	117.76	111.03
43	YX	5	TYR	N-CA-C	-6.06	106.14	112.93
37	RR	111	LEU	N-CA-C	6.06	119.43	110.46
1	XA	753	A	P-O3'-C3'	6.06	129.28	120.20
27	RD	22	SER	N-CA-C	-6.05	104.02	111.40
28	YE	77	ILE	N-CA-C	-6.05	103.57	112.04
4	QD	204	ILE	N-CA-C	-6.05	105.83	111.45
41	RV	14	VAL	N-CA-C	6.05	116.64	110.05
42	RW	92	ARG	N-CA-C	6.05	117.74	111.03
37	RR	2	ARG	N-CA-C	-6.04	97.92	110.80
27	RD	230	ASP	N-CA-C	6.04	119.90	111.56
36	RQ	96	VAL	N-CA-C	6.04	115.95	107.37
27	YD	88	ARG	N-CA-C	6.04	117.42	108.60
25	RA	1667	G	N9-C1'-C2'	6.04	121.05	112.00
20	XT	42	GLN	N-CA-C	-6.04	105.88	113.18
45	RZ	131	ARG	N-CA-C	-6.03	107.74	114.62
47	Y1	51	VAL	N-CA-C	6.03	117.17	108.48
48	Y2	45	SER	N-CA-C	6.03	118.23	109.07
25	YA	1653	G	C2'-C3'-O3'	6.03	118.54	109.50
37	YR	2	ARG	N-CA-C	-6.02	97.97	110.80
35	YP	58	THR	N-CA-C	-6.02	103.07	110.65
27	YD	107	ALA	N-CA-C	6.02	118.33	109.42
8	XH	28	ALA	N-CA-C	6.02	118.31	110.43
27	RD	107	ALA	N-CA-C	6.01	118.32	109.42
48	R2	45	SER	N-CA-C	6.01	118.21	109.07
37	YR	111	LEU	N-CA-C	6.01	119.36	110.46
2	QB	37	ASN	N-CA-C	-6.00	105.91	113.23
36	RQ	97	VAL	N-CA-C	6.00	116.94	108.36
28	YE	18	ASP	N-CA-C	-6.00	98.94	109.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	RE	77	ILE	N-CA-C	-6.00	103.64	112.04
47	R1	51	VAL	N-CA-C	6.00	117.11	108.48
36	YQ	97	VAL	N-CA-C	5.99	116.93	108.36
25	YA	270(S)	G	OP1-P-O3'	5.98	118.36	105.20
20	QT	42	GLN	N-CA-C	-5.98	105.95	113.18
54	Y8	60	LEU	N-CA-C	-5.98	104.12	112.25
28	RE	18	ASP	N-CA-C	-5.97	98.98	109.02
29	RF	183	VAL	N-CA-C	5.97	117.42	110.62
33	RN	38	HIS	N-CA-C	-5.97	106.33	113.97
54	R8	60	LEU	N-CA-C	-5.97	104.14	112.25
25	RA	2490	G	C4-N9-C1'	5.96	144.38	126.50
35	YP	62	LEU	N-CA-C	5.96	115.80	108.11
41	YV	14	VAL	N-CA-C	5.95	116.54	110.05
5	QE	11	ILE	CB-CA-C	-5.95	105.82	111.06
12	XL	45	PRO	CA-N-CD	-5.95	103.67	112.00
29	YF	183	VAL	N-CA-C	5.95	117.40	110.62
35	YP	19	VAL	N-CA-C	5.94	121.70	109.34
8	QH	28	ALA	N-CA-C	5.94	118.22	110.43
5	QE	150	ARG	N-CA-C	-5.94	105.61	112.92
27	RD	106	ILE	N-CA-C	-5.94	101.88	109.30
25	YA	2655	G	C2'-C3'-O3'	5.94	118.40	109.50
1	QA	812	C	C2'-C3'-O3'	5.93	118.40	109.50
41	RV	69	LYS	N-CA-C	5.93	118.96	110.24
47	R1	56	GLN	N-CA-C	5.93	119.88	109.80
11	QK	75	TYR	N-CA-C	-5.92	106.30	112.93
27	RD	99	ASP	N-CA-C	-5.92	105.31	112.54
27	YD	196	VAL	N-CA-C	5.92	120.42	111.89
47	Y1	56	GLN	N-CA-C	5.92	119.86	109.80
32	YI	133	HIS	CA-C-N	-5.91	113.44	119.83
32	YI	133	HIS	C-N-CA	-5.91	113.44	119.83
50	Y4	56	VAL	N-CA-C	-5.91	108.09	113.71
1	QA	1528	U	P-O3'-C3'	5.91	129.06	120.20
41	YV	69	LYS	N-CA-C	5.91	118.92	110.24
20	QT	77	ALA	N-CA-C	-5.91	104.92	111.71
2	XB	24	TRP	CA-C-O	5.90	121.36	117.94
27	YD	200	ASP	N-CA-C	-5.90	105.57	112.89
25	RA	2439	A	P-O3'-C3'	5.90	129.05	120.20
35	RP	62	LEU	N-CA-C	5.90	115.72	108.11
35	RP	19	VAL	N-CA-C	5.90	121.61	109.34
31	YH	125	VAL	C-N-CD	-5.90	107.62	120.60
50	R4	56	VAL	N-CA-C	-5.89	108.11	113.71
11	XK	116	HIS	N-CA-C	-5.89	103.33	111.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	XT	77	ALA	N-CA-C	-5.89	104.93	111.71
42	YW	101	SER	N-CA-C	5.89	119.27	110.14
51	Y5	4	HIS	CA-C-N	-5.89	113.87	119.76
51	Y5	4	HIS	C-N-CA	-5.89	113.87	119.76
45	RZ	98	MET	N-CA-C	5.88	117.47	108.42
38	RS	6	ALA	N-CA-C	-5.87	104.96	111.71
31	YH	4	ILE	N-CA-C	5.87	117.22	108.23
42	RW	101	SER	N-CA-C	5.87	119.23	110.14
11	XK	75	TYR	N-CA-C	-5.87	106.36	112.93
33	YN	38	HIS	N-CA-C	-5.86	106.46	113.97
29	RF	151	SER	N-CA-C	-5.86	106.11	113.20
27	YD	99	ASP	N-CA-C	-5.86	105.39	112.54
1	QA	410	G	C4'-C3'-O3'	5.86	121.79	113.00
31	RH	125	VAL	C-N-CD	-5.86	107.71	120.60
31	RH	4	ILE	N-CA-C	5.85	117.18	108.23
27	YD	106	ILE	N-CA-C	-5.85	101.99	109.30
27	RD	200	ASP	N-CA-C	-5.85	105.64	112.89
29	YF	85	GLY	N-CA-C	-5.84	107.59	115.36
36	RQ	81	VAL	CA-C-N	-5.84	111.19	120.70
36	RQ	81	VAL	C-N-CA	-5.84	111.19	120.70
20	QT	91	LEU	N-CA-C	-5.83	106.33	113.50
32	RI	133	HIS	CA-C-N	-5.83	113.21	119.98
32	RI	133	HIS	C-N-CA	-5.83	113.21	119.98
36	YQ	81	VAL	CA-C-N	-5.83	111.19	120.70
36	YQ	81	VAL	C-N-CA	-5.83	111.19	120.70
13	QM	24	GLY	N-CA-C	-5.83	107.63	115.21
5	XE	150	ARG	N-CA-C	-5.83	105.75	112.92
13	XM	24	GLY	N-CA-C	-5.83	107.64	115.21
27	RD	196	VAL	N-CA-C	5.83	120.28	111.89
8	QH	12	ARG	N-CA-C	-5.82	104.93	111.28
14	QN	39	LEU	N-CA-C	5.82	117.44	109.18
1	XA	934	C	C2'-C3'-O3'	5.82	118.22	109.50
29	YF	151	SER	N-CA-C	-5.82	106.16	113.20
17	QQ	46	ASP	CA-C-N	5.81	127.10	119.84
17	QQ	46	ASP	C-N-CA	5.81	127.10	119.84
28	RE	118	LYS	N-CA-C	-5.81	98.43	110.80
8	XH	12	ARG	N-CA-C	-5.81	104.95	111.28
45	RZ	129	SER	CA-C-N	5.80	127.10	119.84
45	RZ	129	SER	C-N-CA	5.80	127.10	119.84
51	R5	4	HIS	CA-C-N	-5.80	113.96	119.76
51	R5	4	HIS	C-N-CA	-5.80	113.96	119.76
31	RH	161	GLY	N-CA-C	5.80	118.30	111.63

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	YE	118	LYS	N-CA-C	-5.79	98.47	110.80
20	XT	91	LEU	N-CA-C	-5.79	106.38	113.50
30	RG	58	GLN	N-CA-C	-5.79	105.72	112.89
9	XI	118	LYS	N-CA-C	5.78	118.79	109.83
25	YA	2681	C	P-O3'-C3'	5.78	128.88	120.20
38	YS	12	PHE	N-CA-C	-5.77	98.50	110.80
11	QK	116	HIS	N-CA-C	-5.77	103.51	111.81
1	XA	792	A	N9-C1'-C2'	5.76	122.64	114.00
31	YH	161	GLY	N-CA-C	5.76	118.25	111.63
46	Y0	37	LEU	N-CA-C	-5.76	106.60	113.97
42	RW	6	ILE	N-CA-C	5.75	117.03	108.23
32	RI	79	ILE	CA-C-N	5.75	127.03	119.84
32	RI	79	ILE	C-N-CA	5.75	127.03	119.84
9	XI	55	ALA	N-CA-C	-5.75	103.67	111.55
25	YA	752	A	P-O3'-C3'	5.75	128.82	120.20
9	QI	55	ALA	N-CA-C	-5.74	103.68	111.55
25	RA	1694	C	P-O3'-C3'	5.74	128.81	120.20
25	RA	2060	A	C4'-C3'-O3'	5.74	118.01	109.40
50	R4	67	TYR	N-CA-C	5.74	118.57	109.50
25	YA	102	G	P-O3'-C3'	5.74	128.81	120.20
42	YW	6	ILE	N-CA-C	5.74	117.01	108.23
39	RT	70	VAL	N-CA-C	5.74	116.74	108.48
39	RT	121	ILE	N-CA-C	-5.74	104.74	111.00
9	QI	118	LYS	N-CA-C	5.74	118.72	109.83
30	YG	58	GLN	N-CA-C	-5.74	105.78	112.89
2	QB	56	ARG	N-CA-C	-5.73	104.40	111.33
38	RS	12	PHE	N-CA-C	-5.73	98.59	110.80
39	YT	121	ILE	N-CA-C	-5.73	104.76	111.00
5	XE	26	PHE	N-CA-C	5.72	118.92	109.94
19	XS	45	VAL	N-CA-C	5.71	121.23	109.34
50	Y4	67	TYR	N-CA-C	5.71	118.52	109.50
38	YS	6	ALA	N-CA-C	-5.71	105.15	111.71
39	YT	70	VAL	N-CA-C	5.71	116.69	108.48
39	YT	108	ARG	N-CA-C	-5.70	106.49	113.50
2	QB	7	VAL	N-CA-C	5.70	118.36	108.90
5	QE	26	PHE	N-CA-C	5.70	118.89	109.94
30	RG	20	ILE	N-CA-C	-5.70	104.81	110.62
25	YA	512	G	O4'-C1'-N9	5.70	117.05	108.50
28	YE	49	LEU	N-CA-C	5.70	119.76	112.12
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
27	RD	120	GLY	CA-C-N	5.70	125.55	119.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	RD	120	GLY	C-N-CA	5.70	125.55	119.28
29	RF	85	GLY	N-CA-C	-5.70	107.78	115.36
6	QF	95	GLU	CA-C-N	5.69	126.95	119.84
6	QF	95	GLU	C-N-CA	5.69	126.95	119.84
28	YE	131	ALA	CB-CA-C	-5.69	110.03	116.63
25	RA	2689	U	C4'-C3'-O3'	5.68	117.93	109.40
28	YE	159	HIS	N-CA-C	-5.68	101.99	110.23
28	RE	49	LEU	N-CA-C	5.68	119.73	112.12
17	XQ	46	ASP	CA-C-N	5.67	126.93	119.84
17	XQ	46	ASP	C-N-CA	5.67	126.93	119.84
30	YG	20	ILE	N-CA-C	-5.67	104.84	110.62
9	QI	93	ARG	N-CA-C	-5.66	106.54	113.50
44	RY	44	ILE	N-CA-C	5.66	116.33	108.23
42	YW	13	SER	CA-C-N	5.66	126.91	119.84
42	YW	13	SER	C-N-CA	5.66	126.91	119.84
38	RS	72	ALA	N-CA-C	-5.66	105.03	111.14
2	XB	7	VAL	N-CA-C	5.66	118.29	108.90
28	RE	159	HIS	N-CA-C	-5.65	102.03	110.23
39	RT	108	ARG	N-CA-C	-5.65	106.55	113.50
35	RP	123	LEU	N-CA-C	5.65	117.55	109.14
13	QM	88	ARG	N-CA-C	-5.64	106.10	112.87
2	XB	108	ILE	N-CA-C	-5.63	104.44	110.36
29	RF	97	TYR	N-CA-C	5.63	119.62	112.87
35	YP	123	LEU	N-CA-C	5.63	117.52	109.14
9	XI	87	GLN	N-CA-C	-5.62	104.79	111.03
6	XF	95	GLU	CA-C-N	5.62	126.87	119.84
6	XF	95	GLU	C-N-CA	5.62	126.87	119.84
19	QS	45	VAL	N-CA-C	5.62	121.03	109.34
28	YE	198	VAL	N-CA-C	5.62	116.21	107.28
38	RS	53	SER	N-CA-C	-5.61	106.60	113.50
2	XB	56	ARG	N-CA-C	-5.61	104.55	111.33
36	YQ	21	THR	N-CA-C	5.61	122.74	110.80
38	YS	72	ALA	N-CA-C	-5.61	105.08	111.14
27	RD	268	ARG	N-CA-C	5.60	119.62	112.34
29	YF	97	TYR	N-CA-C	5.60	119.59	112.87
2	QB	108	ILE	N-CA-C	-5.60	104.48	110.36
11	QK	120	ARG	N-CA-C	-5.60	102.56	110.29
27	YD	120	GLY	CA-C-N	5.60	125.44	119.28
27	YD	120	GLY	C-N-CA	5.60	125.44	119.28
44	YY	44	ILE	N-CA-C	5.60	116.23	108.23
42	RW	13	SER	N-CA-C	5.59	119.57	109.44
15	XO	54	ARG	N-CA-C	-5.59	104.19	111.02

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	YE	93	VAL	N-CA-C	-5.59	97.70	109.34
25	YA	1819	A	P-O3'-C3'	5.59	128.58	120.20
27	YD	268	ARG	N-CA-C	5.59	119.61	112.34
13	XM	88	ARG	N-CA-C	-5.59	106.17	112.87
42	YW	13	SER	N-CA-C	5.58	119.55	109.44
25	YA	74	A	P-O3'-C3'	5.58	128.58	120.20
5	XE	11	ILE	CB-CA-C	-5.58	105.94	111.30
43	YX	12	VAL	N-CA-C	-5.58	101.62	109.21
9	QI	87	GLN	N-CA-C	-5.58	104.84	111.03
15	QO	54	ARG	N-CA-C	-5.58	104.22	111.02
45	YZ	14	LYS	CA-C-N	5.57	126.81	119.84
45	YZ	14	LYS	C-N-CA	5.57	126.81	119.84
36	YQ	26	TYR	N-CA-C	5.57	119.17	111.71
27	YD	11	PRO	N-CA-C	-5.56	102.26	111.11
27	RD	174	ILE	N-CA-C	5.56	116.87	109.37
50	Y4	15	ILE	N-CA-C	5.56	118.13	108.90
25	YA	752	A	C2'-C3'-O3'	5.55	117.83	109.50
28	RE	198	VAL	N-CA-C	5.55	116.11	107.28
42	RW	13	SER	CA-C-N	5.55	126.78	119.84
42	RW	13	SER	C-N-CA	5.55	126.78	119.84
25	YA	74	A	C4'-C3'-O3'	5.55	117.72	109.40
28	RE	93	VAL	N-CA-C	-5.54	97.81	109.34
38	YS	53	SER	N-CA-C	-5.54	106.68	113.50
27	RD	11	PRO	N-CA-C	-5.54	102.30	111.11
40	YU	50	ARG	N-CA-C	-5.54	105.14	111.07
28	RE	131	ALA	CB-CA-C	-5.54	110.20	116.63
50	R4	15	ILE	N-CA-C	5.54	118.09	108.90
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
1	XA	913	A	P-O3'-C3'	5.54	128.50	120.20
43	RX	12	VAL	N-CA-C	-5.53	101.68	109.21
28	RE	174	ASP	N-CA-C	5.53	115.54	108.24
27	YD	174	ILE	N-CA-C	5.53	116.83	109.37
25	RA	2490	G	C8-N9-C1'	-5.53	110.42	127.00
28	YE	87	GLU	N-CA-C	-5.53	103.85	111.81
28	YE	174	ASP	N-CA-C	5.53	115.54	108.24
43	RX	38	GLU	N-CA-C	-5.52	106.71	113.50
27	RD	146	GLU	N-CA-C	-5.52	101.86	110.42
9	XI	93	ARG	N-CA-C	-5.52	106.71	113.50
32	YI	79	ILE	CA-C-N	5.51	126.73	119.84
32	YI	79	ILE	C-N-CA	5.51	126.73	119.84
16	QP	20	VAL	N-CA-C	5.51	116.98	108.44

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
27	YD	146	GLU	N-CA-C	-5.50	101.89	110.42
28	RE	87	GLU	N-CA-C	-5.50	103.89	111.81
2	QB	86	GLU	N-CA-C	-5.50	104.93	111.69
43	YX	38	GLU	N-CA-C	-5.50	106.74	113.50
36	RQ	21	THR	N-CA-C	5.49	122.50	110.80
3	QC	88	ARG	N-CA-C	-5.49	106.28	112.87
1	QA	410	G	P-O3'-C3'	5.49	128.43	120.20
25	YA	587	C	P-O3'-C3'	5.48	128.42	120.20
29	RF	46	ARG	N-CA-C	5.48	119.69	112.89
41	YV	17	GLY	N-CA-C	-5.48	106.10	115.08
42	RW	21	VAL	N-CA-C	-5.47	105.81	112.76
12	QL	47	LYS	CA-C-N	-5.47	113.00	119.84
12	QL	47	LYS	C-N-CA	-5.47	113.00	119.84
12	XL	127	GLU	N-CA-C	-5.47	105.82	113.37
31	RH	38	SER	CA-C-N	5.47	125.14	119.56
31	RH	38	SER	C-N-CA	5.47	125.14	119.56
16	XP	20	VAL	N-CA-C	5.47	116.91	108.44
19	XS	80	TYR	N-CA-C	5.47	119.72	112.72
2	XB	86	GLU	N-CA-C	-5.46	104.97	111.69
38	YS	101	LEU	N-CA-C	-5.46	104.97	111.69
25	RA	2776	A	P-O3'-C3'	5.46	128.39	120.20
36	RQ	26	TYR	N-CA-C	5.46	119.02	111.71
25	YA	1786	A	N9-C1'-C2'	5.46	122.19	114.00
41	RV	17	GLY	N-CA-C	-5.45	106.14	115.08
1	XA	1503	A	P-O3'-C3'	5.45	128.37	120.20
47	R1	85	LEU	N-CA-C	5.44	117.99	108.52
35	RP	85	LEU	N-CA-C	-5.44	106.32	113.12
55	R9	3	VAL	N-CA-C	5.44	116.31	108.48
25	RA	974(A)	C	P-O3'-C3'	5.44	128.35	120.20
40	RU	50	ARG	N-CA-C	-5.44	105.25	111.07
29	YF	46	ARG	N-CA-C	5.44	119.63	112.89
46	Y0	23	VAL	CB-CA-C	-5.43	104.72	111.08
25	RA	271(B)	G	P-O3'-C3'	5.43	126.22	119.70
27	RD	65	ILE	N-CA-C	5.43	115.97	110.05
9	QI	61	ALA	N-CA-C	5.43	116.66	108.46
25	RA	227	A	P-O3'-C3'	5.43	128.34	120.20
30	RG	31	VAL	CA-C-N	5.43	126.62	119.84
30	RG	31	VAL	C-N-CA	5.43	126.62	119.84
9	XI	61	ALA	N-CA-C	5.42	116.65	108.46
40	YU	99	ALA	N-CA-C	-5.42	106.36	112.87
29	YF	169	ASN	N-CA-C	5.42	118.99	112.38
25	RA	746	A	C2'-C3'-O3'	5.41	117.62	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	RF	78	ILE	CB-CA-C	-5.41	104.95	112.04
1	QA	243	A	P-O3'-C3'	5.41	128.31	120.20
25	YA	222	A	P-O3'-C3'	5.40	128.30	120.20
1	XA	934	C	P-O3'-C3'	5.40	128.29	120.20
33	YN	92	ALA	N-CA-C	5.40	117.16	111.28
32	RI	124	GLY	N-CA-C	5.39	117.71	110.43
47	Y1	85	LEU	N-CA-C	5.39	117.90	108.52
12	QL	127	GLU	N-CA-C	-5.39	105.93	113.37
3	XC	88	ARG	N-CA-C	-5.39	106.40	112.87
25	YA	2776	A	P-O3'-C3'	5.39	128.28	120.20
7	XG	45	ASP	N-CA-C	-5.38	104.86	111.75
25	YA	2335	A	C2'-C3'-O3'	5.38	117.58	109.50
38	RS	101	LEU	N-CA-C	-5.38	105.07	111.69
34	YO	57	VAL	N-CA-C	-5.38	101.79	108.89
13	QM	107	ALA	N-CA-C	-5.37	107.38	114.04
27	YD	65	ILE	N-CA-C	5.37	115.91	110.05
10	XJ	66	ARG	N-CA-C	5.37	117.47	108.23
40	RU	99	ALA	N-CA-C	-5.36	106.44	112.87
8	XH	70	GLN	N-CA-C	5.36	118.19	109.24
34	RO	57	VAL	N-CA-C	-5.36	101.81	108.89
28	YE	2	LYS	N-CA-C	5.36	118.57	110.64
4	QD	174	LEU	N-CA-C	5.36	117.63	108.90
33	RN	92	ALA	N-CA-C	5.36	117.12	111.28
1	XA	1498	U	C2'-C3'-O3'	5.36	117.53	109.50
4	XD	28	SER	CA-C-N	-5.36	113.14	119.84
4	XD	28	SER	C-N-CA	-5.36	113.14	119.84
29	YF	78	ILE	CB-CA-C	-5.36	105.02	112.04
5	QE	97	GLY	N-CA-C	-5.35	107.64	115.72
19	QS	80	TYR	N-CA-C	5.35	119.56	112.72
35	YP	85	LEU	N-CA-C	-5.35	106.44	113.12
44	RY	70	SER	N-CA-C	-5.34	106.92	113.50
29	RF	169	ASN	N-CA-C	5.34	118.89	112.38
29	RF	199	TRP	N-CA-C	-5.34	105.40	112.34
25	YA	222	A	C2'-C3'-O3'	5.34	117.51	109.50
29	YF	10	PRO	N-CA-C	5.34	118.96	110.21
29	YF	199	TRP	N-CA-C	-5.34	105.40	112.34
28	RE	2	LYS	N-CA-C	5.33	118.53	110.64
29	RF	10	PRO	N-CA-C	5.33	118.95	110.21
37	RR	94	TYR	N-CA-C	-5.33	106.81	113.15
31	YH	28	GLY	CA-C-N	5.33	126.50	119.84
31	YH	28	GLY	C-N-CA	5.33	126.50	119.84
37	YR	94	TYR	N-CA-C	-5.33	106.81	113.15

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
25	RA	242	G	C2'-C3'-O3'	5.32	117.49	109.50
25	YA	974(A)	C	C4'-C3'-O3'	5.32	117.39	109.40
39	RT	28	VAL	N-CA-C	5.32	115.37	108.35
13	XM	107	ALA	N-CA-C	-5.32	107.44	114.04
4	XD	174	LEU	N-CA-C	5.32	117.57	108.90
1	XA	530	G	C4'-C3'-O3'	5.32	117.37	109.40
35	YP	133	SER	N-CA-C	5.32	116.88	111.14
10	QJ	66	ARG	N-CA-C	5.31	117.37	108.23
25	YA	1799	G	P-O3'-C3'	5.31	128.17	120.20
11	XK	120	ARG	N-CA-C	-5.31	102.48	110.24
30	YG	31	VAL	CA-C-N	5.31	126.48	119.84
30	YG	31	VAL	C-N-CA	5.31	126.48	119.84
44	YY	70	SER	N-CA-C	-5.30	106.98	113.50
7	QG	45	ASP	N-CA-C	-5.30	104.97	111.75
42	YW	21	VAL	N-CA-C	-5.30	106.03	112.76
32	RI	79	ILE	N-CA-C	5.29	113.66	107.89
39	YT	28	VAL	N-CA-C	5.29	115.34	108.35
48	R2	39	ALA	N-CA-C	-5.29	106.78	113.18
5	XE	97	GLY	N-CA-C	-5.29	107.73	115.72
27	RD	240	ALA	CA-C-N	-5.29	113.23	119.84
27	RD	240	ALA	C-N-CA	-5.29	113.23	119.84
50	Y4	12	ALA	N-CA-C	5.29	114.81	107.73
31	YH	38	SER	CA-C-N	5.28	124.95	119.56
31	YH	38	SER	C-N-CA	5.28	124.95	119.56
25	RA	1141	U	C2'-C3'-O3'	5.28	117.42	109.50
48	Y2	39	ALA	N-CA-C	-5.28	106.80	113.18
27	YD	98	VAL	N-CA-C	-5.27	105.84	113.07
28	YE	80	GLU	N-CA-C	-5.27	100.83	109.80
35	YP	132	LYS	N-CA-C	-5.27	104.78	111.11
25	RA	222	A	C2'-C3'-O3'	5.27	117.41	109.50
35	RP	132	LYS	N-CA-C	-5.27	104.78	111.11
25	YA	856	C	C2'-C3'-O3'	5.27	121.61	113.70
31	RH	28	GLY	CA-C-N	5.27	126.42	119.84
31	RH	28	GLY	C-N-CA	5.27	126.42	119.84
42	RW	96	ILE	N-CA-C	-5.26	101.94	108.89
4	XD	176	LEU	N-CA-C	5.26	116.91	107.80
28	YE	200	GLU	N-CA-C	-5.26	101.95	110.32
45	YZ	100	VAL	CA-C-N	5.26	125.26	119.89
45	YZ	100	VAL	C-N-CA	5.26	125.26	119.89
8	QH	137	VAL	N-CA-C	5.26	117.33	108.81
50	Y4	18	CYS	CB-CA-C	-5.25	108.81	116.53
27	RD	98	VAL	N-CA-C	-5.25	105.88	113.07

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
28	RE	80	GLU	N-CA-C	-5.25	100.88	109.80
35	RP	133	SER	N-CA-C	5.25	116.81	111.14
27	YD	240	ALA	CA-C-N	-5.25	113.28	119.84
27	YD	240	ALA	C-N-CA	-5.25	113.28	119.84
35	YP	36	LYS	N-CA-C	5.24	121.97	110.80
4	QD	176	LEU	N-CA-C	5.24	116.87	107.80
30	RG	99	MET	N-CA-C	-5.23	105.25	111.69
50	R4	12	ALA	N-CA-C	5.23	114.73	107.73
55	Y9	3	VAL	N-CA-C	5.22	116.00	108.48
13	XM	46	LYS	N-CA-C	-5.22	106.06	112.90
35	RP	149	GLU	N-CA-C	5.22	118.18	107.37
47	R1	17	SER	N-CA-C	-5.22	100.23	108.73
8	QH	70	GLN	N-CA-C	5.21	117.95	109.24
28	RE	194	GLY	N-CA-C	-5.21	105.86	112.54
35	RP	36	LYS	N-CA-C	5.21	121.90	110.80
1	QA	934	C	P-O3'-C3'	5.21	128.01	120.20
28	YE	80	GLU	CA-C-N	-5.21	117.64	123.16
28	YE	80	GLU	C-N-CA	-5.21	117.64	123.16
30	YG	99	MET	N-CA-C	-5.21	105.28	111.69
13	QM	75	ALA	N-CA-C	-5.21	105.69	111.36
41	YV	6	LYS	N-CA-C	5.20	118.57	107.70
28	YE	97	LYS	N-CA-C	-5.20	103.13	110.31
28	RE	97	LYS	N-CA-C	-5.20	103.13	110.31
8	XH	137	VAL	N-CA-C	5.20	117.23	108.81
27	YD	133	LEU	N-CA-C	5.20	117.62	111.33
35	YP	149	GLU	N-CA-C	5.20	118.12	107.37
45	YZ	29	TYR	N-CA-C	5.19	117.14	108.99
46	R0	9	SER	N-CA-C	5.19	114.89	108.19
28	RE	200	GLU	N-CA-C	-5.19	102.07	110.32
43	YX	35	THR	N-CA-C	5.18	117.69	109.24
1	XA	1200	C	P-O3'-C3'	5.18	127.97	120.20
5	XE	90	VAL	N-CA-C	5.18	115.42	108.17
41	RV	6	LYS	N-CA-C	5.18	118.52	107.70
47	Y1	72	GLU	N-CA-C	-5.18	106.06	112.38
50	Y4	38	LYS	N-CA-C	-5.18	105.85	113.72
5	QE	67	VAL	N-CA-C	5.17	115.02	107.88
42	YW	96	ILE	N-CA-C	-5.17	102.06	108.89
46	R0	13	GLY	N-CA-C	5.17	122.32	114.61
50	R4	38	LYS	N-CA-C	-5.17	105.86	113.72
35	YP	147	LEU	N-CA-C	5.17	118.06	109.94
17	XQ	71	PHE	N-CA-C	5.17	117.59	108.75
28	YE	79	ARG	N-CA-C	5.17	121.81	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
13	QM	46	LYS	N-CA-C	-5.17	106.13	112.90
50	R4	18	CYS	CB-CA-C	-5.17	108.93	116.53
1	QA	1346	A	C2'-C3'-O3'	5.16	117.25	109.50
5	XE	67	VAL	N-CA-C	5.16	115.00	107.88
11	XK	26	ASN	N-CA-C	5.16	119.73	113.38
44	RY	40	GLU	N-CA-C	-5.16	106.79	114.64
25	RA	345	A	C4'-C3'-O3'	5.16	117.14	109.40
28	RE	79	ARG	N-CA-C	5.15	121.78	110.80
4	QD	28	SER	CA-C-N	-5.15	113.40	119.84
4	QD	28	SER	C-N-CA	-5.15	113.40	119.84
43	RX	35	THR	N-CA-C	5.15	117.63	109.24
28	YE	194	GLY	N-CA-C	-5.15	105.95	112.54
34	YO	58	VAL	N-CA-C	5.15	117.45	108.90
11	QK	26	ASN	N-CA-C	5.14	119.71	113.38
32	RI	135	GLU	N-CA-C	5.14	116.54	109.29
37	RR	9	LYS	CA-C-N	-5.14	115.90	122.79
37	RR	9	LYS	C-N-CA	-5.14	115.90	122.79
36	YQ	90	VAL	N-CA-C	5.14	120.03	109.34
47	R1	18	ILE	N-CA-C	5.14	114.98	107.37
25	YA	1254	A	C4'-C3'-O3'	-5.14	105.29	113.00
42	YW	103	ILE	N-CA-C	5.14	115.75	107.73
54	Y8	53	PRO	N-CA-C	-5.14	101.89	112.47
27	RD	133	LEU	N-CA-C	5.13	117.54	111.33
28	RE	46	ALA	N-CA-C	5.13	114.61	107.73
47	Y1	18	ILE	N-CA-C	5.13	114.97	107.37
54	R8	53	PRO	N-CA-C	-5.13	101.91	112.47
13	XM	75	ALA	N-CA-C	-5.12	105.78	111.36
47	R1	72	GLU	N-CA-C	-5.12	106.13	112.38
25	RA	2832	U	P-O3'-C3'	5.12	127.88	120.20
18	QR	86	VAL	N-CA-C	5.11	116.89	108.97
36	RQ	90	VAL	N-CA-C	5.11	119.97	109.34
48	Y2	56	GLN	N-CA-C	-5.11	105.71	111.28
25	RA	271(C)	U	C2'-C3'-O3'	5.11	117.16	109.50
35	RP	147	LEU	N-CA-C	5.11	117.95	109.94
42	RW	30	GLU	N-CA-C	-5.10	105.41	111.69
18	XR	86	VAL	N-CA-C	5.10	116.88	108.97
48	R2	56	GLN	N-CA-C	-5.10	105.72	111.28
29	YF	80	ALA	CA-C-N	5.10	125.39	119.47
29	YF	80	ALA	C-N-CA	5.10	125.39	119.47
2	XB	24	TRP	N-CA-C	5.10	112.96	108.78
42	RW	103	ILE	N-CA-C	5.09	115.68	107.73
28	YE	46	ALA	N-CA-C	5.09	114.56	107.73

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
19	XS	23	ASN	N-CA-C	-5.09	104.67	111.24
19	QS	23	ASN	N-CA-C	-5.08	104.68	111.24
29	RF	80	ALA	CA-C-N	5.08	125.37	119.47
29	RF	80	ALA	C-N-CA	5.08	125.37	119.47
35	RP	45	LEU	N-CA-C	5.08	117.98	110.46
31	YH	92	ILE	N-CA-C	5.08	119.91	109.34
34	RO	58	VAL	N-CA-C	5.08	117.33	108.90
12	XL	47	LYS	CA-C-N	-5.08	113.49	119.84
12	XL	47	LYS	C-N-CA	-5.08	113.49	119.84
25	YA	2655	G	P-O3'-C3'	5.07	127.81	120.20
17	QQ	71	PHE	N-CA-C	5.07	117.42	108.75
27	RD	136	ILE	CA-C-N	5.07	125.86	119.98
27	RD	136	ILE	C-N-CA	5.07	125.86	119.98
20	QT	14	LYS	N-CA-C	-5.07	105.03	111.11
25	RA	1819	A	C4'-C3'-O3'	5.07	117.00	109.40
37	YR	9	LYS	CA-C-N	-5.07	116.00	122.79
37	YR	9	LYS	C-N-CA	-5.07	116.00	122.79
30	YG	43	LEU	N-CA-C	5.06	117.37	108.56
28	RE	80	GLU	CA-C-N	-5.06	117.79	123.16
28	RE	80	GLU	C-N-CA	-5.06	117.79	123.16
48	R2	52	ASP	N-CA-C	-5.06	105.65	111.07
51	R5	41	PRO	CA-C-N	5.06	126.17	119.84
51	R5	41	PRO	C-N-CA	5.06	126.17	119.84
27	RD	243	GLY	N-CA-C	-5.05	107.82	114.95
2	QB	144	ARG	N-CA-C	-5.05	105.85	111.36
2	QB	90	MET	CA-C-N	5.05	125.20	119.90
2	QB	90	MET	C-N-CA	5.05	125.20	119.90
1	XA	792	A	C3'-C2'-C1'	-5.05	96.45	101.50
47	Y1	17	SER	N-CA-C	-5.05	100.29	108.52
51	Y5	41	PRO	CA-C-N	5.05	126.15	119.84
51	Y5	41	PRO	C-N-CA	5.05	126.15	119.84
29	YF	205	ARG	N-CA-C	-5.05	105.47	110.97
25	RA	2689	U	P-O3'-C3'	5.04	127.77	120.20
5	QE	90	VAL	N-CA-C	5.04	115.23	108.17
1	QA	189	U	C4'-C3'-C2'	5.04	107.64	102.60
2	XB	90	MET	CA-C-N	5.04	125.19	119.90
2	XB	90	MET	C-N-CA	5.04	125.19	119.90
9	XI	124	GLN	N-CA-C	5.04	117.47	109.96
35	YP	45	LEU	N-CA-C	5.04	117.91	110.46
51	Y5	30	LEU	N-CA-C	5.04	117.96	109.95
25	YA	1653	G	P-O3'-C3'	5.03	127.75	120.20
1	QA	1297	C	P-O3'-C3'	5.03	127.74	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	QB	182	ILE	CA-C-N	5.03	126.12	119.84
2	QB	182	ILE	C-N-CA	5.03	126.12	119.84
25	YA	2454	G	OP1-P-O3'	-5.03	92.92	108.00
42	YW	30	GLU	N-CA-C	-5.02	105.51	111.69
29	RF	15	SER	N-CA-C	5.02	116.75	111.28
33	RN	59	LYS	N-CA-C	-5.02	104.08	111.81
32	YI	15	VAL	N-CA-C	5.02	119.78	109.34
2	QB	27	LYS	N-CA-C	-5.01	106.94	113.16
25	YA	299	A	OP2-P-O3'	5.01	123.05	108.00
27	YD	243	GLY	N-CA-C	-5.01	107.88	114.95
33	YN	59	LYS	N-CA-C	-5.01	104.09	111.81
2	XB	27	LYS	N-CA-C	-5.01	106.95	113.16
25	YA	1022	G	P-O3'-C3'	5.01	127.72	120.20
27	RD	7	LYS	N-CA-C	-5.01	102.93	110.24
1	QA	1446	A	N9-C1'-C2'	5.00	119.51	112.00
14	XN	39	LEU	N-CA-C	5.00	117.28	109.52
20	QT	37	SER	N-CA-C	-5.00	105.83	112.34
27	YD	7	LYS	N-CA-C	-5.00	102.93	110.24
17	QQ	90	ILE	N-CA-C	-5.00	104.74	111.44
2	XB	144	ARG	N-CA-C	-5.00	105.91	111.36
39	YT	63	VAL	N-CA-C	5.00	115.11	108.11
48	Y2	52	ASP	N-CA-C	-5.00	105.72	111.07

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
45	YZ	181	GLU	Peptide

5.2 Too-close contacts

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	32247	0	16278	1130	0
1	XA	32249	0	16279	1069	1
2	QB	1924	0	1975	306	0
2	XB	1924	0	1975	306	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
3	QC	1605	0	1668	211	0
3	XC	1605	0	1668	215	0
4	QD	1703	0	1764	266	0
4	XD	1703	0	1765	232	0
5	QE	1155	0	1213	198	0
5	XE	1155	0	1213	159	0
6	QF	843	0	857	102	0
6	XF	843	0	857	107	0
7	QG	1257	0	1296	159	0
7	XG	1257	0	1294	151	0
8	QH	1116	0	1175	176	0
8	XH	1116	0	1177	158	0
9	QI	1010	0	1037	151	0
9	XI	1010	0	1037	157	0
10	QJ	801	0	849	151	0
10	XJ	801	0	849	134	0
11	QK	885	0	904	110	0
11	XK	885	0	904	109	0
12	QL	975	0	1062	102	0
12	XL	975	0	1062	117	0
13	QM	964	0	1034	176	0
13	XM	964	0	1034	172	0
14	QN	492	0	530	106	0
14	XN	492	0	530	103	0
15	QO	734	0	771	83	0
15	XO	734	0	771	86	0
16	QP	705	0	725	125	0
16	XP	705	0	725	118	0
17	QQ	834	0	904	87	0
17	XQ	834	0	904	83	0
18	QR	574	0	644	74	0
18	XR	574	0	644	72	0
19	QS	674	0	699	115	0
19	XS	674	0	699	137	0
20	QT	763	0	860	115	0
20	XT	763	0	861	119	0
21	QU	217	0	234	31	0
21	XU	217	0	234	27	0
22	QV	1644	0	836	44	0
22	XV	1644	0	836	29	0
23	QX	167	0	87	13	0
23	XX	145	0	75	10	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
24	QY	303	0	154	10	0
24	XY	303	0	154	11	0
25	RA	62071	0	31285	1929	0
25	YA	62091	0	31293	1983	0
26	RB	2573	0	1306	121	0
26	YB	2573	0	1306	101	0
27	RD	2115	0	2195	331	0
27	YD	2115	0	2195	337	0
28	RE	1568	0	1634	282	0
28	YE	1568	0	1634	277	0
29	RF	1585	0	1632	194	0
29	YF	1585	0	1632	196	0
30	RG	1474	0	1535	214	0
30	YG	1474	0	1535	207	0
31	RH	1307	0	1382	232	0
31	YH	1307	0	1382	234	0
32	RI	1136	0	1223	82	1
32	YI	1136	0	1223	72	0
33	RN	1104	0	1180	208	0
33	YN	1104	0	1180	198	0
34	RO	933	0	996	135	0
34	YO	933	0	996	134	0
35	RP	1145	0	1228	265	0
35	YP	1145	0	1228	254	0
36	RQ	1122	0	1179	164	0
36	YQ	1122	0	1178	173	0
37	RR	968	0	1033	120	0
37	YR	968	0	1033	120	0
38	RS	882	0	943	170	0
38	YS	882	0	943	163	0
39	RT	1141	0	1202	156	0
39	YT	1141	0	1202	161	0
40	RU	964	0	1022	144	0
40	YU	964	0	1022	153	0
41	RV	779	0	852	137	0
41	YV	779	0	852	136	0
42	RW	900	0	964	103	0
42	YW	900	0	964	111	0
43	RX	725	0	778	72	0
43	YX	725	0	778	75	0
44	RY	785	0	878	175	0
44	YY	785	0	878	168	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
45	RZ	1461	0	1493	85	0
45	YZ	1461	0	1493	88	0
46	R0	648	0	671	57	0
46	Y0	648	0	672	51	0
47	R1	763	0	848	148	0
47	Y1	763	0	848	146	0
48	R2	581	0	629	87	0
48	Y2	581	0	629	81	0
49	R3	469	0	518	44	0
49	Y3	469	0	518	47	0
50	R4	581	0	574	164	0
50	Y4	581	0	574	172	0
51	R5	459	0	480	75	0
51	Y5	459	0	480	78	0
52	R6	424	0	450	91	0
52	Y6	424	0	450	97	0
53	R7	430	0	480	43	0
53	Y7	430	0	480	41	0
54	R8	517	0	582	106	0
54	Y8	517	0	582	108	0
55	R9	307	0	335	28	0
55	Y9	307	0	336	28	0
56	Z6	74	0	51	10	0
56	Z8	74	0	51	10	0
57	QA	64	0	0	0	0
57	QF	1	0	0	0	0
57	QH	1	0	0	0	0
57	QM	1	0	0	0	0
57	QV	1	0	0	0	0
57	QX	1	0	0	0	0
57	R0	1	0	0	0	0
57	R5	1	0	0	0	0
57	R8	1	0	0	0	0
57	RA	239	0	0	0	0
57	RB	2	0	0	0	0
57	RD	1	0	0	0	0
57	RE	2	0	0	0	0
57	RF	1	0	0	0	0
57	RP	1	0	0	0	0
57	RR	2	0	0	0	0
57	XA	72	0	0	1	0
57	XB	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	XM	1	0	0	0	0
57	XV	2	0	0	0	0
57	XX	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y7	1	0	0	0	0
57	YA	269	0	0	1	0
57	YB	3	0	0	0	0
57	YE	1	0	0	0	0
57	YP	1	0	0	0	0
57	YQ	1	0	0	0	0
58	QD	1	0	0	0	0
58	QN	1	0	0	0	0
58	R9	1	0	0	0	0
58	XD	1	0	0	0	0
58	XN	1	0	0	0	0
58	Y9	1	0	0	0	0
59	XX	22	0	12	1	0
All	All	291868	0	198240	18456	1

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 38.

All (18456) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:32:SER:CB	14:YN:41:ARG:HB3	1.23	1.54
14:YN:32:SER:HB3	14:YN:41:ARG:CB	1.28	1.54
31:RH:127:GLU:CG	31:RH:128:PRO:HD3	1.35	1.53
31:YH:127:GLU:CG	31:YH:128:PRO:HD3	1.36	1.52
4:XD:22:LYS:CG	4:XD:26:CYS:SG	2.01	1.49
10:QJ:49:VAL:HG21	14:QN:41:ARG:CB	1.49	1.42
4:XD:22:LYS:HB2	4:XD:26:CYS:SG	1.57	1.42
4:XD:22:LYS:CB	4:XD:26:CYS:SG	2.10	1.40
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.04	1.36
47:R1:81:LYS:HA	47:R1:81:LYS:NZ	1.43	1.34
47:Y1:81:LYS:HA	47:Y1:81:LYS:NZ	1.42	1.34
5:QE:79:GLU:OE2	8:QH:104:ARG:HA	1.24	1.32
4:QD:22:LYS:HG3	4:QD:26:CYS:SG	1.70	1.31
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.62	1.29
4:XD:22:LYS:HG3	4:XD:26:CYS:SG	1.64	1.27
47:R1:81:LYS:HE2	47:R1:81:LYS:N	1.50	1.26

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:81:LYS:HE2	47:Y1:81:LYS:N	1.50	1.26
14:QN:25:VAL:HG23	14:QN:38:GLY:O	1.37	1.25
13:QM:121:LYS:NZ	24:QY:40:G:OP1	1.71	1.24
14:YN:40:CYS:SG	14:YN:43:CYS:N	2.11	1.23
36:RQ:59:ARG:O	36:RQ:60:ARG:HD2	1.38	1.22
14:YN:32:SER:CB	14:YN:41:ARG:CB	1.97	1.21
47:Y1:82:LEU:HD12	47:Y1:82:LEU:C	1.66	1.21
31:YH:127:GLU:HG2	31:YH:128:PRO:CD	1.70	1.21
31:YH:127:GLU:CB	31:YH:128:PRO:HD3	1.69	1.20
31:RH:127:GLU:HG2	31:RH:128:PRO:CD	1.70	1.20
13:QM:77:ASN:HA	50:R4:71:ARG:NH2	1.56	1.20
31:RH:127:GLU:CB	31:RH:128:PRO:HD3	1.69	1.19
25:YA:518:G:H4'	42:YW:18:ARG:HH12	1.07	1.18
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.25	1.18
47:R1:82:LEU:C	47:R1:82:LEU:HD12	1.66	1.18
44:RY:95:LYS:HB3	44:RY:100:ALA:HA	1.20	1.17
1:QA:1054:C:OP2	1:QA:1197:G:OP2	1.63	1.16
4:XD:12:CYS:HA	4:XD:19:LEU:CD2	1.75	1.16
44:YY:76:CYS:HB3	44:YY:96:ILE:HD13	1.17	1.16
31:RH:132:ARG:HB2	31:RH:132:ARG:HH11	1.10	1.16
44:YY:95:LYS:HB3	44:YY:100:ALA:HA	1.20	1.15
1:QA:339:C:OP2	34:RO:97:ARG:NH1	1.80	1.15
14:YN:42:ILE:O	14:YN:43:CYS:O	1.65	1.14
2:XB:101:MET:HA	2:XB:108:ILE:HG13	1.25	1.14
35:RP:50:ARG:HH21	35:RP:50:ARG:HB3	1.13	1.14
12:QL:10:LEU:HD13	17:QQ:32:TYR:CE2	1.83	1.13
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB3	1.71	1.13
19:QS:41:VAL:HB	19:QS:42:PRO:HA	1.26	1.13
4:XD:11:LEU:HD22	4:XD:66:ARG:HD3	1.29	1.13
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG13	1.30	1.13
22:QV:1:C:O4'	46:R0:5:LYS:NZ	1.80	1.12
4:QD:12:CYS:HA	4:QD:19:LEU:HD21	1.24	1.12
19:QS:5:LEU:HD22	50:R4:67:TYR:CE2	1.84	1.12
33:RN:1:MET:HE1	40:RU:95:LEU:HD21	1.27	1.12
47:Y1:82:LEU:CD1	47:Y1:83:GLU:O	1.97	1.12
29:RF:101:LEU:HD12	29:RF:102:PRO:HD2	1.21	1.12
40:RU:8:VAL:HG23	40:RU:11:ARG:HH21	1.14	1.12
35:YP:50:ARG:HH21	35:YP:50:ARG:HB3	1.13	1.12
47:R1:82:LEU:CD1	47:R1:83:GLU:O	1.97	1.11
12:XL:46:LYS:HG2	12:XL:47:LYS:H	1.02	1.11
28:YE:179:GLU:HB3	28:YE:181:LEU:HD23	1.31	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:101:LEU:HD12	29:YF:102:PRO:HD2	1.21	1.11
40:YU:8:VAL:HG23	40:YU:11:ARG:HH21	1.14	1.11
28:RE:179:GLU:HB3	28:RE:181:LEU:HD23	1.31	1.11
27:YD:44:ASN:HB2	27:YD:48:ARG:O	1.51	1.11
33:YN:1:MET:HE1	40:YU:95:LEU:HD21	1.27	1.11
5:QE:78:HIS:CD2	8:QH:104:ARG:HG2	1.85	1.11
27:RD:44:ASN:HB2	27:RD:48:ARG:O	1.50	1.11
47:R1:81:LYS:HZ3	47:R1:81:LYS:CA	1.63	1.11
31:YH:132:ARG:HB2	31:YH:132:ARG:HH11	1.10	1.11
47:Y1:82:LEU:HD12	47:Y1:83:GLU:N	1.66	1.11
4:QD:22:LYS:CG	4:QD:26:CYS:SG	2.38	1.10
31:RH:86:GLU:HG3	31:RH:165:ALA:H	1.06	1.10
5:QE:79:GLU:OE2	8:QH:104:ARG:CA	1.99	1.10
13:XM:77:ASN:HA	50:Y4:71:ARG:NH2	1.66	1.10
11:QK:17:GLY:HA3	11:QK:77:MET:HE1	1.33	1.09
44:RY:76:CYS:HB3	44:RY:96:ILE:HD13	1.17	1.09
28:YE:50:GLY:HA2	28:YE:77:ILE:HA	1.31	1.09
47:Y1:81:LYS:HZ3	47:Y1:81:LYS:CA	1.65	1.09
31:YH:152:ARG:HG3	31:YH:153:LYS:HE2	1.33	1.09
35:RP:19:VAL:HG22	35:RP:20:GLY:H	1.15	1.08
19:XS:41:VAL:HB	19:XS:42:PRO:HA	1.26	1.08
3:QC:15:THR:HG23	3:QC:181:ASN:HA	1.35	1.08
33:YN:134:ARG:H	33:YN:135:PRO:HD3	1.11	1.08
11:QK:79:SER:HB2	11:QK:106:LYS:HD2	1.35	1.08
10:XJ:6:ILE:HG22	10:XJ:98:ILE:HG13	1.30	1.08
15:XO:87:ILE:HG22	15:XO:88:ARG:H	1.19	1.08
27:YD:131:LEU:HB2	27:YD:136:ILE:HD11	1.35	1.08
3:XC:15:THR:HG23	3:XC:181:ASN:HA	1.35	1.08
31:YH:86:GLU:HG3	31:YH:165:ALA:H	1.05	1.08
1:QA:1123:A:H4'	10:QJ:36:GLY:HA3	1.34	1.08
27:RD:131:LEU:HB2	27:RD:136:ILE:HD11	1.35	1.08
47:R1:82:LEU:HD12	47:R1:83:GLU:N	1.66	1.08
2:XB:80:ILE:HD11	2:XB:208:ILE:HG23	1.34	1.08
35:YP:126:VAL:HG12	35:YP:147:LEU:HD21	1.30	1.08
31:RH:152:ARG:HG3	31:RH:153:LYS:HE2	1.34	1.07
50:R4:71:ARG:HH11	50:R4:71:ARG:HG3	1.13	1.07
35:RP:126:VAL:HG12	35:RP:147:LEU:HD21	1.30	1.07
15:QO:87:ILE:HG22	15:QO:88:ARG:H	1.18	1.07
25:YA:1454:U:H5'	37:YR:63:ARG:HE	1.16	1.07
28:RE:50:GLY:HA2	28:RE:77:ILE:HA	1.31	1.06
47:Y1:82:LEU:CD1	47:Y1:83:GLU:N	2.18	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:71:ARG:HG3	50:Y4:71:ARG:HH11	1.14	1.06
35:RP:59:LEU:HA	35:RP:61:ARG:NH2	1.69	1.06
35:YP:59:LEU:HA	35:YP:61:ARG:NH2	1.69	1.06
11:QK:51:LYS:HA	11:QK:55:LYS:HD3	1.36	1.06
31:YH:153:LYS:HB3	31:YH:154:PRO:HD2	1.07	1.06
54:Y8:52:LYS:H	54:Y8:53:PRO:CD	1.69	1.06
10:QJ:49:VAL:CG1	14:QN:41:ARG:HD2	1.85	1.06
28:RE:21:VAL:HB	28:RE:22:PRO:HB3	1.37	1.06
47:R1:82:LEU:CD1	47:R1:83:GLU:N	2.18	1.06
29:RF:46:ARG:HH11	29:RF:46:ARG:HG2	1.20	1.06
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB3	1.24	1.05
28:RE:63:LEU:HD12	28:RE:64:LYS:H	1.18	1.05
13:XM:3:ARG:HA	13:XM:9:ILE:HG21	1.34	1.05
13:XM:88:ARG:HH11	13:XM:88:ARG:HB3	1.19	1.05
4:XD:12:CYS:HA	4:XD:19:LEU:HD21	1.08	1.05
28:YE:21:VAL:HB	28:YE:22:PRO:HB3	1.37	1.05
28:YE:63:LEU:HD12	28:YE:64:LYS:H	1.18	1.05
13:QM:3:ARG:HA	13:QM:9:ILE:HG21	1.35	1.05
13:QM:88:ARG:HH11	13:QM:88:ARG:HB3	1.19	1.05
26:RB:45:A:O4'	30:RG:95:ARG:NH1	1.89	1.05
35:YP:19:VAL:HG22	35:YP:20:GLY:H	1.15	1.05
4:QD:27:TYR:OH	6:XF:15:ASP:OD2	1.73	1.05
5:QE:11:ILE:HD11	5:QE:31:LEU:HD12	1.38	1.05
13:QM:49:THR:HG22	13:QM:51:ALA:H	1.22	1.05
25:YA:2701:C:H3'	25:YA:2702:U:H5''	1.33	1.05
40:RU:90:VAL:HG12	40:RU:91:ASP:H	1.18	1.05
1:QA:864:A:H5'	5:QE:86:ALA:HB2	1.37	1.04
33:RN:134:ARG:H	33:RN:135:PRO:HD3	1.12	1.04
36:RQ:59:ARG:O	36:RQ:60:ARG:CD	2.05	1.04
11:XK:51:LYS:HA	11:XK:55:LYS:HD3	1.36	1.04
41:YV:49:THR:HB	41:YV:50:PRO:HD2	1.39	1.04
2:QB:18:GLY:H	2:QB:42:ILE:HG22	1.21	1.04
37:RR:67:LEU:HD13	37:RR:76:VAL:HG21	1.39	1.04
2:QB:80:ILE:HD11	2:QB:208:ILE:HG23	1.33	1.04
38:RS:106:ARG:HA	38:RS:110:LEU:HD11	1.39	1.04
8:XH:29:SER:HB3	8:XH:32:LYS:HG3	1.39	1.04
11:XK:79:SER:HB2	11:XK:106:LYS:HD2	1.35	1.04
40:YU:90:VAL:HG12	40:YU:91:ASP:H	1.18	1.04
10:QJ:49:VAL:CG1	14:QN:41:ARG:HB2	1.88	1.03
36:RQ:81:VAL:O	36:RQ:82:ARG:CD	2.06	1.03
38:RS:83:LYS:O	38:RS:109:GLY:HA3	1.56	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:127:GLU:CG	31:YH:128:PRO:CD	2.31	1.03
38:YS:83:LYS:O	38:YS:109:GLY:HA3	1.57	1.03
2:QB:4:GLU:HG2	2:QB:5:ILE:H	1.19	1.03
2:XB:4:GLU:HG2	2:XB:5:ILE:H	1.19	1.03
38:YS:106:ARG:HA	38:YS:110:LEU:HD11	1.39	1.03
4:QD:12:CYS:HA	4:QD:19:LEU:CD2	1.87	1.03
27:RD:35:LYS:HG2	27:RD:64:ILE:N	1.72	1.03
14:YN:22:THR:O	14:YN:23:ARG:HB2	1.56	1.03
31:YH:127:GLU:CB	31:YH:128:PRO:CD	2.35	1.03
54:R8:52:LYS:H	54:R8:53:PRO:CD	1.69	1.03
11:XK:17:GLY:HA3	11:XK:77:MET:HE1	1.34	1.03
29:RF:67:GLN:O	29:RF:67:GLN:HG3	1.58	1.02
36:RQ:80:GLU:O	36:RQ:81:VAL:HG13	1.59	1.02
29:RF:67:GLN:O	29:RF:68:LYS:HB2	1.56	1.02
27:YD:35:LYS:HG2	27:YD:64:ILE:N	1.72	1.02
29:YF:67:GLN:O	29:YF:68:LYS:HB2	1.56	1.02
34:YO:53:LYS:HD2	34:YO:53:LYS:H	1.23	1.02
36:YQ:65:PHE:O	36:YQ:66:ILE:HG12	1.59	1.02
36:YQ:81:VAL:O	36:YQ:82:ARG:CD	2.06	1.02
31:RH:153:LYS:HB3	31:RH:154:PRO:HD2	1.06	1.02
36:YQ:12:GLN:HG2	36:YQ:73:PRO:HD2	1.42	1.02
34:RO:53:LYS:HD2	34:RO:53:LYS:H	1.23	1.02
36:RQ:12:GLN:HG2	36:RQ:73:PRO:HD2	1.42	1.02
2:XB:18:GLY:H	2:XB:42:ILE:HG22	1.22	1.02
44:YY:97:ARG:HH21	44:YY:98:VAL:HB	1.25	1.02
38:RS:26:LEU:HD12	38:RS:39:ILE:HD11	1.40	1.01
29:YF:46:ARG:HH11	29:YF:46:ARG:HG2	1.20	1.01
5:XE:11:ILE:HD11	5:XE:31:LEU:HD12	1.38	1.01
13:XM:49:THR:HG22	13:XM:51:ALA:H	1.22	1.01
30:YG:13:GLU:O	30:YG:14:GLU:HB2	1.60	1.01
7:QG:78:ARG:HG3	7:QG:79:ARG:H	1.24	1.01
10:QJ:49:VAL:HG13	14:QN:41:ARG:CD	1.90	1.01
19:QS:41:VAL:HB	19:QS:42:PRO:CA	1.91	1.01
29:RF:185:ASP:HA	29:RF:188:ARG:HD3	1.41	1.01
2:QB:178:ARG:NE	8:QH:71:GLY:O	1.93	1.01
37:YR:67:LEU:HD13	37:YR:76:VAL:HG21	1.39	1.01
19:XS:41:VAL:HB	19:XS:42:PRO:CA	1.91	1.00
33:YN:96:GLU:HG2	33:YN:97:ARG:H	1.26	1.00
8:QH:29:SER:HB3	8:QH:32:LYS:HG3	1.39	1.00
27:RD:227:ASN:HB3	27:RD:228:PRO:HD2	1.43	1.00
41:RV:49:THR:HB	41:RV:50:PRO:HD2	1.39	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:56:VAL:HA	50:R4:60:GLN:HB2	1.43	1.00
4:XD:30:LYS:C	4:XD:32:ALA:H	1.62	1.00
29:YF:67:GLN:O	29:YF:67:GLN:HG3	1.58	1.00
36:YQ:80:GLU:O	36:YQ:81:VAL:HG13	1.59	1.00
36:RQ:81:VAL:O	36:RQ:82:ARG:NE	1.94	1.00
48:R2:50:ILE:HD12	48:R2:51:ARG:N	1.76	1.00
25:YA:482:A:H4'	44:YY:47:LYS:HD2	1.39	1.00
41:YV:1:MET:HE2	41:YV:43:GLU:HG2	1.42	1.00
52:Y6:7:ILE:HG13	52:Y6:8:LYS:H	1.25	1.00
36:RQ:65:PHE:O	36:RQ:66:ILE:HG12	1.59	1.00
37:YR:54:LEU:HD23	37:YR:66:VAL:HG23	1.44	1.00
44:RY:97:ARG:HH21	44:RY:98:VAL:HB	1.26	1.00
31:RH:77:LYS:HZ3	31:RH:77:LYS:HB3	1.22	1.00
2:QB:178:ARG:HH21	8:QH:74:PRO:HB3	1.19	0.99
25:RA:2701:C:H3'	25:RA:2702:U:H5''	1.39	0.99
31:RH:153:LYS:HB3	31:RH:154:PRO:CD	1.92	0.99
38:RS:83:LYS:NZ	38:RS:109:GLY:HA2	1.77	0.99
29:YF:185:ASP:HA	29:YF:188:ARG:HD3	1.41	0.99
38:YS:26:LEU:HD12	38:YS:39:ILE:HD11	1.40	0.99
48:Y2:50:ILE:HD12	48:Y2:51:ARG:N	1.76	0.99
28:RE:201:THR:HG22	28:RE:203:LYS:H	1.26	0.99
31:YH:153:LYS:HB3	31:YH:154:PRO:CD	1.92	0.99
25:RA:1019:U:HO2'	25:RA:1021:A:H2	1.02	0.99
28:YE:201:THR:HG22	28:YE:203:LYS:H	1.26	0.99
8:QH:23:SER:HA	8:QH:63:LEU:HD22	1.45	0.99
23:XX:5:C:H2'	23:XX:6:C:H6	1.27	0.99
2:QB:178:ARG:HD2	8:QH:71:GLY:CA	1.93	0.99
35:YP:105:LEU:O	35:YP:106:LEU:HB2	1.60	0.99
31:RH:127:GLU:CG	31:RH:128:PRO:CD	2.31	0.99
10:XJ:6:ILE:HD11	10:XJ:72:VAL:HB	1.44	0.99
3:QC:95:THR:HG22	3:QC:96:GLY:H	1.27	0.98
8:QH:84:ARG:HH12	8:QH:86:ILE:HD13	1.28	0.98
1:XA:1123:A:H4'	10:XJ:36:GLY:HA3	1.42	0.98
25:YA:1138:G:H21	33:YN:106:MET:HE3	1.26	0.98
36:YQ:81:VAL:O	36:YQ:82:ARG:NE	1.94	0.98
3:QC:181:ASN:HD21	3:QC:204:LEU:HD12	1.27	0.98
39:RT:11:GLU:CD	39:RT:11:GLU:H	1.71	0.98
10:QJ:6:ILE:HD11	10:QJ:72:VAL:HB	1.44	0.98
35:RP:50:ARG:HH21	35:RP:50:ARG:CB	1.76	0.98
25:RA:1542:G:O6	25:RA:1543:A:N6	1.95	0.98
42:RW:86:LEU:HD12	42:RW:87:PRO:HD2	1.45	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:50:ARG:HH21	35:YP:50:ARG:CB	1.76	0.98
2:QB:196:LEU:HD12	2:QB:197:VAL:HG23	1.45	0.98
35:RP:105:LEU:O	35:RP:106:LEU:HB2	1.61	0.98
25:RA:2638:G:OP2	28:RE:82:ARG:NH2	1.96	0.98
36:RQ:79:LEU:O	36:RQ:79:LEU:HD22	1.64	0.98
1:XA:1054:C:OP2	1:XA:1197:G:OP2	1.82	0.98
7:XG:78:ARG:HG3	7:XG:79:ARG:H	1.24	0.98
39:YT:11:GLU:CD	39:YT:11:GLU:H	1.71	0.98
27:RD:44:ASN:HB3	27:RD:49:ILE:HA	1.45	0.98
3:QC:19:GLU:HA	3:QC:54:ARG:HH12	1.29	0.98
30:RG:13:GLU:O	30:RG:14:GLU:HB2	1.60	0.98
8:XH:84:ARG:HH12	8:XH:86:ILE:HD13	1.28	0.98
31:YH:86:GLU:HG3	31:YH:165:ALA:N	1.79	0.98
36:YQ:79:LEU:HD13	36:YQ:79:LEU:O	1.63	0.98
4:XD:20:TYR:CD2	4:XD:27:TYR:CE2	2.51	0.97
3:QC:16:ARG:HD2	3:QC:54:ARG:HH21	1.28	0.97
4:QD:94:LEU:H	4:QD:94:LEU:HD12	1.28	0.97
10:QJ:49:VAL:HG22	14:QN:41:ARG:CB	1.92	0.97
28:RE:20:ALA:O	28:RE:21:VAL:HG22	1.65	0.97
31:RH:127:GLU:CB	31:RH:128:PRO:CD	2.35	0.97
52:Y6:41:PRO:HG2	52:Y6:45:LYS:H	1.30	0.97
27:YD:44:ASN:HB3	27:YD:49:ILE:HA	1.45	0.97
38:YS:83:LYS:NZ	38:YS:109:GLY:HA2	1.77	0.97
4:QD:29:PRO:HG2	4:QD:30:LYS:CD	1.94	0.97
3:XC:16:ARG:HB2	3:XC:16:ARG:HH11	1.30	0.97
39:YT:62:THR:HG22	39:YT:75:ILE:HG12	1.46	0.97
48:Y2:50:ILE:HD12	48:Y2:51:ARG:H	1.24	0.97
36:RQ:79:LEU:O	36:RQ:79:LEU:HD13	1.63	0.97
25:YA:27:G:N2	25:YA:512:G:O2'	1.97	0.97
42:YW:86:LEU:HD12	42:YW:87:PRO:HD2	1.45	0.97
2:XB:178:ARG:HH21	8:XH:74:PRO:HB3	1.28	0.97
7:XG:62:PHE:HA	7:XG:124:LEU:HD21	1.47	0.97
36:YQ:79:LEU:O	36:YQ:79:LEU:HD22	1.64	0.97
48:R2:50:ILE:HD12	48:R2:51:ARG:H	1.24	0.97
33:RN:96:GLU:HG2	33:RN:97:ARG:H	1.26	0.96
1:XA:1139:G:N2	1:XA:1143:G:O6	1.98	0.96
25:RA:2015:A:H1'	51:R5:2:ALA:HA	1.45	0.96
23:XX:5:C:H2'	23:XX:6:C:C6	2.00	0.96
51:Y5:58:LEU:HD13	51:Y5:60:VAL:HG12	1.48	0.96
4:QD:30:LYS:HG3	4:QD:35:ARG:NE	1.80	0.96
25:RA:1434:A:H61	25:RA:1558:A:H62	1.11	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:R6:7:ILE:HG13	52:R6:8:LYS:H	1.25	0.96
41:RV:1:MET:HE2	41:RV:43:GLU:HG2	1.41	0.96
52:R6:47:THR:HG22	52:R6:48:VAL:HG12	1.46	0.96
1:QA:1297:C:O2'	7:QG:114:ARG:NH2	1.98	0.96
2:QB:178:ARG:HD2	8:QH:71:GLY:HA2	1.44	0.96
2:XB:7:VAL:HG21	2:XB:217:ARG:HH11	1.31	0.96
25:YA:2015:A:H1'	51:Y5:2:ALA:HA	1.45	0.96
30:RG:112:PRO:HB3	50:R4:37:SER:HB2	1.47	0.96
3:XC:181:ASN:HD21	3:XC:204:LEU:HD12	1.27	0.96
8:XH:23:SER:HA	8:XH:63:LEU:HD22	1.45	0.96
30:YG:112:PRO:HB3	50:Y4:37:SER:HB2	1.47	0.96
2:QB:7:VAL:HG21	2:QB:217:ARG:HH11	1.30	0.96
7:QG:62:PHE:HA	7:QG:124:LEU:HD21	1.47	0.96
10:XJ:32:ALA:HB3	10:XJ:76:ASN:HB2	1.48	0.96
44:YY:84:ARG:HH12	44:YY:97:ARG:HB2	1.28	0.96
10:QJ:32:ALA:HB3	10:QJ:76:ASN:HB2	1.47	0.96
25:RA:1428:C:N4	25:RA:1570:A:OP2	1.99	0.96
2:QB:8:LYS:HD3	2:QB:8:LYS:H	1.30	0.96
10:QJ:75:ILE:HG13	10:QJ:76:ASN:H	1.31	0.96
3:XC:16:ARG:HD2	3:XC:54:ARG:HH21	1.28	0.96
3:XC:19:GLU:HA	3:XC:54:ARG:HH12	1.29	0.96
50:Y4:56:VAL:HA	50:Y4:60:GLN:HB2	1.44	0.96
4:QD:30:LYS:CB	4:QD:35:ARG:HG3	1.96	0.95
37:RR:54:LEU:HD23	37:RR:66:VAL:HG23	1.44	0.95
27:YD:227:ASN:HB3	27:YD:228:PRO:HD2	1.44	0.95
3:XC:95:THR:HG22	3:XC:96:GLY:H	1.27	0.95
28:YE:20:ALA:O	28:YE:21:VAL:HG22	1.65	0.95
29:YF:101:LEU:HD12	29:YF:102:PRO:CD	1.96	0.95
12:QL:6:THR:H	12:QL:9:GLN:HE21	1.15	0.95
44:RY:84:ARG:HH12	44:RY:97:ARG:HB2	1.28	0.95
12:XL:46:LYS:HG2	12:XL:47:LYS:N	1.78	0.95
51:Y5:56:LYS:H	51:Y5:56:LYS:HD2	1.31	0.95
16:QP:4:ILE:HD11	16:QP:64:ALA:HB1	1.46	0.95
13:XM:57:ARG:HB2	13:XM:57:ARG:HH11	1.32	0.95
35:YP:62:LEU:N	35:YP:62:LEU:HD22	1.82	0.95
4:XD:22:LYS:CD	4:XD:26:CYS:SG	2.55	0.95
4:XD:94:LEU:H	4:XD:94:LEU:HD12	1.28	0.95
1:QA:954:G:H21	1:QA:1227:A:H62	1.15	0.95
1:XA:1238:A:H62	1:XA:1301:U:H3	0.96	0.95
6:XF:86:ARG:O	6:XF:87:ARG:HG2	1.66	0.95
28:YE:78:LEU:HG	28:YE:79:ARG:HE	1.30	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:81:LYS:N	47:Y1:81:LYS:CE	2.30	0.95
22:QV:1:C:H1'	46:R0:5:LYS:HE3	1.49	0.95
29:RF:101:LEU:HD12	29:RF:102:PRO:CD	1.96	0.95
31:RH:86:GLU:HG3	31:RH:165:ALA:N	1.79	0.95
22:XV:2:G:H4'	46:Y0:7:LEU:O	1.67	0.95
29:YF:103:LYS:HA	29:YF:106:ARG:HG3	1.48	0.95
31:YH:153:LYS:CB	31:YH:154:PRO:HD2	1.97	0.94
41:YV:99:ILE:HD13	41:YV:99:ILE:H	1.32	0.94
4:QD:28:SER:HB2	4:QD:29:PRO:HD3	1.49	0.94
25:RA:265:A:N6	25:RA:427:U:O2'	2.00	0.94
48:R2:13:ALA:HA	48:R2:16:LEU:HD23	1.48	0.94
2:XB:196:LEU:HD12	2:XB:197:VAL:HG23	1.45	0.94
44:RY:51:VAL:HG13	44:RY:52:SER:H	1.31	0.94
41:YV:35:LEU:HD21	41:YV:57:VAL:HG22	1.47	0.94
44:YY:51:VAL:HG13	44:YY:52:SER:H	1.31	0.94
48:Y2:13:ALA:HA	48:Y2:16:LEU:HD23	1.48	0.94
47:R1:81:LYS:CA	47:R1:81:LYS:CE	2.45	0.94
12:XL:10:LEU:HD13	17:XQ:32:TYR:CE2	2.03	0.94
16:XP:4:ILE:HD11	16:XP:64:ALA:HB1	1.46	0.94
47:Y1:81:LYS:CA	47:Y1:81:LYS:CE	2.45	0.94
34:RO:2:ILE:HD11	34:RO:82:ASN:HD22	1.33	0.94
35:RP:62:LEU:N	35:RP:62:LEU:HD22	1.82	0.94
6:QF:86:ARG:O	6:QF:87:ARG:HG2	1.66	0.94
52:R6:41:PRO:HG2	52:R6:45:LYS:H	1.29	0.94
25:YA:1899:G:H22	25:YA:1902:C:H41	1.11	0.94
25:RA:674:G:H1'	29:RF:74:ARG:HD3	1.49	0.94
3:QC:16:ARG:HB2	3:QC:16:ARG:HH11	1.30	0.94
7:QG:15:ASP:HB3	7:QG:20:ASP:H	1.31	0.94
27:RD:28:GLU:HB2	27:RD:29:PRO:CD	1.98	0.94
27:RD:108:PRO:HB3	27:RD:143:HIS:HE1	1.32	0.94
39:RT:62:THR:HG22	39:RT:75:ILE:HG12	1.46	0.94
47:R1:81:LYS:N	47:R1:81:LYS:CE	2.30	0.94
3:XC:11:ARG:HB3	3:XC:15:THR:HB	1.48	0.94
10:XJ:75:ILE:HG13	10:XJ:76:ASN:H	1.31	0.94
43:RX:57:LEU:CD1	43:RX:78:LYS:HB2	1.98	0.94
27:YD:28:GLU:HB2	27:YD:29:PRO:CD	1.98	0.94
35:RP:1:MET:HE2	35:RP:5:ASP:HB3	1.50	0.94
1:XA:1286:A:H5''	21:XU:26:LYS:HD2	1.46	0.94
25:YA:270(R):G:N3	47:Y1:78:LYS:NZ	2.14	0.94
31:YH:77:LYS:HB3	31:YH:77:LYS:NZ	1.82	0.94
2:XB:8:LYS:HD3	2:XB:8:LYS:H	1.30	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:47:THR:HG22	52:Y6:48:VAL:HG12	1.45	0.93
13:QM:90:LEU:HA	13:QM:93:ARG:HD2	1.50	0.93
28:RE:78:LEU:HG	28:RE:79:ARG:HE	1.31	0.93
41:RV:35:LEU:HD21	41:RV:57:VAL:HG22	1.47	0.93
51:R5:56:LYS:H	51:R5:56:LYS:HD2	1.30	0.93
31:YH:127:GLU:HB3	31:YH:128:PRO:CD	1.99	0.93
38:RS:59:LYS:HG2	38:RS:60:GLY:H	1.31	0.93
47:Y1:81:LYS:HA	47:Y1:81:LYS:HZ3	0.79	0.93
33:RN:134:ARG:H	33:RN:135:PRO:CD	1.81	0.93
36:RQ:59:ARG:O	36:RQ:60:ARG:CG	2.17	0.93
3:XC:70:VAL:HG12	3:XC:72:LYS:H	1.34	0.93
4:XD:12:CYS:CA	4:XD:19:LEU:HD21	1.98	0.93
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ3	1.31	0.93
33:YN:134:ARG:H	33:YN:135:PRO:CD	1.81	0.93
14:YN:43:CYS:O	14:YN:45:ARG:N	2.01	0.93
19:QS:40:ILE:HG12	19:QS:41:VAL:HG22	1.51	0.93
19:QS:63:THR:HG23	19:QS:66:MET:HE3	1.51	0.93
13:QM:57:ARG:HB2	13:QM:57:ARG:HH11	1.32	0.93
31:RH:127:GLU:HB3	31:RH:128:PRO:CD	1.99	0.93
36:RQ:34:LEU:HD11	36:RQ:129:THR:HB	1.50	0.93
43:YX:57:LEU:CD1	43:YX:78:LYS:HB2	1.98	0.93
20:QT:49:ALA:HB1	20:QT:99:LEU:HB2	1.51	0.93
10:XJ:8:LEU:HD11	10:XJ:23:ILE:HD12	1.49	0.93
5:QE:53:LEU:H	5:QE:53:LEU:HD12	1.34	0.92
41:RV:99:ILE:HD13	41:RV:99:ILE:H	1.31	0.92
6:XF:24:GLU:HA	6:XF:27:GLN:HG3	1.49	0.92
17:XQ:4:LYS:HE3	17:XQ:6:LEU:HD21	1.51	0.92
27:YD:108:PRO:HB3	27:YD:143:HIS:CE1	2.05	0.92
35:YP:65:ARG:HG3	35:YP:65:ARG:HH11	1.34	0.92
37:YR:33:ARG:NH2	51:Y5:55:ARG:HG2	1.85	0.92
51:R5:58:LEU:HD13	51:R5:60:VAL:HG12	1.48	0.92
27:YD:108:PRO:HB3	27:YD:143:HIS:HE1	1.32	0.92
28:YE:14:ILE:HG12	28:YE:15:PHE:H	1.33	0.92
27:RD:147:LEU:HD13	27:RD:155:LEU:HD11	1.52	0.92
27:RD:183:ARG:HH11	27:RD:183:ARG:HG2	1.34	0.92
29:RF:103:LYS:HA	29:RF:106:ARG:HG3	1.49	0.92
19:XS:40:ILE:HG12	19:XS:41:VAL:HG22	1.51	0.92
15:XO:82:ILE:HD11	15:XO:88:ARG:HG3	1.51	0.92
35:YP:1:MET:HE2	35:YP:5:ASP:HB3	1.50	0.92
25:RA:1270:C:H5''	25:RA:1271:G:H5'	1.50	0.92
1:XA:954:G:H4'	13:XM:121:LYS:HG3	1.52	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:53:LEU:H	5:XE:53:LEU:HD12	1.34	0.92
1:QA:191:G:C4	20:QT:105:SER:HB3	2.05	0.92
5:QE:100:VAL:HG22	5:QE:118:ILE:HG22	1.52	0.92
7:XG:15:ASP:HB3	7:XG:20:ASP:H	1.31	0.92
38:YS:59:LYS:HG2	38:YS:60:GLY:H	1.31	0.92
4:QD:30:LYS:HB3	4:QD:35:ARG:HG3	1.52	0.92
31:RH:153:LYS:CB	31:RH:154:PRO:HD2	1.97	0.92
5:XE:101:ILE:HD11	5:XE:119:LEU:HD23	1.51	0.92
14:XN:32:SER:CB	14:XN:41:ARG:HB2	2.00	0.92
1:QA:992:U:H3	1:QA:1044:A:H62	1.18	0.92
8:QH:6:ILE:HB	8:QH:85:ARG:NH1	1.85	0.92
27:RD:108:PRO:HB3	27:RD:143:HIS:CE1	2.05	0.92
14:XN:32:SER:OG	14:XN:41:ARG:HB2	1.70	0.92
4:QD:9:CYS:SG	4:QD:31:CYS:O	2.28	0.92
4:QD:170:VAL:O	6:XF:21:LEU:HD21	1.70	0.92
6:QF:24:GLU:HA	6:QF:27:GLN:HG3	1.49	0.92
25:RA:1019:U:H3	25:RA:1142(A):A:H62	1.10	0.92
30:RG:37:VAL:HG22	30:RG:159:VAL:HA	1.52	0.92
41:RV:24:LYS:HA	41:RV:92:THR:HG23	1.52	0.92
8:XH:6:ILE:HB	8:XH:85:ARG:NH1	1.85	0.92
13:QM:77:ASN:HA	50:R4:71:ARG:HH22	1.22	0.91
1:XA:961:U:O2	1:XA:1201:A:N6	2.03	0.91
47:Y1:82:LEU:C	47:Y1:82:LEU:CD1	2.41	0.91
2:QB:32:ILE:HD11	2:QB:40:HIS:HB3	1.52	0.91
3:XC:20:SER:HB2	3:XC:40:ARG:HH22	1.34	0.91
3:QC:11:ARG:HB3	3:QC:15:THR:HB	1.48	0.91
30:YG:37:VAL:HG22	30:YG:159:VAL:HA	1.52	0.91
38:YS:67:ARG:NH1	38:YS:67:ARG:HB2	1.85	0.91
47:Y1:81:LYS:HA	47:Y1:81:LYS:CE	2.00	0.91
3:QC:70:VAL:HG12	3:QC:72:LYS:H	1.34	0.91
30:RG:101:ILE:HG13	30:RG:102:PHE:N	1.86	0.91
47:R1:81:LYS:HA	47:R1:81:LYS:CE	2.01	0.91
36:YQ:34:LEU:HD11	36:YQ:129:THR:HB	1.50	0.91
44:YY:30:VAL:HG22	44:YY:37:VAL:HG12	1.53	0.91
31:RH:77:LYS:HB3	31:RH:77:LYS:NZ	1.82	0.91
37:RR:33:ARG:NH2	51:R5:55:ARG:HG2	1.85	0.91
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.53	0.91
15:QO:82:ILE:HD11	15:QO:88:ARG:HG3	1.51	0.91
17:QQ:4:LYS:HE3	17:QQ:6:LEU:HD21	1.52	0.91
40:YU:92:ARG:HG2	40:YU:92:ARG:O	1.69	0.91
4:QD:29:PRO:HG2	4:QD:30:LYS:CE	2.01	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:6:ILE:HD12	8:QH:6:ILE:H	1.35	0.91
3:QC:20:SER:HB2	3:QC:40:ARG:HH22	1.34	0.91
12:QL:10:LEU:HD13	17:QQ:32:TYR:HE2	1.33	0.91
4:XD:170:VAL:HG22	4:XD:171:GLY:H	1.34	0.91
34:YO:2:ILE:HD11	34:YO:82:ASN:HD22	1.33	0.91
2:QB:33:TYR:HB2	2:QB:43:ASP:HB2	1.53	0.91
2:QB:77:ALA:HB2	2:QB:211:ILE:HD13	1.53	0.91
29:RF:7:TYR:HB3	29:RF:21:ALA:HB1	1.53	0.91
20:XT:49:ALA:HB1	20:XT:99:LEU:HB2	1.51	0.91
10:QJ:8:LEU:HD11	10:QJ:23:ILE:HD12	1.49	0.91
38:RS:67:ARG:NH1	38:RS:67:ARG:HB2	1.85	0.91
25:YA:2712:U:HO2'	25:YA:2712(A):A:H8	0.93	0.91
25:YA:1496:A:H8	25:YA:1577:C:HO2'	0.92	0.90
27:YD:10:THR:HG23	27:YD:13:ARG:HB3	1.51	0.90
47:Y1:80:LEU:O	47:Y1:81:LYS:HB2	1.71	0.90
1:XA:1078:U:O2'	5:XE:130:ASN:OD1	1.89	0.90
11:XK:99:GLN:HG2	11:XK:105:VAL:HG21	1.53	0.90
4:QD:29:PRO:HG2	4:QD:30:LYS:HD3	1.49	0.90
4:QD:170:VAL:HG22	4:QD:171:GLY:H	1.34	0.90
19:XS:63:THR:HG23	19:XS:66:MET:HE3	1.51	0.90
25:YA:2327:A:H2'	25:YA:2328:A:C8	2.05	0.90
44:YY:38:ILE:HG22	44:YY:66:PRO:HA	1.54	0.90
5:QE:101:ILE:HD11	5:QE:119:LEU:HD23	1.52	0.90
27:RD:10:THR:HG23	27:RD:13:ARG:HB3	1.51	0.90
28:RE:14:ILE:HG12	28:RE:15:PHE:H	1.33	0.90
1:XA:411:A:H62	1:XA:413:G:H21	1.16	0.90
8:XH:6:ILE:H	8:XH:6:ILE:HD12	1.34	0.90
13:XM:90:LEU:HA	13:XM:93:ARG:HD2	1.50	0.90
31:RH:4:ILE:HG13	31:RH:6:ARG:CZ	2.01	0.90
25:YA:297:C:H5"	44:YY:85:VAL:HG21	1.52	0.90
27:YD:147:LEU:HD13	27:YD:155:LEU:HD11	1.51	0.90
41:YV:24:LYS:HA	41:YV:92:THR:HG23	1.52	0.90
41:YV:44:LYS:O	41:YV:46:VAL:HG12	1.72	0.90
48:Y2:65:ASN:HB3	48:Y2:69:ARG:HH12	1.34	0.90
2:QB:178:ARG:NH2	8:QH:74:PRO:HB3	1.86	0.90
35:RP:58:THR:O	35:RP:61:ARG:NE	2.05	0.90
1:XA:1128:C:N3	1:XA:1144:G:N2	2.19	0.90
5:XE:100:VAL:HG22	5:XE:118:ILE:HG22	1.52	0.90
25:YA:607:U:H3	25:YA:621:A:H2	1.20	0.90
51:Y5:3:LYS:HA	51:Y5:3:LYS:HE3	1.54	0.90
36:RQ:59:ARG:O	36:RQ:60:ARG:HG3	1.72	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:22:THR:O	14:YN:23:ARG:CB	2.16	0.90
27:YD:44:ASN:HD22	27:YD:44:ASN:H	1.19	0.90
2:QB:7:VAL:HG21	2:QB:217:ARG:NH1	1.87	0.90
31:YH:4:ILE:HG13	31:YH:6:ARG:CZ	2.01	0.90
31:YH:26:VAL:HG13	31:YH:27:LYS:H	1.35	0.90
32:YI:92:VAL:HG13	32:YI:120:ILE:HG23	1.54	0.90
35:YP:106:LEU:O	35:YP:107:LYS:HB2	1.71	0.90
27:RD:69:ARG:HH21	27:RD:130:ALA:HB2	1.37	0.89
31:RH:10:PRO:HD2	31:RH:50:VAL:O	1.72	0.89
48:R2:65:ASN:HB3	48:R2:69:ARG:HH12	1.34	0.89
25:YA:857:C:H4'	46:Y0:23:VAL:HG21	1.52	0.89
27:YD:69:ARG:HH21	27:YD:130:ALA:HB2	1.37	0.89
27:YD:183:ARG:HH11	27:YD:183:ARG:HG2	1.34	0.89
19:XS:64:GLU:O	19:XS:67:VAL:HG23	1.73	0.89
35:YP:88:LEU:HD12	35:YP:95:VAL:HG11	1.52	0.89
42:YW:65:LEU:HD12	42:YW:68:ARG:HH11	1.36	0.89
4:QD:13:ARG:CB	4:QD:33:MET:HE3	2.02	0.89
25:RA:49:A:H4'	25:RA:50:U:H5''	1.54	0.89
25:RA:483:A:H4'	44:RY:49:VAL:HA	1.52	0.89
2:XB:7:VAL:HG21	2:XB:217:ARG:NH1	1.87	0.89
31:RH:26:VAL:HG13	31:RH:27:LYS:H	1.36	0.89
51:R5:3:LYS:HA	51:R5:3:LYS:HE3	1.54	0.89
1:XA:891:U:OP2	1:XA:906:G:N2	2.05	0.89
25:YA:67:U:H3	25:YA:74:A:H2	1.21	0.89
28:YE:63:LEU:HD12	28:YE:64:LYS:N	1.87	0.89
41:RV:44:LYS:O	41:RV:46:VAL:HG12	1.72	0.89
44:RY:76:CYS:SG	44:RY:77:PRO:HD2	2.13	0.89
54:Y8:59:LYS:HB2	54:Y8:59:LYS:NZ	1.88	0.89
5:QE:78:HIS:HA	8:QH:105:ARG:HB2	1.52	0.89
19:QS:5:LEU:CD2	50:R4:67:TYR:CE2	2.55	0.89
2:XB:32:ILE:HD11	2:XB:40:HIS:HB3	1.52	0.89
2:XB:126:GLU:HG3	2:XB:129:GLU:HG3	1.54	0.89
25:YA:518:G:H4'	42:YW:18:ARG:NH1	1.87	0.89
30:YG:116:ASP:O	30:YG:117:PHE:HB3	1.72	0.89
54:Y8:52:LYS:H	54:Y8:53:PRO:HD3	1.35	0.89
10:QJ:74:ILE:H	10:QJ:74:ILE:HD13	1.38	0.89
19:QS:64:GLU:O	19:QS:67:VAL:HG23	1.73	0.89
40:RU:92:ARG:HG2	40:RU:92:ARG:O	1.69	0.89
35:RP:88:LEU:HD12	35:RP:95:VAL:HG11	1.52	0.89
47:R1:80:LEU:O	47:R1:81:LYS:HB2	1.71	0.89
47:R1:81:LYS:HA	47:R1:81:LYS:HZ3	0.75	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:52:LYS:H	54:R8:53:PRO:HD3	1.35	0.89
13:XM:121:LYS:NZ	24:XY:40:G:OP1	2.05	0.89
31:YH:10:PRO:HD2	31:YH:50:VAL:O	1.72	0.89
35:YP:58:THR:O	35:YP:61:ARG:NE	2.05	0.89
27:RD:27:THR:HG23	27:RD:28:GLU:H	1.38	0.88
35:RP:65:ARG:HG3	35:RP:65:ARG:HH11	1.35	0.88
2:XB:18:GLY:N	2:XB:42:ILE:HG22	1.87	0.88
2:XB:77:ALA:HB2	2:XB:211:ILE:HD13	1.53	0.88
25:YA:620:G:H4'	25:YA:621:A:H5''	1.51	0.88
1:XA:973:G:OP1	10:XJ:57:LYS:NZ	2.06	0.88
30:YG:88:ILE:O	30:YG:88:ILE:HD13	1.72	0.88
2:QB:126:GLU:HG3	2:QB:129:GLU:HG3	1.54	0.88
35:RP:106:LEU:O	35:RP:107:LYS:HB2	1.71	0.88
2:QB:18:GLY:N	2:QB:42:ILE:HG22	1.86	0.88
30:RG:88:ILE:HD13	30:RG:88:ILE:O	1.72	0.88
44:RY:30:VAL:HG22	44:RY:37:VAL:HG12	1.53	0.88
44:YY:76:CYS:SG	44:YY:77:PRO:HD2	2.13	0.88
25:RA:1454:U:OP1	37:RR:77:ARG:NH1	2.06	0.88
5:XE:71:LEU:O	5:XE:72:GLN:HG3	1.74	0.88
12:XL:6:THR:H	12:XL:9:GLN:HE21	1.15	0.88
35:YP:64:LYS:O	35:YP:66:GLY:N	2.07	0.88
38:YS:106:ARG:NH1	38:YS:106:ARG:HB2	1.88	0.88
45:YZ:145:GLU:HG3	45:YZ:146:ILE:HG12	1.54	0.88
5:QE:41:VAL:HG11	5:QE:113:ALA:HB2	1.54	0.88
25:RA:1068:G:N2	25:RA:1095:A:O2'	2.07	0.88
28:RE:63:LEU:HD12	28:RE:64:LYS:N	1.88	0.88
5:XE:79:GLU:OE2	8:XH:104:ARG:HA	1.74	0.88
25:YA:2600:A:C2'	25:YA:2601:C:H5'	2.03	0.88
20:QT:23:ARG:HA	20:QT:26:ASN:HD21	1.36	0.88
4:XD:114:ARG:HH11	4:XD:114:ARG:HG3	1.38	0.88
20:XT:23:ARG:HA	20:XT:26:ASN:HD21	1.37	0.88
33:YN:22:THR:HG22	33:YN:23:LEU:N	1.88	0.88
1:QA:1286:A:H5''	21:QU:26:LYS:HD2	1.55	0.88
13:QM:97:PRO:HB2	13:QM:101:GLN:NE2	1.89	0.88
33:RN:22:THR:HG22	33:RN:23:LEU:N	1.88	0.88
54:R8:59:LYS:HB2	54:R8:59:LYS:NZ	1.88	0.88
38:RS:106:ARG:NH1	38:RS:106:ARG:HB2	1.88	0.88
44:RY:38:ILE:HG22	44:RY:66:PRO:HA	1.54	0.88
51:R5:40:LYS:HZ1	51:R5:48:GLU:HB2	1.39	0.88
5:XE:41:VAL:HG11	5:XE:113:ALA:HB2	1.54	0.88
14:XN:12:ARG:C	14:XN:14:PRO:HD2	1.98	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:8:GLY:O	19:XS:9:VAL:HG22	1.74	0.88
27:YD:44:ASN:CB	27:YD:49:ILE:HA	2.04	0.88
21:XU:6:ARG:HE	21:XU:15:ARG:CZ	1.87	0.87
28:YE:77:ILE:HD12	28:YE:78:LEU:N	1.89	0.87
2:QB:96:ARG:H	2:QB:96:ARG:HD2	1.38	0.87
8:QH:51:VAL:HG21	8:QH:60:ARG:HG2	1.55	0.87
28:RE:77:ILE:HD12	28:RE:78:LEU:N	1.89	0.87
23:XX:2:U:O2'	23:XX:3:G:H5'	1.74	0.87
35:YP:49:ARG:HD2	54:Y8:58:ILE:HG22	1.54	0.87
35:RP:49:ARG:HD2	54:R8:58:ILE:HG22	1.54	0.87
41:RV:19:LYS:HD2	41:RV:95:LEU:HD23	1.55	0.87
42:RW:65:LEU:HD12	42:RW:68:ARG:HH11	1.36	0.87
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:HB2	1.38	0.87
21:QU:6:ARG:HE	21:QU:15:ARG:CZ	1.88	0.87
27:RD:28:GLU:HB2	27:RD:29:PRO:HD2	1.56	0.87
47:Y1:82:LEU:HD13	47:Y1:83:GLU:O	1.74	0.87
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	1.89	0.87
19:QS:41:VAL:HG13	19:QS:44:MET:HB2	1.57	0.87
1:XA:689:C:HO2'	1:XA:705:U:HO2'	1.22	0.87
25:YA:2600:A:H2'	25:YA:2601:C:H5'	1.56	0.87
36:YQ:64:ILE:HA	36:YQ:106:VAL:HG12	1.54	0.87
11:QK:99:GLN:HG2	11:QK:105:VAL:HG21	1.53	0.87
14:QN:12:ARG:C	14:QN:14:PRO:HD2	1.98	0.87
27:RD:181:GLU:HA	27:RD:272:ALA:HB3	1.57	0.87
35:RP:64:LYS:O	35:RP:66:GLY:N	2.07	0.87
13:XM:4:ILE:H	13:XM:9:ILE:CG2	1.88	0.87
27:YD:27:THR:HG23	27:YD:28:GLU:H	1.38	0.87
27:RD:44:ASN:HD22	27:RD:44:ASN:H	1.19	0.87
13:XM:97:PRO:HB2	13:XM:101:GLN:NE2	1.89	0.87
27:YD:181:GLU:HA	27:YD:272:ALA:HB3	1.57	0.87
47:Y1:82:LEU:HD11	47:Y1:83:GLU:O	1.75	0.87
36:RQ:64:ILE:HA	36:RQ:106:VAL:HG12	1.54	0.87
25:YA:483:A:H4'	44:YY:49:VAL:HA	1.57	0.87
1:QA:1139:G:N2	1:QA:1143:G:O6	2.08	0.87
10:XJ:7:LYS:HB2	10:XJ:97:GLU:HB2	1.56	0.87
11:XK:32:ILE:HD12	11:XK:72:ALA:HB2	1.56	0.87
29:YF:7:TYR:HB3	29:YF:21:ALA:HB1	1.53	0.87
30:YG:101:ILE:HG13	30:YG:102:PHE:N	1.86	0.87
25:RA:518:G:H4'	42:RW:18:ARG:HH12	1.37	0.86
35:RP:75:ILE:HD13	35:RP:75:ILE:H	1.39	0.86
19:XS:27:GLU:O	19:XS:28:LYS:HG2	1.74	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2068:U:H3	25:YA:2430:A:H2	1.22	0.86
5:QE:78:HIS:CG	8:QH:104:ARG:HG2	2.11	0.86
10:QJ:47:PHE:HE1	10:QJ:63:PHE:HB2	1.40	0.86
15:QO:56:LEU:O	15:QO:60:VAL:HG23	1.75	0.86
22:QV:1:C:C1'	46:R0:5:LYS:HE3	2.03	0.86
25:RA:526:A:OP1	25:RA:527:C:OP1	1.93	0.86
25:RA:2882:A:OP1	37:RR:96:ARG:NH1	2.07	0.86
38:RS:106:ARG:HB2	38:RS:106:ARG:HH11	1.39	0.86
19:XS:5:LEU:HD11	50:Y4:66:SER:HB2	1.56	0.86
26:YB:8:U:H3	26:YB:112:G:H1	1.19	0.86
30:YG:145:THR:HG23	50:Y4:28:LYS:HZ1	1.38	0.86
35:YP:18:ARG:O	35:YP:19:VAL:HB	1.75	0.86
25:RA:1022:G:O2'	25:RA:1023:U:OP2	1.93	0.86
25:RA:2306:C:H3'	25:RA:2307:G:H5''	1.57	0.86
30:RG:116:ASP:O	30:RG:117:PHE:HB3	1.72	0.86
47:R1:92:LYS:HG3	47:R1:96:LYS:HB2	1.57	0.86
25:YA:1403:C:H5''	25:YA:1471:A:H1'	1.57	0.86
30:YG:161:THR:HG22	30:YG:163:ALA:H	1.39	0.86
1:QA:923:A:N6	1:QA:1392:G:O6	2.07	0.86
2:QB:67:THR:HG21	2:QB:155:LEU:HD21	1.57	0.86
19:QS:8:GLY:O	19:QS:9:VAL:HG22	1.75	0.86
25:RA:1678:G:H22	25:RA:1989:G:H22	1.22	0.86
2:XB:96:ARG:H	2:XB:96:ARG:HD2	1.38	0.86
8:XH:51:VAL:HG21	8:XH:60:ARG:HG2	1.55	0.86
40:YU:92:ARG:HD2	41:YV:11:GLN:NE2	1.90	0.86
19:QS:27:GLU:O	19:QS:28:LYS:HG2	1.74	0.86
23:QX:6:C:O2'	23:QX:7:U:OP1	1.93	0.86
26:RB:56:G:OP1	30:RG:27:ASN:ND2	2.08	0.86
29:RF:82:ILE:O	29:RF:82:ILE:HG13	1.73	0.86
10:XJ:74:ILE:H	10:XJ:74:ILE:HD13	1.39	0.86
25:YA:637:A:H2'	35:YP:117:GLU:OE2	1.76	0.86
27:YD:35:LYS:HG2	27:YD:64:ILE:H	1.40	0.86
31:YH:127:GLU:HG2	31:YH:128:PRO:HD3	0.86	0.86
45:YZ:151:HIS:HB3	45:YZ:170:THR:HA	1.55	0.86
11:QK:32:ILE:HD12	11:QK:72:ALA:HB2	1.56	0.86
27:RD:44:ASN:CB	27:RD:49:ILE:HA	2.04	0.86
25:YA:1795:C:O2	27:YD:255:LYS:HE2	1.75	0.86
25:RA:1582:C:HO2'	25:RA:1586:A:H8	1.21	0.86
31:RH:8:PRO:C	31:RH:9:ILE:HG12	2.00	0.86
25:RA:768:G:O2'	25:RA:1379:A:N6	2.09	0.86
30:RG:161:THR:HG22	30:RG:163:ALA:H	1.39	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:51:VAL:O	44:RY:56:PRO:HA	1.76	0.86
4:QD:114:ARG:HH11	4:QD:114:ARG:HG3	1.39	0.86
13:QM:14:ARG:H	13:QM:44:ARG:HD3	1.41	0.86
1:XA:674:G:H2'	1:XA:675:A:H8	1.41	0.86
41:YV:19:LYS:HD2	41:YV:95:LEU:HD23	1.55	0.86
13:QM:4:ILE:H	13:QM:9:ILE:CG2	1.88	0.86
23:QX:2:U:O2'	23:QX:3:G:H5'	1.74	0.86
25:RA:2122:U:H2'	25:RA:2123:G:H8	1.40	0.86
25:RA:2302:G:N2	25:RA:2314:C:O2	2.07	0.86
19:XS:41:VAL:HG13	19:XS:44:MET:HB2	1.56	0.86
2:XB:67:THR:HG21	2:XB:155:LEU:HD21	1.56	0.85
10:XJ:53:PRO:O	14:XN:41:ARG:NH2	2.09	0.85
25:YA:958:U:OP2	36:YQ:14:ARG:NH1	2.09	0.85
1:QA:1081:G:OP1	5:QE:16:THR:OG1	1.94	0.85
40:RU:92:ARG:HD2	41:RV:11:GLN:NE2	1.90	0.85
1:XA:895:G:H1	1:XA:904:C:H42	1.22	0.85
25:YA:2245:U:H5'	25:YA:2246:G:H5'	1.56	0.85
38:YS:106:ARG:HB2	38:YS:106:ARG:HH11	1.39	0.85
4:QD:22:LYS:CB	4:QD:26:CYS:SG	2.64	0.85
5:QE:71:LEU:O	5:QE:72:GLN:HG3	1.73	0.85
25:RA:279:C:H42	25:RA:361:G:H1	1.22	0.85
25:YA:443:A:N7	29:YF:45:ARG:HD2	1.91	0.85
10:QJ:49:VAL:HG13	14:QN:41:ARG:HD2	0.94	0.85
28:RE:61:ARG:O	28:RE:63:LEU:HG	1.77	0.85
20:XT:36:LEU:HD13	20:XT:39:LYS:HD3	1.57	0.85
39:YT:111:ARG:O	39:YT:112:ARG:HG3	1.76	0.85
20:QT:36:LEU:HD13	20:QT:39:LYS:HD3	1.57	0.85
28:RE:81:ILE:O	28:RE:82:ARG:HB2	1.75	0.85
24:XY:29:U:H2'	24:XY:30:C:C6	2.11	0.85
36:YQ:75:THR:HA	36:YQ:88:GLY:O	1.76	0.85
44:YY:51:VAL:O	44:YY:56:PRO:HA	1.76	0.85
29:RF:32:LEU:HD13	29:RF:105:VAL:HG13	1.59	0.85
36:RQ:75:THR:HA	36:RQ:88:GLY:O	1.76	0.85
47:R1:82:LEU:HD13	47:R1:83:GLU:O	1.74	0.85
15:XO:56:LEU:O	15:XO:60:VAL:HG23	1.75	0.85
25:YA:1055:G:H1	25:YA:1104:C:H42	1.25	0.85
35:YP:75:ILE:H	35:YP:75:ILE:HD13	1.39	0.85
36:RQ:83:MET:HB2	46:R0:7:LEU:HD12	1.59	0.85
51:R5:39:MET:O	51:R5:40:LYS:HG3	1.77	0.85
30:YG:67:LYS:HE2	50:Y4:6:HIS:NE2	1.92	0.85
35:YP:101:VAL:HG23	35:YP:107:LYS:H	1.41	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2210:G:H3'	25:RA:2211:G:C8	2.11	0.85
28:RE:95:ILE:H	28:RE:95:ILE:HD12	1.41	0.85
30:RG:67:LYS:HE2	50:R4:6:HIS:NE2	1.92	0.85
30:RG:145:THR:HG23	50:R4:28:LYS:HZ1	1.39	0.85
31:RH:127:GLU:HG2	31:RH:128:PRO:HD3	0.86	0.85
40:RU:64:ARG:HG2	40:RU:64:ARG:HH21	1.42	0.85
7:XG:44:TYR:HA	7:XG:47:CYS:SG	2.17	0.85
35:RP:18:ARG:O	35:RP:19:VAL:HB	1.75	0.85
1:XA:247:G:N2	1:XA:277:C:O2	2.08	0.85
26:YB:82:G:H2'	26:YB:83:G:H8	1.41	0.85
31:YH:8:PRO:C	31:YH:9:ILE:HG12	2.00	0.85
31:YH:89:ILE:HD11	31:YH:129:THR:HB	1.58	0.85
10:QJ:7:LYS:HB2	10:QJ:97:GLU:HB2	1.57	0.85
1:XA:1238:A:N6	1:XA:1301:U:H3	1.75	0.85
5:XE:51:VAL:HB	5:XE:52:PRO:HD3	1.59	0.85
25:YA:2303:G:H1	25:YA:2313:C:H42	1.25	0.85
27:YD:28:GLU:HB2	27:YD:29:PRO:HD2	1.56	0.85
29:YF:82:ILE:O	29:YF:82:ILE:HG13	1.73	0.85
10:QJ:49:VAL:HG21	14:QN:41:ARG:HB2	1.23	0.84
31:RH:89:ILE:HD11	31:RH:129:THR:HB	1.58	0.84
54:R8:59:LYS:NZ	54:R8:59:LYS:CB	2.40	0.84
27:YD:17:THR:HG22	27:YD:205:VAL:H	1.41	0.84
41:YV:49:THR:HB	41:YV:50:PRO:CD	2.07	0.84
14:QN:23:ARG:O	14:QN:24:CYS:O	1.95	0.84
19:QS:5:LEU:HD21	50:R4:66:SER:HB2	1.59	0.84
24:QY:29:U:H2'	24:QY:30:C:C6	2.11	0.84
25:RA:270(S):G:H1'	47:R1:78:LYS:HD2	1.59	0.84
25:RA:1689:A:H62	25:RA:1698:A:H2	1.22	0.84
2:XB:212:GLN:CD	2:XB:235:SER:HB2	2.03	0.84
12:XL:10:LEU:HD13	17:XQ:32:TYR:HE2	1.42	0.84
13:XM:14:ARG:H	13:XM:44:ARG:HD3	1.41	0.84
1:QA:1070:U:O5'	5:QE:25:ARG:NH1	2.10	0.84
1:QA:1226:C:O2'	13:QM:111:LYS:NZ	2.11	0.84
5:QE:78:HIS:CD2	8:QH:104:ARG:CG	2.59	0.84
10:QJ:49:VAL:CB	14:QN:41:ARG:HB2	2.08	0.84
14:QN:21:TYR:HE2	14:QN:23:ARG:HH21	1.24	0.84
25:YA:265:A:N6	25:YA:427:U:O2'	2.10	0.84
28:YE:81:ILE:O	28:YE:82:ARG:HB2	1.75	0.84
28:YE:95:ILE:HD12	28:YE:95:ILE:H	1.42	0.84
34:YO:26:LYS:HB2	34:YO:30:ALA:HB2	1.59	0.84
1:QA:606:G:H22	1:QA:631:G:H5'	1.41	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1152:A:H5''	10:QJ:13:HIS:CD2	2.13	0.84
5:QE:51:VAL:HB	5:QE:52:PRO:HD3	1.59	0.84
27:RD:17:THR:HG22	27:RD:205:VAL:H	1.42	0.84
34:RO:26:LYS:HB2	34:RO:30:ALA:HB2	1.59	0.84
15:XO:3:ILE:HD13	15:XO:3:ILE:H	1.40	0.84
38:YS:106:ARG:HA	38:YS:110:LEU:CD1	2.07	0.84
1:QA:949:A:H1'	1:QA:1364:U:H3	1.42	0.84
7:QG:44:TYR:HA	7:QG:47:CYS:SG	2.17	0.84
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.60	0.84
28:RE:24:THR:HG21	28:RE:188:VAL:HG11	1.59	0.84
38:RS:89:ARG:HD2	38:RS:92:TYR:O	1.78	0.84
25:YA:2634:G:O6	25:YA:2784:C:N4	2.09	0.84
38:YS:83:LYS:HG2	38:YS:109:GLY:CA	2.07	0.84
2:QB:178:ARG:HD2	8:QH:71:GLY:C	2.02	0.84
15:QO:82:ILE:HD11	15:QO:88:ARG:CG	2.07	0.84
10:XJ:4:ILE:HB	10:XJ:74:ILE:HD11	1.60	0.84
25:YA:1354:A:OP1	27:YD:38:LYS:HE2	1.76	0.84
28:YE:61:ARG:O	28:YE:63:LEU:HG	1.77	0.84
29:YF:53:THR:HG23	29:YF:56:GLU:OE1	1.77	0.84
30:YG:98:ARG:HA	30:YG:101:ILE:HG12	1.59	0.84
1:QA:1079:G:O3'	5:QE:14:ARG:NH2	2.10	0.84
35:RP:62:LEU:CD2	54:R8:25:MET:HB2	2.08	0.84
41:RV:49:THR:HB	41:RV:50:PRO:CD	2.06	0.84
47:R1:82:LEU:HD11	47:R1:83:GLU:O	1.75	0.84
1:XA:1002:G:H1	1:XA:1038:C:H42	1.22	0.84
25:YA:631:A:OP2	54:Y8:46:ARG:NH2	2.10	0.84
31:YH:54:ARG:NH1	31:YH:62:LYS:HG2	1.92	0.84
36:YQ:30:GLY:HA2	36:YQ:107:ALA:HB2	1.60	0.84
51:Y5:40:LYS:HD3	51:Y5:46:CYS:HB3	1.60	0.84
39:RT:111:ARG:O	39:RT:112:ARG:HG3	1.76	0.84
35:YP:62:LEU:CD2	54:Y8:25:MET:HB2	2.08	0.84
37:YR:117:VAL:HG22	37:YR:118:GLU:H	1.43	0.84
44:YY:57:GLN:NE2	44:YY:58:GLY:H	1.76	0.84
4:QD:22:LYS:HB2	4:QD:26:CYS:SG	2.18	0.84
5:QE:93:PRO:HG3	8:QH:105:ARG:HG3	1.59	0.84
27:RD:35:LYS:HG2	27:RD:64:ILE:H	1.40	0.84
30:RG:98:ARG:HA	30:RG:101:ILE:HG12	1.59	0.84
13:XM:23:TYR:HB3	13:XM:67:GLU:HG2	1.60	0.84
14:XM:32:SER:OG	14:XM:41:ARG:CB	2.24	0.84
25:YA:27:G:HO2'	25:YA:28:A:H8	1.24	0.84
25:YA:1019:U:H3	25:YA:1142(A):A:H62	1.23	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:32:LEU:HD13	29:YF:105:VAL:HG13	1.59	0.84
2:QB:212:GLN:CD	2:QB:235:SER:HB2	2.03	0.84
14:QN:8:GLU:OE2	14:QN:11:LYS:HD2	1.78	0.84
38:RS:83:LYS:HG2	38:RS:109:GLY:CA	2.07	0.84
1:XA:864:A:H5'	5:XE:86:ALA:HB2	1.57	0.84
38:YS:89:ARG:HD2	38:YS:92:TYR:O	1.78	0.84
39:YT:3:ARG:HG3	39:YT:7:ILE:HG12	1.60	0.84
4:QD:25:ARG:NH1	4:QD:30:LYS:HE3	1.93	0.83
31:RH:54:ARG:NH1	31:RH:62:LYS:HG2	1.92	0.83
10:XJ:37:PRO:HA	10:XJ:72:VAL:HG22	1.59	0.83
10:XJ:47:PHE:HE1	10:XJ:63:PHE:HB2	1.40	0.83
37:RR:117:VAL:HG22	37:RR:118:GLU:H	1.43	0.83
1:XA:372:C:H42	1:XA:389:A:H62	1.25	0.83
15:XO:82:ILE:HD11	15:XO:88:ARG:CG	2.07	0.83
39:RT:24:PRO:HA	39:RT:49:VAL:HG13	1.59	0.83
1:XA:686:U:H1'	11:XK:42:TRP:HE1	1.43	0.83
3:XC:15:THR:CG2	3:XC:181:ASN:HA	2.08	0.83
12:XL:46:LYS:CG	12:XL:47:LYS:H	1.85	0.83
25:YA:2846:G:H2'	25:YA:2847:U:H6	1.40	0.83
26:YB:31:C:O2	26:YB:53:A:N6	2.12	0.83
31:YH:13:LYS:HE2	31:YH:13:LYS:HA	1.61	0.83
13:QM:23:TYR:HB3	13:QM:67:GLU:HG2	1.60	0.83
19:QS:50:ALA:HB1	19:QS:57:HIS:HB3	1.60	0.83
31:RH:105:LEU:HD13	31:RH:105:LEU:H	1.43	0.83
44:RY:81:LYS:HD3	44:RY:97:ARG:HE	1.43	0.83
51:R5:40:LYS:HD3	51:R5:46:CYS:HB3	1.60	0.83
25:YA:592:G:H1	25:YA:665:C:H42	1.24	0.83
35:YP:126:VAL:HG22	35:YP:145:PRO:HG2	1.61	0.83
52:Y6:27:LYS:HB2	52:Y6:27:LYS:NZ	1.93	0.83
15:QO:3:ILE:H	15:QO:3:ILE:HD13	1.40	0.83
38:RS:88:ASP:O	38:RS:89:ARG:HB3	1.78	0.83
44:RY:57:GLN:NE2	44:RY:58:GLY:H	1.76	0.83
14:YN:8:GLU:OE2	14:YN:11:LYS:HD2	1.78	0.83
28:YE:7:VAL:HG23	28:YE:8:LYS:H	1.44	0.83
51:Y5:39:MET:O	51:Y5:40:LYS:HG3	1.77	0.83
25:RA:1833:U:H2'	25:RA:1834:U:H6	1.43	0.83
28:RE:35:GLN:HG2	28:RE:37:ARG:HE	1.44	0.83
29:RF:192:LEU:HD21	29:RF:194:MET:HE3	1.59	0.83
25:YA:242:G:H5''	54:Y8:3:LYS:HE3	1.60	0.83
33:YN:131:GLN:NE2	33:YN:132:ALA:H	1.75	0.83
35:YP:59:LEU:HA	35:YP:61:ARG:HH21	1.44	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:92:LYS:HG3	47:Y1:96:LYS:HB2	1.58	0.83
4:QD:96:LEU:HD22	4:QD:96:LEU:H	1.43	0.83
1:XA:359:U:H2'	1:XA:360:A:H8	1.44	0.83
7:XG:78:ARG:HG3	7:XG:79:ARG:N	1.93	0.83
25:YA:1264:G:H3'	25:YA:1265:A:H5''	1.58	0.83
33:RN:131:GLN:NE2	33:RN:132:ALA:H	1.75	0.83
33:RN:133:GLN:HB2	33:RN:135:PRO:HD3	1.59	0.83
41:RV:66:ARG:NH1	41:RV:88:ARG:HD3	1.94	0.83
1:XA:1163:C:N4	1:XA:1173:G:O6	2.12	0.83
26:YB:38:C:H42	26:YB:44:G:H1	1.25	0.83
36:YQ:83:MET:H	46:Y0:7:LEU:HD22	1.44	0.83
39:YT:24:PRO:HA	39:YT:49:VAL:HG13	1.59	0.83
7:QG:78:ARG:HG3	7:QG:79:ARG:N	1.93	0.83
10:QJ:37:PRO:HA	10:QJ:72:VAL:HG22	1.59	0.83
35:RP:138:LEU:C	35:RP:140:ALA:H	1.85	0.83
39:RT:53:ARG:O	39:RT:59:THR:HG23	1.78	0.83
45:RZ:94:GLU:HB2	45:RZ:130:PRO:HD2	1.59	0.83
1:XA:973:G:O3'	14:XN:41:ARG:NH1	2.12	0.83
5:XE:81:GLU:HB3	5:XE:90:VAL:HG22	1.60	0.83
25:YA:1863:G:H2'	25:YA:1864:U:C6	2.14	0.83
39:YT:53:ARG:O	39:YT:59:THR:HG23	1.78	0.83
1:QA:1124:G:H3'	1:QA:1145:C:N4	1.93	0.83
2:QB:193:ASP:OD2	2:QB:196:LEU:HG	1.78	0.83
5:QE:81:GLU:HB3	5:QE:90:VAL:HG22	1.60	0.83
10:QJ:49:VAL:HG11	14:QN:41:ARG:HB2	1.58	0.83
12:QL:38:THR:HG23	12:QL:39:VAL:HG23	1.60	0.83
25:RA:631:A:OP2	54:R8:46:ARG:NH2	2.10	0.83
38:RS:106:ARG:HA	38:RS:110:LEU:CD1	2.08	0.83
39:RT:3:ARG:HG3	39:RT:7:ILE:HG12	1.60	0.83
1:QA:411:A:H62	1:QA:413:G:H21	1.26	0.82
2:QB:204:ASN:ND2	2:QB:206:ASP:H	1.77	0.82
22:QV:1:C:C4'	46:R0:5:LYS:HZ1	1.91	0.82
35:RP:101:VAL:HG23	35:RP:107:LYS:H	1.41	0.82
50:R4:36:CYS:O	50:R4:39:CYS:HB2	1.79	0.82
45:YZ:182:LYS:HG3	45:YZ:183:LEU:HD23	1.60	0.82
3:QC:113:ALA:HB3	3:QC:114:PRO:HD3	1.61	0.82
25:RA:1021:A:OP2	33:RN:65:LYS:NZ	2.11	0.82
35:RP:65:ARG:HG3	35:RP:65:ARG:NH1	1.90	0.82
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.60	0.82
2:XB:193:ASP:OD2	2:XB:196:LEU:HG	1.79	0.82
2:XB:204:ASN:ND2	2:XB:206:ASP:H	1.77	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:15:PHE:CE1	28:YE:20:ALA:HB2	2.14	0.82
29:YF:192:LEU:HD21	29:YF:194:MET:HE3	1.59	0.82
31:YH:153:LYS:HG2	31:YH:162:ILE:HG13	1.61	0.82
25:RA:884:C:O2	25:RA:892:G:N1	2.12	0.82
28:RE:15:PHE:CE1	28:RE:20:ALA:HB2	2.14	0.82
29:RF:53:THR:HG23	29:RF:56:GLU:OE1	1.77	0.82
36:RQ:30:GLY:HA2	36:RQ:107:ALA:HB2	1.60	0.82
5:XE:78:HIS:CD2	8:XH:104:ARG:HG2	2.12	0.82
14:YN:44:LEU:HD12	14:YN:53:LEU:CD1	2.08	0.82
25:YA:674:G:H1'	29:YF:74:ARG:HD3	1.60	0.82
25:YA:2592:G:O6	25:YA:2601:C:N4	2.12	0.82
27:YD:25:THR:CG2	27:YD:82:ILE:H	1.93	0.82
33:YN:133:GLN:HB2	33:YN:135:PRO:HD3	1.59	0.82
44:YY:81:LYS:HD3	44:YY:97:ARG:HE	1.43	0.82
1:QA:939:G:H5''	7:QG:102:ARG:HH22	1.42	0.82
2:QB:178:ARG:CD	8:QH:71:GLY:C	2.53	0.82
2:QB:185:ILE:HG22	2:QB:199:TYR:HB2	1.61	0.82
25:RA:1476:C:N4	25:RA:1517:G:O6	2.13	0.82
4:XD:96:LEU:H	4:XD:96:LEU:HD22	1.43	0.82
19:XS:50:ALA:HB1	19:XS:57:HIS:HB3	1.60	0.82
31:YH:105:LEU:HD13	31:YH:105:LEU:H	1.42	0.82
27:RD:35:LYS:NZ	27:RD:104:TYR:HB2	1.93	0.82
52:R6:27:LYS:HB2	52:R6:27:LYS:NZ	1.93	0.82
1:XA:1346:A:H5''	9:XI:120:ARG:HH12	1.44	0.82
12:XL:38:THR:HG23	12:XL:39:VAL:HG23	1.60	0.82
40:YU:64:ARG:HG2	40:YU:64:ARG:HH21	1.42	0.82
52:R6:15:GLU:CD	52:R6:41:PRO:HB3	2.04	0.82
1:XA:1281:U:OP2	1:XA:1282:C:N4	2.11	0.82
17:XQ:59:ILE:HG22	17:XQ:73:VAL:HA	1.60	0.82
25:YA:571:A:H5'	25:YA:2030:A:H62	1.45	0.82
27:YD:35:LYS:NZ	27:YD:104:TYR:HB2	1.93	0.82
33:YN:22:THR:HG22	33:YN:23:LEU:H	1.45	0.82
40:YU:88:ILE:HD13	40:YU:88:ILE:H	1.44	0.82
45:YZ:103:ARG:HB2	45:YZ:138:GLU:HG2	1.60	0.82
1:QA:1152:A:H5''	10:QJ:13:HIS:HD2	1.43	0.82
25:RA:299:A:H5'	44:RY:84:ARG:HH21	1.43	0.82
25:RA:1826:G:H4'	27:RD:242:ARG:HH21	1.42	0.82
25:RA:2580:U:H4'	28:RE:130:GLY:HA3	1.62	0.82
25:RA:2667:C:H1'	31:RH:109:PHE:HD2	1.41	0.82
30:RG:127:GLY:HA2	30:RG:166:ASP:CG	2.05	0.82
40:RU:88:ILE:HD13	40:RU:88:ILE:H	1.44	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:33:VAL:HG12	50:R4:34:GLU:H	1.44	0.82
16:XP:4:ILE:CD1	16:XP:64:ALA:HB1	2.08	0.82
25:YA:819:A:OP2	25:YA:1187:G:N2	2.11	0.82
30:YG:127:GLY:HA2	30:YG:166:ASP:CG	2.05	0.82
48:Y2:16:LEU:O	48:Y2:16:LEU:HG	1.78	0.82
25:RA:1359:A:OP2	25:RA:1371:G:N2	2.13	0.82
25:RA:2637:U:H5''	28:RE:82:ARG:HH21	1.44	0.82
28:RE:7:VAL:HG23	28:RE:8:LYS:H	1.44	0.82
2:XB:84:GLU:OE1	2:XB:216:SER:HA	1.80	0.82
11:XK:124:LYS:HD2	11:XK:125:PHE:HE1	1.45	0.82
25:YA:2233:U:H2'	25:YA:2234:G:C8	2.15	0.82
38:YS:19:LYS:O	38:YS:20:ARG:HB3	1.80	0.82
39:YT:102:ILE:HA	39:YT:105:LEU:HD21	1.62	0.82
1:QA:642:A:N3	8:QH:113:SER:OG	2.12	0.82
2:QB:21:ARG:HG3	2:QB:38:GLY:C	2.05	0.82
25:RA:2112:G:O6	25:RA:2169:A:N6	2.12	0.82
30:RG:179:PRO:HG3	50:R4:38:LYS:NZ	1.95	0.82
33:RN:22:THR:HG22	33:RN:23:LEU:H	1.44	0.82
26:YB:7:G:H1	26:YB:113:C:H42	1.26	0.82
30:YG:179:PRO:HG3	50:Y4:38:LYS:NZ	1.95	0.82
50:Y4:71:ARG:HG3	50:Y4:71:ARG:NH1	1.90	0.82
12:QL:86:ARG:HB2	12:QL:101:VAL:HG22	1.62	0.82
14:QN:41:ARG:NH2	14:QN:42:ILE:HD11	1.94	0.82
25:RA:1012:U:H3	33:RN:25:ARG:HH11	1.26	0.82
25:RA:2832:U:H4'	25:RA:2833:G:H5''	1.61	0.82
2:XB:122:PHE:HD1	2:XB:139:LYS:HZ1	1.28	0.82
25:YA:1103:A:H5'	25:YA:1104:C:H5	1.44	0.82
30:YG:67:LYS:HE2	50:Y4:6:HIS:CE1	2.14	0.82
34:YO:14:THR:HG21	34:YO:86:ILE:HB	1.62	0.82
50:Y4:36:CYS:O	50:Y4:39:CYS:HB2	1.80	0.82
1:QA:1346:A:H5'	9:QI:120:ARG:HH12	1.44	0.81
2:QB:196:LEU:CD1	2:QB:197:VAL:HG23	2.10	0.81
26:YB:70:C:H2'	26:YB:71:C:H6	1.44	0.81
28:YE:24:THR:HG21	28:YE:188:VAL:HG11	1.59	0.81
34:RO:53:LYS:HD2	34:RO:53:LYS:N	1.96	0.81
35:YP:39:LYS:HA	35:YP:45:LEU:CD1	2.10	0.81
41:YV:66:ARG:NH1	41:YV:88:ARG:HD3	1.94	0.81
52:Y6:15:GLU:CD	52:Y6:41:PRO:HB3	2.04	0.81
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.15	0.81
2:QB:84:GLU:OE1	2:QB:216:SER:HA	1.80	0.81
10:QJ:63:PHE:HD1	14:QN:58:LYS:HA	1.43	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:6:C:HO2'	38:RS:29:PHE:HE1	1.24	0.81
29:RF:155:LEU:HD13	29:RF:174:VAL:HG13	1.62	0.81
31:RH:132:ARG:HB2	31:RH:132:ARG:NH1	1.94	0.81
31:RH:153:LYS:HG2	31:RH:162:ILE:HG13	1.61	0.81
39:RT:102:ILE:HA	39:RT:105:LEU:HD21	1.62	0.81
48:R2:16:LEU:O	48:R2:16:LEU:HG	1.78	0.81
54:R8:52:LYS:N	54:R8:53:PRO:CD	2.43	0.81
4:XD:108:LEU:HD11	4:XD:174:LEU:HD22	1.60	0.81
31:YH:10:PRO:O	31:YH:11:VAL:HG13	1.80	0.81
3:QC:15:THR:CG2	3:QC:181:ASN:HA	2.08	0.81
35:RP:126:VAL:HG22	35:RP:145:PRO:HG2	1.60	0.81
36:RQ:90:VAL:HG13	36:RQ:91:GLU:N	1.95	0.81
48:R2:43:GLN:O	48:R2:44:LEU:HG	1.81	0.81
4:XD:30:LYS:C	4:XD:32:ALA:N	2.36	0.81
10:XJ:6:ILE:O	10:XJ:6:ILE:HD12	1.81	0.81
25:YA:1363:C:O2	25:YA:1368:G:N2	2.11	0.81
30:YG:47:LYS:HD3	30:YG:81:LYS:HB2	1.63	0.81
36:YQ:90:VAL:HG13	36:YQ:91:GLU:N	1.95	0.81
38:YS:88:ASP:O	38:YS:89:ARG:HB3	1.78	0.81
53:Y7:48:LYS:HG2	53:Y7:49:ARG:H	1.46	0.81
16:QP:4:ILE:CD1	16:QP:64:ALA:HB1	2.08	0.81
16:QP:51:VAL:HG12	16:QP:52:ASP:H	1.46	0.81
23:QX:4:C:C2'	23:QX:5:C:H5'	2.11	0.81
27:RD:27:THR:HG23	27:RD:28:GLU:N	1.96	0.81
28:RE:3:GLY:O	28:RE:4:ILE:HB	1.81	0.81
30:RG:67:LYS:HE2	50:R4:6:HIS:CE1	2.14	0.81
53:R7:48:LYS:HG2	53:R7:49:ARG:H	1.46	0.81
1:XA:642:A:N3	8:XH:113:SER:OG	2.13	0.81
25:YA:1341:U:OP2	25:YA:1394:U:O2'	1.98	0.81
25:YA:1359:A:N6	25:YA:1372:U:O4	2.13	0.81
25:RA:1447:G:N2	25:RA:1464:C:O2	2.12	0.81
1:XA:489:C:OP1	4:XD:132:ARG:NH2	2.14	0.81
4:QD:108:LEU:HD11	4:QD:174:LEU:HD22	1.60	0.81
10:QJ:4:ILE:HB	10:QJ:74:ILE:HD11	1.60	0.81
31:RH:152:ARG:O	31:RH:153:LYS:HB2	1.80	0.81
35:RP:39:LYS:HA	35:RP:45:LEU:CD1	2.10	0.81
10:XJ:63:PHE:HD1	14:YN:58:LYS:HA	1.43	0.81
25:YA:1667:G:N2	25:YA:1993:U:O4	2.13	0.81
3:QC:47:LEU:HD11	3:QC:76:VAL:HG12	1.62	0.81
7:QG:111:ARG:HH11	7:QG:111:ARG:HB3	1.46	0.81
10:QJ:6:ILE:HD12	10:QJ:6:ILE:O	1.81	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:35:ARG:HG3	33:RN:37:LYS:HG3	1.63	0.81
38:RS:36:TYR:HD2	38:RS:52:SER:HB3	1.46	0.81
3:XC:113:ALA:HB3	3:XC:114:PRO:HD3	1.61	0.81
28:YE:50:GLY:CA	28:YE:77:ILE:HA	2.10	0.81
28:YE:116:VAL:HG21	28:YE:122:PHE:CD2	2.16	0.81
29:YF:155:LEU:HD13	29:YF:174:VAL:HG13	1.62	0.81
33:YN:43:THR:HB	33:YN:46:VAL:HG12	1.63	0.81
48:Y2:43:GLN:O	48:Y2:44:LEU:HG	1.81	0.81
54:Y8:59:LYS:NZ	54:Y8:59:LYS:CB	2.39	0.81
25:RA:2810:A:O3'	28:RE:61:ARG:HG3	1.79	0.81
39:RT:62:THR:CG2	39:RT:75:ILE:HG12	2.11	0.81
44:RY:76:CYS:HB3	44:RY:96:ILE:CD1	2.07	0.81
33:YN:35:ARG:HG3	33:YN:37:LYS:HG3	1.63	0.81
1:QA:235:C:H5'	17:QQ:70:ARG:HG2	1.61	0.81
1:QA:973:G:H3'	1:QA:974:A:H5''	1.61	0.81
13:QM:77:ASN:CG	50:R4:71:ARG:NH1	2.39	0.81
30:RG:47:LYS:HD3	30:RG:81:LYS:HB2	1.63	0.81
38:RS:19:LYS:O	38:RS:20:ARG:HB3	1.80	0.81
38:RS:106:ARG:CA	38:RS:110:LEU:HD21	2.11	0.81
51:R5:4:HIS:HB3	51:R5:5:PRO:CD	2.11	0.81
1:XA:1152:A:H5''	10:XJ:13:HIS:HD2	1.46	0.81
38:YS:36:TYR:HD2	38:YS:52:SER:HB3	1.46	0.81
5:QE:10:MET:HB3	5:QE:32:VAL:HG22	1.63	0.80
26:RB:65:C:H41	26:RB:108:C:H2'	1.46	0.80
28:RE:116:VAL:HG21	28:RE:122:PHE:CD2	2.16	0.80
3:XC:47:LEU:HD11	3:XC:76:VAL:HG12	1.61	0.80
5:XE:50:GLU:HB3	5:XE:53:LEU:HD13	1.61	0.80
25:YA:86:C:HO2'	25:YA:104:U:HO2'	1.15	0.80
25:YA:1077:A:H5'	25:YA:1078:U:H5''	1.62	0.80
35:YP:138:LEU:C	35:YP:140:ALA:H	1.85	0.80
39:YT:39:ARG:HG2	39:YT:40:THR:H	1.46	0.80
39:RT:39:ARG:HG2	39:RT:40:THR:H	1.46	0.80
44:RY:6:HIS:O	44:RY:7:VAL:HG13	1.81	0.80
25:YA:140:A:H8	25:YA:1408:C:HO2'	1.29	0.80
25:YA:1105:U:H2'	25:YA:1106:G:H8	1.46	0.80
44:YY:76:CYS:HB3	44:YY:96:ILE:CD1	2.07	0.80
3:QC:52:LEU:H	3:QC:52:LEU:HD23	1.46	0.80
5:QE:50:GLU:HB3	5:QE:53:LEU:HD13	1.61	0.80
28:RE:50:GLY:CA	28:RE:77:ILE:HA	2.10	0.80
28:RE:201:THR:CG2	28:RE:203:LYS:HB3	2.11	0.80
31:RH:13:LYS:HE2	31:RH:13:LYS:HA	1.61	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:20:SER:HB2	3:XC:40:ARG:NH2	1.96	0.80
25:YA:2111:C:N3	25:YA:2118:U:O2'	2.14	0.80
44:YY:6:HIS:O	44:YY:7:VAL:HG13	1.81	0.80
2:QB:4:GLU:HG2	2:QB:5:ILE:N	1.94	0.80
25:RA:2635:C:OP1	28:RE:78:LEU:HD12	1.81	0.80
28:RE:52:LEU:HB2	28:RE:75:VAL:HG23	1.62	0.80
2:XB:21:ARG:HG3	2:XB:38:GLY:C	2.05	0.80
14:QN:43:CYS:O	14:QN:44:LEU:C	2.22	0.80
3:XC:52:LEU:HD23	3:XC:52:LEU:H	1.46	0.80
25:YA:83:G:O2'	25:YA:84:A:H8	1.65	0.80
27:YD:27:THR:HG23	27:YD:28:GLU:N	1.96	0.80
1:QA:474:G:H2'	1:QA:475:G:H8	1.47	0.80
54:R8:59:LYS:HB2	54:R8:59:LYS:HZ2	1.45	0.80
28:YE:35:GLN:HG2	28:YE:37:ARG:HE	1.44	0.80
34:YO:31:LYS:HG3	34:YO:32:TYR:CE2	2.17	0.80
36:YQ:80:GLU:O	36:YQ:81:VAL:CG1	2.30	0.80
38:YS:106:ARG:CA	38:YS:110:LEU:HD21	2.10	0.80
50:Y4:33:VAL:HG12	50:Y4:34:GLU:H	1.44	0.80
3:QC:20:SER:HB2	3:QC:40:ARG:NH2	1.95	0.80
8:QH:84:ARG:HH11	8:QH:84:ARG:HG3	1.44	0.80
16:QP:51:VAL:HG12	16:QP:52:ASP:N	1.97	0.80
25:RA:195:A:H61	25:RA:198:C:H3'	1.46	0.80
25:RA:2723:C:O3'	37:RR:1:MET:HE3	1.81	0.80
27:RD:27:THR:HG21	27:RD:83:GLU:HB3	1.64	0.80
29:RF:198:ALA:HA	29:RF:201:VAL:HG12	1.62	0.80
35:RP:47:ASP:OD2	35:RP:49:ARG:HG2	1.82	0.80
8:XH:84:ARG:HG3	8:XH:84:ARG:HH11	1.45	0.80
9:XI:19:LEU:HD23	9:XI:61:ALA:HB2	1.63	0.80
14:YN:40:CYS:SG	14:YN:43:CYS:HB2	2.21	0.80
16:XP:51:VAL:HG12	16:XP:52:ASP:H	1.46	0.80
25:YA:1049:C:H2'	25:YA:1050:A:H5''	1.64	0.80
31:YH:152:ARG:O	31:YH:153:LYS:HB2	1.80	0.80
54:Y8:52:LYS:N	54:Y8:53:PRO:CD	2.43	0.80
27:RD:35:LYS:HZ1	27:RD:104:TYR:HB2	1.46	0.80
32:RI:78:THR:H	32:RI:104:GLN:HE22	1.29	0.80
41:RV:99:ILE:HD13	41:RV:99:ILE:N	1.95	0.80
2:XB:196:LEU:CD1	2:XB:197:VAL:HG23	2.10	0.80
25:YA:2637:U:H5''	28:YE:82:ARG:HH21	1.46	0.80
28:YE:3:GLY:O	28:YE:4:ILE:HB	1.81	0.80
28:YE:52:LEU:HB2	28:YE:75:VAL:HG23	1.62	0.80
29:YF:198:ALA:HA	29:YF:201:VAL:HG12	1.62	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1055:A:N7	1:QA:1200:C:N4	2.30	0.80
27:RD:25:THR:HG22	27:RD:82:ILE:H	1.47	0.80
27:RD:121:PRO:HB3	27:RD:135:PHE:HE1	1.46	0.80
31:RH:150:ALA:C	31:RH:152:ARG:H	1.88	0.80
4:XD:28:SER:HB3	4:XD:29:PRO:CD	2.12	0.80
16:XP:4:ILE:HG13	16:XP:21:VAL:HG12	1.64	0.80
25:YA:2696:U:O4	25:YA:2711:A:N6	2.11	0.80
28:YE:201:THR:CG2	28:YE:203:LYS:HB3	2.12	0.80
51:Y5:4:HIS:HB3	51:Y5:5:PRO:CD	2.11	0.80
26:RB:27:C:H5''	38:RS:33:LYS:HZ1	1.45	0.80
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.17	0.80
5:XE:126:ARG:HG3	5:XE:126:ARG:HH11	1.47	0.80
20:XT:50:GLU:HG3	20:XT:51:GLU:N	1.97	0.80
25:YA:1530:G:O6	25:YA:1542:G:N2	2.15	0.80
25:YA:2327:A:H2'	25:YA:2328:A:H8	1.44	0.80
27:YD:68:LYS:HB2	27:YD:70:TRP:CH2	2.17	0.80
30:YG:61:ALA:HB2	30:YG:68:PRO:CD	2.12	0.80
41:YV:99:ILE:HD13	41:YV:99:ILE:N	1.95	0.80
2:QB:35:GLU:O	2:QB:36:ARG:HD3	1.82	0.79
3:QC:138:VAL:HG13	3:QC:149:ALA:HB1	1.64	0.79
16:QP:4:ILE:HG13	16:QP:21:VAL:HG12	1.64	0.79
29:RF:11:VAL:HB	29:RF:18:ARG:HG3	1.64	0.79
29:RF:145:GLU:HG3	29:RF:145:GLU:O	1.81	0.79
34:RO:14:THR:HG21	34:RO:86:ILE:HB	1.62	0.79
25:YA:1689:A:H62	25:YA:1698:A:H2	1.31	0.79
26:YB:30:C:O2	26:YB:54:G:N2	2.13	0.79
27:YD:121:PRO:HB3	27:YD:135:PHE:HE1	1.46	0.79
1:QA:745:C:OP1	1:QA:851:G:O2'	2.01	0.79
5:QE:126:ARG:HH11	5:QE:126:ARG:HG3	1.47	0.79
27:RD:34:VAL:O	27:RD:34:VAL:HG13	1.80	0.79
30:RG:77:ILE:HD13	30:RG:82:LEU:HD12	1.64	0.79
2:XB:35:GLU:O	2:XB:36:ARG:HD3	1.82	0.79
8:XH:100:ILE:HB	8:XH:125:ARG:HH12	1.47	0.79
27:YD:34:VAL:O	27:YD:34:VAL:HG13	1.81	0.79
4:QD:12:CYS:CA	4:QD:19:LEU:HD21	2.10	0.79
14:QN:24:CYS:SG	14:QN:39:LEU:HA	2.22	0.79
27:RD:25:THR:CG2	27:RD:82:ILE:H	1.93	0.79
35:RP:14:LYS:O	35:RP:16:ARG:HG2	1.83	0.79
2:XB:18:GLY:H	2:XB:42:ILE:CG2	1.95	0.79
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.65	0.79
5:XE:10:MET:HB3	5:XE:32:VAL:HG22	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:111:ARG:HH11	7:XG:111:ARG:HB3	1.46	0.79
11:XK:32:ILE:CD1	11:XK:72:ALA:HB2	2.12	0.79
13:XM:4:ILE:H	13:XM:9:ILE:HG21	1.47	0.79
25:YA:83:G:O2'	25:YA:84:A:O5'	2.01	0.79
31:YH:150:ALA:C	31:YH:152:ARG:H	1.88	0.79
1:QA:1080:A:H4'	5:QE:16:THR:HB	1.65	0.79
25:RA:2808:U:O2	25:RA:2892:A:N6	2.15	0.79
30:RG:61:ALA:HB2	30:RG:68:PRO:CD	2.12	0.79
31:RH:10:PRO:O	31:RH:11:VAL:HG13	1.80	0.79
9:XI:15:ALA:HB2	9:XI:65:VAL:HG23	1.65	0.79
12:XL:6:THR:N	12:XL:9:GLN:HE21	1.80	0.79
26:YB:40:U:H3	26:YB:43:C:H5''	1.45	0.79
9:QI:19:LEU:HD23	9:QI:61:ALA:HB2	1.63	0.79
11:QK:124:LYS:HD2	11:QK:125:PHE:HE1	1.45	0.79
25:RA:384:U:H2'	25:RA:385:C:H6	1.48	0.79
25:RA:404:C:O2'	25:RA:405:U:OP2	1.98	0.79
27:RD:54:ARG:NH1	27:RD:54:ARG:HG3	1.98	0.79
28:RE:137:HIS:HB3	28:RE:138:PRO:HD2	1.65	0.79
31:RH:126:PRO:CG	31:RH:127:GLU:H	1.96	0.79
36:RQ:81:VAL:O	36:RQ:82:ARG:CG	2.31	0.79
39:RT:102:ILE:HA	39:RT:105:LEU:CD2	2.13	0.79
1:XA:1356:G:H2'	1:XA:1357:A:C8	2.17	0.79
31:YH:126:PRO:CG	31:YH:127:GLU:H	1.95	0.79
31:YH:169:VAL:HG22	31:YH:170:ARG:H	1.48	0.79
35:YP:65:ARG:HG3	35:YP:65:ARG:NH1	1.90	0.79
36:YQ:81:VAL:O	36:YQ:82:ARG:CG	2.31	0.79
40:YU:105:VAL:HG22	41:YV:44:LYS:HD2	1.65	0.79
7:QG:89:MET:HE1	7:QG:156:TRP:H	1.47	0.79
25:RA:2562:U:O2'	34:RO:23:ARG:NH1	2.15	0.79
28:RE:111:ARG:HE	28:RE:160:TYR:HE1	1.31	0.79
31:RH:86:GLU:CG	31:RH:165:ALA:H	1.94	0.79
35:RP:59:LEU:HA	35:RP:61:ARG:HH21	1.44	0.79
4:XD:165:MET:HA	4:XD:165:MET:HE3	1.65	0.79
8:XH:20:TYR:HA	8:XH:65:TYR:CE2	2.18	0.79
18:XR:43:PHE:HE2	18:XR:58:LEU:HD11	1.47	0.79
28:YE:24:THR:HG21	28:YE:188:VAL:CG1	2.13	0.79
30:YG:77:ILE:HD13	30:YG:82:LEU:HD12	1.65	0.79
31:YH:26:VAL:HG13	31:YH:27:LYS:N	1.96	0.79
35:YP:14:LYS:O	35:YP:16:ARG:HG2	1.83	0.79
39:YT:62:THR:CG2	39:YT:75:ILE:HG12	2.11	0.79
25:RA:900:A:H3'	25:RA:901:A:H8	1.48	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:68:LYS:HB2	27:RD:70:TRP:CH2	2.17	0.79
34:RO:31:LYS:HG3	34:RO:32:TYR:CE2	2.17	0.79
1:XA:448:A:OP2	1:XA:485:G:N2	2.16	0.79
7:XG:89:MET:HE1	7:XG:156:TRP:H	1.47	0.79
12:XL:86:ARG:HB2	12:XL:101:VAL:HG22	1.62	0.79
25:YA:83:G:HO2'	25:YA:84:A:H8	0.84	0.79
25:YA:1490:A:O2'	27:YD:99:ASP:OD2	2.01	0.79
1:QA:673:G:H2'	1:QA:674:G:C8	2.17	0.79
20:QT:89:ARG:HH21	20:QT:104:LEU:HD21	1.47	0.79
25:RA:2451:A:C6	56:Z6:76:PPU:HE2	2.18	0.79
33:RN:43:THR:HB	33:RN:46:VAL:HG12	1.63	0.79
20:XT:100:ILE:HG13	20:XT:102:GLY:H	1.48	0.79
25:YA:583:G:OP2	40:YU:10:ARG:NH1	2.15	0.79
25:YA:583:G:H5''	40:YU:10:ARG:HH12	1.48	0.79
27:YD:17:THR:CG2	27:YD:205:VAL:H	1.96	0.79
39:YT:102:ILE:HA	39:YT:105:LEU:CD2	2.13	0.79
44:YY:86:ARG:HB2	44:YY:95:LYS:HD2	1.64	0.79
49:Y3:56:VAL:HG12	49:Y3:57:GLU:H	1.48	0.79
1:QA:1312:G:H5''	50:R4:67:TYR:OH	1.82	0.79
19:QS:41:VAL:HG12	19:QS:44:MET:N	1.98	0.79
25:RA:1021:A:H62	25:RA:1141:U:H3	1.29	0.79
35:RP:97:PRO:O	35:RP:98:GLU:HB3	1.83	0.79
1:XA:686:U:O4	1:XA:703:G:O2'	2.00	0.79
4:XD:28:SER:HB3	4:XD:29:PRO:HD2	1.65	0.79
13:XM:121:LYS:NZ	24:XY:39:C:O2'	2.16	0.79
25:YA:2636:U:OP1	28:YE:79:ARG:HA	1.82	0.79
47:Y1:11:ARG:HB3	47:Y1:11:ARG:NH1	1.98	0.79
1:QA:1002:G:H2'	1:QA:1003:G:H8	1.47	0.79
8:QH:20:TYR:HA	8:QH:65:TYR:CE2	2.18	0.79
18:QR:56:THR:HB	18:QR:58:LEU:CD1	2.13	0.79
20:QT:50:GLU:HG3	20:QT:51:GLU:N	1.97	0.79
1:XA:703:G:O2'	1:XA:704:A:OP2	2.01	0.79
1:XA:1497:G:H2'	1:XA:1498:U:H5'	1.64	0.79
25:YA:1210:A:H5'	25:YA:1210:A:H8	1.48	0.79
25:YA:2368:C:H2'	25:YA:2369:A:H8	1.46	0.79
31:YH:153:LYS:CG	31:YH:162:ILE:H	1.96	0.79
13:QM:65:LYS:HZ3	50:R4:52:THR:HG21	1.48	0.78
25:RA:102:G:OP2	48:R2:7:ARG:NH2	2.16	0.78
25:RA:873:G:H1	25:RA:904:C:H42	1.30	0.78
40:RU:105:VAL:HG22	41:RV:44:LYS:HD2	1.65	0.78
1:XA:987:G:H1	1:XA:1218:C:H42	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:3:ARG:CA	13:XM:9:ILE:HG21	2.12	0.78
18:XR:56:THR:HB	18:XR:58:LEU:CD1	2.13	0.78
19:XS:41:VAL:HG12	19:XS:44:MET:N	1.98	0.78
31:YH:150:ALA:O	31:YH:152:ARG:N	2.14	0.78
35:YP:47:ASP:OD2	35:YP:49:ARG:HG2	1.82	0.78
12:QL:6:THR:N	12:QL:9:GLN:HE21	1.80	0.78
25:RA:1820:U:C2	27:RD:202:LYS:HB3	2.18	0.78
33:RN:62:VAL:HG12	33:RN:66:LYS:HD2	1.65	0.78
33:RN:71:ILE:HG21	33:RN:84:LYS:HB3	1.65	0.78
1:XA:601:C:O2	1:XA:637:G:N2	2.14	0.78
1:XA:837:G:H1	1:XA:849:C:H42	1.31	0.78
3:XC:138:VAL:HG13	3:XC:149:ALA:HB1	1.64	0.78
9:XI:83:ARG:O	9:XI:86:VAL:HG12	1.84	0.78
43:YX:70:LEU:HD23	43:YX:70:LEU:N	1.98	0.78
50:Y4:58:ARG:O	50:Y4:63:TYR:HB2	1.84	0.78
10:QJ:40:LEU:HB2	10:QJ:69:ASN:HB3	1.65	0.78
36:RQ:119:ARG:HH11	36:RQ:119:ARG:HG2	1.48	0.78
47:R1:11:ARG:NH1	47:R1:11:ARG:HB3	1.98	0.78
1:XA:970:C:N4	9:XI:128:ARG:OXT	2.16	0.78
27:YD:27:THR:HG21	27:YD:83:GLU:HB3	1.63	0.78
34:YO:97:ARG:H	34:YO:117:LEU:HD22	1.48	0.78
40:YU:90:VAL:HG12	40:YU:91:ASP:N	1.98	0.78
4:QD:28:SER:HB2	4:QD:29:PRO:CD	2.14	0.78
7:QG:113:GLU:HB2	7:QG:119:ARG:HG2	1.66	0.78
25:RA:1278:A:H61	25:RA:1292:U:H3	1.30	0.78
27:RD:54:ARG:HG3	27:RD:54:ARG:HH11	1.49	0.78
30:RG:61:ALA:HB2	30:RG:68:PRO:HD3	1.65	0.78
36:RQ:80:GLU:O	36:RQ:81:VAL:CG1	2.30	0.78
10:XJ:16:LEU:HD23	10:XJ:94:VAL:HG13	1.66	0.78
25:YA:102:G:OP2	48:Y2:7:ARG:NH2	2.16	0.78
34:YO:53:LYS:HD2	34:YO:53:LYS:N	1.96	0.78
36:YQ:59:ARG:HD3	36:YQ:59:ARG:H	1.48	0.78
2:QB:84:GLU:HB3	2:QB:219:VAL:HG21	1.66	0.78
11:QK:32:ILE:CD1	11:QK:72:ALA:HB2	2.12	0.78
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HB2	1.65	0.78
43:RX:70:LEU:HD23	43:RX:70:LEU:N	1.99	0.78
28:YE:137:HIS:HB3	28:YE:138:PRO:HD2	1.64	0.78
1:QA:346:G:OP1	39:RT:41:ARG:NH2	2.16	0.78
4:QD:165:MET:HA	4:QD:165:MET:HE3	1.65	0.78
13:QM:4:ILE:H	13:QM:9:ILE:HG21	1.47	0.78
29:RF:20:LEU:HD12	29:RF:21:ALA:H	1.49	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:90:VAL:HG12	40:RU:91:ASP:N	1.97	0.78
49:R3:56:VAL:HG12	49:R3:57:GLU:H	1.48	0.78
1:XA:951:G:OP2	13:XM:102:ARG:NH2	2.16	0.78
27:YD:54:ARG:HG3	27:YD:54:ARG:NH1	1.98	0.78
41:YV:47:VAL:HG13	41:YV:48:GLY:H	1.49	0.78
1:QA:1338:G:H21	22:QV:41:C:H1'	1.47	0.78
4:QD:30:LYS:HD3	4:QD:30:LYS:N	1.98	0.78
5:QE:11:ILE:CD1	5:QE:31:LEU:HD12	2.13	0.78
25:RA:1187:G:H5''	41:RV:81:TYR:CE2	2.19	0.78
27:RD:94:LEU:HD22	27:RD:95:LEU:N	1.98	0.78
31:RH:153:LYS:CG	31:RH:162:ILE:H	1.96	0.78
1:XA:546:G:HO2'	1:XA:548:G:HO2'	1.27	0.78
1:XA:1008:C:H42	1:XA:1021:G:H1	1.32	0.78
30:YG:97:ASP:H	30:YG:100:TRP:HD1	1.31	0.78
3:QC:181:ASN:ND2	3:QC:204:LEU:HD12	1.99	0.78
9:QI:15:ALA:HB2	9:QI:65:VAL:HG23	1.65	0.78
26:RB:8:U:H3	26:RB:112:G:H1	1.32	0.78
34:RO:47:ILE:HD12	34:RO:48:PRO:HD2	1.66	0.78
44:RY:86:ARG:HB2	44:RY:95:LYS:HD2	1.64	0.78
13:XM:88:ARG:HH11	13:XM:88:ARG:CB	1.95	0.78
30:YG:128:ARG:HH21	30:YG:128:ARG:HG3	1.49	0.78
2:QB:18:GLY:H	2:QB:42:ILE:CG2	1.95	0.78
2:QB:122:PHE:HD1	2:QB:139:LYS:HZ1	1.30	0.78
18:QR:43:PHE:HE2	18:QR:58:LEU:HD11	1.47	0.78
25:RA:2197:U:H1'	25:RA:2198:A:C8	2.17	0.78
27:RD:142:VAL:HG23	27:RD:193:VAL:HA	1.66	0.78
27:YD:34:VAL:HG21	27:YD:103:ARG:HA	1.66	0.78
1:QA:953:G:O6	1:QA:1228:C:N4	2.13	0.78
1:QA:1318:A:H4'	19:QS:11:VAL:HG11	1.66	0.78
10:QJ:16:LEU:HD23	10:QJ:94:VAL:HG13	1.66	0.78
25:RA:380:U:H2'	25:RA:381:G:H8	1.48	0.78
25:RA:855:G:H1	25:RA:922:U:H3	1.28	0.78
28:RE:24:THR:HG21	28:RE:188:VAL:CG1	2.13	0.78
32:RI:4:ILE:HD11	32:RI:44:LEU:HD12	1.65	0.78
35:RP:75:ILE:HD13	35:RP:75:ILE:N	1.99	0.78
38:RS:106:ARG:HA	38:RS:110:LEU:HD21	1.64	0.78
1:XA:1347:G:C8	9:XI:107:ARG:HB3	2.19	0.78
6:XF:24:GLU:HA	6:XF:27:GLN:CG	2.14	0.78
25:YA:102:G:HO2'	25:YA:103:A:P	2.06	0.78
25:YA:1013:C:H42	25:YA:1149:G:H1	1.32	0.78
27:YD:94:LEU:HD22	27:YD:95:LEU:N	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:4:ILE:HD12	28:YE:28:ALA:HB1	1.67	0.78
2:QB:101:MET:CA	2:QB:108:ILE:HG13	2.11	0.77
27:RD:25:THR:O	27:RD:27:THR:N	2.17	0.77
29:RF:29:ASN:H	29:RF:112:MET:CE	1.97	0.77
35:RP:62:LEU:N	35:RP:62:LEU:CD2	2.46	0.77
40:RU:66:ASN:O	40:RU:70:ARG:HB2	1.84	0.77
2:XB:239:VAL:HG12	2:XB:240:GLN:NE2	1.99	0.77
7:XG:113:GLU:HB2	7:XG:119:ARG:HG2	1.65	0.77
19:XS:68:GLY:HA3	50:Y4:68:ARG:HB2	1.65	0.77
29:YF:145:GLU:O	29:YF:145:GLU:HG3	1.81	0.77
20:QT:100:ILE:HG13	20:QT:102:GLY:H	1.48	0.77
27:RD:17:THR:CG2	27:RD:205:VAL:H	1.96	0.77
30:RG:128:ARG:HH21	30:RG:128:ARG:HG3	1.48	0.77
25:YA:1026:U:H4'	25:YA:1027:A:OP1	1.85	0.77
34:YO:47:ILE:HD12	34:YO:48:PRO:HD2	1.66	0.77
35:YP:84:ASN:ND2	35:YP:116:GLY:HA3	1.99	0.77
6:QF:23:LYS:O	6:QF:27:GLN:HG2	1.85	0.77
6:QF:24:GLU:HA	6:QF:27:GLN:CG	2.14	0.77
42:RW:65:LEU:CD1	42:RW:68:ARG:HH11	1.97	0.77
46:R0:68:GLU:HG2	46:R0:80:HIS:HB2	1.66	0.77
9:XI:53:VAL:HB	9:XI:95:LYS:HE3	1.67	0.77
13:XM:15:VAL:HG23	13:XM:43:THR:O	1.84	0.77
25:YA:138:G:N2	43:YX:44:GLU:OE2	2.15	0.77
29:YF:20:LEU:HD12	29:YF:21:ALA:H	1.49	0.77
38:YS:106:ARG:HA	38:YS:110:LEU:HD21	1.64	0.77
40:YU:66:ASN:O	40:YU:70:ARG:HB2	1.84	0.77
1:QA:1105:A:H2'	1:QA:1106:G:H8	1.48	0.77
2:QB:239:VAL:HG12	2:QB:240:GLN:NE2	1.99	0.77
25:RA:222:A:O2'	25:RA:223:A:O5'	2.01	0.77
28:RE:4:ILE:HD12	28:RE:28:ALA:HB1	1.67	0.77
31:RH:150:ALA:O	31:RH:152:ARG:N	2.14	0.77
35:RP:84:ASN:ND2	35:RP:116:GLY:HA3	1.99	0.77
50:R4:22:ILE:O	50:R4:24:THR:HG23	1.84	0.77
1:XA:359:U:H2'	1:XA:360:A:C8	2.18	0.77
25:YA:2347:C:H5	25:YA:2382:G:H1'	1.49	0.77
25:YA:2788:C:O2'	25:YA:2809:A:N3	2.18	0.77
27:YD:25:THR:HG22	27:YD:82:ILE:H	1.46	0.77
28:YE:55:ASN:C	28:YE:57:LYS:H	1.91	0.77
29:YF:11:VAL:HB	29:YF:18:ARG:HG3	1.64	0.77
31:YH:132:ARG:HB2	31:YH:132:ARG:NH1	1.95	0.77
31:YH:152:ARG:HG3	31:YH:153:LYS:CE	2.13	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:71:ILE:HG21	33:YN:84:LYS:HB3	1.65	0.77
35:YP:88:LEU:C	35:YP:90:ARG:H	1.92	0.77
47:Y1:13:ILE:HD11	47:Y1:42:GLN:OE1	1.84	0.77
1:QA:951:G:OP2	13:QM:102:ARG:NH2	2.18	0.77
1:QA:999:U:H2'	1:QA:1000:A:H8	1.49	0.77
2:QB:44:LEU:HD12	2:QB:44:LEU:H	1.48	0.77
35:RP:114:ILE:HD11	35:RP:130:PHE:CE1	2.19	0.77
2:XB:84:GLU:HB3	2:XB:219:VAL:HG21	1.65	0.77
36:YQ:79:LEU:HD22	36:YQ:79:LEU:C	2.06	0.77
37:YR:74:LYS:O	37:YR:75:LEU:HB3	1.84	0.77
17:QQ:41:LYS:NZ	17:QQ:92:ARG:HH22	1.82	0.77
17:QQ:59:ILE:H	17:QQ:59:ILE:HD13	1.50	0.77
27:RD:146:GLU:HB2	27:RD:189:CYS:HB3	1.67	0.77
28:RE:55:ASN:C	28:RE:57:LYS:H	1.91	0.77
35:RP:127:ALA:C	35:RP:147:LEU:HD23	2.10	0.77
39:RT:43:GLN:HG2	39:RT:44:ASP:N	1.99	0.77
44:RY:97:ARG:HH21	44:RY:98:VAL:CB	1.98	0.77
50:R4:58:ARG:O	50:R4:63:TYR:HB2	1.84	0.77
2:XB:44:LEU:H	2:XB:44:LEU:HD12	1.48	0.77
25:YA:189:G:H2'	25:YA:205:G:H22	1.50	0.77
25:YA:1045:A:N3	25:YA:1047:G:N2	2.33	0.77
4:QD:9:CYS:SG	4:QD:22:LYS:HD2	2.25	0.77
25:RA:2208:U:H1'	27:RD:151:LYS:HE2	1.66	0.77
44:RY:79:CYS:SG	44:RY:80:GLY:N	2.57	0.77
1:XA:377:G:OP1	16:XP:5:ARG:NH1	2.17	0.77
16:XP:72:ARG:HD3	16:XP:72:ARG:C	2.10	0.77
20:XT:89:ARG:HH21	20:XT:104:LEU:HD21	1.47	0.77
25:YA:1728:G:N1	25:YA:1730:U:OP2	2.17	0.77
36:YQ:119:ARG:HH11	36:YQ:119:ARG:HG2	1.48	0.77
38:YS:83:LYS:C	38:YS:109:GLY:HA3	2.10	0.77
44:YY:79:CYS:SG	44:YY:80:GLY:N	2.57	0.77
51:Y5:40:LYS:CD	51:Y5:46:CYS:HB3	2.15	0.77
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.66	0.77
8:QH:100:ILE:HB	8:QH:125:ARG:HH12	1.47	0.77
25:RA:1833:U:O2'	25:RA:1969:A:N1	2.17	0.77
36:RQ:79:LEU:HD22	36:RQ:79:LEU:C	2.07	0.77
47:R1:13:ILE:HD11	47:R1:42:GLN:OE1	1.84	0.77
47:R1:86:SER:N	47:R1:87:PRO:CD	2.48	0.77
1:XA:1313:U:OP2	50:Y4:67:TYR:OH	2.03	0.77
4:XD:20:TYR:CD2	4:XD:27:TYR:HE2	2.01	0.77
20:XT:13:LEU:HD12	20:XT:14:LYS:N	2.00	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2086:U:H2'	25:YA:2087:G:C8	2.20	0.77
29:YF:183:VAL:O	29:YF:187:VAL:HG23	1.85	0.77
36:YQ:20:ALA:CB	36:YQ:99:PRO:HD2	2.14	0.77
42:YW:65:LEU:CD1	42:YW:68:ARG:HH11	1.97	0.77
1:QA:1206:G:O2'	3:QC:192:THR:O	2.01	0.77
4:QD:76:ARG:HD2	4:QD:207:TYR:CE2	2.20	0.77
13:QM:88:ARG:HH11	13:QM:88:ARG:CB	1.95	0.77
16:QP:6:LEU:HB3	16:QP:17:TYR:HD2	1.50	0.77
31:RH:153:LYS:HA	31:RH:153:LYS:NZ	1.99	0.77
34:RO:97:ARG:H	34:RO:117:LEU:HD22	1.48	0.77
1:XA:923:A:O2'	1:XA:1399:C:OP2	2.02	0.77
5:XE:11:ILE:CD1	5:XE:31:LEU:HD12	2.13	0.77
27:YD:44:ASN:HD22	27:YD:44:ASN:N	1.79	0.77
42:YW:18:ARG:HG3	42:YW:76:VAL:CG1	2.15	0.77
50:Y4:22:ILE:O	50:Y4:24:THR:HG23	1.84	0.77
1:QA:346:G:H1'	1:QA:347:G:H5'	1.67	0.77
1:QA:514:C:N4	1:QA:537:G:O6	2.18	0.77
2:QB:187:LEU:HA	2:QB:201:ILE:HB	1.65	0.77
25:RA:2562:U:H1'	34:RO:23:ARG:NH1	2.00	0.77
29:RF:183:VAL:O	29:RF:187:VAL:HG23	1.85	0.77
35:RP:88:LEU:C	35:RP:90:ARG:H	1.92	0.77
38:RS:60:GLY:O	38:RS:61:ASN:HB3	1.84	0.77
50:R4:1:MET:HB2	50:R4:6:HIS:NE2	2.00	0.77
4:XD:76:ARG:HD2	4:XD:207:TYR:CE2	2.20	0.77
6:XF:23:LYS:O	6:XF:27:GLN:HG2	1.84	0.77
11:XK:77:MET:HE3	11:XK:80:VAL:HG12	1.67	0.77
14:XN:25:VAL:HG22	14:XN:38:GLY:O	1.84	0.77
19:XS:39:THR:HG22	19:XS:40:ILE:H	1.50	0.77
25:YA:363(B):G:H2'	25:YA:363(C):G:C8	2.19	0.77
27:YD:25:THR:O	27:YD:27:THR:N	2.17	0.77
38:YS:60:GLY:O	38:YS:61:ASN:HB3	1.84	0.77
5:QE:12:LEU:HD23	5:QE:13:ILE:N	2.00	0.76
7:QG:148:ASN:HD22	7:QG:148:ASN:N	1.82	0.76
20:QT:26:ASN:O	20:QT:30:LYS:HB2	1.86	0.76
31:RH:26:VAL:HG13	31:RH:27:LYS:N	1.96	0.76
36:RQ:20:ALA:CB	36:RQ:99:PRO:HD2	2.14	0.76
39:RT:57:PHE:C	39:RT:58:ASN:HD22	1.93	0.76
27:YD:153:ALA:O	27:YD:154:LYS:HG3	1.85	0.76
35:YP:127:ALA:C	35:YP:147:LEU:HD23	2.10	0.76
50:Y4:1:MET:HB2	50:Y4:6:HIS:NE2	2.00	0.76
54:Y8:60:LEU:C	54:Y8:63:PRO:HD2	2.10	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:108:G:H5''	1:QA:109:A:H5''	1.68	0.76
5:QE:72:GLN:NE2	5:QE:144:THR:HG22	2.00	0.76
25:RA:498:G:N3	44:RY:47:LYS:NZ	2.30	0.76
25:RA:2529:G:O6	55:R9:31:LYS:NZ	2.17	0.76
1:XA:1055:A:O2'	3:XC:161:GLU:OE2	2.02	0.76
5:XE:42:GLY:HA3	5:XE:66:MET:HG2	1.67	0.76
25:YA:2364:C:OP1	46:Y0:55:ARG:NH1	2.18	0.76
29:YF:32:LEU:C	29:YF:32:LEU:HD12	2.10	0.76
30:YG:61:ALA:HB2	30:YG:68:PRO:HD3	1.65	0.76
35:YP:114:ILE:HD11	35:YP:130:PHE:CE1	2.19	0.76
36:YQ:59:ARG:H	36:YQ:59:ARG:CD	1.99	0.76
49:Y3:35:ARG:HB3	49:Y3:37:LEU:HD21	1.66	0.76
1:QA:1152:A:H2'	1:QA:1153:C:C6	2.21	0.76
5:QE:42:GLY:HA3	5:QE:66:MET:HG2	1.68	0.76
9:QL:83:ARG:O	9:QL:86:VAL:HG12	1.84	0.76
25:RA:693:C:O2	25:RA:769:G:N2	2.15	0.76
29:RF:32:LEU:C	29:RF:32:LEU:HD12	2.10	0.76
37:RR:33:ARG:HH22	51:R5:55:ARG:HG2	1.51	0.76
7:XG:79:ARG:HH22	7:XG:82:GLY:HA2	1.51	0.76
25:YA:465:G:H21	25:YA:684:G:H1'	1.50	0.76
31:YH:153:LYS:HA	31:YH:153:LYS:NZ	2.00	0.76
48:Y2:47:ASN:H	48:Y2:47:ASN:HD22	1.33	0.76
54:Y8:59:LYS:HB2	54:Y8:59:LYS:HZ2	1.48	0.76
1:QA:255:G:H2'	1:QA:256:U:C6	2.21	0.76
13:QM:15:VAL:HG23	13:QM:43:THR:O	1.84	0.76
27:RD:153:ALA:O	27:RD:154:LYS:HG3	1.85	0.76
30:RG:127:GLY:O	30:RG:128:ARG:HG2	1.85	0.76
36:RQ:90:VAL:HG13	36:RQ:91:GLU:H	1.49	0.76
40:RU:88:ILE:HG22	40:RU:90:VAL:HG23	1.67	0.76
44:RY:97:ARG:NH2	44:RY:98:VAL:HB	2.01	0.76
16:XP:51:VAL:HG12	16:XP:52:ASP:N	1.97	0.76
30:YG:127:GLY:O	30:YG:128:ARG:HG2	1.85	0.76
33:YN:62:VAL:HG12	33:YN:66:LYS:HD2	1.65	0.76
36:YQ:66:ILE:HG13	36:YQ:67:ARG:N	2.00	0.76
44:YY:94:LYS:O	44:YY:101:LYS:HB3	1.85	0.76
44:YY:95:LYS:HB3	44:YY:100:ALA:CA	2.10	0.76
47:Y1:80:LEU:C	47:Y1:81:LYS:HE2	2.10	0.76
48:Y2:41:ILE:C	48:Y2:41:ILE:HD12	2.10	0.76
4:QD:13:ARG:CA	4:QD:33:MET:HE3	2.16	0.76
25:RA:1264:G:H3'	25:RA:1265:A:H5''	1.67	0.76
30:RG:101:ILE:HG13	30:RG:102:PHE:H	1.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:66:ILE:HG13	36:RQ:67:ARG:N	2.00	0.76
49:R3:35:ARG:HB3	49:R3:37:LEU:HD21	1.66	0.76
2:XB:4:GLU:HG2	2:XB:5:ILE:N	1.95	0.76
5:XE:53:LEU:H	5:XE:53:LEU:CD1	1.99	0.76
30:YG:142:PRO:HB2	50:Y4:31:ILE:HD13	1.68	0.76
34:YO:104:ARG:HH11	34:YO:104:ARG:HG2	1.50	0.76
1:QA:625:G:H2'	1:QA:626:U:H6	1.50	0.76
21:QU:10:ARG:HG2	21:QU:13:ILE:HD12	1.68	0.76
25:RA:242:G:H5''	54:R8:3:LYS:HE3	1.67	0.76
25:RA:338:G:OP1	44:RY:4:LYS:NZ	2.17	0.76
25:RA:1454:U:H5'	37:RR:63:ARG:HE	1.50	0.76
25:RA:2119:A:N6	25:RA:2170:A:N7	2.34	0.76
27:RD:34:VAL:HG21	27:RD:103:ARG:HA	1.66	0.76
27:RD:44:ASN:HD22	27:RD:44:ASN:N	1.79	0.76
44:RY:81:LYS:HD3	44:RY:97:ARG:NE	2.01	0.76
1:XA:1125:U:OP2	1:XA:1145:C:N4	2.18	0.76
25:YA:363(B):G:H2'	25:YA:363(C):G:H8	1.51	0.76
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HB2	1.65	0.76
1:QA:1512:U:H2'	1:QA:1513:A:H8	1.50	0.76
31:RH:169:VAL:HG22	31:RH:170:ARG:H	1.48	0.76
52:R6:34:LEU:HD13	52:R6:34:LEU:H	1.50	0.76
55:R9:1:MET:HB3	55:R9:4:ARG:NH1	2.01	0.76
4:XD:9:CYS:SG	4:XD:22:LYS:HD2	2.25	0.76
9:XI:113:LYS:HD2	9:XI:113:LYS:H	1.51	0.76
28:YE:111:ARG:HE	28:YE:160:TYR:HE1	1.31	0.76
29:YF:101:LEU:CD1	29:YF:102:PRO:HD2	2.11	0.76
36:YQ:90:VAL:HG13	36:YQ:91:GLU:H	1.49	0.76
42:YW:73:ALA:HB3	42:YW:106:ILE:HG12	1.68	0.76
44:YY:81:LYS:HD3	44:YY:97:ARG:NE	2.00	0.76
4:QD:13:ARG:HA	4:QD:33:MET:HE3	1.67	0.76
10:QJ:38:ILE:HG12	10:QJ:71:LEU:O	1.86	0.76
27:RD:69:ARG:HH21	27:RD:130:ALA:CB	1.99	0.76
37:RR:74:LYS:O	37:RR:75:LEU:HB3	1.84	0.76
47:R1:56:GLN:NE2	47:R1:56:GLN:N	2.34	0.76
3:XC:59:ARG:HH22	3:XC:97:LYS:HE3	1.51	0.76
10:XJ:38:ILE:HG12	10:XJ:71:LEU:O	1.86	0.76
29:YF:29:ASN:H	29:YF:112:MET:CE	1.98	0.76
35:YP:97:PRO:O	35:YP:98:GLU:HB3	1.83	0.76
3:QC:59:ARG:HH22	3:QC:97:LYS:HE3	1.51	0.76
4:QD:153:ARG:NH1	4:QD:181:MET:HG3	2.00	0.76
4:QD:166:LYS:CG	27:YD:135:PHE:HZ	1.99	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:91:VAL:HG13	18:QR:72:ARG:HH12	1.51	0.76
8:QH:5:PRO:O	8:QH:8:ASP:HB3	1.85	0.76
13:QM:50:GLU:OE1	50:R4:32:TYR:CE2	2.39	0.76
51:R5:47:PRO:O	51:R5:48:GLU:HG3	1.86	0.76
7:XG:37:ASN:ND2	9:XI:40:LEU:HD23	2.00	0.76
30:YG:76:SER:OG	30:YG:83:ARG:HA	1.85	0.76
31:YH:125:VAL:HA	31:YH:126:PRO:HB3	1.68	0.76
34:YO:107:ARG:HA	34:YO:112:MET:HE1	1.67	0.76
35:YP:62:LEU:N	35:YP:62:LEU:CD2	2.46	0.76
39:YT:111:ARG:O	39:YT:113:LYS:N	2.17	0.76
1:QA:1081:G:P	5:QE:16:THR:OG1	2.44	0.76
5:QE:11:ILE:HD11	5:QE:31:LEU:CD1	2.16	0.76
16:QP:22:THR:HA	16:QP:33:ILE:HG12	1.66	0.76
19:QS:2:PRO:HB2	50:R4:68:ARG:HH22	1.51	0.76
26:RB:24:G:N3	26:RB:27:C:N4	2.32	0.76
30:RG:76:SER:OG	30:RG:83:ARG:HA	1.85	0.76
34:RO:104:ARG:HH11	34:RO:104:ARG:HG2	1.50	0.76
38:RS:83:LYS:C	38:RS:109:GLY:HA3	2.10	0.76
50:R4:34:GLU:HG3	50:R4:35:VAL:H	1.51	0.76
54:R8:60:LEU:C	54:R8:63:PRO:HD2	2.11	0.76
1:XA:1109:C:OP2	3:XC:176:HIS:ND1	2.19	0.76
5:XE:36:ASP:OD2	5:XE:38:GLN:HB2	1.86	0.76
17:XQ:41:LYS:NZ	17:XQ:92:ARG:HH22	1.82	0.76
25:YA:566:U:OP1	35:YP:29:LYS:HE2	1.87	0.76
25:YA:1416:G:O2'	25:YA:1417:C:O5'	2.04	0.76
27:YD:69:ARG:HH21	27:YD:130:ALA:CB	1.99	0.76
28:YE:63:LEU:CD1	28:YE:65:GLY:H	1.99	0.76
30:YG:101:ILE:HG13	30:YG:102:PHE:H	1.49	0.76
47:Y1:86:SER:N	47:Y1:87:PRO:CD	2.48	0.76
20:QT:13:LEU:HD12	20:QT:14:LYS:N	2.00	0.75
22:QV:1:C:O4'	46:R0:5:LYS:CE	2.34	0.75
51:R5:40:LYS:CD	51:R5:46:CYS:HB3	2.15	0.75
2:XB:117:GLU:O	2:XB:121:LEU:HB2	1.86	0.75
5:XE:12:LEU:HD23	5:XE:13:ILE:N	2.00	0.75
16:XP:6:LEU:HB3	16:XP:17:TYR:HD2	1.50	0.75
16:XP:22:THR:HA	16:XP:33:ILE:HG12	1.66	0.75
25:YA:1820:U:C2	27:YD:202:LYS:HB3	2.21	0.75
25:YA:2712:U:O2'	25:YA:2712(A):A:H8	1.68	0.75
39:YT:50:ILE:HD12	39:YT:102:ILE:HD11	1.68	0.75
50:Y4:34:GLU:HG3	50:Y4:35:VAL:H	1.51	0.75
52:Y6:34:LEU:H	52:Y6:34:LEU:HD13	1.50	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:18:C:H5''	5:QE:127:ASN:HD21	1.49	0.75
1:QA:961:U:O2	1:QA:1201:A:N6	2.15	0.75
1:QA:1069:C:O2'	5:QE:25:ARG:NH1	2.18	0.75
5:QE:53:LEU:H	5:QE:53:LEU:CD1	1.99	0.75
7:QG:37:ASN:ND2	9:QI:40:LEU:HD23	2.00	0.75
9:QI:53:VAL:HB	9:QI:95:LYS:HE3	1.67	0.75
18:QR:53:ARG:HH21	18:QR:60:ALA:N	1.84	0.75
29:RF:129:PHE:HA	29:RF:142:TRP:NE1	2.02	0.75
31:RH:152:ARG:HG3	31:RH:153:LYS:CE	2.14	0.75
8:XH:5:PRO:O	8:XH:8:ASP:HB3	1.86	0.75
27:YD:142:VAL:HG23	27:YD:193:VAL:HA	1.66	0.75
28:YE:23:VAL:HG21	28:YE:183:LEU:HD23	1.69	0.75
28:YE:36:ARG:HH21	28:YE:88:GLY:HA2	1.51	0.75
30:YG:3:LEU:HD12	30:YG:4:ASP:H	1.51	0.75
54:Y8:59:LYS:CB	54:Y8:59:LYS:HZ3	1.98	0.75
1:QA:407:G:O6	1:QA:435:C:N4	2.18	0.75
8:QH:91:ARG:HH11	8:QH:91:ARG:HG2	1.52	0.75
14:QN:22:THR:O	14:QN:23:ARG:HB2	1.86	0.75
9:XI:62:TYR:C	9:XI:63:ILE:HD12	2.12	0.75
10:XJ:40:LEU:HB2	10:XJ:69:ASN:HB3	1.65	0.75
25:YA:155:C:N4	25:YA:171:G:O6	2.18	0.75
25:YA:2056:G:N2	51:Y5:4:HIS:O	2.19	0.75
1:QA:475:G:H2'	1:QA:476:G:H8	1.50	0.75
16:QP:72:ARG:HD3	16:QP:72:ARG:C	2.10	0.75
25:RA:1167:U:O2	25:RA:1183:G:N2	2.19	0.75
30:RG:142:PRO:HB2	50:R4:31:ILE:HD13	1.68	0.75
40:RU:52:ARG:HH11	40:RU:52:ARG:HG2	1.50	0.75
47:R1:80:LEU:C	47:R1:81:LYS:HE2	2.10	0.75
1:XA:669:U:O4	1:XA:737:A:N6	2.19	0.75
4:XD:153:ARG:NH1	4:XD:181:MET:HG3	2.00	0.75
16:XP:43:LYS:HG2	16:XP:48:TRP:CE3	2.22	0.75
25:YA:2310:A:H62	30:YG:77:ILE:HG21	1.51	0.75
25:YA:2399:G:O6	25:YA:2417:C:N4	2.13	0.75
34:YO:47:ILE:CD1	34:YO:48:PRO:HD2	2.16	0.75
35:YP:62:LEU:HD21	54:Y8:25:MET:HB2	1.69	0.75
39:YT:57:PHE:C	39:YT:58:ASN:HD22	1.93	0.75
40:YU:92:ARG:HH11	40:YU:95:LEU:CD1	2.00	0.75
41:YV:52:VAL:HG21	41:YV:55:ALA:HB3	1.68	0.75
44:YY:97:ARG:HH21	44:YY:98:VAL:CB	1.98	0.75
47:Y1:80:LEU:C	47:Y1:81:LYS:HD2	2.12	0.75
11:QK:48:ILE:HD11	11:QK:64:ALA:HA	1.67	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:77:MET:HE3	11:QK:80:VAL:HG12	1.67	0.75
30:RG:3:LEU:HD12	30:RG:4:ASP:H	1.52	0.75
41:RV:15:GLU:O	41:RV:18:LEU:HB2	1.86	0.75
13:XM:49:THR:HG22	13:XM:51:ALA:N	2.01	0.75
25:YA:484:C:H2'	25:YA:485:C:H6	1.51	0.75
40:YU:88:ILE:HG22	40:YU:90:VAL:HG23	1.67	0.75
1:QA:15:G:H2'	1:QA:16:A:C8	2.22	0.75
1:QA:745:C:H2'	1:QA:746:A:H8	1.52	0.75
2:QB:117:GLU:O	2:QB:121:LEU:HB2	1.86	0.75
4:QD:26:CYS:HA	4:QD:31:CYS:HB2	1.67	0.75
20:QT:35:THR:O	20:QT:39:LYS:HG3	1.86	0.75
20:QT:58:LYS:HE3	20:QT:62:LEU:HD11	1.69	0.75
35:RP:62:LEU:HD21	54:R8:25:MET:HB2	1.69	0.75
41:RV:47:VAL:HG13	41:RV:48:GLY:H	1.49	0.75
44:RY:48:ALA:O	44:RY:49:VAL:C	2.30	0.75
44:RY:94:LYS:O	44:RY:101:LYS:HB3	1.85	0.75
19:XS:3:ARG:HG3	19:XS:4:SER:H	1.52	0.75
25:YA:918:A:N3	26:YB:80:U:O2'	2.19	0.75
35:YP:75:ILE:HD13	35:YP:75:ILE:N	2.00	0.75
39:YT:43:GLN:HG2	39:YT:44:ASP:N	1.99	0.75
41:YV:51:VAL:HG12	41:YV:52:VAL:H	1.52	0.75
43:YX:57:LEU:HD11	43:YX:78:LYS:HB2	1.68	0.75
55:Y9:1:MET:HB3	55:Y9:4:ARG:NH1	2.02	0.75
1:QA:1200:C:H1'	1:QA:1204:A:H61	1.50	0.75
1:QA:1342:C:H4'	9:QI:125:TYR:HB3	1.69	0.75
10:QJ:27:ALA:HB1	10:QJ:34:VAL:HG21	1.69	0.75
19:QS:41:VAL:HG12	19:QS:44:MET:H	1.50	0.75
25:RA:305:U:H2'	25:RA:306:U:C6	2.22	0.75
25:RA:481:G:O6	25:RA:509:C:N4	2.14	0.75
25:RA:2593:U:H2'	25:RA:2594:C:H6	1.51	0.75
31:RH:153:LYS:HG2	31:RH:162:ILE:H	1.52	0.75
44:RY:90:LEU:N	44:RY:90:LEU:HD22	2.02	0.75
47:R1:3:LYS:HD3	47:R1:43:TYR:HD2	1.52	0.75
48:R2:41:ILE:C	48:R2:41:ILE:HD12	2.10	0.75
1:XA:606:G:N2	1:XA:631:G:H8	1.85	0.75
20:XT:58:LYS:HE3	20:XT:62:LEU:HD11	1.69	0.75
25:YA:1812:A:H2'	25:YA:1813:G:H8	1.51	0.75
27:YD:146:GLU:HB2	27:YD:189:CYS:HB3	1.67	0.75
33:YN:42:TRP:HA	33:YN:48:MET:HE1	1.69	0.75
44:YY:90:LEU:HD22	44:YY:90:LEU:N	2.01	0.75
44:YY:97:ARG:NH2	44:YY:98:VAL:HB	2.01	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:80:LEU:O	47:Y1:81:LYS:CB	2.35	0.75
5:QE:45:PHE:CE2	5:QE:47:LYS:HD2	2.22	0.75
25:RA:2701:C:H3'	25:RA:2702:U:C5'	2.14	0.75
37:RR:73:VAL:O	37:RR:76:VAL:HG12	1.87	0.75
7:XG:148:ASN:HD22	7:XG:148:ASN:N	1.82	0.75
11:XK:48:ILE:HD11	11:XK:64:ALA:HA	1.67	0.75
18:XR:53:ARG:HH21	18:XR:60:ALA:N	1.84	0.75
29:YF:7:TYR:HB3	29:YF:21:ALA:CB	2.16	0.75
37:YR:33:ARG:HH22	51:Y5:55:ARG:HG2	1.51	0.75
41:YV:35:LEU:H	41:YV:35:LEU:HD22	1.51	0.75
47:Y1:56:GLN:NE2	47:Y1:56:GLN:N	2.34	0.75
12:QL:10:LEU:CD1	17:QQ:32:TYR:CE2	2.69	0.75
1:XA:64:G:N2	1:XA:68:G:O6	2.17	0.75
2:XB:101:MET:CA	2:XB:108:ILE:HG13	2.11	0.75
5:XE:72:GLN:NE2	5:XE:144:THR:HG22	2.01	0.75
7:XG:9:VAL:HG13	7:XG:94:ARG:HE	1.52	0.75
7:XG:23:VAL:HG12	7:XG:27:ILE:HD11	1.69	0.75
8:XH:91:ARG:HH11	8:XH:91:ARG:HG2	1.51	0.75
15:XO:74:ASP:CG	15:XO:77:ARG:HG2	2.12	0.75
21:XU:10:ARG:HG2	21:XU:13:ILE:HD12	1.68	0.75
25:YA:265:A:O2'	25:YA:266:G:H4'	1.87	0.75
25:YA:559:G:H22	40:YU:49:HIS:CE1	2.04	0.75
44:YY:44:ILE:HG13	44:YY:45:VAL:N	2.00	0.75
51:Y5:47:PRO:O	51:Y5:48:GLU:HG3	1.86	0.75
1:QA:1154:G:H2'	1:QA:1155:G:H8	1.51	0.74
15:QO:87:ILE:HG22	15:QO:88:ARG:N	2.00	0.74
19:QS:39:THR:HG22	19:QS:40:ILE:H	1.50	0.74
25:RA:587:C:OP2	35:RP:21:ARG:NH2	2.20	0.74
25:RA:746:A:O2'	25:RA:747:U:OP2	2.04	0.74
25:RA:2068:U:H3	25:RA:2430:A:H2	1.32	0.74
25:RA:2636:U:OP2	28:RE:79:ARG:NH1	2.20	0.74
25:RA:2745:C:O2	31:RH:139:GLN:NE2	2.20	0.74
28:RE:63:LEU:CD1	28:RE:65:GLY:H	1.99	0.74
30:RG:97:ASP:H	30:RG:100:TRP:HD1	1.31	0.74
39:RT:111:ARG:O	39:RT:113:LYS:N	2.17	0.74
40:RU:92:ARG:HH11	40:RU:95:LEU:CD1	2.00	0.74
41:RV:52:VAL:HG21	41:RV:55:ALA:HB3	1.68	0.74
25:YA:1532:C:N4	25:YA:1539:G:O6	2.18	0.74
25:YA:2439:A:C8	25:YA:2439:A:H5'	2.22	0.74
37:YR:73:VAL:O	37:YR:76:VAL:HG12	1.87	0.74
42:YW:40:ASN:O	42:YW:41:LYS:HG2	1.86	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1316:G:OP1	14:QN:17:LYS:NZ	2.17	0.74
6:QF:60:PHE:C	6:QF:61:LEU:HD12	2.13	0.74
13:QM:3:ARG:CA	13:QM:9:ILE:HG21	2.13	0.74
25:RA:77:C:O3'	48:R2:14:ARG:NH2	2.20	0.74
28:RE:36:ARG:HH21	28:RE:88:GLY:HA2	1.51	0.74
35:RP:64:LYS:C	35:RP:66:GLY:H	1.94	0.74
1:XA:128:G:O2'	17:XQ:3:LYS:NZ	2.19	0.74
1:XA:1226:C:OP2	13:XM:103:THR:OG1	2.00	0.74
20:XT:26:ASN:O	20:XT:30:LYS:HB2	1.85	0.74
25:YA:577:G:O2'	25:YA:1254:A:OP1	2.05	0.74
28:YE:61:ARG:HB2	28:YE:62:PRO:HD3	1.69	0.74
1:QA:1081:G:P	5:QE:16:THR:HG1	2.09	0.74
9:QI:113:LYS:HD2	9:QI:113:LYS:H	1.51	0.74
16:QP:43:LYS:HG2	16:QP:48:TRP:CE3	2.22	0.74
25:RA:196:A:OP2	35:RP:46:LYS:NZ	2.21	0.74
34:RO:107:ARG:HA	34:RO:112:MET:HE1	1.67	0.74
38:RS:83:LYS:HZ2	38:RS:109:GLY:HA2	1.49	0.74
42:RW:18:ARG:HG3	42:RW:76:VAL:CG1	2.15	0.74
42:RW:40:ASN:O	42:RW:41:LYS:HG2	1.87	0.74
1:XA:243:A:N6	1:XA:281:G:O2'	2.20	0.74
1:XA:1366:C:H2'	1:XA:1367:C:H6	1.53	0.74
5:XE:10:MET:CB	5:XE:32:VAL:HG22	2.18	0.74
19:XS:41:VAL:HG12	19:XS:44:MET:H	1.50	0.74
27:YD:30:GLU:HG3	27:YD:63:ARG:CZ	2.17	0.74
39:YT:78:LEU:HD13	39:YT:78:LEU:O	1.87	0.74
44:YY:51:VAL:HG13	44:YY:52:SER:N	2.02	0.74
1:QA:359:U:H2'	1:QA:360:A:C8	2.23	0.74
1:QA:569:C:N4	1:QA:881:G:O6	2.19	0.74
10:QJ:33:GLN:O	10:QJ:75:ILE:HG12	1.87	0.74
29:RF:7:TYR:HB3	29:RF:21:ALA:CB	2.16	0.74
32:RI:12:LEU:HG	32:RI:19:VAL:HG11	1.69	0.74
38:RS:62:LYS:HB3	38:RS:97:ARG:HD3	1.69	0.74
50:R4:71:ARG:HG3	50:R4:71:ARG:NH1	1.90	0.74
1:XA:1177:G:OP2	9:XI:97:LYS:NZ	2.20	0.74
16:XP:43:LYS:O	16:XP:45:THR:N	2.21	0.74
17:XQ:59:ILE:H	17:XQ:59:ILE:HD13	1.50	0.74
25:YA:1103:A:H5'	25:YA:1104:C:C5	2.21	0.74
27:YD:54:ARG:HG3	27:YD:54:ARG:HH11	1.49	0.74
15:QO:70:LEU:HD12	15:QO:70:LEU:O	1.88	0.74
15:QO:74:ASP:CG	15:QO:77:ARG:HG2	2.12	0.74
28:RE:201:THR:HG22	28:RE:203:LYS:HB3	1.69	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:26:LYS:HB2	34:RO:30:ALA:CB	2.18	0.74
43:RX:57:LEU:HD11	43:RX:78:LYS:HB2	1.68	0.74
44:RY:44:ILE:HG13	44:RY:45:VAL:N	2.00	0.74
47:R1:26:ARG:O	47:R1:26:ARG:HD2	1.86	0.74
3:XC:181:ASN:ND2	3:XC:204:LEU:HD12	1.99	0.74
7:XG:78:ARG:HH12	7:XG:80:VAL:HG23	1.52	0.74
25:YA:2846:G:H2'	25:YA:2847:U:C6	2.22	0.74
29:YF:136:THR:HG22	29:YF:166:ALA:O	1.87	0.74
36:YQ:79:LEU:O	36:YQ:79:LEU:CD2	2.36	0.74
38:YS:36:TYR:CD2	38:YS:52:SER:HB3	2.23	0.74
40:YU:52:ARG:HH11	40:YU:52:ARG:HG2	1.51	0.74
2:QB:47:THR:O	2:QB:51:LEU:HG	1.87	0.74
7:QG:23:VAL:HG12	7:QG:27:ILE:HD11	1.69	0.74
9:QI:62:TYR:C	9:QI:63:ILE:HD12	2.12	0.74
13:QM:37:THR:HG21	13:QM:39:ILE:HD11	1.68	0.74
25:RA:859:G:O2'	25:RA:860:U:O2	2.06	0.74
39:RT:50:ILE:HD12	39:RT:102:ILE:HD11	1.68	0.74
41:RV:1:MET:HE2	41:RV:43:GLU:CG	2.17	0.74
48:R2:47:ASN:HD22	48:R2:47:ASN:H	1.33	0.74
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.22	0.74
6:XF:91:VAL:HG13	18:XR:72:ARG:HH12	1.51	0.74
23:XX:2:U:C2'	23:XX:3:G:H5'	2.17	0.74
35:YP:64:LYS:C	35:YP:66:GLY:H	1.95	0.74
49:Y3:7:LYS:HB2	49:Y3:34:GLU:HG2	1.69	0.74
2:QB:115:LEU:HD13	2:QB:145:LEU:HB3	1.68	0.74
7:QG:9:VAL:HG13	7:QG:94:ARG:HE	1.53	0.74
29:RF:136:THR:HG22	29:RF:166:ALA:O	1.87	0.74
1:XA:191:G:C4	20:XT:105:SER:HB3	2.23	0.74
5:XE:72:GLN:HE21	5:XE:144:THR:HG22	1.53	0.74
6:XF:60:PHE:C	6:XF:61:LEU:HD12	2.12	0.74
25:YA:271(B):G:H5''	25:YA:271(B):G:H8	1.52	0.74
25:YA:1509:C:H3'	25:YA:1510:A:H5''	1.70	0.74
33:YN:96:GLU:HG2	33:YN:97:ARG:N	2.01	0.74
1:QA:156:G:H1	1:QA:165:C:H42	1.35	0.74
2:QB:168:THR:HB	2:QB:192:SER:HB2	1.70	0.74
4:QD:91:SER:HA	4:QD:94:LEU:HD13	1.70	0.74
5:QE:10:MET:CB	5:QE:32:VAL:HG22	2.18	0.74
23:QX:2:U:C2'	23:QX:3:G:H5'	2.17	0.74
25:RA:1792:G:N2	25:RA:1827:C:O2	2.20	0.74
42:RW:73:ALA:HB3	42:RW:106:ILE:HG12	1.68	0.74
1:XA:971:G:H5''	1:XA:972:C:H5''	1.67	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:25:ARG:HH12	4:XD:30:LYS:HG3	1.52	0.74
6:XF:19:LEU:O	6:XF:19:LEU:HD23	1.88	0.74
20:XT:35:THR:O	20:XT:39:LYS:HG3	1.87	0.74
25:YA:1903:G:OP2	27:YD:241:PRO:HB2	1.87	0.74
25:YA:2443:C:H2'	25:YA:2444:G:C8	2.23	0.74
25:YA:2723:C:OP1	37:YR:3:HIS:ND1	2.20	0.74
29:YF:129:PHE:HA	29:YF:142:TRP:NE1	2.02	0.74
31:YH:153:LYS:HG2	31:YH:162:ILE:H	1.52	0.74
39:YT:26:ASP:HB3	39:YT:91:ARG:HA	1.69	0.74
40:YU:64:ARG:HH21	40:YU:64:ARG:CG	2.00	0.74
41:YV:1:MET:HE2	41:YV:43:GLU:CG	2.17	0.74
3:QC:86:VAL:O	3:QC:89:GLU:HB3	1.88	0.74
6:QF:19:LEU:HD23	6:QF:19:LEU:O	1.87	0.74
14:QN:40:CYS:SG	14:QN:42:ILE:HB	2.27	0.74
25:RA:270(D):C:O2	25:RA:270(V):G:N2	2.19	0.74
25:RA:1468:C:O2	25:RA:1524:G:N2	2.19	0.74
25:RA:1791:A:N6	25:RA:1828:G:O2'	2.19	0.74
25:RA:2818:G:O6	25:RA:2828:C:N4	2.19	0.74
27:RD:77:ALA:CB	27:RD:97:TYR:HA	2.18	0.74
34:RO:47:ILE:CD1	34:RO:48:PRO:HD2	2.16	0.74
35:RP:19:VAL:HG22	35:RP:20:GLY:N	1.97	0.74
35:RP:50:ARG:HB3	35:RP:50:ARG:NH2	1.98	0.74
10:XJ:27:ALA:HB1	10:XJ:34:VAL:HG21	1.69	0.74
10:XJ:33:GLN:O	10:XJ:75:ILE:HG12	1.88	0.74
13:XM:37:THR:HG21	13:XM:39:ILE:HD11	1.68	0.74
25:YA:1187:G:H5''	41:YV:81:TYR:CE2	2.23	0.74
29:YF:29:ASN:HB3	29:YF:112:MET:HE1	1.70	0.74
31:YH:150:ALA:C	31:YH:152:ARG:N	2.44	0.74
38:YS:83:LYS:HZ1	38:YS:109:GLY:HA2	1.49	0.74
39:YT:54:ARG:HG2	39:YT:54:ARG:HH11	1.52	0.74
47:Y1:26:ARG:O	47:Y1:26:ARG:HD2	1.86	0.74
1:QA:750:G:N2	15:QO:23:GLY:O	2.18	0.74
25:RA:2006:C:O2'	25:RA:2823:A:N3	2.18	0.74
36:RQ:79:LEU:O	36:RQ:79:LEU:CD1	2.35	0.74
41:RV:35:LEU:H	41:RV:35:LEU:HD22	1.51	0.74
42:RW:70:TYR:HD2	42:RW:70:TYR:H	1.36	0.74
44:RY:52:SER:OG	44:RY:53:PRO:HD3	1.88	0.74
47:R1:80:LEU:O	47:R1:81:LYS:CB	2.35	0.74
49:R3:29:ARG:HH11	49:R3:29:ARG:HB2	1.52	0.74
51:R5:2:ALA:O	51:R5:3:LYS:HB2	1.88	0.74
1:XA:1152:A:OP1	10:XJ:68:HIS:NE2	2.20	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:851:U:H1'	49:Y3:46:ASN:HD21	1.53	0.74
27:YD:131:LEU:HB2	27:YD:136:ILE:CD1	2.17	0.74
28:YE:78:LEU:HG	28:YE:79:ARG:NE	2.03	0.74
31:YH:153:LYS:HG3	31:YH:161:GLY:CA	2.18	0.74
33:YN:56:ASN:HD22	33:YN:125:GLY:C	1.96	0.74
41:YV:15:GLU:O	41:YV:18:LEU:HB2	1.86	0.74
49:Y3:29:ARG:HB2	49:Y3:29:ARG:HH11	1.53	0.74
50:Y4:41:PRO:O	50:Y4:42:PHE:HB3	1.87	0.74
1:QA:375:U:H4'	16:QP:17:TYR:HE2	1.53	0.73
7:QG:79:ARG:HH22	7:QG:82:GLY:HA2	1.50	0.73
25:RA:305:U:H2'	25:RA:306:U:H6	1.52	0.73
28:RE:77:ILE:HD12	28:RE:78:LEU:H	1.52	0.73
38:RS:36:TYR:CD2	38:RS:52:SER:HB3	2.23	0.73
25:YA:993:G:OP1	40:YU:50:ARG:NH2	2.20	0.73
3:QC:134:ILE:HD11	3:QC:153:VAL:HG21	1.70	0.73
10:QJ:3:LYS:HD2	10:QJ:77:PRO:HD3	1.70	0.73
25:RA:1795:C:O2	27:RD:255:LYS:HE2	1.88	0.73
39:RT:23:ARG:HB2	39:RT:24:PRO:HD2	1.70	0.73
44:RY:95:LYS:HB3	44:RY:100:ALA:CA	2.10	0.73
47:R1:76:ARG:HH11	47:R1:76:ARG:HG2	1.53	0.73
3:XC:134:ILE:HD11	3:XC:153:VAL:HG21	1.70	0.73
5:XE:45:PHE:CE2	5:XE:47:LYS:HD2	2.22	0.73
15:XO:70:LEU:HD12	15:XO:70:LEU:O	1.88	0.73
25:YA:751:A:OP1	57:YA:3027:MG:MG	1.31	0.73
26:YB:15:A:H5'	26:YB:16:G:C8	2.22	0.73
34:YO:26:LYS:HB2	34:YO:30:ALA:CB	2.18	0.73
25:RA:2582:G:H21	25:RA:2583:G:H1'	1.51	0.73
33:RN:58:ASP:H	33:RN:60:ILE:HD11	1.53	0.73
35:RP:62:LEU:HD22	35:RP:62:LEU:H	1.53	0.73
41:RV:51:VAL:HG12	41:RV:52:VAL:H	1.52	0.73
1:XA:939:G:H5''	7:XG:102:ARG:HH22	1.52	0.73
2:XB:8:LYS:HD3	2:XB:8:LYS:N	2.03	0.73
2:XB:47:THR:O	2:XB:51:LEU:HG	1.87	0.73
25:YA:2655:G:O2'	25:YA:2656:U:OP2	2.05	0.73
39:YT:102:ILE:HB	39:YT:110:ILE:CD1	2.19	0.73
1:QA:1104:G:H4'	2:QB:111:ARG:NH1	2.03	0.73
25:RA:1490:A:O2'	27:RD:99:ASP:OD2	2.06	0.73
29:RF:9:ILE:HD11	29:RF:125:LEU:HG	1.70	0.73
29:RF:29:ASN:HB3	29:RF:112:MET:HE1	1.70	0.73
40:RU:64:ARG:HH21	40:RU:64:ARG:CG	2.00	0.73
1:XA:1443:G:N2	25:YA:2864:G:OP1	2.19	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:32:SER:O	14:YN:41:ARG:N	2.22	0.73
14:YN:44:LEU:CD1	14:YN:53:LEU:CD1	2.66	0.73
25:YA:1454:U:H5'	37:YR:63:ARG:NE	1.99	0.73
45:YZ:5:LEU:HD11	45:YZ:39:VAL:HB	1.69	0.73
45:YZ:10:ARG:NH2	45:YZ:26:GLY:O	2.20	0.73
1:QA:1347:G:N2	1:QA:1374:A:OP2	2.21	0.73
25:RA:270(L):U:H2'	32:RI:50:ARG:HD2	1.71	0.73
25:RA:270(R):G:N3	47:R1:78:LYS:NZ	2.36	0.73
25:RA:270(U):C:H2'	25:RA:270(V):G:H8	1.54	0.73
25:RA:1728:G:H3'	25:RA:1729:A:H5''	1.69	0.73
28:RE:61:ARG:HB2	28:RE:62:PRO:HD3	1.69	0.73
32:RI:64:GLU:O	32:RI:67:ARG:NH2	2.21	0.73
25:YA:2071:A:H2'	25:YA:2072:G:H8	1.53	0.73
25:YA:2777:G:OP2	25:YA:2781:A:O2'	2.06	0.73
16:QP:3:LYS:C	16:QP:4:ILE:HD12	2.14	0.73
16:QP:45:THR:HG23	16:QP:46:PRO:HD2	1.70	0.73
28:RE:23:VAL:HG21	28:RE:183:LEU:HD23	1.68	0.73
31:RH:84:SER:O	31:RH:85:LYS:HB2	1.89	0.73
33:RN:96:GLU:HG2	33:RN:97:ARG:N	2.01	0.73
50:R4:41:PRO:O	50:R4:42:PHE:HB3	1.87	0.73
36:YQ:79:LEU:O	36:YQ:79:LEU:CD1	2.35	0.73
1:QA:474:G:H2'	1:QA:475:G:C8	2.24	0.73
27:RD:30:GLU:HG3	27:RD:63:ARG:CZ	2.17	0.73
28:RE:203:LYS:O	28:RE:203:LYS:HD2	1.89	0.73
47:R1:80:LEU:C	47:R1:81:LYS:HD2	2.12	0.73
49:R3:7:LYS:HB2	49:R3:34:GLU:HG2	1.69	0.73
1:XA:295:C:O2	1:XA:302:G:N2	2.20	0.73
1:XA:891:U:H2'	1:XA:892:A:H8	1.54	0.73
3:XC:86:VAL:O	3:XC:89:GLU:HB3	1.87	0.73
3:XC:107:GLN:CD	3:XC:107:GLN:H	1.97	0.73
4:XD:146:ILE:HD12	4:XD:146:ILE:N	2.04	0.73
8:XH:20:TYR:HD1	8:XH:65:TYR:CD2	2.07	0.73
16:XP:60:LEU:HA	16:XP:64:ALA:HB3	1.71	0.73
25:YA:2864:G:OP1	39:YT:119:LYS:HD2	1.88	0.73
30:YG:7:LEU:HD21	30:YG:176:LEU:HD22	1.70	0.73
1:QA:1077:G:N2	1:QA:1080:A:OP2	2.19	0.73
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.71	0.73
2:QB:195:ASP:O	8:QH:74:PRO:HG3	1.88	0.73
25:RA:2439:A:C8	25:RA:2439:A:H5'	2.23	0.73
25:RA:2477:C:H2'	55:R9:1:MET:HG3	1.70	0.73
31:RH:153:LYS:HG3	31:RH:161:GLY:CA	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:8:GLU:CD	7:XG:8:GLU:H	1.96	0.73
27:YD:77:ALA:CB	27:YD:97:TYR:HA	2.18	0.73
28:YE:77:ILE:HD12	28:YE:78:LEU:H	1.52	0.73
29:YF:29:ASN:H	29:YF:112:MET:HE1	1.54	0.73
38:YS:62:LYS:HB3	38:YS:97:ARG:HD3	1.68	0.73
44:YY:48:ALA:O	44:YY:49:VAL:C	2.30	0.73
50:Y4:29:PRO:O	50:Y4:30:GLU:HB2	1.89	0.73
51:Y5:40:LYS:CE	51:Y5:46:CYS:HB3	2.19	0.73
1:QA:1078:U:O2'	5:QE:130:ASN:OD1	2.05	0.73
13:QM:121:LYS:HE2	13:QM:121:LYS:HA	1.71	0.73
20:QT:50:GLU:HG3	20:QT:51:GLU:H	1.54	0.73
25:RA:709:U:H3	25:RA:722:A:H61	1.36	0.73
27:RD:131:LEU:HB2	27:RD:136:ILE:CD1	2.17	0.73
31:RH:125:VAL:HA	31:RH:126:PRO:HB3	1.68	0.73
35:RP:15:ARG:O	35:RP:16:ARG:C	2.32	0.73
36:RQ:90:VAL:CG1	36:RQ:91:GLU:H	2.02	0.73
39:RT:26:ASP:HB3	39:RT:91:ARG:HA	1.69	0.73
2:XB:75:LYS:O	2:XB:75:LYS:HD3	1.89	0.73
18:XR:56:THR:HB	18:XR:58:LEU:HD12	1.71	0.73
25:YA:704:G:H2'	25:YA:726:G:N2	2.04	0.73
25:YA:1279:G:H4'	37:YR:31:HIS:HD2	1.53	0.73
48:Y2:29:LYS:HD3	48:Y2:57:ILE:HD13	1.71	0.73
33:RN:42:TRP:HA	33:RN:48:MET:HE1	1.69	0.73
40:RU:34:LYS:HE2	40:RU:34:LYS:HA	1.70	0.73
1:XA:1239:A:H62	1:XA:1299:A:N6	1.87	0.73
3:XC:13:GLY:HA3	14:XN:57:ARG:NH2	2.04	0.73
25:YA:71:A:H4'	25:YA:72:U:H5''	1.70	0.73
28:YE:203:LYS:O	28:YE:203:LYS:HD2	1.88	0.73
33:YN:58:ASP:H	33:YN:60:ILE:HD11	1.53	0.73
37:YR:3:HIS:O	37:YR:5:LYS:N	2.22	0.73
54:Y8:16:ILE:HD11	54:Y8:57:ARG:HG2	1.70	0.73
54:Y8:61:LEU:O	54:Y8:62:LEU:HB2	1.88	0.73
1:QA:1298:C:O2'	1:QA:1299:A:OP2	2.05	0.72
3:QC:107:GLN:CD	3:QC:107:GLN:H	1.97	0.72
11:QK:48:ILE:HD12	11:QK:63:LEU:HB3	1.71	0.72
12:QL:126:LYS:HB2	12:QL:126:LYS:NZ	2.04	0.72
31:RH:54:ARG:HH12	31:RH:62:LYS:HG2	1.54	0.72
1:XA:1296:C:HO2'	1:XA:1302:U:H5	1.35	0.72
1:XA:1453:G:H2'	20:XT:39:LYS:HZ1	1.53	0.72
13:XM:65:LYS:NZ	50:Y4:52:THR:HG21	2.04	0.72
27:YD:35:LYS:HZ1	27:YD:65:ILE:HA	1.52	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:146:TYR:O	30:YG:149:VAL:HG22	1.89	0.72
52:Y6:13:CYS:HA	52:Y6:50:ARG:O	1.89	0.72
1:QA:1329:A:P	13:QM:28:ALA:HB3	2.30	0.72
3:QC:13:GLY:HA3	14:QN:57:ARG:NH2	2.04	0.72
4:QD:30:LYS:HB2	4:QD:35:ARG:HG3	1.70	0.72
7:QG:78:ARG:HH12	7:QG:80:VAL:HG23	1.52	0.72
19:QS:3:ARG:HG3	19:QS:4:SER:H	1.52	0.72
25:RA:2394:C:OP1	35:RP:63:PRO:HD2	1.90	0.72
26:RB:4:C:N3	26:RB:117:G:N2	2.36	0.72
28:RE:13:ARG:HA	28:RE:22:PRO:HA	1.71	0.72
28:RE:56:PRO:O	28:RE:57:LYS:HB2	1.89	0.72
29:RF:157:VAL:HB	29:RF:194:MET:HB3	1.70	0.72
48:R2:27:GLU:OE1	48:R2:27:GLU:N	2.19	0.72
51:R5:40:LYS:CE	51:R5:46:CYS:HB3	2.19	0.72
54:R8:59:LYS:CB	54:R8:59:LYS:HZ3	2.01	0.72
2:XB:115:LEU:HD13	2:XB:145:LEU:HB3	1.69	0.72
6:XF:77:ARG:HB2	6:XF:77:ARG:HH11	1.53	0.72
16:XP:20:VAL:HG21	16:XP:32:TYR:CG	2.24	0.72
25:YA:1068:G:O2'	25:YA:1096:A:N3	2.22	0.72
25:YA:2723:C:O3'	37:YR:1:MET:HE3	1.88	0.72
25:YA:2729:G:H1'	28:YE:187:ALA:HB2	1.69	0.72
25:YA:2848:G:O2'	25:YA:2867:G:N2	2.23	0.72
26:YB:40:U:H1'	26:YB:45:A:H61	1.54	0.72
31:YH:153:LYS:HA	31:YH:153:LYS:HZ3	1.53	0.72
33:YN:89:LYS:O	33:YN:93:THR:HG22	1.90	0.72
38:YS:83:LYS:HG2	38:YS:109:GLY:N	2.04	0.72
44:YY:52:SER:OG	44:YY:53:PRO:HD3	1.88	0.72
49:Y3:56:VAL:HG12	49:Y3:57:GLU:N	2.04	0.72
1:QA:1446:A:N3	39:RT:118:ARG:HD2	2.04	0.72
4:QD:146:ILE:HD12	4:QD:146:ILE:N	2.04	0.72
6:QF:25:ILE:HD13	6:QF:28:ARG:NH1	2.05	0.72
25:RA:2893:G:H5''	25:RA:2894:G:H5'	1.71	0.72
29:RF:101:LEU:CD1	29:RF:102:PRO:HD2	2.11	0.72
30:RG:146:TYR:O	30:RG:149:VAL:HG22	1.88	0.72
31:RH:30:LYS:HD2	31:RH:81:GLU:H	1.54	0.72
42:RW:1:MET:HA	42:RW:1:MET:HE3	1.71	0.72
25:YA:1019:U:H3	25:YA:1142(A):A:N6	1.86	0.72
31:YH:125:VAL:HG12	31:YH:126:PRO:HG3	1.71	0.72
31:YH:152:ARG:O	31:YH:153:LYS:HD2	1.90	0.72
35:YP:126:VAL:CG1	35:YP:147:LEU:HD21	2.17	0.72
37:YR:117:VAL:HG22	37:YR:118:GLU:N	2.05	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:98:LEU:HD23	40:YU:99:ALA:N	2.04	0.72
31:RH:80:SER:O	31:RH:81:GLU:HB2	1.89	0.72
33:RN:56:ASN:HD22	33:RN:125:GLY:C	1.96	0.72
20:XT:47:GLY:O	20:XT:49:ALA:N	2.19	0.72
25:YA:1485:G:O6	25:YA:1504:C:N4	2.17	0.72
25:YA:2026:C:O2	25:YA:2037:G:N2	2.12	0.72
25:YA:2404:C:H1'	35:YP:67:MET:HE1	1.71	0.72
26:YB:42:C:O4'	30:YG:69:ALA:HB2	1.88	0.72
31:YH:132:ARG:HH11	31:YH:132:ARG:CB	1.97	0.72
36:YQ:90:VAL:CG1	36:YQ:91:GLU:H	2.02	0.72
41:YV:39:LEU:O	41:YV:40:LEU:HD23	1.90	0.72
54:Y8:29:LYS:HD3	54:Y8:44:LYS:HB2	1.71	0.72
1:QA:1213:A:N6	1:QA:1215:G:N3	2.38	0.72
4:QD:30:LYS:HG3	4:QD:35:ARG:HE	1.52	0.72
6:QF:72:VAL:CG2	6:QF:90:VAL:HG11	2.20	0.72
15:QO:71:GLN:HB2	15:QO:78:TYR:CD1	2.25	0.72
25:RA:593:G:H2'	25:RA:594:U:H6	1.53	0.72
25:RA:2404:C:H1'	35:RP:67:MET:HE1	1.72	0.72
28:RE:78:LEU:HG	28:RE:79:ARG:NE	2.03	0.72
34:RO:113:LYS:HG2	34:RO:117:LEU:HD11	1.71	0.72
47:R1:80:LEU:HB2	47:R1:81:LYS:HE2	1.71	0.72
1:XA:474:G:H2'	1:XA:475:G:H8	1.55	0.72
1:XA:1353:G:N2	1:XA:1369:C:O2	2.17	0.72
2:XB:21:ARG:O	2:XB:23:ARG:HD3	1.89	0.72
8:XH:41:ARG:HH11	8:XH:41:ARG:CB	2.03	0.72
25:YA:299:A:H5'	25:YA:300:A:OP2	1.88	0.72
25:YA:2394:C:OP1	35:YP:63:PRO:HD2	1.89	0.72
25:YA:2443:C:H2'	25:YA:2444:G:H8	1.53	0.72
28:YE:21:VAL:HB	28:YE:22:PRO:CB	2.18	0.72
29:YF:124:LEU:HD12	29:YF:125:LEU:N	2.04	0.72
35:YP:15:ARG:O	35:YP:16:ARG:C	2.32	0.72
38:YS:26:LEU:O	38:YS:26:LEU:HD23	1.90	0.72
51:Y5:58:LEU:CD1	51:Y5:60:VAL:HG12	2.19	0.72
5:QE:36:ASP:OD2	5:QE:38:GLN:HB2	1.86	0.72
20:QT:27:LYS:O	20:QT:30:LYS:HB3	1.89	0.72
20:QT:97:ALA:O	20:QT:99:LEU:HD13	1.89	0.72
38:RS:103:GLU:O	38:RS:106:ARG:HG3	1.90	0.72
39:RT:117:ASP:O	39:RT:121:ILE:HG13	1.89	0.72
1:XA:1094:G:O2'	1:XA:1095:U:OP2	2.05	0.72
16:XP:3:LYS:C	16:XP:4:ILE:HD12	2.14	0.72
20:XT:97:ALA:O	20:XT:99:LEU:HD13	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:14:ILE:HD11	39:YT:14:TYR:OH	1.90	0.72
37:YR:85:PRO:O	37:YR:87:TYR:N	2.22	0.72
53:Y7:10:ARG:O	53:Y7:14:LYS:HB2	1.89	0.72
1:QA:872:A:O2'	1:QA:873:A:H5''	1.90	0.72
1:QA:1311:G:N2	1:QA:1326:C:O2	2.19	0.72
15:QO:79:ARG:O	15:QO:82:ILE:HG22	1.89	0.72
28:RE:28:ALA:HB3	28:RE:93:VAL:HG22	1.72	0.72
39:RT:78:LEU:HD13	39:RT:78:LEU:O	1.87	0.72
45:RZ:102:LEU:HD11	45:RZ:124:ILE:HG22	1.71	0.72
53:R7:10:ARG:O	53:R7:14:LYS:HB2	1.90	0.72
1:XA:1439:C:H42	1:XA:1462:G:H1	1.37	0.72
3:XC:16:ARG:HB2	3:XC:16:ARG:NH1	2.04	0.72
4:XD:91:SER:HA	4:XD:94:LEU:HD13	1.70	0.72
10:XJ:3:LYS:HD2	10:XJ:77:PRO:HD3	1.70	0.72
12:XL:126:LYS:HB2	12:XL:126:LYS:NZ	2.04	0.72
25:YA:102:G:O2'	25:YA:103:A:OP2	2.06	0.72
47:Y1:3:LYS:HD3	47:Y1:43:TYR:HD2	1.52	0.72
1:QA:192:U:H4'	20:QT:103:GLY:HA2	1.71	0.72
1:QA:1177:G:OP2	9:QI:97:LYS:NZ	2.23	0.72
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.25	0.72
6:QF:77:ARG:HB2	6:QF:77:ARG:HH11	1.53	0.72
25:RA:2289:G:N2	25:RA:2344:U:O2	2.22	0.72
29:RF:32:LEU:HD12	29:RF:32:LEU:O	1.90	0.72
29:RF:124:LEU:HD12	29:RF:125:LEU:N	2.05	0.72
31:RH:26:VAL:CG1	31:RH:27:LYS:H	2.02	0.72
35:RP:29:LYS:HD2	35:RP:30:THR:HG22	1.72	0.72
35:RP:114:ILE:HD13	35:RP:125:VAL:HG21	1.72	0.72
38:RS:42:ASP:O	38:RS:43:GLU:HB2	1.90	0.72
39:RT:54:ARG:HH11	39:RT:54:ARG:HG2	1.52	0.72
40:RU:66:ASN:HB2	40:RU:76:TYR:HB2	1.72	0.72
40:RU:69:CYS:HB3	40:RU:106:PHE:HZ	1.55	0.72
40:RU:98:LEU:HD23	40:RU:99:ALA:N	2.04	0.72
49:R3:56:VAL:HG12	49:R3:57:GLU:N	2.04	0.72
54:R8:16:ILE:HD11	54:R8:57:ARG:HG2	1.70	0.72
1:XA:210:U:O2'	1:XA:216:G:N7	2.23	0.72
16:XP:45:THR:HG23	16:XP:46:PRO:HD2	1.70	0.72
25:YA:2516:G:N2	25:YA:2568:C:O2	2.17	0.72
29:YF:32:LEU:HD12	29:YF:32:LEU:O	1.90	0.72
31:YH:54:ARG:HH12	31:YH:62:LYS:HG2	1.54	0.72
31:YH:128:PRO:HD2	31:YH:129:THR:H	1.55	0.72
39:YT:117:ASP:O	39:YT:121:ILE:HG13	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1277:C:HO2'	1:QA:1279:A:H8	1.38	0.72
5:QE:72:GLN:HE21	5:QE:144:THR:HG22	1.53	0.72
10:QJ:75:ILE:HG13	10:QJ:76:ASN:N	2.05	0.72
10:QJ:98:ILE:H	10:QJ:98:ILE:HD12	1.55	0.72
20:QT:57:ARG:HD3	20:QT:102:GLY:O	1.90	0.72
25:RA:674:G:O6	25:RA:806:C:N4	2.18	0.72
30:RG:7:LEU:HD21	30:RG:176:LEU:HD22	1.70	0.72
37:RR:117:VAL:HG22	37:RR:118:GLU:N	2.05	0.72
51:R5:58:LEU:CD1	51:R5:60:VAL:HG12	2.19	0.72
53:R7:5:TRP:NE1	53:R7:7:PRO:HG3	2.04	0.72
1:XA:107:G:C2	1:XA:108:G:H1'	2.25	0.72
5:XE:76:ILE:HB	5:XE:77:PRO:HD2	1.72	0.72
8:XH:10:LEU:HD23	8:XH:10:LEU:N	2.04	0.72
10:XJ:98:ILE:H	10:XJ:98:ILE:HD12	1.55	0.72
25:YA:1788:C:H2'	25:YA:1789:A:H8	1.54	0.72
28:YE:201:THR:HG22	28:YE:203:LYS:HB3	1.69	0.72
29:YF:157:VAL:HB	29:YF:194:MET:HB3	1.70	0.72
31:YH:26:VAL:CG1	31:YH:27:LYS:H	2.02	0.72
40:YU:34:LYS:HE2	40:YU:34:LYS:HA	1.70	0.72
47:Y1:80:LEU:HB2	47:Y1:81:LYS:HE2	1.71	0.72
48:Y2:27:GLU:OE1	48:Y2:27:GLU:N	2.19	0.72
8:QH:20:TYR:HD1	8:QH:65:TYR:CD2	2.07	0.72
25:RA:2210:G:H3'	25:RA:2211:G:H8	1.52	0.72
26:RB:40:U:H1'	26:RB:45:A:H61	1.53	0.72
29:RF:29:ASN:H	29:RF:112:MET:HE1	1.54	0.72
31:RH:89:ILE:CD1	31:RH:129:THR:HB	2.19	0.72
37:RR:85:PRO:O	37:RR:87:TYR:N	2.22	0.72
38:RS:83:LYS:HG2	38:RS:109:GLY:N	2.04	0.72
39:RT:102:ILE:HB	39:RT:110:ILE:CD1	2.19	0.72
44:RY:51:VAL:HG13	44:RY:52:SER:N	2.03	0.72
52:R6:13:CYS:HA	52:R6:50:ARG:O	1.89	0.72
54:R8:61:LEU:O	54:R8:62:LEU:HB2	1.88	0.72
20:XT:27:LYS:O	20:XT:30:LYS:HB3	1.89	0.72
25:YA:2306:C:H2'	25:YA:2307:G:H21	1.55	0.72
28:YE:56:PRO:O	28:YE:57:LYS:HB2	1.89	0.72
2:QB:21:ARG:O	2:QB:23:ARG:HD3	1.90	0.71
2:QB:187:LEU:HD11	2:QB:204:ASN:O	1.90	0.71
4:QD:25:ARG:HH12	4:QD:30:LYS:HE3	1.55	0.71
25:RA:95:G:O2'	48:R2:48:HIS:ND1	2.22	0.71
25:RA:1080:C:N4	25:RA:1088:A:OP2	2.20	0.71
25:RA:2208:U:O2'	27:RD:151:LYS:HG2	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:79:LEU:O	36:RQ:79:LEU:CD2	2.36	0.71
36:RQ:81:VAL:C	36:RQ:82:ARG:HG2	2.14	0.71
38:RS:26:LEU:O	38:RS:26:LEU:HD23	1.89	0.71
1:XA:372:C:N4	1:XA:389:A:H62	1.88	0.71
10:XJ:5:ARG:HG3	10:XJ:71:LEU:HD11	1.72	0.71
25:YA:878:A:N6	25:YA:899:A:O2'	2.22	0.71
28:YE:13:ARG:HA	28:YE:22:PRO:HA	1.71	0.71
34:YO:3:GLN:HB2	34:YO:4:PRO:HD2	1.72	0.71
42:YW:70:TYR:H	42:YW:70:TYR:HD2	1.36	0.71
44:YY:57:GLN:HE21	44:YY:58:GLY:H	1.37	0.71
47:Y1:76:ARG:HH11	47:Y1:76:ARG:HG2	1.54	0.71
8:QH:10:LEU:N	8:QH:10:LEU:HD23	2.04	0.71
25:RA:779:U:O2	25:RA:785:G:N1	2.19	0.71
34:RO:3:GLN:HB2	34:RO:4:PRO:HD2	1.72	0.71
40:RU:8:VAL:HG23	40:RU:11:ARG:NH2	1.99	0.71
48:R2:29:LYS:HD3	48:R2:57:ILE:HD13	1.71	0.71
54:R8:60:LEU:O	54:R8:63:PRO:HD2	1.90	0.71
15:XO:79:ARG:O	15:XO:82:ILE:HG22	1.90	0.71
20:XT:83:ARG:HA	20:XT:86:ARG:HB3	1.71	0.71
25:YA:363:G:H2'	25:YA:363(A):A:H8	1.54	0.71
25:YA:518:G:C4'	42:YW:18:ARG:HH12	1.96	0.71
25:YA:957:A:H5'	36:YQ:76:LYS:HD2	1.72	0.71
28:YE:197:ILE:HD11	28:YE:199:ARG:HH12	1.55	0.71
38:YS:67:ARG:O	38:YS:71:ARG:HG3	1.89	0.71
42:YW:1:MET:HA	42:YW:1:MET:HE3	1.71	0.71
1:QA:1069:C:O3'	5:QE:25:ARG:NH1	2.24	0.71
27:RD:244:ARG:HB2	27:RD:245:PRO:HD2	1.71	0.71
28:RE:21:VAL:HB	28:RE:22:PRO:CB	2.18	0.71
28:RE:93:VAL:H	28:RE:95:ILE:HD12	1.54	0.71
31:RH:152:ARG:O	31:RH:153:LYS:HD2	1.90	0.71
37:RR:3:HIS:O	37:RR:5:LYS:N	2.22	0.71
52:R6:7:ILE:C	52:R6:9:LEU:H	1.98	0.71
1:XA:701:C:O2'	1:XA:702:A:OP2	2.08	0.71
1:XA:791:G:N2	1:XA:1497:G:O3'	2.23	0.71
2:XB:214:ILE:HA	2:XB:217:ARG:HH21	1.54	0.71
19:XS:40:ILE:HG13	19:XS:44:MET:SD	2.31	0.71
20:XT:63:ILE:HG22	20:XT:77:ALA:HB1	1.73	0.71
25:YA:593:G:O3'	54:Y8:61:LEU:HD22	1.91	0.71
29:YF:9:ILE:HD11	29:YF:125:LEU:HG	1.70	0.71
31:YH:30:LYS:HD2	31:YH:81:GLU:H	1.54	0.71
31:YH:84:SER:O	31:YH:85:LYS:HB2	1.89	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:103:GLU:O	38:YS:106:ARG:HG3	1.90	0.71
51:Y5:2:ALA:O	51:Y5:3:LYS:HB2	1.88	0.71
53:Y7:5:TRP:NE1	53:Y7:7:PRO:HG3	2.04	0.71
54:Y8:58:ILE:HD13	54:Y8:61:LEU:HD11	1.72	0.71
54:Y8:60:LEU:O	54:Y8:63:PRO:HD2	1.90	0.71
1:QA:41:G:H2'	1:QA:42:G:H8	1.54	0.71
13:QM:49:THR:HG22	13:QM:51:ALA:N	2.01	0.71
19:QS:40:ILE:HG13	19:QS:44:MET:SD	2.30	0.71
28:RE:197:ILE:HD11	28:RE:199:ARG:HH12	1.55	0.71
35:RP:85:LEU:HA	35:RP:88:LEU:HD22	1.71	0.71
41:RV:39:LEU:O	41:RV:40:LEU:HD23	1.90	0.71
6:XF:25:ILE:HD13	6:XF:28:ARG:NH1	2.05	0.71
7:XG:78:ARG:HH12	7:XG:80:VAL:CG2	2.04	0.71
25:YA:1535:U:H5''	25:YA:1537:C:C4	2.26	0.71
29:YF:185:ASP:OD1	29:YF:188:ARG:NH1	2.23	0.71
36:YQ:81:VAL:C	36:YQ:82:ARG:HG2	2.15	0.71
40:YU:69:CYS:HB3	40:YU:106:PHE:HZ	1.55	0.71
52:Y6:28:ARG:HB3	52:Y6:30:THR:H	1.55	0.71
1:QA:983:A:N1	1:QA:1222:G:N2	2.38	0.71
10:QJ:5:ARG:HG3	10:QJ:71:LEU:HD11	1.72	0.71
16:QP:43:LYS:O	16:QP:45:THR:N	2.21	0.71
20:QT:83:ARG:HA	20:QT:86:ARG:HB3	1.72	0.71
23:QX:4:C:H2'	23:QX:5:C:H5'	1.72	0.71
25:RA:1397:U:OP2	25:RA:1398:C:N4	2.22	0.71
31:RH:125:VAL:HG12	31:RH:126:PRO:HG3	1.70	0.71
38:RS:67:ARG:O	38:RS:71:ARG:HG3	1.90	0.71
2:XB:168:THR:HB	2:XB:192:SER:HB2	1.70	0.71
35:YP:58:THR:O	35:YP:61:ARG:CZ	2.38	0.71
35:YP:85:LEU:HA	35:YP:88:LEU:HD22	1.71	0.71
2:QB:59:GLU:O	2:QB:62:ALA:HB3	1.90	0.71
5:QE:82:VAL:HG12	5:QE:83:GLU:N	2.06	0.71
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB3	1.59	0.71
16:QP:20:VAL:HG21	16:QP:32:TYR:CG	2.25	0.71
16:QP:60:LEU:HA	16:QP:64:ALA:HB3	1.71	0.71
20:QT:23:ARG:CA	20:QT:26:ASN:HD21	2.03	0.71
35:RP:49:ARG:HD2	54:R8:58:ILE:CG2	2.20	0.71
44:RY:89:PHE:C	44:RY:90:LEU:HD13	2.15	0.71
2:XB:59:GLU:O	2:XB:62:ALA:HB3	1.90	0.71
3:XC:16:ARG:HD2	3:XC:54:ARG:NH2	2.03	0.71
25:YA:270(T):G:H5''	47:Y1:97:LEU:HD22	1.71	0.71
43:YX:12:VAL:HG12	43:YX:27:THR:O	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:89:PHE:C	44:YY:90:LEU:HD13	2.15	0.71
52:Y6:36:LEU:HD13	52:Y6:50:ARG:NH1	2.05	0.71
1:QA:41:G:H2'	1:QA:42:G:C8	2.26	0.71
1:QA:939:G:H5''	7:QG:102:ARG:NH2	2.04	0.71
2:QB:75:LYS:O	2:QB:75:LYS:HD3	1.89	0.71
3:QC:16:ARG:HB2	3:QC:16:ARG:NH1	2.04	0.71
7:QG:78:ARG:HH12	7:QG:80:VAL:CG2	2.04	0.71
18:QR:56:THR:HB	18:QR:58:LEU:HD12	1.71	0.71
25:RA:135:G:H1	25:RA:144:C:H42	1.36	0.71
25:RA:323:G:O2'	25:RA:1205:U:N3	2.23	0.71
25:RA:2443:C:H2'	25:RA:2444:G:H8	1.54	0.71
28:RE:14:ILE:HD11	39:RT:14:TYR:OH	1.90	0.71
35:RP:83:VAL:CG1	35:RP:112:LEU:HD21	2.21	0.71
43:RX:12:VAL:HG12	43:RX:27:THR:O	1.91	0.71
54:R8:58:ILE:HD13	54:R8:61:LEU:HD11	1.72	0.71
28:YE:93:VAL:H	28:YE:95:ILE:HD12	1.54	0.71
37:YR:1:MET:HG3	37:YR:3:HIS:CE1	2.26	0.71
39:YT:23:ARG:HB2	39:YT:24:PRO:HD2	1.71	0.71
1:QA:377:G:OP1	16:QP:5:ARG:NH1	2.24	0.71
5:QE:78:HIS:CB	8:QH:104:ARG:O	2.39	0.71
7:QG:8:GLU:CD	7:QG:8:GLU:H	1.97	0.71
10:QJ:49:VAL:O	10:QJ:60:ARG:HB3	1.90	0.71
25:RA:247:G:O6	54:R8:12:LYS:NZ	2.15	0.71
25:RA:252:G:OP2	35:RP:50:ARG:NH1	2.24	0.71
25:RA:2114:A:N6	25:RA:2119:A:N7	2.39	0.71
25:RA:2327:A:H2'	25:RA:2328:A:C8	2.25	0.71
27:RD:263:ARG:HB2	27:RD:263:ARG:NH1	2.05	0.71
28:RE:174:ASP:CG	28:RE:175:VAL:H	1.98	0.71
45:RZ:108:PRO:HA	45:RZ:142:SER:HA	1.70	0.71
50:R4:29:PRO:O	50:R4:30:GLU:HB2	1.89	0.71
1:XA:116:A:H61	1:XA:313:A:H1'	1.56	0.71
3:XC:123:GLN:O	3:XC:128:PHE:HB2	1.91	0.71
4:XD:20:TYR:CE2	4:XD:27:TYR:HE2	2.09	0.71
27:YD:263:ARG:HB2	27:YD:263:ARG:NH1	2.06	0.71
42:YW:6:ILE:HG12	42:YW:104:THR:HG23	1.73	0.71
1:QA:191(F):U:O2	20:QT:105:SER:HB2	1.91	0.71
1:QA:1129:C:H4'	1:QA:1130:A:H5'	1.72	0.71
4:QD:190:ASP:HB3	4:QD:193:ASP:OD1	1.91	0.71
8:QH:41:ARG:HH11	8:QH:41:ARG:CB	2.03	0.71
8:QH:84:ARG:HH12	8:QH:86:ILE:CD1	2.02	0.71
29:RF:178:PRO:HB2	29:RF:201:VAL:HG11	1.73	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:185:ASP:OD1	29:RF:188:ARG:NH1	2.24	0.71
52:R6:25:LYS:HD2	54:R8:34:TRP:HZ2	1.56	0.71
52:R6:36:LEU:HD13	52:R6:50:ARG:NH1	2.05	0.71
1:XA:328:C:H4'	1:XA:329:A:H5'	1.73	0.71
2:XB:126:GLU:CG	2:XB:129:GLU:HG3	2.20	0.71
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.71	0.71
2:XB:172:ILE:H	2:XB:172:ILE:HD12	1.56	0.71
15:XO:87:ILE:HG22	15:XO:88:ARG:N	2.00	0.71
25:YA:188:G:N2	25:YA:208:C:N3	2.35	0.71
25:YA:704:G:H2'	25:YA:726:G:H22	1.56	0.71
25:YA:1021:A:H3'	25:YA:1021:A:C8	2.26	0.71
27:YD:244:ARG:HB2	27:YD:245:PRO:HD2	1.71	0.71
35:YP:49:ARG:HD2	54:Y8:58:ILE:CG2	2.20	0.71
45:YZ:97:GLU:HB3	45:YZ:125:LEU:HD11	1.71	0.71
48:Y2:7:ARG:HG3	48:Y2:7:ARG:HH11	1.55	0.71
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HD2	1.73	0.71
1:QA:533:A:O2'	1:QA:534:U:H5''	1.91	0.71
1:QA:1446:A:C2	39:RT:118:ARG:HD2	2.26	0.71
1:QA:1502:A:H5'	1:QA:1504:G:N7	2.06	0.71
2:QB:8:LYS:HD3	2:QB:8:LYS:N	2.03	0.71
2:QB:126:GLU:CG	2:QB:129:GLU:HG3	2.20	0.71
25:RA:270(T):G:O5'	47:R1:97:LEU:HD22	1.90	0.71
25:RA:995:C:N4	33:RN:2:LYS:HG3	2.06	0.71
25:RA:2502:G:H5''	25:RA:2503:A:H5''	1.73	0.71
38:RS:106:ARG:CA	38:RS:110:LEU:HD11	2.20	0.71
10:XJ:81:THR:C	10:XJ:83:GLU:H	1.99	0.71
11:XK:48:ILE:HD12	11:XK:63:LEU:HB3	1.71	0.71
15:XO:71:GLN:HB2	15:XO:78:TYR:CD1	2.24	0.71
20:XT:57:ARG:HD3	20:XT:102:GLY:O	1.90	0.71
28:YE:174:ASP:CG	28:YE:175:VAL:H	1.98	0.71
47:Y1:81:LYS:HE2	47:Y1:81:LYS:CA	2.13	0.71
2:QB:214:ILE:HA	2:QB:217:ARG:HH21	1.55	0.70
11:QK:124:LYS:HD2	11:QK:125:PHE:CE1	2.25	0.70
13:QM:121:LYS:HE2	13:QM:121:LYS:CA	2.21	0.70
25:RA:443:A:C5	29:RF:45:ARG:HD2	2.26	0.70
25:RA:1266:G:C5	42:RW:15:ARG:NH1	2.59	0.70
25:RA:2553:G:N2	56:Z6:76:PPU:H2	2.06	0.70
31:RH:132:ARG:HH11	31:RH:132:ARG:CB	1.97	0.70
39:RT:11:GLU:CD	39:RT:11:GLU:N	2.47	0.70
54:R8:29:LYS:HD3	54:R8:44:LYS:HB2	1.71	0.70
1:XA:1507:A:N6	1:XA:1528:U:O4	2.14	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:15:ALA:HA	9:XI:64:THR:O	1.91	0.70
11:XK:124:LYS:HD2	11:XK:125:PHE:CE1	2.25	0.70
13:XM:65:LYS:HZ3	50:Y4:52:THR:HG21	1.56	0.70
15:XO:65:ARG:HB2	15:XO:65:ARG:HH11	1.56	0.70
25:YA:1291:C:H2'	25:YA:1292:U:C6	2.25	0.70
31:YH:80:SER:O	31:YH:81:GLU:HB2	1.89	0.70
52:Y6:29:ASN:OD1	52:Y6:30:THR:HG22	1.91	0.70
1:QA:6:G:N2	5:QE:98:THR:OG1	2.24	0.70
1:QA:999:U:H2'	1:QA:1000:A:C8	2.26	0.70
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.57	0.70
5:QE:78:HIS:HE1	5:QE:143:ARG:H	1.38	0.70
20:QT:63:ILE:HG22	20:QT:77:ALA:HB1	1.73	0.70
26:RB:82:G:H2'	26:RB:83:G:H8	1.55	0.70
29:RF:66:PRO:O	29:RF:67:GLN:HB3	1.89	0.70
29:RF:101:LEU:O	29:RF:106:ARG:NH1	2.23	0.70
29:RF:164:ARG:HG3	29:RF:175:THR:OG1	1.91	0.70
41:RV:51:VAL:HG12	41:RV:52:VAL:N	2.06	0.70
1:XA:1128:C:H42	1:XA:1144:G:H1	1.37	0.70
2:XB:187:LEU:HD11	2:XB:204:ASN:O	1.90	0.70
6:XF:72:VAL:CG2	6:XF:90:VAL:HG11	2.20	0.70
13:XM:4:ILE:N	13:XM:9:ILE:HG21	2.06	0.70
20:XT:23:ARG:CA	20:XT:26:ASN:HD21	2.04	0.70
25:YA:18:C:N4	25:YA:522:G:O6	2.16	0.70
25:YA:2114:A:N6	25:YA:2119:A:N7	2.39	0.70
31:YH:59:ARG:HH11	31:YH:59:ARG:HG3	1.56	0.70
31:YH:89:ILE:CD1	31:YH:129:THR:HB	2.20	0.70
34:YO:113:LYS:HG2	34:YO:117:LEU:HD11	1.71	0.70
9:QI:15:ALA:HA	9:QI:64:THR:O	1.91	0.70
25:RA:2667:C:H1'	31:RH:109:PHE:CD2	2.24	0.70
31:RH:154:PRO:O	31:RH:155:SER:HB2	1.91	0.70
52:R6:29:ASN:OD1	52:R6:30:THR:HG22	1.91	0.70
1:XA:782:A:OP1	57:XA:1610:MG:MG	1.34	0.70
1:XA:1252:A:H2'	1:XA:1253:G:O4'	1.91	0.70
2:XB:101:MET:HA	2:XB:108:ILE:CG1	2.14	0.70
17:XQ:4:LYS:CE	17:XQ:6:LEU:HD21	2.20	0.70
25:YA:24:G:O2'	42:YW:78:GLU:O	2.09	0.70
25:YA:592:G:H1	25:YA:665:C:N4	1.90	0.70
25:YA:1006:C:H5'	33:YN:28:THR:HG23	1.72	0.70
25:YA:1372:U:H2'	25:YA:1373:A:H5'	1.73	0.70
25:YA:2422:A:N7	25:YA:2424:C:N4	2.38	0.70
28:YE:14:ILE:HG12	28:YE:15:PHE:N	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:28:ALA:HB3	28:YE:93:VAL:HG22	1.72	0.70
29:YF:66:PRO:O	29:YF:67:GLN:HB3	1.90	0.70
1:QA:81:G:N2	1:QA:88:C:O2	2.19	0.70
1:QA:1076:C:O2	1:QA:1082:G:N2	2.25	0.70
25:RA:507:A:H5''	25:RA:508:G:H5'	1.72	0.70
27:RD:43:ARG:HB3	27:RD:54:ARG:HB2	1.73	0.70
35:RP:58:THR:O	35:RP:61:ARG:CZ	2.38	0.70
36:RQ:32:TYR:CD1	36:RQ:133:ARG:HA	2.27	0.70
48:R2:7:ARG:HH11	48:R2:7:ARG:HG3	1.55	0.70
1:XA:842:C:O2'	1:XA:848:C:N4	2.24	0.70
4:XD:190:ASP:HB3	4:XD:193:ASP:OD1	1.91	0.70
5:XE:82:VAL:HG12	5:XE:83:GLU:N	2.06	0.70
10:XJ:6:ILE:HG13	10:XJ:72:VAL:O	1.91	0.70
12:XL:24:VAL:HG12	12:XL:24:VAL:O	1.90	0.70
13:XM:121:LYS:HE2	13:XM:121:LYS:HA	1.71	0.70
25:YA:498:G:N3	44:YY:47:LYS:NZ	2.39	0.70
25:YA:2361:A:O5'	54:Y8:27:THR:OG1	2.08	0.70
35:YP:20:GLY:HA2	35:YP:27:HIS:O	1.92	0.70
41:YV:22:VAL:HG12	41:YV:23:GLU:N	2.05	0.70
10:QJ:6:ILE:HG13	10:QJ:72:VAL:O	1.91	0.70
13:QM:77:ASN:ND2	50:R4:71:ARG:NH1	2.39	0.70
38:RS:54:LEU:HD13	38:RS:54:LEU:O	1.91	0.70
47:R1:82:LEU:HD13	47:R1:83:GLU:N	2.05	0.70
3:XC:152:ILE:HB	3:XC:199:LYS:HB2	1.73	0.70
5:XE:11:ILE:HD11	5:XE:31:LEU:CD1	2.17	0.70
10:XJ:49:VAL:O	10:XJ:60:ARG:HB3	1.90	0.70
25:YA:330:A:O2'	25:YA:331:A:H8	1.73	0.70
25:YA:863:A:H2'	25:YA:864:G:H8	1.54	0.70
25:YA:2123:G:H1	25:YA:2175:C:H42	1.39	0.70
26:YB:8:U:O2	26:YB:112:G:N2	2.24	0.70
29:YF:178:PRO:HB2	29:YF:201:VAL:HG11	1.73	0.70
29:YF:178:PRO:HG2	29:YF:179:GLU:OE2	1.90	0.70
31:YH:103:LEU:HD12	31:YH:131:VAL:HG21	1.73	0.70
38:YS:42:ASP:O	38:YS:43:GLU:HB2	1.90	0.70
25:RA:958:U:O2	26:RB:89(A):A:H4'	1.92	0.70
29:RF:65:TRP:HZ3	29:RF:73:ALA:O	1.74	0.70
29:RF:178:PRO:HG2	29:RF:179:GLU:OE2	1.90	0.70
38:RS:83:LYS:HZ1	38:RS:109:GLY:HA2	1.56	0.70
44:RY:45:VAL:HG12	44:RY:60:PHE:CD1	2.27	0.70
44:RY:57:GLN:HE21	44:RY:58:GLY:H	1.37	0.70
51:R5:40:LYS:HE2	51:R5:47:PRO:HD2	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1071:C:H5''	5:XE:49:PRO:HG2	1.73	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
29:YF:101:LEU:O	29:YF:106:ARG:NH1	2.23	0.70
31:YH:152:ARG:O	31:YH:153:LYS:CB	2.39	0.70
40:YU:65:ILE:HG12	40:YU:96:ALA:HB1	1.73	0.70
47:Y1:7:ILE:CD1	47:Y1:70:VAL:HG22	2.21	0.70
1:QA:618:C:N3	1:QA:622:A:N6	2.40	0.70
1:QA:1071:C:H2'	1:QA:1072:G:H8	1.56	0.70
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.06	0.70
15:QO:65:ARG:HB2	15:QO:65:ARG:HH11	1.56	0.70
25:RA:438:G:H2'	25:RA:439:G:C8	2.26	0.70
25:RA:674:G:C1'	29:RF:74:ARG:HD3	2.21	0.70
25:RA:2582:G:N2	25:RA:2583:G:H1'	2.06	0.70
25:RA:2593:U:H2'	25:RA:2594:C:C6	2.27	0.70
31:RH:128:PRO:HD2	31:RH:129:THR:H	1.55	0.70
33:RN:89:LYS:O	33:RN:93:THR:HG22	1.90	0.70
47:R1:7:ILE:CD1	47:R1:70:VAL:HG22	2.21	0.70
1:XA:15:G:H4'	5:XE:24:ARG:NH1	2.05	0.70
25:YA:1094:U:O2'	25:YA:1096:A:OP1	2.10	0.70
25:YA:2422:A:OP2	52:Y6:6:ARG:NH1	2.25	0.70
25:YA:2712:U:O2'	25:YA:2712(A):A:O5'	2.10	0.70
27:YD:43:ARG:HB3	27:YD:54:ARG:HB2	1.73	0.70
31:YH:154:PRO:HG2	31:YH:162:ILE:O	1.92	0.70
34:YO:63:VAL:HG13	34:YO:84:ALA:HA	1.72	0.70
36:YQ:32:TYR:CD1	36:YQ:133:ARG:HA	2.27	0.70
39:YT:41:ARG:NH2	39:YT:43:GLN:HB2	2.06	0.70
42:YW:29:LEU:HD21	42:YW:33:ARG:CZ	2.22	0.70
52:Y6:25:LYS:HD2	54:Y8:34:TRP:HZ2	1.56	0.70
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.27	0.70
1:QA:1471:G:H2'	1:QA:1472:U:H6	1.56	0.70
3:QC:16:ARG:HD2	3:QC:54:ARG:NH2	2.03	0.70
25:RA:372:G:H5''	47:R1:66:HIS:CD2	2.26	0.70
25:RA:2053:G:O6	25:RA:2616:C:N4	2.20	0.70
31:RH:154:PRO:HG2	31:RH:162:ILE:O	1.92	0.70
42:RW:29:LEU:HD21	42:RW:33:ARG:CZ	2.22	0.70
1:XA:1321:C:H5''	1:XA:1322:C:H5''	1.74	0.70
2:XB:162:ILE:HD11	2:XB:184:VAL:HG13	1.74	0.70
25:YA:530:G:O2'	25:YA:532:A:N7	2.24	0.70
28:YE:103:ASP:OD1	28:YE:201:THR:HA	1.92	0.70
30:YG:131:TYR:O	30:YG:159:VAL:HG13	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:CG	31:YH:165:ALA:H	1.94	0.70
40:YU:66:ASN:HB2	40:YU:76:TYR:HB2	1.73	0.70
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CD	2.21	0.70
1:QA:1106:G:H5''	3:QC:172:ARG:HG2	1.72	0.70
5:QE:76:ILE:HB	5:QE:77:PRO:HD2	1.72	0.70
13:QM:4:ILE:N	13:QM:9:ILE:HG21	2.06	0.70
16:QP:14:ASN:N	16:QP:15:PRO:HD3	2.07	0.70
17:QQ:52:LYS:HD2	17:QQ:55:ASP:OD1	1.91	0.70
27:RD:65:ILE:HD13	27:RD:65:ILE:O	1.91	0.70
30:RG:131:TYR:O	30:RG:159:VAL:HG13	1.92	0.70
31:RH:152:ARG:O	31:RH:153:LYS:CB	2.40	0.70
36:RQ:80:GLU:OE1	46:R0:7:LEU:HB3	1.92	0.70
38:RS:106:ARG:N	38:RS:110:LEU:HD21	2.07	0.70
1:XA:1014:A:H4'	19:XS:14:HIS:CD2	2.27	0.70
19:XS:51:VAL:O	19:XS:57:HIS:HA	1.92	0.70
25:YA:301:G:H1	25:YA:316:C:H42	1.40	0.70
25:YA:1153:C:OP1	40:YU:76:TYR:OH	2.09	0.70
27:YD:65:ILE:HD13	27:YD:65:ILE:O	1.91	0.70
29:YF:164:ARG:HG3	29:YF:175:THR:OG1	1.92	0.70
35:YP:114:ILE:HD13	35:YP:125:VAL:HG21	1.72	0.70
36:YQ:43:THR:OG1	36:YQ:46:GLN:HB2	1.91	0.70
52:Y6:7:ILE:C	52:Y6:9:LEU:H	1.98	0.70
1:QA:559:A:H4'	1:QA:560:U:H3'	1.72	0.70
2:QB:162:ILE:O	2:QB:162:ILE:HG13	1.92	0.70
8:QH:87:SER:HB2	8:QH:93:VAL:HB	1.74	0.70
19:QS:51:VAL:O	19:QS:57:HIS:HA	1.92	0.70
26:RB:7:G:H3'	26:RB:8:U:H5''	1.73	0.70
27:RD:65:ILE:HD11	27:RD:67:PHE:CD1	2.27	0.70
36:RQ:59:ARG:C	36:RQ:60:ARG:HG3	2.17	0.70
48:R2:47:ASN:O	48:R2:49:LYS:N	2.25	0.70
1:XA:407:G:H1	1:XA:435:C:H42	1.40	0.70
25:YA:2701:C:H3'	25:YA:2702:U:C5'	2.17	0.70
38:YS:83:LYS:HZ2	38:YS:109:GLY:HA2	1.56	0.70
41:YV:41:GLY:HA3	41:YV:46:VAL:HG11	1.74	0.70
1:QA:409:G:H1	1:QA:433:C:H42	1.38	0.69
1:QA:1095:U:P	1:QA:1108:G:H1	2.15	0.69
3:QC:152:ILE:HB	3:QC:199:LYS:HB2	1.73	0.69
4:QD:30:LYS:HD3	4:QD:30:LYS:H	1.57	0.69
9:QI:113:LYS:HD2	9:QI:113:LYS:N	2.07	0.69
25:RA:628:G:H2'	25:RA:629:G:H8	1.56	0.69
30:RG:56:ALA:HB2	30:RG:153:ARG:HE	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:150:ALA:C	31:RH:152:ARG:N	2.44	0.69
40:RU:65:ILE:HG12	40:RU:96:ALA:HB1	1.73	0.69
43:RX:57:LEU:HD11	43:RX:78:LYS:HD2	1.73	0.69
47:R1:7:ILE:HD12	47:R1:70:VAL:HG22	1.73	0.69
1:XA:1186:G:O3'	9:XI:113:LYS:NZ	2.23	0.69
2:XB:95:GLN:HE21	2:XB:147:LYS:HE2	1.56	0.69
17:XQ:52:LYS:HD2	17:XQ:55:ASP:OD1	1.91	0.69
19:XS:5:LEU:HD21	50:Y4:66:SER:HB2	1.74	0.69
35:YP:19:VAL:HG22	35:YP:20:GLY:N	1.97	0.69
35:YP:83:VAL:CG1	35:YP:112:LEU:HD21	2.21	0.69
38:YS:54:LEU:HD13	38:YS:54:LEU:O	1.91	0.69
47:Y1:82:LEU:HD12	47:Y1:83:GLU:CA	2.21	0.69
2:QB:95:GLN:HE21	2:QB:147:LYS:HE2	1.56	0.69
13:QM:65:LYS:NZ	50:R4:52:THR:HG21	2.07	0.69
25:RA:32:C:N4	25:RA:447:A:OP2	2.25	0.69
25:RA:1341:U:H2'	25:RA:1397:U:O2	1.92	0.69
44:RY:2:ARG:HH11	44:RY:2:ARG:HG2	1.57	0.69
47:R1:82:LEU:HD12	47:R1:83:GLU:CA	2.21	0.69
47:R1:82:LEU:CD1	47:R1:83:GLU:C	2.64	0.69
1:XA:1106:G:H5''	3:XC:172:ARG:HG2	1.74	0.69
10:XJ:38:ILE:O	10:XJ:38:ILE:HG13	1.92	0.69
10:XJ:54:PHE:C	10:XJ:55:LYS:HG3	2.17	0.69
20:XT:50:GLU:HG3	20:XT:51:GLU:H	1.54	0.69
25:YA:2037:G:H2'	25:YA:2038:G:C8	2.27	0.69
26:YB:38:C:O2	26:YB:48:A:H1'	1.92	0.69
29:YF:185:ASP:HA	29:YF:188:ARG:CD	2.20	0.69
41:YV:51:VAL:HG12	41:YV:52:VAL:N	2.06	0.69
43:YX:57:LEU:HD11	43:YX:78:LYS:HD2	1.73	0.69
47:Y1:7:ILE:HD12	47:Y1:70:VAL:HG22	1.73	0.69
47:Y1:53:VAL:HG22	47:Y1:74:VAL:HG13	1.74	0.69
3:QC:123:GLN:O	3:QC:128:PHE:HB2	1.91	0.69
10:QJ:38:ILE:O	10:QJ:38:ILE:HG13	1.91	0.69
25:RA:2245:U:H5'	25:RA:2246:G:H5'	1.72	0.69
25:RA:2531:A:N3	25:RA:2658:C:O2'	2.21	0.69
28:RE:103:ASP:OD1	28:RE:201:THR:HA	1.92	0.69
31:RH:59:ARG:HH11	31:RH:59:ARG:HG3	1.56	0.69
31:RH:103:LEU:HD12	31:RH:131:VAL:HG21	1.73	0.69
33:RN:120:LEU:HD11	33:RN:122:VAL:HG23	1.74	0.69
45:RZ:60:GLU:HA	45:RZ:66:SER:HA	1.73	0.69
8:XH:87:SER:HB2	8:XH:93:VAL:HB	1.74	0.69
12:XL:25:PRO:C	12:XL:27:LEU:H	1.98	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:6:LEU:O	14:YN:6:LEU:HD23	1.92	0.69
25:YA:1429:G:H2'	25:YA:1430:C:H6	1.57	0.69
35:YP:50:ARG:HB3	35:YP:50:ARG:NH2	1.98	0.69
1:QA:299:G:H2'	1:QA:300:A:C8	2.27	0.69
1:QA:1114:C:H1'	14:QN:60:SER:HB2	1.73	0.69
4:QD:120:LEU:HD22	4:QD:125:HIS:HB2	1.73	0.69
6:QF:3:ARG:HB3	6:QF:93:SER:HB2	1.74	0.69
27:RD:76:PRO:O	27:RD:98:VAL:HG23	1.91	0.69
31:RH:4:ILE:HG13	31:RH:6:ARG:NE	2.08	0.69
35:RP:20:GLY:HA2	35:RP:27:HIS:O	1.92	0.69
50:R4:37:SER:C	50:R4:39:CYS:H	1.98	0.69
1:XA:1129:C:H4'	1:XA:1130:A:H5'	1.75	0.69
2:XB:162:ILE:O	2:XB:162:ILE:HG13	1.92	0.69
3:XC:105:GLU:HG2	3:XC:106:VAL:H	1.58	0.69
6:XF:67:MET:HB2	6:XF:68:PRO:HD2	1.75	0.69
8:XH:84:ARG:HH12	8:XH:86:ILE:CD1	2.02	0.69
27:YD:65:ILE:HD11	27:YD:67:PHE:CD1	2.27	0.69
34:YO:8:LEU:HD22	34:YO:8:LEU:N	2.07	0.69
35:YP:62:LEU:HD22	35:YP:62:LEU:H	1.53	0.69
41:YV:66:ARG:HH12	41:YV:88:ARG:NH1	1.90	0.69
45:YZ:52:SER:OG	45:YZ:52:SER:O	2.05	0.69
47:Y1:82:LEU:CD1	47:Y1:83:GLU:C	2.64	0.69
48:Y2:47:ASN:O	48:Y2:49:LYS:N	2.25	0.69
1:QA:1002:G:H2'	1:QA:1003:G:C8	2.27	0.69
3:QC:147:LYS:O	3:QC:203:PHE:HB3	1.92	0.69
4:QD:188:LEU:HD23	4:QD:189:PRO:HD2	1.75	0.69
12:QL:25:PRO:C	12:QL:27:LEU:H	1.98	0.69
25:RA:1059:G:O6	25:RA:1079:C:N4	2.26	0.69
25:RA:1590:U:H2'	25:RA:1591:G:H8	1.57	0.69
26:RB:33:G:O5'	30:RG:2:PRO:HG3	1.92	0.69
35:RP:126:VAL:CG1	35:RP:147:LEU:HD21	2.16	0.69
36:RQ:43:THR:OG1	36:RQ:46:GLN:HB2	1.91	0.69
51:R5:4:HIS:HB3	51:R5:5:PRO:HD3	1.75	0.69
1:XA:266:G:O2'	1:XA:267:C:OP2	2.11	0.69
1:XA:1346:A:C4	7:XG:10:ARG:NH1	2.60	0.69
25:YA:304:G:H2'	25:YA:305:U:H6	1.56	0.69
27:YD:89:SER:HB2	27:YD:159:ALA:HB2	1.75	0.69
29:YF:65:TRP:HZ3	29:YF:73:ALA:O	1.74	0.69
32:YI:130:TYR:HB3	32:YI:136:VAL:HG13	1.73	0.69
33:YN:120:LEU:HD11	33:YN:122:VAL:HG23	1.74	0.69
35:YP:64:LYS:HB2	54:Y8:25:MET:CG	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:86:LEU:HD12	42:YW:87:PRO:CD	2.23	0.69
8:QH:6:ILE:HD12	8:QH:6:ILE:N	2.08	0.69
21:QU:6:ARG:HE	21:QU:15:ARG:NE	1.91	0.69
25:RA:71:A:H4'	25:RA:72:U:H5''	1.75	0.69
25:RA:83:G:N2	25:RA:103:A:OP2	2.25	0.69
25:RA:1061:U:H5'	25:RA:1070:A:H1'	1.75	0.69
25:RA:1153:C:OP1	40:RU:76:TYR:OH	2.11	0.69
27:RD:89:SER:HB2	27:RD:159:ALA:HB2	1.75	0.69
28:RE:7:VAL:HG23	28:RE:8:LYS:N	2.07	0.69
28:RE:65:GLY:HA2	28:RE:70:ALA:CB	2.23	0.69
29:RF:103:LYS:HA	29:RF:106:ARG:CG	2.21	0.69
33:RN:46:VAL:O	33:RN:47:ALA:HB3	1.92	0.69
47:R1:4:VAL:HG23	47:R1:10:LYS:O	1.93	0.69
47:R1:74:VAL:HG12	47:R1:74:VAL:O	1.93	0.69
47:R1:81:LYS:HE2	47:R1:81:LYS:CA	2.13	0.69
1:XA:1059:C:O2	10:XJ:53:PRO:HG3	1.92	0.69
4:XD:20:TYR:CE2	4:XD:27:TYR:CE2	2.80	0.69
10:XJ:48:THR:HA	10:XJ:62:HIS:HB3	1.75	0.69
16:XP:14:ASN:N	16:XP:15:PRO:HD3	2.07	0.69
25:YA:1270:C:H5''	25:YA:1271:G:H5'	1.74	0.69
25:YA:2498:C:O2'	25:YA:2499:C:H5'	1.92	0.69
25:YA:2757:A:OP1	55:Y9:19:ARG:HA	1.93	0.69
26:YB:70:C:H2'	26:YB:71:C:C6	2.27	0.69
27:YD:76:PRO:O	27:YD:98:VAL:HG23	1.91	0.69
35:YP:61:ARG:H	35:YP:61:ARG:HD2	1.58	0.69
1:QA:1069:C:C2'	5:QE:25:ARG:HH12	2.06	0.69
2:QB:172:ILE:H	2:QB:172:ILE:HD12	1.56	0.69
2:QB:212:GLN:NE2	2:QB:216:SER:HB2	2.08	0.69
8:QH:31:PHE:CE2	8:QH:35:ILE:HD11	2.27	0.69
17:QQ:4:LYS:CE	17:QQ:6:LEU:HD21	2.21	0.69
25:RA:595:C:H42	25:RA:662:G:H1	1.40	0.69
25:RA:1799:G:H5'	25:RA:1819:A:H61	1.58	0.69
27:RD:35:LYS:HB3	27:RD:63:ARG:HA	1.75	0.69
34:RO:63:VAL:HG13	34:RO:84:ALA:HA	1.72	0.69
35:RP:39:LYS:CA	35:RP:45:LEU:HD11	2.23	0.69
41:RV:41:GLY:HA3	41:RV:46:VAL:HG11	1.74	0.69
14:XN:23:ARG:CZ	14:XN:30:ALA:HB2	2.22	0.69
16:XP:1:MET:O	16:XP:24:ALA:HB2	1.92	0.69
25:YA:822:U:H2'	25:YA:823:G:H8	1.58	0.69
25:YA:2469:A:H2	25:YA:2481:G:H21	1.40	0.69
26:YB:82:G:H2'	26:YB:83:G:C8	2.27	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:28:VAL:HG23	30:YG:29:TRP:CD1	2.28	0.69
33:YN:68:GLU:HG2	33:YN:88:GLU:OE1	1.92	0.69
35:YP:29:LYS:HD2	35:YP:30:THR:HG22	1.72	0.69
47:Y1:64:ALA:HA	47:Y1:67:ILE:HG13	1.75	0.69
48:Y2:40:SER:C	48:Y2:42:GLY:H	2.01	0.69
51:Y5:40:LYS:HG2	51:Y5:47:PRO:HD2	1.75	0.69
52:Y6:14:THR:HG21	52:Y6:19:ARG:HH21	1.58	0.69
1:QA:636:U:H2'	1:QA:637:G:C8	2.28	0.69
1:QA:1231:G:O3'	9:QI:126:SER:OG	2.10	0.69
3:QC:105:GLU:HG2	3:QC:106:VAL:H	1.58	0.69
4:QD:79:PHE:C	4:QD:79:PHE:HD2	2.00	0.69
4:QD:166:LYS:HD2	27:YD:134:ARG:NH1	2.07	0.69
8:QH:49:GLU:HG3	8:QH:51:VAL:HG13	1.74	0.69
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
25:RA:249:C:O2	54:R8:12:LYS:HE3	1.91	0.69
25:RA:813:U:H2'	25:RA:814:C:C6	2.28	0.69
25:RA:993:G:OP1	40:RU:50:ARG:NH2	2.18	0.69
25:RA:1041:C:H2'	25:RA:1042:G:H8	1.58	0.69
25:RA:1296:G:OP1	25:RA:2709:G:O2'	2.10	0.69
25:RA:1614:A:H62	42:RW:93:ALA:HB2	1.57	0.69
25:RA:2626:C:H42	25:RA:2777:G:H1	1.40	0.69
25:RA:2630:G:N3	25:RA:2894:G:N2	2.41	0.69
26:RB:13:A:H2'	26:RB:70:C:O2'	1.92	0.69
30:RG:171:ALA:O	30:RG:175:LEU:HG	1.93	0.69
33:RN:7:LYS:HD3	33:RN:9:VAL:HA	1.75	0.69
33:RN:68:GLU:HG2	33:RN:88:GLU:OE1	1.92	0.69
35:RP:64:LYS:HB2	54:R8:25:MET:CG	2.22	0.69
39:RT:41:ARG:NH2	39:RT:43:GLN:HB2	2.06	0.69
40:RU:90:VAL:O	40:RU:92:ARG:N	2.26	0.69
41:RV:66:ARG:HH12	41:RV:88:ARG:NH1	1.90	0.69
51:R5:40:LYS:HE2	51:R5:47:PRO:CD	2.21	0.69
51:R5:40:LYS:HG2	51:R5:47:PRO:HD2	1.75	0.69
52:R6:28:ARG:HB3	52:R6:30:THR:H	1.56	0.69
5:XE:78:HIS:HE1	5:XE:143:ARG:H	1.38	0.69
9:XI:113:LYS:HD2	9:XI:113:LYS:N	2.07	0.69
14:XN:44:LEU:CD1	14:XN:53:LEU:HD13	2.23	0.69
25:YA:1021:A:H3'	25:YA:1021:A:H8	1.57	0.69
25:YA:1899:G:O2'	25:YA:1900:A:OP2	2.08	0.69
27:YD:35:LYS:HB3	27:YD:63:ARG:HA	1.75	0.69
27:YD:122:ASP:CG	27:YD:123:ALA:H	2.00	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:7:VAL:HG23	28:YE:8:LYS:N	2.06	0.69
30:YG:16:ARG:HH21	30:YG:31:VAL:CG1	2.05	0.69
31:YH:89:ILE:HG12	31:YH:89:ILE:O	1.93	0.69
31:YH:154:PRO:O	31:YH:155:SER:HB2	1.91	0.69
33:YN:7:LYS:HD3	33:YN:9:VAL:HA	1.75	0.69
40:YU:65:ILE:HD11	40:YU:93:LYS:HA	1.74	0.69
44:YY:45:VAL:HG12	44:YY:60:PHE:CD1	2.27	0.69
1:QA:991:U:O4	1:QA:1212:U:O2'	2.09	0.69
2:QB:101:MET:HA	2:QB:108:ILE:CG1	2.14	0.69
6:QF:100:ASN:ND2	18:QR:23:LYS:HE3	2.08	0.69
8:QH:1:MET:HE2	8:QH:1:MET:H3	1.57	0.69
8:QH:112:LEU:HA	8:QH:134:ILE:HG12	1.75	0.69
25:RA:49:A:N7	25:RA:120:U:H5	1.91	0.69
25:RA:1043:C:N3	25:RA:1112:G:N2	2.41	0.69
25:RA:1930:G:O2'	25:RA:1931:U:O5'	2.09	0.69
25:RA:2023:G:H5'	25:RA:2617:C:H4'	1.75	0.69
25:RA:2277:G:H5'	36:RQ:85:LYS:HG3	1.75	0.69
25:RA:2291:U:H2'	25:RA:2292:C:C6	2.28	0.69
30:RG:28:VAL:HG23	30:RG:29:TRP:CD1	2.28	0.69
38:RS:52:SER:O	38:RS:56:LEU:HD22	1.93	0.69
44:RY:29:GLU:HB3	44:RY:38:ILE:HG12	1.75	0.69
2:XB:212:GLN:NE2	2:XB:216:SER:HB2	2.08	0.69
8:XH:31:PHE:CE2	8:XH:35:ILE:HD11	2.27	0.69
27:YD:17:THR:HG22	27:YD:205:VAL:N	2.08	0.69
30:YG:56:ALA:HB2	30:YG:153:ARG:HE	1.57	0.69
38:YS:106:ARG:N	38:YS:110:LEU:HD21	2.07	0.69
43:YX:12:VAL:HG11	43:YX:27:THR:OG1	1.93	0.69
1:QA:686:U:H1'	11:QK:42:TRP:HE1	1.58	0.69
1:QA:1080:A:H5''	5:QE:16:THR:HG21	1.74	0.69
1:QA:1287:A:H2'	1:QA:1288:A:C8	2.28	0.69
12:QL:24:VAL:HG12	12:QL:24:VAL:O	1.91	0.69
25:RA:141:A:H8	25:RA:1595:G:H21	1.41	0.69
25:RA:1140:C:H5''	33:RN:66:LYS:HZ1	1.58	0.69
25:RA:2392:A:C8	35:RP:60:MET:HG3	2.27	0.69
27:RD:122:ASP:CG	27:RD:123:ALA:H	2.00	0.69
30:RG:16:ARG:HH21	30:RG:31:VAL:CG1	2.06	0.69
35:RP:61:ARG:HD2	35:RP:61:ARG:H	1.58	0.69
41:RV:22:VAL:HG12	41:RV:23:GLU:N	2.06	0.69
47:R1:53:VAL:HG22	47:R1:74:VAL:HG13	1.74	0.69
48:R2:23:LYS:O	48:R2:27:GLU:OE1	2.11	0.69
52:R6:14:THR:HG21	52:R6:19:ARG:HH21	1.58	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:376:G:OP1	16:XP:5:ARG:HB2	1.93	0.69
1:XA:1318:A:H4'	19:XS:11:VAL:HG11	1.74	0.69
4:XD:13:ARG:HA	4:XD:33:MET:HE3	1.74	0.69
6:XF:100:ASN:ND2	18:XR:23:LYS:HE3	2.08	0.69
19:XS:31:ILE:HG23	19:XS:49:ILE:HA	1.75	0.69
20:XT:64:ASP:HA	20:XT:67:ALA:HB3	1.74	0.69
25:YA:571:A:O2'	41:YV:78:LYS:NZ	2.26	0.69
27:YD:17:THR:CG2	27:YD:204:ILE:HA	2.23	0.69
28:YE:65:GLY:HA2	28:YE:70:ALA:CB	2.23	0.69
37:YR:29:LEU:HD23	37:YR:79:LEU:HD12	1.75	0.69
38:YS:106:ARG:CA	38:YS:110:LEU:HD11	2.19	0.69
2:QB:162:ILE:HD11	2:QB:184:VAL:HG13	1.74	0.68
3:QC:195:VAL:HG12	3:QC:196:LEU:N	2.07	0.68
9:QI:28:VAL:HG13	9:QI:63:ILE:CG2	2.24	0.68
25:RA:769:G:H5'	25:RA:1379:A:N6	2.08	0.68
25:RA:1754:C:H2'	25:RA:1755:A:C8	2.29	0.68
29:RF:185:ASP:HA	29:RF:188:ARG:CD	2.20	0.68
36:RQ:80:GLU:HG3	36:RQ:81:VAL:H	1.58	0.68
42:RW:6:ILE:HG12	42:RW:104:THR:HG23	1.73	0.68
4:XD:79:PHE:C	4:XD:79:PHE:HD2	1.99	0.68
4:XD:188:LEU:HD23	4:XD:189:PRO:HD2	1.75	0.68
13:XM:117:VAL:HG22	13:XM:118:ALA:H	1.58	0.68
35:YP:62:LEU:HD23	54:Y8:25:MET:HB2	1.74	0.68
47:Y1:82:LEU:HD13	47:Y1:83:GLU:N	2.05	0.68
1:QA:976:G:N2	1:QA:1362(A):C:OP2	2.22	0.68
1:QA:1064:G:O2'	1:QA:1065:U:O5'	2.11	0.68
25:RA:74:A:H4'	25:RA:75:G:O5'	1.94	0.68
52:R6:41:PRO:CG	52:R6:45:LYS:H	2.05	0.68
1:XA:1004:A:O5'	1:XA:1025:U:N3	2.26	0.68
7:XG:155:ARG:HD3	7:XG:155:ARG:N	2.07	0.68
25:YA:1022:G:O2'	25:YA:1023:U:OP2	2.09	0.68
25:YA:2025:C:H2'	25:YA:2026:C:H6	1.59	0.68
44:YY:2:ARG:HH11	44:YY:2:ARG:HG2	1.57	0.68
13:QM:90:LEU:CA	13:QM:93:ARG:HD2	2.23	0.68
20:QT:64:ASP:HA	20:QT:67:ALA:HB3	1.74	0.68
30:RG:112:PRO:CB	50:R4:37:SER:HB2	2.22	0.68
33:RN:131:GLN:CD	33:RN:132:ALA:H	2.01	0.68
34:RO:8:LEU:HD22	34:RO:8:LEU:N	2.08	0.68
40:RU:65:ILE:HD11	40:RU:93:LYS:HA	1.74	0.68
1:XA:1095:U:P	1:XA:1108:G:H1	2.17	0.68
4:XD:96:LEU:HD22	4:XD:96:LEU:N	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:6:ILE:H	8:XH:6:ILE:CD1	2.06	0.68
39:YT:109:GLU:O	39:YT:113:LYS:HB2	1.94	0.68
40:YU:8:VAL:HG23	40:YU:11:ARG:NH2	1.99	0.68
44:YY:29:GLU:HB3	44:YY:38:ILE:HG12	1.74	0.68
44:YY:61:ILE:CG2	44:YY:62:GLU:N	2.56	0.68
52:Y6:41:PRO:CG	52:Y6:45:LYS:H	2.05	0.68
2:QB:24:TRP:H	2:QB:24:TRP:CD1	2.11	0.68
9:QI:46:ALA:HA	9:QI:78:LYS:HB2	1.75	0.68
14:QN:26:ARG:NH1	14:QN:43:CYS:SG	2.67	0.68
20:QT:97:ALA:O	20:QT:99:LEU:N	2.27	0.68
25:RA:279:C:N4	25:RA:361:G:H1	1.89	0.68
25:RA:817:C:O2'	25:RA:839:U:H5''	1.93	0.68
27:RD:17:THR:HG22	27:RD:205:VAL:N	2.08	0.68
27:RD:17:THR:CG2	27:RD:204:ILE:HA	2.23	0.68
33:RN:134:ARG:N	33:RN:135:PRO:HD3	1.97	0.68
35:RP:62:LEU:HD23	54:R8:25:MET:HB2	1.75	0.68
47:R1:83:GLU:HG2	47:R1:84:GLY:N	2.09	0.68
1:XA:561:U:O2'	1:XA:562:C:OP2	2.09	0.68
10:XJ:6:ILE:HG22	10:XJ:98:ILE:CG1	2.16	0.68
11:XK:124:LYS:HB3	11:XK:125:PHE:HD1	1.58	0.68
12:XL:45:PRO:HB3	12:XL:93:LEU:HD23	1.73	0.68
25:YA:1291:C:H2'	25:YA:1292:U:H6	1.58	0.68
33:YN:46:VAL:O	33:YN:47:ALA:HB3	1.92	0.68
33:YN:131:GLN:CD	33:YN:132:ALA:H	2.01	0.68
36:YQ:88:GLY:C	36:YQ:90:VAL:N	2.47	0.68
38:YS:57:LYS:HD3	38:YS:57:LYS:H	1.59	0.68
39:YT:11:GLU:CD	39:YT:11:GLU:N	2.47	0.68
50:Y4:37:SER:C	50:Y4:39:CYS:H	1.99	0.68
2:QB:126:GLU:HG2	2:QB:126:GLU:O	1.92	0.68
2:QB:165:VAL:HG23	2:QB:166:ASP:H	1.57	0.68
7:QG:155:ARG:N	7:QG:155:ARG:HD3	2.07	0.68
10:QJ:48:THR:HA	10:QJ:62:HIS:HB3	1.75	0.68
35:RP:26:GLY:O	35:RP:28:GLY:N	2.27	0.68
38:RS:100:ALA:HA	38:RS:103:GLU:HG2	1.75	0.68
41:RV:18:LEU:O	41:RV:95:LEU:HA	1.94	0.68
42:RW:86:LEU:HD12	42:RW:87:PRO:CD	2.23	0.68
47:R1:64:ALA:HA	47:R1:67:ILE:HG13	1.75	0.68
4:XD:198:VAL:HG12	4:XD:199:ASN:N	2.09	0.68
8:XH:6:ILE:HD12	8:XH:6:ILE:N	2.08	0.68
10:XJ:96:ILE:N	10:XJ:96:ILE:HD13	2.09	0.68
17:XQ:59:ILE:HD13	17:XQ:59:ILE:N	2.08	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:112:PRO:CB	50:Y4:37:SER:HB2	2.22	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NE	2.08	0.68
47:Y1:4:VAL:HG23	47:Y1:10:LYS:O	1.93	0.68
1:QA:15:G:H2'	1:QA:16:A:H8	1.57	0.68
1:QA:920:U:H2'	1:QA:921:U:C6	2.28	0.68
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.75	0.68
11:QK:124:LYS:HB3	11:QK:125:PHE:HD1	1.58	0.68
20:QT:89:ARG:NH2	20:QT:104:LEU:HD21	2.09	0.68
25:RA:1140:C:P	33:RN:66:LYS:HZ3	2.15	0.68
25:RA:2198:A:C2	32:RI:29:TYR:HB2	2.29	0.68
25:RA:2287:A:N6	25:RA:2344:U:H3	1.92	0.68
25:RA:2420:C:N4	54:R8:30:ARG:HD2	2.08	0.68
26:RB:116:G:H4'	38:RS:54:LEU:HD13	1.74	0.68
34:RO:25:LEU:HB2	34:RO:38:VAL:HG13	1.74	0.68
39:RT:108:ARG:HA	39:RT:111:ARG:CZ	2.23	0.68
44:RY:40:GLU:HA	44:RY:64:GLU:OE1	1.94	0.68
50:R4:15:ILE:N	50:R4:15:ILE:HD13	2.09	0.68
1:XA:1496:C:O2	1:XA:1517:G:N2	2.25	0.68
4:XD:30:LYS:HA	4:XD:34:GLU:HB2	1.75	0.68
21:XU:6:ARG:HE	21:XU:15:ARG:NE	1.90	0.68
25:YA:1863:G:H2'	25:YA:1864:U:H6	1.59	0.68
38:YS:100:ALA:HA	38:YS:103:GLU:HG2	1.75	0.68
42:YW:29:LEU:HD21	42:YW:33:ARG:NE	2.09	0.68
47:Y1:74:VAL:HG12	47:Y1:74:VAL:O	1.93	0.68
51:Y5:20:ARG:HA	51:Y5:23:HIS:ND1	2.08	0.68
1:QA:658:G:N2	1:QA:747:C:O2	2.19	0.68
4:QD:198:VAL:HG12	4:QD:199:ASN:N	2.09	0.68
5:QE:53:LEU:HD12	5:QE:53:LEU:N	2.09	0.68
25:RA:660:G:O3'	29:RF:38:ARG:NH2	2.26	0.68
25:RA:2393:A:H4'	35:RP:61:ARG:O	1.93	0.68
25:RA:2831:G:H1'	25:RA:2883:A:H2'	1.75	0.68
31:RH:126:PRO:HG2	31:RH:127:GLU:H	1.59	0.68
31:RH:126:PRO:HB2	31:RH:130:ARG:O	1.93	0.68
43:RX:12:VAL:HG11	43:RX:27:THR:OG1	1.93	0.68
51:R5:20:ARG:HA	51:R5:23:HIS:ND1	2.09	0.68
10:XJ:75:ILE:HG13	10:XJ:76:ASN:N	2.05	0.68
13:XM:78:ILE:HG23	13:XM:92:HIS:ND1	2.09	0.68
13:XM:90:LEU:CA	13:XM:93:ARG:HD2	2.23	0.68
25:YA:1778:U:H2'	25:YA:1784:A:N6	2.09	0.68
28:YE:16:ARG:O	28:YE:16:ARG:HG3	1.93	0.68
31:YH:126:PRO:HB2	31:YH:130:ARG:O	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:80:GLU:HG3	36:YQ:81:VAL:H	1.58	0.68
39:YT:50:ILE:HG22	39:YT:62:THR:OG1	1.94	0.68
39:YT:111:ARG:C	39:YT:113:LYS:H	2.01	0.68
41:YV:18:LEU:O	41:YV:95:LEU:HA	1.94	0.68
44:YY:40:GLU:HA	44:YY:64:GLU:OE1	1.94	0.68
9:QI:48:GLU:N	9:QI:49:PRO:HD2	2.09	0.68
12:QL:46:LYS:HG2	12:QL:47:LYS:H	1.58	0.68
17:QQ:59:ILE:HD13	17:QQ:59:ILE:N	2.09	0.68
20:QT:47:GLY:O	20:QT:49:ALA:N	2.20	0.68
25:RA:1279:G:H4'	37:RR:31:HIS:HD2	1.59	0.68
25:RA:1931:U:H6	25:RA:1932:A:C8	2.11	0.68
25:RA:2415:G:H4'	35:RP:66:GLY:C	2.19	0.68
25:RA:2470:G:H5'	36:RQ:56:ARG:HH22	1.58	0.68
31:RH:88:LEU:H	31:RH:88:LEU:HD22	1.58	0.68
36:RQ:12:GLN:CG	36:RQ:73:PRO:HD2	2.21	0.68
37:RR:29:LEU:HD23	37:RR:79:LEU:HD12	1.75	0.68
39:RT:50:ILE:HG22	39:RT:62:THR:OG1	1.94	0.68
39:RT:109:GLU:O	39:RT:113:LYS:HB2	1.94	0.68
43:RX:18:TYR:C	43:RX:20:GLY:H	2.02	0.68
44:RY:49:VAL:O	44:RY:51:VAL:N	2.27	0.68
1:XA:411:A:H62	1:XA:413:G:N2	1.90	0.68
7:XG:50:ILE:HB	7:XG:58:PRO:HB3	1.75	0.68
8:XH:112:LEU:HA	8:XH:134:ILE:HG12	1.75	0.68
25:YA:994:C:H3'	40:YU:54:LYS:HE3	1.76	0.68
25:YA:994:C:O2'	25:YA:996:A:OP1	2.12	0.68
25:YA:2303:G:N2	25:YA:2313:C:N3	2.38	0.68
28:YE:9:VAL:HB	28:YE:25:VAL:HG23	1.76	0.68
31:YH:126:PRO:CD	31:YH:127:GLU:H	2.07	0.68
1:QA:1497:G:H2'	1:QA:1498:U:H5'	1.75	0.68
2:QB:215:LEU:O	2:QB:219:VAL:HG23	1.94	0.68
4:QD:96:LEU:HD22	4:QD:96:LEU:N	2.08	0.68
4:QD:166:LYS:CG	27:YD:135:PHE:CZ	2.77	0.68
25:RA:380:U:H2'	25:RA:381:G:C8	2.28	0.68
25:RA:1043:C:HO2'	25:RA:1048:A:HO2'	1.36	0.68
25:RA:2537:U:H2'	25:RA:2538:C:C6	2.29	0.68
28:RE:116:VAL:O	28:RE:117:MET:HB3	1.94	0.68
38:RS:57:LYS:HD3	38:RS:57:LYS:H	1.58	0.68
47:R1:20:ARG:HH11	47:R1:20:ARG:HG2	1.58	0.68
48:R2:40:SER:C	48:R2:42:GLY:H	2.00	0.68
2:XB:126:GLU:HG2	2:XB:126:GLU:O	1.92	0.68
5:XE:63:ARG:O	5:XE:66:MET:HE2	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:20:TYR:HE2	8:XH:75:ARG:HD2	1.59	0.68
25:YA:666:G:H4'	35:YP:49:ARG:NH1	2.09	0.68
25:YA:1418:G:OP1	25:YA:1588:C:O2'	2.12	0.68
25:YA:2211:G:O2'	25:YA:2212:A:OP2	2.11	0.68
31:YH:126:PRO:HG2	31:YH:127:GLU:H	1.59	0.68
48:Y2:23:LYS:O	48:Y2:27:GLU:OE1	2.11	0.68
8:QH:14:ARG:O	8:QH:18:ARG:HD3	1.94	0.68
10:QJ:6:ILE:HG22	10:QJ:98:ILE:CG1	2.16	0.68
14:QN:6:LEU:O	14:QN:6:LEU:HD23	1.93	0.68
15:QO:61:GLY:C	15:QO:65:ARG:HH12	2.02	0.68
16:QP:66:PRO:HG2	16:QP:71:ARG:NH1	2.09	0.68
17:QQ:74:LEU:HD12	17:QQ:75:ARG:HG2	1.76	0.68
25:RA:2555:U:C2	56:Z6:74:C:C5	2.82	0.68
25:RA:2663:G:H3'	25:RA:2664:G:H8	1.59	0.68
36:RQ:104:PHE:HE1	36:RQ:125:LEU:HD11	1.59	0.68
47:R1:87:PRO:O	47:R1:88:LYS:C	2.37	0.68
1:XA:577:G:H1'	1:XA:816:A:C4	2.29	0.68
7:XG:79:ARG:NH2	7:XG:82:GLY:HA2	2.09	0.68
7:XG:138:LYS:HE2	7:XG:142:GLU:OE2	1.94	0.68
25:YA:136:G:H1	25:YA:143:C:H42	1.40	0.68
25:YA:188:G:H1	25:YA:208:C:H42	1.42	0.68
25:YA:1606:G:H5''	25:YA:1607:C:OP1	1.94	0.68
25:YA:2893:G:H5''	25:YA:2894:G:H5'	1.76	0.68
27:YD:241:PRO:O	27:YD:243:GLY:N	2.27	0.68
31:YH:4:ILE:HG13	31:YH:6:ARG:NH1	2.09	0.68
36:YQ:133:ARG:O	36:YQ:134:ARG:HB2	1.94	0.68
1:QA:411:A:N6	1:QA:413:G:H21	1.92	0.67
29:RF:67:GLN:O	29:RF:67:GLN:CG	2.32	0.67
29:RF:184:TYR:O	29:RF:188:ARG:HG3	1.93	0.67
36:RQ:90:VAL:CG1	36:RQ:91:GLU:N	2.57	0.67
1:XA:309:G:H2'	1:XA:310:G:H8	1.59	0.67
13:XM:36:LYS:HD3	13:XM:36:LYS:C	2.19	0.67
25:YA:771:G:OP1	53:Y7:10:ARG:NH1	2.26	0.67
25:YA:1667:G:O2'	25:YA:1991:U:O4	2.11	0.67
25:YA:1803:A:H4'	27:YD:259:THR:CG2	2.23	0.67
25:YA:2393:A:H4'	35:YP:61:ARG:O	1.94	0.67
27:YD:35:LYS:HZ1	27:YD:104:TYR:HB2	1.57	0.67
30:YG:171:ALA:O	30:YG:175:LEU:HG	1.93	0.67
31:YH:77:LYS:HG2	31:YH:77:LYS:O	1.94	0.67
34:YO:14:THR:O	34:YO:51:ALA:HB3	1.94	0.67
35:YP:39:LYS:CA	35:YP:45:LEU:HD11	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:66:ILE:HG13	36:YQ:67:ARG:H	1.58	0.67
38:YS:35:ILE:HD13	38:YS:101:LEU:HD23	1.76	0.67
43:YX:18:TYR:C	43:YX:20:GLY:H	2.02	0.67
47:Y1:20:ARG:HH11	47:Y1:20:ARG:HG2	1.58	0.67
48:Y2:64:LEU:HD22	48:Y2:68:ARG:HD2	1.77	0.67
50:Y4:15:ILE:N	50:Y4:15:ILE:HD13	2.09	0.67
1:QA:221:C:H2'	1:QA:222:U:H6	1.58	0.67
1:QA:1070:U:P	5:QE:25:ARG:NH1	2.67	0.67
4:QD:173:TRP:CD2	4:QD:189:PRO:HB3	2.29	0.67
10:QJ:96:ILE:HD13	10:QJ:96:ILE:N	2.09	0.67
11:QK:95:ILE:HD12	11:QK:108:ILE:HD13	1.76	0.67
25:RA:848:G:H2'	25:RA:849:A:C8	2.30	0.67
36:RQ:88:GLY:C	36:RQ:90:VAL:N	2.47	0.67
38:RS:35:ILE:HD13	38:RS:101:LEU:HD23	1.76	0.67
52:R6:48:VAL:HG13	52:R6:49:HIS:H	1.60	0.67
1:XA:1422:G:N2	1:XA:1478:C:O2	2.26	0.67
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
4:XD:29:PRO:O	4:XD:30:LYS:HD3	1.94	0.67
4:XD:120:LEU:HD22	4:XD:125:HIS:HB2	1.74	0.67
6:XF:3:ARG:HB3	6:XF:93:SER:HB2	1.75	0.67
8:XH:14:ARG:O	8:XH:18:ARG:HD3	1.94	0.67
9:XI:48:GLU:N	9:XI:49:PRO:HD2	2.10	0.67
20:XT:83:ARG:HA	20:XT:86:ARG:HD3	1.76	0.67
35:YP:65:ARG:HH11	35:YP:65:ARG:CG	2.06	0.67
36:YQ:90:VAL:CG1	36:YQ:91:GLU:N	2.57	0.67
36:YQ:104:PHE:CE1	36:YQ:125:LEU:HD11	2.29	0.67
44:YY:21:LYS:HG3	44:YY:22:GLY:N	2.09	0.67
1:QA:828:A:H5''	1:QA:859:A:C2	2.29	0.67
2:QB:7:VAL:HG22	2:QB:8:LYS:HD3	1.76	0.67
2:QB:24:TRP:H	2:QB:24:TRP:HD1	1.43	0.67
7:QG:79:ARG:NH2	7:QG:82:GLY:HA2	2.09	0.67
25:RA:674:G:H2'	25:RA:804:A:H61	1.57	0.67
25:RA:1509:C:H3'	25:RA:1510:A:H5''	1.76	0.67
29:RF:107:LYS:O	29:RF:108:LYS:C	2.36	0.67
36:RQ:104:PHE:CE1	36:RQ:125:LEU:HD11	2.29	0.67
36:RQ:133:ARG:O	36:RQ:134:ARG:HB2	1.94	0.67
39:RT:111:ARG:C	39:RT:113:LYS:H	2.01	0.67
40:RU:92:ARG:O	40:RU:94:ASN:N	2.25	0.67
3:XC:195:VAL:HG12	3:XC:196:LEU:N	2.08	0.67
9:XI:28:VAL:HG13	9:XI:63:ILE:CG2	2.24	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:484:C:H2'	25:YA:485:C:C6	2.28	0.67
25:YA:1138:G:N2	33:YN:106:MET:HE3	2.06	0.67
36:YQ:33:GLY:HA2	36:YQ:105:GLU:HA	1.76	0.67
39:YT:50:ILE:CD1	39:YT:102:ILE:HD11	2.25	0.67
50:Y4:33:VAL:HG12	50:Y4:34:GLU:N	2.10	0.67
7:QG:140:ASP:C	7:QG:142:GLU:H	2.03	0.67
8:QH:100:ILE:HB	8:QH:125:ARG:NH1	2.10	0.67
13:QM:23:TYR:CB	13:QM:67:GLU:HG2	2.25	0.67
25:RA:593:G:O3'	54:R8:61:LEU:HD22	1.95	0.67
25:RA:1252:G:N3	40:RU:33:ARG:HD2	2.10	0.67
25:RA:2758:A:C2	25:RA:2759:G:H1'	2.29	0.67
28:RE:13:ARG:HH11	28:RE:13:ARG:CB	2.07	0.67
36:RQ:20:ALA:HB1	36:RQ:99:PRO:HD2	1.76	0.67
41:RV:25:LEU:H	41:RV:92:THR:HG21	1.60	0.67
1:XA:1291:G:H4'	9:XI:39:GLY:HA3	1.76	0.67
25:YA:1287:A:N7	37:YR:107:ASP:HB2	2.09	0.67
25:YA:2593:U:H2'	25:YA:2594:C:H6	1.58	0.67
33:YN:96:GLU:CG	33:YN:97:ARG:H	2.00	0.67
35:YP:26:GLY:O	35:YP:28:GLY:N	2.26	0.67
38:YS:26:LEU:HD12	38:YS:39:ILE:CD1	2.23	0.67
19:QS:31:ILE:HG23	19:QS:49:ILE:HA	1.75	0.67
25:RA:873:G:H1	25:RA:904:C:N4	1.93	0.67
25:RA:1803:A:H4'	27:RD:259:THR:HG21	1.76	0.67
25:RA:2041:U:H2'	25:RA:2042:A:C8	2.30	0.67
27:RD:135:PHE:CD2	27:RD:135:PHE:N	2.62	0.67
28:RE:10:GLY:H	28:RE:25:VAL:HG23	1.59	0.67
32:RI:92:VAL:HG13	32:RI:120:ILE:HG23	1.76	0.67
34:RO:13:ASN:ND2	34:RO:96:THR:O	2.28	0.67
1:XA:34:C:H2'	1:XA:35:G:C8	2.29	0.67
7:XG:120:ILE:O	7:XG:124:LEU:HB2	1.95	0.67
9:XI:46:ALA:HA	9:XI:78:LYS:HB2	1.74	0.67
16:XP:66:PRO:HG2	16:XP:71:ARG:NH1	2.09	0.67
25:YA:270(J):G:N2	25:YA:270(Q):C:O2	2.28	0.67
27:YD:44:ASN:N	27:YD:44:ASN:ND2	2.42	0.67
28:YE:13:ARG:HH11	28:YE:13:ARG:CB	2.07	0.67
29:YF:107:LYS:O	29:YF:108:LYS:C	2.36	0.67
34:YO:25:LEU:HB2	34:YO:38:VAL:HG13	1.74	0.67
36:YQ:12:GLN:CG	36:YQ:73:PRO:HD2	2.21	0.67
38:YS:67:ARG:HB2	38:YS:67:ARG:CZ	2.24	0.67
39:YT:108:ARG:HA	39:YT:111:ARG:CZ	2.23	0.67
40:YU:90:VAL:O	40:YU:92:ARG:N	2.26	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:YY:49:VAL:O	44:YY:51:VAL:N	2.27	0.67
1:QA:375:U:H2'	1:QA:376:G:H8	1.60	0.67
6:QF:67:MET:HB2	6:QF:68:PRO:HD2	1.75	0.67
13:QM:78:ILE:HG23	13:QM:92:HIS:ND1	2.09	0.67
25:RA:389:G:H22	35:RP:72:PRO:HD3	1.60	0.67
25:RA:948:G:N2	25:RA:970:C:O2	2.28	0.67
25:RA:1286:A:O2'	25:RA:1288:U:OP2	2.11	0.67
25:RA:1674:G:N2	25:RA:1677:A:N1	2.42	0.67
25:RA:2246:G:H2'	25:RA:2247:A:C8	2.30	0.67
26:RB:11:C:H3'	26:RB:12:C:H6	1.57	0.67
31:RH:4:ILE:HG13	31:RH:6:ARG:NH1	2.09	0.67
31:RH:89:ILE:HG12	31:RH:89:ILE:O	1.93	0.67
42:RW:60:ASN:C	42:RW:61:ASN:HD22	2.03	0.67
52:R6:43:CYS:SG	52:R6:44:ARG:HD3	2.35	0.67
1:XA:902:G:H2'	1:XA:903:G:H8	1.59	0.67
2:XB:71:VAL:CG2	2:XB:164:VAL:HG22	2.25	0.67
2:XB:165:VAL:HG23	2:XB:166:ASP:H	1.57	0.67
3:XC:150:LYS:HB3	3:XC:201:TYR:HB2	1.75	0.67
4:XD:173:TRP:CD2	4:XD:189:PRO:HB3	2.30	0.67
11:XK:95:ILE:HD12	11:XK:108:ILE:HD13	1.76	0.67
16:XP:21:VAL:HG11	16:XP:59:TRP:CD1	2.30	0.67
25:YA:530:G:N1	25:YA:2022:U:OP1	2.27	0.67
28:YE:26:ILE:HD13	28:YE:27:LEU:N	2.10	0.67
28:YE:116:VAL:O	28:YE:117:MET:HB3	1.94	0.67
32:YI:27:ARG:HD3	47:Y1:71:TYR:HE1	1.60	0.67
36:YQ:90:VAL:O	36:YQ:92:GLY:N	2.25	0.67
38:YS:52:SER:O	38:YS:56:LEU:HD22	1.93	0.67
44:YY:14:LEU:HD23	44:YY:15:VAL:N	2.10	0.67
1:QA:1158:C:H4'	2:QB:133:LYS:HZ3	1.56	0.67
1:QA:1267:C:H5	1:QA:1268:A:C5	2.13	0.67
6:QF:96:PRO:HB3	18:QR:30:ASP:OD2	1.95	0.67
7:QG:28:ASN:O	7:QG:31:MET:HB3	1.95	0.67
7:QG:50:ILE:HB	7:QG:58:PRO:HB3	1.75	0.67
13:QM:3:ARG:HD2	13:QM:9:ILE:HG12	1.77	0.67
25:RA:483:A:H3'	25:RA:484:C:H6	1.60	0.67
25:RA:1433:U:H6	25:RA:1433:U:H5''	1.58	0.67
28:RE:16:ARG:O	28:RE:16:ARG:HG3	1.93	0.67
31:RH:126:PRO:CD	31:RH:127:GLU:H	2.07	0.67
35:RP:90:ARG:NE	35:RP:91:PHE:HD1	1.93	0.67
36:RQ:32:TYR:HD1	36:RQ:133:ARG:HA	1.60	0.67
42:RW:29:LEU:HD21	42:RW:33:ARG:NE	2.08	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:33:VAL:HG12	50:R4:34:GLU:N	2.10	0.67
4:XD:29:PRO:C	4:XD:30:LYS:HD3	2.19	0.67
15:XO:61:GLY:C	15:XO:65:ARG:HH12	2.02	0.67
25:YA:2451:A:C6	56:Z8:76:PPU:HE2	2.29	0.67
25:YA:2781:A:H5''	25:YA:2782:G:H5'	1.76	0.67
29:YF:184:TYR:O	29:YF:188:ARG:HG3	1.94	0.67
41:YV:25:LEU:H	41:YV:92:THR:HG21	1.60	0.67
41:YV:44:LYS:O	41:YV:46:VAL:N	2.28	0.67
47:Y1:51:VAL:HG11	47:Y1:74:VAL:HG21	1.76	0.67
47:Y1:86:SER:N	47:Y1:87:PRO:HD2	2.10	0.67
51:Y5:4:HIS:HB3	51:Y5:5:PRO:HD3	1.75	0.67
7:QG:120:ILE:O	7:QG:124:LEU:HB2	1.95	0.67
7:QG:138:LYS:HE2	7:QG:142:GLU:OE2	1.94	0.67
10:QJ:81:THR:C	10:QJ:83:GLU:H	1.99	0.67
27:RD:35:LYS:CG	27:RD:64:ILE:N	2.56	0.67
28:RE:14:ILE:HG12	28:RE:15:PHE:N	2.06	0.67
31:RH:124:GLU:HB3	31:RH:132:ARG:HD2	1.77	0.67
37:RR:26:LYS:HE2	37:RR:70:LEU:O	1.95	0.67
44:RY:61:ILE:CG2	44:RY:62:GLU:N	2.56	0.67
48:R2:47:ASN:H	48:R2:47:ASN:ND2	1.92	0.67
2:XB:164:VAL:HB	2:XB:186:ALA:CB	2.25	0.67
7:XG:28:ASN:O	7:XG:31:MET:HB3	1.95	0.67
9:XI:33:PHE:CZ	9:XI:47:LEU:HD21	2.30	0.67
25:YA:330:A:HO2'	25:YA:331:A:H8	1.42	0.67
29:YF:34:TRP:HA	35:YP:6:LEU:HD12	1.77	0.67
52:Y6:48:VAL:HG13	52:Y6:49:HIS:H	1.60	0.67
1:QA:54:C:N4	1:QA:353:A:OP2	2.27	0.67
1:QA:503:C:OP2	12:QL:116:SER:HB3	1.95	0.67
1:QA:1274:G:N2	1:QA:1275:A:N7	2.42	0.67
2:QB:164:VAL:HB	2:QB:186:ALA:CB	2.25	0.67
4:QD:79:PHE:C	4:QD:79:PHE:CD2	2.71	0.67
14:QN:25:VAL:CG2	14:QN:38:GLY:O	2.31	0.67
25:RA:29:U:H2'	25:RA:30:G:C8	2.30	0.67
25:RA:1412:A:H2'	25:RA:1413:G:O4'	1.95	0.67
25:RA:2729:G:H1'	28:RE:187:ALA:HB2	1.75	0.67
31:RH:125:VAL:CG1	31:RH:126:PRO:HG3	2.25	0.67
44:RY:21:LYS:HG3	44:RY:22:GLY:N	2.09	0.67
1:XA:958:A:C8	19:XS:55:LYS:HD2	2.30	0.67
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	1.95	0.67
17:XQ:56:VAL:HB	17:XQ:78:GLU:HB3	1.76	0.67
25:YA:639:U:H2'	25:YA:640:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:993:G:H2'	25:YA:994:C:H6	1.60	0.67
25:YA:2450:A:C2	25:YA:2451:A:C4	2.83	0.67
28:YE:62:PRO:O	28:YE:64:LYS:N	2.28	0.67
31:YH:88:LEU:H	31:YH:88:LEU:HD22	1.59	0.67
34:YO:13:ASN:ND2	34:YO:96:THR:O	2.28	0.67
49:Y3:29:ARG:HB2	49:Y3:29:ARG:NH1	2.10	0.67
50:Y4:16:CYS:SG	50:Y4:33:VAL:HB	2.35	0.67
1:QA:265:G:H2'	1:QA:266:G:H5''	1.78	0.67
1:QA:1055:A:O2'	3:QC:161:GLU:OE2	2.11	0.67
8:QH:6:ILE:H	8:QH:6:ILE:CD1	2.06	0.67
9:QI:112:LYS:HA	9:QI:119:ALA:HB2	1.77	0.67
13:QM:13:LYS:HA	13:QM:44:ARG:HD2	1.77	0.67
18:QR:70:ILE:O	18:QR:74:ARG:HG3	1.95	0.67
20:QT:36:LEU:HD12	20:QT:55:ILE:HG23	1.76	0.67
20:QT:83:ARG:HA	20:QT:86:ARG:HD3	1.76	0.67
25:RA:1473:G:H1	25:RA:1520:U:H3	1.42	0.67
25:RA:2405:G:OP1	35:RP:77:ARG:NH2	2.28	0.67
26:RB:15:A:H5'	26:RB:16:G:C8	2.30	0.67
28:RE:36:ARG:HH11	28:RE:36:ARG:HB3	1.60	0.67
36:RQ:66:ILE:HG13	36:RQ:67:ARG:H	1.58	0.67
3:XC:73:PRO:O	3:XC:76:VAL:HG22	1.95	0.67
10:XJ:6:ILE:HD11	10:XJ:72:VAL:CB	2.24	0.67
25:YA:688:U:H2'	25:YA:689:A:H8	1.59	0.67
27:YD:35:LYS:CA	27:YD:64:ILE:HG22	2.25	0.67
29:YF:103:LYS:HA	29:YF:106:ARG:CG	2.21	0.67
36:YQ:104:PHE:HE1	36:YQ:125:LEU:HD11	1.58	0.67
42:YW:60:ASN:C	42:YW:61:ASN:HD22	2.03	0.67
44:YY:60:PHE:O	44:YY:61:ILE:HD12	1.95	0.67
1:QA:129(A):G:N2	1:QA:188:U:O2'	2.27	0.66
2:QB:71:VAL:CG2	2:QB:164:VAL:HG22	2.25	0.66
4:QD:196:LEU:C	4:QD:198:VAL:H	2.02	0.66
5:QE:63:ARG:O	5:QE:66:MET:HE2	1.94	0.66
5:QE:75:THR:HG23	5:QE:76:ILE:N	2.11	0.66
8:QH:20:TYR:HE2	8:QH:75:ARG:HD2	1.60	0.66
9:QI:33:PHE:CZ	9:QI:47:LEU:HD21	2.30	0.66
14:QN:40:CYS:SG	14:QN:43:CYS:N	2.67	0.66
16:QP:21:VAL:HG11	16:QP:59:TRP:CD1	2.30	0.66
25:RA:1339:G:N2	25:RA:1603:A:H1'	2.10	0.66
25:RA:1803:A:H4'	27:RD:259:THR:CG2	2.25	0.66
27:RD:241:PRO:O	27:RD:243:GLY:N	2.28	0.66
35:RP:122:PRO:HA	35:RP:141:ALA:O	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:67:ARG:HB2	38:RS:67:ARG:CZ	2.25	0.66
38:RS:107:GLU:H	38:RS:110:LEU:HD11	1.60	0.66
43:RX:57:LEU:HD12	43:RX:78:LYS:HB2	1.77	0.66
47:R1:80:LEU:HD23	47:R1:80:LEU:N	2.10	0.66
49:R3:29:ARG:HB2	49:R3:29:ARG:NH1	2.10	0.66
2:XB:215:LEU:O	2:XB:219:VAL:HG23	1.94	0.66
4:XD:11:LEU:CD2	4:XD:66:ARG:HD3	2.17	0.66
4:XD:79:PHE:C	4:XD:79:PHE:CD2	2.71	0.66
25:YA:2680:C:H5'	28:YE:189:PRO:HA	1.76	0.66
28:YE:51:PHE:O	28:YE:52:LEU:C	2.38	0.66
35:YP:61:ARG:H	35:YP:61:ARG:CD	2.09	0.66
42:YW:18:ARG:HG3	42:YW:76:VAL:HG13	1.77	0.66
45:YZ:19:ARG:NH1	45:YZ:84:GLU:O	2.27	0.66
47:Y1:56:GLN:N	47:Y1:56:GLN:HE21	1.93	0.66
25:RA:1543:A:H1'	25:RA:1545:A:H5''	1.77	0.66
26:RB:97:G:H2'	26:RB:98:G:O4'	1.95	0.66
27:RD:80:ALA:HB3	27:RD:94:LEU:CD1	2.26	0.66
35:RP:66:GLY:O	35:RP:67:MET:HB3	1.94	0.66
36:RQ:90:VAL:O	36:RQ:92:GLY:N	2.25	0.66
44:RY:42:VAL:CG1	44:RY:65:ALA:HB3	2.25	0.66
1:XA:186(E):C:H42	1:XA:191(B):G:H1	1.44	0.66
3:XC:140:ARG:CZ	3:XC:140:ARG:HB2	2.25	0.66
20:XT:89:ARG:NH2	20:XT:104:LEU:HD21	2.09	0.66
29:YF:46:ARG:HH11	29:YF:46:ARG:CG	2.04	0.66
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ2	1.59	0.66
36:YQ:83:MET:HB2	46:Y0:7:LEU:HD22	1.77	0.66
44:YY:75:ILE:HG12	44:YY:76:CYS:N	2.10	0.66
51:Y5:56:LYS:H	51:Y5:56:LYS:CD	2.07	0.66
52:Y6:43:CYS:SG	52:Y6:44:ARG:HD3	2.35	0.66
1:QA:828:A:H2'	1:QA:829:G:O4'	1.96	0.66
4:QD:52:SER:HB3	4:QD:55:ALA:HB2	1.77	0.66
19:QS:65:ASN:N	19:QS:65:ASN:HD22	1.94	0.66
1:XA:108:G:H5''	1:XA:109:A:H5''	1.76	0.66
1:XA:451:A:N7	1:XA:481:G:C2	2.63	0.66
4:XD:14:ARG:O	4:XD:14:ARG:HD3	1.95	0.66
8:XH:100:ILE:HB	8:XH:125:ARG:NH1	2.09	0.66
10:XJ:34:VAL:HG22	10:XJ:74:ILE:HG22	1.78	0.66
25:YA:270(A):A:N3	25:YA:365:C:O2'	2.27	0.66
25:YA:1403:C:H5''	25:YA:1471:A:C1'	2.25	0.66
25:YA:2470:G:H5'	36:YQ:56:ARG:NH2	2.10	0.66
33:YN:57:ALA:HA	33:YN:60:ILE:HD11	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:66:GLY:O	35:YP:67:MET:HB3	1.94	0.66
47:Y1:83:GLU:HG2	47:Y1:84:GLY:N	2.09	0.66
47:Y1:87:PRO:O	47:Y1:88:LYS:C	2.37	0.66
1:QA:804:U:H5''	1:QA:805:C:OP2	1.95	0.66
1:QA:1277:C:O2'	1:QA:1279:A:H8	1.78	0.66
8:QH:10:LEU:HD23	8:QH:10:LEU:H	1.60	0.66
25:RA:25:U:H5''	42:RW:80:PRO:HD3	1.75	0.66
27:RD:145:VAL:HG12	27:RD:146:GLU:O	1.96	0.66
29:RF:34:TRP:HA	35:RP:6:LEU:HD12	1.77	0.66
31:RH:77:LYS:HG2	31:RH:77:LYS:O	1.94	0.66
35:RP:1:MET:CE	35:RP:5:ASP:HB3	2.24	0.66
1:XA:545:C:OP2	4:XD:62:GLN:NE2	2.28	0.66
1:XA:1199:U:H4'	10:XJ:54:PHE:CZ	2.30	0.66
14:XN:32:SER:O	14:XN:40:CYS:C	2.37	0.66
19:XS:5:LEU:HD11	50:Y4:66:SER:CB	2.24	0.66
20:XT:97:ALA:O	20:XT:99:LEU:N	2.27	0.66
25:YA:587:C:OP2	35:YP:21:ARG:NH2	2.27	0.66
25:YA:2654:A:H62	25:YA:2667:C:N4	1.94	0.66
27:YD:172:TYR:HB3	27:YD:184:LYS:HG2	1.77	0.66
33:YN:58:ASP:H	33:YN:60:ILE:CD1	2.09	0.66
35:YP:122:PRO:HA	35:YP:141:ALA:O	1.95	0.66
36:YQ:32:TYR:HD1	36:YQ:133:ARG:HA	1.61	0.66
41:YV:53:GLU:HG2	41:YV:53:GLU:O	1.94	0.66
1:QA:865:A:H5'	1:QA:1078:U:C5	2.29	0.66
8:QH:23:SER:HA	8:QH:63:LEU:CD2	2.24	0.66
17:QQ:56:VAL:HB	17:QQ:78:GLU:HB3	1.76	0.66
25:RA:637:A:H2'	35:RP:117:GLU:OE2	1.94	0.66
25:RA:997:G:OP1	40:RU:93:LYS:HD3	1.94	0.66
25:RA:1190:G:OP1	35:RP:30:THR:OG1	2.12	0.66
27:RD:68:LYS:HB2	27:RD:70:TRP:CZ3	2.31	0.66
31:RH:168:PRO:O	31:RH:169:VAL:HG12	1.96	0.66
32:RI:57:ARG:O	32:RI:61:ARG:HG2	1.96	0.66
34:RO:14:THR:O	34:RO:51:ALA:HB3	1.95	0.66
34:RO:86:ILE:H	34:RO:86:ILE:HD12	1.61	0.66
39:RT:50:ILE:CD1	39:RT:102:ILE:HD11	2.25	0.66
4:XD:52:SER:O	4:XD:56:VAL:HG23	1.95	0.66
7:XG:69:VAL:HG12	7:XG:69:VAL:O	1.95	0.66
8:XH:84:ARG:HG3	8:XH:84:ARG:NH1	2.10	0.66
25:YA:578:A:OP1	25:YA:1255:U:O2'	2.13	0.66
25:YA:1533:C:H2'	25:YA:1534:G:N7	2.11	0.66
27:YD:68:LYS:HB2	27:YD:70:TRP:CZ3	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:28:ALA:O	28:YE:93:VAL:HG23	1.96	0.66
35:YP:81:GLN:NE2	35:YP:106:LEU:O	2.29	0.66
43:YX:11:PRO:HB3	43:YX:92:LEU:HD21	1.78	0.66
48:Y2:65:ASN:HB3	48:Y2:69:ARG:NH1	2.10	0.66
51:Y5:40:LYS:NZ	51:Y5:48:GLU:HB2	2.10	0.66
1:QA:946:A:O2'	1:QA:1333:A:N3	2.27	0.66
3:QC:73:PRO:O	3:QC:76:VAL:HG22	1.96	0.66
3:QC:101:LEU:HD23	3:QC:102:ASN:N	2.11	0.66
7:QG:78:ARG:NH1	7:QG:80:VAL:HG23	2.11	0.66
13:QM:36:LYS:HD3	13:QM:36:LYS:C	2.19	0.66
25:RA:227:A:OP1	35:RP:76:LYS:HE3	1.95	0.66
25:RA:270(T):G:OP1	47:R1:97:LEU:HD13	1.95	0.66
27:RD:44:ASN:HB3	27:RD:49:ILE:HG22	1.78	0.66
28:RE:9:VAL:HB	28:RE:25:VAL:HG23	1.75	0.66
28:RE:101:ARG:CZ	28:RE:171:GLU:HB2	2.25	0.66
30:RG:136:ARG:O	30:RG:154:GLY:HA3	1.95	0.66
35:RP:81:GLN:NE2	35:RP:106:LEU:O	2.29	0.66
36:RQ:86:GLY:C	36:RQ:88:GLY:H	2.03	0.66
40:RU:88:ILE:HD13	40:RU:88:ILE:N	2.10	0.66
41:RV:44:LYS:O	41:RV:46:VAL:N	2.28	0.66
44:RY:94:LYS:HE3	44:RY:101:LYS:NZ	2.11	0.66
8:XH:1:MET:HE2	8:XH:1:MET:H3	1.60	0.66
8:XH:29:SER:HB3	8:XH:32:LYS:CG	2.22	0.66
13:XM:3:ARG:HD2	13:XM:9:ILE:HG12	1.77	0.66
13:XM:65:LYS:HE2	50:Y4:50:VAL:HG11	1.76	0.66
18:XR:70:ILE:O	18:XR:74:ARG:HG3	1.95	0.66
30:YG:136:ARG:O	30:YG:154:GLY:HA3	1.95	0.66
33:YN:134:ARG:N	33:YN:135:PRO:HD3	1.97	0.66
38:YS:107:GLU:H	38:YS:110:LEU:HD11	1.60	0.66
40:YU:88:ILE:HD13	40:YU:88:ILE:N	2.10	0.66
47:Y1:73:LEU:C	47:Y1:75:GLU:H	2.03	0.66
54:Y8:30:ARG:O	54:Y8:31:HIS:HB2	1.96	0.66
1:QA:624:C:H2'	1:QA:625:G:H8	1.60	0.66
1:QA:1004:A:O5'	1:QA:1025:U:N3	2.28	0.66
2:QB:25:ASN:O	2:QB:27:LYS:N	2.27	0.66
5:QE:78:HIS:HD2	8:QH:104:ARG:HG2	1.54	0.66
13:QM:81:LEU:O	13:QM:84:ILE:HG22	1.95	0.66
13:QM:117:VAL:HG22	13:QM:118:ALA:H	1.59	0.66
25:RA:27:G:H1'	25:RA:513:A:H62	1.60	0.66
25:RA:398:G:H2'	25:RA:399:G:C8	2.30	0.66
25:RA:583:G:H5''	40:RU:10:ARG:HH12	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:813:U:H2'	25:RA:814:C:H6	1.60	0.66
29:RF:175:THR:O	29:RF:176:LEU:HB2	1.96	0.66
44:RY:47:LYS:HG2	44:RY:60:PHE:CE1	2.31	0.66
44:RY:75:ILE:HG12	44:RY:76:CYS:N	2.10	0.66
47:R1:86:SER:N	47:R1:87:PRO:HD2	2.10	0.66
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ2	1.58	0.66
1:XA:44:G:C2	1:XA:45:U:H1'	2.31	0.66
1:XA:718:G:H5''	1:XA:719:C:OP2	1.96	0.66
1:XA:1453:G:H2'	20:XT:39:LYS:NZ	2.11	0.66
12:XL:26:ALA:O	12:XL:27:LEU:O	2.14	0.66
19:XS:35:SER:O	19:XS:71:LEU:HD12	1.96	0.66
25:YA:125:G:H5''	53:Y7:19:ARG:HD3	1.77	0.66
25:YA:744:G:N2	25:YA:753:C:O2	2.21	0.66
25:YA:2392:A:H8	35:YP:60:MET:HG3	1.61	0.66
25:YA:2477:C:H2'	55:Y9:1:MET:HG3	1.78	0.66
28:YE:37:ARG:NE	28:YE:37:ARG:HA	2.11	0.66
38:YS:106:ARG:HA	38:YS:110:LEU:CD2	2.25	0.66
47:Y1:11:ARG:HB3	47:Y1:11:ARG:HH11	1.61	0.66
1:QA:1084:G:H5'	1:QA:1102:A:OP2	1.95	0.66
1:QA:1333:A:C2	1:QA:1334:G:H1'	2.31	0.66
7:QG:141:VAL:O	7:QG:141:VAL:HG12	1.95	0.66
12:QL:126:LYS:C	12:QL:128:ALA:H	2.03	0.66
15:QO:26:GLU:CD	15:QO:77:ARG:HH12	2.03	0.66
25:RA:577:G:O2'	25:RA:1254:A:OP1	2.14	0.66
25:RA:866:A:N3	25:RA:866:A:H2'	2.09	0.66
27:RD:35:LYS:CA	27:RD:64:ILE:HG22	2.26	0.66
28:RE:26:ILE:HD13	28:RE:27:LEU:N	2.10	0.66
28:RE:62:PRO:O	28:RE:64:LYS:N	2.28	0.66
47:R1:51:VAL:HG11	47:R1:74:VAL:HG21	1.76	0.66
1:XA:667:G:H4'	15:XO:51:HIS:CE1	2.31	0.66
1:XA:1118:C:H1'	1:XA:1179:A:C4	2.30	0.66
2:XB:24:TRP:H	2:XB:24:TRP:HD1	1.43	0.66
4:XD:196:LEU:C	4:XD:198:VAL:H	2.02	0.66
10:XJ:54:PHE:CZ	10:XJ:55:LYS:NZ	2.61	0.66
13:XM:81:LEU:O	13:XM:84:ILE:HG22	1.95	0.66
27:YD:35:LYS:HE3	27:YD:64:ILE:C	2.21	0.66
27:YD:135:PHE:CD2	27:YD:135:PHE:N	2.61	0.66
27:YD:183:ARG:HH11	27:YD:183:ARG:CG	2.07	0.66
32:YI:29:TYR:O	32:YI:33:ARG:HB2	1.95	0.66
35:YP:61:ARG:NH2	54:Y8:13:ARG:HD2	2.10	0.66
36:YQ:20:ALA:HB1	36:YQ:99:PRO:HD2	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:YQ:88:GLY:C	36:YQ:90:VAL:H	2.02	0.66
44:YY:94:LYS:HE3	44:YY:101:LYS:NZ	2.11	0.66
1:QA:255:G:H2'	1:QA:256:U:H6	1.58	0.66
2:QB:87:ARG:HH11	2:QB:223:ILE:CD1	2.09	0.66
6:QF:1:MET:HE1	6:QF:68:PRO:HB3	1.78	0.66
17:QQ:27:PHE:CZ	17:QQ:36:ILE:HD11	2.31	0.66
25:RA:1065:U:O2	25:RA:1074:G:N1	2.29	0.66
25:RA:1190:G:H5'	35:RP:32:THR:HA	1.78	0.66
25:RA:1349:A:N6	25:RA:1598:C:H42	1.94	0.66
27:RD:237:GLU:N	27:RD:237:GLU:OE1	2.29	0.66
33:RN:58:ASP:H	33:RN:60:ILE:CD1	2.09	0.66
36:RQ:33:GLY:HA2	36:RQ:105:GLU:HA	1.76	0.66
38:RS:106:ARG:HA	38:RS:110:LEU:CD2	2.26	0.66
44:RY:14:LEU:HD23	44:RY:15:VAL:N	2.10	0.66
50:R4:16:CYS:SG	50:R4:33:VAL:HB	2.35	0.66
1:XA:674:G:H2'	1:XA:675:A:C8	2.27	0.66
1:XA:1112:C:H1'	3:XC:179:ARG:HH11	1.61	0.66
1:XA:1446:A:O2'	1:XA:1447:G:O5'	2.14	0.66
5:XE:75:THR:HG23	5:XE:76:ILE:N	2.11	0.66
7:XG:78:ARG:NH1	7:XG:80:VAL:HG23	2.11	0.66
8:XH:10:LEU:HD23	8:XH:10:LEU:H	1.59	0.66
13:XM:74:VAL:O	13:XM:78:ILE:HG13	1.96	0.66
14:XN:40:CYS:SG	14:XN:43:CYS:CB	2.83	0.66
25:YA:1210:A:H5'	25:YA:1210:A:C8	2.31	0.66
25:YA:2389:G:H5''	25:YA:2390:U:H5'	1.78	0.66
30:YG:145:THR:HG23	50:Y4:28:LYS:NZ	2.11	0.66
31:YH:125:VAL:CG1	31:YH:126:PRO:HG3	2.25	0.66
34:YO:110:GLY:HA2	34:YO:112:MET:HE3	1.77	0.66
40:YU:65:ILE:HG12	40:YU:96:ALA:CB	2.26	0.66
44:YY:47:LYS:HG2	44:YY:60:PHE:CE1	2.31	0.66
47:Y1:80:LEU:HD23	47:Y1:80:LEU:N	2.10	0.66
48:Y2:47:ASN:H	48:Y2:47:ASN:ND2	1.92	0.66
1:QA:607:A:H2'	1:QA:608:A:O4'	1.96	0.66
1:QA:677:U:H3	1:QA:713:G:H22	1.43	0.66
6:QF:41:GLU:O	6:QF:43:LEU:HD12	1.96	0.66
10:QJ:99:LYS:O	10:QJ:100:THR:HG23	1.96	0.66
25:RA:67:U:H2'	25:RA:68:G:H8	1.60	0.66
25:RA:259:G:O2'	25:RA:621:A:O2'	2.07	0.66
25:RA:774:A:O2'	25:RA:775:G:O5'	2.14	0.66
27:RD:121:PRO:HB3	27:RD:135:PHE:CE1	2.30	0.66
27:RD:183:ARG:HH11	27:RD:183:ARG:CG	2.07	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:61:ARG:NH2	54:R8:13:ARG:HD2	2.10	0.66
38:RS:88:ASP:OD2	38:RS:90:GLY:N	2.28	0.66
44:RY:99:CYS:SG	44:RY:100:ALA:N	2.69	0.66
54:R8:30:ARG:O	54:R8:31:HIS:HB2	1.96	0.66
1:XA:1016:A:H2'	1:XA:1017:G:O4'	1.95	0.66
19:XS:15:LEU:O	19:XS:19:VAL:N	2.26	0.66
25:YA:1221:C:OP1	41:YV:68:LYS:HE2	1.96	0.66
25:YA:2712:U:H1'	25:YA:2712(A):A:N7	2.11	0.66
28:YE:36:ARG:HH11	28:YE:36:ARG:HB3	1.60	0.66
34:YO:71:ARG:NH1	39:YT:74:ARG:HH21	1.94	0.66
34:YO:113:LYS:O	34:YO:117:LEU:HD12	1.96	0.66
38:YS:88:ASP:OD2	38:YS:90:GLY:N	2.28	0.66
50:Y4:71:ARG:HH11	50:Y4:71:ARG:CG	1.98	0.66
1:QA:192:U:C4'	20:QT:103:GLY:HA2	2.26	0.65
3:QC:140:ARG:CZ	3:QC:140:ARG:HB2	2.25	0.65
5:QE:78:HIS:CD2	8:QH:104:ARG:NE	2.64	0.65
5:QE:78:HIS:HB3	8:QH:104:ARG:O	1.96	0.65
7:QG:69:VAL:O	7:QG:69:VAL:HG12	1.95	0.65
15:QO:25:THR:HG21	15:QO:70:LEU:HB2	1.77	0.65
25:RA:76:C:O2'	48:R2:62:THR:HG21	1.96	0.65
25:RA:288:C:H2'	25:RA:289:A:H8	1.61	0.65
25:RA:994:C:O2'	25:RA:996:A:OP1	2.11	0.65
26:RB:22:U:H3	26:RB:61:G:H1	1.43	0.65
39:RT:22:PHE:CD2	39:RT:22:PHE:N	2.63	0.65
42:RW:25:ARG:NH1	42:RW:25:ARG:HB2	2.11	0.65
43:RX:65:ARG:HD3	43:RX:65:ARG:N	2.11	0.65
44:RY:60:PHE:O	44:RY:61:ILE:HD12	1.95	0.65
48:R2:64:LEU:HD22	48:R2:68:ARG:HD2	1.76	0.65
2:XB:14:GLY:O	2:XB:15:VAL:HG13	1.96	0.65
7:XG:140:ASP:C	7:XG:142:GLU:H	2.03	0.65
10:XJ:39:PRO:HB3	10:XJ:70:ARG:HH12	1.61	0.65
14:XN:23:ARG:NH1	14:XN:30:ALA:HB2	2.11	0.65
17:XQ:74:LEU:HD12	17:XQ:75:ARG:HG2	1.76	0.65
25:YA:1761:C:H42	25:YA:1762:A:H62	1.44	0.65
25:YA:2839:G:H1	25:YA:2878:U:H3	1.41	0.65
26:YB:12:C:O2'	46:Y0:74:ARG:HG3	1.95	0.65
27:YD:121:PRO:HB3	27:YD:135:PHE:CE1	2.30	0.65
28:YE:13:ARG:NH1	28:YE:21:VAL:HG12	2.11	0.65
28:YE:101:ARG:CZ	28:YE:171:GLU:HB2	2.26	0.65
1:QA:1004:A:P	1:QA:1025:U:H3	2.19	0.65
2:QB:87:ARG:O	2:QB:87:ARG:HD2	1.95	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:166:LYS:CD	27:YD:134:ARG:NH1	2.60	0.65
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.79	0.65
25:RA:846:C:H42	25:RA:931:G:H1	1.43	0.65
25:RA:1636:C:H2'	25:RA:1637:A:C8	2.32	0.65
25:RA:2749:A:H4'	31:RH:62:LYS:HB3	1.78	0.65
2:XB:132:LYS:HA	2:XB:135:GLN:CD	2.22	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
6:XF:96:PRO:HB3	18:XR:30:ASP:OD2	1.95	0.65
10:XJ:99:LYS:O	10:XJ:100:THR:HG23	1.96	0.65
17:XQ:27:PHE:CZ	17:XQ:36:ILE:HD11	2.31	0.65
25:YA:1805:U:O2	27:YD:50:THR:HB	1.96	0.65
25:YA:2376:A:N1	38:YS:87:PHE:CD2	2.64	0.65
31:YH:124:GLU:HB3	31:YH:132:ARG:HD2	1.77	0.65
34:YO:86:ILE:H	34:YO:86:ILE:HD12	1.61	0.65
37:YR:26:LYS:HE2	37:YR:70:LEU:O	1.95	0.65
42:YW:65:LEU:HD12	42:YW:68:ARG:NH1	2.10	0.65
44:YY:42:VAL:CG1	44:YY:65:ALA:HB3	2.26	0.65
1:QA:1266:G:N2	1:QA:1270:C:N3	2.44	0.65
2:QB:164:VAL:HB	2:QB:186:ALA:HB2	1.78	0.65
5:QE:41:VAL:CG1	5:QE:113:ALA:HB2	2.25	0.65
8:QH:20:TYR:HA	8:QH:65:TYR:HE2	1.60	0.65
12:QL:21:LYS:HD2	12:QL:21:LYS:N	2.11	0.65
20:QT:44:ALA:HB2	20:QT:88:VAL:HG13	1.78	0.65
25:RA:769:G:H2'	25:RA:770:G:H8	1.60	0.65
25:RA:910:A:N3	25:RA:2264:C:O2'	2.25	0.65
25:RA:2233:U:H2'	25:RA:2234:G:C8	2.32	0.65
27:RD:27:THR:CG2	27:RD:28:GLU:H	2.09	0.65
34:RO:113:LYS:O	34:RO:117:LEU:HD12	1.96	0.65
1:XA:1243:C:H42	1:XA:1294:G:H1	1.43	0.65
15:XO:8:LYS:O	15:XO:12:ILE:HG13	1.96	0.65
15:XO:26:GLU:CD	15:XO:77:ARG:HH12	2.03	0.65
25:YA:1190:G:OP1	35:YP:30:THR:OG1	2.13	0.65
25:YA:1790:C:H5''	25:YA:1791:A:OP1	1.96	0.65
27:YD:145:VAL:HG12	27:YD:146:GLU:O	1.96	0.65
28:YE:10:GLY:H	28:YE:25:VAL:HG23	1.59	0.65
31:YH:168:PRO:O	31:YH:169:VAL:HG12	1.96	0.65
43:YX:65:ARG:HD3	43:YX:65:ARG:N	2.12	0.65
44:YY:35:TYR:CE1	44:YY:69:ALA:HB3	2.31	0.65
45:YZ:74:VAL:HG22	45:YZ:86:VAL:HG13	1.78	0.65
2:QB:17:PHE:HD2	2:QB:44:LEU:HD21	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:94:LEU:H	4:QD:94:LEU:CD1	2.08	0.65
4:QD:122:ARG:O	4:QD:122:ARG:HD3	1.97	0.65
10:QJ:38:ILE:HD11	10:QJ:71:LEU:HB3	1.78	0.65
12:QL:115:LYS:O	12:QL:117:ARG:HG3	1.96	0.65
16:QP:45:THR:HG22	16:QP:47:ASP:H	1.60	0.65
21:QU:25:LYS:HE2	21:QU:26:LYS:O	1.96	0.65
25:RA:1903:G:OP2	27:RD:241:PRO:HB2	1.96	0.65
27:RD:176:ARG:HH11	27:RD:176:ARG:HG2	1.60	0.65
31:RH:128:PRO:CD	31:RH:129:THR:H	2.09	0.65
32:RI:85:GLU:OE1	32:RI:86:THR:OG1	2.14	0.65
35:RP:138:LEU:HD11	35:RP:144:GLU:HG3	1.78	0.65
36:RQ:86:GLY:C	36:RQ:88:GLY:N	2.52	0.65
41:RV:76:LYS:HB2	41:RV:81:TYR:HB3	1.79	0.65
45:RZ:111:VAL:HG22	45:RZ:112:ARG:H	1.62	0.65
3:XC:70:VAL:HG12	3:XC:71:ALA:N	2.10	0.65
6:XF:41:GLU:O	6:XF:43:LEU:HD12	1.96	0.65
9:XI:53:VAL:HG21	9:XI:92:TYR:CE1	2.32	0.65
10:XJ:38:ILE:HD11	10:XJ:71:LEU:HB3	1.78	0.65
16:XP:45:THR:HG22	16:XP:47:ASP:H	1.60	0.65
25:YA:1407:C:H42	25:YA:1595:G:H1	1.43	0.65
25:YA:1899:G:H22	25:YA:1902:C:N4	1.92	0.65
27:YD:27:THR:CG2	27:YD:28:GLU:H	2.09	0.65
1:QA:474:G:H5'	16:QP:81:ARG:HG3	1.77	0.65
1:QA:565:U:H5''	1:QA:566:G:H2'	1.78	0.65
1:QA:1305:G:N2	1:QA:1331:G:H2'	2.12	0.65
4:QD:13:ARG:HD3	4:QD:38:TYR:O	1.97	0.65
7:QG:11:GLN:O	7:QG:12:LEU:HD13	1.97	0.65
19:QS:3:ARG:CZ	19:QS:8:GLY:HA2	2.26	0.65
19:QS:15:LEU:O	19:QS:19:VAL:N	2.26	0.65
19:QS:21:GLU:O	19:QS:25:LYS:HB3	1.97	0.65
41:RV:53:GLU:HG2	41:RV:53:GLU:O	1.94	0.65
51:R5:40:LYS:NZ	51:R5:48:GLU:HB2	2.10	0.65
1:XA:1023:G:H3'	1:XA:1024:G:H5''	1.79	0.65
1:XA:1219:U:OP1	14:XN:19:ARG:NH2	2.18	0.65
2:XB:67:THR:HG21	2:XB:155:LEU:CD2	2.26	0.65
2:XB:87:ARG:HH11	2:XB:223:ILE:CD1	2.09	0.65
4:XD:52:SER:HB3	4:XD:55:ALA:CB	2.27	0.65
8:XH:118:VAL:C	8:XH:119:LEU:HD23	2.22	0.65
16:XP:21:VAL:HG23	16:XP:33:ILE:HB	1.77	0.65
20:XT:36:LEU:HD12	20:XT:55:ILE:HG23	1.76	0.65
25:YA:1826:G:H4'	27:YD:242:ARG:HH21	1.62	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:80:ALA:HB3	27:YD:94:LEU:CD1	2.26	0.65
35:YP:90:ARG:NE	35:YP:91:PHE:HD1	1.93	0.65
48:Y2:42:GLY:O	48:Y2:44:LEU:N	2.30	0.65
1:QA:1203:C:H2'	1:QA:1204:A:C8	2.31	0.65
2:QB:132:LYS:HA	2:QB:135:GLN:CD	2.22	0.65
3:QC:70:VAL:HG12	3:QC:71:ALA:N	2.10	0.65
4:QD:52:SER:O	4:QD:56:VAL:HG23	1.95	0.65
13:QM:74:VAL:O	13:QM:78:ILE:HG13	1.96	0.65
16:QP:6:LEU:HD23	16:QP:17:TYR:CD2	2.32	0.65
25:RA:2456:C:H42	25:RA:2495:G:H1	1.43	0.65
28:RE:4:ILE:C	28:RE:5:LEU:HD23	2.22	0.65
28:RE:11:MET:HE3	28:RE:186:GLY:HA2	1.79	0.65
29:RF:155:LEU:HD13	29:RF:174:VAL:CG1	2.27	0.65
34:RO:12:ASP:OD1	34:RO:14:THR:HG23	1.97	0.65
1:XA:429:U:H1'	1:XA:430:A:H5''	1.78	0.65
1:XA:1316:G:N2	1:XA:1319:A:OP2	2.29	0.65
2:XB:87:ARG:O	2:XB:87:ARG:HD2	1.95	0.65
19:XS:10:PHE:CG	19:XS:11:VAL:N	2.65	0.65
20:XT:83:ARG:CA	20:XT:86:ARG:HB3	2.27	0.65
25:YA:1055:G:O2'	25:YA:1085:A:N1	2.27	0.65
25:YA:1429:G:H2'	25:YA:1430:C:C6	2.31	0.65
25:YA:2093:G:H2'	25:YA:2094:G:H8	1.60	0.65
35:YP:39:LYS:HA	35:YP:45:LEU:HD13	1.79	0.65
35:YP:113:LYS:HG2	35:YP:115:LEU:HD23	1.79	0.65
48:Y2:69:ARG:NH1	48:Y2:69:ARG:HB2	2.11	0.65
1:QA:1071:C:H5''	5:QE:49:PRO:HG2	1.79	0.65
6:QF:98:LEU:HB3	18:QR:30:ASP:HA	1.79	0.65
7:QG:21:VAL:HG23	7:QG:22:LEU:H	1.60	0.65
8:QH:118:VAL:C	8:QH:119:LEU:HD23	2.21	0.65
10:QJ:27:ALA:CB	10:QJ:34:VAL:HG21	2.26	0.65
15:QO:8:LYS:O	15:QO:12:ILE:HG13	1.97	0.65
25:RA:597:U:H2'	25:RA:598:G:H8	1.62	0.65
25:RA:896:A:C2	45:RZ:146:ILE:HD11	2.32	0.65
25:RA:1156:A:C8	40:RU:51:LYS:HD2	2.32	0.65
26:RB:55:U:H4'	30:RG:28:VAL:HG21	1.79	0.65
28:RE:28:ALA:O	28:RE:93:VAL:HG23	1.95	0.65
34:RO:71:ARG:NH1	39:RT:74:ARG:HH21	1.94	0.65
35:RP:39:LYS:HA	35:RP:45:LEU:HD13	1.79	0.65
36:RQ:80:GLU:C	36:RQ:81:VAL:HG13	2.22	0.65
40:RU:90:VAL:CG1	40:RU:91:ASP:H	2.00	0.65
42:RW:18:ARG:HG3	42:RW:76:VAL:HG13	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:49:PHE:O	50:R4:50:VAL:HG23	1.97	0.65
1:XA:797:C:OP1	11:XK:124:LYS:HE2	1.96	0.65
1:XA:1002:G:H2'	1:XA:1003:G:H8	1.62	0.65
2:XB:17:PHE:HD2	2:XB:44:LEU:HD21	1.61	0.65
7:XG:21:VAL:HG23	7:XG:22:LEU:H	1.61	0.65
12:XL:39:VAL:HB	12:XL:57:LYS:HB2	1.78	0.65
25:YA:451:C:H4'	29:YF:52:LYS:NZ	2.12	0.65
25:YA:2071:A:H2	25:YA:2441:C:N3	1.94	0.65
25:YA:2468:G:H5''	36:YQ:120:ILE:HD12	1.79	0.65
44:YY:99:CYS:SG	44:YY:100:ALA:N	2.69	0.65
47:Y1:80:LEU:C	47:Y1:81:LYS:CD	2.69	0.65
4:QD:28:SER:CB	4:QD:29:PRO:HD3	2.25	0.65
6:QF:50:TYR:CE1	18:QR:77:GLY:HA2	2.32	0.65
12:QL:39:VAL:HB	12:QL:57:LYS:HB2	1.79	0.65
13:QM:3:ARG:HG2	50:R4:34:GLU:OE1	1.96	0.65
16:QP:51:VAL:HG21	16:QP:77:ALA:HB2	1.78	0.65
27:RD:172:TYR:HB3	27:RD:184:LYS:HG2	1.77	0.65
34:RO:7:TYR:CE1	34:RO:20:MET:HB2	2.32	0.65
35:RP:6:LEU:O	35:RP:7:ARG:HG2	1.97	0.65
35:RP:138:LEU:C	35:RP:140:ALA:N	2.55	0.65
47:R1:29:GLY:O	47:R1:30:VAL:HG23	1.97	0.65
47:R1:80:LEU:C	47:R1:81:LYS:CD	2.69	0.65
50:R4:36:CYS:O	50:R4:37:SER:O	2.14	0.65
52:R6:7:ILE:HG13	52:R6:8:LYS:N	2.06	0.65
6:XF:98:LEU:HB3	18:XR:30:ASP:HA	1.79	0.65
9:XI:112:LYS:HA	9:XI:119:ALA:HB2	1.77	0.65
13:XM:51:ALA:O	13:XM:55:ARG:HG3	1.97	0.65
16:XP:6:LEU:HD23	16:XP:17:TYR:CD2	2.32	0.65
18:XR:73:ALA:HB3	18:XR:79:LEU:HD12	1.78	0.65
25:YA:702:G:N2	25:YA:730:C:N3	2.44	0.65
25:YA:2073:C:H2'	25:YA:2074:U:H6	1.61	0.65
25:YA:2466:C:OP1	55:Y9:4:ARG:HB2	1.97	0.65
33:YN:43:THR:HB	33:YN:46:VAL:CG1	2.27	0.65
39:YT:11:GLU:N	39:YT:11:GLU:OE1	2.27	0.65
40:YU:74:LEU:HD23	40:YU:114:LYS:HD3	1.78	0.65
54:Y8:52:LYS:O	54:Y8:52:LYS:HG3	1.97	0.65
1:QA:1124:G:H3'	1:QA:1145:C:H41	1.62	0.65
2:QB:14:GLY:O	2:QB:15:VAL:HG13	1.96	0.65
8:QH:20:TYR:CE2	8:QH:75:ARG:HD2	2.32	0.65
10:QJ:34:VAL:HG22	10:QJ:74:ILE:HG22	1.77	0.65
15:QO:74:ASP:OD1	15:QO:77:ARG:N	2.30	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:43:PHE:CE2	18:QR:58:LEU:HD11	2.31	0.65
25:RA:1292:U:H2'	25:RA:1293:C:C6	2.31	0.65
28:RE:37:ARG:HA	28:RE:37:ARG:NE	2.11	0.65
28:RE:51:PHE:O	28:RE:52:LEU:C	2.38	0.65
40:RU:96:ALA:C	40:RU:98:LEU:H	2.04	0.65
44:RY:35:TYR:CE1	44:RY:69:ALA:HB3	2.31	0.65
47:R1:11:ARG:HB3	47:R1:11:ARG:HH11	1.61	0.65
51:R5:40:LYS:HD3	51:R5:46:CYS:CB	2.26	0.65
51:R5:56:LYS:H	51:R5:56:LYS:CD	2.07	0.65
1:XA:607:A:C2	16:XP:31:LYS:HB2	2.31	0.65
3:XC:101:LEU:HD23	3:XC:102:ASN:N	2.11	0.65
5:XE:50:GLU:HG3	5:XE:52:PRO:HD2	1.79	0.65
6:XF:97:PHE:HD2	6:XF:97:PHE:C	2.05	0.65
7:XG:11:GLN:O	7:XG:12:LEU:HD13	1.97	0.65
15:XO:25:THR:HG21	15:XO:70:LEU:HB2	1.77	0.65
19:XS:3:ARG:CZ	19:XS:8:GLY:HA2	2.26	0.65
19:XS:68:GLY:HA3	50:Y4:68:ARG:CB	2.27	0.65
26:YB:42:C:O2	30:YG:93:THR:N	2.28	0.65
28:YE:201:THR:HG22	28:YE:203:LYS:N	2.07	0.65
31:YH:128:PRO:CD	31:YH:129:THR:H	2.09	0.65
35:YP:97:PRO:HD3	35:YP:126:VAL:O	1.97	0.65
35:YP:138:LEU:HD11	35:YP:144:GLU:HG3	1.78	0.65
46:Y0:68:GLU:OE1	46:Y0:82:ARG:NH1	2.30	0.65
1:QA:486:U:H2'	1:QA:487:A:H8	1.62	0.65
1:QA:540:G:H2'	1:QA:541:G:C8	2.32	0.65
2:QB:155:LEU:HD12	2:QB:157:ARG:O	1.97	0.65
19:QS:10:PHE:CG	19:QS:11:VAL:N	2.65	0.65
20:QT:83:ARG:CA	20:QT:86:ARG:HB3	2.27	0.65
25:RA:443:A:N7	29:RF:45:ARG:HD2	2.12	0.65
25:RA:879:G:C2	25:RA:880:G:H1'	2.32	0.65
25:RA:2770:G:H5''	25:RA:2771:C:OP2	1.96	0.65
28:RE:13:ARG:NH1	28:RE:21:VAL:HG12	2.11	0.65
29:RF:45:ARG:CG	29:RF:45:ARG:HH11	2.09	0.65
30:RG:145:THR:HG23	50:R4:28:LYS:NZ	2.11	0.65
34:RO:110:GLY:HA2	34:RO:112:MET:HE3	1.77	0.65
36:RQ:88:GLY:C	36:RQ:90:VAL:H	2.02	0.65
41:RV:43:GLU:OE2	41:RV:43:GLU:HA	1.95	0.65
48:R2:40:SER:C	48:R2:42:GLY:N	2.51	0.65
1:XA:1314:C:OP2	19:XS:4:SER:OG	2.15	0.65
1:XA:1320:C:N4	19:XS:36:ARG:HG3	2.12	0.65
2:XB:7:VAL:HG22	2:XB:8:LYS:HD3	1.76	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:164:VAL:HB	2:XB:186:ALA:HB2	1.78	0.65
3:XC:34:LEU:HD21	3:XC:38:ARG:HD2	1.79	0.65
7:XG:141:VAL:HG12	7:XG:141:VAL:O	1.95	0.65
15:XO:74:ASP:OD1	15:XO:77:ARG:N	2.30	0.65
19:XS:21:GLU:HG3	19:XS:22:LEU:N	2.11	0.65
20:XT:44:ALA:HB2	20:XT:88:VAL:HG13	1.78	0.65
25:YA:2807:G:N1	25:YA:2893:G:O6	2.30	0.65
27:YD:44:ASN:HB3	27:YD:49:ILE:HG22	1.78	0.65
35:YP:6:LEU:O	35:YP:7:ARG:HG2	1.97	0.65
36:YQ:23:GLY:HA3	36:YQ:101:ARG:NH1	2.12	0.65
37:YR:28:LEU:HD21	37:YR:114:VAL:HG12	1.79	0.65
54:Y8:56:GLU:N	54:Y8:56:GLU:OE1	2.30	0.65
1:QA:954:G:H21	1:QA:1227:A:N6	1.91	0.64
10:QJ:6:ILE:HD11	10:QJ:72:VAL:CB	2.24	0.64
12:QL:26:ALA:O	12:QL:27:LEU:O	2.14	0.64
25:RA:363(B):G:H2'	25:RA:363(C):G:C8	2.32	0.64
25:RA:389:G:H1	35:RP:70:GLN:HB3	1.62	0.64
25:RA:1020:A:N1	25:RA:1141:U:O2'	2.26	0.64
25:RA:1814:G:H4'	27:RD:51:VAL:HG21	1.79	0.64
35:RP:97:PRO:HD3	35:RP:126:VAL:O	1.97	0.64
40:RU:74:LEU:HD23	40:RU:114:LYS:HD3	1.78	0.64
47:R1:80:LEU:HD12	47:R1:81:LYS:HE3	1.78	0.64
48:R2:69:ARG:HB2	48:R2:69:ARG:NH1	2.11	0.64
1:XA:953:G:N7	13:XM:104:ARG:NH2	2.45	0.64
4:XD:122:ARG:HD3	4:XD:122:ARG:O	1.97	0.64
12:XL:21:LYS:N	12:XL:21:LYS:HD2	2.11	0.64
12:XL:115:LYS:O	12:XL:117:ARG:HG3	1.97	0.64
14:XN:19:ARG:O	14:XN:20:ALA:C	2.40	0.64
25:YA:278:A:O2'	25:YA:279:C:O4'	2.08	0.64
27:YD:176:ARG:HH11	27:YD:176:ARG:HG2	1.61	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HG2	1.97	0.64
40:YU:102:GLU:HG3	41:YV:2:PHE:HE2	1.62	0.64
42:YW:25:ARG:HB2	42:YW:25:ARG:NH1	2.11	0.64
42:YW:59:VAL:HG12	42:YW:60:ASN:N	2.11	0.64
45:YZ:10:ARG:HH21	45:YZ:26:GLY:H	1.45	0.64
1:QA:546:G:P	4:QD:72:GLU:HB3	2.37	0.64
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.79	0.64
2:QB:67:THR:HG21	2:QB:155:LEU:CD2	2.27	0.64
3:QC:138:VAL:HG13	3:QC:149:ALA:CB	2.27	0.64
4:QD:52:SER:HB3	4:QD:55:ALA:CB	2.27	0.64
4:QD:163:GLU:C	4:QD:165:MET:H	2.03	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:97:PHE:C	6:QF:97:PHE:HD2	2.05	0.64
10:QJ:54:PHE:CZ	10:QJ:55:LYS:NZ	2.61	0.64
22:QV:6:G:H1	22:QV:67:C:H42	1.45	0.64
24:QY:29:U:H2'	24:QY:30:C:H6	1.61	0.64
25:RA:2313:C:H2'	25:RA:2314:C:H6	1.62	0.64
26:RB:78:A:H2'	26:RB:79:C:O4'	1.97	0.64
28:RE:50:GLY:HA3	28:RE:74:PRO:HG3	1.79	0.64
31:RH:51:ARG:HH11	31:RH:51:ARG:HG3	1.62	0.64
31:RH:148:ILE:O	31:RH:151:ILE:HG12	1.98	0.64
36:RQ:81:VAL:O	36:RQ:82:ARG:HG2	1.97	0.64
39:RT:11:GLU:N	39:RT:11:GLU:OE1	2.27	0.64
47:R1:56:GLN:N	47:R1:56:GLN:HE21	1.93	0.64
47:R1:73:LEU:C	47:R1:75:GLU:H	2.03	0.64
5:XE:41:VAL:HG12	5:XE:112:LEU:O	1.97	0.64
5:XE:41:VAL:CG1	5:XE:113:ALA:HB2	2.25	0.64
8:XH:20:TYR:CE2	8:XH:75:ARG:HD2	2.32	0.64
11:XK:103:LEU:HD22	11:XK:103:LEU:H	1.62	0.64
13:XM:23:TYR:CB	13:XM:67:GLU:HG2	2.25	0.64
14:YN:7:ILE:HG13	14:YN:8:GLU:N	2.11	0.64
17:XQ:11:VAL:HG23	17:XQ:20:THR:HB	1.79	0.64
25:YA:526:A:N3	25:YA:2044:C:H1'	2.11	0.64
25:YA:2713:A:OP1	37:YR:14:SER:OG	2.12	0.64
39:YT:22:PHE:N	39:YT:22:PHE:CD2	2.64	0.64
50:Y4:35:VAL:O	50:Y4:37:SER:N	2.26	0.64
51:Y5:40:LYS:HD3	51:Y5:46:CYS:CB	2.26	0.64
1:QA:73:G:H1	1:QA:97:U:H3	1.45	0.64
1:QA:1024:G:H4'	1:QA:1024:G:OP1	1.96	0.64
10:QJ:39:PRO:HB3	10:QJ:70:ARG:HH12	1.61	0.64
16:QP:58:TYR:O	16:QP:62:VAL:HG22	1.96	0.64
25:RA:2517:C:N3	25:RA:2542:A:N6	2.45	0.64
25:RA:2680:C:H5'	28:RE:189:PRO:HA	1.79	0.64
28:RE:35:GLN:CG	28:RE:37:ARG:HE	2.11	0.64
31:RH:105:LEU:H	31:RH:105:LEU:CD1	2.09	0.64
8:XH:42:GLU:HG3	8:XH:109:ILE:HD12	1.80	0.64
19:XS:5:LEU:HD22	50:Y4:67:TYR:CE2	2.31	0.64
19:XS:21:GLU:O	19:XS:25:LYS:HB3	1.97	0.64
25:YA:530:G:C2	25:YA:2022:U:OP1	2.50	0.64
25:YA:2314:C:H2'	25:YA:2315:G:C8	2.32	0.64
26:YB:38:C:N4	26:YB:44:G:H1	1.95	0.64
27:YD:77:ALA:HB2	27:YD:97:TYR:HA	1.77	0.64
31:YH:51:ARG:HG3	31:YH:51:ARG:HH11	1.61	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:105:LEU:H	31:YH:105:LEU:CD1	2.09	0.64
35:YP:98:GLU:O	35:YP:101:VAL:HG12	1.98	0.64
38:YS:78:LEU:HD11	38:YS:107:GLU:O	1.98	0.64
41:YV:76:LYS:HB2	41:YV:81:TYR:HB3	1.79	0.64
47:Y1:29:GLY:O	47:Y1:30:VAL:HG23	1.97	0.64
1:QA:191:G:N9	20:QT:105:SER:HB3	2.11	0.64
1:QA:198:G:H1	1:QA:219:C:H42	1.44	0.64
1:QA:971:G:N2	1:QA:1363:A:OP2	2.30	0.64
3:QC:58:GLU:O	3:QC:64:VAL:HA	1.98	0.64
9:QI:53:VAL:HG21	9:QI:92:TYR:CE1	2.32	0.64
19:QS:35:SER:O	19:QS:71:LEU:HD12	1.96	0.64
25:RA:816:C:H2'	25:RA:817:C:H6	1.62	0.64
27:RD:77:ALA:HB2	27:RD:97:TYR:HA	1.77	0.64
30:RG:81:LYS:O	30:RG:82:LEU:HB2	1.96	0.64
33:RN:15:LEU:HD12	33:RN:136:GLU:HB2	1.79	0.64
33:RN:57:ALA:HA	33:RN:60:ILE:HD11	1.78	0.64
37:RR:2:ARG:HG2	37:RR:5:LYS:NZ	2.13	0.64
37:RR:75:LEU:HD13	37:RR:75:LEU:C	2.22	0.64
40:RU:65:ILE:HG12	40:RU:96:ALA:CB	2.26	0.64
44:RY:56:PRO:HG2	44:RY:57:GLN:OE1	1.98	0.64
50:R4:71:ARG:HH11	50:R4:71:ARG:CG	1.98	0.64
4:XD:61:LYS:HD2	4:XD:206:PHE:CE2	2.32	0.64
12:XL:126:LYS:C	12:XL:128:ALA:H	2.04	0.64
24:XY:29:U:H2'	24:XY:30:C:H6	1.60	0.64
25:YA:1166:C:H42	25:YA:1183:G:H1	1.45	0.64
25:YA:1228:G:OP2	40:YU:16:LYS:NZ	2.17	0.64
25:YA:1386:C:H2'	25:YA:1387:C:C6	2.33	0.64
30:YG:82:LEU:HA	30:YG:86:MET:SD	2.38	0.64
36:YQ:80:GLU:C	36:YQ:81:VAL:HG13	2.22	0.64
50:Y4:36:CYS:O	50:Y4:37:SER:O	2.14	0.64
1:QA:880:C:OP1	12:QL:8:ASN:ND2	2.30	0.64
2:QB:158:LEU:O	2:QB:158:LEU:HD12	1.98	0.64
13:QM:4:ILE:H	13:QM:9:ILE:HG22	1.62	0.64
25:RA:1141:U:O2'	25:RA:1142:U:OP2	2.16	0.64
25:RA:2227:A:H5''	27:RD:263:ARG:NH1	2.12	0.64
25:RA:2746:U:H5''	31:RH:138:LYS:HE2	1.79	0.64
27:RD:236:GLY:C	27:RD:237:GLU:OE1	2.40	0.64
28:RE:104:VAL:HG11	28:RE:188:VAL:CG2	2.27	0.64
32:RI:116:LEU:O	32:RI:118:LYS:N	2.31	0.64
36:RQ:10:ARG:O	36:RQ:11:LYS:HB2	1.98	0.64
1:XA:636:U:H2'	1:XA:637:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:83:GLU:HG2	5:XE:88:LYS:HG3	1.79	0.64
13:XM:13:LYS:HA	13:XM:44:ARG:HD2	1.78	0.64
25:YA:588:U:H1'	29:YF:90:PHE:CD1	2.33	0.64
25:YA:1396:U:H2'	25:YA:1396:U:O2	1.97	0.64
28:YE:104:VAL:HG11	28:YE:188:VAL:CG2	2.27	0.64
29:YF:155:LEU:HD13	29:YF:174:VAL:CG1	2.27	0.64
30:YG:81:LYS:O	30:YG:82:LEU:HB2	1.96	0.64
30:YG:114:ILE:CG2	30:YG:117:PHE:HB2	2.27	0.64
31:YH:117:PRO:HB3	31:YH:123:PHE:CE1	2.33	0.64
36:YQ:81:VAL:O	36:YQ:82:ARG:HD3	1.97	0.64
41:YV:43:GLU:HA	41:YV:43:GLU:OE2	1.95	0.64
1:QA:1223:C:H5''	1:QA:1224:G:H5''	1.79	0.64
5:QE:41:VAL:HG12	5:QE:112:LEU:O	1.97	0.64
25:RA:1678:G:N2	25:RA:1989:G:H22	1.94	0.64
30:RG:82:LEU:HA	30:RG:86:MET:SD	2.38	0.64
40:RU:102:GLU:HG3	41:RV:2:PHE:HE2	1.62	0.64
42:RW:59:VAL:HG12	42:RW:60:ASN:N	2.11	0.64
1:XA:618:C:N3	1:XA:622:A:N6	2.45	0.64
2:XB:187:LEU:HD12	2:XB:205:ASP:HA	1.79	0.64
3:XC:138:VAL:HG13	3:XC:149:ALA:CB	2.27	0.64
19:XS:65:ASN:N	19:XS:65:ASN:HD22	1.94	0.64
21:XU:25:LYS:HE2	21:XU:26:LYS:O	1.97	0.64
25:YA:707:G:H1	25:YA:724:U:H3	1.45	0.64
25:YA:984:A:H5''	25:YA:985:C:H5	1.62	0.64
25:YA:2747:G:N2	25:YA:2748:A:N7	2.45	0.64
33:YN:1:MET:HE2	41:YV:12:TYR:HA	1.80	0.64
33:YN:15:LEU:HD12	33:YN:136:GLU:HB2	1.79	0.64
34:YO:12:ASP:OD1	34:YO:14:THR:HG23	1.97	0.64
40:YU:92:ARG:C	40:YU:94:ASN:H	2.05	0.64
44:YY:56:PRO:HG2	44:YY:57:GLN:OE1	1.98	0.64
44:YY:86:ARG:O	44:YY:92:ASN:HB2	1.97	0.64
47:Y1:80:LEU:HD12	47:Y1:81:LYS:HE3	1.78	0.64
1:QA:719:C:O2'	18:QR:49:LYS:HB3	1.98	0.64
2:QB:60:ASP:HB3	2:QB:64:ARG:NH1	2.13	0.64
4:QD:29:PRO:HG2	4:QD:30:LYS:NZ	2.12	0.64
6:QF:12:PRO:HG2	6:QF:13:ASN:H	1.62	0.64
10:QJ:42:THR:HG23	10:QJ:68:HIS:HA	1.80	0.64
14:QN:19:ARG:O	14:QN:20:ALA:C	2.40	0.64
25:RA:1138:G:H21	33:RN:106:MET:HE3	1.63	0.64
27:RD:35:LYS:HE3	27:RD:64:ILE:C	2.21	0.64
27:RD:182:LEU:H	27:RD:272:ALA:HB3	1.63	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:23:GLY:HA3	36:RQ:101:ARG:NH1	2.12	0.64
40:RU:92:ARG:C	40:RU:94:ASN:H	2.05	0.64
54:R8:56:GLU:N	54:R8:56:GLU:OE1	2.30	0.64
1:XA:923:A:OP1	5:XE:21:ALA:HB2	1.97	0.64
1:XA:1314:C:OP1	19:XS:6:LYS:HE3	1.98	0.64
2:XB:8:LYS:H	2:XB:8:LYS:CD	2.09	0.64
2:XB:134:GLU:HA	2:XB:137:ARG:HB3	1.80	0.64
4:XD:13:ARG:HD2	4:XD:38:TYR:O	1.98	0.64
6:XF:50:TYR:CE1	18:XR:77:GLY:HA2	2.32	0.64
25:YA:795:C:H2'	25:YA:796:C:C6	2.32	0.64
25:YA:846:C:O2'	25:YA:847:U:OP2	2.15	0.64
25:YA:1161:C:O2'	41:YV:8:GLY:HA2	1.97	0.64
25:YA:1776:G:C2	25:YA:1777:U:C6	2.85	0.64
29:YF:175:THR:O	29:YF:176:LEU:HB2	1.95	0.64
36:YQ:86:GLY:C	36:YQ:88:GLY:N	2.52	0.64
4:QD:61:LYS:HD2	4:QD:206:PHE:CE2	2.32	0.64
14:QN:7:ILE:HG13	14:QN:8:GLU:N	2.12	0.64
18:QR:73:ALA:HB3	18:QR:79:LEU:HD12	1.78	0.64
20:QT:26:ASN:HB2	20:QT:71:THR:HG23	1.79	0.64
25:RA:882:G:H1	25:RA:894:C:H42	1.46	0.64
35:RP:105:LEU:O	35:RP:106:LEU:CB	2.42	0.64
3:XC:181:ASN:ND2	3:XC:204:LEU:HB2	2.13	0.64
7:XG:113:GLU:CG	7:XG:119:ARG:HG2	2.28	0.64
9:XI:28:VAL:HA	9:XI:63:ILE:HB	1.79	0.64
10:XJ:27:ALA:CB	10:XJ:34:VAL:HG21	2.26	0.64
11:XK:48:ILE:HD11	11:XK:64:ALA:CA	2.28	0.64
14:YN:18:VAL:HG23	14:YN:19:ARG:H	1.62	0.64
16:XP:58:TYR:O	16:XP:62:VAL:HG22	1.97	0.64
25:YA:795:C:H2'	25:YA:796:C:H6	1.63	0.64
25:YA:1676:A:H8	25:YA:1676:A:O5'	1.80	0.64
25:YA:2023:G:H5'	25:YA:2617:C:H4'	1.80	0.64
26:YB:14:U:OP2	26:YB:70:C:O2'	2.15	0.64
31:YH:92:ILE:HD12	31:YH:92:ILE:H	1.63	0.64
36:YQ:86:GLY:C	36:YQ:88:GLY:H	2.03	0.64
37:YR:75:LEU:HD13	37:YR:75:LEU:C	2.22	0.64
41:YV:36:PRO:HA	41:YV:56:SER:OG	1.98	0.64
50:Y4:49:PHE:O	50:Y4:50:VAL:HG23	1.97	0.64
1:QA:1237:C:O2'	1:QA:1300:G:N2	2.24	0.64
2:QB:178:ARG:NE	8:QH:71:GLY:C	2.56	0.64
5:QE:83:GLU:HG2	5:QE:88:LYS:HG3	1.78	0.64
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.78	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1328:G:H2'	25:RA:1330:C:C4	2.33	0.64
25:RA:2688:U:H1'	25:RA:2721:A:N6	2.13	0.64
25:RA:2774:C:H2'	25:RA:2775:A:C8	2.33	0.64
28:RE:201:THR:HG21	28:RE:203:LYS:HB3	1.80	0.64
35:RP:98:GLU:O	35:RP:101:VAL:HG12	1.98	0.64
36:RQ:104:PHE:O	36:RQ:105:GLU:HB3	1.98	0.64
43:RX:11:PRO:HB3	43:RX:92:LEU:HD21	1.78	0.64
47:R1:91:LYS:HG3	47:R1:92:LYS:H	1.63	0.64
1:XA:452:A:H62	1:XA:480:U:H3	1.46	0.64
2:XB:21:ARG:HB2	2:XB:39:ILE:HA	1.80	0.64
5:XE:53:LEU:HD12	5:XE:53:LEU:N	2.09	0.64
8:XH:28:ALA:HB3	8:XH:57:PRO:HB2	1.79	0.64
11:XK:19:ALA:HA	11:XK:32:ILE:HG22	1.80	0.64
15:XO:87:ILE:CG2	15:XO:88:ARG:H	2.00	0.64
16:XP:51:VAL:HG21	16:XP:77:ALA:HB2	1.78	0.64
25:YA:1142(A):A:H4'	33:YN:25:ARG:HH22	1.61	0.64
25:YA:2392:A:C8	35:YP:60:MET:HG3	2.33	0.64
25:YA:2677:G:N2	25:YA:2730:C:O2	2.25	0.64
26:YB:50:G:OP1	38:YS:63:THR:HG23	1.98	0.64
27:YD:12:SER:C	27:YD:14:ARG:H	2.06	0.64
27:YD:135:PHE:N	27:YD:135:PHE:HD2	1.96	0.64
29:YF:11:VAL:HG12	29:YF:12:LEU:N	2.13	0.64
31:YH:3:ARG:HA	31:YH:3:ARG:NE	2.12	0.64
37:YR:2:ARG:HG2	37:YR:5:LYS:NZ	2.13	0.64
1:QA:15:G:C4'	5:QE:24:ARG:HH12	2.11	0.64
1:QA:954:G:H4'	13:QM:121:LYS:HG3	1.80	0.64
3:QC:34:LEU:HD21	3:QC:38:ARG:HD2	1.79	0.64
11:QK:103:LEU:H	11:QK:103:LEU:HD22	1.62	0.64
14:QN:53:LEU:HB3	14:QN:56:VAL:HG21	1.80	0.64
15:QO:8:LYS:HB2	15:QO:8:LYS:NZ	2.13	0.64
25:RA:1403:C:H5''	25:RA:1471:A:H1'	1.80	0.64
25:RA:2250:G:C6	36:RQ:82:ARG:HD2	2.33	0.64
25:RA:2638:G:P	28:RE:82:ARG:HH22	2.21	0.64
30:RG:114:ILE:CG2	30:RG:117:PHE:HB2	2.28	0.64
31:RH:92:ILE:H	31:RH:92:ILE:HD12	1.63	0.64
33:RN:43:THR:HB	33:RN:46:VAL:CG1	2.27	0.64
36:RQ:30:GLY:HA3	36:RQ:106:VAL:O	1.98	0.64
37:RR:79:LEU:HD23	37:RR:79:LEU:C	2.23	0.64
1:XA:537:G:H5''	12:XL:113:ARG:HH12	1.63	0.64
1:XA:939:G:H5''	7:XG:102:ARG:NH2	2.12	0.64
3:XC:58:GLU:O	3:XC:64:VAL:HA	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:12:PRO:HG2	6:XF:13:ASN:H	1.62	0.64
8:XH:97:VAL:HG13	8:XH:98:LYS:N	2.13	0.64
9:XI:5:TYR:O	9:XI:84:ALA:HA	1.98	0.64
23:XX:3:G:C2'	23:XX:4:C:OP2	2.45	0.64
25:YA:242:G:C8	54:Y8:5:LYS:HG2	2.32	0.64
28:YE:4:ILE:C	28:YE:5:LEU:HD23	2.23	0.64
28:YE:69:LYS:O	28:YE:71:GLY:N	2.27	0.64
29:YF:45:ARG:CG	29:YF:45:ARG:HH11	2.09	0.64
31:YH:148:ILE:O	31:YH:151:ILE:HG12	1.98	0.64
38:YS:26:LEU:HD22	38:YS:87:PHE:HD1	1.63	0.64
43:YX:57:LEU:HD12	43:YX:78:LYS:HB2	1.77	0.64
45:YZ:53:ILE:HG22	45:YZ:71:VAL:HG13	1.79	0.64
1:QA:709:G:H2'	1:QA:710:G:H8	1.63	0.63
1:QA:1080:A:H5''	5:QE:16:THR:CG2	2.28	0.63
8:QH:97:VAL:HG13	8:QH:98:LYS:N	2.13	0.63
9:QI:47:LEU:N	9:QI:47:LEU:HD22	2.14	0.63
12:QL:46:LYS:HG2	12:QL:47:LYS:N	2.12	0.63
16:QP:51:VAL:CG1	16:QP:52:ASP:H	2.11	0.63
25:RA:155:C:H42	25:RA:171:G:H1	1.43	0.63
25:RA:210:C:OP2	53:R7:29:LYS:NZ	2.31	0.63
27:RD:12:SER:C	27:RD:14:ARG:H	2.06	0.63
34:RO:86:ILE:HD12	34:RO:86:ILE:N	2.13	0.63
35:RP:112:LEU:HD11	35:RP:114:ILE:HG23	1.80	0.63
42:RW:74:ALA:O	42:RW:75:TYR:HB3	1.98	0.63
2:XB:158:LEU:O	2:XB:158:LEU:HD12	1.97	0.63
9:XI:62:TYR:O	9:XI:63:ILE:HD12	1.98	0.63
25:YA:1792:G:N2	25:YA:1827:C:O2	2.23	0.63
27:YD:18:VAL:HG12	27:YD:19:ALA:O	1.99	0.63
28:YE:14:ILE:CG1	28:YE:15:PHE:H	2.08	0.63
29:YF:46:ARG:HG2	29:YF:46:ARG:NH1	2.00	0.63
33:YN:39:ARG:HB3	33:YN:41:ASP:OD1	1.98	0.63
33:YN:41:ASP:O	33:YN:48:MET:HE3	1.98	0.63
34:YO:7:TYR:CE1	34:YO:20:MET:HB2	2.32	0.63
34:YO:104:ARG:HG2	34:YO:104:ARG:NH1	2.14	0.63
36:YQ:104:PHE:O	36:YQ:105:GLU:HB3	1.98	0.63
54:Y8:48:PHE:N	54:Y8:48:PHE:CD1	2.66	0.63
1:QA:458:C:H2'	1:QA:464:G:H8	1.64	0.63
1:QA:949:A:H1'	1:QA:1364:U:N3	2.13	0.63
2:QB:134:GLU:HA	2:QB:137:ARG:HB3	1.80	0.63
3:QC:181:ASN:ND2	3:QC:204:LEU:HB2	2.13	0.63
6:QF:62:TRP:C	6:QF:63:TYR:HD2	2.06	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:5:TYR:O	9:QI:84:ALA:HA	1.98	0.63
11:QK:48:ILE:HD11	11:QK:64:ALA:CA	2.28	0.63
13:QM:51:ALA:O	13:QM:55:ARG:HG3	1.97	0.63
21:QU:15:ARG:HH11	21:QU:15:ARG:HG2	1.63	0.63
25:RA:573:G:N1	25:RA:2031:A:OP2	2.26	0.63
25:RA:2122:U:H2'	25:RA:2123:G:C8	2.29	0.63
27:RD:35:LYS:HZ1	27:RD:65:ILE:HA	1.62	0.63
27:RD:135:PHE:N	27:RD:135:PHE:HD2	1.96	0.63
37:RR:28:LEU:HD21	37:RR:114:VAL:HG12	1.79	0.63
38:RS:42:ASP:C	38:RS:44:LYS:H	2.06	0.63
41:RV:52:VAL:CG2	41:RV:55:ALA:HB3	2.28	0.63
43:RX:63:LYS:O	43:RX:64:LYS:HD2	1.98	0.63
2:XB:178:ARG:NH2	8:XH:74:PRO:HB3	2.07	0.63
19:XS:5:LEU:HD21	50:Y4:66:SER:CB	2.28	0.63
25:YA:654(A):G:H22	25:YA:654(U):A:H1'	1.62	0.63
38:YS:42:ASP:C	38:YS:44:LYS:H	2.07	0.63
40:YU:92:ARG:O	40:YU:94:ASN:N	2.25	0.63
42:YW:110:LYS:HG3	42:YW:111:HIS:ND1	2.13	0.63
47:Y1:82:LEU:CD1	47:Y1:83:GLU:CA	2.76	0.63
47:Y1:91:LYS:HG3	47:Y1:92:LYS:H	1.62	0.63
1:QA:1397:C:H1'	23:QX:8:A:N6	2.14	0.63
2:QB:8:LYS:H	2:QB:8:LYS:CD	2.09	0.63
4:QD:30:LYS:HA	4:QD:34:GLU:HB2	1.79	0.63
4:QD:166:LYS:HG3	27:YD:135:PHE:HZ	1.62	0.63
19:QS:39:THR:HG22	19:QS:40:ILE:N	2.14	0.63
25:RA:844:C:H41	25:RA:845:G:N2	1.95	0.63
25:RA:923:C:H2'	25:RA:924:C:C6	2.33	0.63
25:RA:1543:A:O2'	25:RA:1544:C:H3'	1.97	0.63
25:RA:2015:A:N3	51:R5:2:ALA:N	2.47	0.63
25:RA:2466:C:OP1	55:R9:4:ARG:HB2	1.99	0.63
25:RA:2477:C:H2'	55:R9:1:MET:CG	2.28	0.63
25:RA:2563:U:H4'	34:RO:28:SER:HA	1.81	0.63
29:RF:132:VAL:HG23	29:RF:133:ASN:N	2.14	0.63
31:RH:3:ARG:HA	31:RH:3:ARG:NE	2.12	0.63
33:RN:1:MET:HE2	41:RV:12:TYR:HA	1.80	0.63
35:RP:113:LYS:HG2	35:RP:115:LEU:HD23	1.79	0.63
1:XA:192:U:H2'	1:XA:193:C:C6	2.34	0.63
1:XA:232:G:O2'	1:XA:262:A:N6	2.26	0.63
4:XD:165:MET:HE1	4:XD:168:ARG:HD2	1.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:91:ARG:HH22	18:XR:88:LYS:HZ3	1.45	0.63
12:XL:62:SER:O	12:XL:64:TYR:HD1	1.82	0.63
28:YE:50:GLY:HA3	28:YE:74:PRO:HG3	1.80	0.63
1:QA:545:C:OP2	4:QD:62:GLN:NE2	2.32	0.63
1:QA:707:C:H2'	1:QA:708:C:H6	1.64	0.63
1:QA:1070:U:H5'	5:QE:18:ARG:HH22	1.63	0.63
5:QE:78:HIS:CD2	8:QH:104:ARG:HE	2.16	0.63
8:QH:6:ILE:HB	8:QH:85:ARG:HH12	1.62	0.63
9:QL:97:LYS:HB3	9:QL:98:PRO:HD3	1.79	0.63
12:QL:18:VAL:HG23	12:QL:19:ARG:H	1.63	0.63
12:QL:62:SER:O	12:QL:64:TYR:HD1	1.81	0.63
12:QL:126:LYS:HB2	12:QL:126:LYS:HZ3	1.64	0.63
20:QT:14:LYS:HA	20:QT:17:ARG:NH1	2.14	0.63
25:RA:2839:G:H21	37:RR:92:GLY:HA3	1.64	0.63
26:RB:5:C:OP1	26:RB:61:G:O2'	2.12	0.63
31:RH:117:PRO:HB3	31:RH:123:PHE:CE1	2.33	0.63
33:RN:1:MET:HE1	40:RU:95:LEU:CD2	2.18	0.63
33:RN:39:ARG:HB3	33:RN:41:ASP:OD1	1.98	0.63
38:RS:88:ASP:CG	38:RS:90:GLY:H	2.06	0.63
1:XA:376:G:H2'	1:XA:377:G:C8	2.33	0.63
2:XB:25:ASN:O	2:XB:27:LYS:N	2.28	0.63
8:XH:20:TYR:HA	8:XH:65:TYR:HE2	1.60	0.63
12:XL:18:VAL:HG23	12:XL:19:ARG:H	1.63	0.63
12:XL:86:ARG:HB2	12:XL:101:VAL:CG2	2.28	0.63
15:XO:8:LYS:HB2	15:XO:8:LYS:NZ	2.13	0.63
18:XR:43:PHE:CE2	18:XR:58:LEU:HD11	2.31	0.63
28:YE:201:THR:HG21	28:YE:203:LYS:HB3	1.80	0.63
36:YQ:60:ARG:HH12	45:YZ:112:ARG:HG2	1.61	0.63
40:YU:96:ALA:C	40:YU:98:LEU:H	2.04	0.63
45:YZ:102:LEU:HG	45:YZ:123:ASP:HA	1.79	0.63
1:QA:1105:A:H2'	1:QA:1106:G:C8	2.33	0.63
2:QB:20:GLU:HB2	2:QB:190:THR:OG1	1.98	0.63
2:QB:37:ASN:C	2:QB:39:ILE:H	2.07	0.63
25:RA:747:U:C2	51:R5:2:ALA:HB3	2.34	0.63
25:RA:2037:G:H2'	25:RA:2038:G:C8	2.33	0.63
26:RB:83:G:H1	26:RB:93:C:H42	1.46	0.63
27:RD:18:VAL:HG12	27:RD:19:ALA:O	1.99	0.63
27:RD:147:LEU:CD1	27:RD:155:LEU:HD11	2.26	0.63
44:RY:95:LYS:CB	44:RY:100:ALA:HA	2.13	0.63
47:R1:82:LEU:CD1	47:R1:83:GLU:CA	2.76	0.63
48:R2:42:GLY:O	48:R2:44:LEU:N	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:63:TYR:C	50:R4:65:ASP:H	2.05	0.63
1:XA:529:G:O6	12:XL:49:ASN:HB3	1.99	0.63
1:XA:718:G:H1'	11:XK:116:HIS:HA	1.81	0.63
10:XJ:42:THR:HG23	10:XJ:68:HIS:HA	1.80	0.63
25:YA:26:G:H1'	25:YA:515:A:H61	1.63	0.63
25:YA:842:G:N2	25:YA:936:C:O2	2.29	0.63
25:YA:2126:A:H4'	25:YA:2127:G:O5'	1.97	0.63
25:YA:2306:C:C2	25:YA:2307:G:N2	2.67	0.63
25:YA:2724:C:P	37:YR:1:MET:HE3	2.38	0.63
27:YD:230:ASP:O	27:YD:231:HIS:HB2	1.98	0.63
28:YE:11:MET:HE3	28:YE:186:GLY:HA2	1.79	0.63
35:YP:1:MET:CE	35:YP:5:ASP:HB3	2.25	0.63
35:YP:106:LEU:O	35:YP:107:LYS:CB	2.46	0.63
1:QA:390:C:H2'	1:QA:391:G:C8	2.34	0.63
1:QA:959:A:O2'	1:QA:984:C:O2'	2.17	0.63
2:QB:21:ARG:HB2	2:QB:39:ILE:HA	1.80	0.63
4:QD:30:LYS:CG	4:QD:35:ARG:HE	2.11	0.63
5:QE:50:GLU:HG3	5:QE:52:PRO:HD2	1.79	0.63
8:QH:28:ALA:HB3	8:QH:57:PRO:HB2	1.79	0.63
8:QH:112:LEU:HD12	8:QH:112:LEU:O	1.98	0.63
13:QM:40:ASN:HD21	13:QM:42:ALA:HB3	1.64	0.63
19:QS:15:LEU:O	19:QS:19:VAL:HG23	1.98	0.63
19:QS:21:GLU:HG3	19:QS:22:LEU:N	2.11	0.63
25:RA:825:C:H2'	25:RA:826:U:O4'	1.97	0.63
25:RA:2056:G:N2	51:R5:4:HIS:O	2.29	0.63
28:RE:131:ALA:HB1	28:RE:135:HIS:CE1	2.34	0.63
33:RN:61:ARG:HA	33:RN:61:ARG:HE	1.64	0.63
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CB	2.28	0.63
36:RQ:81:VAL:O	36:RQ:82:ARG:HD3	1.98	0.63
40:RU:102:GLU:HG3	41:RV:2:PHE:CE2	2.34	0.63
42:RW:110:LYS:HG3	42:RW:111:HIS:ND1	2.12	0.63
43:RX:49:VAL:HG13	43:RX:83:VAL:HG13	1.80	0.63
1:XA:536:C:H2'	1:XA:537:G:H8	1.63	0.63
1:XA:601:C:H2'	1:XA:602:A:C8	2.34	0.63
4:XD:163:GLU:C	4:XD:165:MET:H	2.03	0.63
5:XE:91:LEU:HA	5:XE:120:THR:HG22	1.81	0.63
9:XI:118:LYS:O	9:XI:119:ALA:HB3	1.99	0.63
20:XT:26:ASN:HB2	20:XT:71:THR:HG23	1.79	0.63
25:YA:10:G:N2	25:YA:2802:G:OP1	2.31	0.63
25:YA:372:G:H5''	47:Y1:66:HIS:CD2	2.33	0.63
25:YA:2285:C:H5	52:Y6:27:LYS:HZ1	1.44	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2388:A:N7	25:YA:2389:G:C6	2.66	0.63
30:YG:68:PRO:HB2	30:YG:90:LEU:HD12	1.80	0.63
32:YI:79:ILE:HB	32:YI:142:VAL:HA	1.81	0.63
36:YQ:30:GLY:HA3	36:YQ:106:VAL:O	1.98	0.63
39:YT:16:ARG:HE	39:YT:19:LEU:HD21	1.62	0.63
50:Y4:63:TYR:C	50:Y4:65:ASP:H	2.05	0.63
1:QA:986:A:N3	19:QS:52:TYR:OH	2.30	0.63
1:QA:1095:U:OP1	1:QA:1108:G:N1	2.31	0.63
7:QG:9:VAL:CG1	7:QG:94:ARG:HE	2.12	0.63
12:QL:85:ILE:HD11	12:QL:98:TYR:HB2	1.81	0.63
14:QN:18:VAL:HG23	14:QN:19:ARG:H	1.63	0.63
25:RA:882:G:H1	25:RA:894:C:N4	1.97	0.63
25:RA:2812:G:N2	25:RA:2889:C:O2	2.32	0.63
25:RA:2821:A:H2'	25:RA:2822:G:H8	1.64	0.63
27:RD:44:ASN:N	27:RD:44:ASN:ND2	2.42	0.63
29:RF:11:VAL:HG12	29:RF:12:LEU:N	2.13	0.63
38:RS:78:LEU:HD11	38:RS:107:GLU:O	1.98	0.63
1:XA:1326:C:OP1	21:XU:17:THR:OG1	2.13	0.63
9:XI:97:LYS:HB3	9:XI:98:PRO:HD3	1.79	0.63
16:XP:66:PRO:HG2	16:XP:71:ARG:HH12	1.64	0.63
25:YA:380:U:H2'	25:YA:381:G:H8	1.64	0.63
25:YA:928:G:H2'	25:YA:928:G:N3	2.14	0.63
25:YA:1286:A:N6	25:YA:1329:U:O2'	2.30	0.63
25:YA:1434:A:H61	25:YA:1558:A:N6	1.97	0.63
25:YA:2372:G:H4'	52:Y6:46:HIS:NE2	2.14	0.63
25:YA:2840:C:H2'	25:YA:2841:C:C6	2.33	0.63
28:YE:35:GLN:CG	28:YE:37:ARG:NE	2.62	0.63
29:YF:67:GLN:O	29:YF:67:GLN:CG	2.32	0.63
34:YO:86:ILE:HD12	34:YO:86:ILE:N	2.13	0.63
36:YQ:10:ARG:O	36:YQ:11:LYS:HB2	1.98	0.63
36:YQ:90:VAL:C	36:YQ:92:GLY:H	2.07	0.63
39:YT:49:VAL:HG13	39:YT:49:VAL:O	1.99	0.63
39:YT:60:THR:HG22	39:YT:77:PRO:HA	1.80	0.63
42:YW:74:ALA:O	42:YW:75:TYR:HB3	1.98	0.63
45:YZ:13:GLU:HB3	45:YZ:18:LEU:HD11	1.79	0.63
3:QC:95:THR:HG22	3:QC:96:GLY:N	2.07	0.63
9:QI:59:PHE:HZ	9:QI:88:TYR:CE1	2.17	0.63
25:RA:187:G:H1	25:RA:209:C:H42	1.45	0.63
25:RA:784:A:N7	27:RD:229:VAL:HG21	2.13	0.63
25:RA:1527:G:H2'	25:RA:1543:A:N1	2.13	0.63
25:RA:1870:C:H2'	25:RA:1871:A:O4'	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2115:G:N2	25:RA:2165:G:N7	2.46	0.63
25:RA:2443:C:H2'	25:RA:2444:G:C8	2.32	0.63
26:RB:6:C:C2	26:RB:115:G:N2	2.66	0.63
27:RD:133:LEU:HD21	27:RD:191:ALA:CB	2.29	0.63
29:RF:28:ILE:HG22	29:RF:112:MET:HB3	1.81	0.63
31:RH:153:LYS:HG3	31:RH:161:GLY:HA3	1.81	0.63
33:RN:22:THR:CG2	33:RN:23:LEU:N	2.61	0.63
33:RN:41:ASP:O	33:RN:48:MET:HE3	1.98	0.63
39:RT:60:THR:HG22	39:RT:77:PRO:HA	1.80	0.63
40:RU:34:LYS:HA	40:RU:34:LYS:CE	2.29	0.63
44:RY:86:ARG:O	44:RY:92:ASN:HB2	1.97	0.63
48:R2:46:GLN:HA	48:R2:46:GLN:OE1	1.98	0.63
2:XB:37:ASN:C	2:XB:39:ILE:H	2.07	0.63
2:XB:60:ASP:HB3	2:XB:64:ARG:NH1	2.13	0.63
2:XB:155:LEU:HD12	2:XB:157:ARG:O	1.98	0.63
2:XB:214:ILE:HD13	2:XB:217:ARG:NH2	2.14	0.63
4:XD:153:ARG:HD3	4:XD:181:MET:SD	2.39	0.63
5:XE:51:VAL:O	5:XE:55:VAL:HG23	1.99	0.63
14:XN:18:VAL:HG23	14:XN:19:ARG:N	2.14	0.63
14:XN:42:ILE:C	14:XN:43:CYS:O	2.41	0.63
25:YA:2642:G:H4'	33:YN:78:TYR:CD2	2.34	0.63
27:YD:72:LYS:HG2	27:YD:103:ARG:NH2	2.13	0.63
31:YH:153:LYS:HG3	31:YH:161:GLY:HA3	1.80	0.63
33:YN:7:LYS:H	33:YN:7:LYS:HD2	1.64	0.63
35:YP:64:LYS:HB2	54:Y8:25:MET:HG3	1.81	0.63
35:YP:83:VAL:HG12	35:YP:112:LEU:HD21	1.81	0.63
35:YP:138:LEU:C	35:YP:140:ALA:N	2.55	0.63
38:YS:22:GLY:O	38:YS:23:ARG:O	2.17	0.63
38:YS:88:ASP:CG	38:YS:90:GLY:H	2.06	0.63
1:QA:1226:C:OP2	13:QM:103:THR:OG1	2.16	0.63
3:QC:34:LEU:CD2	3:QC:38:ARG:HD2	2.29	0.63
7:QG:113:GLU:CG	7:QG:119:ARG:HG2	2.28	0.63
9:QI:118:LYS:O	9:QI:119:ALA:HB3	1.99	0.63
22:QV:1:C:C4'	46:R0:5:LYS:NZ	2.55	0.63
25:RA:443:A:H1'	25:RA:1201:C:O4'	1.98	0.63
25:RA:1019:U:H3	25:RA:1142(A):A:N6	1.91	0.63
25:RA:1935:G:H1'	25:RA:1964:G:N2	2.14	0.63
25:RA:2331:G:O2'	46:R0:43:THR:HG22	1.99	0.63
29:RF:119:ARG:HH11	29:RF:119:ARG:HG2	1.64	0.63
34:RO:8:LEU:HB2	34:RO:19:ILE:HD11	1.81	0.63
35:RP:108:LYS:HD2	35:RP:108:LYS:H	1.64	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:66:ILE:CG1	36:RQ:67:ARG:H	2.12	0.63
37:RR:117:VAL:O	37:RR:118:GLU:HB3	1.99	0.63
39:RT:16:ARG:HE	39:RT:19:LEU:HD21	1.63	0.63
52:R6:13:CYS:HB2	52:R6:22:ALA:HB3	1.80	0.63
54:R8:52:LYS:O	54:R8:52:LYS:HG3	1.97	0.63
2:XB:236:TYR:CD2	2:XB:239:VAL:HG21	2.34	0.63
3:XC:34:LEU:CD2	3:XC:38:ARG:HD2	2.29	0.63
7:XG:9:VAL:CG1	7:XG:94:ARG:HE	2.11	0.63
9:XI:17:VAL:HG21	9:XI:81:ILE:N	2.14	0.63
9:XI:47:LEU:HD22	9:XI:47:LEU:N	2.14	0.63
19:XS:15:LEU:O	19:XS:19:VAL:HG23	1.98	0.63
25:YA:2015:A:N3	51:Y5:2:ALA:N	2.46	0.63
25:YA:2419:U:H5'	52:Y6:23:THR:HG22	1.81	0.63
25:YA:2711:A:H5''	25:YA:2712:U:H5'	1.80	0.63
32:YI:75:LEU:HB3	32:YI:105:HIS:NE2	2.14	0.63
35:YP:13:ASN:C	35:YP:15:ARG:N	2.54	0.63
35:YP:114:ILE:HD11	35:YP:130:PHE:CD1	2.34	0.63
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CB	2.29	0.63
37:YR:117:VAL:O	37:YR:118:GLU:HB3	1.99	0.63
43:YX:49:VAL:HG13	43:YX:83:VAL:HG13	1.80	0.63
47:Y1:18:ILE:HG12	47:Y1:37:ILE:HG12	1.81	0.63
1:QA:1178:G:H5''	9:QI:93:ARG:HH21	1.64	0.62
1:QA:1280:A:O2'	1:QA:1281:U:OP1	2.17	0.62
2:QB:236:TYR:CD2	2:QB:239:VAL:HG21	2.34	0.62
3:QC:189:ALA:O	3:QC:191:THR:HG23	1.99	0.62
11:QK:58:PRO:HD3	11:QK:89:ALA:HB1	1.81	0.62
27:RD:44:ASN:HB3	27:RD:49:ILE:CA	2.27	0.62
31:RH:136:ILE:H	31:RH:136:ILE:HD12	1.64	0.62
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CD	2.29	0.62
37:RR:63:ARG:NH1	37:RR:80:PHE:CD1	2.67	0.62
47:R1:76:ARG:HD2	47:R1:76:ARG:H	1.64	0.62
1:XA:258:G:H1	1:XA:268:C:H42	1.48	0.62
2:XB:66:GLY:O	2:XB:67:THR:HG23	1.99	0.62
11:XK:12:ARG:HG2	11:XK:13:GLN:N	2.14	0.62
19:XS:42:PRO:HD3	50:Y4:63:TYR:HE2	1.64	0.62
25:YA:1022:G:H22	25:YA:1142(A):A:H2	1.46	0.62
25:YA:1479:G:N7	25:YA:1510:A:N6	2.43	0.62
25:YA:2593:U:H2'	25:YA:2594:C:C6	2.34	0.62
28:YE:13:ARG:HH12	28:YE:21:VAL:HG12	1.64	0.62
29:YF:132:VAL:HG23	29:YF:133:ASN:N	2.14	0.62
30:YG:61:ALA:HB2	30:YG:68:PRO:HD2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:86:GLU:O	31:YH:87:LEU:HB2	1.99	0.62
33:YN:87:LEU:O	33:YN:87:LEU:HD23	1.99	0.62
43:YX:63:LYS:O	43:YX:64:LYS:HD2	1.98	0.62
44:YY:87:LYS:O	44:YY:88:LYS:NZ	2.32	0.62
48:Y2:46:GLN:OE1	48:Y2:46:GLN:HA	1.98	0.62
1:QA:561:U:O2'	1:QA:562:C:OP2	2.16	0.62
1:QA:645:C:H2'	1:QA:646:U:O4'	1.99	0.62
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.35	0.62
1:QA:1349:A:OP2	9:QI:118:LYS:NZ	2.31	0.62
2:QB:187:LEU:HD12	2:QB:205:ASP:HA	1.79	0.62
2:QB:214:ILE:HD13	2:QB:217:ARG:NH2	2.14	0.62
3:QC:3:ASN:N	3:QC:3:ASN:HD22	1.97	0.62
4:QD:165:MET:HE1	4:QD:168:ARG:HD2	1.81	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
25:RA:372:G:O2'	25:RA:373:U:P	2.57	0.62
25:RA:624:C:H5''	25:RA:624:C:H6	1.63	0.62
25:RA:666:G:H4'	35:RP:49:ARG:NH1	2.14	0.62
25:RA:2404:C:O3'	35:RP:77:ARG:NH2	2.32	0.62
29:RF:28:ILE:HD13	29:RF:30:PRO:HD3	1.80	0.62
35:RP:83:VAL:HG12	35:RP:112:LEU:HD21	1.80	0.62
1:XA:224:C:H2'	1:XA:225:C:C6	2.34	0.62
1:XA:1313:U:OP1	19:XS:5:LEU:HB2	1.99	0.62
8:XH:16:ALA:HB2	8:XH:24:THR:HG21	1.81	0.62
8:XH:112:LEU:O	8:XH:112:LEU:HD12	1.98	0.62
16:XP:8:ARG:HH11	16:XP:8:ARG:HG2	1.64	0.62
19:XS:2:PRO:HB2	50:Y4:68:ARG:HH22	1.64	0.62
25:YA:724:U:H2'	25:YA:725:G:O4'	1.98	0.62
25:YA:2011:U:H2'	25:YA:2012:G:H5'	1.82	0.62
25:YA:2698:U:H2'	25:YA:2699:C:C6	2.33	0.62
28:YE:4:ILE:CD1	28:YE:28:ALA:HB1	2.29	0.62
33:YN:26:LEU:O	33:YN:30:ILE:HG13	1.99	0.62
33:YN:61:ARG:HA	33:YN:61:ARG:HE	1.63	0.62
43:YX:31:HIS:CE1	43:YX:33:LYS:HB2	2.34	0.62
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ2	1.62	0.62
1:QA:1014:A:H4'	19:QS:14:HIS:CD2	2.33	0.62
1:QA:1151:A:H1'	10:QJ:39:PRO:HB2	1.81	0.62
1:QA:1239:A:O2'	1:QA:1298:C:N4	2.32	0.62
2:QB:66:GLY:O	2:QB:67:THR:HG23	2.00	0.62
3:QC:70:VAL:HG12	3:QC:72:LYS:N	2.11	0.62
5:QE:111:GLU:C	5:QE:113:ALA:H	2.07	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:8:ILE:HD11	6:QF:79:LEU:HD13	1.81	0.62
25:RA:2593:U:C2	25:RA:2594:C:C5	2.87	0.62
27:RD:134:ARG:HD3	27:RD:135:PHE:CE2	2.34	0.62
35:RP:65:ARG:HH11	35:RP:65:ARG:CG	2.06	0.62
39:RT:24:PRO:O	39:RT:94:ALA:HB2	2.00	0.62
48:R2:65:ASN:HB3	48:R2:69:ARG:NH1	2.10	0.62
1:XA:188:U:H2'	1:XA:189:U:H5''	1.79	0.62
4:XD:96:LEU:H	4:XD:96:LEU:CD2	2.11	0.62
5:XE:78:HIS:HA	8:XH:105:ARG:HB2	1.79	0.62
6:XF:62:TRP:C	6:XF:63:TYR:HD2	2.06	0.62
11:XK:17:GLY:HA3	11:XK:77:MET:CE	2.21	0.62
11:XK:58:PRO:HD3	11:XK:89:ALA:HB1	1.81	0.62
22:XV:6:G:H1	22:XV:67:C:H42	1.45	0.62
25:YA:630:G:N2	25:YA:633:A:OP2	2.23	0.62
25:YA:957:A:N6	25:YA:959:A:C2	2.67	0.62
25:YA:2303:G:H1	25:YA:2313:C:N4	1.95	0.62
25:YA:2600:A:N7	27:YD:237:GLU:OE2	2.32	0.62
29:YF:129:PHE:O	29:YF:130:ALA:HB3	1.99	0.62
30:YG:94:LEU:H	30:YG:94:LEU:HD23	1.64	0.62
37:YR:63:ARG:NH1	37:YR:80:PHE:CD1	2.67	0.62
39:YT:22:PHE:N	39:YT:22:PHE:HD2	1.97	0.62
40:YU:34:LYS:HA	40:YU:34:LYS:CE	2.29	0.62
2:QB:23:ARG:HD3	2:QB:23:ARG:H	1.64	0.62
8:QH:42:GLU:HG3	8:QH:109:ILE:HD12	1.80	0.62
9:QI:62:TYR:O	9:QI:63:ILE:HD12	1.98	0.62
11:QK:19:ALA:HA	11:QK:32:ILE:HG22	1.80	0.62
11:QK:57:THR:HG22	11:QK:59:TYR:H	1.64	0.62
13:QM:50:GLU:OE1	50:R4:32:TYR:HE2	1.81	0.62
18:QR:82:THR:HG22	18:QR:83:GLU:N	2.15	0.62
25:RA:301:G:H1	25:RA:316:C:H42	1.47	0.62
28:RE:35:GLN:CG	28:RE:37:ARG:NE	2.62	0.62
35:RP:61:ARG:H	35:RP:61:ARG:CD	2.09	0.62
36:RQ:90:VAL:C	36:RQ:92:GLY:H	2.07	0.62
38:RS:26:LEU:HD22	38:RS:87:PHE:HD1	1.63	0.62
39:RT:96:ARG:NH1	39:RT:96:ARG:HB2	2.14	0.62
2:XB:23:ARG:HD3	2:XB:23:ARG:H	1.64	0.62
3:XC:3:ASN:HD22	3:XC:3:ASN:N	1.97	0.62
10:XJ:29:ARG:HG2	10:XJ:29:ARG:O	2.00	0.62
11:XK:57:THR:HG22	11:XK:59:TYR:H	1.65	0.62
11:XK:99:GLN:HG2	11:XK:105:VAL:CG2	2.28	0.62
12:XL:8:ASN:OD1	17:XQ:34:LYS:HE2	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:483:A:H4'	44:YY:49:VAL:HG13	1.81	0.62
35:YP:65:ARG:HE	54:Y8:15:LYS:HB2	1.64	0.62
3:QC:127:ARG:HH11	3:QC:127:ARG:HG2	1.64	0.62
7:QG:140:ASP:HA	7:QG:143:ARG:NH1	2.14	0.62
9:QI:13:ALA:HB2	9:QI:67:GLY:O	2.00	0.62
9:QI:65:VAL:HG21	9:QI:73:GLN:HB3	1.81	0.62
12:QL:86:ARG:HB2	12:QL:101:VAL:CG2	2.28	0.62
18:QR:25:THR:HG22	18:QR:25:THR:O	2.00	0.62
25:RA:1224:G:OP2	41:RV:66:ARG:NH2	2.32	0.62
25:RA:1411:C:H42	25:RA:1591:G:H1	1.48	0.62
28:RE:13:ARG:HH12	28:RE:21:VAL:HG12	1.64	0.62
30:RG:53:LEU:C	30:RG:53:LEU:HD23	2.25	0.62
30:RG:77:ILE:HD13	30:RG:82:LEU:CD1	2.29	0.62
30:RG:94:LEU:HD23	30:RG:94:LEU:N	2.14	0.62
31:RH:137:ASP:HB3	31:RH:140:LYS:HB2	1.81	0.62
38:RS:48:LEU:N	38:RS:48:LEU:HD12	2.14	0.62
41:RV:36:PRO:HA	41:RV:56:SER:OG	1.98	0.62
43:RX:31:HIS:CE1	43:RX:33:LYS:HB2	2.34	0.62
52:R6:41:PRO:HG2	52:R6:45:LYS:N	2.10	0.62
1:XA:194:C:C2'	1:XA:195:A:H5''	2.29	0.62
1:XA:250:A:H4'	1:XA:251:G:O5'	1.99	0.62
1:XA:537:G:H5''	12:XL:113:ARG:NH1	2.15	0.62
1:XA:695:A:H2'	1:XA:696:A:C8	2.34	0.62
7:XG:140:ASP:HA	7:XG:143:ARG:NH1	2.14	0.62
13:XM:69:GLU:O	13:XM:72:ALA:N	2.32	0.62
14:XN:53:LEU:HB3	14:XN:56:VAL:HG21	1.80	0.62
18:XR:82:THR:HG22	18:XR:83:GLU:N	2.15	0.62
20:XT:14:LYS:HA	20:XT:17:ARG:NH1	2.14	0.62
25:YA:681:G:H2'	25:YA:682:G:O4'	2.00	0.62
25:YA:1270:C:O2'	25:YA:1325:G:H2'	1.99	0.62
27:YD:35:LYS:HA	27:YD:64:ILE:HG22	1.81	0.62
29:YF:28:ILE:HD13	29:YF:30:PRO:HD3	1.80	0.62
30:YG:112:PRO:HB3	50:Y4:37:SER:CB	2.25	0.62
38:YS:48:LEU:HD12	38:YS:48:LEU:N	2.14	0.62
38:YS:100:ALA:HA	38:YS:103:GLU:CG	2.29	0.62
39:YT:96:ARG:HB2	39:YT:96:ARG:NH1	2.14	0.62
41:YV:52:VAL:CG2	41:YV:55:ALA:HB3	2.28	0.62
48:Y2:41:ILE:HG12	48:Y2:44:LEU:HD12	1.82	0.62
1:QA:962:C:H2'	1:QA:963:G:O4'	1.99	0.62
1:QA:1152:A:OP1	10:QJ:68:HIS:NE2	2.32	0.62
1:QA:1306:A:N6	1:QA:1331:G:O2'	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:153:ARG:HD3	4:QD:181:MET:SD	2.39	0.62
9:QI:116:LYS:O	9:QI:118:LYS:N	2.32	0.62
14:QN:41:ARG:HH21	14:QN:42:ILE:HD11	1.62	0.62
25:RA:512:G:OP1	25:RA:1234:U:O2'	2.17	0.62
25:RA:858:U:H1'	25:RA:2268:A:H2'	1.82	0.62
25:RA:1871:A:H2'	25:RA:1872:A:C8	2.34	0.62
25:RA:2445:G:OP1	29:RF:74:ARG:NH2	2.32	0.62
29:RF:129:PHE:O	29:RF:130:ALA:HB3	1.99	0.62
33:RN:87:LEU:O	33:RN:87:LEU:HD23	1.99	0.62
33:RN:96:GLU:O	33:RN:98:VAL:N	2.33	0.62
39:RT:108:ARG:O	39:RT:111:ARG:HG3	2.00	0.62
42:RW:1:MET:HB3	42:RW:64:MET:HE3	1.81	0.62
1:XA:1356:G:H2'	1:XA:1357:A:H8	1.62	0.62
2:XB:20:GLU:HB2	2:XB:190:THR:OG1	1.99	0.62
13:XM:8:GLU:OE2	30:YG:115:ARG:NH1	2.32	0.62
25:YA:745:G:H5''	25:YA:746:A:OP2	1.99	0.62
25:YA:2072:G:C2	25:YA:2073:C:C2	2.88	0.62
30:YG:53:LEU:C	30:YG:53:LEU:HD23	2.24	0.62
30:YG:94:LEU:HD23	30:YG:94:LEU:N	2.14	0.62
35:YP:105:LEU:O	35:YP:106:LEU:CB	2.42	0.62
37:YR:79:LEU:HD23	37:YR:79:LEU:C	2.23	0.62
42:YW:1:MET:HB3	42:YW:64:MET:HE3	1.82	0.62
44:YY:48:ALA:HB2	44:YY:61:ILE:HD13	1.82	0.62
47:Y1:91:LYS:HA	47:Y1:91:LYS:HE3	1.81	0.62
48:Y2:70:GLN:O	48:Y2:71:ASN:HB2	2.00	0.62
52:Y6:13:CYS:HB2	52:Y6:22:ALA:HB3	1.81	0.62
1:QA:728:A:H2'	1:QA:729:A:C8	2.34	0.62
1:QA:973:G:OP1	10:QJ:57:LYS:NZ	2.32	0.62
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.63	0.62
15:QO:26:GLU:CD	15:QO:77:ARG:NH1	2.58	0.62
25:RA:270(I):G:H1	25:RA:270(Q):C:H42	1.47	0.62
25:RA:674:G:H2'	25:RA:804:A:N6	2.14	0.62
25:RA:1332:G:H21	25:RA:1610:A:H8	1.45	0.62
25:RA:1582:C:O2'	25:RA:1586:A:H8	1.81	0.62
25:RA:2883:A:H5'	25:RA:2884:U:H5'	1.81	0.62
26:RB:33:G:H8	26:RB:33:G:H5''	1.65	0.62
28:RE:35:GLN:HG2	28:RE:37:ARG:NE	2.14	0.62
29:RF:32:LEU:CD1	29:RF:105:VAL:HG13	2.29	0.62
33:RN:7:LYS:HD2	33:RN:7:LYS:H	1.64	0.62
39:RT:57:PHE:CD2	39:RT:58:ASN:N	2.66	0.62
47:R1:18:ILE:HG12	47:R1:37:ILE:HG12	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:81:LYS:NZ	47:R1:81:LYS:CA	2.31	0.62
52:R6:18:ARG:O	52:R6:18:ARG:HD2	2.00	0.62
1:XA:816:A:OP1	1:XA:1526:G:O2'	2.17	0.62
2:XB:115:LEU:CD2	2:XB:153:ARG:HD3	2.30	0.62
4:XD:170:VAL:HG22	4:XD:171:GLY:N	2.12	0.62
8:XH:58:TYR:O	8:XH:59:LEU:HD23	2.00	0.62
25:YA:2332:U:O2'	25:YA:2333:A:H5'	1.99	0.62
27:YD:182:LEU:H	27:YD:272:ALA:HB3	1.62	0.62
30:YG:170:ARG:O	30:YG:174:GLU:HB2	2.00	0.62
31:YH:136:ILE:HD12	31:YH:136:ILE:H	1.64	0.62
34:YO:1:MET:HE3	34:YO:67:LYS:HE2	1.82	0.62
36:YQ:63:LYS:HD2	45:YZ:175:VAL:HG21	1.81	0.62
39:YT:108:ARG:O	39:YT:111:ARG:HG3	2.00	0.62
48:Y2:69:ARG:HB2	48:Y2:69:ARG:CZ	2.29	0.62
1:QA:827:U:H6	1:QA:859:A:H61	1.48	0.62
1:QA:868:C:H2'	1:QA:869:G:O4'	1.98	0.62
8:QH:16:ALA:HB2	8:QH:24:THR:HG21	1.82	0.62
8:QH:84:ARG:HG3	8:QH:84:ARG:NH1	2.10	0.62
13:QM:97:PRO:HB2	13:QM:101:GLN:HE22	1.65	0.62
15:QO:76:GLU:C	15:QO:78:TYR:H	2.08	0.62
16:QP:66:PRO:HG2	16:QP:71:ARG:HH12	1.64	0.62
25:RA:302:C:H2'	25:RA:303:U:C6	2.35	0.62
25:RA:1341:U:OP2	25:RA:1394:U:O2'	2.14	0.62
25:RA:1826:G:H4'	27:RD:242:ARG:NH2	2.14	0.62
25:RA:2695:C:H2'	25:RA:2696:U:C6	2.35	0.62
25:RA:2713:A:OP1	37:RR:14:SER:OG	2.17	0.62
27:RD:70:TRP:CH2	27:RD:150:LYS:HA	2.35	0.62
27:RD:72:LYS:HG2	27:RD:103:ARG:NH2	2.14	0.62
27:RD:230:ASP:O	27:RD:231:HIS:HB2	1.98	0.62
33:RN:26:LEU:O	33:RN:30:ILE:HG13	1.99	0.62
35:RP:64:LYS:HB2	54:R8:25:MET:HG3	1.80	0.62
38:RS:22:GLY:O	38:RS:23:ARG:O	2.17	0.62
39:RT:31:SER:HA	39:RT:44:ASP:OD2	2.00	0.62
44:RY:87:LYS:O	44:RY:88:LYS:NZ	2.31	0.62
1:XA:1182:G:H4'	1:XA:1183:A:H5''	1.82	0.62
13:XM:77:ASN:HA	50:Y4:71:ARG:CZ	2.30	0.62
16:XP:51:VAL:CG1	16:XP:52:ASP:H	2.11	0.62
19:XS:39:THR:HG22	19:XS:40:ILE:N	2.14	0.62
25:YA:1696:G:C2	25:YA:1697:G:H1'	2.35	0.62
25:YA:2467:C:H4'	36:YQ:123:HIS:CD2	2.34	0.62
26:YB:71:C:C2	26:YB:72:G:C8	2.88	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:133:LEU:HD21	27:YD:191:ALA:CB	2.29	0.62
28:YE:131:ALA:HB1	28:YE:135:HIS:CE1	2.34	0.62
34:YO:104:ARG:CZ	39:YT:34:VAL:HG11	2.29	0.62
35:YP:112:LEU:HD11	35:YP:114:ILE:HG23	1.80	0.62
50:Y4:61:ARG:O	50:Y4:63:TYR:N	2.33	0.62
1:QA:741:G:H2'	1:QA:742:G:C8	2.35	0.62
1:QA:793:U:H3'	1:QA:794:A:H5''	1.82	0.62
6:QF:77:ARG:HB2	6:QF:77:ARG:NH1	2.15	0.62
10:QJ:22:LYS:HD2	10:QJ:22:LYS:C	2.25	0.62
13:QM:69:GLU:O	13:QM:72:ALA:N	2.32	0.62
17:QQ:11:VAL:HG23	17:QQ:20:THR:HB	1.79	0.62
25:RA:1285:G:N2	25:RA:1329:U:OP1	2.28	0.62
25:RA:2395:C:O2'	47:R1:30:VAL:HG12	1.99	0.62
30:RG:68:PRO:HB2	30:RG:90:LEU:HD12	1.80	0.62
34:RO:78:ARG:HH21	39:RT:103:ARG:NH2	1.98	0.62
38:RS:26:LEU:HD12	38:RS:39:ILE:CD1	2.23	0.62
48:R2:17:SER:HB2	48:R2:18:PRO:CA	2.30	0.62
50:R4:38:LYS:C	50:R4:40:HIS:N	2.53	0.62
1:XA:1070:U:O5'	5:XE:25:ARG:NH1	2.33	0.62
3:XC:189:ALA:O	3:XC:191:THR:HG23	1.99	0.62
9:XI:116:LYS:O	9:XI:118:LYS:N	2.33	0.62
11:XK:51:LYS:CA	11:XK:55:LYS:HD3	2.22	0.62
13:XM:66:LEU:HA	13:XM:70:LEU:HD23	1.81	0.62
19:XS:12:ASP:OD1	19:XS:37:ARG:HD2	2.00	0.62
25:YA:210:C:OP2	53:Y7:29:LYS:NZ	2.33	0.62
25:YA:225:A:O2'	25:YA:257:A:H4'	2.00	0.62
28:YE:104:VAL:HG11	28:YE:188:VAL:HG23	1.82	0.62
29:YF:28:ILE:HG22	29:YF:112:MET:HB3	1.80	0.62
33:YN:133:GLN:O	33:YN:134:ARG:HB3	1.99	0.62
34:YO:7:TYR:HE1	34:YO:20:MET:HE3	1.65	0.62
45:YZ:117:LEU:HA	45:YZ:174:VAL:HG22	1.81	0.62
1:QA:280:C:H3'	1:QA:281:G:H5'	1.82	0.62
6:QF:97:PHE:C	6:QF:97:PHE:CD2	2.76	0.62
11:QK:17:GLY:HA3	11:QK:77:MET:CE	2.20	0.62
25:RA:530:G:H1'	25:RA:2021:C:O2'	1.98	0.62
25:RA:1298:C:H2'	25:RA:1299:G:O4'	2.00	0.62
25:RA:1434:A:H61	25:RA:1558:A:N6	1.91	0.62
25:RA:2041:U:H2'	25:RA:2042:A:H8	1.63	0.62
25:RA:2415:G:H4'	35:RP:67:MET:N	2.15	0.62
25:RA:2531:A:H4'	31:RH:157:TYR:CE2	2.34	0.62
25:RA:2723:C:H5''	37:RR:1:MET:HG2	1.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:27:THR:O	27:RD:29:PRO:HD2	1.99	0.62
27:RD:72:LYS:HE3	27:RD:75:ILE:HD12	1.82	0.62
27:RD:137:PRO:HB2	27:RD:140:THR:HG23	1.81	0.62
30:RG:6:ALA:HB2	50:R4:23:GLU:OE2	2.00	0.62
30:RG:170:ARG:O	30:RG:174:GLU:HB2	1.99	0.62
38:RS:100:ALA:HA	38:RS:103:GLU:CG	2.30	0.62
39:RT:22:PHE:N	39:RT:22:PHE:HD2	1.97	0.62
39:RT:105:LEU:C	39:RT:107:ASP:H	2.08	0.62
44:RY:101:LYS:HE3	44:RY:102:CYS:SG	2.40	0.62
47:R1:3:LYS:HD3	47:R1:43:TYR:CD2	2.35	0.62
47:R1:91:LYS:HA	47:R1:91:LYS:HE3	1.82	0.62
48:R2:69:ARG:HB2	48:R2:69:ARG:CZ	2.30	0.62
50:R4:61:ARG:O	50:R4:63:TYR:N	2.33	0.62
1:XA:1314:C:H5	19:XS:4:SER:HB2	1.63	0.62
2:XB:194:PRO:HG2	2:XB:195:ASP:H	1.64	0.62
3:XC:111:LEU:HD21	3:XC:144:SER:O	2.00	0.62
3:XC:127:ARG:HH11	3:XC:127:ARG:HG2	1.64	0.62
5:XE:51:VAL:HB	5:XE:52:PRO:CD	2.30	0.62
6:XF:8:ILE:HD11	6:XF:79:LEU:HD13	1.81	0.62
25:YA:777:A:C2	25:YA:778:G:C4	2.87	0.62
25:YA:2562:U:H1'	34:YO:23:ARG:NH1	2.15	0.62
30:YG:142:PRO:HB2	50:Y4:31:ILE:CD1	2.30	0.62
48:Y2:17:SER:HB2	48:Y2:18:PRO:CA	2.30	0.62
54:Y8:59:LYS:HZ3	54:Y8:59:LYS:HB3	1.63	0.62
4:QD:106:TYR:HE1	4:QD:112:VAL:O	1.82	0.61
4:QD:166:LYS:HD2	27:YD:134:ARG:HH12	1.64	0.61
5:QE:51:VAL:O	5:QE:55:VAL:HG23	1.99	0.61
6:QF:10:LEU:HD13	6:QF:61:LEU:CD1	2.30	0.61
8:QH:29:SER:HB3	8:QH:32:LYS:CG	2.22	0.61
13:QM:117:VAL:HG22	13:QM:118:ALA:N	2.15	0.61
14:QN:23:ARG:NH1	14:QN:30:ALA:HB2	2.14	0.61
25:RA:2361:A:O5'	54:R8:27:THR:OG1	2.18	0.61
25:RA:2847:U:H3	25:RA:2869:G:H1	1.48	0.61
50:R4:23:GLU:O	50:R4:25:TYR:N	2.33	0.61
54:R8:33:ASN:O	54:R8:34:TRP:C	2.42	0.61
1:XA:142:G:H2'	1:XA:143:A:H8	1.64	0.61
1:XA:414:A:H2'	1:XA:415:A:C8	2.35	0.61
1:XA:821:G:H2'	1:XA:822:C:H6	1.63	0.61
1:XA:829:G:O6	1:XA:857:C:N4	2.20	0.61
5:XE:111:GLU:C	5:XE:113:ALA:H	2.07	0.61
9:XI:65:VAL:HG21	9:XI:73:GLN:HB3	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:26:GLU:CD	15:XO:77:ARG:NH1	2.58	0.61
15:XO:74:ASP:OD1	15:XO:77:ARG:HG2	2.00	0.61
16:XP:4:ILE:HG13	16:XP:21:VAL:CG1	2.29	0.61
16:XP:20:VAL:HG21	16:XP:32:TYR:CD2	2.35	0.61
25:YA:602:G:O2'	25:YA:655:A:N6	2.33	0.61
25:YA:859:G:H5'	25:YA:2268:A:HO2'	1.65	0.61
25:YA:1384:A:O2'	25:YA:1404:C:O2	2.18	0.61
25:YA:2119:A:N6	25:YA:2170:A:H62	1.97	0.61
27:YD:134:ARG:HD3	27:YD:135:PHE:CE2	2.35	0.61
29:YF:32:LEU:CD1	29:YF:105:VAL:HG13	2.29	0.61
36:YQ:54:MET:O	36:YQ:57:HIS:HB3	2.00	0.61
40:YU:79:PHE:CD2	40:YU:79:PHE:C	2.78	0.61
40:YU:102:GLU:HG3	41:YV:2:PHE:CE2	2.34	0.61
47:Y1:76:ARG:HD2	47:Y1:76:ARG:H	1.64	0.61
48:Y2:40:SER:C	48:Y2:42:GLY:N	2.51	0.61
11:QK:121:PRO:HD2	11:QK:126:ARG:HD3	1.82	0.61
13:QM:66:LEU:HA	13:QM:70:LEU:HD23	1.81	0.61
14:QN:23:ARG:CD	14:QN:28:GLY:O	2.49	0.61
15:QO:68:ARG:O	15:QO:72:ARG:HB2	2.00	0.61
25:RA:2439:A:H4'	25:RA:2440:C:O5'	2.01	0.61
25:RA:2529:G:H5''	25:RA:2530:A:H5''	1.81	0.61
25:RA:2688:U:H1'	25:RA:2721:A:H62	1.64	0.61
27:RD:237:GLU:OE1	27:RD:237:GLU:CA	2.48	0.61
30:RG:9:ARG:HG2	30:RG:13:GLU:OE1	2.00	0.61
30:RG:111:LEU:HB2	30:RG:112:PRO:HD3	1.82	0.61
32:RI:62:LYS:HE3	32:RI:134:PRO:HG2	1.82	0.61
34:RO:104:ARG:HG2	34:RO:104:ARG:NH1	2.14	0.61
37:RR:38:VAL:HB	37:RR:39:PRO:HD3	1.81	0.61
45:RZ:53:ILE:HG22	45:RZ:71:VAL:O	2.01	0.61
50:R4:71:ARG:NH1	50:R4:71:ARG:CG	2.61	0.61
52:R6:44:ARG:O	52:R6:45:LYS:HB2	2.00	0.61
6:XF:89:MET:HE1	18:XR:76:LEU:HD22	1.82	0.61
9:XI:59:PHE:HZ	9:XI:88:TYR:CE1	2.17	0.61
17:XQ:65:ILE:HD12	17:XQ:65:ILE:N	2.15	0.61
21:XU:15:ARG:HH11	21:XU:15:ARG:HG2	1.63	0.61
25:YA:822:U:H2'	25:YA:823:G:C8	2.35	0.61
36:YQ:81:VAL:HG23	46:Y0:7:LEU:HD21	1.82	0.61
39:YT:31:SER:HA	39:YT:44:ASP:OD2	2.00	0.61
42:YW:5:ALA:O	42:YW:50:VAL:HG13	2.00	0.61
46:Y0:23:VAL:HB	46:Y0:26:TYR:HE2	1.65	0.61
46:Y0:53:MET:HB2	46:Y0:59:LEU:HD23	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:Y7:31:LEU:O	53:Y7:32:LYS:C	2.43	0.61
4:QD:13:ARG:HB2	4:QD:33:MET:HE3	1.82	0.61
4:QD:162:LEU:CD1	4:QD:181:MET:HB3	2.31	0.61
5:QE:51:VAL:HB	5:QE:52:PRO:CD	2.30	0.61
5:QE:91:LEU:HA	5:QE:120:THR:HG22	1.81	0.61
10:QJ:53:PRO:HA	14:QN:42:ILE:HD12	1.82	0.61
11:QK:12:ARG:HG2	11:QK:13:GLN:H	1.63	0.61
14:QN:44:LEU:C	14:QN:44:LEU:HD12	2.24	0.61
18:QR:57:GLY:O	18:QR:58:LEU:C	2.44	0.61
20:QT:47:GLY:C	20:QT:49:ALA:H	2.07	0.61
25:RA:242:G:C8	54:R8:5:LYS:HG2	2.35	0.61
25:RA:301:G:N2	25:RA:316:C:N3	2.40	0.61
27:RD:133:LEU:HD21	27:RD:191:ALA:HB2	1.82	0.61
34:RO:1:MET:HE3	34:RO:67:LYS:HE2	1.82	0.61
34:RO:97:ARG:N	34:RO:117:LEU:HD22	2.15	0.61
35:RP:114:ILE:HD11	35:RP:130:PHE:CD1	2.34	0.61
40:RU:92:ARG:HD3	40:RU:94:ASN:HB3	1.82	0.61
44:RY:48:ALA:HB2	44:RY:61:ILE:HD13	1.82	0.61
50:R4:35:VAL:O	50:R4:37:SER:N	2.26	0.61
1:XA:295:C:H2'	1:XA:296:U:H6	1.65	0.61
25:YA:751:A:H5'	42:YW:90:ARG:HA	1.81	0.61
25:YA:1459:G:H2'	25:YA:1460:A:H5'	1.83	0.61
27:YD:27:THR:O	27:YD:29:PRO:HD2	1.99	0.61
35:YP:108:LYS:HD2	35:YP:108:LYS:H	1.64	0.61
39:YT:105:LEU:C	39:YT:107:ASP:H	2.08	0.61
1:QA:156:G:H1	1:QA:165:C:N4	1.97	0.61
1:QA:745:C:H2'	1:QA:746:A:C8	2.34	0.61
2:QB:108:ILE:O	2:QB:111:ARG:HB2	2.01	0.61
3:QC:111:LEU:HD21	3:QC:144:SER:O	2.01	0.61
4:QD:29:PRO:CG	4:QD:30:LYS:HD3	2.28	0.61
5:QE:42:GLY:HA2	5:QE:136:MET:HE1	1.82	0.61
7:QG:15:ASP:O	7:QG:19:GLY:HA2	2.00	0.61
8:QH:39:LEU:O	8:QH:45:ILE:HG12	2.01	0.61
14:QN:18:VAL:HG23	14:QN:19:ARG:N	2.14	0.61
25:RA:738:G:H2'	25:RA:739:G:O4'	2.00	0.61
25:RA:829:A:C8	25:RA:2248:C:H5'	2.35	0.61
25:RA:1667:G:H2'	25:RA:1991:U:O4	2.00	0.61
25:RA:2114:A:N6	25:RA:2119:A:H62	1.98	0.61
25:RA:2849:U:H5	39:RT:93:ARG:HH12	1.49	0.61
27:RD:35:LYS:HA	27:RD:64:ILE:HG22	1.82	0.61
28:RE:201:THR:HG22	28:RE:203:LYS:N	2.07	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:152:ARG:O	31:RH:153:LYS:CD	2.48	0.61
33:RN:62:VAL:CG1	33:RN:66:LYS:HD2	2.30	0.61
33:RN:96:GLU:CG	33:RN:97:ARG:H	2.00	0.61
35:RP:50:ARG:CB	35:RP:50:ARG:NH2	2.57	0.61
49:R3:29:ARG:HH11	49:R3:29:ARG:CB	2.13	0.61
54:R8:59:LYS:HZ3	54:R8:59:LYS:HB3	1.65	0.61
7:XG:15:ASP:O	7:XG:19:GLY:HA2	2.00	0.61
9:XI:28:VAL:HG13	9:XI:63:ILE:HG22	1.83	0.61
17:XQ:41:LYS:HZ3	17:XQ:92:ARG:HH22	1.46	0.61
20:XT:34:LYS:O	20:XT:38:LYS:HB2	2.01	0.61
25:YA:1162:G:H1'	41:YV:23:GLU:OE2	2.00	0.61
25:YA:1991:U:H2'	25:YA:1992:G:H5''	1.83	0.61
25:YA:2025:C:H2'	25:YA:2026:C:C6	2.35	0.61
27:YD:137:PRO:HB2	27:YD:140:THR:HG23	1.81	0.61
28:YE:35:GLN:HG2	28:YE:37:ARG:NE	2.14	0.61
30:YG:6:ALA:HB2	50:Y4:23:GLU:OE2	2.00	0.61
33:YN:96:GLU:O	33:YN:98:VAL:N	2.33	0.61
35:YP:50:ARG:CB	35:YP:50:ARG:NH2	2.58	0.61
36:YQ:66:ILE:CG1	36:YQ:67:ARG:H	2.12	0.61
43:YX:15:GLU:N	43:YX:15:GLU:OE1	2.34	0.61
45:YZ:169:GLU:HG2	45:YZ:170:THR:N	2.15	0.61
1:QA:404:U:H2'	1:QA:405:U:H6	1.64	0.61
1:QA:450:G:N7	1:QA:481:G:C6	2.69	0.61
1:QA:1111:A:N1	3:QC:177:THR:HG23	2.16	0.61
2:QB:115:LEU:CD2	2:QB:153:ARG:HD3	2.30	0.61
7:QG:113:GLU:CB	7:QG:119:ARG:HG2	2.29	0.61
10:QJ:98:ILE:HD12	10:QJ:98:ILE:N	2.15	0.61
19:QS:11:VAL:O	19:QS:12:ASP:HB2	2.00	0.61
23:QX:8:A:H8	23:QX:8:A:O5'	1.83	0.61
25:RA:675:A:N3	25:RA:2443:C:O2'	2.29	0.61
25:RA:2419:U:H5'	52:R6:23:THR:HG22	1.82	0.61
30:RG:142:PRO:HB2	50:R4:31:ILE:CD1	2.30	0.61
31:RH:86:GLU:O	31:RH:87:LEU:HB2	1.99	0.61
32:RI:8:PRO:HG3	32:RI:14:ASP:HB2	1.82	0.61
35:RP:65:ARG:HE	54:R8:15:LYS:HB2	1.64	0.61
38:RS:88:ASP:O	38:RS:89:ARG:CB	2.49	0.61
42:RW:5:ALA:O	42:RW:50:VAL:HG13	2.00	0.61
1:XA:826:C:H2'	1:XA:827:U:O2	1.99	0.61
1:XA:1020:U:H2'	1:XA:1021:G:C8	2.36	0.61
1:XA:1149:C:H2'	1:XA:1150:U:H6	1.65	0.61
4:XD:149:ALA:HB3	4:XD:152:SER:HB2	1.82	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:148:ASN:C	7:XG:150:ALA:H	2.08	0.61
9:XI:128:ARG:NH2	22:XV:35:A:OP1	2.26	0.61
15:XO:76:GLU:C	15:XO:78:TYR:H	2.08	0.61
25:YA:2368:C:H2'	25:YA:2369:A:C8	2.33	0.61
27:YD:70:TRP:CH2	27:YD:150:LYS:HA	2.35	0.61
33:YN:62:VAL:CG1	33:YN:66:LYS:HD2	2.29	0.61
34:YO:8:LEU:HB2	34:YO:19:ILE:HD11	1.81	0.61
34:YO:78:ARG:HH21	39:YT:103:ARG:NH2	1.98	0.61
38:YS:17:ARG:HG3	38:YS:18:ILE:N	2.14	0.61
38:YS:43:GLU:HG2	46:Y0:49:LYS:HE2	1.82	0.61
39:YT:24:PRO:O	39:YT:94:ALA:HB2	2.00	0.61
41:YV:46:VAL:O	41:YV:46:VAL:HG13	2.01	0.61
50:Y4:23:GLU:O	50:Y4:25:TYR:N	2.33	0.61
54:Y8:22:VAL:HG21	54:Y8:53:PRO:HB2	1.83	0.61
54:Y8:29:LYS:HD3	54:Y8:44:LYS:CB	2.30	0.61
54:Y8:33:ASN:O	54:Y8:34:TRP:C	2.42	0.61
1:QA:542:G:OP1	4:QD:10:ARG:NH2	2.33	0.61
1:QA:701:C:H4'	1:QA:702:A:H5''	1.83	0.61
1:QA:735:C:H2'	1:QA:736:C:H6	1.66	0.61
1:QA:865:A:H5'	1:QA:1078:U:H5	1.65	0.61
17:QQ:67:LYS:HA	17:QQ:70:ARG:NH1	2.15	0.61
25:RA:1354:A:OP1	27:RD:38:LYS:HE2	2.00	0.61
25:RA:2072:G:N2	25:RA:2073:C:O2	2.33	0.61
25:RA:2152:G:H2'	25:RA:2153:G:H8	1.66	0.61
25:RA:2645:G:H3'	25:RA:2646:C:H5'	1.81	0.61
27:RD:21:PHE:HB3	27:RD:24:ILE:HG13	1.83	0.61
34:RO:104:ARG:CZ	39:RT:34:VAL:HG11	2.29	0.61
42:RW:82:LEU:HB2	42:RW:98:LYS:HB2	1.82	0.61
52:R6:25:LYS:HD2	54:R8:34:TRP:CZ2	2.36	0.61
1:XA:118:U:H3'	1:XA:288:A:H61	1.65	0.61
1:XA:581:G:N2	1:XA:760:G:N7	2.49	0.61
1:XA:1010:G:N2	1:XA:1020:U:H1'	2.15	0.61
1:XA:1336:C:H1'	1:XA:1337:G:C2	2.36	0.61
2:XB:17:PHE:CD2	2:XB:44:LEU:HD11	2.36	0.61
4:XD:106:TYR:HE1	4:XD:112:VAL:O	1.82	0.61
5:XE:42:GLY:HA2	5:XE:136:MET:HE1	1.82	0.61
5:XE:79:GLU:OE2	8:XH:104:ARG:CA	2.48	0.61
5:XE:131:ILE:O	5:XE:134:ALA:HB3	2.01	0.61
6:XF:77:ARG:HB2	6:XF:77:ARG:NH1	2.15	0.61
8:XH:102:ARG:HH11	8:XH:105:ARG:NH2	1.99	0.61
13:XM:77:ASN:CA	50:Y4:71:ARG:NH2	2.55	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:287:C:H42	25:YA:354:G:H1	1.49	0.61
25:YA:747:U:C2	51:Y5:2:ALA:HB3	2.34	0.61
25:YA:1586:A:H3'	25:YA:1587:A:H8	1.64	0.61
25:YA:1818:U:H2'	27:YD:157:ARG:HG3	1.82	0.61
25:YA:2532:G:O2'	25:YA:2657:A:N1	2.30	0.61
27:YD:25:THR:HG21	27:YD:81:ALA:CA	2.31	0.61
27:YD:69:ARG:C	27:YD:71:ASP:H	2.08	0.61
28:YE:35:GLN:CG	28:YE:37:ARG:HE	2.10	0.61
28:YE:69:LYS:C	28:YE:71:GLY:H	2.09	0.61
28:YE:174:ASP:CG	28:YE:175:VAL:N	2.58	0.61
31:YH:6:ARG:HG3	31:YH:7:LEU:N	2.15	0.61
31:YH:152:ARG:O	31:YH:153:LYS:CD	2.48	0.61
36:YQ:2:LEU:HD23	36:YQ:2:LEU:H	1.65	0.61
37:YR:38:VAL:HB	37:YR:39:PRO:HD3	1.81	0.61
38:YS:49:VAL:HG22	38:YS:80:LEU:HD12	1.83	0.61
42:YW:28:SER:O	42:YW:31:GLU:N	2.34	0.61
44:YY:44:ILE:HG13	44:YY:45:VAL:H	1.64	0.61
49:Y3:5:LYS:HB2	49:Y3:36:VAL:HG12	1.82	0.61
52:Y6:18:ARG:O	52:Y6:18:ARG:HD2	2.00	0.61
1:QA:36:C:O2'	1:QA:501:C:OP1	2.17	0.61
16:QP:4:ILE:HG13	16:QP:21:VAL:CG1	2.29	0.61
25:RA:49:A:N7	25:RA:120:U:C5	2.69	0.61
25:RA:2102:U:H3	25:RA:2187:G:H1	1.49	0.61
27:RD:174:ILE:N	27:RD:174:ILE:HD12	2.16	0.61
34:RO:7:TYR:HE1	34:RO:20:MET:HE3	1.65	0.61
39:RT:49:VAL:HG13	39:RT:49:VAL:O	1.99	0.61
41:RV:46:VAL:O	41:RV:46:VAL:HG13	2.01	0.61
43:RX:66:LEU:O	43:RX:66:LEU:HD23	2.01	0.61
47:R1:80:LEU:O	47:R1:81:LYS:HD2	2.01	0.61
1:XA:376:G:H5''	16:XP:5:ARG:HD2	1.82	0.61
2:XB:21:ARG:HG3	2:XB:38:GLY:O	2.01	0.61
2:XB:108:ILE:O	2:XB:111:ARG:HB2	2.01	0.61
6:XF:69:GLU:O	6:XF:72:VAL:HG12	2.01	0.61
8:XH:23:SER:HA	8:XH:63:LEU:CD2	2.24	0.61
10:XJ:34:VAL:CG2	10:XJ:74:ILE:HG22	2.30	0.61
13:XM:117:VAL:HG22	13:XM:118:ALA:N	2.15	0.61
25:YA:674:G:C1'	29:YF:74:ARG:HD3	2.29	0.61
25:YA:688:U:H2'	25:YA:689:A:C8	2.36	0.61
25:YA:1204:A:O2'	25:YA:1205:U:O5'	2.18	0.61
26:YB:38:C:N3	26:YB:44:G:N2	2.44	0.61
27:YD:227:ASN:CB	27:YD:228:PRO:HD2	2.24	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:95:ILE:HD12	28:YE:95:ILE:N	2.15	0.61
34:YO:91:LEU:N	34:YO:91:LEU:HD22	2.16	0.61
40:YU:88:ILE:H	40:YU:88:ILE:CD1	2.05	0.61
44:YY:19:LYS:O	44:YY:19:LYS:HG3	2.01	0.61
45:YZ:182:LYS:HB2	45:YZ:183:LEU:HA	1.81	0.61
1:QA:108:G:P	1:QA:326:G:H22	2.23	0.61
1:QA:489:C:H2'	1:QA:490:G:H8	1.66	0.61
2:QB:194:PRO:HG2	2:QB:195:ASP:H	1.64	0.61
4:QD:129:ASN:HA	4:QD:145:GLU:HB2	1.82	0.61
4:QD:166:LYS:HG3	27:YD:135:PHE:CZ	2.36	0.61
6:QF:98:LEU:HD12	6:QF:98:LEU:O	2.01	0.61
17:QQ:65:ILE:HD12	17:QQ:65:ILE:N	2.15	0.61
25:RA:547:A:H3'	25:RA:548:A:C8	2.36	0.61
25:RA:816:C:H2'	25:RA:817:C:C6	2.36	0.61
25:RA:1081:U:H3'	25:RA:1082:U:H4'	1.83	0.61
25:RA:2870:C:H2'	25:RA:2871:C:O4'	2.00	0.61
28:RE:69:LYS:C	28:RE:71:GLY:H	2.09	0.61
29:RF:63:LYS:HE2	29:RF:67:GLN:HB3	1.83	0.61
31:RH:6:ARG:HG3	31:RH:7:LEU:N	2.15	0.61
33:RN:7:LYS:CD	33:RN:9:VAL:H	2.14	0.61
33:RN:23:LEU:HD12	33:RN:99:LEU:HD23	1.82	0.61
40:RU:69:CYS:HB3	40:RU:106:PHE:CZ	2.36	0.61
42:RW:65:LEU:HD12	42:RW:68:ARG:NH1	2.10	0.61
42:RW:65:LEU:O	42:RW:66:GLU:C	2.43	0.61
45:RZ:16:SER:O	45:RZ:20:ARG:HB2	2.00	0.61
48:R2:41:ILE:HD11	48:R2:44:LEU:HG	1.82	0.61
54:R8:29:LYS:HD3	54:R8:44:LYS:CB	2.30	0.61
54:R8:48:PHE:N	54:R8:48:PHE:CD1	2.66	0.61
1:XA:426:G:OP1	4:XD:38:TYR:OH	2.10	0.61
1:XA:465:A:N7	1:XA:467:G:C6	2.69	0.61
1:XA:821:G:H2'	1:XA:822:C:C6	2.36	0.61
1:XA:1306:A:N6	1:XA:1331:G:H1'	2.15	0.61
6:XF:10:LEU:HD13	6:XF:61:LEU:CD1	2.30	0.61
15:XO:68:ARG:O	15:XO:72:ARG:HB2	2.00	0.61
18:XR:25:THR:HG22	18:XR:25:THR:O	2.00	0.61
25:YA:270(R):G:H1'	47:Y1:78:LYS:HZ1	1.64	0.61
25:YA:860:U:H5	25:YA:917:A:C2	2.19	0.61
25:YA:1639:U:H2'	25:YA:1640:C:H5''	1.82	0.61
25:YA:1728:G:H8	25:YA:1732:A:H62	1.48	0.61
25:YA:2439:A:H5'	25:YA:2439:A:H8	1.65	0.61
25:YA:2887:U:H2'	25:YA:2888:C:H6	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:2:ALA:HB3	27:YD:20:ASP:HB3	1.83	0.61
30:YG:77:ILE:HD13	30:YG:82:LEU:CD1	2.29	0.61
33:YN:7:LYS:CD	33:YN:9:VAL:H	2.14	0.61
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HG	1.83	0.61
49:Y3:59:VAL:HG12	49:Y3:60:GLU:N	2.16	0.61
50:Y4:64:GLY:C	50:Y4:66:SER:H	2.07	0.61
3:QC:70:VAL:O	3:QC:106:VAL:HG23	2.01	0.61
3:QC:77:ILE:C	3:QC:83:ARG:HB3	2.26	0.61
4:QD:11:LEU:HA	4:QD:14:ARG:HB2	1.82	0.61
12:QL:44:THR:O	12:QL:45:PRO:O	2.17	0.61
20:QT:84:LEU:O	20:QT:88:VAL:HG23	2.01	0.61
25:RA:270(U):C:H2'	25:RA:270(V):G:C8	2.34	0.61
25:RA:1678:G:H22	25:RA:1989:G:N2	1.97	0.61
25:RA:2392:A:H8	35:RP:60:MET:HG3	1.66	0.61
36:RQ:59:ARG:C	36:RQ:60:ARG:CG	2.74	0.61
49:R3:59:VAL:HG12	49:R3:60:GLU:N	2.16	0.61
52:R6:41:PRO:HD2	52:R6:46:HIS:N	2.16	0.61
4:XD:162:LEU:CD1	4:XD:181:MET:HB3	2.31	0.61
4:XD:196:LEU:HD12	4:XD:196:LEU:N	2.15	0.61
6:XF:98:LEU:HD12	6:XF:98:LEU:O	2.01	0.61
7:XG:79:ARG:HH11	7:XG:79:ARG:HG2	1.66	0.61
11:XK:121:PRO:HD2	11:XK:126:ARG:HD3	1.82	0.61
12:XL:85:ILE:HD11	12:XL:98:TYR:HB2	1.81	0.61
13:XM:96:LEU:HB3	13:XM:97:PRO:HD2	1.83	0.61
19:XS:16:LEU:O	19:XS:20:LEU:HG	2.01	0.61
25:YA:242:G:C5'	54:Y8:3:LYS:HE3	2.29	0.61
25:YA:863:A:H2'	25:YA:864:G:C8	2.35	0.61
25:YA:882:G:N2	25:YA:895:U:O2	2.33	0.61
25:YA:1327:C:N4	25:YA:1328:G:C6	2.69	0.61
27:YD:133:LEU:HD21	27:YD:191:ALA:HB2	1.82	0.61
28:YE:52:LEU:HB3	28:YE:54:GLN:OE1	2.00	0.61
29:YF:119:ARG:HH11	29:YF:119:ARG:HG2	1.64	0.61
29:YF:164:ARG:HH11	29:YF:164:ARG:HG2	1.66	0.61
31:YH:137:ASP:HB3	31:YH:140:LYS:HB2	1.81	0.61
35:YP:96:THR:HG22	35:YP:126:VAL:HB	1.82	0.61
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CD	2.30	0.61
37:YR:44:LEU:HD22	37:YR:48:VAL:HG23	1.82	0.61
38:YS:89:ARG:O	38:YS:90:GLY:O	2.19	0.61
43:YX:14:SER:O	43:YX:17:ALA:N	2.34	0.61
1:QA:227:G:H2'	1:QA:228:A:C8	2.35	0.61
1:QA:590:C:H2'	1:QA:591:U:H6	1.66	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1321:C:H3'	1:QA:1322:C:H5''	1.83	0.61
1:QA:1330:U:OP1	13:QM:25:ILE:O	2.18	0.61
3:QC:3:ASN:N	3:QC:3:ASN:ND2	2.48	0.61
3:QC:47:LEU:O	3:QC:52:LEU:HD22	2.01	0.61
10:QJ:34:VAL:CG2	10:QJ:74:ILE:HG22	2.30	0.61
13:QM:9:ILE:HD12	13:QM:9:ILE:O	2.01	0.61
13:QM:62:ASN:ND2	50:R4:49:PHE:HD2	1.99	0.61
16:QP:8:ARG:HH11	16:QP:8:ARG:HG2	1.64	0.61
16:QP:20:VAL:HG21	16:QP:32:TYR:CD2	2.35	0.61
16:QP:20:VAL:HG22	16:QP:21:VAL:N	2.16	0.61
25:RA:1047:G:H2'	25:RA:1110:G:N1	2.16	0.61
27:RD:35:LYS:HG2	27:RD:64:ILE:CG2	2.31	0.61
28:RE:52:LEU:HB3	28:RE:54:GLN:OE1	2.00	0.61
35:RP:96:THR:HG22	35:RP:126:VAL:HB	1.83	0.61
36:RQ:2:LEU:HD23	36:RQ:2:LEU:H	1.65	0.61
38:RS:49:VAL:HG22	38:RS:80:LEU:HD12	1.82	0.61
40:RU:79:PHE:CD2	40:RU:79:PHE:C	2.78	0.61
49:R3:5:LYS:HB2	49:R3:36:VAL:HG12	1.82	0.61
50:R4:64:GLY:C	50:R4:66:SER:H	2.07	0.61
1:XA:110:C:H2'	1:XA:111:G:O4'	2.01	0.61
1:XA:192:U:H4'	20:XT:102:GLY:O	2.00	0.61
1:XA:895:G:H2'	1:XA:896:C:C6	2.36	0.61
3:XC:13:GLY:HA3	14:YN:57:ARG:CZ	2.31	0.61
3:XC:77:ILE:C	3:XC:83:ARG:HB3	2.26	0.61
5:XE:43:LEU:HD21	5:XE:132:ALA:HB1	1.83	0.61
9:XI:13:ALA:HB2	9:XI:67:GLY:O	2.00	0.61
25:YA:795:C:O2'	25:YA:796:C:H5'	2.00	0.61
25:YA:934:G:H2'	25:YA:935:C:C6	2.35	0.61
25:YA:1113:U:OP1	31:YH:2:SER:N	2.34	0.61
25:YA:2816:C:O2'	25:YA:2817:G:H5'	1.99	0.61
27:YD:54:ARG:HH11	27:YD:54:ARG:CG	2.14	0.61
30:YG:44:GLY:HA2	30:YG:88:ILE:CG1	2.31	0.61
41:YV:41:GLY:H	41:YV:46:VAL:HG13	1.66	0.61
42:YW:82:LEU:HB2	42:YW:98:LYS:HB2	1.82	0.61
43:YX:66:LEU:O	43:YX:66:LEU:HD23	2.01	0.61
46:Y0:11:ARG:O	46:Y0:14:ARG:NH2	2.34	0.61
52:Y6:7:ILE:HG13	52:Y6:8:LYS:N	2.06	0.61
1:QA:738:C:H5''	6:QF:69:GLU:HB2	1.83	0.60
1:QA:1113:C:H2'	1:QA:1114:C:C6	2.36	0.60
1:QA:1326:C:H2'	1:QA:1327:C:C6	2.36	0.60
2:QB:60:ASP:O	2:QB:64:ARG:HG2	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:141:GLU:O	2:QB:145:LEU:HD23	2.01	0.60
4:QD:90:GLY:CA	4:QD:204:ILE:HD11	2.30	0.60
4:QD:90:GLY:HA2	4:QD:204:ILE:HD11	1.83	0.60
10:QJ:89:ASP:C	10:QJ:90:LEU:HD12	2.26	0.60
19:QS:12:ASP:OD1	19:QS:37:ARG:HD2	2.00	0.60
20:QT:101:GLY:O	20:QT:103:GLY:N	2.34	0.60
25:RA:903:C:H2'	25:RA:904:C:H6	1.66	0.60
26:RB:28:C:H2'	26:RB:29:A:C8	2.36	0.60
29:RF:175:THR:O	29:RF:176:LEU:CB	2.49	0.60
32:RI:68:LEU:HA	32:RI:71:ILE:HG22	1.82	0.60
33:RN:6:PRO:HG3	33:RN:41:ASP:HB2	1.83	0.60
33:RN:58:ASP:N	33:RN:60:ILE:HD11	2.16	0.60
41:RV:35:LEU:O	41:RV:35:LEU:HD23	2.01	0.60
43:RX:14:SER:O	43:RX:17:ALA:N	2.34	0.60
1:XA:1081:G:P	5:XE:16:THR:HG1	2.23	0.60
1:XA:1171:G:H2'	1:XA:1172:C:C6	2.35	0.60
3:XC:3:ASN:N	3:XC:3:ASN:ND2	2.48	0.60
6:XF:45:LEU:HD12	6:XF:59:TYR:HD1	1.66	0.60
25:YA:877:U:H3	25:YA:899:A:H2	1.49	0.60
25:YA:1359:A:H61	25:YA:1372:U:H3	1.48	0.60
25:YA:2635:C:OP1	28:YE:78:LEU:HD12	2.01	0.60
27:YD:35:LYS:NZ	27:YD:65:ILE:HA	2.15	0.60
27:YD:147:LEU:HD13	27:YD:155:LEU:CD1	2.29	0.60
27:YD:147:LEU:CD1	27:YD:155:LEU:HD11	2.26	0.60
29:YF:108:LYS:HZ3	29:YF:108:LYS:HA	1.64	0.60
32:YI:93:THR:O	32:YI:97:ILE:HG12	2.01	0.60
33:YN:99:LEU:O	33:YN:103:VAL:HG23	2.01	0.60
35:YP:27:HIS:ND1	35:YP:27:HIS:N	2.49	0.60
52:Y6:41:PRO:HD2	52:Y6:46:HIS:N	2.16	0.60
4:QD:149:ALA:HB3	4:QD:152:SER:HB2	1.82	0.60
5:QE:131:ILE:O	5:QE:134:ALA:HB3	2.01	0.60
11:QK:41:THR:HG21	11:QK:71:LYS:HB2	1.83	0.60
11:QK:99:GLN:HG2	11:QK:105:VAL:CG2	2.28	0.60
15:QO:5:LYS:O	15:QO:8:LYS:HG2	2.01	0.60
25:RA:108:U:H2'	25:RA:109:G:H8	1.65	0.60
25:RA:558:G:P	33:RN:111:PRO:HD2	2.41	0.60
25:RA:923:C:H2'	25:RA:924:C:H6	1.65	0.60
25:RA:1113:U:H2'	25:RA:1114:G:C8	2.36	0.60
25:RA:2146:C:H4'	25:RA:2147:G:C8	2.35	0.60
25:RA:2591:C:OP2	27:RD:238:GLY:HA3	2.01	0.60
27:RD:263:ARG:HH11	27:RD:263:ARG:CB	2.14	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:28:VAL:O	30:RG:31:VAL:HG12	2.01	0.60
30:RG:61:ALA:HB2	30:RG:68:PRO:HD2	1.80	0.60
37:RR:52:ILE:O	37:RR:55:ALA:HB3	2.01	0.60
41:RV:15:GLU:HG3	41:RV:16:PRO:HD2	1.83	0.60
46:R0:56:ASP:CG	46:R0:58:THR:HG1	2.09	0.60
48:R2:70:GLN:O	48:R2:71:ASN:HB2	2.00	0.60
1:XA:15:G:H4'	5:XE:24:ARG:HH12	1.65	0.60
2:XB:60:ASP:O	2:XB:64:ARG:HG2	2.01	0.60
3:XC:141:VAL:O	3:XC:146:ALA:HB3	2.01	0.60
8:XH:6:ILE:HB	8:XH:85:ARG:HH12	1.62	0.60
10:XJ:22:LYS:HD2	10:XJ:22:LYS:C	2.25	0.60
12:XL:5:PRO:HA	12:XL:9:GLN:NE2	2.16	0.60
16:XP:47:ASP:C	16:XP:49:LEU:H	2.09	0.60
25:YA:1980:G:O2'	25:YA:1982:C:OP2	2.18	0.60
28:YE:131:ALA:HB1	28:YE:135:HIS:HE1	1.65	0.60
32:YI:48:GLU:HA	32:YI:51:ILE:HD12	1.82	0.60
39:YT:34:VAL:HG12	39:YT:36:GLU:HG2	1.83	0.60
42:YW:36:LEU:HD11	42:YW:47:VAL:HG12	1.83	0.60
44:YY:101:LYS:HE3	44:YY:102:CYS:SG	2.40	0.60
1:QA:298:A:H5''	1:QA:299:G:OP2	2.01	0.60
1:QA:955:U:H2'	1:QA:956:U:H6	1.66	0.60
4:QD:196:LEU:N	4:QD:196:LEU:HD12	2.15	0.60
8:QH:49:GLU:O	8:QH:51:VAL:HG13	2.02	0.60
14:QN:25:VAL:HG23	14:QN:38:GLY:C	2.21	0.60
20:QT:34:LYS:O	20:QT:38:LYS:HB2	2.01	0.60
22:QV:1:C:C1'	46:R0:5:LYS:CE	2.78	0.60
25:RA:14:A:N1	25:RA:2044:C:O2'	2.34	0.60
25:RA:1977:A:H8	25:RA:1977:A:O5'	1.85	0.60
25:RA:2111:C:N3	25:RA:2118:U:O2'	2.34	0.60
28:RE:104:VAL:HG11	28:RE:188:VAL:HG23	1.82	0.60
31:RH:126:PRO:CD	31:RH:127:GLU:N	2.64	0.60
34:RO:91:LEU:HD22	34:RO:91:LEU:N	2.16	0.60
35:RP:13:ASN:C	35:RP:15:ARG:N	2.54	0.60
41:RV:66:ARG:HH12	41:RV:88:ARG:HH11	1.49	0.60
42:RW:28:SER:O	42:RW:31:GLU:N	2.34	0.60
45:RZ:166:SER:H	45:RZ:167:PRO:HA	1.66	0.60
1:XA:567:G:H2'	1:XA:568:G:O4'	2.02	0.60
1:XA:1224:G:C6	1:XA:1322:C:H1'	2.36	0.60
2:XB:90:MET:HE2	2:XB:90:MET:HA	1.83	0.60
2:XB:221:LEU:HD13	2:XB:221:LEU:O	2.02	0.60
3:XC:47:LEU:O	3:XC:52:LEU:HD22	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:88:ARG:NH1	3:XC:101:LEU:H	1.99	0.60
5:XE:79:GLU:HB3	5:XE:92:LYS:HA	1.84	0.60
13:XM:40:ASN:HD21	13:XM:42:ALA:HB3	1.64	0.60
17:XQ:67:LYS:HA	17:XQ:70:ARG:NH1	2.15	0.60
19:XS:11:VAL:O	19:XS:12:ASP:HB2	1.99	0.60
25:YA:570:G:H2'	25:YA:2030:A:C5	2.36	0.60
25:YA:582:G:H1	25:YA:1258:C:H42	1.46	0.60
25:YA:676:A:H2	25:YA:802:A:H61	1.48	0.60
25:YA:2131:G:H4'	25:YA:2132:U:H4'	1.82	0.60
25:YA:2284:C:C5	52:Y6:27:LYS:HE2	2.36	0.60
27:YD:263:ARG:HH11	27:YD:263:ARG:CB	2.15	0.60
31:YH:44:VAL:HG22	31:YH:44:VAL:O	2.01	0.60
36:YQ:66:ILE:CG1	36:YQ:67:ARG:N	2.64	0.60
38:YS:99:LYS:O	38:YS:102:ALA:N	2.34	0.60
50:Y4:71:ARG:NH1	50:Y4:71:ARG:CG	2.61	0.60
1:QA:684:A:O2'	11:QK:38:ASN:HB3	2.02	0.60
1:QA:1066:C:H5'	1:QA:1067:A:OP2	2.01	0.60
2:QB:80:ILE:CD1	2:QB:208:ILE:HG23	2.22	0.60
2:QB:114:ARG:O	2:QB:117:GLU:HB2	2.01	0.60
3:QC:88:ARG:O	3:QC:99:VAL:HG21	2.01	0.60
4:QD:146:ILE:HD12	4:QD:146:ILE:H	1.66	0.60
6:QF:69:GLU:O	6:QF:72:VAL:HG12	2.01	0.60
6:QF:89:MET:HE1	18:QR:76:LEU:HD22	1.82	0.60
9:QI:28:VAL:HG13	9:QI:63:ILE:HG22	1.82	0.60
16:QP:40:ASP:OD2	16:QP:42:ARG:HB2	2.02	0.60
20:QT:104:LEU:HD12	20:QT:105:SER:H	1.66	0.60
25:RA:96:G:H4'	48:R2:48:HIS:NE2	2.17	0.60
25:RA:270:A:H2'	25:RA:270(A):A:C8	2.35	0.60
25:RA:870:A:H2'	25:RA:871:U:C6	2.37	0.60
25:RA:1204:A:O2'	25:RA:1205:U:O5'	2.19	0.60
25:RA:2336:A:H61	46:R0:43:THR:HG21	1.64	0.60
30:RG:50:ALA:O	30:RG:53:LEU:HB3	2.01	0.60
36:RQ:66:ILE:CG1	36:RQ:67:ARG:N	2.64	0.60
45:RZ:28:MET:HE1	45:RZ:61:LEU:HD11	1.83	0.60
1:XA:309:G:H2'	1:XA:310:G:C8	2.36	0.60
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.33	0.60
1:XA:1412:C:H42	1:XA:1488:G:H1	1.50	0.60
3:XC:70:VAL:HG12	3:XC:72:LYS:N	2.11	0.60
4:XD:146:ILE:HD12	4:XD:146:ILE:H	1.66	0.60
6:XF:61:LEU:HB3	6:XF:63:TYR:HE2	1.67	0.60
8:XH:49:GLU:O	8:XH:51:VAL:HG13	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:XK:78:GLN:O	11:XK:103:LEU:HA	2.01	0.60
13:XM:4:ILE:H	13:XM:9:ILE:HG22	1.62	0.60
13:XM:9:ILE:HD12	13:XM:9:ILE:O	2.01	0.60
13:XM:37:THR:CG2	13:XM:39:ILE:HD11	2.32	0.60
16:XP:40:ASP:OD2	16:XP:42:ARG:HB2	2.02	0.60
25:YA:466:A:N3	25:YA:683:C:H1'	2.15	0.60
25:YA:469:G:O6	53:Y7:37:LYS:HE2	2.00	0.60
25:YA:580:C:H2'	25:YA:581:C:H6	1.66	0.60
25:YA:1443:G:N2	25:YA:1548:C:N3	2.47	0.60
26:YB:18:G:H1	26:YB:65:C:H42	1.49	0.60
27:YD:35:LYS:NZ	27:YD:64:ILE:O	2.32	0.60
28:YE:37:ARG:NE	28:YE:37:ARG:CA	2.64	0.60
28:YE:53:PRO:HG2	28:YE:54:GLN:NE2	2.16	0.60
29:YF:34:TRP:CZ3	35:YP:8:PRO:HB3	2.37	0.60
32:YI:113:ARG:HB3	32:YI:131:LYS:HD3	1.84	0.60
33:YN:16:ILE:O	33:YN:55:VAL:HG22	2.01	0.60
34:YO:97:ARG:N	34:YO:117:LEU:HD22	2.15	0.60
36:YQ:60:ARG:HH11	45:YZ:113:ALA:HB3	1.65	0.60
37:YR:52:ILE:O	37:YR:55:ALA:HB3	2.01	0.60
40:YU:69:CYS:HB3	40:YU:106:PHE:CZ	2.36	0.60
40:YU:90:VAL:CG1	40:YU:91:ASP:H	2.00	0.60
45:YZ:28:MET:N	45:YZ:35:ARG:O	2.32	0.60
1:QA:1172:C:H2'	1:QA:1173:G:C8	2.37	0.60
1:QA:1412:C:H2'	1:QA:1413:A:C8	2.37	0.60
2:QB:17:PHE:CD2	2:QB:44:LEU:HD11	2.36	0.60
3:QC:141:VAL:O	3:QC:146:ALA:HB3	2.01	0.60
6:QF:1:MET:HA	6:QF:67:MET:O	2.02	0.60
8:QH:86:ILE:HG22	8:QH:93:VAL:HG21	1.84	0.60
10:QJ:32:ALA:H	10:QJ:78:ASN:HD21	1.49	0.60
11:QK:78:GLN:O	11:QK:103:LEU:HA	2.01	0.60
15:QO:74:ASP:OD1	15:QO:77:ARG:HG2	2.00	0.60
27:RD:35:LYS:NZ	27:RD:65:ILE:HA	2.15	0.60
30:RG:94:LEU:HD23	30:RG:94:LEU:H	1.64	0.60
36:RQ:54:MET:O	36:RQ:57:HIS:HB3	2.00	0.60
38:RS:18:ILE:C	38:RS:19:LYS:O	2.44	0.60
43:RX:43:VAL:CG1	43:RX:51:VAL:HG21	2.31	0.60
1:XA:272:C:H2'	1:XA:273:A:H8	1.67	0.60
1:XA:1101:A:H4'	1:XA:1102:A:O5'	2.01	0.60
1:XA:1189:C:H5''	1:XA:1190:G:OP2	2.02	0.60
2:XB:69:LEU:O	2:XB:162:ILE:HA	2.02	0.60
3:XC:70:VAL:O	3:XC:106:VAL:HG23	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:130:VAL:O	3:XC:134:ILE:HG12	2.01	0.60
4:XD:90:GLY:CA	4:XD:204:ILE:HD11	2.31	0.60
8:XH:39:LEU:O	8:XH:45:ILE:HG12	2.01	0.60
9:XI:3:GLN:HB3	9:XI:20:ARG:HG2	1.82	0.60
9:XI:85:LEU:HD12	9:XI:85:LEU:O	2.02	0.60
9:XI:96:LEU:HD23	9:XI:102:LEU:HD12	1.84	0.60
13:XM:3:ARG:HG2	50:Y4:34:GLU:OE1	2.02	0.60
14:YN:44:LEU:HD12	14:YN:48:ALA:HB2	1.83	0.60
17:XQ:84:LEU:C	17:XQ:86:GLU:H	2.08	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
25:YA:1005:C:H5''	25:YA:1006:C:OP2	2.01	0.60
25:YA:1266:G:O5'	42:YW:15:ARG:NH2	2.35	0.60
25:YA:1825:A:H2'	25:YA:1826:G:H8	1.67	0.60
25:YA:2022:U:O2'	25:YA:2617:C:H5'	2.02	0.60
25:YA:2512:C:H2'	25:YA:2513:G:O4'	2.01	0.60
25:YA:2723:C:H5''	37:YR:1:MET:HG2	1.83	0.60
27:YD:25:THR:HG21	27:YD:81:ALA:HA	1.84	0.60
27:YD:35:LYS:HG2	27:YD:64:ILE:CG2	2.31	0.60
27:YD:166:GLN:HE21	27:YD:166:GLN:CA	2.14	0.60
33:YN:17:ASP:O	33:YN:18:ALA:HB3	2.01	0.60
35:YP:13:ASN:O	35:YP:15:ARG:N	2.34	0.60
42:YW:65:LEU:O	42:YW:66:GLU:C	2.43	0.60
45:YZ:60:GLU:HA	45:YZ:66:SER:HA	1.83	0.60
47:Y1:3:LYS:HD3	47:Y1:43:TYR:CD2	2.35	0.60
52:Y6:13:CYS:O	52:Y6:21:TYR:HA	2.02	0.60
1:QA:196:A:OP1	20:QT:68:LYS:NZ	2.28	0.60
1:QA:1190:G:OP1	3:QC:5:ILE:HD12	2.01	0.60
1:QA:1226:C:H2'	13:QM:103:THR:HB	1.82	0.60
2:QB:90:MET:HE2	2:QB:90:MET:HA	1.84	0.60
2:QB:221:LEU:HD13	2:QB:221:LEU:O	2.02	0.60
3:QC:88:ARG:NH1	3:QC:101:LEU:H	1.99	0.60
4:QD:11:LEU:O	4:QD:14:ARG:N	2.35	0.60
4:QD:76:ARG:HD2	4:QD:207:TYR:HE2	1.66	0.60
8:QH:58:TYR:O	8:QH:59:LEU:HD23	2.00	0.60
9:QI:3:GLN:HB3	9:QI:20:ARG:HG2	1.82	0.60
14:QN:23:ARG:HD2	14:QN:28:GLY:O	2.00	0.60
17:QQ:84:LEU:C	17:QQ:86:GLU:H	2.08	0.60
25:RA:38:A:N3	29:RF:48:THR:OG1	2.34	0.60
25:RA:67:U:H3	25:RA:74:A:H2	1.49	0.60
25:RA:845:G:HO2'	25:RA:846:C:H5	1.47	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2544:G:H2'	25:RA:2545:G:H8	1.66	0.60
30:RG:64:THR:HG23	30:RG:66:GLN:H	1.67	0.60
33:RN:133:GLN:O	33:RN:134:ARG:HB3	1.99	0.60
35:RP:55:ARG:HD2	35:RP:56:SER:O	2.01	0.60
5:XE:33:VAL:HG11	5:XE:109:ILE:HA	1.83	0.60
5:XE:74:GLY:O	5:XE:115:VAL:HA	2.01	0.60
9:XI:9:ARG:CB	9:XI:14:VAL:HG22	2.31	0.60
10:XJ:5:ARG:O	10:XJ:98:ILE:HA	2.01	0.60
25:YA:492:A:C2'	25:YA:493:G:H5'	2.31	0.60
25:YA:688:U:H5'	25:YA:1780:A:C2	2.36	0.60
25:YA:1292:U:H2'	25:YA:1293:C:C6	2.36	0.60
25:YA:2347:C:C5	25:YA:2382:G:H1'	2.35	0.60
26:YB:24:G:H1'	26:YB:26:A:H62	1.66	0.60
27:YD:35:LYS:CG	27:YD:64:ILE:N	2.56	0.60
28:YE:63:LEU:CD1	28:YE:64:LYS:H	2.04	0.60
30:YG:28:VAL:O	30:YG:31:VAL:HG12	2.01	0.60
33:YN:1:MET:HE1	40:YU:95:LEU:CD2	2.18	0.60
45:YZ:1:MET:HG2	45:YZ:2:GLU:H	1.65	0.60
45:YZ:23:LYS:O	45:YZ:25:PRO:HD3	2.02	0.60
47:Y1:80:LEU:O	47:Y1:81:LYS:HD2	2.00	0.60
6:QF:61:LEU:HB3	6:QF:63:TYR:HE2	1.67	0.60
9:QI:9:ARG:CB	9:QI:14:VAL:HG22	2.31	0.60
20:QT:96:GLY:O	20:QT:97:ALA:HB3	2.02	0.60
25:RA:1329:U:H5''	25:RA:1330:C:H5	1.65	0.60
25:RA:2068:U:N3	25:RA:2430:A:H2	1.98	0.60
25:RA:2277:G:OP1	36:RQ:85:LYS:HB2	2.01	0.60
28:RE:53:PRO:HG2	28:RE:54:GLN:NE2	2.16	0.60
30:RG:112:PRO:HB3	50:R4:37:SER:CB	2.26	0.60
30:RG:128:ARG:HG3	30:RG:128:ARG:NH2	2.17	0.60
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ2	1.66	0.60
31:RH:44:VAL:HG22	31:RH:44:VAL:O	2.01	0.60
33:RN:17:ASP:O	33:RN:18:ALA:HB3	2.01	0.60
44:RY:19:LYS:O	44:RY:19:LYS:HG3	2.01	0.60
44:RY:44:ILE:HG13	44:RY:45:VAL:H	1.65	0.60
48:R2:41:ILE:HG12	48:R2:44:LEU:HD12	1.82	0.60
1:XA:375:U:H4'	16:XP:17:TYR:HE2	1.67	0.60
1:XA:1292:U:H2'	1:XA:1293:G:C8	2.36	0.60
4:XD:129:ASN:HA	4:XD:145:GLU:HB2	1.82	0.60
7:XG:113:GLU:CB	7:XG:119:ARG:HG2	2.29	0.60
12:XL:54:LYS:CD	12:XL:54:LYS:N	2.64	0.60
13:XM:97:PRO:HB2	13:XM:101:GLN:HE22	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:26:G:N1	25:YA:27:G:N2	2.50	0.60
25:YA:428:A:N6	25:YA:429:A:N1	2.49	0.60
25:YA:483:A:C4'	44:YY:49:VAL:HA	2.29	0.60
25:YA:492:A:H2'	25:YA:493:G:H5'	1.82	0.60
25:YA:675:A:C8	25:YA:804:A:C6	2.90	0.60
25:YA:818:G:H3'	25:YA:1187:G:H22	1.65	0.60
25:YA:993:G:H2'	25:YA:994:C:C6	2.36	0.60
25:YA:1061:U:H3'	25:YA:1062:G:H5''	1.82	0.60
30:YG:180:PHE:C	30:YG:182:LYS:H	2.09	0.60
33:YN:23:LEU:HD12	33:YN:99:LEU:HD23	1.82	0.60
33:YN:101:HIS:CD2	33:YN:101:HIS:C	2.79	0.60
35:YP:79:ARG:HD3	35:YP:110:TYR:HE1	1.67	0.60
38:YS:11:LYS:HB2	38:YS:91:PRO:HD3	1.84	0.60
40:YU:92:ARG:HD3	40:YU:94:ASN:HB3	1.82	0.60
40:YU:92:ARG:NH1	40:YU:95:LEU:CD1	2.65	0.60
41:YV:35:LEU:HD23	41:YV:35:LEU:O	2.01	0.60
41:YV:99:ILE:N	41:YV:99:ILE:CD1	2.65	0.60
43:YX:43:VAL:CG1	43:YX:51:VAL:HG21	2.31	0.60
4:QD:96:LEU:H	4:QD:96:LEU:CD2	2.12	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
9:QI:111:ARG:HG2	9:QI:112:LYS:N	2.16	0.60
9:QI:114:TYR:O	9:QI:114:TYR:HD2	1.85	0.60
10:QJ:5:ARG:O	10:QJ:98:ILE:HA	2.01	0.60
13:QM:37:THR:CG2	13:QM:39:ILE:HD11	2.32	0.60
13:QM:96:LEU:HB3	13:QM:97:PRO:HD2	1.83	0.60
16:QP:47:ASP:C	16:QP:49:LEU:H	2.09	0.60
19:QS:25:LYS:O	19:QS:26:GLY:O	2.20	0.60
25:RA:654:A:O2'	25:RA:654(A):G:N7	2.34	0.60
25:RA:863:A:H2'	25:RA:864:G:C8	2.36	0.60
25:RA:892:G:N2	25:RA:893:C:O2	2.35	0.60
25:RA:955:C:N4	25:RA:962:G:O6	2.17	0.60
25:RA:2318:G:H22	38:RS:2:ALA:N	2.00	0.60
27:RD:2:ALA:HB3	27:RD:20:ASP:HB3	1.83	0.60
27:RD:25:THR:HG21	27:RD:81:ALA:CA	2.31	0.60
28:RE:4:ILE:CD1	28:RE:28:ALA:HB1	2.29	0.60
28:RE:37:ARG:NE	28:RE:37:ARG:CA	2.64	0.60
28:RE:95:ILE:HD12	28:RE:95:ILE:N	2.15	0.60
29:RF:46:ARG:HH11	29:RF:46:ARG:CG	2.04	0.60
31:RH:89:ILE:O	31:RH:91:GLY:N	2.35	0.60
33:RN:99:LEU:O	33:RN:103:VAL:HG23	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:97:VAL:HG21	36:RQ:103:MET:HE3	1.83	0.60
37:RR:44:LEU:HD22	37:RR:48:VAL:HG23	1.82	0.60
38:RS:17:ARG:HG3	38:RS:18:ILE:N	2.14	0.60
45:RZ:5:LEU:HD11	45:RZ:39:VAL:HB	1.84	0.60
48:R2:32:LEU:HD11	48:R2:54:LYS:HG3	1.84	0.60
1:XA:701:C:H1'	1:XA:703:G:C4	2.37	0.60
4:XD:90:GLY:HA2	4:XD:204:ILE:HD11	1.83	0.60
6:XF:1:MET:HA	6:XF:67:MET:O	2.02	0.60
9:XI:111:ARG:HG2	9:XI:112:LYS:N	2.16	0.60
10:XJ:89:ASP:C	10:XJ:90:LEU:HD12	2.26	0.60
25:YA:264:C:C2'	25:YA:265:A:H5''	2.31	0.60
25:YA:1846:G:H5'	25:YA:1847:A:OP2	2.02	0.60
25:YA:2324:C:H5''	25:YA:2325:G:H5'	1.84	0.60
27:YD:21:PHE:HB3	27:YD:24:ILE:HG13	1.83	0.60
27:YD:35:LYS:HD3	27:YD:63:ARG:CB	2.32	0.60
30:YG:9:ARG:HG2	30:YG:13:GLU:OE1	2.01	0.60
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CE1	2.37	0.60
39:YT:57:PHE:CD2	39:YT:58:ASN:N	2.66	0.60
45:YZ:58:VAL:O	45:YZ:60:GLU:N	2.35	0.60
50:Y4:38:LYS:C	50:Y4:40:HIS:N	2.52	0.60
54:Y8:53:PRO:CD	54:Y8:54:GLU:H	2.15	0.60
1:QA:192:U:H4'	20:QT:102:GLY:O	2.01	0.60
1:QA:1440:C:O2'	1:QA:1442:G:N2	2.35	0.60
3:QC:13:GLY:HA3	14:QN:57:ARG:CZ	2.31	0.60
3:QC:130:VAL:O	3:QC:134:ILE:HG12	2.01	0.60
5:QE:33:VAL:HG11	5:QE:109:ILE:HA	1.83	0.60
14:QN:15:LYS:HD2	14:QN:16:PHE:CZ	2.37	0.60
15:QO:4:THR:HB	15:QO:6:GLU:OE2	2.02	0.60
17:QQ:76:LEU:HD12	17:QQ:77:VAL:H	1.66	0.60
25:RA:1101:U:H2'	25:RA:1102:C:C6	2.36	0.60
28:RE:116:VAL:O	28:RE:117:MET:CB	2.49	0.60
29:RF:34:TRP:CZ3	35:RP:8:PRO:HB3	2.37	0.60
29:RF:164:ARG:HH11	29:RF:164:ARG:HG2	1.66	0.60
30:RG:44:GLY:HA2	30:RG:88:ILE:CG1	2.30	0.60
31:RH:30:LYS:CD	31:RH:81:GLU:H	2.15	0.60
35:RP:13:ASN:O	35:RP:15:ARG:N	2.34	0.60
35:RP:27:HIS:N	35:RP:27:HIS:ND1	2.49	0.60
37:RR:44:LEU:O	37:RR:48:VAL:HG23	2.02	0.60
41:RV:18:LEU:HB3	41:RV:96:ILE:HG12	1.84	0.60
43:RX:15:GLU:N	43:RX:15:GLU:OE1	2.34	0.60
1:XA:235:C:H5'	17:XQ:70:ARG:HG2	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:555:C:OP1	12:XL:20:LYS:NZ	2.35	0.60
1:XA:828:A:H2'	1:XA:829:G:O4'	2.02	0.60
2:XB:141:GLU:O	2:XB:145:LEU:HD23	2.02	0.60
13:XM:3:ARG:HA	13:XM:9:ILE:CG2	2.21	0.60
20:XT:74:LYS:C	20:XT:76:ALA:H	2.10	0.60
25:YA:593:G:O2'	54:Y8:61:LEU:HD13	2.02	0.60
25:YA:1340:U:OP2	43:YX:78:LYS:NZ	2.34	0.60
25:YA:2840:C:H2'	25:YA:2841:C:H6	1.65	0.60
27:YD:72:LYS:HE3	27:YD:75:ILE:HD12	1.82	0.60
28:YE:93:VAL:N	28:YE:95:ILE:CD1	2.65	0.60
28:YE:93:VAL:N	28:YE:95:ILE:HD12	2.17	0.60
29:YF:63:LYS:HE2	29:YF:67:GLN:HB3	1.83	0.60
29:YF:175:THR:O	29:YF:176:LEU:CB	2.49	0.60
1:QA:145:G:H1	1:QA:177:C:H42	1.50	0.60
1:QA:811:C:H4'	1:QA:900:A:N6	2.17	0.60
1:QA:1347:G:H22	1:QA:1374:A:P	2.24	0.60
4:QD:114:ARG:HG3	4:QD:114:ARG:NH1	2.13	0.60
5:QE:43:LEU:HD21	5:QE:132:ALA:HB1	1.82	0.60
10:QJ:29:ARG:HG2	10:QJ:29:ARG:O	2.00	0.60
25:RA:1805:U:O2	27:RD:50:THR:HB	2.01	0.60
27:RD:28:GLU:O	27:RD:29:PRO:C	2.45	0.60
27:RD:35:LYS:HD3	27:RD:63:ARG:CB	2.32	0.60
27:RD:165:ILE:HA	27:RD:175:LEU:HD23	1.83	0.60
28:RE:63:LEU:CD1	28:RE:64:LYS:H	2.04	0.60
30:RG:126:ASP:OD1	30:RG:130:ASN:HB2	2.02	0.60
31:RH:117:PRO:HB3	31:RH:123:PHE:CD1	2.37	0.60
36:RQ:81:VAL:HG23	36:RQ:82:ARG:H	1.67	0.60
37:RR:92:GLY:H	37:RR:94:TYR:HE2	1.49	0.60
39:RT:34:VAL:HG12	39:RT:36:GLU:HG2	1.83	0.60
40:RU:76:TYR:CZ	40:RU:80:ILE:HG13	2.37	0.60
44:RY:4:LYS:O	44:RY:5:MET:HB2	2.01	0.60
52:R6:20:ASN:CG	52:R6:21:TYR:H	2.09	0.60
1:XA:148:G:H2'	1:XA:149:A:H8	1.66	0.60
1:XA:1070:U:H2'	1:XA:1071:C:H6	1.67	0.60
1:XA:1288:A:N1	1:XA:1371:G:H1'	2.17	0.60
1:XA:1298:C:O2'	1:XA:1299:A:OP2	2.20	0.60
1:XA:1399:C:H4'	1:XA:1400:C:H5''	1.84	0.60
1:XA:1502:A:H2	1:XA:1505:G:H1	1.50	0.60
2:XB:114:ARG:O	2:XB:117:GLU:HB2	2.01	0.60
2:XB:142:LEU:HD23	2:XB:142:LEU:C	2.27	0.60
16:XP:51:VAL:CG1	16:XP:52:ASP:N	2.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1062:G:H2'	25:YA:1063:G:C8	2.37	0.60
25:YA:2071:A:H2'	25:YA:2072:G:C8	2.37	0.60
28:YE:68:ALA:O	28:YE:69:LYS:HG3	2.02	0.60
35:YP:88:LEU:C	35:YP:90:ARG:N	2.60	0.60
39:YT:107:ASP:O	39:YT:110:ILE:HG22	2.02	0.60
1:QA:355:C:O4'	1:QA:388:G:O2'	2.20	0.59
1:QA:559:A:H4'	1:QA:560:U:H5''	1.83	0.59
25:RA:303:U:H2'	25:RA:304:G:H8	1.65	0.59
25:RA:530:G:C2	25:RA:2022:U:OP1	2.55	0.59
25:RA:565:C:OP1	41:RV:82:ARG:NH2	2.35	0.59
25:RA:649:G:H2'	25:RA:650:C:O4'	2.02	0.59
27:RD:25:THR:HG21	27:RD:81:ALA:HA	1.83	0.59
28:RE:26:ILE:HD13	28:RE:26:ILE:C	2.26	0.59
29:RF:155:LEU:CD1	29:RF:174:VAL:HG13	2.32	0.59
35:RP:88:LEU:C	35:RP:90:ARG:N	2.60	0.59
45:RZ:58:VAL:O	45:RZ:60:GLU:N	2.35	0.59
45:RZ:110:GLY:HA2	45:RZ:111:VAL:C	2.27	0.59
45:RZ:163:LEU:H	45:RZ:163:LEU:HD12	1.66	0.59
10:XJ:32:ALA:H	10:XJ:78:ASN:HD21	1.49	0.59
19:XS:25:LYS:O	19:XS:26:GLY:O	2.20	0.59
20:XT:47:GLY:C	20:XT:49:ALA:H	2.08	0.59
25:YA:137(A):G:H1'	43:YX:41:ASN:ND2	2.17	0.59
25:YA:1055:G:H1	25:YA:1104:C:N4	1.97	0.59
25:YA:1204:A:H2	25:YA:1241:A:N1	1.99	0.59
25:YA:1379:A:H4'	25:YA:1380:G:OP2	2.02	0.59
25:YA:1652:A:H2'	25:YA:1653:G:H5'	1.84	0.59
25:YA:2355:C:O2	46:Y0:39:ARG:NH2	2.35	0.59
27:YD:174:ILE:HD12	27:YD:174:ILE:N	2.16	0.59
28:YE:51:PHE:HD1	28:YE:52:LEU:HG	1.67	0.59
30:YG:50:ALA:O	30:YG:53:LEU:HB3	2.01	0.59
31:YH:30:LYS:CD	31:YH:81:GLU:H	2.15	0.59
33:YN:18:ALA:HB3	33:YN:55:VAL:O	2.02	0.59
35:YP:121:LYS:HG3	35:YP:122:PRO:HD2	1.84	0.59
38:YS:59:LYS:HG2	38:YS:60:GLY:N	2.13	0.59
41:YV:66:ARG:HH12	41:YV:88:ARG:HH11	1.49	0.59
1:QA:1073:U:OP2	5:QE:57:LYS:NZ	2.35	0.59
2:QB:124:SER:HB2	2:QB:125:PRO:HD2	1.84	0.59
6:QF:26:ILE:O	6:QF:30:LEU:HG	2.02	0.59
13:QM:77:ASN:OD1	50:R4:71:ARG:CZ	2.51	0.59
19:QS:16:LEU:O	19:QS:20:LEU:HG	2.01	0.59
20:QT:58:LYS:O	20:QT:62:LEU:HD12	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:589:C:H2'	25:RA:590:A:H8	1.68	0.59
27:RD:69:ARG:C	27:RD:71:ASP:H	2.08	0.59
28:RE:131:ALA:HB1	28:RE:135:HIS:HE1	1.65	0.59
31:RH:4:ILE:N	31:RH:4:ILE:HD13	2.18	0.59
33:RN:101:HIS:CD2	33:RN:101:HIS:C	2.79	0.59
35:RP:37:GLY:HA2	35:RP:41:ARG:HE	1.67	0.59
38:RS:99:LYS:O	38:RS:102:ALA:N	2.34	0.59
39:RT:6:LEU:O	39:RT:7:ILE:C	2.44	0.59
47:R1:91:LYS:CG	47:R1:92:LYS:H	2.15	0.59
1:XA:272:C:H2'	1:XA:273:A:C8	2.37	0.59
1:XA:401:C:H2'	1:XA:402:G:C8	2.37	0.59
2:XB:188:ALA:HB3	2:XB:200:ILE:HG23	1.83	0.59
6:XF:44:GLY:HA2	6:XF:59:TYR:CZ	2.37	0.59
10:XJ:98:ILE:HD12	10:XJ:98:ILE:N	2.15	0.59
16:XP:20:VAL:HG22	16:XP:21:VAL:N	2.16	0.59
17:XQ:84:LEU:C	17:XQ:86:GLU:N	2.59	0.59
18:XR:31:LEU:HD23	18:XR:31:LEU:H	1.67	0.59
20:XT:96:GLY:O	20:XT:97:ALA:HB3	2.02	0.59
25:YA:1344:G:H4'	25:YA:1384:A:N7	2.17	0.59
26:YB:33:G:N2	26:YB:35:U:O4	2.34	0.59
30:YG:111:LEU:HB2	30:YG:112:PRO:HD3	1.82	0.59
35:YP:55:ARG:HD2	35:YP:56:SER:O	2.01	0.59
35:YP:95:VAL:HG13	35:YP:100:LEU:HD21	1.83	0.59
44:YY:96:ILE:CD1	44:YY:98:VAL:HG12	2.32	0.59
54:Y8:22:VAL:CG2	54:Y8:53:PRO:HB2	2.32	0.59
54:Y8:56:GLU:O	54:Y8:59:LYS:N	2.35	0.59
1:QA:1411:C:H2'	1:QA:1412:C:H6	1.67	0.59
3:QC:60:ALA:O	3:QC:61:ALA:CB	2.50	0.59
3:QC:189:ALA:HB3	3:QC:196:LEU:HB2	1.84	0.59
7:QG:66:VAL:O	7:QG:70:LYS:HG3	2.02	0.59
8:QH:41:ARG:HH11	8:QH:41:ARG:HB3	1.66	0.59
25:RA:1027:A:N6	25:RA:1126:A:C4	2.70	0.59
25:RA:1062:G:H2'	25:RA:1063:G:C8	2.37	0.59
25:RA:1729:A:H2'	25:RA:1730:U:H5''	1.84	0.59
25:RA:2637:U:H5''	28:RE:82:ARG:NH2	2.14	0.59
27:RD:166:GLN:CA	27:RD:166:GLN:HE21	2.14	0.59
30:RG:180:PHE:C	30:RG:182:LYS:H	2.09	0.59
32:RI:13:GLY:HA3	32:RI:17:GLN:CD	2.27	0.59
33:RN:16:ILE:O	33:RN:55:VAL:HG22	2.01	0.59
35:RP:95:VAL:HG13	35:RP:100:LEU:HD21	1.84	0.59
39:RT:107:ASP:O	39:RT:110:ILE:HG22	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:58:ARG:HA	40:RU:61:TRP:CE3	2.37	0.59
41:RV:35:LEU:HB2	41:RV:37:VAL:HG23	1.85	0.59
1:XA:646:U:H2'	1:XA:647:C:H6	1.67	0.59
1:XA:1461:G:H2'	1:XA:1462:G:C8	2.37	0.59
8:XH:41:ARG:HH11	8:XH:41:ARG:HB3	1.66	0.59
8:XH:86:ILE:HG22	8:XH:93:VAL:HG21	1.84	0.59
9:XI:66:ARG:HH11	9:XI:66:ARG:HG2	1.68	0.59
11:XK:41:THR:HG21	11:XK:71:LYS:HB2	1.83	0.59
25:YA:740:U:H2'	25:YA:741:G:C8	2.38	0.59
25:YA:1109:C:O2'	25:YA:1110:G:OP1	2.16	0.59
25:YA:1424:G:N2	25:YA:1574:C:O2	2.27	0.59
25:YA:2134:A:OP2	25:YA:2157:G:N2	2.35	0.59
29:YF:123:LEU:HD12	29:YF:124:LEU:N	2.17	0.59
33:YN:6:PRO:HG3	33:YN:41:ASP:HB2	1.83	0.59
33:YN:42:TRP:O	40:YU:64:ARG:NH2	2.35	0.59
36:YQ:97:VAL:HG21	36:YQ:103:MET:HE3	1.83	0.59
40:YU:76:TYR:CZ	40:YU:80:ILE:HG13	2.37	0.59
41:YV:35:LEU:HB2	41:YV:37:VAL:HG23	1.85	0.59
45:YZ:152:ALA:O	45:YZ:154:ASP:N	2.34	0.59
52:Y6:25:LYS:HD2	54:Y8:34:TRP:CZ2	2.36	0.59
52:Y6:44:ARG:O	52:Y6:45:LYS:HB2	2.00	0.59
1:QA:355:C:H2'	1:QA:356:A:O4'	2.03	0.59
1:QA:1112:C:H1'	3:QC:179:ARG:HH11	1.67	0.59
2:QB:4:GLU:CG	2:QB:5:ILE:H	1.99	0.59
5:QE:42:GLY:CA	5:QE:66:MET:HG2	2.33	0.59
5:QE:74:GLY:O	5:QE:115:VAL:HA	2.01	0.59
7:QG:23:VAL:HG12	7:QG:27:ILE:CD1	2.32	0.59
8:QH:86:ILE:HG13	8:QH:133:LEU:HD22	1.84	0.59
10:QJ:31:GLY:HA3	10:QJ:78:ASN:ND2	2.18	0.59
12:QL:54:LYS:CD	12:QL:54:LYS:N	2.65	0.59
14:QN:44:LEU:HD12	14:QN:48:ALA:HB2	1.84	0.59
25:RA:571:A:O2'	41:RV:78:LYS:NZ	2.35	0.59
25:RA:712:G:N2	25:RA:719:C:O2	2.35	0.59
25:RA:958:U:OP2	36:RQ:14:ARG:NH1	2.28	0.59
27:RD:172:TYR:CD1	27:RD:186:HIS:HA	2.37	0.59
28:RE:68:ALA:O	28:RE:69:LYS:HG3	2.02	0.59
28:RE:174:ASP:CG	28:RE:175:VAL:N	2.58	0.59
35:RP:79:ARG:HD3	35:RP:110:TYR:HE1	1.67	0.59
38:RS:11:LYS:HB2	38:RS:91:PRO:HD3	1.84	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD13	1.84	0.59
42:RW:36:LEU:HD11	42:RW:47:VAL:HG12	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:R5:52:TYR:O	51:R5:53:ALA:HB3	2.01	0.59
1:XA:1069:C:O2'	5:XE:25:ARG:NH1	2.28	0.59
1:XA:1079:G:H2'	1:XA:1080:A:C8	2.38	0.59
3:XC:60:ALA:O	3:XC:61:ALA:CB	2.50	0.59
5:XE:72:GLN:O	5:XE:73:ASN:HB3	2.02	0.59
16:XP:43:LYS:HA	16:XP:48:TRP:HB2	1.84	0.59
20:XT:58:LYS:O	20:XT:62:LEU:HD12	2.02	0.59
20:XT:84:LEU:O	20:XT:88:VAL:HG23	2.01	0.59
25:YA:685:A:C2	25:YA:689:A:C6	2.90	0.59
25:YA:1257:C:H5''	29:YF:75:HIS:CE1	2.37	0.59
27:YD:172:TYR:CD1	27:YD:186:HIS:HA	2.37	0.59
31:YH:4:ILE:N	31:YH:4:ILE:HD13	2.18	0.59
31:YH:55:PRO:HG2	31:YH:61:HIS:CE1	2.37	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD13	1.84	0.59
40:YU:58:ARG:HA	40:YU:61:TRP:CE3	2.37	0.59
44:YY:4:LYS:O	44:YY:5:MET:HB2	2.01	0.59
52:Y6:20:ASN:CG	52:Y6:21:TYR:H	2.09	0.59
52:Y6:41:PRO:HG2	52:Y6:45:LYS:N	2.10	0.59
1:QA:986:A:H1'	19:QS:54:GLY:O	2.01	0.59
1:QA:1004:A:H1'	1:QA:1036:G:N2	2.16	0.59
1:QA:1399:C:C2	1:QA:1502:A:N6	2.70	0.59
2:QB:115:LEU:HD23	2:QB:153:ARG:HD3	1.84	0.59
3:QC:149:ALA:O	3:QC:169:ALA:HA	2.02	0.59
4:QD:173:TRP:O	4:QD:186:LEU:HB2	2.02	0.59
7:QG:79:ARG:HH11	7:QG:79:ARG:HG2	1.66	0.59
13:QM:45:VAL:HG22	13:QM:45:VAL:O	2.02	0.59
25:RA:83:G:N2	25:RA:102:G:H1'	2.17	0.59
25:RA:221:A:H4'	25:RA:222:A:O5'	2.02	0.59
25:RA:1047:G:H2'	25:RA:1110:G:H1	1.66	0.59
25:RA:1530:G:H1	25:RA:1541:U:H3	1.50	0.59
25:RA:1576:U:H2'	25:RA:1577:C:H6	1.68	0.59
25:RA:2456:C:C5	25:RA:2457:U:C5	2.91	0.59
27:RD:54:ARG:HH11	27:RD:54:ARG:CG	2.14	0.59
28:RE:36:ARG:H	28:RE:37:ARG:HH21	1.49	0.59
28:RE:61:ARG:HB2	28:RE:62:PRO:CD	2.33	0.59
29:RF:123:LEU:HD12	29:RF:124:LEU:N	2.17	0.59
30:RG:13:GLU:O	30:RG:14:GLU:CB	2.44	0.59
33:RN:78:TYR:N	33:RN:78:TYR:CD1	2.70	0.59
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CE1	2.37	0.59
42:RW:66:GLU:O	42:RW:68:ARG:N	2.33	0.59
45:RZ:102:LEU:HB3	45:RZ:104:PHE:CE1	2.36	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:117:LEU:HA	45:RZ:174:VAL:HA	1.82	0.59
51:R5:40:LYS:NZ	51:R5:46:CYS:HB3	2.18	0.59
52:R6:13:CYS:O	52:R6:21:TYR:HA	2.02	0.59
54:R8:22:VAL:CG2	54:R8:53:PRO:HB2	2.32	0.59
1:XA:91:C:H2'	1:XA:92:G:O4'	2.02	0.59
1:XA:1081:G:OP1	5:XE:16:THR:OG1	2.19	0.59
3:XC:88:ARG:O	3:XC:99:VAL:HG21	2.01	0.59
6:XF:26:ILE:O	6:XF:30:LEU:HG	2.02	0.59
7:XG:85:TYR:HE1	7:XG:154:TYR:CE1	2.21	0.59
19:XS:40:ILE:HD11	19:XS:62:ILE:HG21	1.85	0.59
25:YA:1007:C:O3'	33:YN:108:PRO:HB3	2.03	0.59
25:YA:1359:A:H2'	25:YA:1360:A:H5'	1.84	0.59
25:YA:1935:G:N2	25:YA:1964:G:O4'	2.36	0.59
25:YA:2494:G:H2'	25:YA:2495:G:H8	1.67	0.59
25:YA:2516:G:N1	25:YA:2568:C:N3	2.38	0.59
28:YE:26:ILE:HD13	28:YE:26:ILE:C	2.27	0.59
28:YE:116:VAL:O	28:YE:117:MET:CB	2.49	0.59
29:YF:11:VAL:HG11	29:YF:18:ARG:HE	1.67	0.59
30:YG:16:ARG:NH2	30:YG:31:VAL:HG11	2.17	0.59
31:YH:159:GLU:O	31:YH:160:LYS:HG2	2.03	0.59
45:YZ:26:GLY:HA2	45:YZ:85:HIS:CD2	2.37	0.59
49:Y3:29:ARG:HH11	49:Y3:29:ARG:CB	2.13	0.59
1:QA:411:A:C5	1:QA:413:G:H1'	2.37	0.59
1:QA:717:C:H6	1:QA:717:C:H5''	1.67	0.59
1:QA:1255:G:O2'	1:QA:1258:G:O2'	2.20	0.59
1:QA:1295:G:O2'	13:QM:14:ARG:NH2	2.35	0.59
2:QB:188:ALA:HB3	2:QB:200:ILE:HG23	1.84	0.59
3:QC:36:ASP:HB3	3:QC:40:ARG:HH12	1.68	0.59
6:QF:44:GLY:HA2	6:QF:59:TYR:CZ	2.37	0.59
16:QP:43:LYS:HA	16:QP:48:TRP:HB2	1.84	0.59
20:QT:104:LEU:HD12	20:QT:105:SER:N	2.18	0.59
25:RA:2470:G:H5'	36:RQ:56:ARG:NH2	2.18	0.59
25:RA:2843:G:H1	25:RA:2874:C:H42	1.50	0.59
26:RB:113:C:H2'	26:RB:114:G:H8	1.67	0.59
27:RD:137:PRO:HB2	27:RD:140:THR:CG2	2.33	0.59
35:RP:106:LEU:O	35:RP:107:LYS:CB	2.46	0.59
47:R1:87:PRO:O	47:R1:91:LYS:N	2.31	0.59
53:R7:18:PHE:C	53:R7:18:PHE:CD2	2.81	0.59
54:R8:22:VAL:HG21	54:R8:53:PRO:HB2	1.83	0.59
1:XA:982:U:H5''	14:YN:6:LEU:CD1	2.33	0.59
1:XA:1513:A:H2'	1:XA:1514:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:173:TRP:O	4:XD:186:LEU:HB2	2.02	0.59
7:XG:23:VAL:HG12	7:XG:27:ILE:CD1	2.32	0.59
8:XH:12:ARG:HH12	8:XH:27:PRO:HD2	1.67	0.59
17:XQ:92:ARG:HH11	17:XQ:92:ARG:HG3	1.68	0.59
20:XT:104:LEU:HD12	20:XT:105:SER:N	2.18	0.59
31:YH:86:GLU:O	31:YH:131:VAL:O	2.20	0.59
33:YN:58:ASP:N	33:YN:60:ILE:HD11	2.16	0.59
35:YP:138:LEU:O	35:YP:140:ALA:N	2.33	0.59
40:YU:92:ARG:HH11	40:YU:95:LEU:HD12	1.67	0.59
1:QA:390:C:H4'	16:QP:28:ARG:NH2	2.18	0.59
3:QC:107:GLN:CD	3:QC:107:GLN:N	2.61	0.59
5:QE:68:GLU:O	5:QE:68:GLU:HG3	2.02	0.59
11:QK:34:ASP:HB3	11:QK:40:ILE:HD11	1.84	0.59
22:QV:53:G:H4'	22:QV:54:U:OP1	2.02	0.59
25:RA:108:U:H2'	25:RA:109:G:C8	2.38	0.59
25:RA:150:C:H2'	25:RA:151:C:C6	2.37	0.59
25:RA:859:G:H2'	25:RA:916:G:O6	2.03	0.59
25:RA:2470:G:O6	25:RA:2481:G:N2	2.36	0.59
28:RE:69:LYS:O	28:RE:71:GLY:N	2.27	0.59
31:RH:82:GLY:O	31:RH:135:GLY:O	2.20	0.59
31:RH:127:GLU:HG2	31:RH:128:PRO:CG	2.33	0.59
33:RN:9:VAL:HG21	33:RN:48:MET:HB3	1.85	0.59
38:RS:89:ARG:O	38:RS:90:GLY:O	2.19	0.59
40:RU:52:ARG:HG2	40:RU:52:ARG:NH1	2.17	0.59
42:RW:20:VAL:C	42:RW:22:ASP:N	2.59	0.59
44:RY:51:VAL:CG1	44:RY:52:SER:H	2.11	0.59
47:R1:53:VAL:O	47:R1:54:ALA:C	2.45	0.59
1:XA:145:G:H1	1:XA:177:C:H42	1.49	0.59
1:XA:1178:G:N2	1:XA:1181:G:N7	2.50	0.59
2:XB:124:SER:HB2	2:XB:125:PRO:HD2	1.85	0.59
4:XD:22:LYS:O	4:XD:113:SER:HB3	2.03	0.59
5:XE:42:GLY:CA	5:XE:66:MET:HG2	2.32	0.59
7:XG:66:VAL:O	7:XG:70:LYS:HG3	2.02	0.59
10:XJ:31:GLY:HA3	10:XJ:78:ASN:ND2	2.18	0.59
14:YN:15:LYS:HD2	14:YN:16:PHE:CZ	2.37	0.59
15:XO:5:LYS:O	15:XO:8:LYS:HG2	2.02	0.59
17:XQ:76:LEU:HD12	17:XQ:77:VAL:H	1.67	0.59
20:XT:101:GLY:O	20:XT:103:GLY:N	2.34	0.59
25:YA:664:C:OP1	35:YP:18:ARG:NH2	2.34	0.59
25:YA:859:G:H5'	25:YA:2268:A:O2'	2.02	0.59
31:YH:82:GLY:O	31:YH:135:GLY:O	2.20	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:124:GLU:HB3	31:YH:132:ARG:HG3	1.85	0.59
35:YP:39:LYS:CA	35:YP:45:LEU:CD1	2.80	0.59
35:YP:127:ALA:O	35:YP:147:LEU:HD23	2.02	0.59
37:YR:72:ASP:O	37:YR:76:VAL:HB	2.03	0.59
38:YS:88:ASP:O	38:YS:89:ARG:CB	2.49	0.59
39:YT:6:LEU:O	39:YT:7:ILE:C	2.45	0.59
42:YW:20:VAL:C	42:YW:22:ASP:H	2.10	0.59
44:YY:95:LYS:HD3	44:YY:95:LYS:H	1.67	0.59
45:YZ:182:LYS:CB	45:YZ:183:LEU:HA	2.32	0.59
50:Y4:22:ILE:HG22	50:Y4:23:GLU:N	2.18	0.59
50:Y4:48:ARG:NH1	50:Y4:52:THR:H	2.01	0.59
1:QA:6:G:O2'	1:QA:7:G:O5'	2.19	0.59
2:QB:19:HIS:NE2	2:QB:206:ASP:HB2	2.18	0.59
5:QE:78:HIS:HB2	8:QH:104:ARG:O	2.02	0.59
9:QI:9:ARG:HB3	9:QI:14:VAL:HG13	1.85	0.59
9:QI:96:LEU:HD23	9:QI:102:LEU:HD12	1.84	0.59
10:QJ:13:HIS:HB3	10:QJ:68:HIS:CE1	2.37	0.59
12:QL:70:ILE:HD13	12:QL:77:LEU:HD12	1.83	0.59
13:QM:84:ILE:HG23	13:QM:85:GLY:N	2.17	0.59
25:RA:623:G:H2'	25:RA:624:C:C6	2.37	0.59
25:RA:878:A:N6	25:RA:899:A:O2'	2.35	0.59
25:RA:1478:G:O2'	25:RA:1558:A:N1	2.36	0.59
25:RA:1824:G:O3'	27:RD:249:PRO:HD3	2.03	0.59
27:RD:71:ASP:HB3	27:RD:103:ARG:HH22	1.68	0.59
28:RE:116:VAL:CG2	28:RE:122:PHE:CD2	2.86	0.59
35:RP:138:LEU:O	35:RP:140:ALA:N	2.33	0.59
39:RT:102:ILE:HB	39:RT:110:ILE:HD11	1.84	0.59
53:R7:31:LEU:O	53:R7:32:LYS:C	2.43	0.59
1:XA:1227:A:OP2	13:XM:111:LYS:HE3	2.02	0.59
3:XC:127:ARG:HH11	3:XC:127:ARG:CG	2.15	0.59
11:XK:30:VAL:HG21	11:XK:65:ALA:HA	1.85	0.59
25:YA:227:A:OP1	35:YP:76:LYS:HE3	2.03	0.59
25:YA:1405:U:H2'	25:YA:1406:U:C6	2.37	0.59
25:YA:2314:C:H2'	25:YA:2315:G:H8	1.66	0.59
26:YB:95:U:H2'	26:YB:96:G:C8	2.38	0.59
27:YD:27:THR:CG2	27:YD:83:GLU:HB3	2.33	0.59
30:YG:35:GLU:CD	30:YG:35:GLU:C	2.71	0.59
31:YH:126:PRO:CD	31:YH:127:GLU:N	2.64	0.59
33:YN:78:TYR:N	33:YN:78:TYR:CD1	2.70	0.59
36:YQ:81:VAL:HG23	36:YQ:82:ARG:H	1.67	0.59
37:YR:92:GLY:H	37:YR:94:TYR:HE2	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:15:GLU:HG3	41:YV:16:PRO:HD2	1.83	0.59
47:Y1:53:VAL:O	47:Y1:54:ALA:C	2.45	0.59
1:QA:1189:C:OP1	10:QJ:51:ARG:NH2	2.36	0.59
1:QA:1221:G:OP1	1:QA:1320:C:N4	2.32	0.59
1:QA:1269:A:N1	1:QA:1312:G:O2'	2.31	0.59
1:QA:1505:G:H4'	1:QA:1506:U:H5''	1.85	0.59
2:QB:69:LEU:O	2:QB:162:ILE:HA	2.02	0.59
2:QB:142:LEU:C	2:QB:142:LEU:HD23	2.27	0.59
3:QC:127:ARG:HH11	3:QC:127:ARG:CG	2.15	0.59
7:QG:85:TYR:HE1	7:QG:154:TYR:CE1	2.20	0.59
8:QH:12:ARG:HH12	8:QH:27:PRO:HD2	1.67	0.59
9:QI:17:VAL:HG13	9:QI:81:ILE:HD13	1.85	0.59
9:QI:66:ARG:HH11	9:QI:66:ARG:HG2	1.68	0.59
12:QL:5:PRO:HA	12:QL:9:GLN:NE2	2.17	0.59
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.76	0.59
25:RA:116:C:H2'	25:RA:117:G:O4'	2.02	0.59
25:RA:1564:C:O2'	25:RA:1565:C:H5'	2.02	0.59
25:RA:2255:G:H1	25:RA:2275:C:H42	1.51	0.59
28:RE:93:VAL:N	28:RE:95:ILE:CD1	2.65	0.59
29:RF:89:VAL:HG12	29:RF:90:PHE:N	2.18	0.59
31:RH:55:PRO:HG2	31:RH:61:HIS:CE1	2.37	0.59
10:XJ:13:HIS:HB3	10:XJ:68:HIS:CE1	2.37	0.59
25:YA:140:A:H8	25:YA:1408:C:O2'	1.86	0.59
25:YA:2224:G:OP1	27:YD:268:ARG:HD3	2.03	0.59
25:YA:2537:U:H2'	25:YA:2538:C:C6	2.38	0.59
27:YD:177:LEU:HD11	27:YD:183:ARG:HB2	1.85	0.59
28:YE:36:ARG:H	28:YE:37:ARG:HH21	1.49	0.59
31:YH:4:ILE:HG13	31:YH:6:ARG:CD	2.33	0.59
32:YI:93:THR:OG1	32:YI:94:ALA:N	2.31	0.59
35:YP:37:GLY:HA2	35:YP:41:ARG:HE	1.67	0.59
37:YR:63:ARG:HH11	37:YR:63:ARG:HG3	1.68	0.59
43:YX:49:VAL:CG1	43:YX:83:VAL:HG13	2.33	0.59
50:Y4:15:ILE:HG22	50:Y4:19:GLY:O	2.03	0.59
51:Y5:52:TYR:O	51:Y5:53:ALA:HB3	2.02	0.59
1:QA:501:C:H2'	1:QA:502:G:H8	1.68	0.59
1:QA:1205:U:H5'	3:QC:190:ARG:NH2	2.17	0.59
1:QA:1363:A:H4'	1:QA:1364:U:H5''	1.84	0.59
6:QF:45:LEU:HD12	6:QF:59:TYR:HD1	1.66	0.59
12:QL:54:LYS:N	12:QL:54:LYS:HD2	2.18	0.59
16:QP:53:VAL:HG23	16:QP:54:GLU:N	2.18	0.59
18:QR:31:LEU:HD23	18:QR:31:LEU:H	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:74:LYS:C	20:QT:76:ALA:H	2.10	0.59
25:RA:2298:A:H2'	25:RA:2299:G:O4'	2.03	0.59
31:RH:92:ILE:HG22	31:RH:93:GLY:N	2.18	0.59
32:RI:104:GLN:O	32:RI:105:HIS:ND1	2.33	0.59
33:RN:18:ALA:HB3	33:RN:55:VAL:O	2.03	0.59
35:RP:71:VAL:HG13	35:RP:72:PRO:HD3	1.85	0.59
37:RR:72:ASP:O	37:RR:76:VAL:HB	2.02	0.59
42:RW:20:VAL:C	42:RW:22:ASP:H	2.10	0.59
1:XA:33:A:H2'	1:XA:34:C:C6	2.37	0.59
5:XE:153:LYS:HB2	5:XE:153:LYS:NZ	2.18	0.59
8:XH:84:ARG:NH1	8:XH:86:ILE:HD13	2.11	0.59
9:XI:9:ARG:HB3	9:XI:14:VAL:HG13	1.85	0.59
11:XK:34:ASP:HB3	11:XK:40:ILE:HD11	1.83	0.59
11:XK:69:ALA:HB1	11:XK:103:LEU:HD21	1.85	0.59
12:XL:70:ILE:HD13	12:XL:77:LEU:HD12	1.83	0.59
25:YA:389:G:H1	35:YP:70:GLN:HB3	1.66	0.59
25:YA:716:A:C2	25:YA:717:G:H1'	2.38	0.59
25:YA:1688:U:O2	25:YA:1700:A:H5''	2.02	0.59
28:YE:61:ARG:HB2	28:YE:62:PRO:CD	2.33	0.59
28:YE:134:ILE:C	28:YE:134:ILE:HD12	2.28	0.59
39:YT:102:ILE:HB	39:YT:110:ILE:HD11	1.84	0.59
48:Y2:32:LEU:HD11	48:Y2:54:LYS:HG3	1.84	0.59
48:Y2:64:LEU:CD2	48:Y2:68:ARG:HD2	2.33	0.59
50:Y4:3:GLU:HG3	50:Y4:4:GLY:N	2.18	0.59
53:Y7:18:PHE:CD2	53:Y7:18:PHE:C	2.81	0.59
1:QA:833:U:H2'	1:QA:834:C:H6	1.68	0.58
2:QB:47:THR:HG22	2:QB:51:LEU:HG	1.85	0.58
5:QE:102:ALA:HB2	5:QE:120:THR:OG1	2.03	0.58
8:QH:41:ARG:HH11	8:QH:41:ARG:CG	2.16	0.58
20:QT:37:SER:HB3	20:QT:84:LEU:HD23	1.85	0.58
25:RA:263:C:H2'	25:RA:264:C:O4'	2.03	0.58
25:RA:483:A:H3'	25:RA:484:C:C6	2.38	0.58
25:RA:628:G:H2'	25:RA:629:G:C8	2.38	0.58
25:RA:2342:C:O2	25:RA:2374:C:H4'	2.03	0.58
26:RB:104:A:H2'	26:RB:105:G:O4'	2.03	0.58
33:RN:114:ARG:O	33:RN:115:ARG:HB3	2.03	0.58
48:R2:64:LEU:CD2	48:R2:68:ARG:HD2	2.33	0.58
50:R4:12:ALA:CB	50:R4:29:PRO:HA	2.33	0.58
8:XH:41:ARG:HH11	8:XH:41:ARG:CG	2.16	0.58
12:XL:18:VAL:O	12:XL:19:ARG:HB2	2.03	0.58
25:YA:336:C:HO2'	44:YY:35:TYR:HH	1.50	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1062:G:H8	25:YA:1062:G:O5'	1.85	0.58
25:YA:2030:A:H5''	25:YA:2031:A:OP1	2.03	0.58
25:YA:2344:U:C4	52:Y6:37:ARG:NH1	2.71	0.58
25:YA:2585:U:H5	56:Z8:76:PPU:HO2'	1.50	0.58
27:YD:27:THR:CG2	27:YD:28:GLU:N	2.66	0.58
27:YD:137:PRO:HB2	27:YD:140:THR:CG2	2.33	0.58
29:YF:174:VAL:HG13	29:YF:174:VAL:O	2.03	0.58
30:YG:126:ASP:OD1	30:YG:130:ASN:HB2	2.02	0.58
31:YH:89:ILE:O	31:YH:91:GLY:N	2.35	0.58
31:YH:92:ILE:HG22	31:YH:93:GLY:N	2.18	0.58
37:YR:44:LEU:O	37:YR:48:VAL:HG23	2.02	0.58
39:YT:36:GLU:HG3	39:YT:41:ARG:HD3	1.85	0.58
39:YT:66:VAL:HG12	39:YT:67:SER:H	1.67	0.58
51:Y5:40:LYS:NZ	51:Y5:46:CYS:HB3	2.18	0.58
1:QA:501:C:H2'	1:QA:502:G:C8	2.38	0.58
1:QA:575:G:C6	1:QA:821:G:N7	2.71	0.58
1:QA:1374:A:O2'	7:QG:28:ASN:HB3	2.03	0.58
4:QD:196:LEU:O	4:QD:198:VAL:N	2.31	0.58
9:QI:40:LEU:HD11	9:QI:70:LYS:HG2	1.84	0.58
11:QK:51:LYS:CA	11:QK:55:LYS:HD3	2.21	0.58
12:QL:46:LYS:CG	12:QL:47:LYS:H	2.15	0.58
17:QQ:92:ARG:HG3	17:QQ:92:ARG:HH11	1.68	0.58
24:QY:39:C:O2'	24:QY:40:G:OP1	2.21	0.58
25:RA:224:G:O6	25:RA:419:C:O2'	2.21	0.58
25:RA:1667:G:O2'	25:RA:1669:A:N6	2.35	0.58
27:RD:34:VAL:O	27:RD:34:VAL:CG1	2.50	0.58
27:RD:92:ILE:HD12	27:RD:104:TYR:CD2	2.38	0.58
28:RE:72:VAL:O	28:RE:73:GLU:O	2.21	0.58
28:RE:93:VAL:N	28:RE:95:ILE:HD12	2.17	0.58
29:RF:63:LYS:HE2	29:RF:67:GLN:CB	2.32	0.58
33:RN:13:TRP:O	33:RN:135:PRO:HD2	2.03	0.58
35:RP:127:ALA:O	35:RP:147:LEU:HD23	2.02	0.58
39:RT:66:VAL:HG12	39:RT:67:SER:H	1.67	0.58
44:RY:81:LYS:HD3	44:RY:97:ARG:CD	2.33	0.58
50:R4:65:ASP:O	50:R4:66:SER:CB	2.51	0.58
1:XA:520:A:O2'	12:XL:73:GLU:HG2	2.03	0.58
1:XA:1336:C:H1'	1:XA:1337:G:N2	2.18	0.58
1:XA:1443:G:H22	25:YA:2864:G:P	2.26	0.58
1:XA:1511:G:H2'	1:XA:1512:U:O4'	2.03	0.58
9:XI:40:LEU:HD11	9:XI:70:LYS:HG2	1.84	0.58
9:XI:114:TYR:O	9:XI:114:TYR:HD2	1.85	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:82:VAL:HG23	12:XL:106:ASP:OD2	2.04	0.58
13:XM:45:VAL:HG22	13:XM:45:VAL:O	2.02	0.58
25:YA:1278:A:OP1	37:YR:36:THR:HG22	2.04	0.58
25:YA:1532:C:H2'	25:YA:1533:C:O4'	2.03	0.58
25:YA:2014:A:H2'	25:YA:2015:A:C8	2.38	0.58
25:YA:2376:A:N1	38:YS:87:PHE:HD2	2.01	0.58
25:YA:2677:G:H2'	25:YA:2678:C:H6	1.68	0.58
25:YA:2757:A:P	55:Y9:20:HIS:H	2.26	0.58
25:YA:2832:U:H4'	25:YA:2833:G:H5''	1.84	0.58
30:YG:16:ARG:HB3	30:YG:17:PRO:CD	2.33	0.58
33:YN:70:LYS:C	33:YN:71:ILE:HD13	2.28	0.58
41:YV:18:LEU:HB3	41:YV:96:ILE:HG12	1.84	0.58
1:QA:818:G:H3'	1:QA:819:A:H5''	1.84	0.58
5:QE:72:GLN:O	5:QE:73:ASN:HB3	2.02	0.58
25:RA:620:G:H4'	25:RA:621:A:H5''	1.85	0.58
28:RE:6:GLY:HA3	28:RE:26:ILE:HD11	1.85	0.58
29:RF:179:GLU:CD	29:RF:179:GLU:H	2.11	0.58
30:RG:35:GLU:CD	30:RG:35:GLU:C	2.71	0.58
31:RH:86:GLU:O	31:RH:131:VAL:O	2.21	0.58
34:RO:20:MET:O	34:RO:41:ALA:HB1	2.04	0.58
35:RP:121:LYS:HG3	35:RP:122:PRO:HD2	1.84	0.58
39:RT:36:GLU:HG3	39:RT:41:ARG:HD3	1.85	0.58
45:RZ:141:VAL:HG23	45:RZ:144:LEU:HD23	1.84	0.58
48:R2:16:LEU:O	48:R2:17:SER:HB3	2.04	0.58
48:R2:17:SER:CB	48:R2:18:PRO:HA	2.33	0.58
50:R4:42:PHE:CG	50:R4:43:TYR:N	2.72	0.58
1:XA:445:G:H1	1:XA:489:C:H42	1.48	0.58
1:XA:1229:A:OP1	13:XM:116:THR:HG23	2.03	0.58
2:XB:47:THR:HG22	2:XB:51:LEU:HG	1.85	0.58
3:XC:77:ILE:O	3:XC:84:ILE:HG22	2.02	0.58
3:XC:149:ALA:O	3:XC:169:ALA:HA	2.02	0.58
25:YA:888:C:H3'	25:YA:889:C:H4'	1.85	0.58
25:YA:1178:C:H2'	25:YA:1179:C:C6	2.37	0.58
25:YA:1435:G:H21	25:YA:1478:G:H5'	1.68	0.58
25:YA:1793:C:H42	25:YA:1826:G:H1	1.49	0.58
25:YA:2326:C:O2	25:YA:2326:C:H2'	2.02	0.58
25:YA:2637:U:H5''	28:YE:82:ARG:NH2	2.15	0.58
29:YF:63:LYS:HE2	29:YF:67:GLN:CB	2.33	0.58
35:YP:37:GLY:C	35:YP:41:ARG:HD3	2.29	0.58
35:YP:65:ARG:HH21	54:Y8:15:LYS:CB	2.17	0.58
36:YQ:55:VAL:HG22	36:YQ:56:ARG:N	2.18	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:YW:80:PRO:O	42:YW:100:THR:HG22	2.03	0.58
1:QA:1202:G:H2'	1:QA:1203:C:O4'	2.03	0.58
7:QG:49:ILE:O	7:QG:53:LYS:HB3	2.04	0.58
9:QI:128:ARG:HD3	22:QV:32:C:OP2	2.03	0.58
14:QN:23:ARG:H	14:QN:33:VAL:HG11	1.67	0.58
16:QP:28:ARG:HH11	16:QP:28:ARG:HG2	1.68	0.58
27:RD:34:VAL:C	27:RD:35:LYS:HG3	2.29	0.58
27:RD:35:LYS:CG	27:RD:64:ILE:H	2.14	0.58
30:RG:16:ARG:NH2	30:RG:31:VAL:HG11	2.17	0.58
33:RN:14:VAL:HG12	33:RN:15:LEU:N	2.19	0.58
33:RN:70:LYS:C	33:RN:71:ILE:HD13	2.28	0.58
34:RO:71:ARG:HH11	34:RO:71:ARG:HG3	1.69	0.58
36:RQ:81:VAL:C	36:RQ:82:ARG:CG	2.76	0.58
40:RU:92:ARG:NH1	40:RU:95:LEU:CD1	2.65	0.58
41:RV:41:GLY:H	41:RV:46:VAL:HG13	1.67	0.58
43:RX:49:VAL:CG1	43:RX:83:VAL:HG13	2.33	0.58
44:RY:96:ILE:CD1	44:RY:98:VAL:HG12	2.32	0.58
48:R2:16:LEU:O	48:R2:16:LEU:CG	2.49	0.58
48:R2:69:ARG:NH1	48:R2:69:ARG:CB	2.67	0.58
50:R4:48:ARG:NH1	50:R4:52:THR:H	2.01	0.58
54:R8:46:ARG:O	54:R8:47:LYS:HB3	2.03	0.58
1:XA:429:U:H4'	1:XA:430:A:OP1	2.03	0.58
1:XA:565:U:H5''	1:XA:566:G:H2'	1.83	0.58
1:XA:908:A:H2'	1:XA:909:A:C8	2.38	0.58
1:XA:963:G:N3	10:XJ:55:LYS:NZ	2.51	0.58
1:XA:1218:C:H2'	1:XA:1219:U:C6	2.38	0.58
2:XB:212:GLN:NE2	2:XB:235:SER:HB2	2.18	0.58
5:XE:102:ALA:HB2	5:XE:120:THR:OG1	2.03	0.58
9:XI:13:ALA:HB2	9:XI:67:GLY:C	2.28	0.58
13:XM:66:LEU:O	13:XM:67:GLU:C	2.46	0.58
25:YA:654(A):G:N2	25:YA:654(U):A:H1'	2.17	0.58
25:YA:1424:G:H2'	25:YA:1425:G:O4'	2.02	0.58
25:YA:1532:C:N3	25:YA:1539:G:N1	2.51	0.58
25:YA:1795:C:O2'	25:YA:1901:A:OP1	2.20	0.58
25:YA:1885:A:H5'	25:YA:1886:C:OP2	2.04	0.58
25:YA:2050:C:H42	25:YA:2618:G:H1	1.52	0.58
25:YA:2415:G:H4'	35:YP:67:MET:N	2.19	0.58
28:YE:51:PHE:CD1	28:YE:52:LEU:HG	2.38	0.58
31:YH:153:LYS:CB	31:YH:154:PRO:CD	2.69	0.58
33:YN:9:VAL:HG21	33:YN:48:MET:HB3	1.85	0.58
48:Y2:51:ARG:HA	48:Y2:54:LYS:HB2	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:429:U:H4'	1:QA:430:A:H5''	1.85	0.58
1:QA:658:G:H2'	1:QA:659:U:H6	1.68	0.58
1:QA:933:G:H1	1:QA:1384:C:H42	1.50	0.58
1:QA:1036:G:C8	1:QA:1037:C:C4	2.92	0.58
1:QA:1142:G:H3'	1:QA:1143:G:C8	2.37	0.58
1:QA:1432:G:H1'	1:QA:1469:G:H22	1.66	0.58
4:QD:156:GLU:O	4:QD:160:GLN:HG3	2.03	0.58
4:QD:170:VAL:HG22	4:QD:171:GLY:N	2.12	0.58
5:QE:79:GLU:HB3	5:QE:92:LYS:HA	1.83	0.58
6:QF:97:PHE:O	18:QR:31:LEU:HD23	2.04	0.58
14:QN:23:ARG:O	14:QN:24:CYS:C	2.46	0.58
25:RA:389:G:H1	35:RP:71:VAL:HG12	1.69	0.58
25:RA:609(A):G:H2'	25:RA:610:C:C6	2.39	0.58
25:RA:1359:A:N6	25:RA:1372:U:C4	2.71	0.58
25:RA:2250:G:C8	25:RA:2496:C:H5''	2.39	0.58
26:RB:55:U:H4'	30:RG:28:VAL:CG2	2.33	0.58
27:RD:242:ARG:HD2	27:RD:242:ARG:N	2.18	0.58
29:RF:160:ASN:OD1	29:RF:162:LEU:HB2	2.04	0.58
37:RR:117:VAL:CG2	37:RR:118:GLU:H	2.15	0.58
40:RU:92:ARG:HH11	40:RU:95:LEU:HD12	1.67	0.58
51:R5:60:VAL:HG13	51:R5:60:VAL:OXT	2.03	0.58
2:XB:75:LYS:HD3	2:XB:75:LYS:C	2.28	0.58
2:XB:80:ILE:HG21	2:XB:212:GLN:HA	1.85	0.58
13:XM:19:LEU:HD22	13:XM:19:LEU:H	1.68	0.58
25:YA:1400:G:H2'	25:YA:1401:G:C8	2.38	0.58
25:YA:2287:A:N6	25:YA:2344:U:H3	2.00	0.58
27:YD:34:VAL:C	27:YD:35:LYS:HG3	2.28	0.58
27:YD:165:ILE:HA	27:YD:175:LEU:HD23	1.83	0.58
29:YF:89:VAL:HG12	29:YF:90:PHE:N	2.18	0.58
30:YG:64:THR:HG23	30:YG:66:GLN:H	1.67	0.58
31:YH:85:LYS:HA	31:YH:86:GLU:OE1	2.03	0.58
34:YO:12:ASP:CG	34:YO:14:THR:HG23	2.29	0.58
35:YP:71:VAL:HG13	35:YP:72:PRO:HD3	1.84	0.58
36:YQ:60:ARG:HA	45:YZ:178:GLU:O	2.03	0.58
36:YQ:66:ILE:HA	36:YQ:104:PHE:HA	1.85	0.58
37:YR:2:ARG:HG2	37:YR:5:LYS:HZ1	1.68	0.58
41:YV:49:THR:CB	41:YV:50:PRO:HD2	2.25	0.58
44:YY:51:VAL:CG1	44:YY:52:SER:H	2.11	0.58
48:Y2:17:SER:CB	48:Y2:18:PRO:HA	2.33	0.58
1:QA:19:C:P	5:QE:127:ASN:HD22	2.27	0.58
1:QA:193:C:OP1	20:QT:57:ARG:HD2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1263:C:H42	1:QA:1272:G:H1	1.51	0.58
1:QA:1312:G:H3'	50:R4:67:TYR:OH	2.04	0.58
3:QC:77:ILE:O	3:QC:84:ILE:HG22	2.02	0.58
3:QC:105:GLU:HG2	3:QC:106:VAL:N	2.18	0.58
14:QN:23:ARG:CZ	14:QN:30:ALA:HB2	2.33	0.58
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
19:QS:40:ILE:HD11	19:QS:62:ILE:HG21	1.85	0.58
25:RA:328:U:H4'	44:RY:68:HIS:CE1	2.39	0.58
25:RA:812:C:H5'	35:RP:22:GLY:HA3	1.85	0.58
25:RA:1270:C:O2'	25:RA:1648:C:OP2	2.22	0.58
29:RF:174:VAL:HG13	29:RF:174:VAL:O	2.03	0.58
31:RH:4:ILE:HG13	31:RH:6:ARG:CD	2.33	0.58
34:RO:12:ASP:CG	34:RO:14:THR:HG23	2.29	0.58
40:RU:47:TYR:C	40:RU:47:TYR:CD2	2.81	0.58
42:RW:95:ILE:HD12	42:RW:95:ILE:O	2.04	0.58
2:XB:115:LEU:HD23	2:XB:153:ARG:HD3	1.85	0.58
3:XC:181:ASN:HD22	3:XC:204:LEU:HB2	1.68	0.58
4:XD:114:ARG:HG3	4:XD:114:ARG:NH1	2.13	0.58
13:XM:57:ARG:HH11	13:XM:57:ARG:CB	2.13	0.58
14:XN:44:LEU:HD13	14:XN:53:LEU:HD13	1.84	0.58
16:XP:53:VAL:HG23	16:XP:54:GLU:N	2.18	0.58
25:YA:1696:G:C6	25:YA:1697:G:C4	2.91	0.58
27:YD:44:ASN:HB3	27:YD:49:ILE:CA	2.27	0.58
28:YE:78:LEU:HD23	28:YE:79:ARG:HD2	1.86	0.58
31:YH:117:PRO:HB3	31:YH:123:PHE:CD1	2.37	0.58
39:YT:88:ILE:C	39:YT:88:ILE:HD12	2.29	0.58
1:QA:992:U:H3	1:QA:1044:A:N6	1.96	0.58
1:QA:1221:G:OP1	19:QS:36:ARG:HD3	2.04	0.58
1:QA:1528:U:O2'	1:QA:1529:G:OP2	2.21	0.58
2:QB:80:ILE:HD11	2:QB:208:ILE:CG2	2.22	0.58
2:QB:212:GLN:NE2	2:QB:235:SER:HB2	2.18	0.58
10:QJ:3:LYS:O	10:QJ:100:THR:HG22	2.04	0.58
13:QM:3:ARG:HA	13:QM:9:ILE:CG2	2.22	0.58
13:QM:19:LEU:HD22	13:QM:19:LEU:H	1.68	0.58
18:QR:25:THR:C	18:QR:26:LEU:HD23	2.29	0.58
18:QR:36:ASN:O	18:QR:36:ASN:ND2	2.32	0.58
25:RA:839:U:H1'	25:RA:1191:G:H1'	1.85	0.58
25:RA:903:C:H2'	25:RA:904:C:C6	2.38	0.58
31:RH:159:GLU:O	31:RH:160:LYS:HG2	2.03	0.58
43:RX:27:THR:HB	43:RX:80:ILE:HB	1.84	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RY:95:LYS:HD3	44:RY:95:LYS:H	1.67	0.58
46:R0:37:LEU:N	46:R0:59:LEU:O	2.34	0.58
1:XA:781:A:C5	1:XA:802:A:C2	2.92	0.58
1:XA:1213:A:C6	1:XA:1215:G:H1'	2.39	0.58
2:XB:19:HIS:NE2	2:XB:206:ASP:HB2	2.18	0.58
5:XE:68:GLU:O	5:XE:68:GLU:HG3	2.03	0.58
9:XI:79:LEU:O	9:XI:82:ALA:HB3	2.03	0.58
12:XL:45:PRO:HB3	12:XL:93:LEU:CD2	2.33	0.58
14:XN:21:TYR:HE2	14:XN:23:ARG:HH21	1.52	0.58
25:YA:738:G:C6	25:YA:739:G:C2	2.91	0.58
25:YA:1055:G:N2	25:YA:1104:C:N3	2.48	0.58
25:YA:1636:C:H2'	25:YA:1637:A:H8	1.69	0.58
25:YA:2273:A:O2'	25:YA:2274:A:H5'	2.03	0.58
29:YF:138:GLU:O	29:YF:141:ALA:HB3	2.03	0.58
32:YI:31:LEU:HD21	32:YI:38:LEU:HG	1.86	0.58
34:YO:7:TYR:C	34:YO:8:LEU:HD22	2.29	0.58
34:YO:40:VAL:HG12	34:YO:41:ALA:N	2.19	0.58
35:YP:71:VAL:CG1	35:YP:72:PRO:HD3	2.33	0.58
35:YP:112:LEU:HD13	35:YP:112:LEU:C	2.29	0.58
40:YU:47:TYR:C	40:YU:47:TYR:CD2	2.81	0.58
41:YV:38:LEU:HD23	41:YV:39:LEU:N	2.19	0.58
42:YW:66:GLU:O	42:YW:68:ARG:N	2.33	0.58
43:YX:7:VAL:O	43:YX:30:VAL:HG12	2.04	0.58
43:YX:36:LYS:HE3	43:YX:54:VAL:O	2.04	0.58
44:YY:81:LYS:HD3	44:YY:97:ARG:CD	2.34	0.58
48:Y2:69:ARG:NH1	48:Y2:69:ARG:CB	2.67	0.58
49:Y3:22:ALA:O	49:Y3:25:ALA:HB3	2.04	0.58
50:Y4:12:ALA:CB	50:Y4:29:PRO:HA	2.33	0.58
50:Y4:65:ASP:O	50:Y4:66:SER:CB	2.51	0.58
1:QA:900:A:H2'	1:QA:901:A:C8	2.39	0.58
1:QA:1203:C:H2'	1:QA:1204:A:H8	1.68	0.58
1:QA:1237:C:HO2'	1:QA:1300:G:H22	1.52	0.58
1:QA:1305:G:H5'	21:QU:4:GLY:HA3	1.86	0.58
2:QB:21:ARG:HG3	2:QB:38:GLY:O	2.01	0.58
2:QB:75:LYS:HD3	2:QB:75:LYS:C	2.29	0.58
4:QD:170:VAL:O	6:XF:21:LEU:CD2	2.48	0.58
5:QE:153:LYS:HB2	5:QE:153:LYS:NZ	2.18	0.58
9:QI:79:LEU:O	9:QI:82:ALA:HB3	2.03	0.58
11:QK:21:ILE:HG13	11:QK:30:VAL:HG12	1.85	0.58
12:QL:33:ARG:O	12:QL:85:ILE:HG22	2.03	0.58
13:QM:66:LEU:O	13:QM:67:GLU:C	2.46	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:900:A:H5'	25:RA:901:A:OP2	2.04	0.58
25:RA:2343:C:HO2'	25:RA:2373:G:HO2'	1.47	0.58
29:RF:11:VAL:HG11	29:RF:18:ARG:HE	1.67	0.58
29:RF:53:THR:C	29:RF:55:GLY:H	2.11	0.58
35:RP:37:GLY:C	35:RP:41:ARG:HD3	2.29	0.58
35:RP:112:LEU:HD13	35:RP:112:LEU:C	2.29	0.58
38:RS:67:ARG:HB2	38:RS:67:ARG:HH11	1.66	0.58
39:RT:88:ILE:C	39:RT:88:ILE:HD12	2.29	0.58
41:RV:81:TYR:C	41:RV:82:ARG:HG3	2.27	0.58
45:RZ:54:HIS:O	45:RZ:55:HIS:ND1	2.37	0.58
50:R4:3:GLU:HG3	50:R4:4:GLY:N	2.18	0.58
50:R4:15:ILE:HG22	50:R4:19:GLY:O	2.03	0.58
50:R4:22:ILE:HG22	50:R4:23:GLU:N	2.18	0.58
1:XA:486:U:H2'	1:XA:487:A:H8	1.69	0.58
1:XA:1158:C:H4'	2:XB:133:LYS:NZ	2.19	0.58
1:XA:1347:G:N2	1:XA:1374:A:OP2	2.32	0.58
2:XB:140:HIS:HA	2:XB:143:GLU:OE1	2.04	0.58
3:XC:36:ASP:HB3	3:XC:40:ARG:HH12	1.68	0.58
4:XD:191:ARG:NH1	4:XD:200:GLU:OE1	2.37	0.58
4:XD:196:LEU:O	4:XD:198:VAL:N	2.31	0.58
5:XE:78:HIS:CG	8:XH:104:ARG:HG2	2.38	0.58
5:XE:152:ARG:O	8:XH:64:LYS:NZ	2.36	0.58
7:XG:49:ILE:O	7:XG:53:LYS:HB3	2.04	0.58
16:XP:28:ARG:HH11	16:XP:28:ARG:HG2	1.68	0.58
25:YA:1222:C:H2'	25:YA:1223:C:H6	1.69	0.58
25:YA:1342:A:O2'	25:YA:1344:G:OP2	2.21	0.58
25:YA:1872:A:H5'	25:YA:1878:G:OP2	2.03	0.58
25:YA:2691:C:H5'	25:YA:2872:G:H5''	1.85	0.58
27:YD:242:ARG:HD2	27:YD:242:ARG:N	2.18	0.58
28:YE:63:LEU:HD13	28:YE:65:GLY:H	1.68	0.58
28:YE:72:VAL:O	28:YE:73:GLU:O	2.21	0.58
33:YN:13:TRP:O	33:YN:135:PRO:HD2	2.03	0.58
33:YN:114:ARG:O	33:YN:115:ARG:HB3	2.03	0.58
37:YR:117:VAL:CG2	37:YR:118:GLU:H	2.15	0.58
42:YW:95:ILE:HD12	42:YW:95:ILE:O	2.04	0.58
48:Y2:21:LEU:O	48:Y2:25:VAL:HG23	2.04	0.58
1:QA:1378:C:N4	1:QA:1379:G:N3	2.51	0.58
4:QD:22:LYS:O	4:QD:113:SER:HB3	2.03	0.58
13:QM:56:LEU:HD13	13:QM:60:VAL:HG23	1.86	0.58
25:RA:669:G:H2'	25:RA:669:G:N3	2.19	0.58
25:RA:1378:A:HO2'	25:RA:1379:A:P	2.27	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1454:U:O2'	25:RA:1455:G:N7	2.33	0.58
25:RA:2246:G:H2'	25:RA:2247:A:H8	1.68	0.58
25:RA:2313:C:H2'	25:RA:2314:C:C6	2.38	0.58
26:RB:65:C:N4	26:RB:108:C:H2'	2.15	0.58
28:RE:51:PHE:CD1	28:RE:52:LEU:HG	2.39	0.58
28:RE:111:ARG:NE	28:RE:160:TYR:HE1	2.01	0.58
50:R4:27:THR:O	50:R4:28:LYS:HB3	2.04	0.58
1:XA:1346:A:C5	7:XG:10:ARG:NH1	2.72	0.58
2:XB:12:GLU:O	2:XB:16:HIS:ND1	2.36	0.58
3:XC:95:THR:HG22	3:XC:96:GLY:N	2.06	0.58
3:XC:189:ALA:HB3	3:XC:196:LEU:HB2	1.84	0.58
8:XH:19:VAL:O	8:XH:20:TYR:HB2	2.04	0.58
16:XP:14:ASN:N	16:XP:15:PRO:CD	2.67	0.58
19:XS:65:ASN:HA	50:Y4:55:ARG:HH11	1.69	0.58
25:YA:64:A:C4	43:YX:66:LEU:HD13	2.38	0.58
25:YA:74:A:H4'	25:YA:75:G:O5'	2.04	0.58
25:YA:1357:U:H2'	25:YA:1358:G:C8	2.38	0.58
25:YA:1614:A:H62	42:YW:93:ALA:HB2	1.68	0.58
25:YA:2495:G:H2'	25:YA:2496:C:C6	2.39	0.58
31:YH:4:ILE:HD13	31:YH:4:ILE:H	1.68	0.58
38:YS:95:HIS:CG	38:YS:96:GLY:H	2.21	0.58
41:YV:81:TYR:C	41:YV:82:ARG:HG3	2.27	0.58
45:YZ:24:LEU:HB2	45:YZ:41:LEU:HG	1.85	0.58
48:Y2:15:LYS:H	48:Y2:67:LYS:CE	2.17	0.58
51:Y5:60:VAL:HG13	51:Y5:60:VAL:OXT	2.03	0.58
1:QA:309:G:O2'	1:QA:607:A:N1	2.36	0.58
1:QA:727:G:N2	1:QA:730:G:OP2	2.36	0.58
2:QB:80:ILE:HG21	2:QB:212:GLN:HA	1.84	0.58
7:QG:69:VAL:HG11	7:QG:104:LEU:CD2	2.34	0.58
11:QK:30:VAL:HG21	11:QK:65:ALA:HA	1.85	0.58
12:QL:45:PRO:HD3	12:QL:51:ALA:O	2.04	0.58
17:QQ:84:LEU:C	17:QQ:86:GLU:N	2.60	0.58
19:QS:17:GLU:HA	19:QS:20:LEU:HD12	1.86	0.58
25:RA:1485:G:H5''	25:RA:1485:G:H8	1.69	0.58
25:RA:2753:A:O2'	55:R9:15:LYS:NZ	2.36	0.58
28:RE:134:ILE:C	28:RE:134:ILE:HD12	2.28	0.58
31:RH:153:LYS:HA	31:RH:153:LYS:HZ3	1.68	0.58
35:RP:71:VAL:CG1	35:RP:72:PRO:HD3	2.33	0.58
38:RS:26:LEU:CD2	38:RS:87:PHE:HD1	2.17	0.58
40:RU:24:TYR:HE1	40:RU:39:LEU:HD23	1.69	0.58
42:RW:43:GLY:O	42:RW:44:ALA:C	2.46	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:RX:7:VAL:O	43:RX:30:VAL:HG12	2.04	0.58
51:R5:50:GLY:O	51:R5:51:TYR:HB2	2.03	0.58
1:XA:1268:A:H4'	21:XU:19:GLY:C	2.28	0.58
1:XA:1435:G:H2'	1:XA:1436:U:C6	2.39	0.58
3:XC:33:LEU:O	3:XC:37:GLN:HG2	2.04	0.58
4:XD:156:GLU:O	4:XD:160:GLN:HG3	2.03	0.58
12:XL:54:LYS:N	12:XL:54:LYS:HD2	2.18	0.58
12:XL:83:VAL:HG22	12:XL:84:LEU:H	1.69	0.58
25:YA:219:G:N3	25:YA:234:C:O2'	2.32	0.58
25:YA:534:U:H5'	40:YU:42:ALA:HB1	1.86	0.58
25:YA:573:G:O2'	25:YA:574:C:H3'	2.04	0.58
25:YA:715:G:H2'	25:YA:716:A:C8	2.39	0.58
27:YD:71:ASP:HB3	27:YD:103:ARG:HH22	1.68	0.58
29:YF:53:THR:C	29:YF:55:GLY:H	2.11	0.58
29:YF:179:GLU:CD	29:YF:179:GLU:H	2.11	0.58
36:YQ:47:ILE:CD1	36:YQ:70:PRO:HD3	2.34	0.58
1:QA:396:G:O2'	1:QA:398:C:OP1	2.18	0.57
1:QA:1112:C:H1'	3:QC:179:ARG:NH1	2.19	0.57
1:QA:1347:G:C8	9:QI:107:ARG:HB3	2.39	0.57
1:QA:1399:C:N3	1:QA:1502:A:N6	2.51	0.57
25:RA:637:A:H8	35:RP:117:GLU:OE2	1.86	0.57
25:RA:1041:C:H2'	25:RA:1042:G:C8	2.39	0.57
25:RA:1230:C:H2'	25:RA:1231:G:H8	1.68	0.57
25:RA:1448:G:H1'	25:RA:1528:A:H62	1.68	0.57
25:RA:2061:G:OP2	25:RA:2502:G:H5'	2.03	0.57
25:RA:2420:C:H41	54:R8:30:ARG:HD2	1.68	0.57
25:RA:2814:C:H42	25:RA:2886:G:H1	1.49	0.57
26:RB:40:U:H3	26:RB:43:C:H5''	1.69	0.57
26:RB:42:C:O4'	30:RG:69:ALA:HB2	2.04	0.57
27:RD:25:THR:HG21	27:RD:81:ALA:HB1	1.85	0.57
27:RD:27:THR:CG2	27:RD:83:GLU:HB3	2.33	0.57
31:RH:125:VAL:HA	31:RH:126:PRO:CB	2.29	0.57
31:RH:125:VAL:HG12	31:RH:126:PRO:CG	2.34	0.57
32:RI:77:LEU:HD11	32:RI:140:LEU:HD12	1.86	0.57
36:RQ:47:ILE:CD1	36:RQ:70:PRO:HD3	2.34	0.57
36:RQ:58:PHE:O	36:RQ:59:ARG:C	2.43	0.57
42:RW:80:PRO:O	42:RW:100:THR:HG22	2.03	0.57
45:RZ:52:SER:O	45:RZ:52:SER:OG	2.15	0.57
46:R0:50:ASN:ND2	46:R0:81:VAL:O	2.36	0.57
47:R1:81:LYS:HE2	47:R1:81:LYS:H	1.62	0.57
50:R4:15:ILE:HG22	50:R4:20:ASN:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:56:GLU:O	54:R8:59:LYS:N	2.35	0.57
1:XA:595:G:H1'	1:XA:596:C:H5	1.68	0.57
1:XA:960:U:O2	1:XA:960:U:H2'	2.03	0.57
2:XB:111:ARG:HA	2:XB:111:ARG:NE	2.19	0.57
3:XC:76:VAL:HG21	3:XC:103:VAL:CG1	2.34	0.57
7:XG:69:VAL:HG11	7:XG:104:LEU:CD2	2.34	0.57
8:XH:86:ILE:HG13	8:XH:133:LEU:HD22	1.84	0.57
13:XM:4:ILE:HG22	13:XM:5:ALA:N	2.19	0.57
15:XO:4:THR:HB	15:XO:6:GLU:OE2	2.02	0.57
25:YA:330:A:H2	25:YA:1210:A:H2'	1.67	0.57
25:YA:675:A:OP1	29:YF:63:LYS:NZ	2.36	0.57
29:YF:160:ASN:OD1	29:YF:162:LEU:HB2	2.04	0.57
30:YG:39:ILE:HG23	30:YG:155:MET:HG3	1.86	0.57
31:YH:127:GLU:HG2	31:YH:128:PRO:CG	2.32	0.57
32:YI:71:ILE:HG12	32:YI:71:ILE:O	2.04	0.57
33:YN:35:ARG:O	33:YN:37:LYS:N	2.37	0.57
38:YS:67:ARG:NH1	38:YS:67:ARG:CB	2.64	0.57
39:YT:82:LEU:HD12	39:YT:82:LEU:N	2.19	0.57
50:Y4:37:SER:HB3	50:Y4:42:PHE:CE1	2.38	0.57
2:QB:111:ARG:HA	2:QB:111:ARG:NE	2.19	0.57
2:QB:140:HIS:HA	2:QB:143:GLU:OE1	2.04	0.57
11:QK:32:ILE:O	11:QK:40:ILE:HG12	2.04	0.57
13:QM:81:LEU:HB3	13:QM:89:GLY:CA	2.34	0.57
15:QO:6:GLU:CD	15:QO:6:GLU:H	2.12	0.57
16:QP:21:VAL:HG22	16:QP:34:GLU:O	2.04	0.57
16:QP:51:VAL:CG1	16:QP:52:ASP:N	2.65	0.57
25:RA:1403:C:H5''	25:RA:1471:A:C1'	2.34	0.57
25:RA:2130:U:O2'	25:RA:2133:G:O2'	2.17	0.57
27:RD:177:LEU:HD11	27:RD:183:ARG:HB2	1.85	0.57
29:RF:138:GLU:O	29:RF:141:ALA:HB3	2.04	0.57
37:RR:63:ARG:HH11	37:RR:63:ARG:HG3	1.68	0.57
39:RT:82:LEU:HD12	39:RT:82:LEU:N	2.19	0.57
45:RZ:45:ASP:O	45:RZ:49:ARG:HG2	2.03	0.57
48:R2:21:LEU:O	48:R2:25:VAL:HG23	2.04	0.57
50:R4:39:CYS:O	50:R4:40:HIS:HB2	2.03	0.57
51:R5:55:ARG:NH1	51:R5:58:LEU:HD11	2.19	0.57
1:XA:374:A:C6	1:XA:375:U:C4	2.92	0.57
1:XA:438:G:H4'	4:XD:123:HIS:CE1	2.38	0.57
1:XA:728:A:H2'	1:XA:729:A:C8	2.38	0.57
4:XD:33:MET:HE2	4:XD:37:PRO:HA	1.86	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)
11:XK:21:ILE:HD12	11:XK:21:ILE:N	2.19	0.57
25:YA:1316:U:C2'	25:YA:1317:A:H5'	2.34	0.57
25:YA:1639:U:C2'	25:YA:1640:C:H5''	2.34	0.57
25:YA:2881:C:H5'	37:YR:117:VAL:HG21	1.85	0.57
28:YE:63:LEU:HD12	28:YE:65:GLY:H	1.69	0.57
28:YE:111:ARG:NE	28:YE:160:TYR:HE1	2.01	0.57
28:YE:116:VAL:CG2	28:YE:122:PHE:CD2	2.86	0.57
28:YE:203:LYS:HE3	28:YE:204:ALA:HB2	1.86	0.57
32:YI:68:LEU:HA	32:YI:71:ILE:HG22	1.85	0.57
40:YU:39:LEU:O	40:YU:40:PHE:C	2.48	0.57
41:YV:78:LYS:O	41:YV:79:VAL:HB	2.03	0.57
43:YX:27:THR:HB	43:YX:80:ILE:HB	1.84	0.57
52:Y6:27:LYS:HB2	52:Y6:27:LYS:HZ3	1.69	0.57
1:QA:411:A:C4	1:QA:413:G:H1'	2.39	0.57
1:QA:429:U:H4'	1:QA:430:A:OP1	2.02	0.57
1:QA:545:C:OP1	4:QD:61:LYS:NZ	2.35	0.57
1:QA:748:C:H1'	1:QA:749:C:H5	1.69	0.57
1:QA:838:G:C6	1:QA:842:C:H1'	2.40	0.57
1:QA:1034:G:H2'	1:QA:1035:A:C8	2.38	0.57
1:QA:1239:A:H4'	1:QA:1240:U:H5''	1.86	0.57
2:QB:97:TRP:HH2	2:QB:176:GLU:HB2	1.69	0.57
25:RA:303:U:H2'	25:RA:304:G:C8	2.39	0.57
25:RA:439:G:H8	25:RA:439:G:O5'	1.87	0.57
25:RA:1188:U:C2'	25:RA:1189:A:H5'	2.34	0.57
25:RA:1405:U:O2'	25:RA:1406:U:O4'	2.13	0.57
25:RA:1468:C:H2'	25:RA:1469:A:C8	2.40	0.57
25:RA:1889:A:H2'	25:RA:1890:A:C8	2.39	0.57
25:RA:2056:G:H2'	25:RA:2056:G:N3	2.19	0.57
26:RB:6:C:O2'	38:RS:29:PHE:HE1	1.86	0.57
26:RB:116:G:O2'	38:RS:54:LEU:HD11	2.04	0.57
27:RD:263:ARG:HB2	27:RD:263:ARG:HH11	1.67	0.57
28:RE:74:PRO:HG2	28:RE:77:ILE:HG23	1.86	0.57
29:RF:29:ASN:N	29:RF:112:MET:HE1	2.19	0.57
30:RG:125:PHE:C	30:RG:127:GLY:H	2.12	0.57
31:RH:4:ILE:HD13	31:RH:4:ILE:H	1.68	0.57
31:RH:84:SER:O	31:RH:133:VAL:O	2.22	0.57
31:RH:85:LYS:HA	31:RH:86:GLU:OE1	2.04	0.57
34:RO:20:MET:HG2	34:RO:21:CYS:N	2.20	0.57
38:RS:67:ARG:HH11	38:RS:67:ARG:CB	2.18	0.57
45:RZ:166:SER:OG	45:RZ:168:GLU:N	2.36	0.57
48:R2:15:LYS:H	48:R2:67:LYS:NZ	2.02	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:37:SER:HB3	50:R4:42:PHE:CE1	2.38	0.57
1:XA:216:G:H2'	1:XA:217:C:C6	2.39	0.57
1:XA:811:C:H4'	1:XA:900:A:N6	2.19	0.57
2:XB:97:TRP:HH2	2:XB:176:GLU:HB2	1.69	0.57
15:XO:6:GLU:CD	15:XO:6:GLU:H	2.12	0.57
22:XV:53:G:H4'	22:XV:54:U:OP1	2.02	0.57
25:YA:286:C:O2'	25:YA:287:C:H5'	2.04	0.57
25:YA:600:G:H2'	25:YA:601:C:C6	2.39	0.57
25:YA:1344:G:H4'	25:YA:1384:A:C5	2.39	0.57
25:YA:2887:U:H2'	25:YA:2888:C:C6	2.39	0.57
26:YB:43:C:O2	30:YG:95:ARG:NH2	2.37	0.57
28:YE:6:GLY:HA3	28:YE:26:ILE:HD11	1.85	0.57
31:YH:2:SER:O	31:YH:3:ARG:C	2.47	0.57
37:YR:32:GLY:O	37:YR:115:GLU:HA	2.04	0.57
38:YS:26:LEU:CD2	38:YS:87:PHE:HD1	2.17	0.57
45:YZ:57:ILE:O	45:YZ:69:THR:N	2.24	0.57
48:Y2:16:LEU:O	48:Y2:17:SER:HB3	2.04	0.57
51:Y5:50:GLY:O	51:Y5:51:TYR:HB2	2.02	0.57
1:QA:186:C:H4'	20:QT:82:SER:HB3	1.86	0.57
1:QA:243:A:H4'	1:QA:244:U:O5'	2.03	0.57
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.38	0.57
2:QB:12:GLU:O	2:QB:16:HIS:ND1	2.36	0.57
3:QC:57:ILE:HG23	3:QC:64:VAL:HG13	1.86	0.57
3:QC:181:ASN:HD22	3:QC:204:LEU:HB2	1.68	0.57
4:QD:100:ARG:HH22	4:QD:137:SER:HB3	1.70	0.57
6:QF:99:ALA:O	6:QF:100:ASN:HB2	2.04	0.57
19:QS:65:ASN:N	19:QS:65:ASN:ND2	2.52	0.57
25:RA:586:A:N1	25:RA:809:G:O2'	2.31	0.57
25:RA:960:A:H4'	25:RA:2457:U:H5'	1.87	0.57
25:RA:1568:G:H5''	27:RD:61:LEU:HD22	1.86	0.57
25:RA:2072:G:C2	25:RA:2073:C:C2	2.91	0.57
25:RA:2137:C:H42	25:RA:2154:G:H1	1.51	0.57
25:RA:2861:G:H2'	25:RA:2862:G:H8	1.69	0.57
25:RA:2892:A:H2'	25:RA:2893:G:O4'	2.03	0.57
27:RD:35:LYS:HG2	27:RD:64:ILE:CA	2.34	0.57
27:RD:147:LEU:HD13	27:RD:155:LEU:CD1	2.29	0.57
34:RO:7:TYR:C	34:RO:8:LEU:HD22	2.29	0.57
35:RP:59:LEU:HA	35:RP:61:ARG:CZ	2.35	0.57
36:RQ:55:VAL:HG22	36:RQ:56:ARG:N	2.18	0.57
36:RQ:66:ILE:HA	36:RQ:104:PHE:HA	1.85	0.57
48:R2:17:SER:HB2	48:R2:18:PRO:HA	1.86	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:53:PRO:CD	54:R8:54:GLU:H	2.15	0.57
1:XA:881:G:OP2	12:XL:12:ARG:NH2	2.36	0.57
1:XA:1008:C:N4	1:XA:1021:G:H1	2.01	0.57
2:XB:77:ALA:CB	2:XB:211:ILE:HG21	2.35	0.57
2:XB:106:LYS:O	2:XB:110:GLN:HG3	2.05	0.57
3:XC:105:GLU:HG2	3:XC:106:VAL:N	2.18	0.57
6:XF:39:LYS:HD2	6:XF:64:GLN:NE2	2.19	0.57
6:XF:69:GLU:C	6:XF:71:ARG:H	2.13	0.57
7:XG:121:ALA:O	7:XG:125:MET:N	2.37	0.57
10:XJ:3:LYS:O	10:XJ:100:THR:HG22	2.04	0.57
20:XT:37:SER:HB3	20:XT:84:LEU:HD23	1.85	0.57
25:YA:638:G:H2'	25:YA:639:U:O4'	2.04	0.57
25:YA:862:G:H2'	25:YA:863:A:O4'	2.04	0.57
25:YA:1441:G:H2'	25:YA:1442:G:H8	1.69	0.57
26:YB:86:G:H2'	26:YB:87:G:C8	2.40	0.57
27:YD:35:LYS:HG2	27:YD:64:ILE:CA	2.34	0.57
30:YG:63:ILE:HD11	30:YG:102:PHE:HE2	1.69	0.57
31:YH:76:VAL:C	31:YH:78:GLY:H	2.13	0.57
32:YI:83:ALA:O	32:YI:85:GLU:N	2.38	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:N	2.19	0.57
34:YO:20:MET:O	34:YO:41:ALA:HB1	2.04	0.57
40:YU:24:TYR:HE1	40:YU:39:LEU:HD23	1.70	0.57
42:YW:43:GLY:O	42:YW:44:ALA:C	2.46	0.57
47:Y1:86:SER:H	47:Y1:87:PRO:CD	2.16	0.57
49:Y3:4:LEU:O	49:Y3:36:VAL:HA	2.04	0.57
49:Y3:31:LEU:O	49:Y3:32:GLN:HB2	2.04	0.57
1:QA:522:C:H41	12:QL:53:ARG:HH22	1.51	0.57
1:QA:627:G:H2'	1:QA:628:G:H8	1.70	0.57
1:QA:1064:G:H1'	1:QA:1066:C:C6	2.39	0.57
1:QA:1314:C:OP1	19:QS:6:LYS:HE3	2.04	0.57
4:QD:50:ARG:O	4:QD:50:ARG:HD2	2.05	0.57
10:QJ:64:GLU:OE2	10:QJ:66:ARG:HD2	2.05	0.57
10:QJ:74:ILE:HD13	10:QJ:74:ILE:N	2.16	0.57
13:QM:82:MET:O	13:QM:84:ILE:N	2.38	0.57
25:RA:443:A:OP1	29:RF:46:ARG:HB2	2.04	0.57
25:RA:451:C:H4'	29:RF:52:LYS:NZ	2.20	0.57
25:RA:554:U:HO2'	25:RA:556:G:H8	1.51	0.57
25:RA:888:C:O2'	25:RA:889:C:H4'	2.03	0.57
25:RA:1184:G:OP1	49:R3:29:ARG:NH1	2.37	0.57
25:RA:2009:G:OP1	42:RW:41:LYS:HE2	2.04	0.57
25:RA:2061:G:H5''	25:RA:2503:A:C2	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:63:LEU:HD13	28:RE:65:GLY:H	1.68	0.57
30:RG:16:ARG:HB3	30:RG:17:PRO:CD	2.33	0.57
30:RG:39:ILE:CG2	30:RG:155:MET:HG3	2.35	0.57
30:RG:63:ILE:HD11	30:RG:102:PHE:HE2	1.69	0.57
33:RN:35:ARG:O	33:RN:37:LYS:N	2.37	0.57
33:RN:42:TRP:O	40:RU:64:ARG:NH2	2.35	0.57
52:R6:6:ARG:O	52:R6:8:LYS:HD2	2.05	0.57
1:XA:67:C:H2'	1:XA:68:G:C8	2.39	0.57
1:XA:1014:A:H4'	19:XS:14:HIS:NE2	2.19	0.57
11:XK:29:ILE:HG13	11:XK:43:SER:O	2.05	0.57
12:XL:33:ARG:O	12:XL:85:ILE:HG22	2.03	0.57
13:XM:81:LEU:HB3	13:XM:89:GLY:CA	2.34	0.57
16:XP:75:ARG:C	16:XP:77:ALA:H	2.11	0.57
16:XP:76:GLN:O	16:XP:76:GLN:HG2	2.04	0.57
19:XS:15:LEU:HD23	19:XS:15:LEU:N	2.19	0.57
24:XY:39:C:O2'	24:XY:40:G:OP1	2.21	0.57
25:YA:177:G:H5''	25:YA:177:G:N3	2.20	0.57
25:YA:370:G:H5''	25:YA:423:A:N6	2.20	0.57
25:YA:612:G:C2	25:YA:613:U:O2	2.56	0.57
25:YA:669:G:H2'	25:YA:669:G:N3	2.19	0.57
29:YF:32:LEU:HD13	29:YF:105:VAL:CG1	2.33	0.57
33:YN:63:THR:HG22	33:YN:66:LYS:NZ	2.20	0.57
34:YO:71:ARG:HG3	34:YO:71:ARG:HH11	1.69	0.57
42:YW:20:VAL:C	42:YW:22:ASP:N	2.60	0.57
50:Y4:39:CYS:O	50:Y4:40:HIS:HB2	2.03	0.57
1:QA:947:G:O3'	13:QM:109:THR:OG1	2.23	0.57
2:QB:187:LEU:CD1	2:QB:205:ASP:HA	2.33	0.57
3:QC:14:ILE:HG12	3:QC:15:THR:N	2.19	0.57
3:QC:77:ILE:O	3:QC:83:ARG:HB3	2.05	0.57
3:QC:90:GLU:O	3:QC:94:LEU:HG	2.05	0.57
7:QG:16:LEU:CD1	9:QI:45:ALA:HB2	2.34	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:HD21	1.85	0.57
14:QN:13:THR:N	14:QN:14:PRO:CD	2.68	0.57
18:QR:85:LEU:HD23	18:QR:88:LYS:HD2	1.86	0.57
20:QT:10:LEU:HG	20:QT:12:ALA:H	1.70	0.57
25:RA:1728:G:N1	25:RA:1730:U:OP2	2.38	0.57
26:RB:56:G:P	30:RG:27:ASN:HD21	2.26	0.57
30:RG:39:ILE:HG23	30:RG:155:MET:HG3	1.87	0.57
31:RH:76:VAL:C	31:RH:78:GLY:H	2.13	0.57
33:RN:40:PRO:HB3	40:RU:68:ALA:HB2	1.87	0.57
33:RN:133:GLN:O	33:RN:134:ARG:CB	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:40:VAL:HG12	34:RO:41:ALA:N	2.19	0.57
37:RR:32:GLY:O	37:RR:115:GLU:HA	2.04	0.57
38:RS:95:HIS:CG	38:RS:96:GLY:H	2.21	0.57
38:RS:106:ARG:O	38:RS:107:GLU:HB2	2.04	0.57
41:RV:78:LYS:O	41:RV:79:VAL:HB	2.04	0.57
45:RZ:153:SER:HB2	45:RZ:167:PRO:HB3	1.86	0.57
49:R3:22:ALA:O	49:R3:25:ALA:HB3	2.04	0.57
50:R4:38:LYS:C	50:R4:40:HIS:H	2.07	0.57
55:R9:25:VAL:HB	55:R9:34:GLN:HB2	1.86	0.57
1:XA:434:U:H2'	1:XA:435:C:C6	2.40	0.57
2:XB:178:ARG:HH21	8:XH:74:PRO:CB	2.10	0.57
3:XC:107:GLN:CD	3:XC:107:GLN:N	2.61	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:CB	2.17	0.57
5:XE:140:ARG:HH11	5:XE:140:ARG:HB2	1.69	0.57
7:XG:16:LEU:CD1	9:XI:45:ALA:HB2	2.33	0.57
7:XG:62:PHE:HA	7:XG:124:LEU:CD2	2.27	0.57
13:XM:84:ILE:HG23	13:XM:85:GLY:N	2.18	0.57
18:XR:25:THR:C	18:XR:26:LEU:HD23	2.29	0.57
25:YA:239:U:H2'	25:YA:240:G:O4'	2.04	0.57
25:YA:465:G:N2	25:YA:684:G:H1'	2.19	0.57
25:YA:1885:A:H3'	25:YA:1886:C:C6	2.39	0.57
25:YA:2438:U:O3'	25:YA:2439:A:H3'	2.05	0.57
25:YA:2481:G:O2'	25:YA:2482:G:OP2	2.21	0.57
27:YD:34:VAL:O	27:YD:34:VAL:CG1	2.51	0.57
28:YE:41:LYS:HE2	28:YE:41:LYS:HA	1.87	0.57
28:YE:152:LYS:HG2	33:YN:78:TYR:CE1	2.39	0.57
30:YG:107:LEU:HD11	30:YG:178:PHE:CE1	2.40	0.57
33:YN:133:GLN:O	33:YN:134:ARG:CB	2.53	0.57
37:YR:56:LYS:C	37:YR:58:GLY:N	2.62	0.57
38:YS:72:ALA:O	38:YS:76:LYS:HG3	2.04	0.57
44:YY:94:LYS:HE3	44:YY:101:LYS:HZ3	1.69	0.57
51:Y5:55:ARG:NH1	51:Y5:58:LEU:HD11	2.19	0.57
1:QA:15:G:H4'	5:QE:24:ARG:HH12	1.70	0.57
1:QA:57:G:H2'	1:QA:58:C:C6	2.40	0.57
1:QA:113:G:O2'	1:QA:354:G:H5'	2.05	0.57
1:QA:1037:C:H2'	1:QA:1038:C:C6	2.39	0.57
2:QB:30:ARG:HH21	2:QB:194:PRO:CG	2.17	0.57
6:QF:39:LYS:HD2	6:QF:64:GLN:NE2	2.19	0.57
16:QP:76:GLN:HG2	16:QP:76:GLN:O	2.04	0.57
25:RA:121:G:C2	25:RA:131:G:C4	2.92	0.57
25:RA:1006:C:H1'	33:RN:106:MET:HE2	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1869:G:H5'	25:RA:1870:C:OP2	2.05	0.57
30:RG:107:LEU:HD11	30:RG:178:PHE:CE1	2.39	0.57
33:RN:7:LYS:HG2	33:RN:8:GLN:N	2.20	0.57
34:RO:96:THR:O	34:RO:97:ARG:HB3	2.04	0.57
40:RU:96:ALA:O	40:RU:100:VAL:HG23	2.05	0.57
47:R1:70:VAL:O	47:R1:74:VAL:HG23	2.05	0.57
2:XB:30:ARG:HH21	2:XB:194:PRO:CG	2.17	0.57
3:XC:14:ILE:HG12	3:XC:15:THR:N	2.19	0.57
6:XF:99:ALA:O	6:XF:100:ASN:HB2	2.04	0.57
25:YA:27:G:O2'	25:YA:28:A:H8	1.85	0.57
25:YA:259:G:H21	25:YA:621:A:H8	1.52	0.57
25:YA:2073:C:O2'	25:YA:2074:U:H5'	2.05	0.57
25:YA:2292:C:H42	25:YA:2340:G:H1	1.52	0.57
31:YH:3:ARG:HA	31:YH:3:ARG:HE	1.69	0.57
32:YI:9:LEU:HD21	32:YI:12:LEU:HB2	1.86	0.57
38:YS:5:THR:HG23	38:YS:8:GLU:OE2	2.05	0.57
38:YS:106:ARG:O	38:YS:107:GLU:HB2	2.04	0.57
40:YU:52:ARG:HG2	40:YU:52:ARG:NH1	2.18	0.57
47:Y1:70:VAL:O	47:Y1:74:VAL:HG23	2.04	0.57
50:Y4:42:PHE:CG	50:Y4:43:TYR:N	2.72	0.57
1:QA:1079:G:H2'	1:QA:1080:A:C8	2.40	0.57
1:QA:1244:C:H42	1:QA:1293:G:H1	1.50	0.57
1:QA:1297:C:H4'	1:QA:1298:C:H5'	1.86	0.57
3:QC:76:VAL:HG21	3:QC:103:VAL:CG1	2.34	0.57
5:QE:78:HIS:CB	8:QH:104:ARG:HG2	2.34	0.57
11:QK:29:ILE:HG13	11:QK:43:SER:O	2.04	0.57
12:QL:82:VAL:HG23	12:QL:106:ASP:OD2	2.04	0.57
13:QM:69:GLU:O	13:QM:71:ARG:N	2.38	0.57
25:RA:270(T):G:P	47:R1:97:LEU:HD13	2.44	0.57
25:RA:589:C:H2'	25:RA:590:A:C8	2.39	0.57
25:RA:664:C:OP1	35:RP:18:ARG:NH2	2.31	0.57
25:RA:770:G:N3	25:RA:1354:A:H2	2.03	0.57
25:RA:1007:C:OP1	33:RN:35:ARG:NH1	2.38	0.57
25:RA:1449:A:H5'	25:RA:1449(A):G:OP2	2.05	0.57
25:RA:2087:G:H2'	25:RA:2088:G:H8	1.69	0.57
28:RE:51:PHE:HD1	28:RE:52:LEU:HG	1.68	0.57
38:RS:103:GLU:O	38:RS:106:ARG:CG	2.53	0.57
43:RX:36:LYS:HE3	43:RX:54:VAL:O	2.04	0.57
47:R1:86:SER:H	47:R1:87:PRO:CD	2.16	0.57
47:R1:89:GLU:O	47:R1:93:GLU:HB2	2.04	0.57
1:XA:232:G:H1'	1:XA:262:A:N1	2.19	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:276:G:O3'	17:XQ:68:ARG:NH1	2.38	0.57
1:XA:299:G:H2'	1:XA:300:A:C8	2.39	0.57
1:XA:633:G:H5'	1:XA:634:C:OP2	2.03	0.57
1:XA:1135:U:H4'	1:XA:1136:U:H5	1.69	0.57
1:XA:1417:G:N2	1:XA:1482:G:H2'	2.20	0.57
13:XM:82:MET:O	13:XM:84:ILE:N	2.38	0.57
17:XQ:32:TYR:O	17:XQ:34:LYS:N	2.37	0.57
19:XS:9:VAL:O	19:XS:9:VAL:HG23	2.04	0.57
25:YA:121:G:H2'	25:YA:122:G:H8	1.69	0.57
25:YA:304:G:H2'	25:YA:305:U:C6	2.39	0.57
25:YA:1728:G:H3'	25:YA:1729:A:H5''	1.85	0.57
27:YD:28:GLU:O	27:YD:29:PRO:C	2.45	0.57
28:YE:102:VAL:HG13	28:YE:172:VAL:CG2	2.34	0.57
30:YG:125:PHE:C	30:YG:127:GLY:H	2.12	0.57
33:YN:14:VAL:HG12	33:YN:15:LEU:H	1.69	0.57
34:YO:96:THR:O	34:YO:97:ARG:HB3	2.04	0.57
37:YR:45:ARG:HA	37:YR:95:THR:HG21	1.87	0.57
44:YY:21:LYS:HG3	44:YY:22:GLY:H	1.69	0.57
54:Y8:46:ARG:O	54:Y8:47:LYS:HB3	2.03	0.57
1:QA:954:G:N2	1:QA:1227:A:H62	1.94	0.57
4:QD:119:GLN:HG3	4:QD:123:HIS:CD2	2.40	0.57
5:QE:82:VAL:CG1	5:QE:83:GLU:N	2.68	0.57
7:QG:113:GLU:HB2	7:QG:119:ARG:CG	2.35	0.57
7:QG:121:ALA:O	7:QG:125:MET:N	2.37	0.57
9:QI:17:VAL:CG1	9:QI:81:ILE:HD13	2.35	0.57
25:RA:177:G:H3'	25:RA:178:G:H8	1.69	0.57
25:RA:1230:C:H2'	25:RA:1231:G:C8	2.40	0.57
28:RE:41:LYS:HA	28:RE:41:LYS:HE2	1.87	0.57
28:RE:102:VAL:HG13	28:RE:172:VAL:CG2	2.34	0.57
31:RH:124:GLU:HB3	31:RH:132:ARG:HG3	1.85	0.57
33:RN:14:VAL:HG12	33:RN:15:LEU:H	1.69	0.57
44:RY:89:PHE:O	44:RY:90:LEU:HD13	2.05	0.57
48:R2:31:GLU:O	48:R2:35:LEU:HG	2.05	0.57
49:R3:31:LEU:O	49:R3:32:GLN:HB2	2.04	0.57
52:R6:11:LEU:HD23	52:R6:26:ASN:HB3	1.87	0.57
52:R6:48:VAL:HG13	52:R6:49:HIS:N	2.20	0.57
55:R9:1:MET:HB3	55:R9:4:ARG:CZ	2.35	0.57
1:XA:1120:G:H1	1:XA:1153:C:H42	1.52	0.57
2:XB:187:LEU:CD1	2:XB:205:ASP:HA	2.34	0.57
4:XD:50:ARG:O	4:XD:50:ARG:HD2	2.05	0.57
7:XG:37:ASN:HD21	9:XI:40:LEU:HD23	1.69	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:64:GLU:OE2	10:XJ:66:ARG:HD2	2.05	0.57
12:XL:11:VAL:HG13	17:XQ:29:HIS:CD2	2.40	0.57
13:XM:49:THR:HB	13:XM:52:GLU:HG3	1.86	0.57
25:YA:482:A:O2'	44:YY:47:LYS:NZ	2.29	0.57
25:YA:702:G:H1	25:YA:730:C:H42	1.52	0.57
25:YA:2848:G:N2	25:YA:2867:G:C4	2.73	0.57
27:YD:25:THR:HG21	27:YD:81:ALA:HB1	1.85	0.57
27:YD:25:THR:HG21	27:YD:82:ILE:H	1.70	0.57
27:YD:36:PRO:HB2	27:YD:61:LEU:HG	1.87	0.57
31:YH:84:SER:O	31:YH:133:VAL:O	2.22	0.57
33:YN:7:LYS:HG2	33:YN:8:GLN:N	2.20	0.57
33:YN:114:ARG:C	33:YN:116:LEU:H	2.13	0.57
35:YP:64:LYS:C	35:YP:66:GLY:N	2.57	0.57
40:YU:83:LEU:HD12	40:YU:113:ALA:HB2	1.86	0.57
44:YY:97:ARG:HG2	44:YY:97:ARG:O	2.05	0.57
1:QA:67:C:H2'	1:QA:68:G:C8	2.40	0.57
1:QA:230:G:N2	1:QA:231:G:N3	2.53	0.57
1:QA:1080:A:C4'	5:QE:16:THR:HB	2.34	0.57
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.39	0.57
1:QA:1275:A:H2'	1:QA:1276:G:O4'	2.04	0.57
2:QB:106:LYS:O	2:QB:110:GLN:HG3	2.05	0.57
3:QC:59:ARG:NH2	3:QC:97:LYS:HE3	2.20	0.57
3:QC:59:ARG:HH12	3:QC:97:LYS:HE3	1.70	0.57
11:QK:69:ALA:HB1	11:QK:103:LEU:CD2	2.35	0.57
16:QP:14:ASN:N	16:QP:15:PRO:CD	2.67	0.57
25:RA:1480:G:O6	25:RA:1513:C:N4	2.32	0.57
25:RA:2367:G:H8	25:RA:2367:G:O5'	1.87	0.57
25:RA:2517:C:C2	25:RA:2542:A:N6	2.73	0.57
26:RB:42:C:N4	30:RG:91:ARG:HH21	2.02	0.57
27:RD:35:LYS:CE	27:RD:104:TYR:HB2	2.35	0.57
28:RE:63:LEU:HD12	28:RE:65:GLY:H	1.69	0.57
31:RH:3:ARG:HA	31:RH:3:ARG:HE	1.69	0.57
33:RN:112:LEU:C	33:RN:112:LEU:HD23	2.30	0.57
33:RN:112:LEU:O	33:RN:114:ARG:O	2.23	0.57
35:RP:13:ASN:O	35:RP:14:LYS:C	2.48	0.57
48:R2:15:LYS:H	48:R2:67:LYS:CE	2.17	0.57
53:R7:19:ARG:HH11	53:R7:19:ARG:HG2	1.70	0.57
53:R7:38:GLY:O	53:R7:39:ARG:C	2.48	0.57
1:XA:536:C:H2'	1:XA:537:G:C8	2.38	0.57
1:XA:1103:C:H2'	1:XA:1104:G:O4'	2.04	0.57
1:XA:1352:C:H42	1:XA:1370:G:H1	1.52	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:11:ARG:HH21	3:XC:180:ALA:HB3	1.70	0.57
4:XD:13:ARG:O	4:XD:16:GLY:N	2.29	0.57
4:XD:100:ARG:HH22	4:XD:137:SER:HB3	1.70	0.57
13:XM:69:GLU:O	13:XM:71:ARG:N	2.38	0.57
25:YA:297:C:H5''	44:YY:85:VAL:CG2	2.32	0.57
25:YA:1955:U:O2'	25:YA:1956:U:H5'	2.04	0.57
25:YA:2418:A:H2'	25:YA:2419:U:C6	2.40	0.57
27:YD:92:ILE:HD12	27:YD:104:TYR:CD2	2.39	0.57
30:YG:60:LEU:O	30:YG:64:THR:HG22	2.05	0.57
45:YZ:179:ASP:OD1	45:YZ:180:VAL:HG22	2.05	0.57
46:Y0:10:THR:HG23	46:Y0:12:ASN:H	1.69	0.57
1:QA:399:G:H2'	1:QA:400:C:C6	2.40	0.56
1:QA:703:G:O2'	1:QA:704:A:OP2	2.22	0.56
1:QA:977:A:O2'	1:QA:979:C:OP2	2.17	0.56
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.40	0.56
3:QC:7:PRO:O	3:QC:11:ARG:HG2	2.05	0.56
5:QE:78:HIS:HB2	8:QH:104:ARG:HG2	1.86	0.56
5:QE:78:HIS:CE1	5:QE:143:ARG:H	2.20	0.56
5:QE:140:ARG:HB2	5:QE:140:ARG:HH11	1.69	0.56
7:QG:18:TYR:HD2	7:QG:59:LEU:HD22	1.70	0.56
10:QJ:94:VAL:HG12	10:QJ:95:GLU:N	2.19	0.56
13:QM:73:GLU:O	13:QM:77:ASN:N	2.33	0.56
16:QP:7:ALA:O	16:QP:9:PHE:CD2	2.58	0.56
19:QS:40:ILE:HG12	19:QS:41:VAL:N	2.20	0.56
25:RA:991:C:H5'	25:RA:991:C:H6	1.69	0.56
25:RA:2273:A:H2'	25:RA:2274:A:C8	2.40	0.56
25:RA:2788:C:O2'	25:RA:2809:A:N3	2.37	0.56
29:RF:24:LEU:HB3	29:RF:115:ALA:HB2	1.87	0.56
33:RN:63:THR:HG22	33:RN:66:LYS:NZ	2.20	0.56
35:RP:65:ARG:HH21	54:R8:15:LYS:CB	2.17	0.56
37:RR:56:LYS:C	37:RR:58:GLY:N	2.62	0.56
38:RS:5:THR:HG23	38:RS:8:GLU:OE2	2.05	0.56
38:RS:32:LEU:O	38:RS:62:LYS:HE2	2.05	0.56
38:RS:72:ALA:O	38:RS:76:LYS:HG3	2.04	0.56
54:R8:52:LYS:H	54:R8:53:PRO:HD2	1.66	0.56
1:XA:347:G:O2'	1:XA:348:G:H5''	2.05	0.56
1:XA:975:A:O2'	14:YN:32:SER:OG	2.13	0.56
2:XB:60:ASP:HB3	2:XB:64:ARG:CZ	2.34	0.56
3:XC:57:ILE:HG23	3:XC:64:VAL:HG13	1.86	0.56
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:13:THR:N	14:YN:14:PRO:CD	2.68	0.56
14:YN:29:ARG:HH11	14:YN:29:ARG:HG3	1.70	0.56
16:XP:7:ALA:O	16:XP:9:PHE:CD2	2.58	0.56
21:XU:7:ARG:O	21:XU:8:THR:HG23	2.05	0.56
25:YA:900:A:H5'	25:YA:901:A:OP2	2.04	0.56
25:YA:1093:G:H4'	31:YH:170:ARG:NH2	2.19	0.56
25:YA:2115:G:N2	25:YA:2165:G:N7	2.52	0.56
27:YD:69:ARG:HD3	27:YD:105:ILE:HD11	1.87	0.56
29:YF:118:ALA:O	29:YF:121:GLY:N	2.33	0.56
30:YG:39:ILE:CG2	30:YG:155:MET:HG3	2.35	0.56
35:YP:59:LEU:HA	35:YP:61:ARG:CZ	2.34	0.56
38:YS:67:ARG:CB	38:YS:67:ARG:HH11	2.18	0.56
40:YU:68:ALA:O	40:YU:71:GLN:HB2	2.04	0.56
40:YU:104:GLN:OE1	40:YU:104:GLN:N	2.35	0.56
52:Y6:14:THR:O	52:Y6:49:HIS:HA	2.05	0.56
1:QA:898:G:O2'	1:QA:900:A:N7	2.34	0.56
1:QA:980:C:H5'	1:QA:981:U:OP2	2.05	0.56
1:QA:1305:G:O2'	1:QA:1306:A:O5'	2.22	0.56
2:QB:60:ASP:HB3	2:QB:64:ARG:CZ	2.35	0.56
4:QD:191:ARG:NH1	4:QD:200:GLU:OE1	2.37	0.56
8:QH:119:LEU:HD12	8:QH:124:ALA:HA	1.87	0.56
11:QK:21:ILE:HD12	11:QK:21:ILE:N	2.19	0.56
13:QM:84:ILE:CG2	13:QM:85:GLY:N	2.68	0.56
15:QO:53:HIS:CE1	15:QO:57:LEU:HD11	2.40	0.56
25:RA:612:G:H2'	25:RA:613:U:O2	2.04	0.56
25:RA:1308:A:H2'	25:RA:1309:G:O4'	2.05	0.56
25:RA:2456:C:N4	25:RA:2495:G:H1	2.03	0.56
28:RE:152:LYS:HG2	33:RN:78:TYR:CE1	2.40	0.56
29:RF:46:ARG:HG2	29:RF:46:ARG:NH1	2.00	0.56
30:RG:97:ASP:H	30:RG:100:TRP:CD1	2.18	0.56
31:RH:2:SER:O	31:RH:3:ARG:C	2.47	0.56
33:RN:82:LEU:HD12	33:RN:83:LYS:H	1.71	0.56
40:RU:39:LEU:O	40:RU:40:PHE:C	2.48	0.56
40:RU:68:ALA:O	40:RU:71:GLN:HB2	2.05	0.56
41:RV:38:LEU:HD23	41:RV:39:LEU:N	2.19	0.56
49:R3:4:LEU:O	49:R3:36:VAL:HA	2.04	0.56
50:R4:50:VAL:O	50:R4:51:ASP:C	2.48	0.56
52:R6:42:TRP:N	52:R6:42:TRP:CD1	2.73	0.56
53:R7:13:ALA:O	53:R7:17:GLY:HA3	2.05	0.56
1:XA:58:C:O2'	1:XA:388:G:N7	2.34	0.56
1:XA:976:G:N2	1:XA:1362(A):C:OP2	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:42:GLN:HG2	4:XD:42:GLN:O	2.05	0.56
7:XG:18:TYR:HD2	7:XG:59:LEU:HD22	1.70	0.56
7:XG:42:ILE:O	7:XG:117:ALA:HB2	2.05	0.56
8:XH:49:GLU:HG3	8:XH:51:VAL:CG1	2.35	0.56
16:XP:21:VAL:HG22	16:XP:34:GLU:O	2.04	0.56
25:YA:195:A:H4'	25:YA:251:A:O2'	2.04	0.56
25:YA:1453:A:O2'	25:YA:1454:U:H2'	2.05	0.56
25:YA:1558:A:H1'	25:YA:1559:G:H5''	1.86	0.56
25:YA:1778:U:C5	25:YA:1784:A:C4	2.93	0.56
25:YA:2250:G:C8	25:YA:2496:C:H5''	2.40	0.56
26:YB:34:U:P	30:YG:2:PRO:HG2	2.44	0.56
32:YI:56:LYS:HE3	32:YI:57:ARG:HG2	1.86	0.56
32:YI:78:THR:HG22	32:YI:141:LYS:HD2	1.87	0.56
33:YN:82:LEU:HD12	33:YN:83:LYS:H	1.70	0.56
38:YS:103:GLU:O	38:YS:106:ARG:CG	2.52	0.56
43:YX:35:THR:HG22	43:YX:38:GLU:OE1	2.05	0.56
45:YZ:31:ARG:NH2	45:YZ:93:ASP:OD1	2.38	0.56
46:Y0:23:VAL:HA	46:Y0:38:VAL:HG22	1.85	0.56
50:Y4:27:THR:O	50:Y4:28:LYS:HB3	2.04	0.56
53:Y7:48:LYS:HG2	53:Y7:49:ARG:N	2.19	0.56
55:Y9:25:VAL:HB	55:Y9:34:GLN:HB2	1.86	0.56
1:QA:210:U:O2'	1:QA:216:G:N7	2.37	0.56
1:QA:448:A:OP2	1:QA:485:G:N2	2.37	0.56
1:QA:1014:A:H4'	19:QS:14:HIS:NE2	2.21	0.56
1:QA:1028:C:H42	1:QA:1033:G:H1	1.53	0.56
2:QB:77:ALA:CB	2:QB:211:ILE:HG21	2.35	0.56
3:QC:188:LEU:O	3:QC:189:ALA:HB2	2.05	0.56
8:QH:84:ARG:NH1	8:QH:86:ILE:HD13	2.11	0.56
9:QI:13:ALA:HB2	9:QI:67:GLY:C	2.28	0.56
12:QL:18:VAL:O	12:QL:19:ARG:HB2	2.04	0.56
12:QL:58:VAL:O	12:QL:65:GLU:HA	2.06	0.56
13:QM:4:ILE:HG22	13:QM:5:ALA:N	2.20	0.56
13:QM:119:GLY:HA3	22:QV:29:G:OP1	2.06	0.56
14:QN:8:GLU:C	14:QN:10:ALA:H	2.14	0.56
17:QQ:6:LEU:O	17:QQ:58:GLU:HA	2.05	0.56
19:QS:15:LEU:HD23	19:QS:15:LEU:N	2.19	0.56
20:QT:53:LEU:HA	20:QT:56:MET:HB3	1.87	0.56
20:QT:82:SER:O	20:QT:86:ARG:HB2	2.06	0.56
25:RA:270(K):C:H42	25:RA:270(M):U:H5	1.50	0.56
25:RA:1083:U:O2'	25:RA:1085:A:H5''	2.05	0.56
25:RA:1310:G:O6	25:RA:1604:C:N4	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1769:G:O2'	25:RA:1958:C:OP1	2.17	0.56
25:RA:2287:A:H62	25:RA:2344:U:H3	1.51	0.56
25:RA:2293:C:H2'	25:RA:2294:C:O4'	2.05	0.56
25:RA:2370:G:N3	52:R6:45:LYS:NZ	2.51	0.56
25:RA:2372:G:H4'	52:R6:46:HIS:NE2	2.21	0.56
25:RA:2416:C:H5''	35:RP:64:LYS:HE3	1.86	0.56
25:RA:2864:G:OP1	39:RT:119:LYS:HD2	2.05	0.56
26:RB:40:U:N3	26:RB:43:C:H5''	2.21	0.56
27:RD:236:GLY:O	27:RD:237:GLU:OE1	2.23	0.56
28:RE:37:ARG:NE	28:RE:37:ARG:N	2.54	0.56
28:RE:78:LEU:HD23	28:RE:79:ARG:HD2	1.86	0.56
28:RE:183:LEU:HD12	28:RE:183:LEU:N	2.20	0.56
31:RH:77:LYS:HZ3	31:RH:77:LYS:CB	2.03	0.56
33:RN:56:ASN:N	33:RN:125:GLY:O	2.35	0.56
33:RN:114:ARG:C	33:RN:116:LEU:H	2.13	0.56
35:RP:31:ALA:O	35:RP:32:THR:HG23	2.05	0.56
37:RR:70:LEU:HD13	37:RR:75:LEU:HD11	1.88	0.56
45:RZ:77:ASP:OD2	45:RZ:80:ARG:HD3	2.05	0.56
45:RZ:129:SER:C	45:RZ:131:ARG:H	2.12	0.56
47:R1:53:VAL:HG12	47:R1:54:ALA:N	2.20	0.56
48:R2:51:ARG:HA	48:R2:54:LYS:HB2	1.86	0.56
52:R6:14:THR:O	52:R6:49:HIS:HA	2.06	0.56
54:R8:50:LEU:HD12	54:R8:51:ALA:H	1.70	0.56
55:R9:2:LYS:HD2	55:R9:33:LYS:O	2.04	0.56
1:XA:236:G:H2'	1:XA:237:C:H6	1.70	0.56
1:XA:392:G:H2'	1:XA:393:A:C8	2.40	0.56
1:XA:737:A:H2'	1:XA:738:C:C6	2.40	0.56
1:XA:983:A:H5''	1:XA:984:C:OP2	2.05	0.56
1:XA:1080:A:H5''	5:XE:16:THR:HG21	1.87	0.56
1:XA:1104:G:H4'	2:XB:111:ARG:NH1	2.20	0.56
1:XA:1128:C:N4	1:XA:1144:G:H1	2.03	0.56
1:XA:1222:G:H5''	19:XS:78:ARG:NH1	2.20	0.56
1:XA:1225:A:H2'	1:XA:1225:A:N3	2.19	0.56
2:XB:55:PHE:HA	2:XB:58:ILE:HB	1.88	0.56
2:XB:102:LEU:HB3	2:XB:180:LEU:CD1	2.36	0.56
3:XC:59:ARG:HH12	3:XC:97:LYS:HE3	1.70	0.56
6:XF:92:LYS:HB2	6:XF:92:LYS:HZ2	1.70	0.56
8:XH:38:ILE:HD12	8:XH:118:VAL:HG12	1.87	0.56
8:XH:82:HIS:HD2	8:XH:83:ILE:N	2.03	0.56
9:XI:10:ARG:CD	9:XI:105:ASP:HB2	2.35	0.56
10:XJ:35:SER:O	10:XJ:72:VAL:HG13	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:4:ILE:HA	16:XP:20:VAL:O	2.05	0.56
18:XR:85:LEU:HD23	18:XR:88:LYS:HD2	1.86	0.56
21:XU:6:ARG:HH21	21:XU:15:ARG:HE	1.53	0.56
25:YA:503:A:H4'	25:YA:504:U:C5'	2.35	0.56
25:YA:612:G:N2	25:YA:617:G:C5	2.74	0.56
25:YA:851:U:O2'	49:Y3:45:GLY:HA3	2.05	0.56
25:YA:1024:G:OP2	25:YA:1025:G:H3'	2.05	0.56
25:YA:1221:C:H2'	25:YA:1222:C:C6	2.41	0.56
25:YA:1252:G:N3	40:YU:33:ARG:HD2	2.20	0.56
25:YA:1496:A:H8	25:YA:1577:C:O2'	1.72	0.56
25:YA:1930:G:H2'	25:YA:1968:G:C6	2.40	0.56
25:YA:2115:G:N2	25:YA:2165:G:O6	2.38	0.56
25:YA:2506:U:H2'	25:YA:2506:U:O2	2.03	0.56
25:YA:2507:C:H2'	25:YA:2508:G:H8	1.70	0.56
25:YA:2845:G:C2'	25:YA:2846:G:H5'	2.35	0.56
30:YG:34:LEU:HD13	30:YG:34:LEU:C	2.30	0.56
33:YN:56:ASN:N	33:YN:125:GLY:O	2.35	0.56
34:YO:3:GLN:CB	34:YO:4:PRO:HD2	2.35	0.56
36:YQ:37:LEU:HD21	36:YQ:130:LYS:HE3	1.87	0.56
36:YQ:79:LEU:O	36:YQ:79:LEU:CG	2.52	0.56
38:YS:32:LEU:O	38:YS:62:LYS:HE2	2.05	0.56
39:YT:134:GLU:O	39:YT:135:ALA:HB3	2.05	0.56
41:YV:76:LYS:O	41:YV:79:VAL:HG12	2.05	0.56
47:Y1:89:GLU:O	47:Y1:93:GLU:HB2	2.04	0.56
48:Y2:17:SER:HB2	48:Y2:18:PRO:HA	1.86	0.56
48:Y2:31:GLU:O	48:Y2:35:LEU:HG	2.05	0.56
49:Y3:7:LYS:NZ	49:Y3:32:GLN:HE21	2.03	0.56
53:Y7:38:GLY:O	53:Y7:39:ARG:C	2.48	0.56
55:Y9:2:LYS:HD2	55:Y9:33:LYS:O	2.05	0.56
1:QA:302:G:O3'	12:QL:17:LYS:HE2	2.05	0.56
1:QA:833:U:H2'	1:QA:834:C:C6	2.41	0.56
1:QA:923:A:O2'	1:QA:1399:C:OP2	2.19	0.56
1:QA:933:G:N2	1:QA:935:A:O4'	2.39	0.56
12:QL:83:VAL:HG22	12:QL:84:LEU:H	1.70	0.56
14:QN:25:VAL:N	14:QN:38:GLY:O	2.38	0.56
21:QU:7:ARG:O	21:QU:8:THR:HG23	2.05	0.56
25:RA:139:G:N2	25:RA:1596:A:H4'	2.20	0.56
25:RA:851:U:O2'	49:R3:45:GLY:HA3	2.05	0.56
25:RA:1581:G:H5''	25:RA:1581:G:H8	1.69	0.56
25:RA:2308:G:H22	25:RA:2311:A:H2	1.54	0.56
30:RG:34:LEU:HD11	30:RG:99:MET:HE2	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:57:ARG:HB2	32:RI:57:ARG:HH11	1.70	0.56
35:RP:14:LYS:O	35:RP:16:ARG:N	2.39	0.56
36:RQ:132:VAL:HG11	45:RZ:81:ARG:CZ	2.35	0.56
37:RR:84:ALA:HB3	37:RR:85:PRO:HD3	1.87	0.56
39:RT:26:ASP:CB	39:RT:91:ARG:HA	2.36	0.56
51:R5:55:ARG:HD3	51:R5:56:LYS:N	2.21	0.56
1:XA:236:G:H2'	1:XA:237:C:C6	2.40	0.56
1:XA:292:G:N7	1:XA:293:G:H1'	2.21	0.56
1:XA:615:C:O2	1:XA:625:G:N2	2.35	0.56
2:XB:80:ILE:CG2	2:XB:212:GLN:HA	2.36	0.56
4:XD:76:ARG:HD2	4:XD:207:TYR:HE2	1.66	0.56
5:XE:82:VAL:CG1	5:XE:83:GLU:N	2.68	0.56
6:XF:91:VAL:CG1	18:XR:72:ARG:HH12	2.18	0.56
11:XK:21:ILE:HG13	11:XK:30:VAL:HG12	1.86	0.56
11:XK:34:ASP:N	11:XK:40:ILE:HD11	2.20	0.56
15:XO:53:HIS:CE1	15:XO:57:LEU:HD11	2.40	0.56
25:YA:103:A:H8	25:YA:103:A:O5'	1.89	0.56
25:YA:1803:A:H4'	27:YD:259:THR:HG21	1.85	0.56
25:YA:2250:G:C6	36:YQ:82:ARG:HD2	2.41	0.56
25:YA:2795:G:H3'	25:YA:2797:U:C5'	2.36	0.56
27:YD:2:ALA:O	27:YD:3:VAL:HB	2.06	0.56
27:YD:183:ARG:HD2	27:YD:270:ILE:HG12	1.88	0.56
28:YE:32:PRO:O	28:YE:34:VAL:HG13	2.06	0.56
31:YH:6:ARG:C	31:YH:8:PRO:HD2	2.30	0.56
31:YH:125:VAL:HG12	31:YH:126:PRO:CG	2.34	0.56
35:YP:115:LEU:HD12	35:YP:116:GLY:N	2.21	0.56
39:YT:26:ASP:CB	39:YT:91:ARG:HA	2.36	0.56
47:Y1:76:ARG:HG2	47:Y1:76:ARG:NH1	2.20	0.56
53:Y7:12:ARG:NH2	53:Y7:44:PRO:HB3	2.21	0.56
1:QA:375:U:H4'	16:QP:17:TYR:CE2	2.38	0.56
1:QA:1192:C:O2	5:QE:25:ARG:NH2	2.38	0.56
3:QC:114:PRO:O	3:QC:118:GLN:HG3	2.06	0.56
5:QE:78:HIS:HB2	8:QH:104:ARG:C	2.31	0.56
8:QH:77:GLU:HG2	8:QH:78:GLN:H	1.71	0.56
13:QM:49:THR:HB	13:QM:52:GLU:HG3	1.86	0.56
17:QQ:50:LYS:HG3	17:QQ:51:TYR:CE1	2.41	0.56
25:RA:66:C:C4	25:RA:67:U:C4	2.94	0.56
25:RA:1351:C:H2'	25:RA:1352:U:C6	2.40	0.56
25:RA:1534:G:N3	25:RA:1534:G:H2'	2.20	0.56
25:RA:2747:G:H2'	25:RA:2748:A:C8	2.41	0.56
28:RE:117:MET:O	28:RE:117:MET:HG3	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:198:ALA:CA	29:RF:201:VAL:HG12	2.35	0.56
30:RG:41:GLN:HB3	30:RG:43:LEU:HD13	1.87	0.56
30:RG:179:PRO:HG3	50:R4:38:LYS:HZ1	1.67	0.56
35:RP:31:ALA:C	35:RP:32:THR:HG23	2.31	0.56
39:RT:134:GLU:O	39:RT:135:ALA:HB3	2.05	0.56
41:RV:75:PHE:C	41:RV:75:PHE:CD1	2.83	0.56
43:RX:65:ARG:HD3	43:RX:65:ARG:H	1.70	0.56
50:R4:37:SER:C	50:R4:39:CYS:N	2.62	0.56
50:R4:48:ARG:O	50:R4:50:VAL:N	2.38	0.56
1:XA:465:A:N7	1:XA:467:G:C5	2.74	0.56
1:XA:1129:C:H5'	1:XA:1130:A:OP1	2.06	0.56
3:XC:180:ALA:O	3:XC:181:ASN:HB3	2.06	0.56
3:XC:188:LEU:O	3:XC:189:ALA:HB2	2.05	0.56
9:XI:33:PHE:CE2	9:XI:47:LEU:HD21	2.40	0.56
25:YA:1433:U:H6	25:YA:1433:U:H5''	1.70	0.56
25:YA:2774:C:H2'	25:YA:2775:A:O4'	2.06	0.56
28:YE:74:PRO:HG2	28:YE:77:ILE:HG23	1.87	0.56
29:YF:155:LEU:CD1	29:YF:174:VAL:HG13	2.32	0.56
29:YF:197:ASP:O	29:YF:199:TRP:N	2.38	0.56
31:YH:77:LYS:HZ3	31:YH:77:LYS:CB	2.11	0.56
31:YH:126:PRO:CG	31:YH:127:GLU:N	2.65	0.56
33:YN:40:PRO:HB3	40:YU:68:ALA:HB2	1.86	0.56
38:YS:14:VAL:HG13	38:YS:15:ARG:N	2.21	0.56
41:YV:75:PHE:C	41:YV:75:PHE:CD1	2.83	0.56
47:Y1:92:LYS:C	47:Y1:94:LEU:N	2.62	0.56
50:Y4:15:ILE:HG22	50:Y4:20:ASN:HA	1.86	0.56
52:Y6:11:LEU:HD23	52:Y6:26:ASN:HB3	1.87	0.56
1:QA:358:U:H2'	1:QA:359:U:H6	1.70	0.56
1:QA:376:G:H2'	1:QA:377:G:H8	1.70	0.56
1:QA:1213:A:C6	1:QA:1215:G:H1'	2.41	0.56
1:QA:1255:G:N2	1:QA:1259:C:O2	2.39	0.56
3:QC:45:LYS:HD2	3:QC:46:GLU:HG3	1.87	0.56
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
8:QH:7:ALA:HB2	8:QH:85:ARG:HD3	1.87	0.56
9:QI:9:ARG:HB2	9:QI:14:VAL:HG22	1.88	0.56
16:QP:4:ILE:HA	16:QP:20:VAL:O	2.05	0.56
25:RA:1210:A:H5''	25:RA:1210:A:C8	2.40	0.56
25:RA:2645:G:C3'	25:RA:2646:C:H5'	2.35	0.56
27:RD:80:ALA:HB3	27:RD:94:LEU:HD13	1.88	0.56
27:RD:183:ARG:HD2	27:RD:270:ILE:HG12	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:32:PRO:O	28:RE:34:VAL:HG13	2.06	0.56
28:RE:64:LYS:C	28:RE:66:HIS:H	2.12	0.56
29:RF:32:LEU:HD13	29:RF:105:VAL:CG1	2.33	0.56
47:R1:92:LYS:C	47:R1:94:LEU:N	2.62	0.56
50:R4:41:PRO:O	50:R4:42:PHE:CB	2.54	0.56
53:R7:12:ARG:NH2	53:R7:44:PRO:HB3	2.21	0.56
1:XA:1062:U:H2'	1:XA:1063:C:C6	2.41	0.56
3:XC:90:GLU:O	3:XC:94:LEU:HG	2.05	0.56
4:XD:110:PHE:CE2	4:XD:148:VAL:HG23	2.41	0.56
11:XK:69:ALA:HB1	11:XK:103:LEU:CD2	2.35	0.56
14:XN:23:ARG:H	14:XN:33:VAL:HG11	1.71	0.56
25:YA:1288:U:O2'	25:YA:1647:G:N2	2.39	0.56
25:YA:2028:U:H2'	25:YA:2029:G:O4'	2.06	0.56
25:YA:2404:C:H1'	35:YP:67:MET:CE	2.36	0.56
25:YA:2818:G:OP2	37:YR:42:LYS:NZ	2.39	0.56
27:YD:259:THR:O	27:YD:260:ARG:C	2.49	0.56
28:YE:64:LYS:C	28:YE:66:HIS:H	2.12	0.56
44:YY:75:ILE:C	44:YY:75:ILE:HD13	2.31	0.56
54:Y8:50:LEU:HD12	54:Y8:51:ALA:H	1.70	0.56
1:QA:313:A:H2'	1:QA:314:C:C6	2.40	0.56
1:QA:864:A:H5'	5:QE:86:ALA:CB	2.22	0.56
3:QC:33:LEU:O	3:QC:37:GLN:HG2	2.04	0.56
3:QC:134:ILE:CD1	3:QC:153:VAL:HG21	2.35	0.56
5:QE:107:ARG:O	5:QE:108:ALA:C	2.49	0.56
6:QF:33:TYR:HE2	6:QF:74:ASP:HB3	1.71	0.56
9:QL:10:ARG:CD	9:QL:105:ASP:HB2	2.35	0.56
14:QN:15:LYS:O	14:QN:16:PHE:O	2.24	0.56
15:QO:24:SER:O	15:QO:28:GLN:HG3	2.06	0.56
17:QQ:48:GLU:O	17:QQ:49:GLU:C	2.48	0.56
19:QS:5:LEU:HD22	50:R4:67:TYR:HE2	1.63	0.56
20:QT:94:ALA:O	20:QT:95:ALA:CB	2.54	0.56
25:RA:195:A:N6	25:RA:198:C:H3'	2.18	0.56
25:RA:398:G:H2'	25:RA:399:G:H8	1.71	0.56
25:RA:1434:A:H2'	25:RA:1435:G:C8	2.40	0.56
25:RA:1930:G:HO2'	25:RA:1931:U:P	2.29	0.56
25:RA:2821:A:H2'	25:RA:2822:G:C8	2.41	0.56
28:RE:77:ILE:O	28:RE:78:LEU:C	2.47	0.56
30:RG:34:LEU:HD13	30:RG:34:LEU:C	2.30	0.56
30:RG:120:LEU:HB3	30:RG:131:TYR:OH	2.05	0.56
34:RO:19:ILE:HD13	34:RO:19:ILE:O	2.06	0.56
36:RQ:79:LEU:O	36:RQ:79:LEU:CG	2.52	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:105:VAL:HA	41:RV:44:LYS:HE3	1.88	0.56
41:RV:76:LYS:O	41:RV:79:VAL:HG12	2.05	0.56
44:RY:75:ILE:C	44:RY:75:ILE:HD13	2.30	0.56
44:RY:95:LYS:O	44:RY:95:LYS:HE3	2.06	0.56
44:RY:97:ARG:O	44:RY:97:ARG:HG2	2.06	0.56
49:R3:59:VAL:CG1	49:R3:60:GLU:N	2.69	0.56
50:R4:48:ARG:HH12	50:R4:52:THR:HG22	1.70	0.56
1:XA:7:G:H5'	1:XA:298:A:O4'	2.05	0.56
1:XA:246:A:N3	1:XA:247:G:H1'	2.21	0.56
1:XA:328:C:HO2'	1:XA:329:A:P	2.28	0.56
1:XA:923:A:H2'	1:XA:924:C:C6	2.41	0.56
1:XA:1151:A:O2'	1:XA:1152:A:O5'	2.21	0.56
3:XC:7:PRO:O	3:XC:11:ARG:HG2	2.06	0.56
4:XD:107:ARG:C	4:XD:109:GLY:H	2.14	0.56
4:XD:119:GLN:HG3	4:XD:123:HIS:CD2	2.40	0.56
4:XD:165:MET:HA	4:XD:165:MET:CE	2.36	0.56
6:XF:97:PHE:O	18:XR:31:LEU:HD23	2.04	0.56
8:XH:77:GLU:HG2	8:XH:78:GLN:H	1.71	0.56
10:XJ:94:VAL:HG12	10:XJ:95:GLU:N	2.19	0.56
12:XL:79:GLU:O	12:XL:79:GLU:HG2	2.05	0.56
13:XM:89:GLY:O	13:XM:92:HIS:HB2	2.06	0.56
19:XS:17:GLU:HA	19:XS:20:LEU:HD12	1.86	0.56
20:XT:82:SER:O	20:XT:86:ARG:HB2	2.05	0.56
25:YA:189:G:H2'	25:YA:205:G:N2	2.17	0.56
25:YA:503:A:H4'	25:YA:504:U:H5'	1.87	0.56
25:YA:1303:G:H1'	25:YA:1641:A:N1	2.20	0.56
25:YA:2782:G:O5'	25:YA:2782:G:H8	1.89	0.56
27:YD:35:LYS:CE	27:YD:104:TYR:HB2	2.35	0.56
28:YE:37:ARG:NE	28:YE:37:ARG:N	2.54	0.56
28:YE:183:LEU:HD12	28:YE:183:LEU:N	2.20	0.56
32:YI:144:VAL:O	32:YI:145:VAL:HG22	2.06	0.56
33:YN:112:LEU:O	33:YN:114:ARG:O	2.23	0.56
33:YN:112:LEU:HD23	33:YN:112:LEU:C	2.30	0.56
35:YP:59:LEU:O	35:YP:59:LEU:HD23	2.06	0.56
44:YY:95:LYS:HE3	44:YY:95:LYS:O	2.06	0.56
52:Y6:6:ARG:O	52:Y6:8:LYS:HD2	2.05	0.56
53:Y7:13:ALA:O	53:Y7:17:GLY:HA3	2.05	0.56
1:QA:909:A:H2'	1:QA:910:C:O4'	2.04	0.56
2:QB:7:VAL:HG22	2:QB:8:LYS:N	2.21	0.56
4:QD:42:GLN:HG2	4:QD:42:GLN:O	2.05	0.56
9:QI:114:TYR:O	9:QI:114:TYR:CD2	2.59	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:35:SER:O	10:QJ:72:VAL:HG13	2.05	0.56
11:QK:41:THR:HG21	11:QK:71:LYS:CB	2.36	0.56
11:QK:125:PHE:N	11:QK:125:PHE:CD1	2.73	0.56
15:QO:8:LYS:HB2	15:QO:8:LYS:HZ2	1.68	0.56
25:RA:68:G:N2	25:RA:69:C:H1'	2.21	0.56
25:RA:389:G:N1	35:RP:70:GLN:HB3	2.20	0.56
25:RA:2271:G:H2'	25:RA:2272:U:O4'	2.06	0.56
27:RD:94:LEU:HD22	27:RD:95:LEU:H	1.69	0.56
29:RF:9:ILE:HD11	29:RF:125:LEU:CG	2.36	0.56
30:RG:60:LEU:O	30:RG:64:THR:HG22	2.05	0.56
36:RQ:12:GLN:OE1	36:RQ:72:LYS:HD2	2.06	0.56
37:RR:1:MET:SD	37:RR:1:MET:N	2.75	0.56
37:RR:2:ARG:HG2	37:RR:5:LYS:HZ1	1.69	0.56
38:RS:5:THR:OG1	38:RS:7:TYR:HB3	2.06	0.56
38:RS:14:VAL:HG13	38:RS:15:ARG:N	2.21	0.56
41:RV:27:ALA:O	41:RV:28:GLU:O	2.24	0.56
43:RX:35:THR:HG22	43:RX:38:GLU:OE1	2.05	0.56
45:RZ:150:LEU:O	45:RZ:171:ILE:HG12	2.05	0.56
48:R2:50:ILE:CD1	48:R2:51:ARG:N	2.60	0.56
1:XA:685:G:N2	1:XA:686:U:C4	2.74	0.56
1:XA:791:G:H22	1:XA:1498:U:P	2.28	0.56
3:XC:113:ALA:C	3:XC:115:LEU:H	2.14	0.56
4:XD:25:ARG:NH1	4:XD:30:LYS:HG3	2.20	0.56
5:XE:78:HIS:CE1	5:XE:143:ARG:H	2.20	0.56
7:XG:11:GLN:C	7:XG:12:LEU:HD22	2.31	0.56
7:XG:62:PHE:O	7:XG:66:VAL:HG23	2.06	0.56
8:XH:7:ALA:HB2	8:XH:85:ARG:HD3	1.87	0.56
8:XH:102:ARG:NH1	8:XH:105:ARG:NH2	2.54	0.56
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.86	0.56
12:XL:47:LYS:O	12:XL:49:ASN:N	2.39	0.56
12:XL:58:VAL:O	12:XL:65:GLU:HA	2.06	0.56
13:XM:56:LEU:HD13	13:XM:60:VAL:HG23	1.86	0.56
15:XO:8:LYS:HB2	15:XO:8:LYS:HZ2	1.70	0.56
19:XS:65:ASN:N	19:XS:65:ASN:ND2	2.52	0.56
25:YA:277:C:H3'	25:YA:278:A:C5'	2.36	0.56
25:YA:443:A:C5	29:YF:45:ARG:HD2	2.39	0.56
25:YA:1059:G:H3'	25:YA:1060:U:H5''	1.86	0.56
25:YA:2395:C:O2'	47:Y1:30:VAL:HG12	2.05	0.56
25:YA:2632:A:O2'	25:YA:2811:G:O2'	2.20	0.56
28:YE:195:LEU:HD12	28:YE:196:VAL:H	1.71	0.56
30:YG:128:ARG:HG3	30:YG:128:ARG:NH2	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:5:THR:OG1	38:YS:7:TYR:HB3	2.06	0.56
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CG	2.36	0.56
52:Y6:48:VAL:HG13	52:Y6:49:HIS:N	2.20	0.56
1:QA:266:G:O2'	1:QA:267:C:OP2	2.17	0.56
1:QA:458:C:H2'	1:QA:464:G:C8	2.40	0.56
1:QA:724:G:H2'	1:QA:725:G:H8	1.70	0.56
3:QC:6:HIS:CD2	3:QC:7:PRO:HD2	2.41	0.56
3:QC:113:ALA:C	3:QC:115:LEU:H	2.14	0.56
4:QD:110:PHE:CE2	4:QD:148:VAL:HG23	2.41	0.56
5:QE:99:GLY:O	5:QE:117:ASP:HA	2.06	0.56
7:QG:62:PHE:HA	7:QG:124:LEU:CD2	2.27	0.56
9:QI:33:PHE:CE2	9:QI:47:LEU:HD21	2.40	0.56
10:QJ:6:ILE:CG2	10:QJ:98:ILE:HG13	2.21	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.86	0.56
12:QL:111:LYS:O	12:QL:112:ASP:HB2	2.05	0.56
13:QM:80:ARG:O	13:QM:84:ILE:HB	2.06	0.56
16:QP:53:VAL:HG23	16:QP:54:GLU:H	1.70	0.56
25:RA:597:U:H2'	25:RA:598:G:C8	2.41	0.56
25:RA:2014:A:O2'	51:R5:2:ALA:HB2	2.05	0.56
25:RA:2576:G:N2	25:RA:2576:G:OP2	2.38	0.56
27:RD:259:THR:O	27:RD:260:ARG:C	2.49	0.56
32:RI:121:LYS:HG2	32:RI:122:GLU:H	1.70	0.56
33:RN:131:GLN:CG	33:RN:132:ALA:N	2.68	0.56
34:RO:3:GLN:CB	34:RO:4:PRO:HD2	2.35	0.56
54:R8:30:ARG:O	54:R8:31:HIS:CB	2.54	0.56
1:XA:1189:C:OP1	10:XJ:51:ARG:NH2	2.39	0.56
1:XA:1376:U:OP1	7:XG:98:SER:HB3	2.06	0.56
2:XB:7:VAL:HG22	2:XB:8:LYS:N	2.21	0.56
3:XC:77:ILE:O	3:XC:83:ARG:HB3	2.05	0.56
5:XE:107:ARG:O	5:XE:108:ALA:C	2.49	0.56
13:XM:84:ILE:CG2	13:XM:85:GLY:N	2.68	0.56
59:XX:101:AMP:O2P	59:XX:101:AMP:H8	1.89	0.56
25:YA:596:G:C2	25:YA:662:G:C2	2.94	0.56
25:YA:1579:A:H2'	25:YA:1580:A:C8	2.41	0.56
25:YA:2031:A:C5	25:YA:2498:C:H1'	2.41	0.56
25:YA:2810:A:O3'	28:YE:61:ARG:HG3	2.06	0.56
28:YE:77:ILE:O	28:YE:78:LEU:C	2.48	0.56
35:YP:31:ALA:C	35:YP:32:THR:HG23	2.31	0.56
40:YU:96:ALA:O	40:YU:100:VAL:HG23	2.05	0.56
44:YY:84:ARG:NH1	44:YY:97:ARG:HB2	2.11	0.56
45:YZ:45:ASP:OD1	45:YZ:49:ARG:NE	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:59:VAL:CG1	49:Y3:60:GLU:N	2.69	0.56
50:Y4:48:ARG:O	50:Y4:50:VAL:N	2.38	0.56
50:Y4:50:VAL:O	50:Y4:51:ASP:C	2.48	0.56
51:Y5:20:ARG:C	51:Y5:22:HIS:H	2.14	0.56
1:QA:921:U:O2	5:QE:19:MET:HB2	2.06	0.56
2:QB:102:LEU:HB3	2:QB:180:LEU:CD1	2.36	0.56
4:QD:52:SER:O	4:QD:53:ASP:C	2.49	0.56
5:QE:140:ARG:HH11	5:QE:140:ARG:CB	2.18	0.56
8:QH:38:ILE:HD12	8:QH:118:VAL:HG12	1.87	0.56
8:QH:82:HIS:HD2	8:QH:83:ILE:N	2.03	0.56
8:QH:128:GLY:O	8:QH:129:VAL:HG13	2.06	0.56
13:QM:9:ILE:HD12	13:QM:9:ILE:C	2.31	0.56
13:QM:77:ASN:CA	50:R4:71:ARG:HH22	2.09	0.56
13:QM:89:GLY:O	13:QM:92:HIS:HB2	2.06	0.56
25:RA:607:U:H3	25:RA:621:A:H2	1.50	0.56
25:RA:1289:C:H2'	25:RA:1290:C:H6	1.69	0.56
25:RA:2364:C:OP1	46:R0:55:ARG:NH1	2.38	0.56
27:RD:239:ARG:O	27:RD:240:ALA:HB2	2.05	0.56
28:RE:203:LYS:HE3	28:RE:204:ALA:HB2	1.86	0.56
31:RH:59:ARG:HH11	31:RH:59:ARG:CG	2.19	0.56
35:RP:15:ARG:O	35:RP:17:LYS:N	2.39	0.56
40:RU:83:LEU:HD12	40:RU:113:ALA:HB2	1.86	0.56
50:R4:61:ARG:C	50:R4:63:TYR:H	2.14	0.56
1:XA:32:A:H2'	1:XA:33:A:C8	2.41	0.56
1:XA:713:G:H2'	1:XA:714:G:C8	2.41	0.56
1:XA:986:A:N3	19:XS:52:TYR:OH	2.39	0.56
2:XB:169:LYS:HD3	2:XB:169:LYS:O	2.05	0.56
2:XB:217:ARG:HA	2:XB:220:ASP:OD2	2.06	0.56
6:XF:41:GLU:HG2	6:XF:43:LEU:HD11	1.88	0.56
7:XG:20:ASP:HB3	7:XG:23:VAL:HG23	1.88	0.56
8:XH:128:GLY:O	8:XH:129:VAL:HG13	2.06	0.56
12:XL:111:LYS:O	12:XL:112:ASP:HB2	2.06	0.56
17:XQ:6:LEU:O	17:XQ:58:GLU:HA	2.05	0.56
25:YA:433:C:H2'	25:YA:434:U:C6	2.40	0.56
25:YA:1101:U:H2'	25:YA:1102:C:C6	2.41	0.56
25:YA:1543:A:C2	25:YA:1545:A:C4	2.94	0.56
25:YA:2422:A:C8	25:YA:2424:C:C5	2.94	0.56
25:YA:2543:G:H2'	25:YA:2544:G:C8	2.41	0.56
26:YB:55:U:O3'	30:YG:27:ASN:ND2	2.38	0.56
30:YG:135:LEU:HD12	30:YG:135:LEU:N	2.21	0.56
40:YU:105:VAL:HA	41:YV:44:LYS:HE3	1.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:4:LEU:HD21	49:Y3:39:ASP:OD1	2.06	0.56
50:Y4:41:PRO:O	50:Y4:42:PHE:CB	2.54	0.56
1:QA:347:G:O2'	1:QA:348:G:OP2	2.22	0.55
1:QA:575:G:O4'	1:QA:881:G:N2	2.39	0.55
1:QA:1023:G:H3'	1:QA:1024:G:H5''	1.89	0.55
1:QA:1255:G:OP1	10:QJ:45:ARG:NH2	2.38	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
14:QN:44:LEU:CD1	14:QN:48:ALA:HB2	2.36	0.55
17:QQ:41:LYS:HZ1	17:QQ:92:ARG:HH22	1.53	0.55
19:QS:41:VAL:CB	19:QS:42:PRO:CA	2.76	0.55
25:RA:654(S):G:H2'	25:RA:654(T):C:C6	2.40	0.55
25:RA:1005:C:C2	25:RA:1143:A:C5	2.94	0.55
25:RA:2419:U:OP1	52:R6:23:THR:HG21	2.06	0.55
27:RD:35:LYS:NZ	27:RD:64:ILE:O	2.32	0.55
29:RF:108:LYS:HZ3	29:RF:108:LYS:HA	1.72	0.55
36:RQ:37:LEU:HD21	36:RQ:130:LYS:HE3	1.87	0.55
44:RY:62:GLU:O	44:RY:63:LYS:O	2.24	0.55
2:XB:68:ILE:HD12	2:XB:68:ILE:N	2.21	0.55
2:XB:96:ARG:H	2:XB:96:ARG:CD	2.16	0.55
3:XC:112:SER:OG	3:XC:115:LEU:HG	2.06	0.55
3:XC:114:PRO:O	3:XC:118:GLN:HG3	2.05	0.55
4:XD:52:SER:O	4:XD:53:ASP:C	2.49	0.55
8:XH:49:GLU:O	8:XH:51:VAL:N	2.39	0.55
9:XI:17:VAL:CG1	9:XI:81:ILE:HD13	2.35	0.55
10:XJ:26:ALA:HA	10:XJ:29:ARG:NH2	2.21	0.55
11:XK:41:THR:HG21	11:XK:71:LYS:CB	2.36	0.55
12:XL:10:LEU:CD1	17:XQ:32:TYR:CE2	2.85	0.55
12:XL:83:VAL:HG22	12:XL:84:LEU:N	2.21	0.55
13:XM:9:ILE:HD12	13:XM:9:ILE:C	2.31	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
19:XS:18:LYS:O	19:XS:22:LEU:HD13	2.06	0.55
19:XS:40:ILE:HG12	19:XS:41:VAL:N	2.20	0.55
25:YA:152:G:H2'	25:YA:153:C:C6	2.41	0.55
25:YA:244:A:H2'	25:YA:245:G:O4'	2.06	0.55
25:YA:287:C:N4	25:YA:354:G:H1	2.04	0.55
25:YA:464:U:C2	25:YA:788:A:C6	2.94	0.55
25:YA:528:A:C2	25:YA:2043:C:H4'	2.41	0.55
25:YA:685:A:N3	25:YA:689:A:N6	2.54	0.55
25:YA:1028:A:N6	25:YA:1125:G:H2'	2.21	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2789:C:H1'	25:YA:2892:A:H2	1.71	0.55
27:YD:94:LEU:HD13	27:YD:94:LEU:C	2.31	0.55
28:YE:117:MET:O	28:YE:117:MET:HG3	2.06	0.55
29:YF:198:ALA:C	29:YF:200:GLU:N	2.62	0.55
29:YF:198:ALA:CA	29:YF:201:VAL:HG12	2.34	0.55
35:YP:14:LYS:O	35:YP:16:ARG:N	2.39	0.55
36:YQ:25:ASP:N	36:YQ:102:VAL:HG23	2.21	0.55
44:YY:48:ALA:H	44:YY:60:PHE:HA	1.71	0.55
44:YY:62:GLU:O	44:YY:63:LYS:O	2.24	0.55
44:YY:89:PHE:O	44:YY:90:LEU:HD13	2.05	0.55
47:Y1:4:VAL:HG23	47:Y1:10:LYS:C	2.32	0.55
48:Y2:15:LYS:H	48:Y2:67:LYS:NZ	2.02	0.55
1:QA:375:U:H2'	1:QA:376:G:C8	2.41	0.55
1:QA:565:U:OP2	1:QA:566:G:O2'	2.14	0.55
1:QA:762:C:H2'	1:QA:763:G:C8	2.41	0.55
2:QB:46:LYS:HA	2:QB:49:GLU:OE1	2.05	0.55
6:QF:89:MET:HE1	18:QR:76:LEU:CD2	2.36	0.55
8:QH:49:GLU:O	8:QH:51:VAL:N	2.39	0.55
10:QJ:26:ALA:HA	10:QJ:29:ARG:NH2	2.21	0.55
13:QM:81:LEU:HB3	13:QM:89:GLY:HA2	1.88	0.55
19:QS: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
25:RA:51:G:N3	25:RA:119:A:C2	2.74	0.55
25:RA:117:G:OP2	25:RA:119:A:O2'	2.21	0.55
25:RA:1101:U:H2'	25:RA:1102:C:H6	1.69	0.55
25:RA:1607:C:H5''	25:RA:1608:A:H5'	1.88	0.55
25:RA:2485:G:OP1	36:RQ:46:GLN:NE2	2.33	0.55
31:RH:6:ARG:C	31:RH:8:PRO:HD2	2.30	0.55
31:RH:153:LYS:CB	31:RH:154:PRO:CD	2.69	0.55
32:RI:41:GLU:HA	32:RI:44:LEU:HB2	1.89	0.55
42:RW:14:PRO:HG2	42:RW:78:GLU:OE2	2.07	0.55
49:R3:7:LYS:NZ	49:R3:32:GLN:HE21	2.03	0.55
1:XA:321:A:N6	1:XA:329:A:OP2	2.39	0.55
3:XC:45:LYS:HD2	3:XC:46:GLU:HG3	1.87	0.55
5:XE:92:LYS:O	5:XE:118:ILE:HD12	2.06	0.55
5:XE:144:THR:O	5:XE:148:VAL:HG23	2.06	0.55
12:XL:27:LEU:C	12:XL:29:GLY:N	2.64	0.55
17:XQ:50:LYS:HG3	17:XQ:51:TYR:CE1	2.40	0.55
20:XT:94:ALA:O	20:XT:95:ALA:CB	2.54	0.55
21:XU:6:ARG:O	21:XU:8:THR:N	2.39	0.55
25:YA:205:G:O2'	25:YA:206:U:OP2	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:224:G:O6	25:YA:419:C:O2'	2.24	0.55
25:YA:819:A:C4	25:YA:1189:A:C2	2.94	0.55
25:YA:1271:G:N2	25:YA:1617:C:O4'	2.39	0.55
25:YA:1798:U:H5''	27:YD:259:THR:HG22	1.87	0.55
25:YA:2419:U:OP1	52:Y6:23:THR:HG21	2.06	0.55
29:YF:29:ASN:N	29:YF:112:MET:HE1	2.19	0.55
30:YG:120:LEU:HB3	30:YG:131:TYR:OH	2.05	0.55
35:YP:13:ASN:O	35:YP:14:LYS:C	2.49	0.55
35:YP:19:VAL:CG2	35:YP:20:GLY:H	1.99	0.55
36:YQ:12:GLN:OE1	36:YQ:72:LYS:HD2	2.06	0.55
39:YT:107:ASP:O	39:YT:111:ARG:NH1	2.39	0.55
40:YU:73:GLY:O	40:YU:74:LEU:HB3	2.07	0.55
40:YU:92:ARG:NH1	41:YV:11:GLN:HB2	2.22	0.55
43:YX:18:TYR:C	43:YX:20:GLY:N	2.64	0.55
48:Y2:43:GLN:O	48:Y2:44:LEU:CG	2.54	0.55
1:QA:144:G:H1	1:QA:178:C:H42	1.54	0.55
1:QA:859:A:H2'	1:QA:860:A:O4'	2.05	0.55
1:QA:1222:G:H2'	1:QA:1223:C:C6	2.40	0.55
2:QB:204:ASN:HD22	2:QB:205:ASP:N	2.04	0.55
3:QC:180:ALA:O	3:QC:181:ASN:HB3	2.06	0.55
7:QG:42:ILE:O	7:QG:117:ALA:HB2	2.05	0.55
11:QK:125:PHE:HD1	11:QK:125:PHE:H	1.54	0.55
25:RA:451:C:H4'	29:RF:52:LYS:HZ2	1.71	0.55
25:RA:1030:G:OP2	36:RQ:128:LYS:HE2	2.06	0.55
25:RA:1278:A:O3'	37:RR:34:ILE:HG23	2.07	0.55
25:RA:2636:U:OP1	28:RE:79:ARG:HA	2.05	0.55
27:RD:31:LYS:O	27:RD:35:LYS:O	2.24	0.55
27:RD:69:ARG:HD3	27:RD:105:ILE:HD11	1.87	0.55
27:RD:94:LEU:HD13	27:RD:94:LEU:C	2.31	0.55
41:RV:49:THR:CB	41:RV:50:PRO:HD2	2.25	0.55
44:RY:95:LYS:HB2	44:RY:95:LYS:NZ	2.21	0.55
1:XA:677:U:H3	1:XA:713:G:H22	1.55	0.55
1:XA:690:G:H22	11:XK:55:LYS:NZ	2.04	0.55
2:XB:204:ASN:HD22	2:XB:205:ASP:N	2.04	0.55
4:XD:28:SER:CB	4:XD:29:PRO:CD	2.84	0.55
25:YA:270(J):G:H2'	25:YA:270(K):C:O4'	2.07	0.55
25:YA:1022:G:H4'	25:YA:1023:U:H5'	1.87	0.55
33:YN:131:GLN:CG	33:YN:132:ALA:N	2.68	0.55
35:YP:15:ARG:O	35:YP:17:LYS:N	2.39	0.55
38:YS:18:ILE:C	38:YS:19:LYS:O	2.44	0.55
44:YY:95:LYS:CB	44:YY:100:ALA:HA	2.13	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:Y3:8:LEU:HD22	49:Y3:31:LEU:CD2	2.37	0.55
49:Y3:35:ARG:HB3	49:Y3:37:LEU:CD2	2.37	0.55
1:QA:68:G:N2	1:QA:69:G:H1'	2.21	0.55
1:QA:826:C:H2'	1:QA:827:U:O2	2.07	0.55
2:QB:217:ARG:HA	2:QB:220:ASP:OD2	2.07	0.55
3:QC:95:THR:CG2	3:QC:96:GLY:H	2.10	0.55
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	1.52	0.55
25:RA:918:A:C5	25:RA:919:G:H1'	2.41	0.55
25:RA:1854:A:H3'	25:RA:1855:G:H8	1.71	0.55
25:RA:2483:C:H5''	25:RA:2484:G:OP2	2.06	0.55
25:RA:2760:C:H2'	25:RA:2761:G:O4'	2.05	0.55
25:RA:2779:U:O2'	25:RA:2781:A:N7	2.39	0.55
27:RD:2:ALA:O	27:RD:3:VAL:HB	2.05	0.55
27:RD:36:PRO:HB2	27:RD:61:LEU:HG	1.87	0.55
27:RD:155:LEU:HD23	27:RD:177:LEU:CD2	2.36	0.55
28:RE:4:ILE:HD13	28:RE:5:LEU:H	1.71	0.55
28:RE:67:PHE:O	28:RE:69:LYS:N	2.39	0.55
28:RE:195:LEU:HD12	28:RE:196:VAL:H	1.71	0.55
29:RF:28:ILE:HD12	29:RF:28:ILE:O	2.06	0.55
35:RP:39:LYS:CA	35:RP:45:LEU:CD1	2.80	0.55
35:RP:104:GLY:C	35:RP:105:LEU:HD12	2.31	0.55
41:RV:52:VAL:O	41:RV:54:GLY:N	2.39	0.55
42:RW:88:ARG:HB3	42:RW:92:ARG:HB3	1.88	0.55
47:R1:4:VAL:HG23	47:R1:10:LYS:C	2.32	0.55
1:XA:731:G:OP1	1:XA:766:A:H1'	2.07	0.55
2:XB:46:LYS:HA	2:XB:49:GLU:OE1	2.05	0.55
2:XB:214:ILE:HA	2:XB:217:ARG:NH2	2.21	0.55
3:XC:188:LEU:N	3:XC:188:LEU:HD22	2.21	0.55
16:XP:53:VAL:HG23	16:XP:54:GLU:H	1.71	0.55
19:XS:5:LEU:CD1	50:Y4:66:SER:HB2	2.33	0.55
25:YA:1430:C:H2'	25:YA:1431:U:C6	2.41	0.55
25:YA:1930:G:H2'	25:YA:1968:G:O6	2.06	0.55
25:YA:2356:C:OP1	46:Y0:24:LYS:NZ	2.39	0.55
25:YA:2364:C:H4'	46:Y0:56:ASP:OD2	2.06	0.55
25:YA:2517:C:C5	25:YA:2542:A:C5	2.95	0.55
25:YA:2758:A:C5	25:YA:2759:G:C8	2.94	0.55
25:YA:2776:A:OP1	25:YA:2776:A:H3'	2.06	0.55
25:YA:2836:U:C4	25:YA:2883:A:N6	2.75	0.55
28:YE:20:ALA:O	28:YE:21:VAL:CG2	2.48	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:24:LEU:HB3	29:YF:115:ALA:HB2	1.87	0.55
31:YH:152:ARG:C	31:YH:153:LYS:HE2	2.32	0.55
32:YI:4:ILE:HG12	32:YI:18:VAL:HG22	1.88	0.55
33:YN:44:PRO:HG2	33:YN:45:ASN:H	1.71	0.55
35:YP:31:ALA:O	35:YP:32:THR:HG23	2.05	0.55
35:YP:39:LYS:N	35:YP:45:LEU:HD11	2.21	0.55
38:YS:59:LYS:CG	38:YS:60:GLY:H	2.11	0.55
42:YW:14:PRO:HG2	42:YW:78:GLU:OE2	2.07	0.55
50:Y4:37:SER:C	50:Y4:39:CYS:N	2.62	0.55
1:QA:690:G:H2'	1:QA:691:G:O4'	2.07	0.55
1:QA:1199:U:H4'	10:QJ:54:PHE:CZ	2.42	0.55
3:QC:20:SER:CB	3:QC:40:ARG:HH22	2.14	0.55
3:QC:112:SER:OG	3:QC:115:LEU:HG	2.06	0.55
5:QE:78:HIS:HD2	8:QH:104:ARG:CG	2.14	0.55
5:QE:92:LYS:O	5:QE:118:ILE:HD12	2.06	0.55
7:QG:46:ALA:HB2	7:QG:117:ALA:HB1	1.88	0.55
16:QP:43:LYS:C	16:QP:45:THR:H	2.14	0.55
25:RA:289:A:H2'	25:RA:290:G:O4'	2.06	0.55
25:RA:412:A:N7	25:RA:2411:A:H2	2.05	0.55
25:RA:746:A:HO2'	25:RA:747:U:P	2.28	0.55
25:RA:896:A:N3	45:RZ:146:ILE:HD11	2.21	0.55
25:RA:1062:G:N3	25:RA:1077:A:N6	2.55	0.55
25:RA:1917:U:H2'	25:RA:1918:A:C8	2.41	0.55
25:RA:2078:C:H1'	25:RA:2434:A:N3	2.21	0.55
25:RA:2105:C:H2'	25:RA:2106:G:H8	1.72	0.55
25:RA:2355:C:H1'	46:R0:39:ARG:HH21	1.70	0.55
25:RA:2506:U:O2	25:RA:2506:U:H2'	2.05	0.55
25:RA:2809:A:OP2	25:RA:2891:G:N1	2.33	0.55
27:RD:118:VAL:HG22	27:RD:119:ALA:H	1.72	0.55
30:RG:114:ILE:HD11	30:RG:140:ILE:HD12	1.89	0.55
31:RH:151:ILE:C	31:RH:152:ARG:O	2.49	0.55
31:RH:152:ARG:C	31:RH:153:LYS:HE2	2.32	0.55
32:RI:4:ILE:HG23	32:RI:18:VAL:HG22	1.88	0.55
38:RS:36:TYR:HD2	38:RS:52:SER:CB	2.18	0.55
40:RU:27:LEU:O	40:RU:29:SER:N	2.40	0.55
44:RY:21:LYS:HG3	44:RY:22:GLY:H	1.69	0.55
48:R2:41:ILE:HD11	48:R2:44:LEU:CG	2.36	0.55
54:R8:63:PRO:O	54:R8:64:TYR:HB2	2.07	0.55
1:XA:194:C:H2'	1:XA:195:A:H5''	1.87	0.55
1:XA:1157:A:H1'	1:XA:1158:C:C2	2.42	0.55
3:XC:6:HIS:CD2	3:XC:7:PRO:HD2	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:7:GLU:HG2	5:XE:112:LEU:HD22	1.88	0.55
9:XI:82:ALA:O	9:XI:86:VAL:HB	2.06	0.55
9:XI:105:ASP:C	9:XI:107:ARG:H	2.14	0.55
13:XM:81:LEU:HB3	13:XM:89:GLY:HA2	1.88	0.55
20:XT:43:LEU:HA	20:XT:46:GLU:HB3	1.88	0.55
25:YA:849:A:N6	25:YA:929:G:H1'	2.21	0.55
25:YA:1093:G:H1'	25:YA:1099:G:O6	2.06	0.55
25:YA:1537:C:H2'	25:YA:1538:G:C8	2.42	0.55
25:YA:1885:A:H3'	25:YA:1886:C:H6	1.71	0.55
25:YA:2870:C:H5''	37:YR:65:LEU:HD21	1.87	0.55
27:YD:239:ARG:O	27:YD:240:ALA:HB2	2.05	0.55
37:YR:84:ALA:HB3	37:YR:85:PRO:HD3	1.88	0.55
44:YY:61:ILE:HG23	44:YY:62:GLU:H	1.71	0.55
44:YY:91:GLU:HG3	44:YY:92:ASN:H	1.72	0.55
47:Y1:83:GLU:CD	47:Y1:85:LEU:H	2.15	0.55
47:Y1:91:LYS:CG	47:Y1:92:LYS:H	2.15	0.55
53:Y7:19:ARG:HH11	53:Y7:19:ARG:HG2	1.71	0.55
1:QA:1095:U:OP1	1:QA:1108:G:N2	2.40	0.55
1:QA:1298:C:OP2	7:QG:114:ARG:NH2	2.39	0.55
3:QC:11:ARG:HH21	3:QC:180:ALA:HB3	1.70	0.55
3:QC:188:LEU:N	3:QC:188:LEU:HD22	2.21	0.55
7:QG:20:ASP:HB3	7:QG:23:VAL:HG23	1.88	0.55
7:QG:37:ASN:HD21	9:QI:40:LEU:HD23	1.69	0.55
9:QI:82:ALA:O	9:QI:86:VAL:HB	2.06	0.55
11:QK:34:ASP:N	11:QK:40:ILE:HD11	2.20	0.55
12:QL:11:VAL:HG13	17:QQ:29:HIS:HD2	1.70	0.55
25:RA:1202:C:H42	25:RA:1243:G:H1	1.54	0.55
25:RA:1265:A:H61	25:RA:2013:A:H5''	1.71	0.55
25:RA:2193:G:H2'	25:RA:2194:G:H8	1.72	0.55
28:RE:14:ILE:HD11	39:RT:14:TYR:CZ	2.42	0.55
29:RF:129:PHE:O	29:RF:130:ALA:CB	2.55	0.55
32:RI:3:VAL:O	32:RI:18:VAL:HA	2.06	0.55
33:RN:87:LEU:HD23	33:RN:87:LEU:C	2.32	0.55
34:RO:68:GLU:HA	34:RO:78:ARG:HB3	1.89	0.55
35:RP:115:LEU:HD12	35:RP:116:GLY:N	2.21	0.55
37:RR:12:ARG:HH11	37:RR:12:ARG:HG3	1.71	0.55
40:RU:104:GLN:OE1	40:RU:104:GLN:N	2.35	0.55
47:R1:80:LEU:C	47:R1:81:LYS:CE	2.77	0.55
50:R4:9:LEU:H	50:R4:27:THR:HG22	1.71	0.55
1:XA:59:A:N6	1:XA:331:G:H1'	2.22	0.55
1:XA:401:C:H2'	1:XA:402:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:690:G:H2'	1:XA:691:G:O4'	2.07	0.55
1:XA:973:G:O4'	10:XJ:55:LYS:HG2	2.06	0.55
3:XC:59:ARG:NH2	3:XC:97:LYS:HE3	2.20	0.55
4:XD:10:ARG:HH11	4:XD:10:ARG:HG3	1.72	0.55
6:XF:33:TYR:HE2	6:XF:74:ASP:HB3	1.71	0.55
7:XG:50:ILE:CB	7:XG:58:PRO:HB3	2.37	0.55
7:XG:73:MET:HG2	7:XG:90:GLU:HA	1.88	0.55
10:XJ:19:SER:O	10:XJ:23:ILE:HG13	2.07	0.55
18:XR:58:LEU:HD12	18:XR:58:LEU:H	1.71	0.55
25:YA:155:C:H5'	25:YA:161:U:OP2	2.07	0.55
25:YA:1299:G:H5''	25:YA:1300:U:OP1	2.06	0.55
25:YA:1317:A:H2'	25:YA:1318:C:C6	2.42	0.55
28:YE:53:PRO:O	28:YE:74:PRO:HA	2.07	0.55
35:YP:49:ARG:NE	54:Y8:59:LYS:HG2	2.22	0.55
40:YU:58:ARG:O	40:YU:62:ILE:HG13	2.06	0.55
41:YV:29:PRO:HA	41:YV:61:VAL:CG2	2.37	0.55
42:YW:25:ARG:HH11	42:YW:25:ARG:CB	2.20	0.55
45:YZ:48:PHE:CE2	45:YZ:52:SER:HA	2.42	0.55
1:QA:404:U:H2'	1:QA:405:U:C6	2.42	0.55
1:QA:440:A:H5'	1:QA:442:C:OP2	2.07	0.55
1:QA:686:U:H2'	1:QA:687:A:C8	2.41	0.55
1:QA:1181:G:C5	1:QA:1182:G:N2	2.75	0.55
1:QA:1305:G:HO2'	1:QA:1306:A:P	2.30	0.55
1:QA:1338:G:N3	22:QV:41:C:O2'	2.35	0.55
2:QB:169:LYS:HD3	2:QB:169:LYS:O	2.06	0.55
4:QD:126:ILE:HG22	4:QD:127:THR:N	2.22	0.55
8:QH:23:SER:HB2	8:QH:61:VAL:O	2.07	0.55
13:QM:82:MET:O	13:QM:83:ASP:C	2.49	0.55
16:QP:59:TRP:HA	16:QP:59:TRP:CE3	2.42	0.55
25:RA:482:A:H4'	44:RY:47:LYS:HD2	1.88	0.55
25:RA:2467:C:C2'	25:RA:2468:G:H5'	2.37	0.55
26:RB:44:G:C2	26:RB:48:A:C2	2.94	0.55
33:RN:109:LYS:N	33:RN:109:LYS:HD2	2.22	0.55
34:RO:79:PHE:HD2	39:RT:72:VAL:HG22	1.72	0.55
35:RP:2:LYS:O	35:RP:5:ASP:HB2	2.06	0.55
36:RQ:25:ASP:N	36:RQ:102:VAL:HG23	2.22	0.55
40:RU:92:ARG:NH1	41:RV:11:GLN:HB2	2.22	0.55
49:R3:4:LEU:HD21	49:R3:39:ASP:OD1	2.06	0.55
54:R8:56:GLU:O	54:R8:57:ARG:C	2.50	0.55
1:XA:518:C:H2'	1:XA:530:G:C4	2.42	0.55
1:XA:735:C:H2'	1:XA:736:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1068:G:N7	1:XA:1094:G:C8	2.74	0.55
2:XB:41:ILE:HD12	2:XB:41:ILE:N	2.21	0.55
4:XD:126:ILE:HG22	4:XD:127:THR:N	2.22	0.55
5:XE:99:GLY:O	5:XE:117:ASP:HA	2.06	0.55
6:XF:92:LYS:HB2	6:XF:92:LYS:NZ	2.22	0.55
8:XH:102:ARG:NH1	8:XH:105:ARG:NH1	2.55	0.55
10:XJ:4:ILE:CB	10:XJ:74:ILE:HD11	2.36	0.55
10:XJ:84:GLN:C	10:XJ:86:MET:H	2.14	0.55
11:XK:20:TYR:HB2	11:XK:31:THR:O	2.07	0.55
16:XP:59:TRP:HA	16:XP:59:TRP:CE3	2.42	0.55
20:XT:53:LEU:HA	20:XT:56:MET:HB3	1.87	0.55
25:YA:23:G:N2	25:YA:517:C:O2	2.40	0.55
25:YA:287:C:O2'	25:YA:288:C:O5'	2.24	0.55
25:YA:780:G:H21	25:YA:783:A:H62	1.53	0.55
25:YA:1000:A:H2'	25:YA:1001:A:C8	2.42	0.55
25:YA:2285:C:H5	52:Y6:27:LYS:NZ	2.04	0.55
25:YA:2653:U:H3'	25:YA:2654:A:H8	1.72	0.55
27:YD:43:ARG:CB	27:YD:54:ARG:HB2	2.37	0.55
28:YE:21:VAL:HG23	28:YE:22:PRO:HD3	1.89	0.55
28:YE:67:PHE:O	28:YE:69:LYS:N	2.39	0.55
30:YG:34:LEU:HD11	30:YG:99:MET:HE2	1.88	0.55
34:YO:19:ILE:O	34:YO:19:ILE:HD13	2.06	0.55
34:YO:79:PHE:HD2	39:YT:72:VAL:HG22	1.72	0.55
35:YP:2:LYS:O	35:YP:5:ASP:HB2	2.06	0.55
40:YU:6:THR:O	40:YU:9:VAL:HG23	2.07	0.55
50:Y4:9:LEU:H	50:Y4:27:THR:HG22	1.71	0.55
50:Y4:61:ARG:C	50:Y4:63:TYR:H	2.14	0.55
52:Y6:42:TRP:N	52:Y6:42:TRP:CD1	2.73	0.55
1:QA:707:C:H2'	1:QA:708:C:C6	2.42	0.55
1:QA:1157:A:H1'	1:QA:1158:C:C4	2.42	0.55
5:QE:7:GLU:HG2	5:QE:112:LEU:HD22	1.88	0.55
10:QJ:32:ALA:O	10:QJ:33:GLN:O	2.25	0.55
12:QL:79:GLU:HG2	12:QL:79:GLU:O	2.05	0.55
14:QN:22:THR:HB	14:QN:33:VAL:HG11	1.88	0.55
16:QP:48:TRP:O	16:QP:49:LEU:HB2	2.06	0.55
17:QQ:62:SER:HB3	17:QQ:72:ARG:HH21	1.72	0.55
19:QS:7:LYS:HG3	19:QS:8:GLY:N	2.22	0.55
25:RA:566:U:H5''	35:RP:29:LYS:NZ	2.22	0.55
25:RA:1204:A:H2	25:RA:1241:A:C2	2.24	0.55
25:RA:2131:G:N2	25:RA:2158:A:N7	2.54	0.55
25:RA:2197:U:H1'	25:RA:2198:A:H8	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2405:G:P	35:RP:77:ARG:NH2	2.80	0.55
26:RB:75:G:H1	26:RB:102:G:N2	2.05	0.55
28:RE:3:GLY:HA3	28:RE:81:ILE:HD12	1.88	0.55
30:RG:135:LEU:HD12	30:RG:135:LEU:N	2.21	0.55
40:RU:74:LEU:HD13	40:RU:79:PHE:HB2	1.89	0.55
50:R4:65:ASP:O	50:R4:66:SER:HB3	2.07	0.55
1:XA:353:A:H5'	1:XA:353:A:H8	1.71	0.55
1:XA:965:A:C2	1:XA:969:A:C2	2.95	0.55
9:XI:126:SER:O	9:XI:128:ARG:N	2.35	0.55
10:XJ:16:LEU:HD13	10:XJ:16:LEU:O	2.07	0.55
15:XO:65:ARG:HB2	15:XO:65:ARG:NH1	2.20	0.55
16:XP:43:LYS:HA	16:XP:48:TRP:CB	2.37	0.55
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
21:XU:21:TYR:O	21:XU:22:ARG:HB2	2.06	0.55
25:YA:888:C:H3'	25:YA:889:C:C4'	2.36	0.55
25:YA:902:C:H2'	25:YA:903:C:H6	1.72	0.55
25:YA:2015:A:C1'	51:Y5:2:ALA:HA	2.30	0.55
25:YA:2291:U:H2'	25:YA:2292:C:C6	2.42	0.55
28:YE:3:GLY:HA3	28:YE:81:ILE:HD12	1.88	0.55
31:YH:143:GLN:C	31:YH:143:GLN:HE21	2.15	0.55
32:YI:21:VAL:HG22	32:YI:22:LYS:H	1.71	0.55
34:YO:20:MET:HG2	34:YO:21:CYS:N	2.20	0.55
38:YS:36:TYR:HD2	38:YS:52:SER:CB	2.18	0.55
38:YS:107:GLU:N	38:YS:110:LEU:HD11	2.22	0.55
39:YT:29:ARG:HH11	39:YT:29:ARG:HB2	1.72	0.55
39:YT:123:GLN:O	39:YT:125:ARG:N	2.40	0.55
50:Y4:48:ARG:HH12	50:Y4:52:THR:HG22	1.71	0.55
51:Y5:55:ARG:HD3	51:Y5:56:LYS:N	2.21	0.55
1:QA:191(E):G:H2'	1:QA:191(F):U:C6	2.42	0.55
1:QA:370:C:H2'	1:QA:371:G:C8	2.41	0.55
1:QA:1213:A:N1	1:QA:1215:G:H1'	2.22	0.55
2:QB:41:ILE:HD12	2:QB:41:ILE:N	2.21	0.55
2:QB:80:ILE:CG2	2:QB:212:GLN:HA	2.35	0.55
5:QE:126:ARG:HG3	5:QE:126:ARG:NH1	2.19	0.55
6:QF:91:VAL:CG1	18:QR:72:ARG:HH12	2.18	0.55
7:QG:11:GLN:C	7:QG:12:LEU:HD22	2.31	0.55
9:QI:40:LEU:HD11	9:QI:70:LYS:CG	2.37	0.55
10:QJ:16:LEU:HD13	10:QJ:16:LEU:O	2.07	0.55
13:QM:93:ARG:NH1	25:RA:887:A:OP1	2.40	0.55
15:QO:29:VAL:HG11	15:QO:67:LEU:HD21	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:13:ASP:C	17:QQ:15:MET:H	2.15	0.55
25:RA:975:G:H1'	25:RA:990:A:C2	2.41	0.55
25:RA:1142(A):A:H4'	33:RN:25:ARG:HH22	1.72	0.55
25:RA:1465:G:C2	25:RA:1466:G:C8	2.95	0.55
27:RD:65:ILE:HD13	27:RD:65:ILE:C	2.32	0.55
29:RF:118:ALA:O	29:RF:121:GLY:N	2.33	0.55
30:RG:3:LEU:HD12	30:RG:4:ASP:N	2.19	0.55
31:RH:143:GLN:HE21	31:RH:143:GLN:C	2.15	0.55
35:RP:39:LYS:N	35:RP:45:LEU:HD11	2.21	0.55
40:RU:6:THR:O	40:RU:9:VAL:HG23	2.07	0.55
40:RU:58:ARG:O	40:RU:62:ILE:HG13	2.06	0.55
41:RV:99:ILE:N	41:RV:99:ILE:CD1	2.65	0.55
44:RY:48:ALA:H	44:RY:60:PHE:HA	1.72	0.55
1:XA:297:G:N2	1:XA:299:G:H3'	2.22	0.55
1:XA:977:A:H8	1:XA:1223:C:C2	2.25	0.55
2:XB:187:LEU:HD22	2:XB:201:ILE:O	2.07	0.55
4:XD:94:LEU:H	4:XD:94:LEU:CD1	2.08	0.55
6:XF:52:ILE:O	6:XF:53:ALA:HB3	2.07	0.55
8:XH:23:SER:HB2	8:XH:61:VAL:O	2.07	0.55
8:XH:102:ARG:HH11	8:XH:105:ARG:CZ	2.19	0.55
9:XI:9:ARG:HB2	9:XI:14:VAL:HG22	1.88	0.55
9:XI:45:ALA:O	9:XI:48:GLU:HG2	2.07	0.55
11:XK:125:PHE:HD1	11:XK:125:PHE:H	1.55	0.55
11:XK:125:PHE:N	11:XK:125:PHE:CD1	2.74	0.55
13:XM:80:ARG:O	13:XM:84:ILE:HB	2.06	0.55
15:XO:39:LEU:O	15:XO:40:SER:C	2.50	0.55
16:XP:21:VAL:O	16:XP:33:ILE:N	2.39	0.55
16:XP:28:ARG:HG2	16:XP:28:ARG:NH1	2.22	0.55
25:YA:25:U:H5''	42:YW:80:PRO:HD3	1.89	0.55
25:YA:389:G:N1	35:YP:70:GLN:HB3	2.22	0.55
25:YA:859:G:H21	25:YA:860:U:H3	1.55	0.55
25:YA:1001:A:H2'	25:YA:1002:G:O4'	2.07	0.55
25:YA:1317:A:H2'	25:YA:1318:C:H6	1.72	0.55
26:YB:112:G:H8	26:YB:112:G:O5'	1.90	0.55
28:YE:4:ILE:HD13	28:YE:5:LEU:H	1.71	0.55
29:YF:28:ILE:HD12	29:YF:28:ILE:O	2.06	0.55
31:YH:26:VAL:CG1	31:YH:27:LYS:N	2.63	0.55
33:YN:87:LEU:HD23	33:YN:87:LEU:C	2.32	0.55
33:YN:109:LYS:N	33:YN:109:LYS:HD2	2.22	0.55
34:YO:4:PRO:O	34:YO:5:GLN:HB2	2.06	0.55
36:YQ:64:ILE:HA	36:YQ:106:VAL:CG1	2.33	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:YT:16:ARG:HG2	39:YT:18:ASP:OD1	2.07	0.55
44:YY:95:LYS:HA	44:YY:101:LYS:H	1.72	0.55
50:Y4:51:ASP:OD1	50:Y4:51:ASP:O	2.25	0.55
1:QA:20:U:H2'	1:QA:21:G:O4'	2.06	0.55
1:QA:186:C:H5'	20:QT:78:ALA:HB1	1.88	0.55
1:QA:552:U:O4	1:QA:553:A:N6	2.40	0.55
1:QA:565:U:H5''	1:QA:566:G:C2'	2.37	0.55
4:QD:107:ARG:C	4:QD:109:GLY:H	2.14	0.55
9:QI:45:ALA:O	9:QI:48:GLU:HG2	2.07	0.55
11:QK:50:TYR:HH	11:QK:59:TYR:HE2	1.55	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
25:RA:602:G:O2'	25:RA:604:G:O2'	2.23	0.55
25:RA:1543:A:H2	25:RA:1545:A:C5	2.25	0.55
25:RA:1869:G:N2	25:RA:1878:G:C5	2.75	0.55
25:RA:2219:G:OP1	27:RD:172:TYR:OH	2.20	0.55
29:RF:147:GLY:O	29:RF:148:LEU:HD23	2.07	0.55
30:RG:7:LEU:HD12	30:RG:104:GLU:HA	1.88	0.55
31:RH:8:PRO:O	31:RH:9:ILE:HG23	2.07	0.55
32:RI:52:ARG:HA	32:RI:56:LYS:H	1.72	0.55
35:RP:106:LEU:O	35:RP:107:LYS:HD3	2.07	0.55
38:RS:74:ALA:HB1	38:RS:107:GLU:HB3	1.89	0.55
38:RS:107:GLU:N	38:RS:110:LEU:HD11	2.22	0.55
40:RU:73:GLY:O	40:RU:74:LEU:HB3	2.07	0.55
41:RV:49:THR:CB	41:RV:50:PRO:CD	2.83	0.55
48:R2:47:ASN:ND2	48:R2:47:ASN:N	2.54	0.55
1:XA:1450:U:O2'	1:XA:1451:A:N7	2.38	0.55
2:XB:16:HIS:CE1	2:XB:209:ARG:HH21	2.25	0.55
4:XD:31:CYS:O	4:XD:32:ALA:HB3	2.07	0.55
6:XF:89:MET:HE1	18:XR:76:LEU:CD2	2.36	0.55
9:XI:40:LEU:HD11	9:XI:70:LYS:CG	2.37	0.55
9:XI:114:TYR:O	9:XI:114:TYR:CD2	2.59	0.55
12:XL:28:LYS:O	12:XL:29:GLY:C	2.50	0.55
12:XL:62:SER:C	12:XL:64:TYR:H	2.14	0.55
13:XM:117:VAL:O	13:XM:118:ALA:C	2.51	0.55
25:YA:86:C:O2'	25:YA:104:U:O2'	1.96	0.55
25:YA:573:G:N1	25:YA:2031:A:OP2	2.32	0.55
25:YA:1636:C:H2'	25:YA:1637:A:C8	2.42	0.55
25:YA:2600:A:O2'	25:YA:2601:C:H5'	2.06	0.55
27:YD:65:ILE:HD13	27:YD:65:ILE:C	2.32	0.55
27:YD:94:LEU:HD22	27:YD:95:LEU:H	1.70	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:155:LEU:HD23	27:YD:177:LEU:CD2	2.36	0.55
28:YE:54:GLN:NE2	28:YE:54:GLN:N	2.56	0.55
29:YF:32:LEU:HD12	29:YF:36:VAL:HG23	1.89	0.55
30:YG:41:GLN:HB3	30:YG:43:LEU:HD13	1.87	0.55
36:YQ:21:THR:O	36:YQ:22:LYS:O	2.25	0.55
44:YY:97:ARG:NH2	44:YY:98:VAL:CB	2.65	0.55
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HD23	2.07	0.55
48:Y2:31:GLU:HB2	48:Y2:53:LEU:HD11	1.89	0.55
54:Y8:30:ARG:O	54:Y8:31:HIS:CB	2.55	0.55
1:QA:581:G:N2	1:QA:760:G:N7	2.54	0.54
1:QA:960:U:O2	1:QA:960:U:H2'	2.07	0.54
1:QA:1312:G:OP2	50:R4:67:TYR:HE1	1.89	0.54
2:QB:214:ILE:HA	2:QB:217:ARG:NH2	2.21	0.54
3:QC:43:LEU:O	3:QC:47:LEU:HB3	2.08	0.54
7:QG:50:ILE:CB	7:QG:58:PRO:HB3	2.37	0.54
7:QG:50:ILE:HG22	7:QG:50:ILE:O	2.07	0.54
8:QH:102:ARG:HH11	8:QH:105:ARG:CZ	2.19	0.54
10:QJ:84:GLN:C	10:QJ:86:MET:H	2.14	0.54
11:QK:125:PHE:HD1	11:QK:125:PHE:N	2.05	0.54
25:RA:198:C:O2'	25:RA:199:A:H5'	2.08	0.54
25:RA:1022:G:C6	25:RA:1140:C:C4	2.95	0.54
25:RA:1278:A:N6	25:RA:1292:U:H3	2.04	0.54
30:RG:116:ASP:O	30:RG:117:PHE:CB	2.51	0.54
31:RH:128:PRO:CD	31:RH:129:THR:N	2.71	0.54
32:RI:78:THR:HG22	32:RI:141:LYS:HD2	1.89	0.54
35:RP:65:ARG:HH21	54:R8:15:LYS:HB2	1.72	0.54
35:RP:84:ASN:ND2	35:RP:115:LEU:HD12	2.22	0.54
42:RW:80:PRO:O	42:RW:100:THR:CG2	2.55	0.54
1:XA:423:G:H2'	1:XA:424:G:O4'	2.06	0.54
1:XA:474:G:H2'	1:XA:475:G:C8	2.39	0.54
1:XA:721:G:H4'	1:XA:722:A:O4'	2.08	0.54
1:XA:1124:G:H8	1:XA:1124:G:OP2	1.90	0.54
2:XB:134:GLU:O	2:XB:138:LEU:HD12	2.07	0.54
10:XJ:81:THR:C	10:XJ:83:GLU:N	2.64	0.54
12:XL:50:SER:O	12:XL:51:ALA:HB2	2.05	0.54
14:XN:8:GLU:C	14:XN:10:ALA:H	2.13	0.54
14:XN:15:LYS:O	14:XN:16:PHE:O	2.24	0.54
25:YA:738:G:C2	25:YA:759:G:C5	2.95	0.54
27:YD:31:LYS:O	27:YD:35:LYS:O	2.24	0.54
30:YG:114:ILE:HD11	30:YG:140:ILE:HD12	1.89	0.54
36:YQ:79:LEU:C	36:YQ:79:LEU:CD2	2.80	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:12:ARG:HH11	37:YR:12:ARG:HG3	1.71	0.54
40:YU:27:LEU:O	40:YU:29:SER:N	2.40	0.54
40:YU:95:LEU:HD12	41:YV:11:GLN:HE21	1.72	0.54
42:YW:88:ARG:HB3	42:YW:92:ARG:HB3	1.89	0.54
44:YY:95:LYS:HD3	44:YY:95:LYS:N	2.23	0.54
44:YY:95:LYS:HB2	44:YY:95:LYS:NZ	2.21	0.54
1:QA:176:C:H2'	1:QA:177:C:C6	2.42	0.54
1:QA:258:G:H2'	1:QA:259:G:C8	2.42	0.54
1:QA:567:G:H5''	1:QA:568:G:OP2	2.07	0.54
1:QA:865:A:H8	1:QA:865:A:O5'	1.90	0.54
1:QA:1376:U:P	7:QG:94:ARG:HH12	2.30	0.54
3:QC:134:ILE:HG21	3:QC:168:ALA:HB3	1.89	0.54
5:QE:144:THR:O	5:QE:148:VAL:HG23	2.06	0.54
12:QL:28:LYS:O	12:QL:29:GLY:C	2.50	0.54
12:QL:83:VAL:HG22	12:QL:84:LEU:N	2.21	0.54
16:QP:28:ARG:HG2	16:QP:28:ARG:NH1	2.22	0.54
17:QQ:33:GLY:O	17:QQ:34:LYS:O	2.25	0.54
25:RA:507:A:C5'	25:RA:508:G:H5'	2.37	0.54
25:RA:2151:G:H2'	25:RA:2152:G:C8	2.43	0.54
25:RA:2881:C:H2'	25:RA:2882:A:H8	1.71	0.54
27:RD:25:THR:HG21	27:RD:81:ALA:CB	2.38	0.54
28:RE:21:VAL:HG23	28:RE:22:PRO:HD3	1.89	0.54
29:RF:197:ASP:O	29:RF:198:ALA:HB3	2.06	0.54
30:RG:83:ARG:HB2	30:RG:86:MET:HE3	1.88	0.54
33:RN:44:PRO:HG2	33:RN:45:ASN:H	1.71	0.54
35:RP:24:GLY:O	35:RP:25:SER:HB3	2.06	0.54
35:RP:59:LEU:O	35:RP:59:LEU:HD23	2.06	0.54
38:RS:13:ARG:O	38:RS:13:ARG:HD2	2.06	0.54
39:RT:107:ASP:O	39:RT:111:ARG:NH1	2.40	0.54
40:RU:58:ARG:NH1	40:RU:93:LYS:HE2	2.22	0.54
41:RV:29:PRO:HA	41:RV:61:VAL:CG2	2.37	0.54
42:RW:25:ARG:HH11	42:RW:25:ARG:CB	2.20	0.54
43:RX:5:TYR:HE2	48:R2:30:ARG:HH11	1.55	0.54
47:R1:91:LYS:HA	47:R1:91:LYS:CE	2.38	0.54
53:R7:48:LYS:HG2	53:R7:49:ARG:N	2.19	0.54
1:XA:22:G:C6	1:XA:23:C:C4	2.95	0.54
1:XA:837:G:H1	1:XA:849:C:N4	2.03	0.54
3:XC:43:LEU:O	3:XC:47:LEU:HB3	2.07	0.54
4:XD:19:LEU:N	4:XD:19:LEU:HD23	2.22	0.54
22:XV:68:C:H2'	22:XV:69:C:C6	2.42	0.54
25:YA:49:A:C2	25:YA:118:A:C6	2.94	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:271(B):G:H5''	25:YA:271(B):G:C8	2.39	0.54
25:YA:484:C:OP1	44:YY:51:VAL:HG11	2.07	0.54
25:YA:1657:C:H2'	25:YA:1658:C:C6	2.42	0.54
25:YA:2163:C:H2'	25:YA:2164:C:H6	1.71	0.54
25:YA:2212:A:N3	25:YA:2215:G:N1	2.55	0.54
25:YA:2329:G:H2'	25:YA:2330:G:C8	2.42	0.54
25:YA:2861:G:H2'	25:YA:2862:G:H8	1.72	0.54
31:YH:86:GLU:HG3	31:YH:165:ALA:CB	2.38	0.54
33:YN:42:TRP:CD1	40:YU:63:VAL:HG11	2.42	0.54
34:YO:53:LYS:HD2	34:YO:56:ASP:OD1	2.08	0.54
39:YT:98:LYS:HB3	39:YT:100:TYR:CE1	2.43	0.54
40:YU:58:ARG:NH1	40:YU:93:LYS:HE2	2.22	0.54
41:YV:27:ALA:O	41:YV:28:GLU:O	2.24	0.54
41:YV:52:VAL:O	41:YV:54:GLY:N	2.39	0.54
44:YY:2:ARG:HG2	44:YY:2:ARG:NH1	2.22	0.54
1:QA:1127:G:H21	1:QA:1147:C:H41	1.55	0.54
4:QD:13:ARG:HD2	4:QD:40:PRO:HD3	1.89	0.54
8:QH:49:GLU:HG3	8:QH:51:VAL:CG1	2.35	0.54
9:QI:70:LYS:O	9:QI:74:ILE:HG13	2.07	0.54
10:QJ:19:SER:O	10:QJ:23:ILE:HG13	2.07	0.54
14:QN:24:CYS:SG	14:QN:39:LEU:CA	2.94	0.54
16:QP:43:LYS:HA	16:QP:48:TRP:CB	2.37	0.54
25:RA:856:C:C6	25:RA:856:C:H3'	2.42	0.54
25:RA:987:G:O2'	25:RA:1000:A:N3	2.34	0.54
25:RA:2261:C:C6	46:R0:16:SER:HB3	2.43	0.54
25:RA:2505:G:C6	25:RA:2576:G:C8	2.95	0.54
27:RD:43:ARG:CB	27:RD:54:ARG:HB2	2.37	0.54
29:RF:62:ARG:HB3	29:RF:62:ARG:NH1	2.22	0.54
29:RF:197:ASP:O	29:RF:199:TRP:N	2.38	0.54
31:RH:12:PRO:O	31:RH:13:LYS:HB2	2.07	0.54
31:RH:86:GLU:HG3	31:RH:165:ALA:CB	2.38	0.54
35:RP:49:ARG:NE	54:R8:59:LYS:HG2	2.22	0.54
39:RT:16:ARG:HG2	39:RT:18:ASP:OD1	2.06	0.54
42:RW:70:TYR:CD2	42:RW:70:TYR:N	2.75	0.54
44:RY:47:LYS:O	44:RY:49:VAL:HG23	2.07	0.54
49:R3:8:LEU:HD22	49:R3:31:LEU:CD2	2.37	0.54
1:XA:1127:G:H21	1:XA:1147:C:N4	2.05	0.54
2:XB:170:GLU:HA	2:XB:172:ILE:HD12	1.90	0.54
5:XE:10:MET:HE2	5:XE:13:ILE:HD13	1.90	0.54
8:XH:77:GLU:HG2	8:XH:78:GLN:N	2.22	0.54
10:XJ:32:ALA:O	10:XJ:33:GLN:O	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:15:LEU:CD2	19:XS:15:LEU:H	2.21	0.54
20:XT:10:LEU:HG	20:XT:12:ALA:H	1.70	0.54
25:YA:336:C:O2'	44:YY:35:TYR:OH	2.23	0.54
25:YA:543:C:H2'	25:YA:544:C:C6	2.42	0.54
25:YA:1761:C:N4	25:YA:1762:A:H62	2.05	0.54
25:YA:2596:U:H2'	25:YA:2597:G:O4'	2.07	0.54
28:YE:176:ILE:HG22	28:YE:179:GLU:H	1.72	0.54
29:YF:129:PHE:O	29:YF:130:ALA:CB	2.55	0.54
31:YH:8:PRO:O	31:YH:9:ILE:HG23	2.08	0.54
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB2	1.72	0.54
41:YV:49:THR:CB	41:YV:50:PRO:CD	2.83	0.54
42:YW:9:TYR:H	42:YW:102:HIS:CE1	2.25	0.54
45:YZ:158:PRO:O	45:YZ:160:GLY:N	2.40	0.54
54:Y8:56:GLU:O	54:Y8:57:ARG:C	2.50	0.54
1:QA:475:G:H2'	1:QA:476:G:C8	2.35	0.54
1:QA:1329:A:H5'	13:QM:29:ARG:HG3	1.90	0.54
2:QB:68:ILE:HD12	2:QB:68:ILE:N	2.21	0.54
12:QL:6:THR:O	12:QL:7:ILE:C	2.51	0.54
25:RA:204:A:O3'	25:RA:205:G:H4'	2.07	0.54
25:RA:312:G:H4'	25:RA:331:A:N3	2.23	0.54
25:RA:483:A:C5'	44:RY:49:VAL:HG13	2.37	0.54
25:RA:527:C:H4'	25:RA:528:A:O5'	2.07	0.54
25:RA:678:C:H2'	25:RA:679:C:C6	2.43	0.54
25:RA:1496:A:H8	25:RA:1577:C:O2'	1.89	0.54
27:RD:233:HIS:CD2	27:RD:233:HIS:N	2.75	0.54
28:RE:61:ARG:O	28:RE:62:PRO:C	2.50	0.54
28:RE:186:GLY:O	28:RE:188:VAL:N	2.41	0.54
34:RO:53:LYS:HD2	34:RO:56:ASP:OD1	2.08	0.54
39:RT:3:ARG:HG3	39:RT:7:ILE:CG1	2.36	0.54
39:RT:29:ARG:HB2	39:RT:29:ARG:HH11	1.72	0.54
39:RT:123:GLN:O	39:RT:125:ARG:N	2.40	0.54
41:RV:22:VAL:CG1	41:RV:23:GLU:N	2.71	0.54
42:RW:38:TYR:OH	51:R5:47:PRO:HG3	2.08	0.54
44:RY:91:GLU:HG3	44:RY:92:ASN:H	1.72	0.54
44:RY:95:LYS:HD3	44:RY:95:LYS:N	2.23	0.54
47:R1:83:GLU:CG	47:R1:84:GLY:N	2.71	0.54
1:XA:297:G:H4'	1:XA:557:G:H4'	1.89	0.54
1:XA:982:U:H5''	14:XN:6:LEU:HD11	1.89	0.54
1:XA:1081:G:P	5:XE:16:THR:OG1	2.65	0.54
8:XH:119:LEU:HD12	8:XH:124:ALA:HA	1.88	0.54
9:XI:66:ARG:HG2	9:XI:66:ARG:NH1	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.07	0.54
15:XO:32:LEU:O	15:XO:33:THR:C	2.51	0.54
25:YA:1788:C:H2'	25:YA:1789:A:C8	2.39	0.54
27:YD:25:THR:O	27:YD:25:THR:HG23	2.07	0.54
35:YP:104:GLY:C	35:YP:105:LEU:HD12	2.32	0.54
35:YP:106:LEU:O	35:YP:107:LYS:HD3	2.07	0.54
35:YP:114:ILE:HD11	35:YP:130:PHE:HE1	1.70	0.54
43:YX:65:ARG:HD3	43:YX:65:ARG:H	1.70	0.54
44:YY:47:LYS:O	44:YY:49:VAL:HG23	2.07	0.54
47:Y1:92:LYS:O	47:Y1:94:LEU:N	2.41	0.54
51:Y5:55:ARG:HD3	51:Y5:56:LYS:H	1.73	0.54
1:QA:625:G:H2'	1:QA:626:U:C6	2.35	0.54
1:QA:701:C:H4'	1:QA:702:A:C5'	2.37	0.54
1:QA:1305:G:O2'	1:QA:1306:A:H8	1.91	0.54
2:QB:83:MET:O	2:QB:85:ALA:N	2.41	0.54
3:QC:109:PRO:O	3:QC:115:LEU:HD12	2.08	0.54
4:QD:19:LEU:N	4:QD:19:LEU:HD23	2.23	0.54
8:QH:51:VAL:HG11	8:QH:60:ARG:CG	2.38	0.54
8:QH:97:VAL:CG1	8:QH:98:LYS:N	2.70	0.54
11:QK:62:GLN:O	11:QK:63:LEU:C	2.51	0.54
12:QL:62:SER:C	12:QL:64:TYR:H	2.14	0.54
13:QM:108:ARG:O	13:QM:109:THR:C	2.50	0.54
18:QR:39:VAL:HA	18:QR:42:ARG:NH1	2.23	0.54
23:QX:6:C:HO2'	23:QX:7:U:P	2.29	0.54
25:RA:1509:C:N3	25:RA:1511:A:N6	2.56	0.54
25:RA:1600:C:H2'	25:RA:1601:G:H8	1.72	0.54
25:RA:1727:U:H2'	25:RA:1728:G:O4'	2.07	0.54
25:RA:1835:G:C4	25:RA:1931:U:N3	2.75	0.54
25:RA:1837:C:N3	25:RA:1903:G:N2	2.42	0.54
25:RA:2287:A:O2'	25:RA:2288:A:H5''	2.08	0.54
25:RA:2331:G:H4'	46:R0:43:THR:H	1.72	0.54
25:RA:2578:G:N2	25:RA:2579:C:C2	2.76	0.54
26:RB:56:G:H5'	30:RG:27:ASN:ND2	2.22	0.54
27:RD:72:LYS:O	27:RD:73:VAL:C	2.51	0.54
30:RG:111:LEU:HB2	50:R4:38:LYS:HZ3	1.72	0.54
30:RG:139:LEU:HD22	30:RG:146:TYR:HD1	1.73	0.54
36:RQ:39:PRO:HB3	36:RQ:99:PRO:HD3	1.90	0.54
38:RS:67:ARG:NH1	38:RS:67:ARG:CB	2.64	0.54
42:RW:9:TYR:H	42:RW:102:HIS:CE1	2.26	0.54
44:RY:47:LYS:C	44:RY:49:VAL:H	2.16	0.54
44:RY:61:ILE:HG23	44:RY:62:GLU:H	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:37:SER:HB3	50:R4:42:PHE:CD1	2.43	0.54
50:R4:63:TYR:C	50:R4:65:ASP:N	2.62	0.54
51:R5:20:ARG:C	51:R5:22:HIS:H	2.14	0.54
52:R6:12:GLU:HG2	52:R6:52:VAL:O	2.07	0.54
54:R8:32:LEU:O	54:R8:36:LYS:HE3	2.06	0.54
1:XA:181:G:O2'	1:XA:182:U:H6	1.90	0.54
3:XC:195:VAL:CG1	3:XC:196:LEU:N	2.71	0.54
4:XD:153:ARG:NH1	4:XD:181:MET:CG	2.71	0.54
7:XG:137:LYS:O	7:XG:141:VAL:HG23	2.08	0.54
8:XH:97:VAL:CG1	8:XH:98:LYS:N	2.70	0.54
12:XL:6:THR:OG1	12:XL:9:GLN:HG3	2.08	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
13:XM:121:LYS:HE2	13:XM:121:LYS:N	2.23	0.54
16:XP:3:LYS:O	16:XP:21:VAL:HA	2.08	0.54
25:YA:699:A:H2'	25:YA:700:G:O4'	2.08	0.54
25:YA:777:A:H2	25:YA:778:G:C4	2.26	0.54
25:YA:2230:G:C6	25:YA:2231:C:C4	2.95	0.54
25:YA:2275:C:O2	36:YQ:83:MET:HG3	2.08	0.54
25:YA:2336:A:H61	46:Y0:43:THR:HG21	1.72	0.54
25:YA:2712:U:H1'	25:YA:2712(A):A:C8	2.42	0.54
27:YD:206:LEU:O	27:YD:211:ARG:NH1	2.38	0.54
30:YG:7:LEU:HD12	30:YG:104:GLU:HA	1.88	0.54
32:YI:14:ASP:O	32:YI:16:GLY:N	2.39	0.54
35:YP:140:ALA:O	35:YP:141:ALA:HB2	2.08	0.54
42:YW:80:PRO:O	42:YW:100:THR:CG2	2.55	0.54
47:Y1:53:VAL:HG12	47:Y1:54:ALA:N	2.21	0.54
49:Y3:2:PRO:O	49:Y3:3:ARG:O	2.25	0.54
50:Y4:42:PHE:O	50:Y4:43:TYR:C	2.51	0.54
50:Y4:63:TYR:C	50:Y4:65:ASP:N	2.62	0.54
54:Y8:32:LEU:O	54:Y8:36:LYS:HE3	2.07	0.54
3:QC:181:ASN:HD21	3:QC:204:LEU:CD1	2.12	0.54
6:QF:52:ILE:O	6:QF:53:ALA:HB3	2.07	0.54
7:QG:62:PHE:O	7:QG:66:VAL:HG23	2.06	0.54
8:QH:102:ARG:NH1	8:QH:105:ARG:NH1	2.55	0.54
9:QI:66:ARG:HG2	9:QI:66:ARG:NH1	2.22	0.54
10:QJ:101:VAL:HG22	10:QJ:101:VAL:O	2.07	0.54
12:QL:6:THR:OG1	12:QL:9:GLN:HG3	2.08	0.54
12:QL:83:VAL:CG2	12:QL:100:ILE:HG23	2.38	0.54
13:QM:34:LEU:CD1	13:QM:41:PRO:HG3	2.38	0.54
13:QM:121:LYS:HE2	13:QM:121:LYS:N	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:483:A:H4'	44:RY:49:VAL:HG13	1.89	0.54
25:RA:995:C:H42	33:RN:2:LYS:HG3	1.72	0.54
25:RA:1006:C:H1'	33:RN:106:MET:CE	2.38	0.54
27:RD:183:ARG:HG2	27:RD:183:ARG:NH1	2.11	0.54
28:RE:176:ILE:HG22	28:RE:179:GLU:H	1.71	0.54
35:RP:125:VAL:O	35:RP:145:PRO:HD2	2.08	0.54
37:RR:45:ARG:HA	37:RR:95:THR:HG21	1.87	0.54
44:RY:88:LYS:HA	44:RY:88:LYS:HZ2	1.72	0.54
1:XA:688:G:H2'	1:XA:689:C:H6	1.73	0.54
1:XA:966:G:O2'	9:XI:127:LYS:O	2.24	0.54
1:XA:1007:C:H2'	1:XA:1008:C:H5''	1.90	0.54
1:XA:1152:A:H2'	1:XA:1153:C:H6	1.72	0.54
3:XC:109:PRO:O	3:XC:115:LEU:HD12	2.08	0.54
7:XG:46:ALA:HB2	7:XG:117:ALA:HB1	1.88	0.54
9:XI:43:ALA:C	9:XI:45:ALA:H	2.16	0.54
11:XK:50:TYR:HH	11:XK:59:TYR:HE2	1.55	0.54
14:XN:6:LEU:CD2	14:XN:23:ARG:NH2	2.70	0.54
14:XN:13:THR:N	14:XN:14:PRO:HD2	2.22	0.54
15:XO:21:ASP:OD1	15:XO:24:SER:HB2	2.07	0.54
25:YA:389:G:H22	35:YP:72:PRO:CG	2.20	0.54
25:YA:755:C:H2'	25:YA:756:C:H6	1.72	0.54
25:YA:812:C:H5'	35:YP:22:GLY:HA3	1.89	0.54
25:YA:860:U:C5	25:YA:917:A:C2	2.95	0.54
25:YA:1454:U:OP1	37:YR:77:ARG:NH1	2.41	0.54
25:YA:2667:C:H1'	31:YH:109:PHE:HD2	1.73	0.54
26:YB:9:G:N2	26:YB:111:U:O2	2.36	0.54
27:YD:118:VAL:HG22	27:YD:119:ALA:H	1.72	0.54
27:YD:211:ARG:HD2	27:YD:214:TRP:CZ3	2.43	0.54
28:YE:14:ILE:HG23	28:YE:15:PHE:N	2.23	0.54
29:YF:62:ARG:HB3	29:YF:62:ARG:NH1	2.22	0.54
33:YN:68:GLU:HG2	33:YN:88:GLU:CD	2.33	0.54
35:YP:124:LYS:HA	35:YP:143:GLY:O	2.08	0.54
37:YR:28:LEU:HD13	37:YR:28:LEU:O	2.08	0.54
40:YU:86:ALA:HB1	40:YU:88:ILE:HD11	1.90	0.54
50:Y4:47:GLN:O	50:Y4:48:ARG:HB2	2.07	0.54
52:Y6:17:LYS:O	52:Y6:18:ARG:HB2	2.08	0.54
1:QA:627:G:H2'	1:QA:628:G:C8	2.43	0.54
1:QA:966:G:O2'	9:QI:127:LYS:O	2.26	0.54
1:QA:1161:C:O2'	1:QA:1162:C:H5'	2.07	0.54
2:QB:55:PHE:HA	2:QB:58:ILE:HB	1.88	0.54
6:QF:78:GLU:OE2	6:QF:81:ILE:HD12	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:92:LYS:HB2	6:QF:92:LYS:NZ	2.22	0.54
9:QI:105:ASP:C	9:QI:107:ARG:H	2.14	0.54
15:QO:21:ASP:OD1	15:QO:24:SER:HB2	2.07	0.54
16:QP:21:VAL:O	16:QP:33:ILE:N	2.39	0.54
21:QU:21:TYR:O	21:QU:22:ARG:HB2	2.05	0.54
25:RA:744:G:H2'	25:RA:745:G:O4'	2.08	0.54
25:RA:1059:G:C6	25:RA:1060:U:H1'	2.43	0.54
25:RA:1199:U:H1'	40:RU:4:ALA:HB2	1.89	0.54
25:RA:2351:G:H8	25:RA:2351:G:O5'	1.89	0.54
25:RA:2425:A:H4'	25:RA:2426:A:H5''	1.88	0.54
27:RD:227:ASN:HB3	27:RD:228:PRO:CD	2.30	0.54
28:RE:54:GLN:NE2	28:RE:54:GLN:N	2.55	0.54
28:RE:101:ARG:HB3	28:RE:201:THR:OG1	2.08	0.54
29:RF:192:LEU:HD21	29:RF:194:MET:CE	2.35	0.54
36:RQ:21:THR:O	36:RQ:22:LYS:O	2.25	0.54
41:RV:45:THR:HG22	41:RV:45:THR:O	2.08	0.54
41:RV:91:TYR:C	41:RV:91:TYR:HD1	2.16	0.54
43:RX:18:TYR:C	43:RX:20:GLY:N	2.64	0.54
50:R4:51:ASP:O	50:R4:51:ASP:OD1	2.25	0.54
1:XA:377:G:P	16:XP:5:ARG:NH1	2.81	0.54
1:XA:1312:G:N7	19:XS:2:PRO:HD2	2.23	0.54
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.23	0.54
7:XG:13:GLN:O	7:XG:24:THR:HG21	2.08	0.54
7:XG:102:ARG:O	7:XG:106:GLN:HG3	2.08	0.54
8:XH:20:TYR:HD1	8:XH:65:TYR:HD2	1.55	0.54
11:XK:24:SER:HB3	11:XK:27:ASN:O	2.08	0.54
12:XL:119:LYS:C	12:XL:120:TYR:HD1	2.16	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
16:XP:48:TRP:O	16:XP:49:LEU:HB2	2.06	0.54
18:XR:29:PHE:CD2	18:XR:29:PHE:N	2.76	0.54
19:XS:62:ILE:C	19:XS:63:THR:HG22	2.32	0.54
25:YA:39:C:H2'	25:YA:40:C:C6	2.43	0.54
25:YA:1803:A:H2	25:YA:1822:G:N3	2.06	0.54
25:YA:1825:A:H2'	25:YA:1826:G:C8	2.42	0.54
25:YA:1931:U:H6	25:YA:1932:A:C8	2.25	0.54
25:YA:2230:G:C5	25:YA:2231:C:C5	2.95	0.54
25:YA:2287:A:N6	25:YA:2344:U:N3	2.55	0.54
27:YD:263:ARG:HB2	27:YD:263:ARG:HH11	1.68	0.54
29:YF:127:GLU:O	29:YF:129:PHE:N	2.39	0.54
31:YH:126:PRO:HD2	31:YH:127:GLU:H	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:153:LYS:CE	31:YH:153:LYS:HA	2.38	0.54
36:YQ:39:PRO:HB3	36:YQ:99:PRO:HD3	1.90	0.54
37:YR:18:LEU:HD13	37:YR:18:LEU:C	2.33	0.54
37:YR:38:VAL:HG22	37:YR:112:ALA:HB2	1.90	0.54
38:YS:111:GLU:HA	38:YS:111:GLU:OE1	2.07	0.54
51:Y5:44:THR:O	51:Y5:46:CYS:N	2.41	0.54
52:Y6:20:ASN:CG	52:Y6:21:TYR:N	2.66	0.54
1:QA:741:G:H2'	1:QA:742:G:H8	1.73	0.54
1:QA:965:A:C2	1:QA:969:A:N1	2.76	0.54
2:QB:16:HIS:CE1	2:QB:209:ARG:HH21	2.25	0.54
2:QB:170:GLU:HA	2:QB:172:ILE:HD12	1.90	0.54
4:QD:23:GLY:HA3	4:QD:112:VAL:CG2	2.38	0.54
5:QE:10:MET:HE2	5:QE:13:ILE:HD13	1.89	0.54
8:QH:101:PRO:HG2	8:QH:133:LEU:HD11	1.89	0.54
9:QI:43:ALA:C	9:QI:45:ALA:H	2.16	0.54
14:QN:13:THR:N	14:QN:14:PRO:HD2	2.21	0.54
16:QP:3:LYS:O	16:QP:21:VAL:HA	2.08	0.54
20:QT:43:LEU:HA	20:QT:46:GLU:HB3	1.88	0.54
25:RA:242:G:C5'	54:R8:3:LYS:HE3	2.35	0.54
25:RA:310:A:OP1	44:RY:18:GLY:N	2.25	0.54
25:RA:571:A:C6	25:RA:575:A:C8	2.95	0.54
25:RA:829:A:N7	25:RA:2247:A:O2'	2.37	0.54
25:RA:2283:C:P	52:R6:5:VAL:HG13	2.48	0.54
29:RF:67:GLN:O	29:RF:68:LYS:CB	2.39	0.54
33:RN:42:TRP:CD1	40:RU:63:VAL:HG11	2.42	0.54
35:RP:124:LYS:HA	35:RP:143:GLY:O	2.08	0.54
36:RQ:60:ARG:HH12	36:RQ:113:GLN:HE22	1.55	0.54
37:RR:1:MET:O	37:RR:2:ARG:HG3	2.08	0.54
47:R1:83:GLU:CD	47:R1:85:LEU:H	2.15	0.54
48:R2:31:GLU:HB2	48:R2:53:LEU:HD11	1.89	0.54
49:R3:35:ARG:HB3	49:R3:37:LEU:CD2	2.37	0.54
51:R5:55:ARG:HD3	51:R5:56:LYS:H	1.73	0.54
1:XA:690:G:H22	11:XK:55:LYS:HZ1	1.54	0.54
1:XA:1446:A:C2	39:YT:118:ARG:HD2	2.43	0.54
2:XB:83:MET:O	2:XB:85:ALA:N	2.41	0.54
2:XB:102:LEU:HB3	2:XB:180:LEU:HD12	1.90	0.54
3:XC:134:ILE:CD1	3:XC:153:VAL:HG21	2.35	0.54
3:XC:134:ILE:HG21	3:XC:168:ALA:HB3	1.89	0.54
4:XD:196:LEU:C	4:XD:198:VAL:N	2.66	0.54
8:XH:51:VAL:HG11	8:XH:60:ARG:CG	2.38	0.54
8:XH:101:PRO:HG2	8:XH:133:LEU:HD11	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:482:A:H4'	44:YY:47:LYS:CD	2.26	0.54
25:YA:529:A:H2	25:YA:2041:U:H3	1.51	0.54
25:YA:739:G:H22	25:YA:758:C:H42	1.56	0.54
25:YA:852:G:H2'	25:YA:853:G:C8	2.43	0.54
25:YA:977:G:H4'	25:YA:1155:A:H5'	1.89	0.54
25:YA:1443:G:N2	25:YA:1549:C:N3	2.56	0.54
25:YA:2084:C:H2'	25:YA:2085:C:H6	1.73	0.54
27:YD:124:PRO:HB2	27:YD:126:GLN:NE2	2.23	0.54
28:YE:14:ILE:HD11	39:YT:14:TYR:CZ	2.42	0.54
28:YE:51:PHE:O	28:YE:74:PRO:HB3	2.08	0.54
30:YG:3:LEU:HD12	30:YG:4:ASP:N	2.19	0.54
30:YG:81:LYS:O	30:YG:82:LEU:CB	2.56	0.54
31:YH:91:GLY:O	31:YH:94:TYR:HB2	2.08	0.54
33:YN:7:LYS:HD3	33:YN:9:VAL:CA	2.38	0.54
34:YO:78:ARG:O	39:YT:73:GLU:HG3	2.08	0.54
35:YP:24:GLY:O	35:YP:25:SER:HB3	2.06	0.54
35:YP:84:ASN:ND2	35:YP:115:LEU:HD12	2.22	0.54
38:YS:13:ARG:O	38:YS:13:ARG:HD2	2.07	0.54
40:YU:24:TYR:O	40:YU:29:SER:HB3	2.08	0.54
41:YV:66:ARG:HH11	41:YV:66:ARG:CB	2.20	0.54
41:YV:91:TYR:C	41:YV:91:TYR:HD1	2.16	0.54
43:YX:5:TYR:HE2	48:Y2:30:ARG:HH11	1.55	0.54
46:Y0:22:GLY:N	46:Y0:39:ARG:O	2.29	0.54
55:Y9:1:MET:HB3	55:Y9:4:ARG:CZ	2.37	0.54
1:QA:487:A:H2'	1:QA:488:C:O4'	2.07	0.54
1:QA:691:G:N2	1:QA:696:A:OP2	2.41	0.54
1:QA:807:A:H2'	1:QA:808:C:C6	2.43	0.54
1:QA:922:G:N2	1:QA:923:A:N3	2.55	0.54
7:QG:13:GLN:O	7:QG:24:THR:HG21	2.08	0.54
15:QO:87:ILE:CG2	15:QO:88:ARG:H	2.00	0.54
19:QS:62:ILE:C	19:QS:63:THR:HG22	2.32	0.54
21:QU:6:ARG:O	21:QU:8:THR:N	2.39	0.54
25:RA:265:A:O2'	25:RA:266:G:H4'	2.07	0.54
25:RA:2867:G:O2'	25:RA:2868:A:H8	1.91	0.54
27:RD:158:ALA:HB3	27:RD:161:THR:HG21	1.89	0.54
31:RH:26:VAL:CG1	31:RH:27:LYS:N	2.64	0.54
31:RH:86:GLU:CD	31:RH:86:GLU:H	2.16	0.54
31:RH:91:GLY:O	31:RH:94:TYR:HB2	2.08	0.54
31:RH:153:LYS:HA	31:RH:153:LYS:CE	2.37	0.54
32:RI:99:GLU:OE2	32:RI:103:ARG:NH2	2.38	0.54
34:RO:4:PRO:O	34:RO:5:GLN:HB2	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RP:64:LYS:HG3	54:R8:25:MET:SD	2.48	0.54
39:RT:14:TYR:H	39:RT:14:TYR:HD1	1.56	0.54
40:RU:95:LEU:HD12	41:RV:11:GLN:HE21	1.72	0.54
44:RY:87:LYS:NZ	44:RY:87:LYS:HB2	2.23	0.54
52:R6:17:LYS:O	52:R6:18:ARG:HB2	2.08	0.54
1:XA:303:A:H2'	1:XA:304:U:O4'	2.08	0.54
1:XA:375:U:H5''	16:XP:69:THR:HG21	1.90	0.54
1:XA:1194:U:H4'	5:XE:22:GLY:O	2.08	0.54
1:XA:1221:G:P	19:XS:36:ARG:HD3	2.47	0.54
1:XA:1230:C:H2'	1:XA:1231:G:H8	1.73	0.54
3:XC:92:ALA:HB2	3:XC:99:VAL:CG1	2.38	0.54
7:XG:12:LEU:HD22	7:XG:12:LEU:N	2.22	0.54
7:XG:113:GLU:HB2	7:XG:119:ARG:CG	2.35	0.54
10:XJ:101:VAL:HG22	10:XJ:101:VAL:O	2.07	0.54
12:XL:42:THR:HA	12:XL:53:ARG:O	2.08	0.54
13:XM:30:ALA:O	13:XM:31:LYS:C	2.49	0.54
13:XM:73:GLU:O	13:XM:77:ASN:N	2.33	0.54
17:XQ:65:ILE:HD12	17:XQ:65:ILE:H	1.73	0.54
25:YA:445:C:O2'	25:YA:446:G:H5'	2.07	0.54
25:YA:646:A:H2'	25:YA:647:G:O4'	2.08	0.54
25:YA:1412:A:H2'	25:YA:1413:G:C8	2.43	0.54
25:YA:2061:G:OP2	25:YA:2502:G:OP2	2.25	0.54
27:YD:158:ALA:HB3	27:YD:161:THR:HG21	1.90	0.54
34:YO:68:GLU:HA	34:YO:78:ARG:HB3	1.89	0.54
35:YP:92:GLU:HA	35:YP:123:LEU:CD2	2.38	0.54
39:YT:55:ASN:O	39:YT:57:PHE:O	2.26	0.54
44:YY:87:LYS:HB2	44:YY:87:LYS:NZ	2.23	0.54
47:Y1:80:LEU:C	47:Y1:81:LYS:CE	2.77	0.54
47:Y1:91:LYS:HA	47:Y1:91:LYS:CE	2.37	0.54
48:Y2:47:ASN:ND2	48:Y2:47:ASN:N	2.54	0.54
49:Y3:56:VAL:CG1	49:Y3:57:GLU:H	2.20	0.54
50:Y4:65:ASP:O	50:Y4:66:SER:HB3	2.07	0.54
1:QA:277:C:H5'	17:QQ:68:ARG:NH2	2.23	0.54
1:QA:337:C:H2'	1:QA:338:A:C8	2.43	0.54
1:QA:354:G:C2'	1:QA:355:C:H5'	2.38	0.54
1:QA:582:U:C2	1:QA:760:G:C6	2.96	0.54
1:QA:922:G:H1'	5:QE:19:MET:HE3	1.90	0.54
5:QE:101:ILE:O	5:QE:101:ILE:HG12	2.08	0.54
9:QI:99:LEU:O	9:QI:101:PHE:N	2.41	0.54
11:QK:24:SER:HB3	11:QK:27:ASN:O	2.08	0.54
13:QM:121:LYS:NZ	24:QY:39:C:O2'	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:15:LEU:CD2	19:QS:15:LEU:H	2.21	0.54
25:RA:270(R):G:H1'	47:R1:78:LYS:HZ1	1.71	0.54
25:RA:2030:A:H4'	25:RA:2031:A:C8	2.43	0.54
25:RA:2458:G:O2'	25:RA:2490:G:O6	2.24	0.54
25:RA:2635:C:H5''	28:RE:78:LEU:HA	1.89	0.54
25:RA:2740:A:H2'	25:RA:2741:A:C8	2.43	0.54
29:RF:29:ASN:CB	29:RF:112:MET:HE1	2.38	0.54
37:RR:38:VAL:HG22	37:RR:112:ALA:HB2	1.90	0.54
37:RR:53:HIS:HA	37:RR:56:LYS:HD3	1.90	0.54
47:R1:92:LYS:O	47:R1:94:LEU:N	2.41	0.54
1:XA:142:G:H2'	1:XA:143:A:C8	2.41	0.54
1:XA:186:C:H5'	20:XT:78:ALA:HB1	1.89	0.54
1:XA:186(C):G:H2'	1:XA:186(D):C:C6	2.43	0.54
1:XA:1073:U:O2'	2:XB:104:ASN:OD1	2.24	0.54
6:XF:89:MET:HG2	6:XF:89:MET:O	2.08	0.54
10:XJ:61:GLU:HG3	14:YN:58:LYS:HE2	1.90	0.54
18:XR:39:VAL:HA	18:XR:42:ARG:NH1	2.23	0.54
18:XR:51:LEU:HD22	18:XR:55:ARG:HD2	1.90	0.54
25:YA:1266:G:C5	42:YW:15:ARG:NH1	2.75	0.54
25:YA:2289:G:N2	25:YA:2344:U:C2	2.76	0.54
25:YA:2370:G:H21	52:Y6:45:LYS:NZ	2.06	0.54
26:YB:100:G:H2'	26:YB:101:A:C8	2.43	0.54
27:YD:80:ALA:HB3	27:YD:94:LEU:HD13	1.88	0.54
27:YD:85:ASP:OD2	27:YD:88:ARG:HG2	2.07	0.54
27:YD:130:ALA:C	27:YD:131:LEU:HD12	2.33	0.54
29:YF:147:GLY:O	29:YF:148:LEU:HD23	2.08	0.54
31:YH:125:VAL:HA	31:YH:126:PRO:CB	2.29	0.54
34:YO:49:ARG:HB3	34:YO:49:ARG:NH1	2.23	0.54
34:YO:55:GLY:O	34:YO:56:ASP:C	2.50	0.54
37:YR:70:LEU:HD13	37:YR:75:LEU:HD11	1.88	0.54
40:YU:74:LEU:HD13	40:YU:79:PHE:HB2	1.89	0.54
41:YV:45:THR:HG22	41:YV:45:THR:O	2.08	0.54
45:YZ:152:ALA:HB2	45:YZ:168:GLU:HA	1.90	0.54
1:QA:493:G:H8	1:QA:493:G:O5'	1.90	0.53
1:QA:836:G:C6	1:QA:851:G:C6	2.96	0.53
3:QC:51:GLY:O	3:QC:70:VAL:HG13	2.08	0.53
3:QC:53:ALA:HB2	3:QC:115:LEU:HD21	1.90	0.53
3:QC:195:VAL:CG1	3:QC:196:LEU:N	2.71	0.53
4:QD:79:PHE:CE2	4:QD:83:SER:HB2	2.43	0.53
7:QG:102:ARG:O	7:QG:106:GLN:HG3	2.08	0.53
9:QI:28:VAL:HG13	9:QI:63:ILE:HG21	1.89	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:119:LYS:C	12:QL:120:TYR:HD1	2.16	0.53
17:QQ:5:VAL:O	17:QQ:6:LEU:HD23	2.08	0.53
22:QV:68:C:H2'	22:QV:69:C:C6	2.42	0.53
25:RA:422:A:C6	25:RA:423:A:C6	2.95	0.53
25:RA:897:C:H3'	25:RA:897:C:OP2	2.08	0.53
27:RD:25:THR:CG2	27:RD:81:ALA:HB1	2.38	0.53
27:RD:206:LEU:O	27:RD:211:ARG:NH1	2.38	0.53
28:RE:51:PHE:O	28:RE:74:PRO:HB3	2.08	0.53
28:RE:53:PRO:O	28:RE:74:PRO:HA	2.07	0.53
34:RO:113:LYS:HG2	34:RO:117:LEU:CD1	2.38	0.53
35:RP:37:GLY:HA2	35:RP:41:ARG:NE	2.23	0.53
37:RR:18:LEU:HD13	37:RR:18:LEU:C	2.33	0.53
47:R1:83:GLU:OE1	47:R1:85:LEU:HD23	2.07	0.53
48:R2:43:GLN:O	48:R2:44:LEU:CG	2.54	0.53
51:R5:60:VAL:OXT	51:R5:60:VAL:CG1	2.56	0.53
1:XA:582:U:C2	1:XA:760:G:C6	2.97	0.53
1:XA:600:C:H42	1:XA:638:G:H1	1.57	0.53
1:XA:1157:A:H1'	1:XA:1158:C:N3	2.23	0.53
9:XI:13:ALA:HA	9:XI:66:ARG:O	2.08	0.53
9:XI:47:LEU:HB3	9:XI:50:LEU:HD12	1.90	0.53
9:XI:53:VAL:CB	9:XI:95:LYS:HE3	2.36	0.53
9:XI:99:LEU:O	9:XI:101:PHE:N	2.41	0.53
10:XJ:16:LEU:O	10:XJ:20:ALA:HB2	2.08	0.53
13:XM:87:TYR:C	13:XM:89:GLY:N	2.64	0.53
25:YA:372:G:O2'	25:YA:373:U:P	2.65	0.53
25:YA:580:C:H2'	25:YA:581:C:C6	2.43	0.53
25:YA:784:A:O2'	25:YA:785:G:H5''	2.07	0.53
25:YA:860:U:OP2	25:YA:916:G:N1	2.38	0.53
25:YA:890:A:O2'	25:YA:892:G:H8	1.92	0.53
25:YA:1050:A:O2'	25:YA:2752:C:H1'	2.08	0.53
25:YA:2653:U:O2'	31:YH:110:SER:HB2	2.07	0.53
25:YA:2738:A:H2	25:YA:2766:G:H22	1.56	0.53
25:YA:2756:U:OP2	55:Y9:19:ARG:NE	2.41	0.53
27:YD:183:ARG:HG2	27:YD:183:ARG:NH1	2.12	0.53
28:YE:25:VAL:HG11	39:YT:11:GLU:HG2	1.90	0.53
28:YE:186:GLY:O	28:YE:188:VAL:N	2.41	0.53
29:YF:197:ASP:O	29:YF:198:ALA:HB3	2.06	0.53
37:YR:70:LEU:C	37:YR:72:ASP:H	2.16	0.53
39:YT:105:LEU:O	39:YT:107:ASP:N	2.41	0.53
41:YV:91:TYR:C	41:YV:91:TYR:CD1	2.87	0.53
1:QA:45:U:H2'	1:QA:46:G:C8	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:122:G:C2	1:QA:123:C:C2	2.96	0.53
1:QA:327:A:O2'	1:QA:328:C:O4'	2.22	0.53
10:QJ:61:GLU:HG3	14:QN:58:LYS:HE2	1.90	0.53
13:QM:76:ALA:O	13:QM:79:LYS:HB3	2.09	0.53
15:QO:7:GLU:O	15:QO:11:VAL:HG23	2.08	0.53
25:RA:1359:A:H61	25:RA:1372:U:H3	1.55	0.53
25:RA:1600:C:H2'	25:RA:1601:G:C8	2.42	0.53
25:RA:2046:G:H2'	25:RA:2047:U:C6	2.44	0.53
25:RA:2723:C:OP1	37:RR:3:HIS:HD2	1.91	0.53
25:RA:2815:C:H5'	51:R5:29:THR:HG21	1.91	0.53
27:RD:85:ASP:OD2	27:RD:88:ARG:HG2	2.07	0.53
27:RD:211:ARG:HD2	27:RD:214:TRP:CZ3	2.43	0.53
27:RD:227:ASN:CB	27:RD:228:PRO:HD2	2.24	0.53
29:RF:116:ASP:OD1	29:RF:119:ARG:NH2	2.41	0.53
31:RH:139:GLN:O	31:RH:143:GLN:HB2	2.09	0.53
33:RN:109:LYS:HD2	33:RN:109:LYS:H	1.74	0.53
34:RO:55:GLY:O	34:RO:56:ASP:C	2.50	0.53
34:RO:78:ARG:O	39:RT:73:GLU:HG3	2.08	0.53
36:RQ:119:ARG:HG2	36:RQ:119:ARG:NH1	2.20	0.53
37:RR:28:LEU:HD13	37:RR:28:LEU:O	2.08	0.53
40:RU:24:TYR:O	40:RU:29:SER:HB3	2.08	0.53
41:RV:7:THR:CG2	41:RV:22:VAL:HG11	2.39	0.53
43:RX:53:LYS:NZ	43:RX:55:ASN:HD21	2.06	0.53
47:R1:25:LYS:C	47:R1:27:GLU:H	2.16	0.53
53:R7:10:ARG:NH1	53:R7:14:LYS:HE3	2.23	0.53
1:XA:34:C:H2'	1:XA:35:G:H8	1.72	0.53
1:XA:337:C:H2'	1:XA:338:A:C8	2.43	0.53
1:XA:403:C:H42	1:XA:547:A:H5'	1.73	0.53
1:XA:486:U:H2'	1:XA:487:A:C8	2.42	0.53
1:XA:881:G:P	12:XL:12:ARG:HH22	2.31	0.53
1:XA:1024:G:OP1	1:XA:1024:G:H4'	2.09	0.53
1:XA:1239:A:H4'	1:XA:1240:U:H5''	1.90	0.53
3:XC:53:ALA:HB2	3:XC:115:LEU:HD21	1.90	0.53
9:XI:128:ARG:HH21	22:XV:35:A:P	2.31	0.53
13:XM:39:ILE:HD11	13:XM:56:LEU:HB2	1.90	0.53
17:XQ:33:GLY:O	17:XQ:34:LYS:O	2.26	0.53
25:YA:1509:C:H2'	25:YA:1511:A:C8	2.43	0.53
25:YA:1670:C:C4	25:YA:1671:U:C2	2.96	0.53
25:YA:2134:A:O2'	25:YA:2159:G:N2	2.36	0.53
25:YA:2415:G:H4'	35:YP:66:GLY:C	2.33	0.53
25:YA:2698:U:H2'	25:YA:2699:C:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2863:C:H2'	25:YA:2864:G:H8	1.73	0.53
28:YE:101:ARG:HB3	28:YE:201:THR:OG1	2.08	0.53
30:YG:83:ARG:HB2	30:YG:86:MET:HE3	1.89	0.53
31:YH:12:PRO:O	31:YH:13:LYS:HB2	2.07	0.53
31:YH:59:ARG:HH11	31:YH:59:ARG:CG	2.20	0.53
33:YN:134:ARG:N	33:YN:135:PRO:CD	2.58	0.53
34:YO:12:ASP:OD1	34:YO:85:VAL:HG13	2.08	0.53
35:YP:14:LYS:O	35:YP:15:ARG:C	2.51	0.53
38:YS:25:ARG:HH12	38:YS:42:ASP:CG	2.16	0.53
38:YS:74:ALA:HB1	38:YS:107:GLU:HB3	1.89	0.53
44:YY:90:LEU:HD22	44:YY:90:LEU:H	1.73	0.53
45:YZ:10:ARG:HD2	45:YZ:36:LYS:HB3	1.90	0.53
48:Y2:41:ILE:HD11	48:Y2:44:LEU:HB2	1.90	0.53
52:Y6:12:GLU:HG2	52:Y6:52:VAL:O	2.07	0.53
52:Y6:13:CYS:O	52:Y6:14:THR:HB	2.08	0.53
53:Y7:10:ARG:NH1	53:Y7:14:LYS:HE3	2.23	0.53
1:QA:792:A:H2'	1:QA:792:A:N3	2.23	0.53
1:QA:1178:G:C8	1:QA:1180:A:OP2	2.61	0.53
1:QA:1471:G:H2'	1:QA:1472:U:C6	2.41	0.53
2:QB:170:GLU:C	2:QB:172:ILE:HD12	2.33	0.53
3:QC:3:ASN:ND2	3:QC:3:ASN:H	2.05	0.53
3:QC:78:GLY:HA3	3:QC:83:ARG:CB	2.38	0.53
3:QC:92:ALA:HB2	3:QC:99:VAL:CG1	2.38	0.53
4:QD:153:ARG:NH1	4:QD:181:MET:CG	2.71	0.53
4:QD:173:TRP:CD1	4:QD:174:LEU:HG	2.44	0.53
8:QH:10:LEU:H	8:QH:10:LEU:CD2	2.15	0.53
12:QL:11:VAL:HG13	17:QQ:29:HIS:CD2	2.43	0.53
18:QR:58:LEU:HD12	18:QR:58:LEU:H	1.72	0.53
25:RA:323:G:HO2'	25:RA:1205:U:H3	1.51	0.53
25:RA:486:C:H4'	42:RW:60:ASN:OD1	2.08	0.53
25:RA:1427:A:H4'	25:RA:1428:C:O5'	2.07	0.53
25:RA:1992:G:O2'	25:RA:1993:U:OP2	2.22	0.53
25:RA:2359:C:H2'	25:RA:2360:A:O4'	2.09	0.53
29:RF:32:LEU:HD12	29:RF:36:VAL:HG23	1.89	0.53
29:RF:198:ALA:C	29:RF:200:GLU:N	2.62	0.53
33:RN:137:LYS:HG3	33:RN:138:LEU:N	2.23	0.53
35:RP:140:ALA:O	35:RP:141:ALA:HB2	2.08	0.53
37:RR:3:HIS:C	37:RR:5:LYS:H	2.16	0.53
38:RS:111:GLU:OE1	38:RS:111:GLU:HA	2.07	0.53
44:RY:44:ILE:CG1	44:RY:45:VAL:N	2.70	0.53
52:R6:20:ASN:CG	52:R6:21:TYR:N	2.66	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:35:G:O2'	12:XL:118:SER:O	2.18	0.53
1:XA:562:C:H1'	12:XL:15:ARG:HD2	1.89	0.53
1:XA:606:G:N2	1:XA:631:G:C8	2.72	0.53
1:XA:1343:G:H2'	1:XA:1344:C:H6	1.72	0.53
4:XD:120:LEU:HD22	4:XD:125:HIS:CB	2.38	0.53
5:XE:101:ILE:HG12	5:XE:101:ILE:O	2.08	0.53
9:XI:28:VAL:HG13	9:XI:63:ILE:HG21	1.89	0.53
12:XL:6:THR:O	12:XL:7:ILE:C	2.51	0.53
12:XL:83:VAL:CG2	12:XL:100:ILE:HG23	2.38	0.53
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ2	1.72	0.53
25:YA:273(A):G:C2	25:YA:364:C:N3	2.76	0.53
25:YA:617:G:OP1	29:YF:40:GLN:NE2	2.41	0.53
25:YA:1221:C:H2'	25:YA:1222:C:H6	1.72	0.53
25:YA:1338:G:N7	43:YX:62:LYS:NZ	2.41	0.53
25:YA:1386:C:H2'	25:YA:1387:C:H6	1.73	0.53
25:YA:1691:C:H2'	25:YA:1692:U:O4'	2.09	0.53
25:YA:1788:C:O2'	25:YA:1789:A:H5'	2.08	0.53
25:YA:1957:C:H2'	25:YA:1958:C:H6	1.74	0.53
25:YA:2168:G:H8	25:YA:2168:G:OP2	1.91	0.53
25:YA:2252:G:H2'	25:YA:2253:G:O4'	2.07	0.53
25:YA:2543:G:N2	25:YA:2765:A:C8	2.76	0.53
27:YD:35:LYS:CG	27:YD:64:ILE:H	2.15	0.53
29:YF:51:THR:O	29:YF:93:LYS:NZ	2.38	0.53
30:YG:139:LEU:HD22	30:YG:146:TYR:HD1	1.73	0.53
31:YH:86:GLU:H	31:YH:86:GLU:CD	2.16	0.53
31:YH:151:ILE:C	31:YH:152:ARG:O	2.49	0.53
39:YT:135:ALA:C	39:YT:137:LYS:H	2.16	0.53
44:YY:47:LYS:C	44:YY:49:VAL:H	2.16	0.53
52:Y6:11:LEU:CD1	52:Y6:51:GLU:HG3	2.39	0.53
54:Y8:63:PRO:O	54:Y8:64:TYR:HB2	2.07	0.53
1:QA:1305:G:H22	1:QA:1331:G:H2'	1.71	0.53
1:QA:1305:G:OP1	21:QU:2:GLY:HA2	2.09	0.53
2:QB:24:TRP:CE2	2:QB:26:PRO:HD3	2.43	0.53
2:QB:134:GLU:HB3	2:QB:138:LEU:CD1	2.39	0.53
2:QB:187:LEU:HD22	2:QB:201:ILE:O	2.07	0.53
7:QG:12:LEU:HD22	7:QG:12:LEU:N	2.23	0.53
8:QH:77:GLU:HG2	8:QH:78:GLN:N	2.22	0.53
9:QI:4:TYR:CE2	9:QI:88:TYR:HB2	2.44	0.53
9:QI:13:ALA:HA	9:QI:66:ARG:O	2.08	0.53
25:RA:468:G:N7	53:R7:39:ARG:NH2	2.57	0.53
25:RA:843:G:N2	25:RA:936:C:C2	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:856:C:H1'	46:R0:27:GLU:HB3	1.89	0.53
25:RA:1107:G:H2'	25:RA:1108:U:H6	1.74	0.53
25:RA:1754:C:H2'	25:RA:1755:A:H8	1.71	0.53
25:RA:2676:C:O2	25:RA:2732:G:N2	2.31	0.53
25:RA:2712:U:H1'	25:RA:2712(A):A:C8	2.44	0.53
27:RD:124:PRO:HB2	27:RD:126:GLN:NE2	2.22	0.53
28:RE:14:ILE:CG1	28:RE:15:PHE:H	2.08	0.53
30:RG:81:LYS:O	30:RG:82:LEU:CB	2.56	0.53
34:RO:49:ARG:HB3	34:RO:49:ARG:NH1	2.23	0.53
36:RQ:112:GLU:CD	36:RQ:112:GLU:H	2.17	0.53
37:RR:70:LEU:C	37:RR:72:ASP:H	2.16	0.53
39:RT:135:ALA:C	39:RT:137:LYS:H	2.16	0.53
41:RV:66:ARG:HH11	41:RV:66:ARG:CB	2.20	0.53
41:RV:91:TYR:C	41:RV:91:TYR:CD1	2.87	0.53
49:R3:2:PRO:O	49:R3:3:ARG:O	2.25	0.53
51:R5:16:ARG:NH1	51:R5:17:ASP:OD1	2.41	0.53
51:R5:44:THR:O	51:R5:46:CYS:N	2.40	0.53
52:R6:11:LEU:CD1	52:R6:51:GLU:HG3	2.39	0.53
54:R8:58:ILE:O	54:R8:61:LEU:HG	2.08	0.53
1:XA:442:C:H2'	1:XA:443:C:H6	1.73	0.53
1:XA:1399:C:C2	1:XA:1502:A:N6	2.77	0.53
2:XB:80:ILE:CD1	2:XB:208:ILE:HG23	2.22	0.53
2:XB:178:ARG:NH2	8:XH:68:ARG:HH22	2.05	0.53
3:XC:3:ASN:ND2	3:XC:3:ASN:H	2.05	0.53
4:XD:173:TRP:CD1	4:XD:174:LEU:HG	2.44	0.53
7:XG:85:TYR:HE1	7:XG:154:TYR:HE1	1.56	0.53
13:XM:34:LEU:CD1	13:XM:41:PRO:HG3	2.38	0.53
19:XS:63:THR:O	19:XS:66:MET:HG2	2.09	0.53
20:XT:30:LYS:HE2	20:XT:72:LEU:HD12	1.91	0.53
25:YA:247:G:O6	54:Y8:12:LYS:NZ	2.28	0.53
25:YA:1793:C:O2	25:YA:1900:A:H2	1.91	0.53
27:YD:25:THR:HG21	27:YD:81:ALA:CB	2.38	0.53
28:YE:47:VAL:O	28:YE:48:GLN:C	2.52	0.53
28:YE:61:ARG:O	28:YE:62:PRO:C	2.51	0.53
32:YI:29:TYR:HA	32:YI:33:ARG:HD3	1.89	0.53
33:YN:12:ARG:NH1	33:YN:50:ASP:CG	2.67	0.53
33:YN:137:LYS:HG3	33:YN:138:LEU:N	2.23	0.53
36:YQ:112:GLU:CD	36:YQ:112:GLU:H	2.17	0.53
37:YR:91:GLN:HG2	37:YR:91:GLN:O	2.08	0.53
54:Y8:58:ILE:O	54:Y8:61:LEU:HG	2.08	0.53
1:QA:474:G:C5'	16:QP:81:ARG:HG3	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:980:C:H3'	1:QA:981:U:C6	2.43	0.53
1:QA:1178:G:H5''	9:QI:93:ARG:NH2	2.23	0.53
1:QA:1259:C:C4	1:QA:1260:C:H1'	2.43	0.53
3:QC:173:VAL:HG12	3:QC:173:VAL:O	2.08	0.53
4:QD:108:LEU:HD11	4:QD:174:LEU:CD2	2.37	0.53
6:QF:41:GLU:HG2	6:QF:43:LEU:HD11	1.89	0.53
7:QG:137:LYS:O	7:QG:141:VAL:HG23	2.07	0.53
11:QK:20:TYR:HB2	11:QK:31:THR:O	2.07	0.53
13:QM:39:ILE:HD11	13:QM:56:LEU:HB2	1.90	0.53
15:QO:32:LEU:O	15:QO:33:THR:C	2.51	0.53
18:QR:51:LEU:HD22	18:QR:55:ARG:HD2	1.89	0.53
25:RA:153:C:P	47:R1:88:LYS:HE2	2.48	0.53
25:RA:336:C:HO2'	44:RY:35:TYR:HH	1.57	0.53
25:RA:729:G:H2'	25:RA:1775:U:H1'	1.90	0.53
25:RA:1590:U:H2'	25:RA:1591:G:C8	2.40	0.53
25:RA:2216:G:H2'	25:RA:2217:G:H8	1.72	0.53
27:RD:25:THR:O	27:RD:25:THR:HG23	2.07	0.53
33:RN:12:ARG:NH1	33:RN:50:ASP:CG	2.67	0.53
37:RR:91:GLN:O	37:RR:91:GLN:HG2	2.08	0.53
38:RS:25:ARG:HH11	38:RS:25:ARG:CB	2.22	0.53
40:RU:86:ALA:HB1	40:RU:88:ILE:HD11	1.90	0.53
43:RX:60:ARG:NH1	53:R7:47:ARG:HH22	2.07	0.53
44:RY:97:ARG:NH2	44:RY:98:VAL:CB	2.65	0.53
52:R6:9:LEU:HD13	52:R6:26:ASN:ND2	2.24	0.53
54:R8:29:LYS:HB2	54:R8:44:LYS:HG2	1.90	0.53
1:XA:447:G:H2'	1:XA:485:G:N2	2.22	0.53
1:XA:604:G:H2'	1:XA:605:U:O4'	2.08	0.53
2:XB:140:HIS:C	2:XB:142:LEU:H	2.16	0.53
7:XG:50:ILE:HG22	7:XG:50:ILE:O	2.07	0.53
13:XM:81:LEU:HD13	13:XM:88:ARG:HD2	1.90	0.53
17:XQ:11:VAL:HG22	17:XQ:20:THR:O	2.09	0.53
19:XS:7:LYS:HG3	19:XS:8:GLY:N	2.22	0.53
21:XU:14:TRP:CZ3	21:XU:15:ARG:HD3	2.43	0.53
25:YA:270(U):C:H2'	25:YA:270(V):G:H8	1.74	0.53
25:YA:317:G:C2	25:YA:318:C:C2	2.97	0.53
25:YA:793:A:O2'	25:YA:794:G:OP2	2.26	0.53
25:YA:901:A:H5'	25:YA:902:C:OP2	2.07	0.53
25:YA:1405:U:H2'	25:YA:1406:U:H6	1.74	0.53
25:YA:1444(A):A:O2'	25:YA:1460:A:N3	2.42	0.53
25:YA:2735:G:H2'	25:YA:2736:G:C8	2.44	0.53
35:YP:88:LEU:HD23	35:YP:89:ALA:N	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:125:VAL:O	35:YP:145:PRO:HD2	2.08	0.53
42:YW:28:SER:HB3	42:YW:31:GLU:HB2	1.91	0.53
48:Y2:16:LEU:O	48:Y2:16:LEU:CG	2.49	0.53
51:Y5:16:ARG:NH1	51:Y5:17:ASP:OD1	2.41	0.53
1:QA:176:C:H2'	1:QA:177:C:H6	1.74	0.53
1:QA:315:A:H5''	1:QA:317:G:OP2	2.08	0.53
1:QA:619:U:N3	4:QD:134:ASP:OD2	2.42	0.53
1:QA:1004:A:H1'	1:QA:1036:G:C2	2.44	0.53
2:QB:134:GLU:O	2:QB:138:LEU:HD12	2.07	0.53
4:QD:198:VAL:HG12	4:QD:199:ASN:H	1.74	0.53
5:QE:36:ASP:OD1	5:QE:37:ARG:N	2.42	0.53
5:QE:79:GLU:OE2	8:QH:104:ARG:C	2.51	0.53
10:QJ:16:LEU:O	10:QJ:20:ALA:HB2	2.08	0.53
19:QS:5:LEU:CD2	50:R4:66:SER:HB2	2.36	0.53
23:QX:6:C:O2'	23:QX:7:U:P	2.66	0.53
25:RA:135:G:H1	25:RA:144:C:N4	2.05	0.53
25:RA:138:G:N2	43:RX:44:GLU:OE2	2.38	0.53
25:RA:140:A:H8	25:RA:1408:C:HO2'	1.55	0.53
25:RA:288:C:H2'	25:RA:289:A:C8	2.42	0.53
25:RA:1140:C:H5''	33:RN:66:LYS:NZ	2.24	0.53
25:RA:1380:G:O2'	25:RA:1569:A:N6	2.42	0.53
25:RA:1592:C:H2'	25:RA:1593:G:C8	2.43	0.53
25:RA:1852:C:H41	25:RA:1888:G:N2	2.06	0.53
25:RA:2012:G:H4'	42:RW:96:ILE:HD11	1.91	0.53
25:RA:2061:G:C2	25:RA:2063:C:C4	2.97	0.53
26:RB:31:C:H42	26:RB:51:G:H1	1.55	0.53
28:RE:14:ILE:HG23	28:RE:15:PHE:N	2.22	0.53
28:RE:20:ALA:O	28:RE:21:VAL:CG2	2.48	0.53
29:RF:34:TRP:CH2	35:RP:8:PRO:HB3	2.43	0.53
33:RN:78:TYR:N	33:RN:78:TYR:HD1	2.07	0.53
33:RN:95:PRO:O	33:RN:96:GLU:C	2.51	0.53
34:RO:12:ASP:OD1	34:RO:85:VAL:HG13	2.08	0.53
35:RP:101:VAL:C	35:RP:103:ALA:H	2.17	0.53
38:RS:10:ARG:O	38:RS:14:VAL:HG12	2.09	0.53
39:RT:105:LEU:O	39:RT:107:ASP:N	2.41	0.53
44:RY:84:ARG:NH1	44:RY:97:ARG:HB2	2.11	0.53
45:RZ:157:LEU:HD23	45:RZ:161:VAL:HG12	1.90	0.53
50:R4:23:GLU:C	50:R4:24:THR:HG1	2.17	0.53
1:XA:73:G:H2'	1:XA:74:C:C6	2.43	0.53
1:XA:266:G:H5''	1:XA:267:C:C5	2.44	0.53
1:XA:560:U:O2'	1:XA:561:U:OP2	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1226:C:O2'	13:XM:103:THR:O	2.17	0.53
4:XD:79:PHE:CE2	4:XD:83:SER:HB2	2.43	0.53
5:XE:87:SER:HB3	5:XE:131:ILE:CD1	2.39	0.53
6:XF:78:GLU:OE2	6:XF:81:ILE:HD12	2.08	0.53
7:XG:95:ARG:CZ	7:XG:99:LEU:HD11	2.38	0.53
12:XL:11:VAL:HG13	17:XQ:29:HIS:HD2	1.72	0.53
12:XL:32:PHE:HE1	12:XL:86:ARG:HG3	1.73	0.53
14:XN:40:CYS:SG	14:XN:42:ILE:N	2.81	0.53
14:XN:41:ARG:HE	14:XN:42:ILE:CG1	2.22	0.53
25:YA:106:C:H2'	25:YA:107:C:H6	1.73	0.53
25:YA:270(W):G:H2'	25:YA:270(X):G:O4'	2.09	0.53
25:YA:303:U:H2'	25:YA:304:G:C8	2.43	0.53
25:YA:704:G:HO2'	25:YA:705:A:P	2.32	0.53
25:YA:768:G:C4	25:YA:769:G:C8	2.97	0.53
25:YA:1359:A:N6	25:YA:1372:U:C4	2.76	0.53
25:YA:2074:U:H2'	25:YA:2075:U:C6	2.43	0.53
25:YA:2424:C:O2	25:YA:2429:G:O2'	2.20	0.53
25:YA:2485:G:OP1	36:YQ:46:GLN:NE2	2.35	0.53
25:YA:2729:G:O2'	28:YE:187:ALA:HB2	2.09	0.53
27:YD:77:ALA:HB2	27:YD:97:TYR:CG	2.44	0.53
27:YD:198:ASN:C	27:YD:198:ASN:HD22	2.16	0.53
31:YH:12:PRO:HG3	31:YH:48:GLY:O	2.09	0.53
32:YI:99:GLU:O	32:YI:102:SER:HB2	2.08	0.53
33:YN:56:ASN:ND2	33:YN:125:GLY:C	2.65	0.53
34:YO:2:ILE:HD12	34:YO:2:ILE:N	2.23	0.53
35:YP:79:ARG:HD3	35:YP:110:TYR:CE1	2.43	0.53
36:YQ:81:VAL:C	36:YQ:82:ARG:CG	2.76	0.53
41:YV:22:VAL:CG1	41:YV:23:GLU:N	2.71	0.53
41:YV:41:GLY:HA3	41:YV:46:VAL:CG1	2.38	0.53
47:Y1:87:PRO:O	47:Y1:91:LYS:N	2.31	0.53
50:Y4:23:GLU:C	50:Y4:24:THR:HG1	2.17	0.53
50:Y4:49:PHE:N	50:Y4:49:PHE:CD1	2.76	0.53
50:Y4:56:VAL:HA	50:Y4:60:GLN:CB	2.29	0.53
4:QD:147:ALA:HA	4:QD:182:LYS:HA	1.91	0.53
4:QD:183:GLY:C	4:QD:184:LYS:HG3	2.34	0.53
12:QL:27:LEU:C	12:QL:29:GLY:N	2.64	0.53
16:QP:4:ILE:HD12	16:QP:4:ILE:N	2.23	0.53
16:QP:72:ARG:HD3	16:QP:73:LEU:HD23	1.91	0.53
25:RA:345:A:N3	25:RA:347:A:N6	2.57	0.53
25:RA:871:U:H5'	25:RA:872:A:OP1	2.09	0.53
25:RA:1416:G:H2'	25:RA:1417:C:C6	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1949:G:H1	25:RA:1957:C:N4	2.06	0.53
25:RA:2032:G:H21	28:RE:146:THR:CG2	2.22	0.53
25:RA:2698:U:H2'	25:RA:2699:C:C6	2.44	0.53
33:RN:19:GLU:HA	33:RN:59:LYS:HB2	1.91	0.53
33:RN:120:LEU:CD1	33:RN:122:VAL:HG23	2.39	0.53
35:RP:14:LYS:O	35:RP:15:ARG:C	2.51	0.53
39:RT:98:LYS:HB3	39:RT:100:TYR:CE1	2.43	0.53
43:RX:36:LYS:HA	43:RX:39:ILE:HD12	1.90	0.53
48:R2:41:ILE:HD11	48:R2:44:LEU:HB2	1.90	0.53
50:R4:15:ILE:HD13	50:R4:15:ILE:H	1.74	0.53
1:XA:191:G:N9	20:XT:105:SER:HB3	2.23	0.53
1:XA:665:A:C8	1:XA:733:A:C2	2.97	0.53
1:XA:974:A:OP2	14:XN:41:ARG:HG2	2.09	0.53
1:XA:1127:G:H21	1:XA:1147:C:H41	1.56	0.53
1:XA:1213:A:N1	1:XA:1215:G:H1'	2.24	0.53
1:XA:1318:A:H4'	19:XS:11:VAL:CG1	2.38	0.53
2:XB:206:ASP:O	2:XB:207:ALA:HB3	2.08	0.53
4:XD:23:GLY:HA3	4:XD:112:VAL:CG2	2.38	0.53
15:XO:29:VAL:HG11	15:XO:67:LEU:HD21	1.89	0.53
17:XQ:5:VAL:O	17:XQ:6:LEU:HD23	2.08	0.53
18:XR:30:ASP:C	18:XR:32:ARG:H	2.15	0.53
25:YA:2262:U:H4'	25:YA:2328:A:C2	2.44	0.53
25:YA:2751:G:H8	25:YA:2751:G:O5'	1.92	0.53
25:YA:2816:C:O2	25:YA:2883:A:O2'	2.26	0.53
29:YF:29:ASN:CB	29:YF:112:MET:HE1	2.38	0.53
33:YN:19:GLU:HA	33:YN:59:LYS:HB2	1.91	0.53
33:YN:95:PRO:O	33:YN:96:GLU:C	2.51	0.53
51:Y5:60:VAL:OXT	51:Y5:60:VAL:CG1	2.56	0.53
1:QA:560:U:H5'	1:QA:566:G:H22	1.73	0.53
1:QA:560:U:N3	1:QA:566:G:O4'	2.41	0.53
1:QA:920:U:H2'	1:QA:921:U:H6	1.74	0.53
1:QA:1222:G:OP1	19:QS:77:THR:HG21	2.09	0.53
1:QA:1487:G:H8	1:QA:1487:G:O5'	1.91	0.53
1:QA:1509:C:H2'	1:QA:1510:U:O4'	2.09	0.53
2:QB:140:HIS:C	2:QB:142:LEU:H	2.16	0.53
4:QD:120:LEU:HD22	4:QD:125:HIS:CB	2.38	0.53
4:QD:172:PRO:HB2	4:QD:193:ASP:OD2	2.08	0.53
4:QD:206:PHE:HD2	4:QD:207:TYR:CD1	2.27	0.53
7:QG:95:ARG:CZ	7:QG:99:LEU:HD11	2.38	0.53
13:QM:92:HIS:CD2	13:QM:98:VAL:HG21	2.43	0.53
25:RA:111:A:O3'	48:R2:69:ARG:NH2	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:323:G:H2'	29:RF:169:ASN:OD1	2.08	0.53
25:RA:1989:G:C5	25:RA:1990:C:C5	2.97	0.53
25:RA:2781:A:H5''	25:RA:2782:G:H5'	1.90	0.53
27:RD:36:PRO:HA	27:RD:62:TYR:O	2.09	0.53
28:RE:25:VAL:HG11	39:RT:11:GLU:HG2	1.90	0.53
41:RV:48:GLY:O	41:RV:49:THR:O	2.26	0.53
42:RW:8:ARG:HH11	42:RW:8:ARG:HG3	1.73	0.53
42:RW:14:PRO:O	42:RW:17:VAL:N	2.42	0.53
44:RY:95:LYS:HA	44:RY:101:LYS:H	1.72	0.53
50:R4:42:PHE:O	50:R4:43:TYR:C	2.51	0.53
50:R4:54:GLY:O	50:R4:71:ARG:HA	2.08	0.53
52:R6:25:LYS:HE2	52:R6:27:LYS:HE3	1.91	0.53
1:XA:323:U:H5'	20:XT:23:ARG:HB2	1.91	0.53
1:XA:411:A:N7	1:XA:413:G:N3	2.57	0.53
2:XB:24:TRP:CE2	2:XB:26:PRO:HD3	2.43	0.53
4:XD:172:PRO:HB2	4:XD:193:ASP:OD2	2.08	0.53
13:XM:76:ALA:O	13:XM:79:LYS:HB3	2.09	0.53
15:XO:26:GLU:HA	15:XO:81:LEU:HD22	1.90	0.53
15:XO:62:GLN:N	15:XO:65:ARG:HH12	2.06	0.53
16:XP:40:ASP:C	16:XP:42:ARG:H	2.17	0.53
19:XS:5:LEU:HD22	50:Y4:67:TYR:CZ	2.44	0.53
25:YA:270(R):G:H1'	47:Y1:78:LYS:NZ	2.23	0.53
25:YA:459:U:OP2	25:YA:469:G:N1	2.34	0.53
25:YA:1425:G:H2'	25:YA:1426:G:C8	2.42	0.53
25:YA:2069:G:N2	25:YA:2442:C:O2	2.42	0.53
25:YA:2820:A:C2	37:YR:4:LEU:HD21	2.44	0.53
27:YD:25:THR:CG2	27:YD:81:ALA:HB1	2.38	0.53
28:YE:119:ARG:HD3	28:YE:160:TYR:HB2	1.91	0.53
30:YG:111:LEU:HB2	50:Y4:38:LYS:HZ3	1.72	0.53
31:YH:40:GLU:O	31:YH:41:MET:HB2	2.09	0.53
36:YQ:76:LYS:O	36:YQ:88:GLY:HA3	2.09	0.53
37:YR:1:MET:O	37:YR:2:ARG:HG3	2.08	0.53
38:YS:10:ARG:O	38:YS:14:VAL:HG12	2.09	0.53
41:YV:48:GLY:O	41:YV:49:THR:O	2.26	0.53
43:YX:60:ARG:NH1	53:Y7:47:ARG:HH22	2.07	0.53
47:Y1:20:ARG:HG2	47:Y1:20:ARG:NH1	2.24	0.53
48:Y2:50:ILE:CD1	48:Y2:51:ARG:N	2.61	0.53
50:Y4:37:SER:HB3	50:Y4:42:PHE:CD1	2.43	0.53
52:Y6:9:LEU:HD13	52:Y6:26:ASN:ND2	2.24	0.53
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.27	0.53
1:QA:316:G:OP2	1:QA:351:G:O2'	2.26	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1175:G:H2'	1:QA:1176:A:H8	1.72	0.53
1:QA:1513:A:H2'	1:QA:1514:C:C6	2.43	0.53
2:QB:5:ILE:N	2:QB:5:ILE:HD13	2.24	0.53
2:QB:87:ARG:HH11	2:QB:223:ILE:HD12	1.73	0.53
2:QB:178:ARG:CD	8:QH:71:GLY:CA	2.77	0.53
2:QB:233:SER:OG	2:QB:234:PRO:HD2	2.09	0.53
5:QE:12:LEU:O	5:QE:13:ILE:HD12	2.08	0.53
7:QG:8:GLU:CD	7:QG:8:GLU:N	2.67	0.53
12:QL:42:THR:HA	12:QL:53:ARG:O	2.08	0.53
17:QQ:11:VAL:HG22	17:QQ:20:THR:O	2.09	0.53
25:RA:389:G:H22	35:RP:72:PRO:CD	2.21	0.53
25:RA:593:G:H2'	25:RA:594:U:C6	2.40	0.53
25:RA:709:U:H3	25:RA:722:A:N6	2.04	0.53
25:RA:1341:U:OP1	25:RA:1397:U:N3	2.42	0.53
25:RA:2345:G:N2	25:RA:2382:G:OP2	2.39	0.53
25:RA:2663:G:H3'	25:RA:2664:G:C8	2.42	0.53
26:RB:16:G:H1	26:RB:68:C:H42	1.56	0.53
27:RD:25:THR:O	27:RD:26:LYS:C	2.52	0.53
27:RD:25:THR:HG21	27:RD:82:ILE:H	1.70	0.53
29:RF:129:PHE:O	29:RF:142:TRP:CD1	2.62	0.53
31:RH:126:PRO:HD2	31:RH:127:GLU:H	1.72	0.53
34:RO:14:THR:HG21	34:RO:86:ILE:HD13	1.91	0.53
41:RV:51:VAL:CG1	41:RV:52:VAL:H	2.22	0.53
50:R4:47:GLN:O	50:R4:48:ARG:HB2	2.07	0.53
1:XA:502:G:H2'	1:XA:503:C:O4'	2.09	0.53
1:XA:673:G:H2'	1:XA:674:G:C8	2.43	0.53
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.44	0.53
1:XA:1030:C:H2'	1:XA:1031:G:O4'	2.09	0.53
1:XA:1315:U:H2'	1:XA:1316:G:O4'	2.09	0.53
1:XA:1499:A:H1'	1:XA:1520:G:H5'	1.90	0.53
3:XC:51:GLY:O	3:XC:70:VAL:HG13	2.09	0.53
3:XC:134:ILE:CG2	3:XC:168:ALA:HB3	2.39	0.53
5:XE:12:LEU:O	5:XE:13:ILE:HD12	2.08	0.53
9:XI:4:TYR:CE2	9:XI:88:TYR:HB2	2.44	0.53
9:XI:113:LYS:HD3	9:XI:119:ALA:O	2.09	0.53
19:XS:29:ARG:HD3	19:XS:30:LEU:HD13	1.91	0.53
23:XX:7:U:H2'	23:XX:7:U:O2	2.07	0.53
25:YA:572:A:H5''	25:YA:573:G:OP2	2.09	0.53
25:YA:974:G:OP1	41:YV:76:LYS:HE2	2.09	0.53
25:YA:1105:U:H2'	25:YA:1106:G:C8	2.36	0.53
25:YA:1206:G:C6	25:YA:1207:C:C4	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2636:U:O2	25:YA:2783:G:N1	2.42	0.53
29:YF:116:ASP:OD1	29:YF:119:ARG:NH2	2.41	0.53
29:YF:192:LEU:HD21	29:YF:194:MET:CE	2.35	0.53
31:YH:128:PRO:CD	31:YH:129:THR:N	2.71	0.53
35:YP:64:LYS:HG3	54:Y8:25:MET:SD	2.48	0.53
35:YP:101:VAL:C	35:YP:103:ALA:H	2.17	0.53
37:YR:67:LEU:HD13	37:YR:76:VAL:CG2	2.27	0.53
37:YR:107:ASP:C	37:YR:107:ASP:OD2	2.52	0.53
39:YT:34:VAL:CG1	39:YT:36:GLU:HG2	2.39	0.53
41:YV:35:LEU:HD21	41:YV:57:VAL:CG2	2.30	0.53
41:YV:38:LEU:HD13	41:YV:55:ALA:HB3	1.91	0.53
45:YZ:70:LEU:HB2	45:YZ:91:LEU:HD21	1.90	0.53
52:Y6:25:LYS:HE2	52:Y6:27:LYS:HE3	1.91	0.53
1:QA:662:G:O2'	1:QA:836:G:OP1	2.26	0.53
1:QA:973:G:O4'	10:QJ:55:LYS:HG2	2.08	0.53
2:QB:96:ARG:H	2:QB:96:ARG:CD	2.16	0.53
2:QB:206:ASP:O	2:QB:207:ALA:HB3	2.08	0.53
3:QC:87:LEU:C	3:QC:89:GLU:N	2.65	0.53
5:QE:140:ARG:HB2	5:QE:140:ARG:NH1	2.23	0.53
6:QF:75:LEU:HD23	6:QF:79:LEU:HG	1.91	0.53
6:QF:89:MET:O	6:QF:90:VAL:C	2.51	0.53
13:QM:117:VAL:O	13:QM:118:ALA:C	2.51	0.53
16:QP:1:MET:SD	16:QP:3:LYS:HE3	2.49	0.53
19:QS:29:ARG:HD3	19:QS:30:LEU:HD13	1.91	0.53
20:QT:30:LYS:HE2	20:QT:72:LEU:HD12	1.91	0.53
25:RA:384:U:H2'	25:RA:385:C:C6	2.37	0.53
25:RA:922:U:H2'	25:RA:923:C:C6	2.43	0.53
25:RA:1021:A:H3'	25:RA:1021:A:C8	2.44	0.53
25:RA:2338:G:C2	25:RA:2339:G:C8	2.97	0.53
25:RA:2419:U:O4	54:R8:30:ARG:NE	2.42	0.53
27:RD:43:ARG:NH1	27:RD:44:ASN:OD1	2.42	0.53
31:RH:40:GLU:O	31:RH:41:MET:HB2	2.08	0.53
32:RI:97:ILE:HD12	32:RI:140:LEU:HD11	1.90	0.53
33:RN:18:ALA:O	33:RN:19:GLU:C	2.52	0.53
33:RN:75:TYR:C	33:RN:76:SER:O	2.52	0.53
35:RP:12:ALA:C	35:RP:14:LYS:H	2.17	0.53
35:RP:79:ARG:HD3	35:RP:110:TYR:CE1	2.43	0.53
37:RR:107:ASP:C	37:RR:107:ASP:OD2	2.52	0.53
38:RS:106:ARG:HA	38:RS:110:LEU:CG	2.39	0.53
39:RT:55:ASN:O	39:RT:57:PHE:O	2.26	0.53
47:R1:85:LEU:HA	47:R1:87:PRO:HD2	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:52:LYS:N	54:R8:53:PRO:HD2	2.22	0.53
1:XA:764:C:H5''	1:XA:765:G:OP2	2.08	0.53
1:XA:956:U:H2'	1:XA:957:U:O4'	2.08	0.53
1:XA:1004:A:C5	1:XA:1025:U:H1'	2.44	0.53
1:XA:1268:A:H2'	1:XA:1269:A:C8	2.44	0.53
1:XA:1298:C:OP2	7:XG:114:ARG:NH2	2.36	0.53
1:XA:1365:G:H2'	1:XA:1366:C:C6	2.44	0.53
2:XB:9:GLU:OE2	2:XB:9:GLU:N	2.42	0.53
2:XB:188:ALA:HB3	2:XB:200:ILE:CG2	2.39	0.53
3:XC:48:TYR:O	3:XC:51:GLY:N	2.41	0.53
3:XC:78:GLY:HA3	3:XC:83:ARG:CB	2.38	0.53
8:XH:87:SER:HA	8:XH:93:VAL:HG23	1.91	0.53
10:XJ:6:ILE:CG2	10:XJ:98:ILE:HG13	2.21	0.53
10:XJ:74:ILE:HD13	10:XJ:74:ILE:N	2.16	0.53
11:XK:125:PHE:HD1	11:XK:125:PHE:N	2.06	0.53
12:XL:43:VAL:HG13	12:XL:55:VAL:HG21	1.91	0.53
15:XO:7:GLU:O	15:XO:11:VAL:HG23	2.08	0.53
25:YA:1101:U:H2'	25:YA:1102:C:H6	1.73	0.53
25:YA:1434:A:H61	25:YA:1558:A:H62	1.56	0.53
25:YA:2330:G:H2'	25:YA:2331:G:O4'	2.08	0.53
25:YA:2614:A:H4'	25:YA:2615:U:OP1	2.09	0.53
28:YE:64:LYS:C	28:YE:66:HIS:N	2.68	0.53
29:YF:140:LEU:O	29:YF:143:ALA:HB3	2.09	0.53
31:YH:10:PRO:C	31:YH:11:VAL:HG22	2.34	0.53
31:YH:44:VAL:O	31:YH:44:VAL:CG2	2.57	0.53
31:YH:139:GLN:O	31:YH:143:GLN:HB2	2.09	0.53
35:YP:125:VAL:O	35:YP:125:VAL:HG13	2.09	0.53
35:YP:147:LEU:O	35:YP:148:LEU:CB	2.57	0.53
38:YS:56:LEU:C	38:YS:56:LEU:HD23	2.34	0.53
38:YS:56:LEU:O	38:YS:58:LEU:HD22	2.09	0.53
39:YT:3:ARG:HG3	39:YT:7:ILE:CG1	2.36	0.53
42:YW:7:ALA:HB2	42:YW:50:VAL:CG2	2.40	0.53
42:YW:8:ARG:HG3	42:YW:8:ARG:HH11	1.73	0.53
43:YX:53:LYS:NZ	43:YX:55:ASN:HD21	2.06	0.53
45:YZ:128:VAL:HB	45:YZ:161:VAL:HG13	1.91	0.53
46:Y0:68:GLU:HG2	46:Y0:80:HIS:HB2	1.91	0.53
50:Y4:36:CYS:O	50:Y4:37:SER:C	2.52	0.53
1:QA:736:C:H2'	1:QA:737:A:C8	2.44	0.52
2:QB:102:LEU:HB3	2:QB:180:LEU:HD12	1.90	0.52
2:QB:200:ILE:HG22	2:QB:201:ILE:N	2.24	0.52
4:QD:163:GLU:C	4:QD:165:MET:N	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:47:LEU:HB3	9:QI:50:LEU:HD12	1.90	0.52
17:QQ:65:ILE:HD12	17:QQ:65:ILE:H	1.74	0.52
18:QR:29:PHE:CD2	18:QR:29:PHE:N	2.76	0.52
18:QR:44:LEU:HD12	18:QR:44:LEU:N	2.24	0.52
22:QV:4:G:HO2'	22:QV:5:G:H8	1.56	0.52
25:RA:638:G:H5''	25:RA:638:G:H8	1.75	0.52
25:RA:1195:G:H5''	25:RA:1195:G:H8	1.75	0.52
26:RB:7:G:H8	26:RB:7:G:H5''	1.74	0.52
27:RD:130:ALA:C	27:RD:131:LEU:HD12	2.33	0.52
27:RD:155:LEU:CD1	27:RD:155:LEU:N	2.71	0.52
31:RH:10:PRO:C	31:RH:11:VAL:HG22	2.34	0.52
35:RP:64:LYS:C	35:RP:66:GLY:N	2.56	0.52
35:RP:125:VAL:O	35:RP:125:VAL:HG13	2.09	0.52
36:RQ:7:MET:HE1	36:RQ:73:PRO:HG3	1.91	0.52
38:RS:89:ARG:HH11	38:RS:89:ARG:HG2	1.74	0.52
39:RT:100:TYR:HB3	39:RT:103:ARG:NH1	2.25	0.52
39:RT:110:ILE:HG23	39:RT:111:ARG:N	2.24	0.52
49:R3:9:VAL:HG12	49:R3:32:GLN:HE22	1.74	0.52
50:R4:49:PHE:N	50:R4:49:PHE:CD1	2.76	0.52
1:XA:717:C:H6	1:XA:717:C:H5''	1.74	0.52
1:XA:1348:U:N3	1:XA:1374:A:H2	2.07	0.52
2:XB:92:TYR:CE1	2:XB:151:GLY:HA3	2.45	0.52
3:XC:173:VAL:HG12	3:XC:173:VAL:O	2.08	0.52
5:XE:140:ARG:HB2	5:XE:140:ARG:NH1	2.23	0.52
8:XH:100:ILE:CB	8:XH:125:ARG:HH12	2.20	0.52
10:XJ:39:PRO:HB3	10:XJ:70:ARG:NH1	2.24	0.52
13:XM:8:GLU:C	13:XM:9:ILE:HG23	2.35	0.52
14:XN:7:ILE:CG1	14:XN:8:GLU:N	2.72	0.52
25:YA:530:G:O2'	25:YA:2021:C:O2'	2.25	0.52
25:YA:1799:G:O2'	25:YA:1800:C:OP2	2.25	0.52
25:YA:1847:A:H5'	25:YA:1848:A:OP2	2.09	0.52
25:YA:2355:C:H4'	46:Y0:36:ILE:HD11	1.90	0.52
25:YA:2838:G:H2'	25:YA:2839:G:H8	1.73	0.52
27:YD:25:THR:O	27:YD:26:LYS:C	2.52	0.52
29:YF:129:PHE:O	29:YF:142:TRP:CD1	2.62	0.52
30:YG:16:ARG:HH11	30:YG:16:ARG:HG2	1.74	0.52
30:YG:179:PRO:HG3	50:Y4:38:LYS:HZ1	1.74	0.52
31:YH:89:ILE:O	31:YH:89:ILE:CG1	2.57	0.52
33:YN:22:THR:CG2	33:YN:23:LEU:N	2.61	0.52
33:YN:109:LYS:HD2	33:YN:109:LYS:H	1.73	0.52
37:YR:70:LEU:O	37:YR:72:ASP:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:92:ARG:NH2	40:YU:94:ASN:HD22	2.07	0.52
41:YV:7:THR:CG2	41:YV:22:VAL:HG11	2.39	0.52
47:Y1:25:LYS:C	47:Y1:27:GLU:H	2.17	0.52
49:Y3:6:VAL:HG12	49:Y3:56:VAL:HG22	1.91	0.52
52:Y6:7:ILE:CG1	52:Y6:8:LYS:H	2.07	0.52
1:QA:141:A:H1'	1:QA:182:U:C2	2.44	0.52
1:QA:508:C:OP1	1:QA:508:C:H6	1.92	0.52
1:QA:1322:C:O2'	1:QA:1323:G:H5'	2.09	0.52
1:QA:1349:A:H2'	1:QA:1350:A:O4'	2.09	0.52
3:QC:29:TYR:OH	14:QN:54:PRO:HD2	2.09	0.52
3:QC:134:ILE:CG2	3:QC:168:ALA:HB3	2.39	0.52
4:QD:176:LEU:HD12	4:QD:182:LYS:O	2.10	0.52
5:QE:87:SER:HB3	5:QE:131:ILE:CD1	2.38	0.52
8:QH:33:GLU:C	8:QH:35:ILE:N	2.65	0.52
9:QI:53:VAL:CB	9:QI:95:LYS:HE3	2.36	0.52
15:QO:26:GLU:HA	15:QO:81:LEU:HD22	1.90	0.52
15:QO:39:LEU:O	15:QO:40:SER:C	2.50	0.52
20:QT:13:LEU:HD12	20:QT:13:LEU:C	2.34	0.52
21:QU:14:TRP:CZ3	21:QU:15:ARG:HD3	2.43	0.52
22:QV:15:G:H22	22:QV:48:C:H42	1.57	0.52
25:RA:312:G:H5'	25:RA:331:A:O2'	2.10	0.52
25:RA:333:G:H5''	25:RA:334:C:OP2	2.09	0.52
25:RA:1398:C:OP1	43:RX:53:LYS:NZ	2.43	0.52
25:RA:1812:A:O2'	27:RD:45:ASN:HB2	2.08	0.52
25:RA:2336:A:H61	46:R0:43:THR:CG2	2.21	0.52
25:RA:2469:A:C5	25:RA:2482:G:C8	2.97	0.52
25:RA:2523:G:O2'	25:RA:2764:A:O3'	2.26	0.52
25:RA:2525:G:N2	25:RA:2538:C:O2	2.40	0.52
28:RE:61:ARG:O	28:RE:63:LEU:N	2.42	0.52
28:RE:64:LYS:C	28:RE:66:HIS:N	2.68	0.52
33:RN:12:ARG:NH1	33:RN:50:ASP:OD2	2.40	0.52
36:RQ:76:LYS:O	36:RQ:88:GLY:HA3	2.09	0.52
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ3	1.73	0.52
51:R5:55:ARG:HG3	51:R5:57:VAL:H	1.74	0.52
54:R8:61:LEU:O	54:R8:62:LEU:CB	2.57	0.52
1:XA:27:G:H4'	4:XD:209:ARG:HG3	1.90	0.52
1:XA:542:G:H5''	4:XD:10:ARG:HH22	1.73	0.52
1:XA:1190:G:OP1	3:XC:5:ILE:HD12	2.10	0.52
1:XA:1216:G:H5''	14:XN:5:ALA:CB	2.39	0.52
2:XB:80:ILE:HD11	2:XB:208:ILE:CG2	2.23	0.52
2:XB:170:GLU:C	2:XB:172:ILE:HD12	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:232:PRO:O	2:XB:233:SER:O	2.27	0.52
6:XF:75:LEU:HD21	6:XF:79:LEU:HD11	1.91	0.52
11:XK:115:PRO:C	11:XK:117:ASN:H	2.17	0.52
13:XM:87:TYR:CE1	13:XM:91:ARG:HD3	2.44	0.52
25:YA:224:G:C2	25:YA:225:A:C4	2.98	0.52
25:YA:252:G:N2	25:YA:253:C:H1'	2.24	0.52
25:YA:373:U:H1'	25:YA:423:A:C2	2.44	0.52
25:YA:1441:G:H2'	25:YA:1442:G:C8	2.45	0.52
25:YA:2009:G:OP1	42:YW:41:LYS:HE2	2.09	0.52
25:YA:2424:C:H5'	25:YA:2424:C:H6	1.74	0.52
25:YA:2538:C:O2'	25:YA:2539:C:H5'	2.09	0.52
25:YA:2721:A:H1'	25:YA:2873:A:O2'	2.09	0.52
27:YD:35:LYS:HD3	27:YD:63:ARG:CA	2.39	0.52
27:YD:233:HIS:N	27:YD:233:HIS:CD2	2.75	0.52
28:YE:7:VAL:O	28:YE:196:VAL:HG13	2.09	0.52
28:YE:39:PRO:HG2	28:YE:40:GLU:OE1	2.09	0.52
29:YF:9:ILE:HD11	29:YF:125:LEU:CG	2.36	0.52
29:YF:34:TRP:CH2	35:YP:8:PRO:HB3	2.43	0.52
33:YN:131:GLN:CG	33:YN:132:ALA:H	2.20	0.52
36:YQ:29:PHE:HB3	36:YQ:65:PHE:CZ	2.44	0.52
41:YV:34:GLU:O	41:YV:36:PRO:HD3	2.09	0.52
52:Y6:14:THR:OG1	52:Y6:19:ARG:NE	2.41	0.52
1:QA:734:G:H2'	1:QA:735:C:H6	1.74	0.52
1:QA:752:G:H1'	1:QA:754:C:H41	1.74	0.52
1:QA:985:C:H2'	1:QA:986:A:H8	1.74	0.52
1:QA:1049:U:H5'	1:QA:1201:A:OP1	2.10	0.52
1:QA:1142:G:H3'	1:QA:1143:G:H8	1.73	0.52
3:QC:140:ARG:HG3	3:QC:140:ARG:HH11	1.75	0.52
9:QI:113:LYS:HD3	9:QI:119:ALA:O	2.09	0.52
10:QJ:80:LYS:HE2	1:XA:1162:C:O2'	2.10	0.52
12:QL:127:GLU:O	12:QL:128:ALA:HB3	2.10	0.52
13:QM: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
19:QS:11:VAL:O	19:QS:11:VAL:HG13	2.10	0.52
19:QS:65:ASN:ND2	19:QS:65:ASN:H	2.08	0.52
25:RA:27:G:H1'	25:RA:513:A:N6	2.24	0.52
25:RA:1178:C:H2'	25:RA:1179:C:C6	2.45	0.52
25:RA:1401:G:H2'	25:RA:1402:C:O4'	2.08	0.52
25:RA:2011:U:OP2	42:RW:16:LYS:NZ	2.42	0.52
28:RE:7:VAL:O	28:RE:196:VAL:HG13	2.09	0.52
29:RF:53:THR:C	29:RF:55:GLY:N	2.67	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:125:LEU:HA	29:RF:194:MET:O	2.10	0.52
30:RG:16:ARG:HH11	30:RG:16:ARG:HG2	1.74	0.52
31:RH:12:PRO:HG3	31:RH:48:GLY:O	2.09	0.52
33:RN:94:HIS:O	33:RN:95:PRO:O	2.27	0.52
35:RP:92:GLU:HA	35:RP:123:LEU:CD2	2.38	0.52
36:RQ:29:PHE:HB3	36:RQ:65:PHE:CZ	2.44	0.52
37:RR:33:ARG:NH2	51:R5:55:ARG:CG	2.66	0.52
38:RS:83:LYS:O	38:RS:109:GLY:CA	2.46	0.52
38:RS:86:ALA:O	38:RS:87:PHE:HB3	2.10	0.52
45:RZ:20:ARG:O	45:RZ:20:ARG:HD3	2.09	0.52
49:R3:21:ALA:O	49:R3:25:ALA:N	2.41	0.52
52:R6:13:CYS:O	52:R6:14:THR:HB	2.08	0.52
54:R8:43:GLN:C	54:R8:44:LYS:HD2	2.34	0.52
1:XA:606:G:H1	1:XA:631:G:H5''	1.74	0.52
1:XA:1359:C:H3'	14:XN:35:ARG:HH12	1.75	0.52
6:XF:89:MET:O	6:XF:90:VAL:C	2.51	0.52
7:XG:106:GLN:O	7:XG:110:GLN:HG3	2.10	0.52
11:XK:124:LYS:O	11:XK:126:ARG:N	2.40	0.52
19:XS:27:GLU:O	19:XS:28:LYS:CG	2.53	0.52
25:YA:271(B):G:O2'	25:YA:271(C):U:OP2	2.24	0.52
25:YA:295:G:H1	25:YA:343:C:H42	1.57	0.52
25:YA:846:C:H42	25:YA:931:G:H1	1.56	0.52
25:YA:1190:G:H5'	35:YP:32:THR:HA	1.91	0.52
25:YA:1654:A:OP2	37:YR:2:ARG:HD2	2.09	0.52
25:YA:2033:A:O2'	25:YA:2035:G:OP2	2.26	0.52
25:YA:2267:A:H5''	25:YA:2268:A:H5'	1.90	0.52
25:YA:2420:C:H6	25:YA:2420:C:O5'	1.93	0.52
25:YA:2748:A:H2'	25:YA:2749:A:C8	2.44	0.52
26:YB:89:G:C6	26:YB:89(A):A:C6	2.98	0.52
27:YD:66:ASP:OD2	27:YD:69:ARG:HG2	2.09	0.52
28:YE:137:HIS:HB3	28:YE:138:PRO:CD	2.37	0.52
31:YH:121:ILE:HG12	31:YH:135:GLY:HA3	1.91	0.52
33:YN:75:TYR:C	33:YN:76:SER:O	2.52	0.52
34:YO:107:ARG:CA	34:YO:112:MET:HE1	2.39	0.52
35:YP:37:GLY:HA2	35:YP:41:ARG:NE	2.23	0.52
37:YR:53:HIS:HA	37:YR:56:LYS:HD3	1.90	0.52
42:YW:25:ARG:HB2	42:YW:25:ARG:HH11	1.74	0.52
42:YW:32:ALA:O	42:YW:33:ARG:C	2.51	0.52
42:YW:38:TYR:OH	51:Y5:47:PRO:HG3	2.08	0.52
44:YY:44:ILE:CG1	44:YY:45:VAL:N	2.70	0.52
44:YY:61:ILE:HG23	44:YY:62:GLU:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:Y0:25:ARG:HH11	46:Y0:25:ARG:HG2	1.73	0.52
50:Y4:40:HIS:N	50:Y4:41:PRO:CD	2.73	0.52
1:QA:376:G:H2'	1:QA:377:G:C8	2.45	0.52
1:QA:568:G:N3	1:QA:574:A:H2	2.08	0.52
1:QA:600:C:H5'	8:QH:129:VAL:HA	1.91	0.52
1:QA:624:C:H2'	1:QA:625:G:C8	2.43	0.52
1:QA:779:C:H4'	11:QK:121:PRO:O	2.10	0.52
1:QA:1087:G:H22	1:QA:1099:G:H1'	1.73	0.52
7:QG:44:TYR:C	7:QG:46:ALA:N	2.66	0.52
8:QH:87:SER:HA	8:QH:93:VAL:HG23	1.91	0.52
8:QH:100:ILE:CB	8:QH:125:ARG:HH12	2.21	0.52
13:QM:87:TYR:CE1	13:QM:91:ARG:HD3	2.44	0.52
25:RA:171:G:N2	25:RA:172:C:O2	2.42	0.52
25:RA:235:U:H2'	25:RA:236:C:C6	2.44	0.52
25:RA:517:C:O2'	42:RW:18:ARG:NH2	2.42	0.52
25:RA:832:G:OP1	35:RP:38:GLN:HB3	2.09	0.52
25:RA:1022:G:H22	25:RA:1142(A):A:H2	1.57	0.52
25:RA:2393:A:C2'	25:RA:2394:C:H5'	2.39	0.52
30:RG:124:SER:HB2	30:RG:131:TYR:CE1	2.44	0.52
31:RH:44:VAL:O	31:RH:44:VAL:CG2	2.57	0.52
32:RI:14:ASP:O	32:RI:16:GLY:N	2.42	0.52
33:RN:68:GLU:HG2	33:RN:88:GLU:CD	2.33	0.52
38:RS:56:LEU:C	38:RS:56:LEU:HD23	2.34	0.52
39:RT:14:TYR:CD1	39:RT:14:TYR:N	2.77	0.52
40:RU:88:ILE:H	40:RU:88:ILE:CD1	2.05	0.52
41:RV:48:GLY:O	41:RV:49:THR:C	2.52	0.52
42:RW:32:ALA:O	42:RW:33:ARG:C	2.52	0.52
45:RZ:5:LEU:HD12	45:RZ:7:ALA:HB2	1.90	0.52
47:R1:29:GLY:C	47:R1:30:VAL:CG2	2.82	0.52
50:R4:48:ARG:CZ	50:R4:51:ASP:HA	2.40	0.52
1:XA:443:C:H42	1:XA:491:G:H1	1.58	0.52
4:XD:206:PHE:HD2	4:XD:207:TYR:CD1	2.27	0.52
5:XE:36:ASP:OD1	5:XE:37:ARG:N	2.42	0.52
11:XK:62:GLN:O	11:XK:63:LEU:C	2.51	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:NZ	2.57	0.52
13:XM:8:GLU:OE1	30:YG:115:ARG:CZ	2.57	0.52
16:XP:4:ILE:HD12	16:XP:4:ILE:N	2.23	0.52
16:XP:34:GLU:OE1	16:XP:55:ARG:HD3	2.10	0.52
17:XQ:62:SER:HB3	17:XQ:72:ARG:HH21	1.72	0.52
19:XS:3:ARG:HG3	19:XS:4:SER:N	2.24	0.52
19:XS:11:VAL:O	19:XS:11:VAL:HG13	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:XX:3:G:O2'	23:XX:4:C:OP2	2.27	0.52
25:YA:26:G:C6	25:YA:27:G:C2	2.97	0.52
25:YA:451:C:H4'	29:YF:52:LYS:HZ2	1.72	0.52
25:YA:855:G:O2'	46:Y0:27:GLU:OE2	2.20	0.52
25:YA:1029:A:H5''	36:YQ:128:LYS:HE2	1.92	0.52
25:YA:1814:G:H4'	27:YD:51:VAL:HG21	1.91	0.52
25:YA:2808:U:H5'	25:YA:2891:G:O6	2.09	0.52
27:YD:155:LEU:CD1	27:YD:155:LEU:N	2.71	0.52
28:YE:7:VAL:CG2	28:YE:8:LYS:H	2.10	0.52
29:YF:132:VAL:O	29:YF:133:ASN:C	2.52	0.52
33:YN:18:ALA:O	33:YN:19:GLU:C	2.53	0.52
38:YS:62:LYS:HB3	38:YS:97:ARG:CD	2.39	0.52
39:YT:94:ALA:O	39:YT:95:ARG:HB3	2.09	0.52
45:YZ:149:SER:HB2	45:YZ:172:ALA:O	2.10	0.52
1:QA:15:G:H4'	5:QE:24:ARG:NH1	2.25	0.52
1:QA:258:G:H2'	1:QA:259:G:H8	1.75	0.52
1:QA:791:G:C6	1:QA:792:A:N1	2.77	0.52
1:QA:1192:C:C5	1:QA:1193:G:C8	2.98	0.52
2:QB:92:TYR:CE1	2:QB:151:GLY:HA3	2.45	0.52
2:QB:188:ALA:HB3	2:QB:200:ILE:CG2	2.40	0.52
4:QD:29:PRO:CG	4:QD:30:LYS:NZ	2.73	0.52
11:QK:91:ARG:NH2	18:QR:88:LYS:NZ	2.57	0.52
13:QM:82:MET:HE3	13:QM:93:ARG:HG2	1.91	0.52
25:RA:155:C:N4	25:RA:171:G:H1	2.06	0.52
25:RA:900:A:H3'	25:RA:901:A:C8	2.36	0.52
25:RA:952:G:C6	25:RA:966:G:C6	2.98	0.52
25:RA:1342:A:C5	25:RA:1397:U:C6	2.98	0.52
25:RA:1352:U:O2'	25:RA:1353:A:H5'	2.08	0.52
25:RA:1359:A:N6	25:RA:1373:A:C4	2.78	0.52
25:RA:1448:G:H1'	25:RA:1528:A:N6	2.24	0.52
25:RA:1728:G:H5''	25:RA:1728:G:N3	2.24	0.52
27:RD:210:GLY:O	27:RD:213:ARG:N	2.43	0.52
28:RE:170:LEU:CD2	28:RE:185:LYS:HB2	2.40	0.52
29:RF:140:LEU:O	29:RF:143:ALA:HB3	2.09	0.52
32:RI:21:VAL:HG13	32:RI:22:LYS:O	2.10	0.52
32:RI:68:LEU:HA	32:RI:71:ILE:CG2	2.40	0.52
33:RN:7:LYS:HD3	33:RN:9:VAL:CA	2.38	0.52
38:RS:56:LEU:O	38:RS:58:LEU:HD22	2.09	0.52
39:RT:16:ARG:HD3	39:RT:19:LEU:HG	1.92	0.52
40:RU:91:ASP:O	40:RU:92:ARG:C	2.53	0.52
49:R3:56:VAL:CG1	49:R3:57:GLU:H	2.19	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:36:CYS:O	50:R4:37:SER:C	2.52	0.52
1:XA:1085:U:H3'	1:XA:1086:U:C5	2.45	0.52
1:XA:1347:G:OP2	9:XI:107:ARG:HG2	2.09	0.52
2:XB:200:ILE:HG22	2:XB:201:ILE:N	2.24	0.52
2:XB:233:SER:OG	2:XB:234:PRO:HD2	2.09	0.52
4:XD:176:LEU:HD12	4:XD:182:LYS:O	2.10	0.52
7:XG:8:GLU:CD	7:XG:8:GLU:N	2.67	0.52
10:XJ:4:ILE:HB	10:XJ:74:ILE:CD1	2.36	0.52
13:XM:73:GLU:O	13:XM:76:ALA:N	2.42	0.52
18:XR:36:ASN:O	18:XR:36:ASN:ND2	2.32	0.52
25:YA:24:G:H2'	25:YA:25:U:O4'	2.09	0.52
25:YA:272:G:H2'	25:YA:273:G:H8	1.74	0.52
25:YA:503:A:C5	25:YA:506:G:C5	2.98	0.52
25:YA:869:G:O2'	25:YA:870:A:H5'	2.10	0.52
25:YA:1063:G:H22	25:YA:1076:C:H1'	1.74	0.52
25:YA:2790:A:C2	25:YA:2791:C:H2'	2.45	0.52
27:YD:36:PRO:HA	27:YD:62:TYR:O	2.09	0.52
28:YE:93:VAL:C	28:YE:95:ILE:H	2.17	0.52
29:YF:162:LEU:HD23	29:YF:165:ARG:NH2	2.25	0.52
34:YO:79:PHE:CD2	39:YT:72:VAL:HG22	2.45	0.52
38:YS:25:ARG:HH11	38:YS:25:ARG:CB	2.22	0.52
39:YT:36:GLU:O	39:YT:37:GLY:C	2.53	0.52
39:YT:100:TYR:HB3	39:YT:103:ARG:NH1	2.25	0.52
42:YW:9:TYR:CD2	42:YW:102:HIS:HE1	2.28	0.52
47:Y1:4:VAL:HG22	47:Y1:5:CYS:N	2.25	0.52
48:Y2:7:ARG:HG3	48:Y2:7:ARG:NH1	2.25	0.52
50:Y4:54:GLY:O	50:Y4:71:ARG:HA	2.08	0.52
51:Y5:55:ARG:HG3	51:Y5:57:VAL:H	1.74	0.52
54:Y8:61:LEU:O	54:Y8:62:LEU:CB	2.57	0.52
1:QA:892:A:H2'	1:QA:893:C:C6	2.44	0.52
2:QB:9:GLU:N	2:QB:9:GLU:OE2	2.42	0.52
4:QD:31:CYS:O	4:QD:32:ALA:HB3	2.10	0.52
4:QD:196:LEU:C	4:QD:198:VAL:N	2.66	0.52
10:QJ:4:ILE:HB	10:QJ:74:ILE:CD1	2.37	0.52
12:QL:32:PHE:HE1	12:QL:86:ARG:HG3	1.73	0.52
25:RA:515:A:H1'	25:RA:581:C:H1'	1.91	0.52
25:RA:571:A:C5	25:RA:575:A:C8	2.98	0.52
25:RA:582:G:H2'	25:RA:583:G:C8	2.44	0.52
25:RA:704:G:H1'	25:RA:727:A:N6	2.25	0.52
25:RA:1001:A:H2'	25:RA:1002:G:O4'	2.09	0.52
25:RA:2695:C:H2'	25:RA:2696:U:H6	1.74	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:35:LYS:HD3	27:RD:63:ARG:CA	2.39	0.52
27:RD:66:ASP:OD2	27:RD:69:ARG:HG2	2.09	0.52
27:RD:77:ALA:HB2	27:RD:97:TYR:CG	2.44	0.52
27:RD:133:LEU:HG	27:RD:189:CYS:O	2.10	0.52
27:RD:134:ARG:HB2	27:RD:135:PHE:HD2	1.75	0.52
28:RE:179:GLU:HA	28:RE:179:GLU:OE1	2.10	0.52
30:RG:97:ASP:N	30:RG:100:TRP:HD1	2.05	0.52
33:RN:57:ALA:O	33:RN:58:ASP:HB3	2.09	0.52
33:RN:103:VAL:O	33:RN:106:MET:N	2.42	0.52
41:RV:34:GLU:O	41:RV:36:PRO:HD3	2.10	0.52
50:R4:55:ARG:C	50:R4:59:PHE:HB3	2.35	0.52
1:XA:328:C:H4'	1:XA:329:A:C5'	2.40	0.52
1:XA:1004:A:H1'	1:XA:1036:G:H22	1.74	0.52
8:XH:102:ARG:NH1	8:XH:105:ARG:HH22	2.07	0.52
20:XT:13:LEU:HD12	20:XT:13:LEU:C	2.34	0.52
25:YA:121:G:H2'	25:YA:122:G:C8	2.44	0.52
25:YA:1071:G:O2'	25:YA:1089:G:OP2	2.20	0.52
25:YA:1093:G:OP1	31:YH:170:ARG:HD2	2.09	0.52
25:YA:1156:A:C8	40:YU:51:LYS:HD2	2.45	0.52
25:YA:1590:U:H2'	25:YA:1591:G:C8	2.44	0.52
25:YA:2378:A:H4'	38:YS:23:ARG:NE	2.25	0.52
25:YA:2689:U:P	25:YA:2719:G:H22	2.33	0.52
26:YB:16:G:C6	26:YB:69:G:C2	2.97	0.52
27:YD:174:ILE:N	27:YD:174:ILE:CD1	2.73	0.52
28:YE:176:ILE:HG22	28:YE:176:ILE:O	2.10	0.52
29:YF:196:LEU:C	29:YF:197:ASP:O	2.50	0.52
30:YG:97:ASP:H	30:YG:100:TRP:CD1	2.19	0.52
30:YG:124:SER:HB2	30:YG:131:TYR:CE1	2.44	0.52
31:YH:24:VAL:HG23	31:YH:24:VAL:O	2.09	0.52
33:YN:103:VAL:O	33:YN:106:MET:N	2.42	0.52
34:YO:2:ILE:CD1	34:YO:82:ASN:HD22	2.14	0.52
37:YR:52:ILE:CG2	37:YR:94:TYR:HD1	2.22	0.52
39:YT:23:ARG:HG2	39:YT:120:ARG:HH12	1.75	0.52
39:YT:99:LEU:HB2	39:YT:101:PHE:CE1	2.45	0.52
44:YY:91:GLU:HG3	44:YY:92:ASN:N	2.25	0.52
50:Y4:15:ILE:HD13	50:Y4:15:ILE:H	1.73	0.52
50:Y4:48:ARG:CZ	50:Y4:51:ASP:HA	2.40	0.52
50:Y4:55:ARG:C	50:Y4:59:PHE:HB3	2.35	0.52
1:QA:164:U:H2'	1:QA:165:C:H6	1.75	0.52
1:QA:955:U:OP1	13:QM:121:LYS:HD2	2.09	0.52
1:QA:988:G:H2'	1:QA:989:C:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1147:C:O2	9:QI:16:ARG:NH1	2.43	0.52
5:QE:96:PRO:HA	5:QE:117:ASP:CG	2.35	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
9:QI:112:LYS:HD3	9:QI:112:LYS:C	2.35	0.52
15:QO:62:GLN:N	15:QO:65:ARG:HH12	2.06	0.52
16:QP:40:ASP:C	16:QP:42:ARG:H	2.17	0.52
17:QQ:98:LEU:O	17:QQ:99:SER:C	2.53	0.52
20:QT:89:ARG:HH22	20:QT:106:ALA:HB2	1.75	0.52
25:RA:151:C:O5'	25:RA:151:C:H6	1.93	0.52
25:RA:1050:A:H2'	25:RA:1051:G:O4'	2.09	0.52
25:RA:1478:G:HO2'	25:RA:1558:A:H2	1.55	0.52
27:RD:35:LYS:HG2	27:RD:64:ILE:HG22	1.92	0.52
28:RE:39:PRO:HG2	28:RE:40:GLU:OE1	2.09	0.52
28:RE:116:VAL:HG22	28:RE:122:PHE:HB2	1.91	0.52
28:RE:129:HIS:O	28:RE:130:GLY:C	2.53	0.52
33:RN:56:ASN:ND2	33:RN:125:GLY:C	2.66	0.52
38:RS:95:HIS:CG	38:RS:96:GLY:N	2.77	0.52
39:RT:23:ARG:HG2	39:RT:120:ARG:HH12	1.75	0.52
39:RT:94:ALA:O	39:RT:95:ARG:HB3	2.09	0.52
41:RV:41:GLY:HA3	41:RV:46:VAL:CG1	2.38	0.52
45:RZ:111:VAL:O	45:RZ:113:ALA:N	2.43	0.52
46:R0:21:LEU:HD11	46:R0:41:ARG:HG2	1.92	0.52
47:R1:76:ARG:HG2	47:R1:76:ARG:NH1	2.19	0.52
1:XA:335:C:O2'	1:XA:1433:A:N3	2.33	0.52
1:XA:815:A:H5''	1:XA:817:C:N4	2.25	0.52
1:XA:1167:A:C6	1:XA:1169:A:C6	2.98	0.52
2:XB:87:ARG:HH11	2:XB:223:ILE:HD12	1.73	0.52
4:XD:183:GLY:C	4:XD:184:LYS:HG3	2.34	0.52
6:XF:86:ARG:O	6:XF:87:ARG:CG	2.50	0.52
11:XK:46:GLY:HA2	11:XK:50:TYR:O	2.10	0.52
13:XM:82:MET:HE3	13:XM:93:ARG:HG2	1.91	0.52
13:XM:92:HIS:CD2	13:XM:98:VAL:HG21	2.43	0.52
16:XP:45:THR:HG23	16:XP:46:PRO:CD	2.39	0.52
25:YA:317:G:N2	25:YA:318:C:O2	2.43	0.52
25:YA:347:A:H2'	25:YA:348:G:C8	2.45	0.52
25:YA:1021:A:C8	25:YA:1021:A:C3'	2.91	0.52
25:YA:2031:A:N3	25:YA:2455:G:O2'	2.41	0.52
25:YA:2522:U:O2'	25:YA:2647:U:OP1	2.19	0.52
25:YA:2747:G:O6	25:YA:2755:C:H5''	2.10	0.52
27:YD:43:ARG:NH1	27:YD:44:ASN:OD1	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:61:ARG:O	28:YE:63:LEU:N	2.42	0.52
32:YI:8:PRO:HG3	32:YI:14:ASP:HB2	1.91	0.52
33:YN:7:LYS:HD3	33:YN:9:VAL:N	2.25	0.52
34:YO:43:VAL:HG23	34:YO:56:ASP:O	2.10	0.52
34:YO:113:LYS:HG2	34:YO:117:LEU:CD1	2.38	0.52
38:YS:56:LEU:O	38:YS:57:LYS:C	2.53	0.52
39:YT:42:ILE:HD12	39:YT:42:ILE:N	2.25	0.52
39:YT:110:ILE:HG23	39:YT:111:ARG:N	2.24	0.52
41:YV:35:LEU:CD2	41:YV:57:VAL:HG22	2.32	0.52
52:Y6:30:THR:O	52:Y6:30:THR:HG23	2.09	0.52
1:QA:224:C:H2'	1:QA:225:C:C6	2.45	0.52
1:QA:1069:C:C3'	5:QE:25:ARG:HH12	2.23	0.52
1:QA:1432:G:H1'	1:QA:1469:G:N2	2.25	0.52
2:QB:53:ARG:O	2:QB:56:ARG:HB2	2.09	0.52
3:QC:6:HIS:C	3:QC:8:ILE:H	2.18	0.52
3:QC:22:TRP:CZ3	3:QC:32:LEU:HD12	2.45	0.52
4:QD:10:ARG:O	4:QD:14:ARG:HB2	2.09	0.52
4:QD:12:CYS:HA	4:QD:19:LEU:HD23	1.83	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD11	1.92	0.52
6:QF:99:ALA:HB1	18:QR:23:LYS:NZ	2.25	0.52
7:QG:151:TYR:HA	7:QG:153:HIS:CE1	2.45	0.52
9:QI:13:ALA:HB2	9:QI:68:GLY:HA3	1.92	0.52
13:QM:77:ASN:CG	50:R4:71:ARG:CZ	2.83	0.52
13:QM:81:LEU:HD13	13:QM:88:ARG:HD2	1.91	0.52
16:QP:34:GLU:OE1	16:QP:55:ARG:HD3	2.10	0.52
19:QS:50:ALA:CB	19:QS:57:HIS:HB3	2.37	0.52
25:RA:222:A:HO2'	25:RA:223:A:P	2.31	0.52
25:RA:746:A:O2'	25:RA:747:U:P	2.67	0.52
25:RA:2697:G:C2	25:RA:2711:A:C2	2.97	0.52
25:RA:2861:G:H2'	25:RA:2862:G:C8	2.45	0.52
26:RB:30:C:H4'	26:RB:58:A:H2	1.73	0.52
26:RB:75:G:H1	26:RB:102:G:H22	1.54	0.52
28:RE:54:GLN:O	28:RE:55:ASN:HB2	2.09	0.52
31:RH:121:ILE:HG12	31:RH:135:GLY:HA3	1.91	0.52
32:RI:4:ILE:HG12	32:RI:18:VAL:HG22	1.92	0.52
41:RV:2:PHE:CD1	41:RV:2:PHE:C	2.88	0.52
41:RV:3:ALA:HB3	41:RV:14:VAL:HG23	1.92	0.52
49:R3:7:LYS:HE2	49:R3:32:GLN:NE2	2.25	0.52
55:R9:1:MET:HE1	55:R9:32:HIS:HD2	1.75	0.52
55:R9:27:CYS:SG	55:R9:28:GLU:N	2.83	0.52
1:XA:160:A:H1'	1:XA:344:A:C5	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:185:A:H61	1:XA:192:U:H3	1.57	0.52
1:XA:646:U:H2'	1:XA:647:C:C6	2.43	0.52
1:XA:1070:U:H5'	5:XE:18:ARG:HH22	1.75	0.52
1:XA:1120:G:H1	1:XA:1153:C:N4	2.08	0.52
2:XB:82:ARG:HB3	2:XB:83:MET:HE2	1.92	0.52
3:XC:140:ARG:HG3	3:XC:140:ARG:HH11	1.75	0.52
4:XD:65:ARG:NH1	4:XD:70:ILE:O	2.43	0.52
4:XD:155:LEU:O	4:XD:159:ARG:HG2	2.10	0.52
9:XI:3:GLN:HB3	9:XI:20:ARG:CG	2.40	0.52
9:XI:13:ALA:HB2	9:XI:68:GLY:HA3	1.91	0.52
12:XL:127:GLU:O	12:XL:128:ALA:HB3	2.10	0.52
13:XM:98:VAL:O	13:XM:98:VAL:HG12	2.10	0.52
15:XO:61:GLY:C	15:XO:65:ARG:NH1	2.67	0.52
16:XP:1:MET:SD	16:XP:3:LYS:HE3	2.49	0.52
18:XR:44:LEU:HD12	18:XR:44:LEU:N	2.24	0.52
19:XS:65:ASN:ND2	19:XS:65:ASN:H	2.08	0.52
25:YA:79:G:O2'	25:YA:346:A:N3	2.30	0.52
25:YA:275:G:OP2	25:YA:363:G:N1	2.42	0.52
25:YA:704:G:O2'	25:YA:705:A:P	2.68	0.52
25:YA:2102:U:H3	25:YA:2187:G:H1	1.56	0.52
25:YA:2478:A:OP1	55:Y9:31:LYS:HD3	2.09	0.52
27:YD:72:LYS:O	27:YD:73:VAL:C	2.51	0.52
29:YF:108:LYS:O	29:YF:112:MET:HG3	2.10	0.52
31:YH:153:LYS:HG3	31:YH:161:GLY:HA2	1.91	0.52
33:YN:12:ARG:NH1	33:YN:50:ASP:OD1	2.43	0.52
36:YQ:119:ARG:HG2	36:YQ:119:ARG:NH1	2.20	0.52
38:YS:83:LYS:O	38:YS:109:GLY:CA	2.46	0.52
41:YV:48:GLY:O	41:YV:49:THR:C	2.52	0.52
44:YY:9:LYS:HG2	44:YY:9:LYS:O	2.10	0.52
49:Y3:9:VAL:HG12	49:Y3:32:GLN:HE22	1.74	0.52
1:QA:528:C:O2'	1:QA:535:A:O2'	2.17	0.52
1:QA:909:A:H2	1:QA:1413:A:N3	2.08	0.52
2:QB:232:PRO:O	2:QB:233:SER:O	2.27	0.52
3:QC:150:LYS:HG3	3:QC:169:ALA:HB2	1.92	0.52
3:QC:195:VAL:HG12	3:QC:196:LEU:H	1.75	0.52
4:QD:106:TYR:CE1	4:QD:112:VAL:O	2.62	0.52
4:QD:173:TRP:C	4:QD:186:LEU:HB2	2.35	0.52
7:QG:85:TYR:HE1	7:QG:154:TYR:HE1	1.55	0.52
11:QK:115:PRO:C	11:QK:117:ASN:H	2.17	0.52
12:QL:46:LYS:CG	12:QL:47:LYS:N	2.73	0.52
13:QM:34:LEU:HD12	13:QM:41:PRO:HG3	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:QN:36:PHE:C	14:QN:36:PHE:CD1	2.88	0.52
25:RA:155:C:H5'	25:RA:161:U:OP2	2.10	0.52
25:RA:483:A:H4'	44:RY:49:VAL:CA	2.32	0.52
25:RA:1140:C:H1'	25:RA:1143:A:C2	2.45	0.52
25:RA:2814:C:N4	25:RA:2886:G:H1	2.07	0.52
25:RA:2867:G:O2'	25:RA:2868:A:P	2.67	0.52
27:RD:165:ILE:C	27:RD:166:GLN:HE21	2.18	0.52
27:RD:174:ILE:N	27:RD:174:ILE:CD1	2.73	0.52
28:RE:54:GLN:NE2	28:RE:54:GLN:H	2.08	0.52
31:RH:4:ILE:O	31:RH:6:ARG:N	2.43	0.52
31:RH:41:MET:HE1	31:RH:64:LEU:HB3	1.91	0.52
34:RO:4:PRO:O	34:RO:5:GLN:CB	2.58	0.52
35:RP:88:LEU:HD23	35:RP:89:ALA:N	2.24	0.52
35:RP:147:LEU:O	35:RP:148:LEU:CB	2.57	0.52
37:RR:41:ALA:O	37:RR:43:GLU:N	2.43	0.52
38:RS:25:ARG:HH12	38:RS:42:ASP:CG	2.16	0.52
44:RY:91:GLU:HG3	44:RY:92:ASN:N	2.25	0.52
45:RZ:98:MET:HE2	45:RZ:100:VAL:HG22	1.90	0.52
48:R2:9:GLN:O	48:R2:12:GLU:HB3	2.10	0.52
49:R3:6:VAL:HG12	49:R3:56:VAL:HG22	1.92	0.52
50:R4:54:GLY:HA2	50:R4:57:GLU:HG2	1.92	0.52
52:R6:30:THR:O	52:R6:30:THR:HG23	2.09	0.52
1:XA:790:A:N6	1:XA:791:G:N1	2.58	0.52
3:XC:175:LEU:HD12	3:XC:175:LEU:H	1.75	0.52
4:XD:147:ALA:HA	4:XD:182:LYS:HA	1.91	0.52
6:XF:19:LEU:HD23	6:XF:19:LEU:C	2.35	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
13:XM:66:LEU:O	13:XM:68:GLY:N	2.43	0.52
25:YA:962:G:H2'	25:YA:963:U:H6	1.75	0.52
25:YA:1203:G:N2	25:YA:1243:G:O6	2.42	0.52
25:YA:1657:C:O2'	25:YA:1658:C:H5'	2.10	0.52
25:YA:1756:G:H4'	25:YA:1758:G:O4'	2.10	0.52
25:YA:2700:C:C2'	25:YA:2701:C:H5'	2.39	0.52
27:YD:133:LEU:HG	27:YD:189:CYS:O	2.10	0.52
28:YE:54:GLN:O	28:YE:55:ASN:HB2	2.09	0.52
28:YE:170:LEU:CD2	28:YE:185:LYS:HB2	2.40	0.52
32:YI:9:LEU:O	32:YI:10:GLU:HG3	2.10	0.52
40:YU:59:ARG:O	40:YU:63:VAL:HG23	2.10	0.52
40:YU:104:GLN:CD	40:YU:104:GLN:H	2.16	0.52
40:YU:107:ALA:O	40:YU:111:GLU:OE1	2.28	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:43:GLN:C	54:Y8:44:LYS:HD2	2.35	0.52
1:QA:375:U:C4'	16:QP:17:TYR:HE2	2.21	0.52
1:QA:948:C:H2'	1:QA:949:A:H8	1.75	0.52
6:QF:10:LEU:HD13	6:QF:61:LEU:HD13	1.92	0.52
6:QF:19:LEU:HD23	6:QF:19:LEU:C	2.35	0.52
7:QG:106:GLN:O	7:QG:110:GLN:HG3	2.10	0.52
10:QJ:39:PRO:HB3	10:QJ:70:ARG:NH1	2.23	0.52
10:QJ:81:THR:C	10:QJ:83:GLU:N	2.64	0.52
13:QM:66:LEU:O	13:QM:68:GLY:N	2.43	0.52
14:QN:7:ILE:CG1	14:QN:8:GLU:N	2.73	0.52
15:QO:16:ALA:HB1	15:QO:21:ASP:HB3	1.92	0.52
19:QS:5:LEU:CD2	50:R4:67:TYR:CZ	2.92	0.52
19:QS:63:THR:O	19:QS:66:MET:HG2	2.09	0.52
20:QT:28:ALA:C	20:QT:30:LYS:N	2.67	0.52
25:RA:220:G:H21	25:RA:429:A:H62	1.58	0.52
25:RA:372:G:O2'	25:RA:373:U:OP2	2.28	0.52
25:RA:769:G:H2'	25:RA:770:G:C8	2.43	0.52
25:RA:806:C:OP2	35:RP:41:ARG:NE	2.41	0.52
25:RA:1666:G:H2'	25:RA:1667:G:H1'	1.92	0.52
25:RA:1844:C:H2'	25:RA:1845:G:C8	2.45	0.52
26:RB:2:C:H2'	26:RB:3:C:C6	2.45	0.52
27:RD:198:ASN:C	27:RD:198:ASN:HD22	2.17	0.52
29:RF:108:LYS:O	29:RF:112:MET:HG3	2.10	0.52
31:RH:24:VAL:O	31:RH:24:VAL:HG23	2.09	0.52
32:RI:60:GLU:HG3	32:RI:61:ARG:NH1	2.25	0.52
33:RN:108:PRO:O	33:RN:113:GLY:HA3	2.10	0.52
34:RO:23:ARG:O	34:RO:39:ILE:HB	2.10	0.52
37:RR:52:ILE:CG2	37:RR:94:TYR:HD1	2.22	0.52
40:RU:92:ARG:NH2	40:RU:94:ASN:HD22	2.07	0.52
40:RU:107:ALA:O	40:RU:111:GLU:OE1	2.28	0.52
45:RZ:17:ALA:O	45:RZ:21:ALA:N	2.41	0.52
47:R1:4:VAL:HG22	47:R1:5:CYS:N	2.24	0.52
47:R1:82:LEU:C	47:R1:82:LEU:CD1	2.41	0.52
51:R5:40:LYS:HD3	51:R5:46:CYS:SG	2.50	0.52
52:R6:27:LYS:HB2	52:R6:27:LYS:HZ3	1.73	0.52
1:XA:247:G:N1	1:XA:277:C:N3	2.39	0.52
1:XA:977:A:H8	1:XA:1223:C:N3	2.07	0.52
2:XB:5:ILE:N	2:XB:5:ILE:HD13	2.24	0.52
2:XB:53:ARG:O	2:XB:56:ARG:HB2	2.10	0.52
2:XB:170:GLU:HA	2:XB:172:ILE:CD1	2.40	0.52
3:XC:112:SER:HB3	3:XC:115:LEU:HD12	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:26:CYS:HB3	4:XD:31:CYS:SG	2.49	0.52
8:XH:33:GLU:C	8:XH:35:ILE:N	2.65	0.52
13:XM:34:LEU:HD12	13:XM:41:PRO:HG3	1.92	0.52
13:XM:65:LYS:CE	50:Y4:50:VAL:HG11	2.39	0.52
14:XN:8:GLU:C	14:XN:10:ALA:N	2.68	0.52
15:XO:26:GLU:OE2	15:XO:77:ARG:NH1	2.43	0.52
17:XQ:98:LEU:O	17:XQ:99:SER:C	2.53	0.52
19:XS:15:LEU:HD23	19:XS:15:LEU:H	1.75	0.52
25:YA:864:G:O2'	25:YA:866:A:N6	2.43	0.52
25:YA:922:U:H2'	25:YA:923:C:C6	2.45	0.52
25:YA:1035:U:H2'	25:YA:1036:G:C8	2.45	0.52
25:YA:1337:G:H2'	25:YA:1338:G:O4'	2.10	0.52
25:YA:2210:G:H2'	25:YA:2210:G:N3	2.25	0.52
25:YA:2500:U:O2'	25:YA:2504:U:OP1	2.24	0.52
25:YA:2712:U:O2'	25:YA:2712(A):A:P	2.68	0.52
26:YB:7:G:H1	26:YB:113:C:N4	2.00	0.52
27:YD:35:LYS:HG2	27:YD:64:ILE:HG22	1.92	0.52
27:YD:165:ILE:C	27:YD:166:GLN:HE21	2.18	0.52
29:YF:29:ASN:H	29:YF:112:MET:HE3	1.75	0.52
30:YG:37:VAL:HG22	30:YG:159:VAL:CA	2.34	0.52
34:YO:16:ALA:HA	34:YO:46:ALA:HB2	1.92	0.52
38:YS:89:ARG:HG2	38:YS:89:ARG:HH11	1.74	0.52
38:YS:106:ARG:HA	38:YS:110:LEU:CG	2.39	0.52
39:YT:16:ARG:HD3	39:YT:19:LEU:HG	1.92	0.52
44:YY:56:PRO:O	44:YY:57:GLN:C	2.53	0.52
47:Y1:83:GLU:CG	47:Y1:84:GLY:N	2.71	0.52
50:Y4:68:ARG:HD3	50:Y4:69:LYS:HG2	1.92	0.52
52:Y6:34:LEU:HD23	52:Y6:36:LEU:HD22	1.92	0.52
54:Y8:52:LYS:N	54:Y8:53:PRO:HD2	2.22	0.52
1:QA:97:U:O2'	1:QA:99:C:H5'	2.10	0.51
1:QA:449:C:H2'	1:QA:450:G:O4'	2.09	0.51
1:QA:596:C:N3	1:QA:644:G:N2	2.53	0.51
1:QA:682:G:C6	1:QA:683:G:N7	2.78	0.51
1:QA:1129:C:O2	1:QA:1132:C:N4	2.43	0.51
4:QD:135:LEU:C	4:QD:137:SER:H	2.18	0.51
13:QM:98:VAL:O	13:QM:98:VAL:HG12	2.10	0.51
19:QS:15:LEU:HD23	19:QS:15:LEU:H	1.74	0.51
19:QS:40:ILE:HG23	19:QS:67:VAL:O	2.11	0.51
25:RA:375:C:O5'	25:RA:375:C:H6	1.92	0.51
25:RA:530:G:C5	25:RA:2022:U:H5''	2.45	0.51
25:RA:704:G:H2'	25:RA:726:G:H22	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1012:U:H3	33:RN:25:ARG:NH1	2.02	0.51
25:RA:1405:U:O2'	25:RA:1406:U:O5'	2.28	0.51
25:RA:1466:G:H2'	25:RA:1466:G:N3	2.24	0.51
25:RA:2028:U:H2'	25:RA:2029:G:C8	2.46	0.51
25:RA:2469:A:H2	25:RA:2481:G:H21	1.58	0.51
25:RA:2543:G:H21	25:RA:2646:C:H5''	1.74	0.51
28:RE:93:VAL:C	28:RE:95:ILE:H	2.17	0.51
31:RH:55:PRO:HG2	31:RH:61:HIS:ND1	2.25	0.51
34:RO:2:ILE:HD12	34:RO:2:ILE:N	2.24	0.51
35:RP:112:LEU:HD11	35:RP:114:ILE:CG2	2.40	0.51
40:RU:8:VAL:O	40:RU:9:VAL:C	2.53	0.51
42:RW:28:SER:HB3	42:RW:31:GLU:HB2	1.91	0.51
43:RX:52:VAL:O	43:RX:52:VAL:HG12	2.09	0.51
43:RX:65:ARG:H	43:RX:65:ARG:CD	2.23	0.51
44:RY:9:LYS:HG2	44:RY:9:LYS:O	2.10	0.51
44:RY:61:ILE:HG23	44:RY:62:GLU:N	2.24	0.51
45:RZ:3:TYR:O	45:RZ:57:ILE:HG23	2.10	0.51
45:RZ:129:SER:O	45:RZ:131:ARG:N	2.39	0.51
47:R1:60:PHE:HE2	47:R1:91:LYS:HZ1	1.56	0.51
50:R4:40:HIS:N	50:R4:41:PRO:CD	2.73	0.51
1:XA:132:C:H42	1:XA:230:G:H1	1.57	0.51
1:XA:292:G:C5	1:XA:293:G:H1'	2.45	0.51
1:XA:360:A:H2'	1:XA:361:G:C8	2.45	0.51
1:XA:377:G:P	16:XP:5:ARG:HH11	2.34	0.51
1:XA:538:G:O3'	12:XL:114:LYS:HD3	2.10	0.51
1:XA:926:G:H8	1:XA:926:G:O5'	1.92	0.51
1:XA:1085:U:H3'	1:XA:1086:U:H5	1.75	0.51
1:XA:1285:A:H4'	1:XA:1286:A:H5'	1.92	0.51
3:XC:40:ARG:O	3:XC:44:GLU:HG3	2.10	0.51
4:XD:162:LEU:HD11	4:XD:181:MET:HB3	1.92	0.51
4:XD:173:TRP:C	4:XD:186:LEU:HB2	2.36	0.51
5:XE:101:ILE:N	5:XE:101:ILE:HD13	2.25	0.51
6:XF:30:LEU:O	6:XF:35:ALA:HB3	2.10	0.51
7:XG:16:LEU:HD11	9:XI:45:ALA:HB2	1.92	0.51
13:XM:90:LEU:CB	13:XM:93:ARG:HD2	2.40	0.51
20:XT:83:ARG:O	20:XT:86:ARG:HB3	2.09	0.51
25:YA:839:U:H2'	25:YA:840:C:C6	2.44	0.51
25:YA:1069:A:H4'	25:YA:1070:A:H5''	1.93	0.51
25:YA:1252:G:C2	25:YA:1253:A:C2	2.98	0.51
25:YA:2735:G:H2'	25:YA:2736:G:H8	1.75	0.51
26:YB:50:G:OP1	38:YS:62:LYS:HB2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:YF:67:GLN:O	29:YF:68:LYS:CB	2.39	0.51
32:YI:21:VAL:HG21	32:YI:25:TYR:HD1	1.76	0.51
37:YR:41:ALA:O	37:YR:43:GLU:N	2.43	0.51
39:YT:111:ARG:O	39:YT:112:ARG:CG	2.55	0.51
40:YU:91:ASP:O	40:YU:92:ARG:C	2.53	0.51
44:YY:74:PRO:O	44:YY:80:GLY:HA2	2.10	0.51
47:Y1:91:LYS:HE3	47:Y1:91:LYS:CA	2.40	0.51
50:Y4:14:ILE:O	50:Y4:14:ILE:HG23	2.10	0.51
1:QA:278:G:N2	17:QQ:95:TYR:HB3	2.25	0.51
1:QA:519:C:OP2	12:QL:50:SER:OG	2.28	0.51
1:QA:690:G:H22	11:QK:55:LYS:NZ	2.08	0.51
2:QB:92:TYR:C	2:QB:92:TYR:CD1	2.88	0.51
4:QD:196:LEU:HD12	4:QD:196:LEU:H	1.75	0.51
7:QG:15:ASP:CB	7:QG:20:ASP:H	2.13	0.51
13:QM:90:LEU:CB	13:QM:93:ARG:HD2	2.41	0.51
18:QR:64:ARG:O	18:QR:66:LEU:N	2.43	0.51
25:RA:109:G:C2	25:RA:110:G:C8	2.99	0.51
25:RA:1356:G:N2	25:RA:1376:C:C2	2.78	0.51
25:RA:1410:G:H5''	25:RA:1410:G:H8	1.74	0.51
25:RA:1681:G:H8	25:RA:1681:G:O5'	1.93	0.51
25:RA:2881:C:H5''	37:RR:117:VAL:HG21	1.92	0.51
26:RB:12:C:H2'	46:R0:73:GLY:HA3	1.92	0.51
26:RB:50:G:OP1	38:RS:63:THR:HG23	2.10	0.51
28:RE:105:THR:HB	28:RE:197:ILE:HG12	1.92	0.51
30:RG:97:ASP:O	30:RG:101:ILE:HG23	2.10	0.51
31:RH:126:PRO:HD2	31:RH:127:GLU:N	2.25	0.51
33:RN:16:ILE:HG22	33:RN:17:ASP:N	2.26	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:N	2.25	0.51
39:RT:20:PRO:HD2	39:RT:86:ILE:HG23	1.92	0.51
39:RT:42:ILE:HD12	39:RT:42:ILE:N	2.25	0.51
40:RU:59:ARG:O	40:RU:63:VAL:HG23	2.11	0.51
43:RX:47:PHE:N	43:RX:47:PHE:CD1	2.78	0.51
46:R0:10:THR:HG22	46:R0:12:ASN:H	1.75	0.51
50:R4:14:ILE:HG23	50:R4:14:ILE:O	2.10	0.51
51:R5:20:ARG:C	51:R5:22:HIS:N	2.68	0.51
1:XA:191:G:O2'	20:XT:101:GLY:O	2.28	0.51
1:XA:193:C:OP1	20:XT:57:ARG:HD2	2.10	0.51
1:XA:1052:U:H5''	1:XA:1053:G:OP2	2.10	0.51
1:XA:1111:A:N1	3:XC:177:THR:HG23	2.25	0.51
2:XB:86:GLU:C	2:XB:88:ALA:H	2.17	0.51
3:XC:181:ASN:HD21	3:XC:204:LEU:CD1	2.12	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:106:TYR:CE1	4:XD:112:VAL:O	2.62	0.51
4:XD:127:THR:CG2	4:XD:128:VAL:N	2.73	0.51
4:XD:162:LEU:HD13	4:XD:181:MET:HB3	1.92	0.51
6:XF:75:LEU:HD23	6:XF:79:LEU:HG	1.90	0.51
6:XF:101:ALA:HA	18:XR:28:GLU:OE1	2.10	0.51
7:XG:151:TYR:HA	7:XG:153:HIS:CE1	2.45	0.51
9:XI:88:TYR:O	9:XI:89:ASN:CB	2.58	0.51
13:XM:77:ASN:ND2	50:Y4:71:ARG:NH1	2.58	0.51
25:YA:534:U:O2	40:YU:49:HIS:HE1	1.93	0.51
25:YA:685:A:N3	25:YA:689:A:C6	2.79	0.51
25:YA:1641:A:H3'	25:YA:1642:G:H8	1.75	0.51
25:YA:1741:C:H5'	25:YA:1742:C:OP2	2.09	0.51
25:YA:2415:G:O3'	35:YP:66:GLY:HA3	2.10	0.51
25:YA:2578:G:OP2	25:YA:2578:G:H4'	2.10	0.51
26:YB:105:G:C2	26:YB:106:G:C8	2.97	0.51
27:YD:35:LYS:HD2	27:YD:104:TYR:CD1	2.45	0.51
27:YD:205:VAL:O	27:YD:206:LEU:C	2.52	0.51
28:YE:51:PHE:CD1	28:YE:52:LEU:N	2.76	0.51
30:YG:97:ASP:O	30:YG:101:ILE:HG23	2.10	0.51
33:YN:94:HIS:O	33:YN:95:PRO:O	2.28	0.51
33:YN:120:LEU:CD1	33:YN:122:VAL:HG23	2.38	0.51
35:YP:112:LEU:HD11	35:YP:114:ILE:CG2	2.40	0.51
35:YP:112:LEU:HD22	35:YP:113:LYS:H	1.75	0.51
38:YS:67:ARG:HB2	38:YS:67:ARG:HH11	1.66	0.51
43:YX:52:VAL:HG12	43:YX:52:VAL:O	2.09	0.51
51:Y5:40:LYS:HD3	51:Y5:46:CYS:SG	2.50	0.51
1:QA:6:G:H4'	1:QA:298:A:H4'	1.92	0.51
1:QA:216:G:H2'	1:QA:217:C:C6	2.46	0.51
1:QA:328:C:O2	1:QA:328:C:H2'	2.10	0.51
1:QA:1004:A:H2	1:QA:1024:G:C8	2.28	0.51
2:QB:86:GLU:C	2:QB:88:ALA:H	2.17	0.51
3:QC:22:TRP:CH2	3:QC:32:LEU:HB2	2.45	0.51
3:QC:35:GLU:OE2	3:QC:95:THR:HG23	2.11	0.51
3:QC:40:ARG:O	3:QC:44:GLU:HG3	2.11	0.51
4:QD:162:LEU:HD11	4:QD:181:MET:HB3	1.92	0.51
6:QF:75:LEU:HD21	6:QF:79:LEU:HD11	1.91	0.51
11:QK:96:ARG:O	11:QK:97:ALA:C	2.54	0.51
13:QM:2:ALA:O	13:QM:9:ILE:HB	2.10	0.51
16:QP:21:VAL:O	16:QP:33:ILE:HG12	2.11	0.51
22:QV:74:C:H42	25:RA:2252:G:H1	1.58	0.51
25:RA:120:U:H4'	25:RA:121:G:H5''	1.91	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:190:A:N6	25:RA:207:A:H1'	2.25	0.51
25:RA:2627:G:N3	25:RA:2781:A:H2	2.09	0.51
26:RB:37:C:N4	26:RB:38:C:N3	2.59	0.51
26:RB:46:A:C5	26:RB:47:C:C5	2.98	0.51
27:RD:205:VAL:O	27:RD:206:LEU:C	2.52	0.51
33:RN:12:ARG:NH1	33:RN:50:ASP:OD1	2.43	0.51
34:RO:24:VAL:HG21	34:RO:32:TYR:O	2.10	0.51
34:RO:43:VAL:HG23	34:RO:56:ASP:O	2.10	0.51
38:RS:87:PHE:O	38:RS:88:ASP:O	2.28	0.51
39:RT:99:LEU:HB2	39:RT:101:PHE:CE1	2.45	0.51
41:RV:29:PRO:O	41:RV:61:VAL:O	2.29	0.51
49:R3:17:LYS:HA	49:R3:20:LYS:HD2	1.93	0.51
49:R3:49:LYS:O	49:R3:49:LYS:HG2	2.10	0.51
2:XB:134:GLU:HB3	2:XB:138:LEU:CD1	2.39	0.51
3:XC:6:HIS:C	3:XC:8:ILE:H	2.18	0.51
3:XC:20:SER:CB	3:XC:40:ARG:HH22	2.14	0.51
3:XC:22:TRP:CZ3	3:XC:32:LEU:HD12	2.45	0.51
3:XC:35:GLU:OE2	3:XC:95:THR:HG23	2.10	0.51
8:XH:12:ARG:NH1	8:XH:27:PRO:HD2	2.25	0.51
8:XH:51:VAL:HG11	8:XH:60:ARG:HG3	1.92	0.51
12:XL:23:LYS:O	12:XL:24:VAL:HG23	2.10	0.51
16:XP:21:VAL:O	16:XP:33:ILE:HG12	2.11	0.51
19:XS:40:ILE:HG23	19:XS:67:VAL:O	2.11	0.51
21:XU:3:LYS:HB3	21:XU:14:TRP:CD1	2.46	0.51
25:YA:27:G:H1'	25:YA:513:A:N6	2.25	0.51
25:YA:392:C:H5''	25:YA:409:C:H5''	1.91	0.51
25:YA:656:G:H2'	25:YA:657:U:O4'	2.11	0.51
25:YA:1343:G:H1	25:YA:1404:C:H42	1.58	0.51
25:YA:1422:G:C5	25:YA:1423:G:N7	2.78	0.51
25:YA:1638:C:H4'	25:YA:2710:C:O2	2.11	0.51
25:YA:1652:A:C2'	25:YA:1653:G:H5'	2.41	0.51
25:YA:2318:G:H22	38:YS:2:ALA:N	2.09	0.51
25:YA:2459:A:C6	25:YA:2460:U:C2	2.99	0.51
25:YA:2845:G:O2'	25:YA:2846:G:H5'	2.10	0.51
27:YD:30:GLU:HG3	27:YD:63:ARG:NH2	2.26	0.51
27:YD:67:PHE:CE1	27:YD:157:ARG:NH2	2.79	0.51
28:YE:20:ALA:C	28:YE:21:VAL:HG13	2.35	0.51
28:YE:55:ASN:C	28:YE:57:LYS:N	2.62	0.51
28:YE:203:LYS:HE3	28:YE:204:ALA:CB	2.40	0.51
29:YF:125:LEU:HA	29:YF:194:MET:O	2.10	0.51
30:YG:44:GLY:CA	30:YG:88:ILE:HD11	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:134:ARG:O	33:YN:136:GLU:N	2.43	0.51
34:YO:14:THR:HG21	34:YO:86:ILE:HD13	1.91	0.51
41:YV:14:VAL:HA	41:YV:18:LEU:HD12	1.93	0.51
45:YZ:19:ARG:HD3	45:YZ:25:PRO:HD2	1.91	0.51
47:Y1:29:GLY:C	47:Y1:30:VAL:CG2	2.82	0.51
1:QA:634:C:C2'	1:QA:635:G:H5'	2.40	0.51
1:QA:797:C:OP1	11:QK:124:LYS:HE2	2.11	0.51
1:QA:924:C:N4	1:QA:925:G:O6	2.44	0.51
3:QC:11:ARG:O	3:QC:13:GLY:N	2.43	0.51
4:QD:65:ARG:NH1	4:QD:70:ILE:O	2.43	0.51
6:QF:63:TYR:HD2	6:QF:63:TYR:N	2.09	0.51
9:QI:3:GLN:HB3	9:QI:20:ARG:CG	2.40	0.51
9:QI:126:SER:O	9:QI:128:ARG:N	2.35	0.51
10:QJ:17:ASP:HA	10:QJ:20:ALA:HB3	1.93	0.51
11:QK:102:GLY:O	11:QK:103:LEU:C	2.53	0.51
13:QM:57:ARG:HH11	13:QM:57:ARG:CB	2.14	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
25:RA:246:C:N4	54:R8:8:LYS:HG3	2.25	0.51
25:RA:626:U:H5''	25:RA:627:A:H5'	1.93	0.51
25:RA:1093:G:OP1	31:RH:170:ARG:HD2	2.10	0.51
25:RA:2724:C:P	37:RR:1:MET:HE3	2.50	0.51
26:RB:66:A:C2	26:RB:108:C:C4	2.98	0.51
28:RE:47:VAL:O	28:RE:48:GLN:C	2.51	0.51
29:RF:162:LEU:HD23	29:RF:165:ARG:NH2	2.25	0.51
30:RG:114:ILE:CG2	30:RG:115:ARG:N	2.73	0.51
31:RH:89:ILE:O	31:RH:89:ILE:CG1	2.57	0.51
32:RI:120:ILE:HG12	32:RI:126:TYR:CE1	2.46	0.51
36:RQ:64:ILE:HA	36:RQ:106:VAL:CG1	2.33	0.51
37:RR:28:LEU:CD2	37:RR:114:VAL:HG12	2.41	0.51
37:RR:56:LYS:C	37:RR:58:GLY:H	2.18	0.51
39:RT:34:VAL:CG1	39:RT:36:GLU:HG2	2.39	0.51
39:RT:57:PHE:O	39:RT:58:ASN:C	2.53	0.51
47:R1:8:SER:HB3	47:R1:66:HIS:CE1	2.46	0.51
50:R4:36:CYS:O	50:R4:39:CYS:CB	2.55	0.51
1:XA:60:A:H4'	1:XA:61:G:O5'	2.10	0.51
1:XA:277:C:C4	1:XA:278:G:N7	2.78	0.51
1:XA:582:U:H2'	1:XA:583:A:C8	2.45	0.51
1:XA:738:C:H2'	1:XA:739:C:C6	2.45	0.51
1:XA:1148:U:OP1	9:XI:7:THR:HG21	2.10	0.51
1:XA:1324:A:H4'	1:XA:1362:C:H4'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:92:TYR:CD1	2:XB:92:TYR:C	2.88	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
5:XE:96:PRO:HA	5:XE:117:ASP:CG	2.35	0.51
8:XH:39:LEU:C	8:XH:45:ILE:HG12	2.35	0.51
13:XM:87:TYR:C	13:XM:89:GLY:H	2.18	0.51
20:XT:89:ARG:HH22	20:XT:106:ALA:HB2	1.75	0.51
21:XU:6:ARG:HE	21:XU:15:ARG:NH2	2.08	0.51
25:YA:49:A:N6	25:YA:177:G:C4	2.78	0.51
25:YA:195:A:H5'	35:YP:46:LYS:NZ	2.25	0.51
25:YA:934:G:H2'	25:YA:935:C:H6	1.74	0.51
25:YA:1492:G:H3'	25:YA:1493:C:H5'	1.92	0.51
25:YA:2205:C:O5'	25:YA:2205:C:H6	1.92	0.51
25:YA:2408:U:H2'	25:YA:2409:G:C8	2.45	0.51
27:YD:221:VAL:HG22	27:YD:226:MET:HE2	1.91	0.51
28:YE:95:ILE:H	28:YE:95:ILE:CD1	2.19	0.51
33:YN:12:ARG:NH1	33:YN:50:ASP:OD2	2.40	0.51
34:YO:4:PRO:O	34:YO:5:GLN:CB	2.58	0.51
34:YO:23:ARG:O	34:YO:39:ILE:HB	2.09	0.51
41:YV:2:PHE:CD1	41:YV:2:PHE:C	2.88	0.51
42:YW:14:PRO:O	42:YW:17:VAL:N	2.42	0.51
48:Y2:15:LYS:H	48:Y2:67:LYS:HE2	1.73	0.51
50:Y4:54:GLY:HA2	50:Y4:57:GLU:HG2	1.92	0.51
54:Y8:29:LYS:HB2	54:Y8:44:LYS:HG2	1.91	0.51
1:QA:129(A):G:N2	1:QA:188:U:HO2'	2.07	0.51
1:QA:181:G:O2'	1:QA:182:U:O5'	2.27	0.51
1:QA:573:A:N3	1:QA:883:C:O2'	2.42	0.51
1:QA:696:A:H8	1:QA:696:A:O5'	1.94	0.51
1:QA:1127:G:N2	1:QA:1145:C:O2	2.44	0.51
1:QA:1329:A:N7	21:QU:7:ARG:NH2	2.59	0.51
3:QC:36:ASP:HB3	3:QC:40:ARG:NH1	2.25	0.51
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	1.92	0.51
7:QG:16:LEU:HD11	9:QI:45:ALA:HB2	1.92	0.51
8:QH:102:ARG:NH1	8:QH:105:ARG:HH12	2.09	0.51
9:QI:28:VAL:O	9:QI:29:ASN:C	2.53	0.51
25:RA:247:G:H4'	25:RA:386:G:C5	2.46	0.51
25:RA:828:U:H4'	25:RA:831:G:N1	2.26	0.51
25:RA:1085:A:O2'	25:RA:1086:A:OP1	2.28	0.51
25:RA:2516:G:C5	25:RA:2517:C:C4	2.98	0.51
25:RA:2600:A:C6	25:RA:2601:C:N4	2.79	0.51
25:RA:2745:C:C4	25:RA:2746:U:C4	2.98	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:32:LEU:O	29:RF:36:VAL:HG23	2.11	0.51
33:RN:131:GLN:CG	33:RN:132:ALA:H	2.20	0.51
36:RQ:25:ASP:HA	36:RQ:100:GLY:O	2.11	0.51
37:RR:117:VAL:CG2	37:RR:118:GLU:N	2.74	0.51
41:RV:38:LEU:HD13	41:RV:55:ALA:HB3	1.91	0.51
44:RY:75:ILE:CG1	44:RY:76:CYS:N	2.73	0.51
44:RY:95:LYS:O	44:RY:96:ILE:O	2.28	0.51
50:R4:12:ALA:HB1	50:R4:30:GLU:H	1.76	0.51
1:XA:267:C:H2'	1:XA:268:C:H6	1.76	0.51
1:XA:475:G:H2'	1:XA:476:G:H8	1.76	0.51
1:XA:668:G:O2'	15:XO:46:HIS:HB3	2.11	0.51
1:XA:1054:C:N4	24:XY:34:C:C6	2.78	0.51
1:XA:1389:C:H2'	1:XA:1390:U:O4'	2.10	0.51
3:XC:29:TYR:OH	14:XN:54:PRO:HD2	2.09	0.51
9:XI:112:LYS:HD3	9:XI:112:LYS:C	2.35	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
25:YA:17:G:H2'	25:YA:18:C:H6	1.75	0.51
25:YA:628:G:H2'	25:YA:629:G:H8	1.75	0.51
25:YA:807:U:OP2	35:YP:41:ARG:NH1	2.43	0.51
25:YA:1449:A:H5'	25:YA:1449(A):G:OP2	2.10	0.51
25:YA:1506:C:H3'	25:YA:1507:A:H5''	1.91	0.51
25:YA:1993:U:H4'	28:YE:128:SER:OG	2.10	0.51
25:YA:2729:G:H2'	25:YA:2730:C:C6	2.46	0.51
27:YD:134:ARG:HB2	27:YD:135:PHE:HD2	1.75	0.51
29:YF:65:TRP:HZ2	29:YF:72:ARG:NH2	2.09	0.51
31:YH:41:MET:HE1	31:YH:64:LEU:HB3	1.91	0.51
39:YT:14:TYR:H	39:YT:14:TYR:HD1	1.56	0.51
50:Y4:42:PHE:O	50:Y4:44:THR:N	2.44	0.51
1:QA:389:A:H2'	1:QA:390:C:H5'	1.93	0.51
1:QA:409:G:H1	1:QA:433:C:N4	2.06	0.51
1:QA:940:C:H2'	1:QA:941:G:C8	2.46	0.51
1:QA:1015:A:H1'	1:QA:1219:U:H5'	1.93	0.51
2:QB:82:ARG:HA	2:QB:92:TYR:CE2	2.45	0.51
4:QD:54:TYR:CE1	4:QD:206:PHE:HE1	2.29	0.51
4:QD:127:THR:CG2	4:QD:128:VAL:N	2.73	0.51
6:QF:30:LEU:O	6:QF:35:ALA:HB3	2.10	0.51
8:QH:39:LEU:C	8:QH:45:ILE:HG12	2.35	0.51
9:QI:88:TYR:O	9:QI:89:ASN:CB	2.58	0.51
12:QL:23:LYS:O	12:QL:24:VAL:HG23	2.11	0.51
13:QM:16:ASP:HB3	13:QM:34:LEU:HD11	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:87:TYR:C	13:QM:89:GLY:N	2.64	0.51
15:QO:17:ARG:NH1	15:QO:77:ARG:NH1	2.59	0.51
21:QU:3:LYS:HB3	21:QU:14:TRP:CD1	2.45	0.51
21:QU:10:ARG:HH11	21:QU:10:ARG:HG3	1.75	0.51
25:RA:130:C:H4'	25:RA:1349:A:O4'	2.11	0.51
25:RA:848:G:C2	25:RA:933:A:H1'	2.45	0.51
25:RA:1188:U:O2'	25:RA:1189:A:H5'	2.10	0.51
25:RA:1705:G:C6	25:RA:1706:U:C4	2.98	0.51
25:RA:1899:G:H21	25:RA:1902:C:H42	1.58	0.51
25:RA:2625:G:H2'	25:RA:2626:C:C6	2.46	0.51
25:RA:2643:G:H2'	25:RA:2644:G:O4'	2.10	0.51
27:RD:67:PHE:CE1	27:RD:157:ARG:NH2	2.79	0.51
28:RE:105:THR:HG23	28:RE:166:THR:OG1	2.10	0.51
28:RE:119:ARG:HD3	28:RE:160:TYR:HB2	1.92	0.51
30:RG:44:GLY:CA	30:RG:88:ILE:HD11	2.40	0.51
33:RN:6:PRO:HG2	33:RN:43:THR:OG1	2.11	0.51
33:RN:26:LEU:HG	33:RN:30:ILE:HD11	1.93	0.51
34:RO:2:ILE:CD1	34:RO:82:ASN:HD22	2.14	0.51
34:RO:16:ALA:HA	34:RO:46:ALA:HB2	1.92	0.51
34:RO:79:PHE:CD2	39:RT:72:VAL:HG22	2.45	0.51
35:RP:112:LEU:HD22	35:RP:113:LYS:H	1.75	0.51
42:RW:7:ALA:HB2	42:RW:50:VAL:CG2	2.40	0.51
42:RW:25:ARG:HB2	42:RW:25:ARG:HH11	1.74	0.51
52:R6:9:LEU:HB3	52:R6:26:ASN:O	2.11	0.51
53:R7:36:GLN:HG2	53:R7:36:GLN:O	2.10	0.51
1:XA:129(A):G:N2	1:XA:191(A):G:C5	2.79	0.51
1:XA:421:U:H5''	1:XA:422:C:OP2	2.11	0.51
1:XA:505:G:H2'	1:XA:505:G:N3	2.26	0.51
1:XA:889:A:H4'	1:XA:890:G:OP1	2.09	0.51
3:XC:11:ARG:O	3:XC:13:GLY:N	2.43	0.51
3:XC:22:TRP:CH2	3:XC:32:LEU:HB2	2.45	0.51
4:XD:196:LEU:HD12	4:XD:196:LEU:H	1.75	0.51
5:XE:10:MET:HE2	5:XE:13:ILE:CD1	2.41	0.51
10:XJ:17:ASP:HA	10:XJ:20:ALA:HB3	1.93	0.51
12:XL:24:VAL:O	12:XL:24:VAL:CG1	2.58	0.51
13:XM:80:ARG:NH2	50:Y4:70:GLY:HA3	2.26	0.51
14:YN:36:PHE:CD1	14:YN:36:PHE:C	2.88	0.51
14:YN:44:LEU:O	14:YN:48:ALA:N	2.41	0.51
16:XP:20:VAL:HG23	16:XP:34:GLU:O	2.11	0.51
16:XP:72:ARG:HD3	16:XP:73:LEU:HD23	1.91	0.51
18:XR:43:PHE:C	18:XR:44:LEU:HD12	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:28:ALA:C	20:XT:30:LYS:N	2.67	0.51
25:YA:216:A:C8	25:YA:432:A:C6	2.99	0.51
25:YA:836:G:H5''	25:YA:837:C:OP2	2.10	0.51
25:YA:1962:C:O2'	25:YA:1964:G:OP2	2.28	0.51
25:YA:2336:A:H8	25:YA:2336:A:O5'	1.92	0.51
25:YA:2745:C:H1'	31:YH:143:GLN:HG2	1.91	0.51
26:YB:5:C:H2'	26:YB:6:C:H6	1.74	0.51
26:YB:63:G:C2	26:YB:64:C:C2	2.99	0.51
27:YD:117:VAL:CG2	27:YD:128:GLY:C	2.84	0.51
30:YG:114:ILE:CG2	30:YG:115:ARG:N	2.73	0.51
33:YN:131:GLN:HE21	33:YN:132:ALA:H	1.58	0.51
36:YQ:7:MET:HE1	36:YQ:73:PRO:HG3	1.91	0.51
37:YR:56:LYS:C	37:YR:58:GLY:H	2.18	0.51
39:YT:14:TYR:N	39:YT:14:TYR:CD1	2.78	0.51
40:YU:8:VAL:O	40:YU:9:VAL:C	2.53	0.51
41:YV:41:GLY:N	41:YV:46:VAL:HG13	2.26	0.51
42:YW:70:TYR:HD2	42:YW:70:TYR:N	2.06	0.51
43:YX:36:LYS:HA	43:YX:39:ILE:HD12	1.90	0.51
1:QA:102:G:C6	1:QA:103:C:C4	2.99	0.51
1:QA:359:U:H2'	1:QA:360:A:H8	1.72	0.51
1:QA:376:G:OP1	16:QP:5:ARG:HB2	2.10	0.51
1:QA:502:G:H2'	1:QA:503:C:O4'	2.11	0.51
2:QB:24:TRP:CE3	2:QB:26:PRO:HA	2.45	0.51
2:QB:134:GLU:HB3	2:QB:138:LEU:HD12	1.93	0.51
5:QE:10:MET:HE2	5:QE:13:ILE:CD1	2.41	0.51
6:QF:101:ALA:HA	18:QR:28:GLU:OE1	2.11	0.51
11:QK:46:GLY:HA2	11:QK:50:TYR:O	2.10	0.51
25:RA:554:U:O2'	25:RA:556:G:H8	1.93	0.51
25:RA:558:G:OP1	33:RN:111:PRO:HD2	2.11	0.51
25:RA:860:U:C5	25:RA:917:A:C2	2.98	0.51
25:RA:2414:G:H21	35:RP:67:MET:CE	2.23	0.51
25:RA:2459:A:C2	25:RA:2460:U:H1'	2.46	0.51
25:RA:2475:C:H42	25:RA:2529:G:H22	1.57	0.51
25:RA:2724:C:OP1	28:RE:118:LYS:NZ	2.43	0.51
27:RD:221:VAL:HG22	27:RD:226:MET:HE2	1.91	0.51
29:RF:132:VAL:O	29:RF:133:ASN:C	2.52	0.51
30:RG:51:ARG:HH11	30:RG:51:ARG:HB3	1.76	0.51
30:RG:95:ARG:O	30:RG:96:ARG:C	2.54	0.51
34:RO:15:GLY:O	34:RO:46:ALA:HB1	2.10	0.51
39:RT:36:GLU:O	39:RT:37:GLY:C	2.53	0.51
39:RT:111:ARG:C	39:RT:113:LYS:N	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:5:VAL:HG22	41:RV:14:VAL:HG22	1.93	0.51
42:RW:9:TYR:CD2	42:RW:102:HIS:HE1	2.28	0.51
43:RX:5:TYR:CE2	48:R2:30:ARG:HG3	2.45	0.51
47:R1:87:PRO:O	47:R1:91:LYS:HB2	2.11	0.51
47:R1:94:LEU:O	47:R1:95:LEU:HG	2.11	0.51
48:R2:15:LYS:H	48:R2:67:LYS:HE2	1.73	0.51
1:XA:339:C:OP2	34:YO:97:ARG:NH1	2.43	0.51
1:XA:411:A:C4	1:XA:413:G:H1'	2.46	0.51
1:XA:538:G:OP1	12:XL:113:ARG:HD2	2.10	0.51
3:XC:139:GLN:O	3:XC:143:GLU:HB2	2.11	0.51
4:XD:108:LEU:HD11	4:XD:174:LEU:CD2	2.37	0.51
4:XD:135:LEU:C	4:XD:137:SER:H	2.18	0.51
4:XD:163:GLU:C	4:XD:165:MET:N	2.66	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD13	1.93	0.51
7:XG:108:ALA:C	7:XG:110:GLN:H	2.19	0.51
7:XG:140:ASP:C	7:XG:142:GLU:N	2.69	0.51
11:XK:29:ILE:HG13	11:XK:44:SER:HB3	1.92	0.51
13:XM:2:ALA:O	13:XM:9:ILE:HB	2.10	0.51
13:XM:4:ILE:HG22	13:XM:5:ALA:H	1.75	0.51
22:XV:4:G:HO2'	22:XV:5:G:H8	1.58	0.51
22:XV:15:G:H22	22:XV:48:C:H42	1.57	0.51
22:XV:58:A:O2'	22:XV:60:U:OP2	2.16	0.51
22:XV:68:C:H2'	22:XV:69:C:H6	1.76	0.51
25:YA:270(B):A:O2'	25:YA:364:C:H2'	2.10	0.51
25:YA:394:A:H5'	25:YA:395:U:OP2	2.11	0.51
25:YA:470:A:H2'	25:YA:471:A:O4'	2.10	0.51
25:YA:1291:C:C2	25:YA:1292:U:C5	2.99	0.51
25:YA:1529:A:C8	25:YA:1530:G:C8	2.99	0.51
25:YA:1888:G:N3	25:YA:1888:G:H5''	2.25	0.51
25:YA:1918:A:O2'	25:YA:1920:C:N4	2.43	0.51
30:YG:51:ARG:HH11	30:YG:51:ARG:HB3	1.76	0.51
31:YH:19:VAL:HG13	31:YH:43:VAL:CG2	2.41	0.51
31:YH:55:PRO:HG2	31:YH:61:HIS:ND1	2.26	0.51
31:YH:72:ILE:O	31:YH:75:ALA:HB3	2.11	0.51
34:YO:24:VAL:HG21	34:YO:32:TYR:O	2.11	0.51
35:YP:95:VAL:HG13	35:YP:100:LEU:CD2	2.40	0.51
37:YR:118:GLU:OXT	37:YR:118:GLU:HG3	2.11	0.51
43:YX:5:TYR:CE2	48:Y2:30:ARG:HG3	2.45	0.51
50:Y4:12:ALA:HB1	50:Y4:30:GLU:H	1.76	0.51
51:Y5:54:GLY:O	51:Y5:55:ARG:C	2.54	0.51
1:QA:189:U:C2	17:QQ:72:ARG:NH1	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:359:U:OP1	32:YI:87:LYS:HD3	2.10	0.51
2:QB:187:LEU:HD13	2:QB:187:LEU:O	2.11	0.51
3:QC:175:LEU:HD12	3:QC:175:LEU:H	1.75	0.51
4:QD:22:LYS:HB2	4:QD:26:CYS:CB	2.41	0.51
8:QH:104:ARG:HD2	8:QH:138:TRP:CD2	2.46	0.51
18:QR:43:PHE:C	18:QR:51:LEU:HD12	2.36	0.51
25:RA:185:U:H4'	25:RA:218:A:H4'	1.93	0.51
25:RA:531:C:OP1	25:RA:561:G:N1	2.44	0.51
25:RA:930:U:H4'	25:RA:931:G:O5'	2.11	0.51
25:RA:947:G:H2'	25:RA:948:G:C8	2.46	0.51
25:RA:1392:A:H62	25:RA:1393:A:N6	2.09	0.51
25:RA:1826:G:H2'	25:RA:1827:C:C6	2.45	0.51
25:RA:1832:C:N4	25:RA:1833:U:C4	2.79	0.51
25:RA:2818:G:H2'	25:RA:2819:G:C8	2.46	0.51
26:RB:89(A):A:C5	26:RB:90:C:H1'	2.46	0.51
27:RD:76:PRO:HA	27:RD:118:VAL:HG23	1.93	0.51
28:RE:20:ALA:C	28:RE:21:VAL:HG13	2.35	0.51
29:RF:127:GLU:O	29:RF:129:PHE:N	2.40	0.51
33:RN:134:ARG:O	33:RN:136:GLU:N	2.43	0.51
34:RO:113:LYS:O	34:RO:116:SER:HB3	2.11	0.51
37:RR:85:PRO:C	37:RR:87:TYR:H	2.19	0.51
41:RV:35:LEU:CD2	41:RV:57:VAL:HG22	2.32	0.51
45:RZ:151:HIS:HA	45:RZ:170:THR:HA	1.92	0.51
48:R2:36:ARG:O	48:R2:40:SER:HB2	2.10	0.51
54:R8:10:ALA:O	54:R8:14:VAL:HG12	2.11	0.51
1:XA:1329:A:H5'	13:XM:29:ARG:HG3	1.92	0.51
4:XD:112:VAL:HG12	4:XD:116:GLN:OE1	2.11	0.51
4:XD:206:PHE:CD2	4:XD:207:TYR:CD1	2.99	0.51
7:XG:15:ASP:CB	7:XG:20:ASP:H	2.13	0.51
8:XH:104:ARG:HD2	8:XH:138:TRP:CD2	2.46	0.51
14:XN:40:CYS:SG	14:XN:43:CYS:CA	2.98	0.51
16:XP:1:MET:O	16:XP:3:LYS:HG3	2.11	0.51
16:XP:30:GLY:O	16:XP:31:LYS:C	2.54	0.51
19:XS:41:VAL:CG1	19:XS:45:VAL:N	2.74	0.51
25:YA:1155:A:O2'	25:YA:1156:A:H2'	2.10	0.51
25:YA:1239:G:H2'	25:YA:1240:U:O4'	2.11	0.51
25:YA:1251:C:OP1	40:YU:10:ARG:HG3	2.11	0.51
25:YA:1842:G:N2	25:YA:1901:A:C4	2.79	0.51
26:YB:13:A:C2	26:YB:70:C:O4'	2.64	0.51
34:YO:24:VAL:O	34:YO:24:VAL:HG13	2.11	0.51
35:YP:62:LEU:CD2	35:YP:62:LEU:H	2.19	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:101:VAL:HA	35:YP:105:LEU:O	2.10	0.51
36:YQ:58:PHE:HD1	36:YQ:58:PHE:O	1.94	0.51
36:YQ:133:ARG:HG2	36:YQ:134:ARG:N	2.26	0.51
40:YU:98:LEU:HD23	40:YU:98:LEU:C	2.36	0.51
42:YW:48:ALA:O	42:YW:49:LYS:C	2.53	0.51
43:YX:47:PHE:CD1	43:YX:47:PHE:N	2.78	0.51
43:YX:65:ARG:H	43:YX:65:ARG:CD	2.24	0.51
51:Y5:20:ARG:C	51:Y5:22:HIS:N	2.68	0.51
51:Y5:36:CYS:C	51:Y5:38:ALA:H	2.19	0.51
52:Y6:20:ASN:O	52:Y6:21:TYR:CB	2.59	0.51
55:Y9:1:MET:HE2	55:Y9:10:ILE:HD13	1.92	0.51
1:QA:190:G:O2'	1:QA:191(A):G:OP2	2.29	0.51
1:QA:224:C:H2'	1:QA:225:C:H6	1.75	0.51
1:QA:555:C:H2'	1:QA:556:C:C6	2.46	0.51
3:QC:21:ARG:CD	3:QC:21:ARG:N	2.74	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
5:QE:12:LEU:HD23	5:QE:13:ILE:H	1.76	0.51
5:QE:60:TYR:CE1	5:QE:64:ARG:NH2	2.77	0.51
6:QF:86:ARG:O	6:QF:87:ARG:CG	2.50	0.51
9:QI:40:LEU:C	9:QI:42:ARG:H	2.18	0.51
10:QJ:54:PHE:O	10:QJ:55:LYS:HG3	2.11	0.51
13:QM:120:LYS:O	13:QM:121:LYS:HB2	2.11	0.51
15:QO:76:GLU:C	15:QO:78:TYR:N	2.68	0.51
16:QP:30:GLY:O	16:QP:31:LYS:C	2.54	0.51
20:QT:98:PRO:C	20:QT:100:ILE:H	2.18	0.51
25:RA:363(B):G:H2'	25:RA:363(C):G:H8	1.73	0.51
25:RA:879:G:H2'	25:RA:880:G:O4'	2.10	0.51
25:RA:1043:C:O2'	25:RA:1048:A:O2'	2.14	0.51
29:RF:127:GLU:OE1	29:RF:127:GLU:HA	2.07	0.51
31:RH:131:VAL:CG1	31:RH:132:ARG:N	2.74	0.51
33:RN:112:LEU:HD23	33:RN:113:GLY:N	2.26	0.51
34:RO:20:MET:HG2	34:RO:21:CYS:O	2.11	0.51
36:RQ:36:ALA:HB1	36:RQ:127:ILE:HD12	1.93	0.51
38:RS:56:LEU:O	38:RS:57:LYS:C	2.53	0.51
44:RY:2:ARG:HG2	44:RY:2:ARG:NH1	2.22	0.51
44:RY:46:LYS:HE3	44:RY:63:LYS:HB3	1.93	0.51
51:R5:36:CYS:C	51:R5:38:ALA:H	2.19	0.51
1:XA:1057:G:H2'	1:XA:1058:G:O4'	2.10	0.51
1:XA:1158:C:H4'	2:XB:133:LYS:HZ1	1.74	0.51
1:XA:1240:U:OP2	7:XG:116:ALA:N	2.44	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1301:U:C4	1:XA:1303:C:C6	2.99	0.51
2:XB:15:VAL:H	2:XB:16:HIS:HD1	1.59	0.51
3:XC:70:VAL:CG1	3:XC:71:ALA:N	2.73	0.51
3:XC:87:LEU:C	3:XC:89:GLU:H	2.19	0.51
3:XC:150:LYS:HG3	3:XC:169:ALA:HB2	1.92	0.51
4:XD:11:LEU:HD22	4:XD:66:ARG:CD	2.19	0.51
5:XE:126:ARG:HH11	5:XE:126:ARG:CG	2.21	0.51
6:XF:22:GLU:CD	6:XF:82:ARG:HH21	2.18	0.51
12:XL:126:LYS:C	12:XL:128:ALA:N	2.69	0.51
16:XP:39:TYR:OH	16:XP:41:PRO:HB3	2.11	0.51
21:XU:10:ARG:HH11	21:XU:10:ARG:HG3	1.75	0.51
25:YA:60:G:C2	25:YA:74:A:C5	2.98	0.51
25:YA:628:G:H2'	25:YA:629:G:C8	2.45	0.51
25:YA:655:A:H8	25:YA:656:G:O4'	1.94	0.51
25:YA:898:C:H2'	25:YA:899:A:H5'	1.92	0.51
25:YA:1899:G:N2	25:YA:1902:C:H5	2.08	0.51
25:YA:2401:U:H2'	25:YA:2402:C:H5''	1.93	0.51
25:YA:2416:C:C2	25:YA:2417:C:C5	2.99	0.51
27:YD:28:GLU:OE1	27:YD:29:PRO:HD2	2.11	0.51
27:YD:210:GLY:O	27:YD:213:ARG:N	2.43	0.51
28:YE:37:ARG:HE	28:YE:37:ARG:N	2.09	0.51
28:YE:54:GLN:NE2	28:YE:54:GLN:H	2.08	0.51
30:YG:109:VAL:O	30:YG:113:ARG:HG3	2.10	0.51
32:YI:77:LEU:HD11	32:YI:140:LEU:HD12	1.92	0.51
33:YN:57:ALA:O	33:YN:58:ASP:HB3	2.10	0.51
33:YN:78:TYR:N	33:YN:78:TYR:HD1	2.07	0.51
33:YN:108:PRO:O	33:YN:113:GLY:HA3	2.10	0.51
36:YQ:25:ASP:HA	36:YQ:100:GLY:O	2.11	0.51
45:YZ:146:ILE:HG22	45:YZ:176:PRO:HD3	1.92	0.51
54:Y8:40:GLU:C	54:Y8:42:ARG:N	2.68	0.51
1:QA:539:A:N6	1:QA:540:G:O6	2.44	0.51
1:QA:959:A:H3'	1:QA:960:U:H5''	1.92	0.51
1:QA:1368:G:OP1	9:QI:111:ARG:NH2	2.44	0.51
2:QB:23:ARG:HH11	2:QB:23:ARG:HG2	1.76	0.51
3:QC:132:ARG:O	3:QC:136:GLN:HB2	2.11	0.51
4:QD:83:SER:HA	4:QD:89:THR:HG23	1.92	0.51
4:QD:155:LEU:O	4:QD:159:ARG:HG2	2.10	0.51
4:QD:162:LEU:HD13	4:QD:181:MET:HB3	1.92	0.51
5:QE:101:ILE:N	5:QE:101:ILE:HD13	2.25	0.51
9:QI:79:LEU:HD22	9:QI:101:PHE:O	2.11	0.51
11:QK:91:ARG:HH22	18:QR:88:LYS:NZ	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:1:MET:O	16:QP:3:LYS:HG3	2.11	0.51
16:QP:83:GLU:HG3	16:QP:84:ALA:H	1.76	0.51
25:RA:201:C:O2'	25:RA:386:G:N1	2.41	0.51
25:RA:856:C:H6	25:RA:856:C:H5''	1.75	0.51
25:RA:2406:U:C2	35:RP:72:PRO:HB2	2.46	0.51
25:RA:2612:C:C4	25:RA:2613:U:H5	2.29	0.51
27:RD:117:VAL:CG2	27:RD:128:GLY:C	2.84	0.51
28:RE:37:ARG:HE	28:RE:37:ARG:N	2.09	0.51
34:RO:23:ARG:HH11	34:RO:23:ARG:HG2	1.76	0.51
34:RO:35:VAL:O	34:RO:35:VAL:HG23	2.11	0.51
38:RS:89:ARG:HD2	38:RS:89:ARG:O	2.11	0.51
41:RV:14:VAL:HA	41:RV:18:LEU:HD12	1.93	0.51
44:RY:56:PRO:O	44:RY:57:GLN:C	2.53	0.51
50:R4:42:PHE:O	50:R4:44:THR:N	2.44	0.51
1:XA:438:G:H2'	1:XA:494:U:O4	2.11	0.51
1:XA:892:A:O2'	1:XA:1415:G:H4'	2.11	0.51
1:XA:1064:G:OP1	1:XA:1386:G:H4'	2.11	0.51
2:XB:82:ARG:HA	2:XB:92:TYR:CE2	2.45	0.51
3:XC:21:ARG:CD	3:XC:21:ARG:N	2.74	0.51
3:XC:99:VAL:O	3:XC:99:VAL:HG23	2.11	0.51
6:XF:10:LEU:HD13	6:XF:61:LEU:HD11	1.92	0.51
6:XF:63:TYR:CD2	6:XF:63:TYR:N	2.79	0.51
9:XI:40:LEU:C	9:XI:42:ARG:H	2.18	0.51
9:XI:79:LEU:HD22	9:XI:101:PHE:O	2.10	0.51
25:YA:1048:A:H5'	25:YA:1049:C:OP2	2.11	0.51
25:YA:1798:U:C2	25:YA:1822:G:N2	2.79	0.51
25:YA:2466:C:H5'	55:Y9:5:ALA:HB3	1.92	0.51
29:YF:108:LYS:HA	29:YF:108:LYS:NZ	2.27	0.51
30:YG:95:ARG:O	30:YG:96:ARG:C	2.54	0.51
31:YH:4:ILE:O	31:YH:6:ARG:N	2.43	0.51
33:YN:16:ILE:HG22	33:YN:17:ASP:N	2.25	0.51
33:YN:26:LEU:HG	33:YN:30:ILE:HD11	1.93	0.51
33:YN:118:LYS:O	33:YN:120:LEU:N	2.43	0.51
34:YO:113:LYS:O	34:YO:116:SER:HB3	2.11	0.51
35:YP:12:ALA:C	35:YP:14:LYS:H	2.16	0.51
38:YS:86:ALA:O	38:YS:87:PHE:HB3	2.09	0.51
38:YS:87:PHE:O	38:YS:88:ASP:O	2.29	0.51
38:YS:95:HIS:CG	38:YS:96:GLY:N	2.77	0.51
44:YY:95:LYS:O	44:YY:96:ILE:O	2.28	0.51
49:Y3:49:LYS:HG2	49:Y3:49:LYS:O	2.10	0.51
53:Y7:36:GLN:HG2	53:Y7:36:GLN:O	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:15:G:C4'	5:QE:24:ARG:NH1	2.74	0.50
1:QA:17:U:H2'	1:QA:18:C:C6	2.46	0.50
1:QA:922:G:C2	1:QA:923:A:C4	2.98	0.50
1:QA:1118:C:H1'	1:QA:1179:A:C4	2.45	0.50
3:QC:48:TYR:O	3:QC:51:GLY:N	2.41	0.50
4:QD:206:PHE:CD2	4:QD:207:TYR:CD1	2.99	0.50
5:QE:153:LYS:HB2	5:QE:153:LYS:HZ3	1.75	0.50
9:QI:29:ASN:OD1	9:QI:64:THR:HA	2.11	0.50
12:QL:126:LYS:C	12:QL:128:ALA:N	2.69	0.50
13:QM:87:TYR:C	13:QM:89:GLY:H	2.19	0.50
21:QU:14:TRP:CE3	21:QU:15:ARG:HD3	2.46	0.50
25:RA:257:A:H2'	25:RA:258:G:O4'	2.11	0.50
25:RA:826:U:C6	25:RA:828:U:H6	2.29	0.50
25:RA:974(A):C:H4'	25:RA:975:G:O5'	2.10	0.50
25:RA:1711:C:H2'	25:RA:1712:C:C6	2.47	0.50
25:RA:1930:G:O2'	25:RA:1931:U:P	2.68	0.50
25:RA:2404:C:H1'	35:RP:67:MET:CE	2.40	0.50
27:RD:30:GLU:HG3	27:RD:63:ARG:NH2	2.25	0.50
29:RF:65:TRP:HZ2	29:RF:72:ARG:NH2	2.08	0.50
29:RF:196:LEU:C	29:RF:197:ASP:O	2.50	0.50
31:RH:72:ILE:O	31:RH:75:ALA:HB3	2.11	0.50
33:RN:7:LYS:HD3	33:RN:9:VAL:N	2.25	0.50
35:RP:101:VAL:HA	35:RP:105:LEU:O	2.10	0.50
36:RQ:23:GLY:O	36:RQ:24:GLY:C	2.54	0.50
37:RR:1:MET:O	37:RR:2:ARG:CB	2.60	0.50
38:RS:89:ARG:O	38:RS:90:GLY:C	2.54	0.50
39:RT:57:PHE:CG	39:RT:58:ASN:N	2.79	0.50
1:XA:148:G:H2'	1:XA:149:A:C8	2.46	0.50
1:XA:451:A:N6	1:XA:481:G:O4'	2.43	0.50
2:XB:187:LEU:HD13	2:XB:187:LEU:O	2.11	0.50
3:XC:87:LEU:C	3:XC:89:GLU:N	2.65	0.50
4:XD:178:VAL:O	4:XD:180:GLY:N	2.44	0.50
6:XF:63:TYR:HD2	6:XF:63:TYR:N	2.09	0.50
8:XH:29:SER:CB	8:XH:32:LYS:HG3	2.28	0.50
9:XI:83:ARG:C	9:XI:86:VAL:HG12	2.36	0.50
13:XM:66:LEU:O	13:XM:70:LEU:HB2	2.11	0.50
15:XO:16:ALA:HB1	15:XO:21:ASP:HB3	1.92	0.50
25:YA:1258:C:O4'	29:YF:84:VAL:HG11	2.11	0.50
25:YA:1357:U:H2'	25:YA:1358:G:H8	1.75	0.50
25:YA:1401:G:H8	25:YA:1401:G:O5'	1.94	0.50
25:YA:1864:U:H3	25:YA:1878:G:H1	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:43:C:H1'	30:YG:93:THR:O	2.11	0.50
28:YE:105:THR:HG23	28:YE:166:THR:OG1	2.10	0.50
28:YE:116:VAL:HG22	28:YE:122:PHE:HB2	1.91	0.50
28:YE:129:HIS:O	28:YE:130:GLY:C	2.53	0.50
29:YF:32:LEU:O	29:YF:36:VAL:HG23	2.11	0.50
31:YH:126:PRO:HD2	31:YH:127:GLU:N	2.26	0.50
35:YP:49:ARG:HE	54:Y8:59:LYS:HG2	1.76	0.50
37:YR:3:HIS:C	37:YR:5:LYS:H	2.17	0.50
37:YR:92:GLY:N	37:YR:94:TYR:HE2	2.09	0.50
38:YS:26:LEU:CD2	38:YS:87:PHE:CD1	2.94	0.50
38:YS:74:ALA:O	38:YS:75:GLU:C	2.54	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:H	1.76	0.50
39:YT:51:ARG:HG3	39:YT:98:LYS:HG3	1.93	0.50
48:Y2:36:ARG:O	48:Y2:40:SER:HB2	2.10	0.50
49:Y3:7:LYS:HE2	49:Y3:32:GLN:NE2	2.25	0.50
49:Y3:56:VAL:CG1	49:Y3:57:GLU:N	2.74	0.50
50:Y4:1:MET:HE3	50:Y4:6:HIS:CD2	2.46	0.50
1:QA:376:G:O3'	16:QP:5:ARG:HD2	2.11	0.50
1:QA:570:G:H2'	1:QA:571:U:H6	1.74	0.50
1:QA:658:G:H2'	1:QA:659:U:C6	2.47	0.50
1:QA:878:G:H5'	8:QH:89:PRO:HG2	1.93	0.50
1:QA:912:C:O2'	1:QA:913:A:H5'	2.12	0.50
1:QA:942:G:H2'	1:QA:943:U:H6	1.76	0.50
1:QA:1221:G:P	19:QS:36:ARG:HD3	2.51	0.50
1:QA:1223:C:P	19:QS:78:ARG:HH12	2.34	0.50
1:QA:1224:G:N1	1:QA:1322:C:H1'	2.26	0.50
1:QA:1478:C:H2'	1:QA:1479:C:C6	2.46	0.50
3:QC:99:VAL:O	3:QC:99:VAL:HG23	2.11	0.50
7:QG:23:VAL:O	7:QG:27:ILE:CD1	2.60	0.50
13:QM:66:LEU:O	13:QM:70:LEU:HB2	2.11	0.50
16:QP:20:VAL:HG23	16:QP:34:GLU:O	2.11	0.50
19:QS:43:GLU:N	19:QS:43:GLU:OE2	2.44	0.50
25:RA:49:A:H5''	25:RA:51:G:C5'	2.41	0.50
25:RA:84:A:N1	25:RA:98:G:O2'	2.39	0.50
25:RA:654(U):A:H8	25:RA:654(U):A:O5'	1.95	0.50
25:RA:2032:G:H1'	28:RE:145:LYS:HD3	1.93	0.50
25:RA:2666:C:H3'	25:RA:2667:C:H6	1.76	0.50
25:RA:2726:U:O2'	25:RA:2727:G:H5'	2.11	0.50
28:RE:137:HIS:HB3	28:RE:138:PRO:CD	2.37	0.50
30:RG:121:ASN:C	30:RG:123:ASN:H	2.19	0.50
34:RO:24:VAL:O	34:RO:24:VAL:HG13	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:47:ILE:CG1	34:RO:48:PRO:HD2	2.41	0.50
35:RP:95:VAL:HG13	35:RP:100:LEU:CD2	2.40	0.50
36:RQ:133:ARG:HG2	36:RQ:134:ARG:N	2.26	0.50
40:RU:112:ARG:HH11	40:RU:112:ARG:HG2	1.76	0.50
42:RW:88:ARG:HB3	42:RW:92:ARG:CB	2.41	0.50
44:RY:44:ILE:CG1	44:RY:45:VAL:H	2.25	0.50
44:RY:74:PRO:O	44:RY:80:GLY:HA2	2.10	0.50
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CG	2.46	0.50
1:XA:15:G:H2'	1:XA:16:A:C8	2.46	0.50
1:XA:1399:C:H4'	1:XA:1400:C:C5'	2.41	0.50
2:XB:24:TRP:CE3	2:XB:26:PRO:HA	2.45	0.50
9:XI:28:VAL:O	9:XI:29:ASN:C	2.53	0.50
14:XN:48:ALA:CA	14:XN:53:LEU:HD12	2.41	0.50
18:XR:43:PHE:C	18:XR:51:LEU:HD12	2.36	0.50
21:XU:14:TRP:CE3	21:XU:15:ARG:HD3	2.46	0.50
25:YA:264:C:O2'	25:YA:265:A:H5''	2.11	0.50
25:YA:592:G:N2	25:YA:593:G:H1'	2.27	0.50
25:YA:823:G:H2'	25:YA:824:A:C8	2.46	0.50
25:YA:1370:C:O2'	25:YA:1811:G:O2'	2.29	0.50
25:YA:1593:G:H2'	25:YA:1594:G:C8	2.46	0.50
25:YA:2244:U:H2'	25:YA:2245:U:O4'	2.10	0.50
25:YA:2308:G:H2'	25:YA:2308:G:N3	2.26	0.50
26:YB:52:A:H62	38:YS:33:LYS:HG3	1.75	0.50
31:YH:103:LEU:CD1	31:YH:131:VAL:HG21	2.41	0.50
31:YH:133:VAL:HG12	31:YH:141:VAL:HG13	1.93	0.50
32:YI:87:LYS:HA	32:YI:122:GLU:HG2	1.93	0.50
33:YN:73:THR:HG22	33:YN:82:LEU:HD11	1.93	0.50
34:YO:23:ARG:HH11	34:YO:23:ARG:HG2	1.76	0.50
39:YT:57:PHE:CG	39:YT:58:ASN:N	2.79	0.50
41:YV:5:VAL:HG22	41:YV:14:VAL:HG22	1.93	0.50
47:Y1:85:LEU:HA	47:Y1:87:PRO:HD2	1.92	0.50
1:QA:236:G:H8	1:QA:236:G:O5'	1.93	0.50
1:QA:248:C:H2'	1:QA:249:U:H6	1.76	0.50
1:QA:625:G:C4	1:QA:626:U:C5	3.00	0.50
1:QA:674:G:O2'	1:QA:675:A:H5'	2.11	0.50
1:QA:857:C:H2'	1:QA:858:G:O4'	2.10	0.50
1:QA:1459:C:OP1	20:QT:27:LYS:NZ	2.45	0.50
3:QC:70:VAL:CG1	3:QC:71:ALA:N	2.73	0.50
4:QD:7:PRO:HB2	4:QD:10:ARG:HD2	1.92	0.50
4:QD:30:LYS:CG	4:QD:35:ARG:NE	2.64	0.50
4:QD:163:GLU:OE1	27:YD:134:ARG:NH2	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:45:PHE:CD2	5:QE:47:LYS:HD2	2.47	0.50
5:QE:83:GLU:HG2	5:QE:88:LYS:CG	2.41	0.50
8:QH:12:ARG:NH1	8:QH:27:PRO:HD2	2.25	0.50
8:QH:95:VAL:HB	8:QH:99:GLU:O	2.12	0.50
18:QR:43:PHE:C	18:QR:44:LEU:HD12	2.36	0.50
25:RA:315:G:H2'	25:RA:316:C:C6	2.45	0.50
25:RA:676:A:H2	25:RA:802:A:H61	1.60	0.50
25:RA:1413:G:N2	25:RA:1414:G:H1'	2.26	0.50
25:RA:1530:G:H2'	25:RA:1531:C:C6	2.47	0.50
25:RA:1538:G:H2'	25:RA:1539:G:H8	1.75	0.50
25:RA:1568:G:OP2	27:RD:63:ARG:NH2	2.39	0.50
25:RA:1860:G:H1	25:RA:1882:C:H42	1.57	0.50
25:RA:2069:G:C2'	25:RA:2070:G:H5'	2.42	0.50
25:RA:2151:G:H2'	25:RA:2152:G:H8	1.74	0.50
25:RA:2377:A:H2'	25:RA:2378:A:C8	2.46	0.50
25:RA:2548:G:N2	25:RA:2560:C:O2	2.37	0.50
30:RG:92:VAL:O	30:RG:92:VAL:HG13	2.12	0.50
31:RH:169:VAL:HG13	31:RH:170:ARG:N	2.26	0.50
32:RI:29:TYR:O	32:RI:33:ARG:HD3	2.11	0.50
33:RN:120:LEU:HD13	33:RN:120:LEU:C	2.37	0.50
34:RO:107:ARG:CA	34:RO:112:MET:HE1	2.39	0.50
47:R1:91:LYS:HE3	47:R1:91:LYS:CA	2.40	0.50
51:R5:37:LYS:O	51:R5:37:LYS:HD2	2.12	0.50
1:XA:407:G:H1	1:XA:435:C:N4	2.05	0.50
1:XA:452:A:H4'	16:XP:72:ARG:NH2	2.26	0.50
1:XA:474:G:H5'	16:XP:81:ARG:HG3	1.92	0.50
1:XA:505:G:H5''	1:XA:506:G:OP2	2.10	0.50
2:XB:53:ARG:HA	2:XB:56:ARG:HG3	1.93	0.50
7:XG:40:ALA:O	7:XG:41:ARG:C	2.54	0.50
9:XI:10:ARG:HG3	9:XI:105:ASP:HB2	1.92	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:NH1	2.59	0.50
15:XO:76:GLU:C	15:XO:78:TYR:N	2.69	0.50
25:YA:185:U:H4'	25:YA:218:A:H4'	1.93	0.50
25:YA:270(J):G:N2	25:YA:270(Q):C:C2	2.79	0.50
25:YA:298:G:P	44:YY:85:VAL:HG22	2.51	0.50
25:YA:483:A:H4'	44:YY:49:VAL:CA	2.36	0.50
25:YA:558:G:P	33:YN:111:PRO:HD2	2.51	0.50
25:YA:841:A:C2	25:YA:938:G:C2	2.99	0.50
25:YA:1204:A:H1'	25:YA:1206:G:N9	2.27	0.50
25:YA:1687:G:H1'	25:YA:1702:G:N2	2.26	0.50
25:YA:1871:A:H2'	25:YA:1872:A:C8	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2532:G:H1'	25:YA:2663:G:N2	2.27	0.50
25:YA:2869:G:H2'	25:YA:2870:C:H6	1.76	0.50
26:YB:24:G:O6	26:YB:56:G:O2'	2.26	0.50
33:YN:112:LEU:HD23	33:YN:113:GLY:N	2.26	0.50
35:YP:114:ILE:HD13	35:YP:125:VAL:CG2	2.41	0.50
40:YU:92:ARG:C	40:YU:94:ASN:N	2.69	0.50
40:YU:112:ARG:HG2	40:YU:112:ARG:HH11	1.76	0.50
42:YW:70:TYR:N	42:YW:70:TYR:CD2	2.75	0.50
44:YY:46:LYS:HE3	44:YY:63:LYS:HB3	1.93	0.50
47:Y1:80:LEU:HB2	47:Y1:81:LYS:CE	2.41	0.50
50:Y4:10:VAL:HG23	50:Y4:11:PRO:HD2	1.93	0.50
1:QA:1051:C:H2'	1:QA:1052:U:C6	2.46	0.50
2:QB:53:ARG:HA	2:QB:56:ARG:HG3	1.93	0.50
2:QB:200:ILE:O	2:QB:201:ILE:HD13	2.12	0.50
4:QD:180:GLY:O	4:QD:181:MET:C	2.54	0.50
10:QJ:98:ILE:H	10:QJ:98:ILE:CD1	2.24	0.50
16:QP:39:TYR:OH	16:QP:41:PRO:HB3	2.11	0.50
25:RA:508:G:O2'	25:RA:509:C:P	2.69	0.50
25:RA:869:G:C2	25:RA:870:A:C8	2.99	0.50
25:RA:1359:A:N6	25:RA:1372:U:N3	2.59	0.50
25:RA:1534:G:OP1	25:RA:1534:G:H8	1.95	0.50
25:RA:1770:G:C6	25:RA:1771:C:C4	2.99	0.50
25:RA:2106:G:N2	25:RA:2107:C:O2	2.43	0.50
25:RA:2477:C:H41	55:R9:10:ILE:HG23	1.75	0.50
28:RE:37:ARG:HE	28:RE:37:ARG:H	1.59	0.50
29:RF:45:ARG:CG	29:RF:45:ARG:NH1	2.71	0.50
30:RG:43:LEU:O	30:RG:88:ILE:HG12	2.12	0.50
31:RH:153:LYS:HG3	31:RH:161:GLY:HA2	1.91	0.50
32:RI:102:SER:O	32:RI:106:GLY:N	2.40	0.50
35:RP:114:ILE:HD13	35:RP:125:VAL:CG2	2.41	0.50
37:RR:70:LEU:O	37:RR:72:ASP:N	2.42	0.50
38:RS:26:LEU:CD2	38:RS:87:PHE:CD1	2.94	0.50
38:RS:35:ILE:CD1	38:RS:101:LEU:HD23	2.41	0.50
39:RT:54:ARG:HG2	39:RT:54:ARG:NH1	2.23	0.50
45:RZ:8:TYR:HB2	45:RZ:38:TYR:CE2	2.47	0.50
52:R6:9:LEU:HD13	52:R6:26:ASN:HD22	1.76	0.50
1:XA:411:A:C6	1:XA:429:U:C5	3.00	0.50
1:XA:994:A:H61	1:XA:1047:G:H4'	1.77	0.50
1:XA:1035:A:C6	1:XA:1036:G:H1'	2.46	0.50
1:XA:1064:G:N2	1:XA:1190:G:H2'	2.27	0.50
1:XA:1238:A:C6	1:XA:1303:C:O4'	2.65	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:103:THR:N	2:XB:180:LEU:HD11	2.26	0.50
3:XC:184:TYR:HA	3:XC:200:ALA:O	2.12	0.50
9:XI:48:GLU:N	9:XI:49:PRO:CD	2.74	0.50
9:XI:83:ARG:HA	9:XI:86:VAL:CG1	2.42	0.50
25:YA:637:A:H4'	25:YA:638:G:O5'	2.12	0.50
25:YA:1021:A:OP2	33:YN:65:LYS:NZ	2.43	0.50
25:YA:1022:G:N2	25:YA:1142(A):A:H2	2.08	0.50
25:YA:1026:U:H1'	25:YA:1027:A:H5''	1.92	0.50
25:YA:1171:G:O6	25:YA:1174:A:N6	2.43	0.50
25:YA:1331:A:C6	25:YA:1333:C:C2	2.99	0.50
25:YA:1530:G:C2	25:YA:1531:C:C2	2.99	0.50
25:YA:2013:A:C2'	25:YA:2014:A:H5'	2.41	0.50
25:YA:2286:A:H2'	52:Y6:31:PRO:HG2	1.94	0.50
26:YB:15:A:H1'	26:YB:109:G:N9	2.27	0.50
27:YD:10:THR:CG2	27:YD:13:ARG:HB3	2.35	0.50
27:YD:233:HIS:CD2	27:YD:233:HIS:H	2.29	0.50
27:YD:241:PRO:O	27:YD:242:ARG:C	2.53	0.50
34:YO:15:GLY:O	34:YO:46:ALA:HB1	2.10	0.50
38:YS:83:LYS:HG2	38:YS:109:GLY:HA2	1.90	0.50
44:YY:75:ILE:CG1	44:YY:76:CYS:N	2.73	0.50
47:Y1:87:PRO:O	47:Y1:91:LYS:HB2	2.10	0.50
47:Y1:94:LEU:O	47:Y1:95:LEU:HG	2.11	0.50
49:Y3:17:LYS:HA	49:Y3:20:LYS:HD2	1.92	0.50
1:QA:564:C:H5'	17:QQ:32:TYR:CE2	2.46	0.50
1:QA:1126:U:H1'	1:QA:1280:A:N7	2.27	0.50
1:QA:1135:U:H4'	1:QA:1136:U:H5	1.77	0.50
1:QA:1158:C:N3	1:QA:1160:G:C8	2.79	0.50
1:QA:1316:G:H2'	1:QA:1318:A:OP2	2.12	0.50
3:QC:8:ILE:C	3:QC:10:PHE:N	2.69	0.50
3:QC:52:LEU:H	3:QC:52:LEU:CD2	2.20	0.50
4:QD:28:SER:CB	4:QD:29:PRO:CD	2.85	0.50
6:QF:63:TYR:N	6:QF:63:TYR:CD2	2.79	0.50
7:QG:50:ILE:HA	7:QG:54:THR:HG22	1.94	0.50
8:QH:83:ILE:HB	8:QH:137:VAL:HG13	1.93	0.50
9:QI:10:ARG:HG3	9:QI:105:ASP:HB2	1.92	0.50
9:QI:53:VAL:HG21	9:QI:92:TYR:CZ	2.45	0.50
14:QN:48:ALA:CA	14:QN:53:LEU:HD12	2.42	0.50
15:QO:26:GLU:OE2	15:QO:77:ARG:NH1	2.43	0.50
22:QV:68:C:H2'	22:QV:69:C:H6	1.76	0.50
25:RA:27:G:N2	25:RA:512:G:O2'	2.44	0.50
25:RA:747:U:N3	51:R5:2:ALA:N	2.58	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1091:G:N2	25:RA:1101:U:H1'	2.26	0.50
28:RE:176:ILE:HG22	28:RE:176:ILE:O	2.10	0.50
29:RF:108:LYS:HA	29:RF:108:LYS:NZ	2.27	0.50
38:RS:60:GLY:O	38:RS:61:ASN:CB	2.56	0.50
39:RT:51:ARG:HG3	39:RT:98:LYS:HG3	1.94	0.50
40:RU:92:ARG:C	40:RU:94:ASN:N	2.69	0.50
42:RW:22:ASP:HA	42:RW:25:ARG:HH12	1.75	0.50
44:RY:88:LYS:NZ	44:RY:88:LYS:HA	2.27	0.50
50:R4:1:MET:HE3	50:R4:6:HIS:CD2	2.46	0.50
51:R5:48:GLU:HA	51:R5:59:GLU:HG2	1.94	0.50
51:R5:54:GLY:O	51:R5:55:ARG:C	2.54	0.50
1:XA:753:A:H4'	1:XA:754:C:O5'	2.11	0.50
1:XA:1225:A:H5''	1:XA:1226:C:OP2	2.12	0.50
9:XI:53:VAL:HG21	9:XI:92:TYR:CZ	2.45	0.50
16:XP:83:GLU:HG3	16:XP:84:ALA:H	1.77	0.50
25:YA:1503:U:H2'	25:YA:1504:C:H6	1.77	0.50
25:YA:2322:A:H2'	25:YA:2323:G:O4'	2.11	0.50
25:YA:2472:G:N2	25:YA:2477:C:H5'	2.27	0.50
25:YA:2849:U:O2	25:YA:2867:G:H1'	2.12	0.50
27:YD:10:THR:HG23	27:YD:13:ARG:CB	2.34	0.50
27:YD:182:LEU:H	27:YD:272:ALA:CB	2.25	0.50
30:YG:6:ALA:H	50:Y4:23:GLU:CG	2.25	0.50
30:YG:43:LEU:O	30:YG:88:ILE:HG12	2.12	0.50
30:YG:111:LEU:N	30:YG:112:PRO:CD	2.75	0.50
31:YH:24:VAL:HG21	31:YH:72:ILE:HG12	1.94	0.50
31:YH:169:VAL:HG13	31:YH:170:ARG:N	2.26	0.50
36:YQ:132:VAL:HG12	36:YQ:133:ARG:N	2.27	0.50
37:YR:117:VAL:CG2	37:YR:118:GLU:N	2.74	0.50
38:YS:26:LEU:HD22	38:YS:87:PHE:CD1	2.46	0.50
39:YT:20:PRO:HD2	39:YT:86:ILE:HG23	1.92	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:H	2.22	0.50
42:YW:22:ASP:HA	42:YW:25:ARG:HH12	1.75	0.50
48:Y2:41:ILE:HD11	48:Y2:44:LEU:CB	2.42	0.50
50:Y4:42:PHE:CD1	50:Y4:42:PHE:C	2.90	0.50
50:Y4:57:GLU:O	50:Y4:61:ARG:O	2.30	0.50
51:Y5:56:LYS:HD2	51:Y5:56:LYS:N	2.13	0.50
1:QA:374:A:C6	1:QA:375:U:C4	3.00	0.50
1:QA:941:G:O6	1:QA:1342:C:N4	2.37	0.50
1:QA:1230:C:H6	1:QA:1230:C:O5'	1.95	0.50
1:QA:1237:C:H5''	1:QA:1238:A:O4'	2.10	0.50
2:QB:15:VAL:H	2:QB:16:HIS:HD1	1.59	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:170:GLU:HA	2:QB:172:ILE:CD1	2.41	0.50
3:QC:34:LEU:O	3:QC:38:ARG:HG3	2.11	0.50
4:QD:13:ARG:HH22	4:QD:36:ARG:CZ	2.24	0.50
4:QD: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
8:QH:20:TYR:HD1	8:QH:65:TYR:HD2	1.55	0.50
10:QJ:56:HIS:O	10:QJ:58:ASP:O	2.30	0.50
13:QM:28:ALA:C	13:QM:30:ALA:N	2.70	0.50
19:QS:41:VAL:CG1	19:QS:45:VAL:N	2.74	0.50
25:RA:278:A:H61	25:RA:362:U:H3	1.57	0.50
25:RA:652:C:H5'	25:RA:653:A:OP2	2.11	0.50
25:RA:2828:C:O2'	25:RA:2829:C:H5'	2.11	0.50
27:RD:31:LYS:C	27:RD:32:SER:O	2.54	0.50
27:RD:32:SER:O	27:RD:33:LEU:CB	2.60	0.50
27:RD:35:LYS:HD2	27:RD:104:TYR:CD1	2.46	0.50
27:RD:237:GLU:OE1	27:RD:237:GLU:HA	2.12	0.50
28:RE:61:ARG:CB	28:RE:62:PRO:HD3	2.41	0.50
30:RG:109:VAL:O	30:RG:113:ARG:HG3	2.10	0.50
31:RH:16:SER:O	31:RH:17:VAL:HG23	2.12	0.50
33:RN:129:PRO:C	33:RN:131:GLN:H	2.20	0.50
36:RQ:108:GLY:O	36:RQ:109:VAL:HG23	2.12	0.50
39:RT:23:ARG:CB	39:RT:24:PRO:HD2	2.40	0.50
42:RW:34:ASN:O	42:RW:35:ILE:C	2.55	0.50
44:RY:48:ALA:HB2	44:RY:61:ILE:CD1	2.41	0.50
44:RY:90:LEU:HD22	44:RY:90:LEU:H	1.73	0.50
45:RZ:103:ARG:O	45:RZ:138:GLU:HA	2.11	0.50
47:R1:80:LEU:HB2	47:R1:81:LYS:CE	2.41	0.50
48:R2:16:LEU:O	48:R2:17:SER:CB	2.56	0.50
50:R4:1:MET:O	50:R4:1:MET:HG3	2.12	0.50
52:R6:41:PRO:HD2	52:R6:46:HIS:H	1.77	0.50
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.75	0.50
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
7:XG:50:ILE:HA	7:XG:54:THR:HG22	1.94	0.50
8:XH:102:ARG:NH1	8:XH:105:ARG:HH12	2.09	0.50
10:XJ:54:PHE:O	10:XJ:55:LYS:HG3	2.10	0.50
19:XS:50:ALA:CB	19:XS:57:HIS:HB3	2.37	0.50
21:XU:6:ARG:HH21	21:XU:15:ARG:NE	2.09	0.50
25:YA:303:U:H2'	25:YA:304:G:H8	1.77	0.50
25:YA:546:C:OP1	25:YA:547:A:N6	2.45	0.50
25:YA:729:G:C5	27:YD:208:LYS:HB2	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:747:U:C4	51:Y5:2:ALA:N	2.80	0.50
25:YA:796:C:H2'	25:YA:797:C:C6	2.47	0.50
25:YA:962:G:H2'	25:YA:963:U:O4'	2.12	0.50
25:YA:1511:A:O2'	25:YA:1512:G:H5'	2.12	0.50
25:YA:1833:U:O2'	25:YA:1969:A:N1	2.37	0.50
25:YA:2577:A:H5''	25:YA:2578:G:H5'	1.93	0.50
25:YA:2620:C:H2'	25:YA:2621:A:O4'	2.12	0.50
29:YF:45:ARG:CG	29:YF:45:ARG:NH1	2.71	0.50
31:YH:131:VAL:CG1	31:YH:132:ARG:N	2.74	0.50
33:YN:120:LEU:C	33:YN:120:LEU:HD13	2.37	0.50
35:YP:138:LEU:HD11	35:YP:144:GLU:CG	2.42	0.50
36:YQ:23:GLY:O	36:YQ:24:GLY:C	2.54	0.50
37:YR:10:LEU:O	37:YR:11:ASN:C	2.55	0.50
37:YR:85:PRO:C	37:YR:87:TYR:H	2.19	0.50
38:YS:89:ARG:HD2	38:YS:89:ARG:O	2.11	0.50
40:YU:92:ARG:CD	40:YU:94:ASN:HB3	2.42	0.50
42:YW:40:ASN:C	42:YW:41:LYS:HG2	2.37	0.50
1:QA:67:C:H2'	1:QA:68:G:H8	1.76	0.50
1:QA:246:A:N6	1:QA:281:G:H1'	2.26	0.50
1:QA:371:G:O3'	1:QA:372:C:H4'	2.12	0.50
1:QA:934:C:H5	1:QA:1344:C:H2'	1.77	0.50
1:QA:1151:A:H2'	1:QA:1152:A:H8	1.75	0.50
2:QB:82:ARG:HB3	2:QB:83:MET:HE2	1.92	0.50
3:QC:139:GLN:O	3:QC:143:GLU:HB2	2.11	0.50
4:QD:128:VAL:O	4:QD:130:GLY:N	2.45	0.50
5:QE:32:VAL:O	5:QE:43:LEU:HD12	2.12	0.50
9:QI:5:TYR:HA	9:QI:17:VAL:O	2.12	0.50
14:QN:23:ARG:C	14:QN:24:CYS:O	2.54	0.50
16:QP:59:TRP:HA	16:QP:59:TRP:HE3	1.77	0.50
19:QS:2:PRO:CB	50:R4:68:ARG:HH22	2.24	0.50
25:RA:107:C:H2'	25:RA:108:U:H6	1.76	0.50
25:RA:153:C:OP2	47:R1:88:LYS:HE2	2.12	0.50
25:RA:483:A:C4'	44:RY:49:VAL:HA	2.34	0.50
25:RA:696:G:C2	25:RA:697:C:C6	3.00	0.50
25:RA:703:U:H2'	25:RA:704:G:O4'	2.12	0.50
25:RA:727:A:C2'	25:RA:728:G:H5'	2.42	0.50
25:RA:999:U:C5	25:RA:1154:G:C5	2.99	0.50
25:RA:1022:G:C2	25:RA:1140:C:N3	2.80	0.50
25:RA:1028:A:H2'	25:RA:1029:A:C8	2.47	0.50
25:RA:1061:U:H2'	25:RA:1063:G:P	2.52	0.50
25:RA:1278:A:OP1	37:RR:36:THR:HG22	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1764:G:C6	25:RA:1989:G:C2	3.00	0.50
25:RA:1854:A:H5''	25:RA:1855:G:OP2	2.11	0.50
25:RA:2524:G:C2	25:RA:2525:G:H1'	2.47	0.50
25:RA:2555:U:H2'	25:RA:2556:C:H5'	1.94	0.50
25:RA:2625:G:C6	25:RA:2626:C:C4	3.00	0.50
25:RA:2679:A:H1'	25:RA:2729:G:H22	1.77	0.50
26:RB:42:C:O2'	30:RG:67:LYS:O	2.20	0.50
27:RD:28:GLU:OE1	27:RD:29:PRO:HD2	2.11	0.50
31:RH:133:VAL:HG12	31:RH:141:VAL:HG13	1.93	0.50
37:RR:92:GLY:N	37:RR:94:TYR:HE2	2.10	0.50
39:RT:38:ASN:O	39:RT:39:ARG:O	2.30	0.50
40:RU:79:PHE:C	40:RU:79:PHE:HD2	2.18	0.50
40:RU:92:ARG:NH1	40:RU:95:LEU:HD11	2.26	0.50
42:RW:40:ASN:C	42:RW:41:LYS:HG2	2.36	0.50
43:RX:35:THR:O	43:RX:36:LYS:C	2.55	0.50
50:R4:10:VAL:HG23	50:R4:11:PRO:HD2	1.93	0.50
53:R7:46:VAL:HG12	53:R7:47:ARG:N	2.27	0.50
1:XA:250:A:H1'	1:XA:251:G:OP2	2.11	0.50
1:XA:264:U:H2'	1:XA:265:G:O4'	2.12	0.50
1:XA:632:A:C8	1:XA:633:G:C8	3.00	0.50
1:XA:734:G:C2	1:XA:735:C:C2	3.00	0.50
1:XA:1199:U:H4'	10:XJ:54:PHE:CE2	2.46	0.50
8:XH:95:VAL:HB	8:XH:99:GLU:O	2.12	0.50
15:XO:17:ARG:NH1	15:XO:77:ARG:CZ	2.74	0.50
19:XS:26:GLY:O	19:XS:27:GLU:HB2	2.11	0.50
25:YA:981:A:OP2	25:YA:982:C:N4	2.38	0.50
25:YA:1028:A:H61	25:YA:1125:G:H2'	1.77	0.50
25:YA:1140:C:OP1	33:YN:24:GLY:N	2.43	0.50
25:YA:1586:A:H3'	25:YA:1587:A:C8	2.46	0.50
25:YA:1773:A:H2'	25:YA:1774:C:O4'	2.12	0.50
25:YA:2514:U:H2'	25:YA:2515:C:O4'	2.12	0.50
26:YB:105:G:OP1	45:YZ:31:ARG:HB2	2.12	0.50
27:YD:35:LYS:HE2	27:YD:104:TYR:HB2	1.94	0.50
27:YD:218:ARG:HB3	27:YD:219:PRO:HD2	1.94	0.50
34:YO:35:VAL:O	34:YO:35:VAL:HG23	2.11	0.50
36:YQ:36:ALA:HB1	36:YQ:127:ILE:HD12	1.93	0.50
37:YR:28:LEU:CD2	37:YR:114:VAL:HG12	2.41	0.50
41:YV:29:PRO:O	41:YV:61:VAL:O	2.29	0.50
41:YV:51:VAL:CG1	41:YV:52:VAL:N	2.75	0.50
44:YY:2:ARG:O	44:YY:3:VAL:C	2.55	0.50
46:Y0:42:GLY:C	46:Y0:57:PHE:HD1	2.19	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:9:GLN:O	48:Y2:12:GLU:HB3	2.10	0.50
50:Y4:22:ILE:H	50:Y4:22:ILE:HD12	1.77	0.50
51:Y5:37:LYS:O	51:Y5:37:LYS:HD2	2.12	0.50
51:Y5:50:GLY:O	51:Y5:51:TYR:CB	2.59	0.50
52:Y6:9:LEU:HB3	52:Y6:26:ASN:O	2.12	0.50
53:Y7:9:ARG:HH12	53:Y7:47:ARG:HG3	1.76	0.50
1:QA:109:A:C4	1:QA:327:A:C2	3.00	0.50
1:QA:828:A:N6	1:QA:859:A:H5'	2.27	0.50
2:QB:16:HIS:HB3	2:QB:210:SER:CB	2.42	0.50
5:QE:51:VAL:CB	5:QE:52:PRO:HD3	2.38	0.50
8:QH:51:VAL:HG11	8:QH:60:ARG:HG3	1.92	0.50
9:QI:83:ARG:HA	9:QI:86:VAL:CG1	2.41	0.50
12:QL:24:VAL:O	12:QL:24:VAL:CG1	2.58	0.50
16:QP:13:HIS:C	16:QP:15:PRO:HD3	2.36	0.50
16:QP:45:THR:HG23	16:QP:46:PRO:CD	2.39	0.50
22:QV:75:C:H2'	22:QV:76:A:O4'	2.12	0.50
25:RA:314:A:O2'	25:RA:315:G:H5'	2.12	0.50
25:RA:531:C:C5	25:RA:2035:G:C2	3.00	0.50
25:RA:565:C:H4'	25:RA:1253:A:C6	2.47	0.50
25:RA:604:G:O6	25:RA:624:C:N4	2.44	0.50
25:RA:833:U:O4	25:RA:834:C:N4	2.45	0.50
25:RA:860:U:O2'	25:RA:2267:A:H4'	2.11	0.50
25:RA:999:U:H5	25:RA:1154:G:C5	2.29	0.50
25:RA:1869:G:C2	25:RA:1878:G:C6	3.00	0.50
25:RA:2123:G:H22	25:RA:2176:A:H1'	1.77	0.50
25:RA:2850:A:N7	25:RA:2868:A:O2'	2.32	0.50
26:RB:32:C:C2	26:RB:51:G:N2	2.80	0.50
27:RD:2:ALA:CB	27:RD:20:ASP:CB	2.90	0.50
28:RE:2:LYS:HG2	28:RE:95:ILE:CG2	2.42	0.50
28:RE:119:ARG:HD3	28:RE:160:TYR:CD2	2.47	0.50
28:RE:203:LYS:HE3	28:RE:204:ALA:CB	2.40	0.50
32:RI:57:ARG:HA	32:RI:60:GLU:HB3	1.93	0.50
34:RO:104:ARG:NE	39:RT:34:VAL:HG11	2.26	0.50
36:RQ:2:LEU:HD23	36:RQ:2:LEU:N	2.27	0.50
38:RS:74:ALA:O	38:RS:75:GLU:C	2.54	0.50
40:RU:76:TYR:CD2	40:RU:76:TYR:C	2.90	0.50
40:RU:98:LEU:HD23	40:RU:98:LEU:C	2.36	0.50
44:RY:16:ALA:O	44:RY:21:LYS:HD3	2.11	0.50
51:R5:50:GLY:O	51:R5:51:TYR:CB	2.59	0.50
1:XA:389:A:C6	1:XA:390:C:H1'	2.46	0.50
1:XA:544:G:H2'	1:XA:545:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1053:G:H2'	1:XA:1199:U:H5	1.77	0.50
1:XA:1179:A:O3'	9:XI:103:THR:HG23	2.12	0.50
1:XA:1206:G:C6	1:XA:1207:G:C5	3.00	0.50
1:XA:1244:C:N3	1:XA:1294:G:N2	2.60	0.50
1:XA:1400:C:H4'	1:XA:1401:G:OP2	2.11	0.50
2:XB:200:ILE:O	2:XB:201:ILE:HD13	2.12	0.50
3:XC:132:ARG:O	3:XC:136:GLN:HB2	2.11	0.50
4:XD:20:TYR:CD2	4:XD:27:TYR:CD2	3.00	0.50
13:XM:120:LYS:O	13:XM:121:LYS:CB	2.60	0.50
14:XN:41:ARG:HE	14:XN:42:ILE:HG13	1.76	0.50
20:XT:49:ALA:CB	20:XT:99:LEU:HD22	2.42	0.50
20:XT:84:LEU:HD13	20:XT:84:LEU:C	2.37	0.50
25:YA:162:U:H6	25:YA:162:U:OP1	1.95	0.50
25:YA:534:U:O2'	40:YU:45:TYR:HB3	2.12	0.50
25:YA:952:G:C6	25:YA:953:A:N7	2.80	0.50
25:YA:1053:C:H42	25:YA:1106:G:H1	1.60	0.50
25:YA:1169:G:H1	25:YA:1180:C:H42	1.58	0.50
25:YA:1266:G:N7	42:YW:15:ARG:NH1	2.58	0.50
25:YA:2093:G:H2'	25:YA:2094:G:C8	2.44	0.50
25:YA:2468:G:O2'	25:YA:2481:G:N2	2.45	0.50
28:YE:2:LYS:HG2	28:YE:95:ILE:CG2	2.42	0.50
28:YE:105:THR:HB	28:YE:197:ILE:HG12	1.92	0.50
29:YF:53:THR:C	29:YF:55:GLY:N	2.68	0.50
30:YG:49:ASP:OD1	30:YG:51:ARG:HG3	2.12	0.50
30:YG:83:ARG:HH11	30:YG:83:ARG:HG2	1.76	0.50
30:YG:103:LEU:HD21	30:YG:178:PHE:CZ	2.47	0.50
30:YG:114:ILE:HG21	30:YG:117:PHE:HB2	1.93	0.50
31:YH:16:SER:O	31:YH:17:VAL:HG23	2.12	0.50
32:YI:97:ILE:HD12	32:YI:140:LEU:HD11	1.93	0.50
33:YN:63:THR:HG22	33:YN:66:LYS:HZ1	1.76	0.50
34:YO:105:GLU:O	34:YO:108:GLU:HB2	2.12	0.50
35:YP:112:LEU:HD22	35:YP:113:LYS:N	2.26	0.50
36:YQ:108:GLY:O	36:YQ:109:VAL:HG23	2.12	0.50
38:YS:5:THR:HG1	38:YS:7:TYR:HB3	1.75	0.50
44:YY:48:ALA:HB2	44:YY:61:ILE:CD1	2.41	0.50
44:YY:101:LYS:O	44:YY:102:CYS:SG	2.66	0.50
45:YZ:5:LEU:O	45:YZ:6:LYS:HB2	2.12	0.50
49:Y3:7:LYS:CB	49:Y3:34:GLU:HG2	2.41	0.50
50:Y4:36:CYS:O	50:Y4:39:CYS:CB	2.55	0.50
1:QA:282:A:C6	1:QA:283:C:C2	3.00	0.50
1:QA:1053:G:H5'	1:QA:1054:C:H5'	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.43	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:184:TYR:HA	3:QC:200:ALA:O	2.12	0.50
7:QG:50:ILE:HG21	7:QG:58:PRO:HA	1.93	0.50
7:QG:148:ASN:C	7:QG:150:ALA:N	2.69	0.50
8:QH:84:ARG:O	8:QH:135:CYS:HB2	2.12	0.50
10:QJ:22:LYS:NZ	10:QJ:23:ILE:HG12	2.27	0.50
21:QU:2:GLY:O	21:QU:4:GLY:N	2.45	0.50
25:RA:222:A:O2'	25:RA:223:A:P	2.70	0.50
25:RA:595:C:N4	25:RA:662:G:H1	2.08	0.50
25:RA:611:C:C2	25:RA:618:G:N2	2.80	0.50
25:RA:870:A:C2	25:RA:908:C:C2	3.00	0.50
25:RA:1190:G:C5'	35:RP:32:THR:HA	2.41	0.50
25:RA:1336:A:H2'	25:RA:1337:G:C8	2.47	0.50
25:RA:1534:G:H1	25:RA:1538:G:N2	2.10	0.50
25:RA:1570:A:H2'	25:RA:1571:A:C8	2.47	0.50
25:RA:2131:G:O3'	25:RA:2132:U:H4'	2.12	0.50
25:RA:2154:G:H2'	25:RA:2155:G:C8	2.47	0.50
25:RA:2495:G:H5''	36:RQ:81:VAL:CG1	2.41	0.50
27:RD:123:ALA:HB3	27:RD:131:LEU:HG	1.94	0.50
28:RE:1:MET:H1	28:RE:1:MET:HE2	1.76	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:CG2	2.41	0.50
31:RH:19:VAL:HG13	31:RH:43:VAL:HG23	1.93	0.50
31:RH:153:LYS:O	31:RH:154:PRO:O	2.30	0.50
32:RI:52:ARG:HB2	32:RI:56:LYS:HG2	1.94	0.50
33:RN:46:VAL:O	33:RN:47:ALA:CB	2.58	0.50
33:RN:137:LYS:HG3	33:RN:138:LEU:H	1.77	0.50
35:RP:6:LEU:N	35:RP:6:LEU:CD2	2.75	0.50
35:RP:81:GLN:CD	35:RP:106:LEU:O	2.55	0.50
36:RQ:80:GLU:HG3	36:RQ:81:VAL:N	2.27	0.50
37:RR:96:ARG:NH2	37:RR:117:VAL:HG23	2.27	0.50
44:RY:81:LYS:HD3	44:RY:97:ARG:HD3	1.94	0.50
52:R6:20:ASN:O	52:R6:21:TYR:CB	2.59	0.50
52:R6:34:LEU:HD23	52:R6:36:LEU:HD22	1.92	0.50
55:R9:7:VAL:HG12	55:R9:25:VAL:HG21	1.94	0.50
1:XA:280:C:C2	17:XQ:38:ARG:HG3	2.46	0.50
1:XA:356:A:N3	1:XA:368:U:O2'	2.39	0.50
1:XA:664:G:N2	1:XA:742:G:C2	2.80	0.50
1:XA:762:C:H2'	1:XA:763:G:C8	2.46	0.50
1:XA:1014:A:H4'	19:XS:14:HIS:HE2	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1221:G:O3'	19:XS:77:THR:HG21	2.12	0.50
1:XA:1298:C:H1'	1:XA:1299:A:C2	2.46	0.50
3:XC:34:LEU:HD23	3:XC:34:LEU:C	2.37	0.50
3:XC:36:ASP:HB3	3:XC:40:ARG:NH1	2.25	0.50
4:XD:150:GLU:C	4:XD:152:SER:H	2.20	0.50
5:XE:126:ARG:HG3	5:XE:126:ARG:NH1	2.19	0.50
7:XG:148:ASN:C	7:XG:150:ALA:N	2.69	0.50
10:XJ:40:LEU:HB2	10:XJ:69:ASN:CB	2.40	0.50
25:YA:39:C:H2'	25:YA:40:C:H6	1.76	0.50
25:YA:282:A:H2'	25:YA:282:A:N3	2.27	0.50
25:YA:1792:G:O2'	25:YA:1830:C:OP1	2.29	0.50
25:YA:1813:G:H1'	27:YD:50:THR:OG1	2.12	0.50
25:YA:2277:G:C5'	36:YQ:85:LYS:HG3	2.42	0.50
25:YA:2756:U:H3	25:YA:2758:A:H62	1.60	0.50
25:YA:2758:A:C2	25:YA:2759:G:H1'	2.47	0.50
27:YD:227:ASN:HB3	27:YD:228:PRO:CD	2.30	0.50
30:YG:16:ARG:HB3	30:YG:17:PRO:HD3	1.94	0.50
35:YP:147:LEU:O	35:YP:148:LEU:HB2	2.11	0.50
38:YS:35:ILE:CD1	38:YS:101:LEU:HD23	2.41	0.50
38:YS:52:SER:O	38:YS:56:LEU:CD2	2.60	0.50
42:YW:1:MET:HE2	42:YW:2:GLU:H	1.76	0.50
43:YX:47:PHE:O	43:YX:48:LYS:C	2.55	0.50
44:YY:16:ALA:O	44:YY:21:LYS:HD3	2.11	0.50
53:Y7:12:ARG:NH1	53:Y7:12:ARG:HG3	2.27	0.50
1:QA:616:G:C2	1:QA:617:G:C8	3.00	0.49
1:QA:1052:U:H5''	1:QA:1053:G:OP2	2.11	0.49
3:QC:35:GLU:O	3:QC:39:ILE:HG13	2.12	0.49
3:QC:36:ASP:HA	3:QC:39:ILE:HD12	1.94	0.49
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
14:QN:22:THR:O	14:QN:23:ARG:CB	2.59	0.49
15:QO:17:ARG:NH1	15:QO:77:ARG:CZ	2.74	0.49
16:QP:39:TYR:CE2	16:QP:41:PRO:HD3	2.47	0.49
20:QT:37:SER:O	20:QT:41:ILE:HG12	2.12	0.49
20:QT:49:ALA:CB	20:QT:99:LEU:HD22	2.42	0.49
25:RA:530:G:N1	25:RA:2022:U:OP1	2.45	0.49
25:RA:622:G:O2'	25:RA:623:G:H5'	2.12	0.49
25:RA:738:G:C6	25:RA:739:G:C2	2.99	0.49
25:RA:2818:G:H2'	25:RA:2819:G:H8	1.77	0.49
26:RB:15:A:H1'	26:RB:109:G:C4	2.47	0.49
27:RD:35:LYS:HE2	27:RD:104:TYR:HB2	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:11:VAL:CG1	29:RF:12:LEU:N	2.75	0.49
30:RG:103:LEU:HD21	30:RG:178:PHE:CZ	2.47	0.49
30:RG:111:LEU:N	30:RG:112:PRO:CD	2.75	0.49
31:RH:103:LEU:CD1	31:RH:131:VAL:HG21	2.41	0.49
32:RI:9:LEU:O	32:RI:10:GLU:HG3	2.11	0.49
32:RI:63:ALA:HA	32:RI:66:GLU:HG2	1.94	0.49
32:RI:130:TYR:O	32:RI:131:LYS:HD2	2.11	0.49
33:RN:118:LYS:C	33:RN:120:LEU:H	2.20	0.49
35:RP:61:ARG:HH21	54:R8:13:ARG:HD2	1.77	0.49
38:RS:62:LYS:HB3	38:RS:97:ARG:CD	2.39	0.49
41:RV:41:GLY:N	41:RV:46:VAL:HG13	2.26	0.49
44:RY:2:ARG:O	44:RY:3:VAL:C	2.55	0.49
53:R7:12:ARG:NH1	53:R7:12:ARG:HG3	2.27	0.49
1:XA:963:G:H21	10:XJ:55:LYS:HD3	1.77	0.49
1:XA:1070:U:P	5:XE:25:ARG:NH1	2.84	0.49
1:XA:1502:A:H2	1:XA:1505:G:H22	1.55	0.49
2:XB:16:HIS:HB3	2:XB:210:SER:CB	2.42	0.49
2:XB:23:ARG:HG2	2:XB:23:ARG:HH11	1.76	0.49
5:XE:32:VAL:O	5:XE:43:LEU:HD12	2.12	0.49
8:XH:84:ARG:O	8:XH:135:CYS:HB2	2.12	0.49
9:XI:29:ASN:OD1	9:XI:64:THR:HA	2.12	0.49
11:XK:25:TYR:CD1	11:XK:25:TYR:N	2.80	0.49
11:XK:106:LYS:O	11:XK:107:SER:HB3	2.12	0.49
25:YA:423:A:H5''	25:YA:424:G:C5'	2.42	0.49
25:YA:481:G:H1'	25:YA:507:A:N1	2.28	0.49
25:YA:918:A:C5	25:YA:919:G:H1'	2.47	0.49
25:YA:1019:U:O2'	25:YA:1021:A:H2	1.95	0.49
25:YA:1212:G:O2'	25:YA:1236:G:N2	2.32	0.49
25:YA:1344:G:H5'	25:YA:1384:A:C6	2.47	0.49
25:YA:2272:U:H5''	25:YA:2273:A:OP1	2.12	0.49
25:YA:2292:C:P	38:YS:17:ARG:HH22	2.35	0.49
25:YA:2352:A:N6	25:YA:2365:G:O2'	2.45	0.49
25:YA:2773:C:H2'	25:YA:2774:C:H6	1.76	0.49
28:YE:46:ALA:HB1	28:YE:80:GLU:HB2	1.94	0.49
32:YI:37:VAL:HG12	32:YI:38:LEU:HD12	1.92	0.49
33:YN:6:PRO:HG2	33:YN:43:THR:OG1	2.11	0.49
33:YN:46:VAL:O	33:YN:47:ALA:CB	2.57	0.49
33:YN:137:LYS:HG3	33:YN:138:LEU:H	1.77	0.49
34:YO:47:ILE:CG1	34:YO:48:PRO:HD2	2.42	0.49
35:YP:88:LEU:C	35:YP:88:LEU:HD23	2.37	0.49
44:YY:19:LYS:O	44:YY:19:LYS:CG	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:Y2:69:ARG:CB	48:Y2:69:ARG:HH11	2.25	0.49
50:Y4:9:LEU:H	50:Y4:27:THR:CG2	2.25	0.49
52:Y6:44:ARG:O	52:Y6:45:LYS:CB	2.60	0.49
1:QA:190:G:N3	1:QA:190:G:H2'	2.26	0.49
1:QA:292:G:C5	1:QA:293:G:H1'	2.47	0.49
1:QA:552:U:O2'	12:QL:86:ARG:O	2.28	0.49
1:QA:821:G:C2	1:QA:822:C:C2	3.00	0.49
1:QA:985:C:H2'	1:QA:986:A:C8	2.47	0.49
1:QA:1053:G:N7	1:QA:1200:C:H5''	2.27	0.49
1:QA:1397:C:H1'	23:QX:8:A:H62	1.76	0.49
1:QA:1486:G:H2'	1:QA:1487:G:O4'	2.12	0.49
5:QE:10:MET:HB2	5:QE:32:VAL:HG22	1.94	0.49
9:QI:48:GLU:N	9:QI:49:PRO:CD	2.74	0.49
11:QK:29:ILE:HG13	11:QK:44:SER:HB3	1.93	0.49
21:QU:6:ARG:HH21	21:QU:15:ARG:NE	2.09	0.49
25:RA:570:G:H2'	25:RA:2030:A:C6	2.47	0.49
25:RA:1517:G:H2'	25:RA:1518:C:C6	2.47	0.49
25:RA:2507:C:H2'	25:RA:2508:G:O4'	2.12	0.49
25:RA:2720:U:H2'	25:RA:2721:A:O4'	2.11	0.49
27:RD:218:ARG:HB3	27:RD:219:PRO:HD2	1.94	0.49
28:RE:23:VAL:HG12	28:RE:173:VAL:HG21	1.94	0.49
40:RU:53:ARG:C	40:RU:55:ARG:H	2.20	0.49
43:RX:47:PHE:O	43:RX:48:LYS:C	2.55	0.49
46:R0:41:ARG:O	46:R0:57:PHE:HD1	1.95	0.49
52:R6:37:ARG:HA	52:R6:37:ARG:HE	1.77	0.49
1:XA:73:G:H2'	1:XA:74:C:H6	1.77	0.49
1:XA:1054:C:C4	1:XA:1196:U:H5	2.30	0.49
3:XC:34:LEU:O	3:XC:38:ARG:HG3	2.11	0.49
7:XG:50:ILE:HG21	7:XG:58:PRO:HA	1.93	0.49
8:XH:83:ILE:HB	8:XH:137:VAL:HG13	1.94	0.49
8:XH:91:ARG:HH11	8:XH:91:ARG:CG	2.22	0.49
8:XH:91:ARG:HG2	8:XH:91:ARG:NH1	2.25	0.49
9:XI:33:PHE:HZ	9:XI:47:LEU:HD21	1.76	0.49
9:XI:113:LYS:H	9:XI:119:ALA:HA	1.77	0.49
13:XM:14:ARG:HG3	13:XM:16:ASP:OD2	2.13	0.49
13:XM:102:ARG:O	13:XM:102:ARG:HG3	2.11	0.49
20:XT:10:LEU:C	20:XT:12:ALA:H	2.21	0.49
25:YA:489:G:N7	42:YW:49:LYS:NZ	2.60	0.49
25:YA:747:U:N3	51:Y5:2:ALA:N	2.59	0.49
25:YA:1496:A:H5'	25:YA:1497:U:OP1	2.12	0.49
25:YA:2654:A:N6	25:YA:2667:C:N4	2.58	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2675:A:H8	25:YA:2675:A:OP2	1.94	0.49
25:YA:2756:U:H5''	55:Y9:19:ARG:CB	2.42	0.49
25:YA:2842:G:O2'	25:YA:2843:G:H5'	2.13	0.49
26:YB:42:C:O2'	30:YG:67:LYS:O	2.27	0.49
27:YD:76:PRO:HA	27:YD:118:VAL:HG23	1.93	0.49
28:YE:37:ARG:HE	28:YE:37:ARG:H	1.59	0.49
29:YF:11:VAL:CG1	29:YF:12:LEU:N	2.75	0.49
30:YG:121:ASN:C	30:YG:123:ASN:H	2.19	0.49
31:YH:7:LEU:C	31:YH:7:LEU:HD12	2.37	0.49
32:YI:88:ILE:HG12	32:YI:122:GLU:H	1.77	0.49
34:YO:69:ILE:O	34:YO:76:ALA:HA	2.11	0.49
34:YO:104:ARG:NE	39:YT:34:VAL:HG11	2.26	0.49
35:YP:36:LYS:HB2	35:YP:40:SER:HB3	1.94	0.49
35:YP:81:GLN:CD	35:YP:106:LEU:O	2.55	0.49
38:YS:60:GLY:O	38:YS:61:ASN:CB	2.55	0.49
39:YT:57:PHE:O	39:YT:58:ASN:C	2.53	0.49
41:YV:3:ALA:HB3	41:YV:14:VAL:HG23	1.92	0.49
47:Y1:67:ILE:N	47:Y1:68:PRO:CD	2.76	0.49
47:Y1:81:LYS:O	47:Y1:82:LEU:O	2.30	0.49
49:Y3:21:ALA:O	49:Y3:25:ALA:N	2.41	0.49
1:QA:718:G:H1'	11:QK:116:HIS:HA	1.93	0.49
1:QA:762:C:H2'	1:QA:763:G:H8	1.76	0.49
1:QA:790:A:C6	1:QA:791:G:C6	3.00	0.49
1:QA:1322:C:O2	1:QA:1322:C:H2'	2.11	0.49
1:QA:1502:A:H3'	1:QA:1503:A:H3'	1.95	0.49
4:QD:3:ARG:O	4:QD:4:TYR:C	2.55	0.49
4:QD:23:GLY:H	4:QD:26:CYS:HB2	1.77	0.49
4:QD:206:PHE:HD2	4:QD:207:TYR:CE1	2.30	0.49
5:QE:41:VAL:CG1	5:QE:112:LEU:O	2.60	0.49
7:QG:108:ALA:C	7:QG:110:GLN:H	2.19	0.49
14:QN:8:GLU:O	14:QN:10:ALA:N	2.45	0.49
16:QP:83:GLU:OE2	16:QP:83:GLU:HA	2.12	0.49
21:QU:6:ARG:HE	21:QU:15:ARG:NH2	2.09	0.49
25:RA:137:C:N4	25:RA:137(A):G:O6	2.44	0.49
25:RA:602:G:H8	25:RA:602:G:OP2	1.96	0.49
25:RA:607:U:OP1	29:RF:102:PRO:HA	2.13	0.49
25:RA:1949:G:H1	25:RA:1957:C:H42	1.60	0.49
25:RA:2309:A:C6	25:RA:2310:A:C6	3.01	0.49
25:RA:2495:G:H2'	25:RA:2496:C:C6	2.47	0.49
25:RA:2872:G:C2	25:RA:2873:A:N6	2.80	0.49
26:RB:2:C:H2'	26:RB:3:C:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:5:C:O2	26:RB:116:G:N2	2.45	0.49
26:RB:15:A:H1'	26:RB:109:G:N9	2.27	0.49
27:RD:10:THR:HG23	27:RD:13:ARG:CB	2.34	0.49
27:RD:25:THR:O	27:RD:27:THR:HG22	2.12	0.49
35:RP:31:ALA:C	35:RP:32:THR:CG2	2.85	0.49
35:RP:88:LEU:C	35:RP:88:LEU:HD23	2.37	0.49
38:RS:83:LYS:HG2	38:RS:109:GLY:HA2	1.90	0.49
41:RV:76:LYS:HG3	41:RV:81:TYR:CD1	2.47	0.49
47:R1:20:ARG:HG2	47:R1:20:ARG:NH1	2.24	0.49
47:R1:82:LEU:HD13	47:R1:83:GLU:C	2.36	0.49
1:XA:598:U:H4'	8:XH:94:TYR:CD2	2.47	0.49
1:XA:880:C:OP1	12:XL:8:ASN:ND2	2.45	0.49
1:XA:891:U:H2'	1:XA:892:A:C8	2.42	0.49
1:XA:1070:U:H2'	1:XA:1071:C:C6	2.47	0.49
2:XB:207:ALA:O	2:XB:209:ARG:N	2.45	0.49
3:XC:35:GLU:O	3:XC:39:ILE:HG13	2.13	0.49
3:XC:195:VAL:HG12	3:XC:196:LEU:H	1.75	0.49
4:XD:118:ARG:NH2	4:XD:136:PRO:HB2	2.27	0.49
5:XE:41:VAL:CG1	5:XE:112:LEU:O	2.60	0.49
8:XH:109:ILE:HG12	8:XH:110:ALA:N	2.27	0.49
9:XI:5:TYR:HA	9:XI:17:VAL:O	2.12	0.49
9:XI:43:ALA:HA	9:XI:74:ILE:HD13	1.94	0.49
17:XQ:33:GLY:O	17:XQ:34:LYS:C	2.56	0.49
21:XU:2:GLY:O	21:XU:4:GLY:N	2.45	0.49
25:YA:840:C:OP2	25:YA:932:G:N2	2.44	0.49
25:YA:856:C:H1'	46:Y0:27:GLU:HB3	1.93	0.49
25:YA:1048:A:P	25:YA:1110:G:H22	2.34	0.49
25:YA:1293:C:H2'	25:YA:1294:U:H6	1.77	0.49
25:YA:1864:U:C3'	25:YA:1869:G:H5''	2.42	0.49
25:YA:1917:U:H2'	25:YA:1918:A:O4'	2.11	0.49
25:YA:2286:A:C2'	52:Y6:31:PRO:HG2	2.42	0.49
33:YN:82:LEU:HD12	33:YN:83:LYS:N	2.27	0.49
38:YS:89:ARG:O	38:YS:90:GLY:C	2.54	0.49
39:YT:39:ARG:CG	39:YT:40:THR:H	2.22	0.49
40:YU:76:TYR:CD2	40:YU:76:TYR:C	2.90	0.49
40:YU:92:ARG:NH1	40:YU:95:LEU:HD11	2.26	0.49
42:YW:29:LEU:O	42:YW:29:LEU:HD23	2.13	0.49
42:YW:51:LEU:HD23	42:YW:105:VAL:HG11	1.95	0.49
44:YY:88:LYS:NZ	44:YY:88:LYS:HA	2.27	0.49
47:Y1:93:GLU:O	47:Y1:97:LEU:HD11	2.12	0.49
54:Y8:10:ALA:O	54:Y8:14:VAL:HG12	2.11	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
56:Z8:76:PPU:HD2	56:Z8:76:PPU:HN2	1.76	0.49
1:QA:911:U:H2'	1:QA:912:C:C6	2.47	0.49
1:QA:1162:C:C2	1:QA:1175:G:C2	3.00	0.49
3:QC:87:LEU:C	3:QC:89:GLU:H	2.19	0.49
3:QC:178:LEU:N	3:QC:178:LEU:HD22	2.27	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
15:QO:77:ARG:HA	15:QO:80:ALA:HB3	1.95	0.49
20:QT:10:LEU:C	20:QT:12:ALA:H	2.20	0.49
21:QU:6:ARG:C	21:QU:8:THR:H	2.20	0.49
25:RA:67:U:N3	25:RA:74:A:H2	2.10	0.49
25:RA:352:G:H3'	25:RA:353:G:C8	2.47	0.49
25:RA:638:G:C5	25:RA:639:U:C4	3.00	0.49
25:RA:751:A:C6	25:RA:789:A:C5	3.01	0.49
25:RA:842:G:N2	25:RA:937:U:C2	2.80	0.49
25:RA:1021:A:H3'	25:RA:1021:A:H8	1.77	0.49
25:RA:1312:U:C4	25:RA:1603:A:C6	3.00	0.49
25:RA:1341:U:O4	43:RX:16:LYS:HE2	2.11	0.49
25:RA:1425:G:H2'	25:RA:1426:G:C8	2.48	0.49
25:RA:2464:C:H2'	25:RA:2465:C:O4'	2.12	0.49
27:RD:12:SER:C	27:RD:14:ARG:N	2.70	0.49
27:RD:35:LYS:CG	27:RD:64:ILE:HG22	2.42	0.49
27:RD:69:ARG:C	27:RD:71:ASP:N	2.69	0.49
27:RD:241:PRO:O	27:RD:242:ARG:C	2.55	0.49
30:RG:49:ASP:OD1	30:RG:51:ARG:HG3	2.12	0.49
31:RH:120:GLY:HA3	31:RH:140:LYS:NZ	2.28	0.49
33:RN:73:THR:HG22	33:RN:82:LEU:HD11	1.93	0.49
35:RP:49:ARG:HE	54:R8:59:LYS:HG2	1.76	0.49
35:RP:114:ILE:HD11	35:RP:130:PHE:HE1	1.70	0.49
35:RP:147:LEU:O	35:RP:148:LEU:HB2	2.11	0.49
36:RQ:29:PHE:N	36:RQ:105:GLU:OE2	2.41	0.49
36:RQ:90:VAL:C	36:RQ:92:GLY:N	2.70	0.49
37:RR:10:LEU:O	37:RR:11:ASN:C	2.55	0.49
37:RR:118:GLU:OXT	37:RR:118:GLU:HG3	2.11	0.49
38:RS:99:LYS:O	38:RS:101:LEU:N	2.45	0.49
40:RU:79:PHE:HE2	40:RU:83:LEU:HD22	1.78	0.49
42:RW:29:LEU:HD23	42:RW:29:LEU:O	2.13	0.49
48:R2:41:ILE:HD11	48:R2:44:LEU:CB	2.42	0.49
49:R3:7:LYS:CB	49:R3:34:GLU:HG2	2.41	0.49
50:R4:22:ILE:HD12	50:R4:22:ILE:H	1.77	0.49
50:R4:57:GLU:O	50:R4:61:ARG:O	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:93:U:H2'	1:XA:95:G:O4'	2.13	0.49
1:XA:657:G:C2	1:XA:658:G:C8	3.00	0.49
1:XA:720:C:H5''	18:XR:52:PRO:HA	1.94	0.49
1:XA:1126:U:H1'	1:XA:1280:A:N7	2.28	0.49
1:XA:1128:C:H5'	9:XI:16:ARG:NH2	2.27	0.49
5:XE:12:LEU:HD23	5:XE:13:ILE:H	1.76	0.49
10:XJ:63:PHE:CD1	14:YN:58:LYS:HA	2.35	0.49
13:XM:66:LEU:C	13:XM:70:LEU:HB2	2.37	0.49
13:XM:120:LYS:O	13:XM:121:LYS:HB2	2.10	0.49
17:XQ:3:LYS:HD2	17:XQ:60:ILE:HD11	1.95	0.49
20:XT:26:ASN:CB	20:XT:71:THR:HG23	2.43	0.49
23:XX:3:G:H2'	23:XX:4:C:OP2	2.11	0.49
25:YA:80:G:H1'	25:YA:346:A:C6	2.47	0.49
25:YA:732:C:H2'	25:YA:733:G:O4'	2.12	0.49
25:YA:851:U:H1'	49:Y3:46:ASN:ND2	2.23	0.49
25:YA:993:G:OP1	40:YU:50:ARG:NH1	2.45	0.49
25:YA:2012:G:H4'	42:YW:96:ILE:HD11	1.93	0.49
25:YA:2104:G:N2	25:YA:2186:G:C4	2.81	0.49
25:YA:2419:U:O4	54:Y8:30:ARG:CZ	2.61	0.49
27:YD:35:LYS:CG	27:YD:64:ILE:HG22	2.42	0.49
28:YE:179:GLU:HA	28:YE:179:GLU:OE1	2.10	0.49
29:YF:144:LYS:C	29:YF:146:ALA:H	2.21	0.49
33:YN:73:THR:CG2	33:YN:82:LEU:HD11	2.43	0.49
33:YN:129:PRO:C	33:YN:131:GLN:H	2.20	0.49
36:YQ:2:LEU:HD23	36:YQ:2:LEU:N	2.27	0.49
38:YS:99:LYS:O	38:YS:101:LEU:N	2.45	0.49
42:YW:28:SER:C	42:YW:30:GLU:N	2.69	0.49
44:YY:44:ILE:CG1	44:YY:45:VAL:H	2.24	0.49
47:Y1:8:SER:HB3	47:Y1:66:HIS:CE1	2.47	0.49
47:Y1:19:GLN:OE1	47:Y1:19:GLN:HA	2.12	0.49
1:QA:192:U:H2'	1:QA:193:C:C6	2.47	0.49
1:QA:1014:A:H4'	19:QS:14:HIS:HE2	1.77	0.49
1:QA:1208:C:H2'	1:QA:1209:C:C6	2.47	0.49
1:QA:1372:U:OP1	9:QI:71:SER:HB3	2.12	0.49
1:QA:1511:G:H2'	1:QA:1512:U:O4'	2.13	0.49
2:QB:181:PHE:O	2:QB:183:PRO:HD3	2.12	0.49
4:QD:150:GLU:C	4:QD:152:SER:H	2.20	0.49
5:QE:93:PRO:HG3	8:QH:105:ARG:CG	2.36	0.49
8:QH:82:HIS:CD2	8:QH:82:HIS:C	2.91	0.49
9:QI:43:ALA:HA	9:QI:74:ILE:HD13	1.94	0.49
12:QL:8:ASN:OD1	17:QQ:34:LYS:HE2	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:94:G:N3	48:R2:47:ASN:OD1	2.46	0.49
25:RA:222:A:N6	25:RA:224:G:C2	2.81	0.49
25:RA:270(T):G:C5'	47:R1:97:LEU:HD22	2.42	0.49
25:RA:752:A:O2'	25:RA:753:C:OP2	2.23	0.49
25:RA:1293:C:O5'	25:RA:1293:C:H6	1.95	0.49
25:RA:1668:A:C5	25:RA:1674:G:C5	3.00	0.49
25:RA:2404:C:H2'	25:RA:2405:G:O4'	2.12	0.49
28:RE:55:ASN:O	28:RE:57:LYS:N	2.44	0.49
30:RG:83:ARG:HG2	30:RG:83:ARG:HH11	1.76	0.49
30:RG:107:LEU:HD11	30:RG:178:PHE:CD1	2.48	0.49
31:RH:23:ARG:HD2	31:RH:34:GLU:OE2	2.12	0.49
31:RH:128:PRO:HD2	31:RH:129:THR:N	2.25	0.49
33:RN:30:ILE:O	33:RN:34:LEU:HD23	2.13	0.49
33:RN:120:LEU:HD11	33:RN:122:VAL:CG2	2.42	0.49
34:RO:105:GLU:O	34:RO:108:GLU:HB2	2.12	0.49
37:RR:41:ALA:C	37:RR:43:GLU:N	2.68	0.49
37:RR:67:LEU:HD13	37:RR:76:VAL:CG2	2.27	0.49
37:RR:71:GLN:HA	37:RR:71:GLN:HE21	1.77	0.49
38:RS:18:ILE:O	38:RS:19:LYS:O	2.31	0.49
40:RU:92:ARG:CD	40:RU:94:ASN:HB3	2.42	0.49
43:RX:70:LEU:N	43:RX:70:LEU:CD2	2.72	0.49
44:RY:77:PRO:O	44:RY:78:ALA:HB2	2.11	0.49
46:R0:27:GLU:HB2	46:R0:69:PHE:HD1	1.76	0.49
50:R4:9:LEU:H	50:R4:27:THR:CG2	2.25	0.49
50:R4:42:PHE:O	50:R4:44:THR:O	2.31	0.49
1:XA:418:C:H2'	1:XA:419:C:C6	2.47	0.49
1:XA:1296:C:O2'	1:XA:1302:U:H5	1.94	0.49
1:XA:1346:A:N1	1:XA:1374:A:H5''	2.27	0.49
1:XA:1418:A:C2	1:XA:1483:A:C2	3.00	0.49
2:XB:15:VAL:H	2:XB:16:HIS:CE1	2.30	0.49
2:XB:68:ILE:O	2:XB:91:PRO:HD2	2.13	0.49
4:XD:198:VAL:HG12	4:XD:199:ASN:H	1.74	0.49
8:XH:14:ARG:O	8:XH:14:ARG:HG2	2.12	0.49
10:XJ:22:LYS:NZ	10:XJ:23:ILE:HG12	2.28	0.49
16:XP:59:TRP:HA	16:XP:59:TRP:HE3	1.77	0.49
21:XU:6:ARG:C	21:XU:8:THR:H	2.20	0.49
25:YA:607:U:N3	25:YA:621:A:H2	2.00	0.49
25:YA:1338:G:O2'	25:YA:1393:A:N1	2.37	0.49
25:YA:1769:G:C2	25:YA:1984:G:C4	3.01	0.49
25:YA:1782:C:C4	25:YA:2587:A:N1	2.81	0.49
25:YA:2070:G:N1	25:YA:2071:A:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2387:U:O2'	46:Y0:19:LYS:NZ	2.41	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:HB3	2.42	0.49
28:YE:17:ASP:N	28:YE:17:ASP:OD2	2.46	0.49
28:YE:61:ARG:CB	28:YE:62:PRO:CD	2.90	0.49
30:YG:107:LEU:HD11	30:YG:178:PHE:CD1	2.48	0.49
31:YH:19:VAL:HG13	31:YH:43:VAL:HG23	1.93	0.49
31:YH:103:LEU:H	31:YH:103:LEU:HD23	1.77	0.49
31:YH:153:LYS:O	31:YH:154:PRO:O	2.29	0.49
33:YN:95:PRO:O	33:YN:97:ARG:N	2.46	0.49
34:YO:1:MET:HE3	34:YO:67:LYS:HG2	1.95	0.49
34:YO:20:MET:HG2	34:YO:21:CYS:O	2.11	0.49
36:YQ:29:PHE:N	36:YQ:105:GLU:OE2	2.41	0.49
40:YU:81:HIS:CE1	40:YU:117:GLN:HG3	2.48	0.49
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HA	1.95	0.49
47:Y1:40:ARG:NH2	47:Y1:42:GLN:HG2	2.27	0.49
51:Y5:2:ALA:O	51:Y5:3:LYS:CB	2.60	0.49
52:Y6:7:ILE:C	52:Y6:9:LEU:N	2.65	0.49
1:QA:6:G:N2	5:QE:98:THR:HG1	2.11	0.49
1:QA:126:G:H1	1:QA:235:C:H42	1.60	0.49
1:QA:1152:A:H2'	1:QA:1153:C:H6	1.72	0.49
1:QA:1267:C:C5	1:QA:1268:A:C5	2.99	0.49
1:QA:1343:G:H2'	1:QA:1344:C:C6	2.48	0.49
6:QF:51:PRO:HA	6:QF:55:ASP:O	2.13	0.49
9:QI:79:LEU:O	9:QI:79:LEU:HD13	2.12	0.49
11:QK:91:ARG:NH2	18:QR:88:LYS:HZ1	2.10	0.49
13:QM:14:ARG:HG3	13:QM:16:ASP:OD2	2.13	0.49
14:QN:8:GLU:C	14:QN:10:ALA:N	2.68	0.49
15:QO:54:ARG:O	15:QO:55:GLY:C	2.55	0.49
20:QT:60:GLU:HG3	20:QT:81:LYS:HE3	1.94	0.49
20:QT:97:ALA:HB3	20:QT:99:LEU:CD1	2.43	0.49
22:QV:56:C:O2'	30:RG:78:SER:HB2	2.13	0.49
25:RA:273(A):G:C2	25:RA:364:C:N3	2.81	0.49
25:RA:307:G:N2	25:RA:310:A:O5'	2.42	0.49
25:RA:449:A:C2'	25:RA:450:G:H5'	2.43	0.49
25:RA:751:A:H5''	25:RA:752:A:OP1	2.13	0.49
25:RA:818:G:H5'	25:RA:819:A:OP2	2.12	0.49
25:RA:858:U:O2	25:RA:2268:A:H2'	2.12	0.49
25:RA:868:U:C4	25:RA:869:G:N7	2.81	0.49
25:RA:877:U:OP2	25:RA:877:U:H6	1.94	0.49
25:RA:928:G:O2'	49:R3:43:ILE:HD11	2.13	0.49
25:RA:1107:G:H2'	25:RA:1108:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1191:G:N2	25:RA:1192:G:H1'	2.27	0.49
25:RA:1405:U:H2'	25:RA:1406:U:C6	2.46	0.49
25:RA:1844:C:H2'	25:RA:1845:G:H8	1.77	0.49
25:RA:2481:G:O2'	25:RA:2482:G:P	2.70	0.49
27:RD:198:ASN:C	27:RD:198:ASN:ND2	2.69	0.49
34:RO:8:LEU:N	34:RO:8:LEU:CD2	2.76	0.49
34:RO:69:ILE:O	34:RO:76:ALA:HA	2.12	0.49
36:RQ:132:VAL:HG12	36:RQ:133:ARG:N	2.27	0.49
39:RT:94:ALA:O	39:RT:95:ARG:CB	2.61	0.49
41:RV:7:THR:HG23	41:RV:22:VAL:HG11	1.94	0.49
43:RX:51:VAL:HG13	43:RX:81:VAL:HG23	1.93	0.49
44:RY:35:TYR:CD1	44:RY:69:ALA:HB3	2.48	0.49
47:R1:67:ILE:N	47:R1:68:PRO:CD	2.76	0.49
47:R1:73:LEU:C	47:R1:75:GLU:N	2.70	0.49
48:R2:33:MET:O	48:R2:37:PHE:HD1	1.95	0.49
50:R4:10:VAL:CG2	50:R4:11:PRO:HD2	2.43	0.49
50:R4:68:ARG:HD3	50:R4:69:LYS:HG2	1.93	0.49
52:R6:7:ILE:C	52:R6:9:LEU:N	2.65	0.49
54:R8:15:LYS:HD3	54:R8:15:LYS:C	2.37	0.49
1:XA:320:C:H2'	1:XA:321:A:C8	2.47	0.49
1:XA:347:G:O2'	1:XA:348:G:OP2	2.26	0.49
1:XA:652:U:O4	1:XA:752:G:O2'	2.20	0.49
1:XA:945:G:C6	1:XA:1337:G:C5	3.01	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
4:XD:206:PHE:HD2	4:XD:207:TYR:CE1	2.30	0.49
6:XF:72:VAL:HG13	6:XF:73:ASN:N	2.27	0.49
6:XF:101:ALA:HA	18:XR:28:GLU:HG2	1.95	0.49
7:XG:44:TYR:C	7:XG:46:ALA:N	2.66	0.49
8:XH:61:VAL:HG12	8:XH:63:LEU:HD13	1.94	0.49
14:XN:8:GLU:O	14:XN:10:ALA:N	2.45	0.49
19:XS:9:VAL:O	19:XS:10:PHE:HB3	2.13	0.49
25:YA:528:A:N1	25:YA:2042:A:H2'	2.27	0.49
25:YA:566:U:H5''	35:YP:29:LYS:NZ	2.27	0.49
25:YA:1047:G:N2	25:YA:1110:G:H2'	2.28	0.49
25:YA:1048:A:OP2	25:YA:1110:G:N2	2.45	0.49
25:YA:1264:G:H5'	51:Y5:11:THR:HG21	1.95	0.49
25:YA:1265:A:C8	25:YA:1267:U:C2	3.01	0.49
25:YA:1341:U:OP1	25:YA:1397:U:N3	2.38	0.49
25:YA:1414:G:N2	25:YA:1589:C:C2	2.81	0.49
25:YA:1829:A:H2'	25:YA:1830:C:O4'	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2647:U:H2'	25:YA:2648:C:C6	2.46	0.49
25:YA:2737:G:H2'	25:YA:2738:A:C8	2.48	0.49
25:YA:2792:G:C6	25:YA:2805:G:C2	3.01	0.49
26:YB:7:G:C2	26:YB:114:G:C2	3.01	0.49
31:YH:98:LEU:HD12	31:YH:102:ALA:O	2.13	0.49
34:YO:104:ARG:NH1	39:YT:36:GLU:CD	2.71	0.49
35:YP:30:THR:O	35:YP:33:ARG:HB2	2.12	0.49
37:YR:33:ARG:NH2	51:Y5:55:ARG:CG	2.66	0.49
39:YT:57:PHE:O	39:YT:59:THR:N	2.46	0.49
43:YX:51:VAL:HG13	43:YX:81:VAL:HG23	1.93	0.49
44:YY:61:ILE:HG22	44:YY:62:GLU:N	2.28	0.49
44:YY:81:LYS:CD	44:YY:97:ARG:HE	2.20	0.49
44:YY:95:LYS:N	44:YY:95:LYS:CD	2.75	0.49
45:YZ:52:SER:O	45:YZ:54:HIS:N	2.46	0.49
50:Y4:1:MET:HG3	50:Y4:1:MET:O	2.12	0.49
53:Y7:46:VAL:HG12	53:Y7:47:ARG:N	2.27	0.49
54:Y8:52:LYS:H	54:Y8:53:PRO:HD2	1.66	0.49
55:Y9:1:MET:HE1	55:Y9:32:HIS:HD2	1.77	0.49
55:Y9:7:VAL:HG12	55:Y9:25:VAL:HG21	1.94	0.49
1:QA:942:G:C2	1:QA:1342:C:C2	3.01	0.49
1:QA:1239:A:H4'	1:QA:1240:U:C5'	2.43	0.49
2:QB:68:ILE:O	2:QB:91:PRO:HD2	2.13	0.49
2:QB:103:THR:N	2:QB:180:LEU:HD11	2.27	0.49
2:QB:180:LEU:O	2:QB:181:PHE:HB2	2.12	0.49
3:QC:173:VAL:N	3:QC:174:PRO:HD3	2.27	0.49
4:QD:9:CYS:SG	4:QD:22:LYS:CE	3.01	0.49
6:QF:101:ALA:HA	18:QR:28:GLU:HG2	1.95	0.49
10:QJ:49:VAL:HG22	14:QN:41:ARG:CG	2.42	0.49
13:QM:102:ARG:O	13:QM:102:ARG:HG3	2.12	0.49
13:QM:120:LYS:O	13:QM:121:LYS:CB	2.60	0.49
20:QT:83:ARG:C	20:QT:86:ARG:HB3	2.38	0.49
25:RA:863:A:H2'	25:RA:864:G:H8	1.76	0.49
25:RA:1695:G:H1'	27:RD:8:PRO:O	2.12	0.49
25:RA:2277:G:P	36:RQ:85:LYS:HB2	2.53	0.49
25:RA:2556:C:H2'	25:RA:2557:G:O4'	2.12	0.49
26:RB:81:G:C2	26:RB:82:G:N7	2.80	0.49
28:RE:179:GLU:O	28:RE:180:ASN:HB2	2.12	0.49
30:RG:114:ILE:HG21	30:RG:117:PHE:HB2	1.93	0.49
31:RH:7:LEU:C	31:RH:7:LEU:HD12	2.37	0.49
31:RH:24:VAL:HG21	31:RH:72:ILE:HG12	1.94	0.49
31:RH:98:LEU:HD12	31:RH:102:ALA:O	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:103:LEU:HD23	31:RH:103:LEU:H	1.77	0.49
33:RN:95:PRO:O	33:RN:97:ARG:N	2.46	0.49
35:RP:47:ASP:OD1	35:RP:49:ARG:NH1	2.46	0.49
36:RQ:23:GLY:O	36:RQ:24:GLY:O	2.30	0.49
39:RT:16:ARG:NE	39:RT:19:LEU:HD21	2.28	0.49
44:RY:84:ARG:HD3	44:RY:86:ARG:NH1	2.28	0.49
46:R0:14:ARG:O	46:R0:15:ASP:HB2	2.11	0.49
51:R5:2:ALA:O	51:R5:3:LYS:CB	2.60	0.49
1:XA:544:G:H2'	1:XA:545:C:C6	2.48	0.49
1:XA:662:G:O2'	1:XA:836:G:H5'	2.13	0.49
1:XA:1004:A:H1'	1:XA:1036:G:N2	2.27	0.49
13:XM:16:ASP:HB3	13:XM:34:LEU:HD11	1.93	0.49
19:XS:11:VAL:O	19:XS:12:ASP:CB	2.61	0.49
20:XT:37:SER:O	20:XT:41:ILE:HG12	2.12	0.49
20:XT:60:GLU:HG3	20:XT:81:LYS:HE3	1.94	0.49
20:XT:98:PRO:C	20:XT:100:ILE:H	2.19	0.49
25:YA:52:A:H8	25:YA:52:A:O5'	1.96	0.49
25:YA:525:U:H5''	25:YA:556:G:H5'	1.95	0.49
25:YA:607:U:OP1	29:YF:102:PRO:HA	2.11	0.49
25:YA:844:C:C5	25:YA:845:G:C5	3.01	0.49
25:YA:1600:C:OP1	43:YX:58:HIS:NE2	2.35	0.49
25:YA:2807:G:H3'	25:YA:2808:U:H5''	1.95	0.49
26:YB:39:A:C4	26:YB:44:G:N2	2.81	0.49
27:YD:2:ALA:CB	27:YD:20:ASP:CB	2.90	0.49
27:YD:69:ARG:C	27:YD:71:ASP:N	2.69	0.49
27:YD:123:ALA:HB3	27:YD:131:LEU:HG	1.94	0.49
28:YE:179:GLU:O	28:YE:180:ASN:HB2	2.12	0.49
30:YG:56:ALA:HB2	30:YG:153:ARG:NE	2.27	0.49
32:YI:75:LEU:HB3	32:YI:105:HIS:CD2	2.47	0.49
37:YR:96:ARG:NH2	37:YR:117:VAL:HG23	2.27	0.49
39:YT:38:ASN:O	39:YT:39:ARG:O	2.30	0.49
41:YV:29:PRO:O	41:YV:61:VAL:HG22	2.12	0.49
44:YY:84:ARG:HD3	44:YY:86:ARG:NH1	2.28	0.49
45:YZ:179:ASP:CG	45:YZ:180:VAL:HG22	2.37	0.49
50:Y4:47:GLN:O	50:Y4:48:ARG:CB	2.61	0.49
52:Y6:9:LEU:HD13	52:Y6:26:ASN:HD22	1.76	0.49
54:Y8:16:ILE:CD1	54:Y8:57:ARG:HG2	2.42	0.49
1:QA:144:G:H1	1:QA:178:C:N4	2.11	0.49
1:QA:304:U:H2'	1:QA:305:G:C8	2.47	0.49
1:QA:622:A:C8	1:QA:623:C:C6	3.01	0.49
1:QA:971:G:H5''	1:QA:972:C:H5''	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1198:G:H2'	1:QA:1199:U:O4'	2.13	0.49
2:QB:42:ILE:HD11	2:QB:202:PRO:HB2	1.95	0.49
6:QF:72:VAL:HG13	6:QF:73:ASN:N	2.27	0.49
6:QF:97:PHE:CD2	18:QR:31:LEU:HD21	2.48	0.49
10:QJ:49:VAL:CG1	10:QJ:50:ILE:N	2.76	0.49
11:QK:25:TYR:N	11:QK:25:TYR:CD1	2.80	0.49
11:QK:110:ASP:HB2	18:QR:88:LYS:HD3	1.95	0.49
12:QL:85:ILE:HD11	12:QL:98:TYR:CB	2.42	0.49
17:QQ:74:LEU:HD12	17:QQ:75:ARG:NE	2.28	0.49
20:QT:84:LEU:C	20:QT:84:LEU:HD13	2.36	0.49
25:RA:31:C:O3'	25:RA:1238:G:H5''	2.12	0.49
25:RA:182:A:N3	25:RA:433:C:O2'	2.41	0.49
25:RA:270(S):G:C1'	47:R1:78:LYS:HD2	2.38	0.49
25:RA:704:G:H2'	25:RA:726:G:N2	2.28	0.49
25:RA:871:U:H4'	36:RQ:69:PHE:CE2	2.48	0.49
25:RA:977:G:C6	25:RA:987:G:C5	3.01	0.49
25:RA:1265:A:C8	25:RA:1267:U:C2	3.00	0.49
25:RA:1797:C:O2'	27:RD:259:THR:HB	2.13	0.49
25:RA:1820:U:O4	27:RD:199:ALA:HB1	2.13	0.49
25:RA:2566:A:H4'	25:RA:2567:G:O5'	2.13	0.49
25:RA:2838:G:C6	25:RA:2839:G:C5	3.00	0.49
27:RD:2:ALA:CB	27:RD:20:ASP:HB3	2.42	0.49
28:RE:119:ARG:HD3	28:RE:160:TYR:HD2	1.78	0.49
30:RG:6:ALA:H	50:R4:23:GLU:CG	2.25	0.49
30:RG:143:GLU:HA	50:R4:28:LYS:HD3	1.95	0.49
31:RH:54:ARG:HD3	31:RH:65:HIS:ND1	2.27	0.49
31:RH:137:ASP:CB	31:RH:140:LYS:HB2	2.43	0.49
33:RN:73:THR:CG2	33:RN:82:LEU:HD11	2.43	0.49
35:RP:101:VAL:CG1	35:RP:102:ARG:N	2.75	0.49
39:RT:16:ARG:HD3	39:RT:19:LEU:CG	2.43	0.49
42:RW:30:GLU:O	42:RW:34:ASN:ND2	2.46	0.49
42:RW:48:ALA:O	42:RW:49:LYS:C	2.54	0.49
44:RY:95:LYS:N	44:RY:95:LYS:CD	2.76	0.49
46:R0:18:ALA:HB3	46:R0:20:ARG:NH1	2.28	0.49
47:R1:40:ARG:NH2	47:R1:42:GLN:HG2	2.27	0.49
47:R1:81:LYS:O	47:R1:82:LEU:O	2.30	0.49
51:R5:48:GLU:HA	51:R5:59:GLU:CG	2.43	0.49
52:R6:8:LYS:O	52:R6:27:LYS:HA	2.13	0.49
53:R7:9:ARG:HH12	53:R7:47:ARG:HG3	1.76	0.49
1:XA:97:U:H2'	1:XA:99:C:C6	2.47	0.49
1:XA:439:A:OP2	1:XA:493:G:N1	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:575:G:O2'	1:XA:821:G:OP2	2.29	0.49
1:XA:736:C:H2'	1:XA:737:A:C8	2.47	0.49
1:XA:1079:G:O3'	5:XE:14:ARG:NH2	2.46	0.49
1:XA:1230:C:H2'	1:XA:1231:G:C8	2.47	0.49
1:XA:1464:G:H2'	1:XA:1465:C:C6	2.48	0.49
2:XB:95:GLN:NE2	2:XB:147:LYS:HE2	2.27	0.49
2:XB:178:ARG:NE	8:XH:71:GLY:O	2.45	0.49
3:XC:188:LEU:N	3:XC:188:LEU:CD2	2.76	0.49
4:XD:68:TYR:O	4:XD:69:GLY:C	2.55	0.49
5:XE:45:PHE:CD2	5:XE:47:LYS:HD2	2.47	0.49
9:XI:110:GLU:O	9:XI:110:GLU:HG3	2.12	0.49
11:XK:53:SER:C	11:XK:55:LYS:H	2.21	0.49
12:XL:25:PRO:C	12:XL:27:LEU:N	2.70	0.49
16:XP:83:GLU:HA	16:XP:83:GLU:OE2	2.13	0.49
20:XT:83:ARG:C	20:XT:86:ARG:HB3	2.38	0.49
25:YA:301:G:H1	25:YA:316:C:N4	2.06	0.49
25:YA:993:G:C4	25:YA:994:C:C5	3.01	0.49
25:YA:1157:G:C6	25:YA:1158:C:C4	3.01	0.49
25:YA:1443:G:N2	25:YA:1549:C:C2	2.81	0.49
25:YA:1676:A:H2'	25:YA:1677:A:O4'	2.12	0.49
25:YA:1882:C:H5'	25:YA:1883:G:OP2	2.12	0.49
25:YA:2292:C:N4	25:YA:2340:G:H1	2.11	0.49
25:YA:2405:G:O2'	25:YA:2406:U:OP2	2.22	0.49
25:YA:2625:G:H2'	25:YA:2626:C:O4'	2.12	0.49
25:YA:2849:U:H4'	25:YA:2868:A:C2	2.47	0.49
27:YD:30:GLU:CD	27:YD:63:ARG:HE	2.21	0.49
30:YG:3:LEU:HD21	50:Y4:25:TYR:CE1	2.48	0.49
37:YR:1:MET:O	37:YR:2:ARG:CB	2.60	0.49
54:Y8:15:LYS:HD3	54:Y8:15:LYS:C	2.37	0.49
54:Y8:58:ILE:O	54:Y8:61:LEU:HD12	2.13	0.49
1:QA:221:C:H2'	1:QA:222:U:C6	2.45	0.49
1:QA:345:C:H5'	1:QA:346:G:C5	2.47	0.49
1:QA:397:A:H5'	1:QA:398:C:OP1	2.13	0.49
2:QB:16:HIS:HB3	2:QB:210:SER:HB2	1.95	0.49
2:QB:193:ASP:OD2	2:QB:196:LEU:CG	2.57	0.49
4:QD:68:TYR:O	4:QD:69:GLY:C	2.55	0.49
5:QE:78:HIS:CD2	8:QH:104:ARG:CD	2.96	0.49
9:QI:110:GLU:O	9:QI:110:GLU:HG3	2.12	0.49
9:QI:112:LYS:HD3	9:QI:113:LYS:O	2.13	0.49
10:QJ:33:GLN:HB2	10:QJ:75:ILE:CD1	2.43	0.49
10:QJ:49:VAL:HG23	14:QN:34:TYR:OH	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:66:LEU:C	13:QM:70:LEU:HB2	2.38	0.49
17:QQ:67:LYS:HA	17:QQ:70:ARG:HH12	1.76	0.49
20:QT:26:ASN:CB	20:QT:71:THR:HG23	2.42	0.49
20:QT:53:LEU:HA	20:QT:56:MET:CB	2.43	0.49
25:RA:579:G:O2'	25:RA:2019:A:OP1	2.21	0.49
25:RA:1059:G:H2'	25:RA:1060:U:H4'	1.95	0.49
25:RA:1247:A:O2'	25:RA:1248:G:H5''	2.13	0.49
25:RA:2477:C:C6	55:R9:1:MET:HE3	2.47	0.49
25:RA:2851:A:H2'	25:RA:2852:G:O4'	2.13	0.49
27:RD:182:LEU:H	27:RD:272:ALA:CB	2.25	0.49
27:RD:233:HIS:CD2	27:RD:233:HIS:H	2.29	0.49
28:RE:38:THR:O	28:RE:42:ASP:HB2	2.13	0.49
28:RE:95:ILE:H	28:RE:95:ILE:CD1	2.18	0.49
30:RG:113:ARG:HD2	50:R4:33:VAL:CG1	2.43	0.49
30:RG:115:ARG:HG2	30:RG:115:ARG:NH1	2.27	0.49
34:RO:107:ARG:NH1	39:RT:36:GLU:OE1	2.46	0.49
36:RQ:132:VAL:HG11	45:RZ:81:ARG:NH2	2.28	0.49
37:RR:41:ALA:C	37:RR:43:GLU:H	2.20	0.49
38:RS:48:LEU:N	38:RS:48:LEU:CD1	2.76	0.49
39:RT:111:ARG:O	39:RT:112:ARG:CG	2.55	0.49
41:RV:29:PRO:O	41:RV:61:VAL:HG22	2.12	0.49
43:RX:44:GLU:OE1	43:RX:50:LYS:HD2	2.13	0.49
47:R1:19:GLN:HA	47:R1:19:GLN:OE1	2.12	0.49
52:R6:7:ILE:O	52:R6:9:LEU:N	2.46	0.49
54:R8:33:ASN:O	54:R8:35:GLN:N	2.46	0.49
54:R8:58:ILE:O	54:R8:61:LEU:HD12	2.13	0.49
1:XA:109:A:C6	1:XA:326:G:C6	3.01	0.49
1:XA:369:C:OP2	1:XA:388:G:N2	2.39	0.49
1:XA:415:A:H2'	1:XA:416:G:C8	2.48	0.49
1:XA:1171:G:H2'	1:XA:1172:C:H6	1.77	0.49
1:XA:1492:A:OP1	12:XL:47:LYS:CG	2.61	0.49
2:XB:7:VAL:CG2	2:XB:8:LYS:HD3	2.43	0.49
2:XB:69:LEU:HB3	2:XB:162:ILE:HG22	1.95	0.49
4:XD:9:CYS:SG	4:XD:22:LYS:CD	2.98	0.49
4:XD:128:VAL:O	4:XD:130:GLY:N	2.45	0.49
9:XI:22:GLY:HA3	9:XI:60:ASP:OD2	2.13	0.49
9:XI:79:LEU:O	9:XI:79:LEU:HD13	2.12	0.49
11:XK:13:GLN:HG3	11:XK:75:TYR:O	2.13	0.49
12:XL:85:ILE:HD11	12:XL:98:TYR:CB	2.42	0.49
13:XM:12:ASN:O	13:XM:13:LYS:HB2	2.13	0.49
13:XM:23:TYR:HB3	13:XM:67:GLU:CG	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:90:LEU:HA	13:XM:93:ARG:CD	2.34	0.49
15:XO:54:ARG:O	15:XO:55:GLY:C	2.55	0.49
16:XP:57:ARG:HH11	16:XP:57:ARG:HG3	1.78	0.49
20:XT:97:ALA:HB3	20:XT:99:LEU:CD1	2.43	0.49
25:YA:190:A:C6	25:YA:191:A:C6	3.01	0.49
25:YA:222:A:O2'	25:YA:223:A:O5'	2.30	0.49
25:YA:777:A:C2	25:YA:778:G:C5	3.01	0.49
25:YA:1145:C:H2'	25:YA:1146:C:C6	2.48	0.49
25:YA:1264:G:C3'	25:YA:1265:A:H5''	2.39	0.49
25:YA:1296:G:OP1	25:YA:2709:G:O2'	2.22	0.49
25:YA:1916:A:H2'	25:YA:1917:U:O4'	2.12	0.49
25:YA:2001:A:C2	25:YA:2002:G:C4	3.00	0.49
25:YA:2127:G:H2'	25:YA:2128:C:O4'	2.13	0.49
25:YA:2287:A:H8	25:YA:2287:A:H5''	1.78	0.49
25:YA:2832:U:H1'	25:YA:2834:G:C4	2.47	0.49
27:YD:44:ASN:H	27:YD:44:ASN:ND2	1.97	0.49
28:YE:119:ARG:HD3	28:YE:160:TYR:CD2	2.47	0.49
30:YG:143:GLU:HA	50:Y4:28:LYS:HD3	1.95	0.49
31:YH:124:GLU:HB3	31:YH:132:ARG:CG	2.43	0.49
32:YI:63:ALA:HA	32:YI:66:GLU:HG2	1.95	0.49
37:YR:71:GLN:HE21	37:YR:71:GLN:HA	1.77	0.49
39:YT:135:ALA:C	39:YT:137:LYS:N	2.71	0.49
41:YV:79:VAL:HG22	41:YV:79:VAL:O	2.12	0.49
44:YY:81:LYS:HD3	44:YY:97:ARG:HD3	1.94	0.49
50:Y4:38:LYS:C	50:Y4:40:HIS:H	2.07	0.49
50:Y4:53:GLU:O	50:Y4:57:GLU:HG3	2.13	0.49
1:QA:222:U:H2'	1:QA:223:U:C6	2.48	0.49
1:QA:737:A:H2'	1:QA:738:C:C6	2.48	0.49
1:QA:962:C:C2	1:QA:963:G:C8	3.01	0.49
1:QA:1119:C:H2'	1:QA:1120:G:C8	2.48	0.49
1:QA:1305:G:C5'	21:QU:4:GLY:HA3	2.41	0.49
2:QB:207:ALA:O	2:QB:209:ARG:N	2.45	0.49
3:QC:188:LEU:N	3:QC:188:LEU:CD2	2.76	0.49
4:QD:30:LYS:HD2	4:QD:35:ARG:HH21	1.78	0.49
5:QE:78:HIS:CE1	5:QE:142:LEU:HD23	2.48	0.49
8:QH:29:SER:CB	8:QH:32:LYS:HG3	2.28	0.49
8:QH:61:VAL:HG12	8:QH:63:LEU:HD13	1.94	0.49
9:QI:79:LEU:O	9:QI:83:ARG:HG2	2.13	0.49
10:QJ:16:LEU:HD13	10:QJ:16:LEU:C	2.38	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)
13:QM:36:LYS:C	13:QM:36:LYS:CD	2.85	0.49
14:QN:23:ARG:HD3	14:QN:28:GLY:O	2.13	0.49
25:RA:1201:C:N4	25:RA:1244:G:H1	2.11	0.49
25:RA:1773:A:H2'	25:RA:1774:C:O4'	2.12	0.49
25:RA:1872:A:H5'	25:RA:1878:G:OP2	2.12	0.49
25:RA:2404:C:O2	25:RA:2414:G:C2	2.66	0.49
25:RA:2422:A:C8	25:RA:2424:C:C5	3.01	0.49
27:RD:30:GLU:CD	27:RD:63:ARG:HE	2.21	0.49
28:RE:46:ALA:HB1	28:RE:80:GLU:HB2	1.94	0.49
29:RF:45:ARG:NH1	29:RF:45:ARG:HG2	2.28	0.49
37:RR:44:LEU:HD22	37:RR:48:VAL:CG2	2.42	0.49
37:RR:52:ILE:CG2	37:RR:94:TYR:CD1	2.96	0.49
38:RS:11:LYS:O	38:RS:11:LYS:HG2	2.12	0.49
40:RU:81:HIS:CE1	40:RU:117:GLN:HG3	2.48	0.49
42:RW:1:MET:HE2	42:RW:2:GLU:H	1.77	0.49
50:R4:47:GLN:O	50:R4:48:ARG:CB	2.61	0.49
51:R5:52:TYR:O	51:R5:53:ALA:CB	2.60	0.49
52:R6:27:LYS:NZ	52:R6:27:LYS:CB	2.73	0.49
52:R6:44:ARG:O	52:R6:45:LYS:CB	2.60	0.49
1:XA:96:G:H2'	1:XA:97:U:O4'	2.12	0.49
1:XA:179:A:H2'	1:XA:180:U:C6	2.47	0.49
1:XA:601:C:H2'	1:XA:602:A:H8	1.75	0.49
2:XB:39:ILE:O	2:XB:41:ILE:HD12	2.12	0.49
3:XC:76:VAL:HG21	3:XC:103:VAL:HG11	1.95	0.49
10:XJ:16:LEU:HD13	10:XJ:16:LEU:C	2.38	0.49
11:XK:41:THR:HG22	11:XK:42:TRP:N	2.28	0.49
13:XM:65:LYS:HZ2	13:XM:69:GLU:HG2	1.77	0.49
13:XM:73:GLU:O	13:XM:76:ALA:HB3	2.13	0.49
25:YA:106:C:H2'	25:YA:107:C:C6	2.47	0.49
25:YA:1045:A:H4'	25:YA:1046:A:C5'	2.43	0.49
25:YA:1650:G:N2	25:YA:2007:C:O2	2.44	0.49
25:YA:2782:G:O5'	25:YA:2782:G:C8	2.65	0.49
26:YB:3:C:H2'	26:YB:4:C:C6	2.48	0.49
30:YG:77:ILE:O	30:YG:81:LYS:O	2.31	0.49
30:YG:113:ARG:HD2	50:Y4:33:VAL:CG1	2.43	0.49
30:YG:115:ARG:HH11	30:YG:115:ARG:HG2	1.77	0.49
31:YH:54:ARG:HD3	31:YH:65:HIS:ND1	2.27	0.49
33:YN:4:TYR:OH	33:YN:7:LYS:NZ	2.46	0.49
35:YP:6:LEU:O	35:YP:7:ARG:O	2.31	0.49
35:YP:47:ASP:OD1	35:YP:49:ARG:NH1	2.46	0.49
35:YP:101:VAL:CG1	35:YP:102:ARG:N	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YS:11:LYS:HG2	38:YS:11:LYS:O	2.12	0.49
38:YS:48:LEU:N	38:YS:48:LEU:CD1	2.76	0.49
38:YS:55:ALA:O	38:YS:56:LEU:HB3	2.13	0.49
40:YU:64:ARG:CG	40:YU:64:ARG:NH2	2.70	0.49
41:YV:35:LEU:HD22	41:YV:57:VAL:O	2.13	0.49
41:YV:76:LYS:HG3	41:YV:81:TYR:CD1	2.48	0.49
42:YW:88:ARG:HB3	42:YW:92:ARG:CB	2.42	0.49
52:Y6:37:ARG:HE	52:Y6:37:ARG:HA	1.77	0.49
1:QA:296:U:O2'	1:QA:556:C:O2	2.31	0.48
1:QA:468:A:C8	1:QA:474:G:C8	3.01	0.48
1:QA:1326:C:OP1	21:QU:12:LYS:HE3	2.13	0.48
4:QD:9:CYS:SG	4:QD:22:LYS:CD	2.98	0.48
5:QE:11:ILE:CG1	5:QE:31:LEU:HD12	2.42	0.48
9:QI:18:PHE:O	9:QI:61:ALA:HA	2.13	0.48
11:QK:19:ALA:CB	11:QK:32:ILE:HG22	2.42	0.48
13:QM:4:ILE:HG22	13:QM:5:ALA:H	1.75	0.48
16:QP:43:LYS:HE2	16:QP:48:TRP:CZ3	2.47	0.48
19:QS:26:GLY:O	19:QS:27:GLU:HB2	2.11	0.48
25:RA:372:G:H8	47:R1:65:SER:O	1.96	0.48
25:RA:676:A:C8	25:RA:2069:G:N2	2.80	0.48
25:RA:862:G:H2'	25:RA:863:A:O4'	2.13	0.48
25:RA:1251:C:OP1	40:RU:10:ARG:HG3	2.12	0.48
25:RA:1349:A:H3'	25:RA:1349:A:N3	2.27	0.48
25:RA:1427:A:C4	25:RA:1428:C:N4	2.81	0.48
25:RA:1462:C:H4'	25:RA:2703:C:H5'	1.94	0.48
25:RA:2199:A:H5''	25:RA:2205:C:OP2	2.12	0.48
25:RA:2747:G:H5''	31:RH:70:THR:HG21	1.94	0.48
29:RF:129:PHE:CD2	29:RF:163:VAL:HG21	2.48	0.48
30:RG:36:LYS:HA	30:RG:95:ARG:HG2	1.95	0.48
31:RH:12:PRO:HD3	31:RH:48:GLY:O	2.13	0.48
31:RH:42:ARG:O	31:RH:52:VAL:HA	2.12	0.48
31:RH:124:GLU:HB3	31:RH:132:ARG:CG	2.43	0.48
32:RI:86:THR:H	32:RI:123:LEU:HD12	1.78	0.48
35:RP:30:THR:O	35:RP:33:ARG:HB2	2.12	0.48
36:RQ:31:ASP:O	36:RQ:32:TYR:CG	2.66	0.48
41:RV:18:LEU:HB3	41:RV:96:ILE:CG1	2.43	0.48
42:RW:36:LEU:CD1	42:RW:47:VAL:HG12	2.43	0.48
42:RW:51:LEU:HD23	42:RW:105:VAL:HG11	1.95	0.48
43:RX:11:PRO:HB3	43:RX:92:LEU:CD2	2.43	0.48
44:RY:6:HIS:O	44:RY:7:VAL:CG1	2.59	0.48
44:RY:101:LYS:O	44:RY:102:CYS:SG	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:RZ:4:ARG:NH1	45:RZ:58:VAL:HG21	2.28	0.48
1:XA:1095:U:OP1	1:XA:1108:G:N2	2.46	0.48
2:XB:134:GLU:HB3	2:XB:138:LEU:HD12	1.93	0.48
4:XD:163:GLU:O	4:XD:165:MET:N	2.46	0.48
5:XE:62:ALA:C	5:XE:64:ARG:H	2.21	0.48
7:XG:23:VAL:O	7:XG:27:ILE:CD1	2.60	0.48
7:XG:63:LYS:O	7:XG:63:LYS:HD2	2.13	0.48
8:XH:45:ILE:O	8:XH:45:ILE:HG13	2.13	0.48
10:XJ:3:LYS:O	10:XJ:100:THR:HA	2.13	0.48
10:XJ:53:PRO:C	14:XN:41:ARG:NH2	2.71	0.48
14:XN:47:LEU:O	14:XN:48:ALA:C	2.56	0.48
20:XT:53:LEU:HA	20:XT:56:MET:CB	2.43	0.48
22:XV:75:C:H2'	22:XV:76:A:O4'	2.12	0.48
25:YA:38:A:O5'	25:YA:38:A:H8	1.95	0.48
25:YA:643:A:N1	25:YA:2369:A:O2'	2.29	0.48
25:YA:664:C:H4'	25:YA:941:A:OP1	2.13	0.48
25:YA:1784:A:H4'	25:YA:1785:A:O5'	2.13	0.48
25:YA:2677:G:C4	25:YA:2731:G:N2	2.81	0.48
25:YA:2744:G:O2'	25:YA:2745:C:H5'	2.13	0.48
25:YA:2824:C:C5	25:YA:2825:C:C4	3.01	0.48
26:YB:54:G:O2'	26:YB:55:U:H5'	2.13	0.48
27:YD:48:ARG:HG3	27:YD:48:ARG:HH11	1.78	0.48
30:YG:115:ARG:NH1	30:YG:115:ARG:HG2	2.26	0.48
35:YP:31:ALA:C	35:YP:32:THR:CG2	2.85	0.48
35:YP:52:GLU:OE2	35:YP:57:THR:HA	2.13	0.48
40:YU:91:ASP:O	40:YU:95:LEU:N	2.43	0.48
44:YY:77:PRO:O	44:YY:78:ALA:HB2	2.10	0.48
44:YY:97:ARG:HG2	44:YY:97:ARG:NH1	2.28	0.48
51:Y5:49:CYS:SG	51:Y5:58:LEU:HB2	2.53	0.48
52:Y6:7:ILE:O	52:Y6:9:LEU:N	2.46	0.48
54:Y8:33:ASN:O	54:Y8:35:GLN:N	2.46	0.48
54:Y8:35:GLN:HA	54:Y8:35:GLN:OE1	2.13	0.48
56:Z6:76:PPU:HN2	56:Z6:76:PPU:HD2	1.76	0.48
1:QA:407:G:N1	1:QA:435:C:N3	2.56	0.48
1:QA:830:G:N2	1:QA:857:C:C2	2.81	0.48
1:QA:1122:U:N3	1:QA:1123:A:N7	2.61	0.48
2:QB:5:ILE:HG21	2:QB:224:GLN:HG2	1.95	0.48
5:QE:100:VAL:O	5:QE:107:ARG:NH2	2.47	0.48
8:QH:122:ARG:O	8:QH:125:ARG:N	2.46	0.48
10:QJ:94:VAL:CG1	10:QJ:95:GLU:N	2.76	0.48
11:QK:53:SER:C	11:QK:55:LYS:H	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:130:C:O3'	25:RA:1349:A:H1'	2.13	0.48
25:RA:1059:G:C5	25:RA:1060:U:H1'	2.48	0.48
25:RA:1378:A:HO2'	25:RA:1379:A:C5'	2.20	0.48
25:RA:1469:A:H2'	25:RA:1470:G:O4'	2.13	0.48
25:RA:1718:G:C2	25:RA:1725:G:C8	3.01	0.48
25:RA:1839:G:C8	25:RA:1927:A:H1'	2.48	0.48
25:RA:1995:U:N3	25:RA:1996:C:C4	2.81	0.48
25:RA:2404:C:C1'	35:RP:67:MET:HE1	2.42	0.48
26:RB:4:C:C2	26:RB:117:G:N2	2.80	0.48
27:RD:10:THR:O	27:RD:11:PRO:C	2.56	0.48
30:RG:77:ILE:O	30:RG:81:LYS:O	2.31	0.48
30:RG:115:ARG:HG2	30:RG:115:ARG:HH11	1.77	0.48
33:RN:10:GLU:HA	33:RN:11:PRO:HD3	1.74	0.48
34:RO:104:ARG:NH1	39:RT:36:GLU:CD	2.71	0.48
35:RP:36:LYS:HB2	35:RP:40:SER:HB3	1.94	0.48
41:RV:22:VAL:HG12	41:RV:23:GLU:H	1.76	0.48
41:RV:79:VAL:HG22	41:RV:79:VAL:O	2.12	0.48
47:R1:93:GLU:O	47:R1:97:LEU:HD11	2.12	0.48
51:R5:3:LYS:O	51:R5:4:HIS:C	2.56	0.48
51:R5:45:VAL:O	51:R5:45:VAL:HG12	2.13	0.48
51:R5:56:LYS:HD2	51:R5:56:LYS:N	2.13	0.48
1:XA:1148:U:H2'	1:XA:1149:C:O4'	2.12	0.48
1:XA:1161:C:C2'	1:XA:1162:C:H5'	2.43	0.48
1:XA:1432:G:OP1	39:YT:107:ASP:HB2	2.13	0.48
2:XB:16:HIS:HD2	2:XB:210:SER:HA	1.77	0.48
2:XB:154:LEU:O	2:XB:155:LEU:HB2	2.13	0.48
3:XC:173:VAL:N	3:XC:174:PRO:HD3	2.27	0.48
4:XD:3:ARG:O	4:XD:4:TYR:C	2.55	0.48
4:XD:9:CYS:SG	4:XD:22:LYS:CE	3.01	0.48
4:XD:121:VAL:O	4:XD:134:ASP:HA	2.13	0.48
5:XE:78:HIS:CD2	8:XH:104:ARG:CG	2.91	0.48
5:XE:83:GLU:HG2	5:XE:88:LYS:CG	2.42	0.48
6:XF:51:PRO:HA	6:XF:55:ASP:O	2.12	0.48
9:XI:79:LEU:O	9:XI:83:ARG:HG2	2.13	0.48
10:XJ:33:GLN:HB2	10:XJ:75:ILE:CD1	2.43	0.48
11:XK:34:ASP:HB2	11:XK:35:PRO:HD2	1.95	0.48
11:XK:96:ARG:O	11:XK:97:ALA:C	2.54	0.48
13:XM:3:ARG:HA	13:XM:9:ILE:HG12	1.95	0.48
16:XP:72:ARG:C	16:XP:72:ARG:CD	2.84	0.48
21:XU:9:ARG:HH11	21:XU:9:ARG:HG2	1.78	0.48
25:YA:53:A:C8	25:YA:54:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:211:A:H2'	25:YA:212:G:O4'	2.13	0.48
25:YA:319:C:H2'	25:YA:320:A:O4'	2.13	0.48
25:YA:374:A:H3'	25:YA:375:C:H6	1.78	0.48
25:YA:456:C:C5	43:YX:69:TYR:CZ	3.02	0.48
25:YA:1048:A:C5	25:YA:1111:A:H2	2.31	0.48
25:YA:1056:G:H5'	25:YA:1085:A:H2	1.78	0.48
25:YA:1230:C:H2'	25:YA:1231:G:C8	2.48	0.48
25:YA:2298:A:H5''	25:YA:2299:G:OP2	2.12	0.48
25:YA:2532:G:H4'	25:YA:2657:A:H2	1.78	0.48
26:YB:44:G:OP1	50:Y4:1:MET:N	2.35	0.48
30:YG:92:VAL:O	30:YG:92:VAL:HG13	2.12	0.48
31:YH:42:ARG:O	31:YH:52:VAL:HA	2.13	0.48
35:YP:144:GLU:O	35:YP:144:GLU:OE1	2.31	0.48
36:YQ:63:LYS:HB2	45:YZ:116:VAL:HG21	1.96	0.48
36:YQ:90:VAL:C	36:YQ:92:GLY:N	2.71	0.48
37:YR:41:ALA:C	37:YR:43:GLU:H	2.21	0.48
38:YS:33:LYS:HB3	38:YS:34:HIS:CD2	2.48	0.48
48:Y2:16:LEU:O	48:Y2:17:SER:CB	2.56	0.48
53:Y7:48:LYS:CG	53:Y7:49:ARG:H	2.23	0.48
1:QA:51:A:N1	1:QA:314:C:O2'	2.46	0.48
1:QA:411:A:H62	1:QA:413:G:N2	2.04	0.48
1:QA:838:G:N2	1:QA:849:C:C2	2.81	0.48
1:QA:1442:G:C5	1:QA:1446:A:C6	3.02	0.48
2:QB:39:ILE:O	2:QB:41:ILE:HD12	2.13	0.48
3:QC:12:LEU:C	3:QC:14:ILE:H	2.21	0.48
4:QD:121:VAL:O	4:QD:134:ASP:HA	2.14	0.48
8:QH:14:ARG:O	8:QH:14:ARG:HG2	2.12	0.48
9:QI:18:PHE:HB2	9:QI:62:TYR:HB3	1.95	0.48
11:QK:106:LYS:O	11:QK:107:SER:HB3	2.12	0.48
12:QL:38:THR:CG2	12:QL:57:LYS:HB3	2.44	0.48
25:RA:67:U:H2'	25:RA:68:G:C8	2.44	0.48
25:RA:270(I):G:H1	25:RA:270(Q):C:N4	2.10	0.48
25:RA:693:C:O4'	25:RA:1354:A:H1'	2.13	0.48
25:RA:1047:G:O2'	25:RA:1110:G:N2	2.47	0.48
25:RA:1399:C:O5'	25:RA:1399:C:H6	1.96	0.48
25:RA:1661:G:C6	25:RA:2000:G:C6	3.01	0.48
25:RA:1783:A:H5'	25:RA:2608:G:H4'	1.95	0.48
25:RA:2747:G:H2'	25:RA:2748:A:H8	1.78	0.48
26:RB:9:G:H5'	38:RS:19:LYS:NZ	2.28	0.48
29:RF:128:ALA:O	29:RF:129:PHE:HB2	2.13	0.48
29:RF:155:LEU:HD23	29:RF:186:ILE:HA	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:125:PHE:HB3	30:RG:166:ASP:HB2	1.95	0.48
31:RH:119:GLU:CD	31:RH:120:GLY:H	2.22	0.48
31:RH:123:PHE:O	31:RH:125:VAL:HG23	2.13	0.48
35:RP:35:HIS:O	35:RP:36:LYS:O	2.31	0.48
35:RP:52:GLU:OE2	35:RP:57:THR:HA	2.13	0.48
38:RS:33:LYS:HB3	38:RS:34:HIS:CD2	2.48	0.48
38:RS:59:LYS:HG2	38:RS:60:GLY:N	2.13	0.48
46:R0:56:ASP:OD2	46:R0:58:THR:N	2.43	0.48
48:R2:69:ARG:HH11	48:R2:69:ARG:HB3	1.78	0.48
50:R4:42:PHE:CD1	50:R4:42:PHE:C	2.90	0.48
53:R7:12:ARG:HG3	53:R7:12:ARG:HH11	1.78	0.48
1:XA:1226:C:N4	13:XM:104:ARG:HD2	2.27	0.48
1:XA:1321:C:C5'	1:XA:1322:C:H5''	2.43	0.48
1:XA:1348:U:C5	1:XA:1349:A:N7	2.81	0.48
2:XB:5:ILE:HG21	2:XB:224:GLN:HG2	1.95	0.48
2:XB:16:HIS:HB3	2:XB:210:SER:HB2	1.95	0.48
2:XB:181:PHE:O	2:XB:183:PRO:HD3	2.12	0.48
3:XC:14:ILE:C	3:XC:16:ARG:H	2.21	0.48
10:XJ:56:HIS:O	10:XJ:58:ASP:O	2.30	0.48
10:XJ:98:ILE:H	10:XJ:98:ILE:CD1	2.24	0.48
16:XP:39:TYR:CE2	16:XP:41:PRO:HD3	2.47	0.48
16:XP:43:LYS:HE2	16:XP:48:TRP:CZ3	2.47	0.48
25:YA:301:G:H1'	25:YA:302:C:C6	2.47	0.48
25:YA:696:G:C2	25:YA:697:C:C5	3.02	0.48
25:YA:1322:A:H2'	25:YA:1323:U:H6	1.79	0.48
25:YA:1972:A:H2'	25:YA:1973:G:H8	1.78	0.48
25:YA:2063:C:H5'	25:YA:2063:C:H6	1.77	0.48
25:YA:2263:C:H2'	25:YA:2264:C:H6	1.77	0.48
25:YA:2854:G:H2'	25:YA:2855:C:C6	2.49	0.48
25:YA:2864:G:C2	25:YA:2865:U:C2	3.01	0.48
27:YD:25:THR:O	27:YD:27:THR:HG22	2.12	0.48
28:YE:38:THR:O	28:YE:42:ASP:HB2	2.13	0.48
29:YF:155:LEU:HD23	29:YF:186:ILE:HA	1.95	0.48
31:YH:13:LYS:HE2	31:YH:13:LYS:CA	2.40	0.48
31:YH:23:ARG:HD2	31:YH:34:GLU:OE2	2.12	0.48
31:YH:109:PHE:C	31:YH:111:HIS:H	2.21	0.48
32:YI:133:HIS:HB2	32:YI:134:PRO:CD	2.44	0.48
36:YQ:23:GLY:O	36:YQ:24:GLY:O	2.30	0.48
36:YQ:34:LEU:HD23	36:YQ:104:PHE:HD1	1.77	0.48
37:YR:41:ALA:C	37:YR:43:GLU:N	2.68	0.48
37:YR:52:ILE:CG2	37:YR:94:TYR:CD1	2.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:YU:52:ARG:NH1	40:YU:52:ARG:CG	2.76	0.48
41:YV:18:LEU:HB3	41:YV:96:ILE:CG1	2.43	0.48
52:Y6:27:LYS:O	52:Y6:28:ARG:HG2	2.13	0.48
1:QA:12:U:H2'	1:QA:13:U:H5''	1.94	0.48
1:QA:563:A:N7	1:QA:567:G:H1'	2.28	0.48
1:QA:597:G:N2	8:QH:94:TYR:OH	2.47	0.48
1:QA:627:G:O2'	1:QA:628:G:H5'	2.13	0.48
1:QA:735:C:H2'	1:QA:736:C:C6	2.46	0.48
1:QA:1171:G:H2'	1:QA:1172:C:C6	2.48	0.48
1:QA:1220:G:O3'	19:QS:36:ARG:HD3	2.14	0.48
1:QA:1411:C:H2'	1:QA:1412:C:C6	2.48	0.48
2:QB:15:VAL:H	2:QB:16:HIS:CE1	2.30	0.48
2:QB: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:163:GLU:O	4:QD:165:MET:N	2.46	0.48
4:QD:196:LEU:HB3	4:QD:197:PRO:HD2	1.95	0.48
9:QI:113:LYS:H	9:QI:119:ALA:HA	1.77	0.48
9:QI:118:LYS:NZ	9:QI:118:LYS:CB	2.76	0.48
15:QO:50:HIS:O	15:QO:53:HIS:N	2.47	0.48
17:QQ:63:ARG:HG2	17:QQ:64:PRO:N	2.28	0.48
22:QV:4:G:O2'	22:QV:5:G:H8	1.96	0.48
25:RA:96:G:H4'	48:R2:48:HIS:CD2	2.48	0.48
25:RA:301:G:H1'	25:RA:302:C:C6	2.48	0.48
25:RA:476:G:H4'	25:RA:502:A:N1	2.29	0.48
25:RA:724:U:H2'	25:RA:725:G:O4'	2.14	0.48
25:RA:2607:G:H2'	25:RA:2608:G:O4'	2.14	0.48
26:RB:16:G:H2'	26:RB:17:C:C6	2.49	0.48
28:RE:78:LEU:CD2	28:RE:79:ARG:HD2	2.43	0.48
29:RF:198:ALA:O	29:RF:201:VAL:HG12	2.13	0.48
30:RG:16:ARG:HB3	30:RG:17:PRO:HD3	1.94	0.48
35:RP:112:LEU:HD12	35:RP:127:ALA:CB	2.44	0.48
38:RS:46:VAL:HG12	38:RS:47:THR:N	2.28	0.48
39:RT:105:LEU:C	39:RT:107:ASP:OD1	2.56	0.48
39:RT:132:LYS:O	39:RT:136:GLN:HG3	2.14	0.48
41:RV:35:LEU:HD22	41:RV:57:VAL:O	2.14	0.48
44:RY:57:GLN:O	44:RY:58:GLY:O	2.32	0.48
48:R2:69:ARG:CB	48:R2:69:ARG:HH11	2.25	0.48
50:R4:48:ARG:C	50:R4:49:PHE:HD1	2.22	0.48
54:R8:35:GLN:HA	54:R8:35:GLN:OE1	2.13	0.48
1:XA:28:G:N2	1:XA:555:C:O2	2.46	0.48
1:XA:1130:A:O2'	9:XI:3:GLN:NE2	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1206:G:C4	1:XA:1207:G:C8	3.01	0.48
1:XA:1213:A:N6	1:XA:1215:G:N3	2.60	0.48
2:XB:97:TRP:HZ2	2:XB:102:LEU:HD13	1.78	0.48
2:XB:193:ASP:OD2	2:XB:196:LEU:CG	2.58	0.48
2:XB:206:ASP:HA	2:XB:211:ILE:HD11	1.94	0.48
4:XD:3:ARG:O	4:XD:5:ILE:HG13	2.14	0.48
4:XD:33:MET:CE	4:XD:37:PRO:HA	2.43	0.48
4:XD:114:ARG:HH11	4:XD:114:ARG:CG	2.16	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
9:XI:112:LYS:HD3	9:XI:113:LYS:O	2.13	0.48
9:XI:118:LYS:NZ	9:XI:118:LYS:CB	2.75	0.48
9:XI:128:ARG:NH2	22:XV:35:A:P	2.86	0.48
17:XQ:74:LEU:HD12	17:XQ:75:ARG:NE	2.28	0.48
20:XT:37:SER:HB3	20:XT:84:LEU:CD2	2.43	0.48
22:XV:4:G:O2'	22:XV:5:G:H8	1.96	0.48
24:XY:40:G:O2'	24:XY:41:A:H5'	2.13	0.48
25:YA:242:G:N2	25:YA:255:A:OP2	2.37	0.48
25:YA:333:G:H5''	25:YA:334:C:OP2	2.13	0.48
25:YA:612:G:C2	25:YA:617:G:C6	3.01	0.48
25:YA:910:A:C5	36:YQ:13:GLN:HG3	2.49	0.48
25:YA:1301:A:O2'	25:YA:1302:A:H3'	2.13	0.48
25:YA:2182:G:H2'	25:YA:2183:C:C6	2.48	0.48
25:YA:2504:U:O5'	25:YA:2504:U:H6	1.96	0.48
27:YD:45:ASN:CG	27:YD:46:GLN:N	2.68	0.48
28:YE:69:LYS:C	28:YE:71:GLY:N	2.71	0.48
29:YF:107:LYS:O	29:YF:110:LEU:N	2.47	0.48
31:YH:137:ASP:CB	31:YH:140:LYS:HB2	2.43	0.48
32:YI:79:ILE:HG22	32:YI:81:VAL:HG22	1.94	0.48
33:YN:30:ILE:O	33:YN:34:LEU:HD23	2.13	0.48
39:YT:58:ASN:HD22	39:YT:58:ASN:N	2.10	0.48
47:Y1:73:LEU:C	47:Y1:75:GLU:N	2.70	0.48
51:Y5:48:GLU:HA	51:Y5:59:GLU:HG2	1.94	0.48
1:QA:707:C:H5''	11:QK:85:ARG:NH1	2.28	0.48
1:QA:1258:G:C6	1:QA:1259:C:N4	2.81	0.48
2:QB:7:VAL:CG2	2:QB:8:LYS:HD3	2.43	0.48
2:QB:154:LEU:O	2:QB:155:LEU:HB2	2.13	0.48
4:QD:118:ARG:NH2	4:QD:136:PRO:HB2	2.28	0.48
5:QE:78:HIS:NE2	8:QH:104:ARG:NE	2.62	0.48
10:QJ:3:LYS:O	10:QJ:100:THR:HA	2.14	0.48
13:QM:3:ARG:HA	13:QM:9:ILE:HG12	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:73:GLU:O	13:QM:76:ALA:HB3	2.13	0.48
25:RA:1163:G:C2	25:RA:1164:G:C8	3.02	0.48
25:RA:1954:G:H21	25:RA:1956:U:H3	1.62	0.48
25:RA:2320:A:C8	25:RA:2333:A:N6	2.81	0.48
25:RA:2524:G:H2'	25:RA:2525:G:O4'	2.13	0.48
26:RB:42:C:O2	30:RG:93:THR:N	2.30	0.48
27:RD:35:LYS:HD2	27:RD:104:TYR:CE1	2.49	0.48
29:RF:144:LYS:C	29:RF:146:ALA:H	2.20	0.48
31:RH:104:GLU:HG3	31:RH:114:VAL:HG22	1.96	0.48
31:RH:109:PHE:C	31:RH:111:HIS:H	2.22	0.48
32:RI:29:TYR:O	32:RI:32:PRO:HD2	2.12	0.48
36:RQ:34:LEU:HD23	36:RQ:104:PHE:HD1	1.77	0.48
37:RR:42:LYS:HA	37:RR:45:ARG:HD2	1.96	0.48
41:RV:6:LYS:HD3	41:RV:11:GLN:HG2	1.96	0.48
43:RX:35:THR:O	43:RX:37:THR:N	2.47	0.48
45:RZ:150:LEU:HD23	45:RZ:171:ILE:CG1	2.43	0.48
47:R1:92:LYS:O	47:R1:93:GLU:C	2.56	0.48
1:XA:321:A:N7	1:XA:328:C:O2	2.46	0.48
1:XA:613:C:O2	1:XA:627:G:N2	2.34	0.48
1:XA:1517:G:H1'	25:YA:1919:A:O3'	2.14	0.48
2:XB:42:ILE:HD11	2:XB:202:PRO:HB2	1.95	0.48
2:XB:164:VAL:HB	2:XB:186:ALA:HB1	1.96	0.48
5:XE:11:ILE:CG1	5:XE:31:LEU:HD12	2.42	0.48
7:XG:60:LYS:O	7:XG:61:VAL:C	2.56	0.48
7:XG:107:ALA:CB	7:XG:134:ALA:HB2	2.44	0.48
8:XH:86:ILE:HG13	8:XH:133:LEU:CD2	2.44	0.48
9:XI:18:PHE:O	9:XI:61:ALA:HA	2.13	0.48
12:XL:27:LEU:C	12:XL:29:GLY:H	2.20	0.48
16:XP:69:THR:O	16:XP:73:LEU:HG	2.14	0.48
17:XQ:67:LYS:HA	17:XQ:70:ARG:HH12	1.77	0.48
20:XT:44:ALA:C	20:XT:91:LEU:HB3	2.39	0.48
25:YA:270(R):G:H2'	25:YA:270(S):G:C8	2.48	0.48
25:YA:301:G:C4	25:YA:302:C:C5	3.01	0.48
25:YA:653:A:O2'	25:YA:654:A:OP1	2.25	0.48
25:YA:836:G:C6	25:YA:837:C:C4	3.01	0.48
25:YA:1024:G:C6	25:YA:1025:G:C6	3.01	0.48
25:YA:1419:A:N7	25:YA:1421:G:C6	2.81	0.48
25:YA:1658:C:H2'	25:YA:1659:U:H6	1.79	0.48
25:YA:1682:G:C6	25:YA:1683:C:C4	3.02	0.48
25:YA:2733:A:C2	25:YA:2734:A:H1'	2.49	0.48
27:YD:10:THR:O	27:YD:11:PRO:C	2.56	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:198:ASN:C	27:YD:198:ASN:ND2	2.69	0.48
29:YF:128:ALA:O	29:YF:129:PHE:HB2	2.13	0.48
31:YH:12:PRO:HD3	31:YH:48:GLY:O	2.13	0.48
31:YH:82:GLY:O	31:YH:83:TYR:O	2.31	0.48
32:YI:57:ARG:HA	32:YI:60:GLU:HB3	1.96	0.48
32:YI:99:GLU:HG2	32:YI:103:ARG:HH21	1.79	0.48
35:YP:6:LEU:N	35:YP:6:LEU:CD2	2.75	0.48
35:YP:71:VAL:HG13	35:YP:72:PRO:CD	2.43	0.48
39:YT:16:ARG:HD3	39:YT:19:LEU:CG	2.43	0.48
41:YV:7:THR:HG23	41:YV:22:VAL:HG11	1.94	0.48
44:YY:35:TYR:CD1	44:YY:69:ALA:HB3	2.48	0.48
46:Y0:14:ARG:HE	46:Y0:14:ARG:HB2	1.45	0.48
51:Y5:52:TYR:O	51:Y5:53:ALA:CB	2.61	0.48
1:QA:18:C:C5'	5:QE:127:ASN:HD21	2.21	0.48
1:QA:281:G:H8	1:QA:281:G:OP2	1.96	0.48
1:QA:559:A:C5'	1:QA:560:U:H3'	2.44	0.48
1:QA:729:A:N1	1:QA:764:C:O2'	2.44	0.48
1:QA:814:A:N7	1:QA:816:A:C4	2.82	0.48
1:QA:939:G:H5''	7:QG:102:ARG:HH12	1.79	0.48
1:QA:940:C:H2'	1:QA:941:G:H8	1.77	0.48
1:QA:1120:G:H2'	1:QA:1121:U:C6	2.49	0.48
1:QA:1356:G:H2'	1:QA:1357:A:C8	2.49	0.48
1:QA:1511:G:C6	1:QA:1512:U:N3	2.82	0.48
2:QB:200:ILE:H	2:QB:200:ILE:HD12	1.79	0.48
5:QE:62:ALA:C	5:QE:64:ARG:H	2.21	0.48
5:QE:87:SER:HB3	5:QE:131:ILE:HD13	1.95	0.48
8:QH:6:ILE:O	8:QH:10:LEU:HG	2.14	0.48
11:QK:34:ASP:HB2	11:QK:35:PRO:HD2	1.95	0.48
13:QM:69:GLU:O	13:QM:70:LEU:C	2.56	0.48
16:QP:71:ARG:HH11	16:QP:71:ARG:HB2	1.79	0.48
19:QS:24:ALA:O	19:QS:25:LYS:HB2	2.13	0.48
19:QS:27:GLU:O	19:QS:28:LYS:CG	2.53	0.48
19:QS:36:ARG:HB3	19:QS:36:ARG:NH1	2.28	0.48
25:RA:71:A:H5'	25:RA:72:U:H2'	1.95	0.48
25:RA:103:A:OP2	25:RA:103:A:H8	1.96	0.48
25:RA:327:G:N2	44:RY:70:SER:OG	2.46	0.48
25:RA:449:A:O2'	25:RA:450:G:H5'	2.14	0.48
25:RA:624:C:O2	25:RA:657:U:H4'	2.14	0.48
25:RA:628:G:H4'	25:RA:651:G:O2'	2.14	0.48
25:RA:1322:A:C5	25:RA:1323:U:C5	3.01	0.48
25:RA:1433:U:H5''	25:RA:1433:U:C6	2.44	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1534:G:N1	25:RA:1538:G:N2	2.61	0.48
25:RA:1790:C:H5''	25:RA:1791:A:OP1	2.13	0.48
25:RA:1792:G:H2'	25:RA:1793:C:H6	1.77	0.48
25:RA:2143:C:H2'	25:RA:2144:U:O4'	2.14	0.48
25:RA:2417:C:H2'	25:RA:2418:A:H8	1.78	0.48
25:RA:2877:G:O2'	25:RA:2878:U:H5'	2.14	0.48
27:RD:48:ARG:HG3	27:RD:48:ARG:HH11	1.78	0.48
28:RE:93:VAL:H	28:RE:95:ILE:CD1	2.23	0.48
29:RF:107:LYS:O	29:RF:110:LEU:N	2.47	0.48
30:RG:136:ARG:O	30:RG:154:GLY:CA	2.62	0.48
31:RH:7:LEU:N	31:RH:8:PRO:CD	2.77	0.48
33:RN:34:LEU:O	33:RN:49:GLY:HA3	2.13	0.48
34:RO:1:MET:HE3	34:RO:67:LYS:HG2	1.95	0.48
35:RP:144:GLU:OE1	35:RP:144:GLU:O	2.31	0.48
43:RX:14:SER:O	43:RX:15:GLU:C	2.57	0.48
46:R0:68:GLU:OE1	46:R0:82:ARG:NH1	2.47	0.48
47:R1:56:GLN:NE2	47:R1:56:GLN:H	2.10	0.48
52:R6:14:THR:OG1	52:R6:19:ARG:NE	2.40	0.48
54:R8:56:GLU:O	54:R8:58:ILE:N	2.47	0.48
1:XA:17:U:H1'	1:XA:1080:A:H1'	1.95	0.48
1:XA:574:A:N3	1:XA:883:C:H1'	2.28	0.48
1:XA:827:U:C5	1:XA:870:U:C4	3.01	0.48
1:XA:939:G:H2'	1:XA:940:C:C6	2.48	0.48
1:XA:1333:A:H2'	1:XA:1334:G:O4'	2.13	0.48
2:XB:180:LEU:O	2:XB:181:PHE:HB2	2.13	0.48
3:XC:153:VAL:HA	3:XC:197:GLY:O	2.14	0.48
4:XD:180:GLY:O	4:XD:181:MET:C	2.55	0.48
4:XD:196:LEU:HB3	4:XD:197:PRO:HD2	1.96	0.48
5:XE:87:SER:HB3	5:XE:131:ILE:HD13	1.95	0.48
5:XE:100:VAL:O	5:XE:107:ARG:NH2	2.47	0.48
9:XI:7:THR:O	9:XI:83:ARG:HD2	2.14	0.48
10:XJ:49:VAL:CG1	10:XJ:50:ILE:N	2.76	0.48
10:XJ:94:VAL:CG1	10:XJ:95:GLU:N	2.76	0.48
15:XO:24:SER:OG	15:XO:25:THR:N	2.47	0.48
25:YA:198:C:O2'	25:YA:199:A:H5'	2.13	0.48
25:YA:210:C:H2'	25:YA:211:A:C8	2.49	0.48
25:YA:288:C:H2'	25:YA:289:A:H8	1.79	0.48
25:YA:301:G:C6	25:YA:317:G:C6	3.02	0.48
25:YA:890:A:HO2'	25:YA:892:G:H8	1.58	0.48
25:YA:921:G:H4'	25:YA:2269:A:C5	2.49	0.48
25:YA:960:A:C8	25:YA:962:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1055:G:O2'	25:YA:1085:A:C6	2.62	0.48
25:YA:1607:C:N4	25:YA:1621:U:H2'	2.28	0.48
25:YA:2259:G:C2	25:YA:2282:G:N1	2.81	0.48
25:YA:2432:A:H5''	25:YA:2433:A:OP2	2.14	0.48
25:YA:2477:C:H2'	55:Y9:1:MET:CG	2.42	0.48
25:YA:2494:G:O2'	25:YA:2495:G:H5'	2.14	0.48
25:YA:2505:G:O2'	25:YA:2506:U:H5'	2.14	0.48
25:YA:2756:U:H4'	25:YA:2757:A:OP1	2.12	0.48
26:YB:9:G:C6	26:YB:10:C:C4	3.01	0.48
28:YE:174:ASP:O	28:YE:182:LEU:HD12	2.14	0.48
29:YF:198:ALA:O	29:YF:201:VAL:HG12	2.13	0.48
31:YH:53:GLU:CD	31:YH:54:ARG:H	2.21	0.48
31:YH:120:GLY:HA3	31:YH:140:LYS:NZ	2.27	0.48
33:YN:87:LEU:C	33:YN:87:LEU:CD2	2.87	0.48
36:YQ:31:ASP:O	36:YQ:32:TYR:CG	2.66	0.48
36:YQ:79:LEU:HD12	46:Y0:5:LYS:HD3	1.95	0.48
38:YS:18:ILE:O	38:YS:19:LYS:O	2.31	0.48
42:YW:34:ASN:O	42:YW:35:ILE:C	2.55	0.48
43:YX:35:THR:O	43:YX:36:LYS:C	2.55	0.48
47:Y1:56:GLN:NE2	47:Y1:56:GLN:H	2.10	0.48
48:Y2:33:MET:O	48:Y2:37:PHE:HD1	1.95	0.48
52:Y6:41:PRO:HD2	52:Y6:46:HIS:H	1.77	0.48
1:QA:192:U:H2'	1:QA:193:C:H6	1.79	0.48
1:QA:1064:G:HO2'	1:QA:1065:U:P	2.35	0.48
1:QA:1234:C:H4'	1:QA:1364:U:H1'	1.96	0.48
1:QA:1498:U:O5'	1:QA:1498:U:H6	1.96	0.48
2:QB:16:HIS:HD2	2:QB:210:SER:HA	1.77	0.48
3:QC:71:ALA:HA	3:QC:106:VAL:HB	1.95	0.48
4:QD:165:MET:CE	4:QD:168:ARG:HD2	2.44	0.48
7:QG:60:LYS:O	7:QG:61:VAL:C	2.57	0.48
7:QG:78:ARG:HG3	7:QG:78:ARG:HH11	1.79	0.48
9:QI:17:VAL:HG11	9:QI:81:ILE:HA	1.96	0.48
12:QL:27:LEU:C	12:QL:29:GLY:H	2.20	0.48
12:QL:52:LEU:O	12:QL:54:LYS:NZ	2.30	0.48
12:QL:127:GLU:O	12:QL:128:ALA:CB	2.62	0.48
25:RA:57:C:H2'	25:RA:58:G:O4'	2.14	0.48
25:RA:418:G:O2'	25:RA:419:C:H5'	2.13	0.48
25:RA:1077:A:H3'	25:RA:1077:A:N3	2.28	0.48
25:RA:1373:A:N6	25:RA:1374:G:C2	2.82	0.48
25:RA:1478:G:C2	25:RA:1479:G:C8	3.01	0.48
25:RA:1654:A:OP2	37:RR:2:ARG:HD2	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2712:U:HO2'	25:RA:2712(A):A:H8	1.61	0.48
25:RA:2867:G:HO2'	25:RA:2868:A:H8	1.60	0.48
26:RB:5:C:H2'	26:RB:6:C:H6	1.78	0.48
26:RB:113:C:H2'	26:RB:114:G:C8	2.47	0.48
29:RF:155:LEU:HA	29:RF:174:VAL:HG12	1.95	0.48
30:RG:3:LEU:HD21	50:R4:25:TYR:CE1	2.48	0.48
32:RI:52:ARG:NH1	32:RI:52:ARG:HB3	2.29	0.48
36:RQ:87:LYS:O	36:RQ:89:ASN:N	2.43	0.48
39:RT:135:ALA:C	39:RT:137:LYS:N	2.71	0.48
44:RY:44:ILE:O	44:RY:62:GLU:O	2.32	0.48
52:R6:27:LYS:O	52:R6:28:ARG:HG2	2.13	0.48
54:R8:41:ILE:HG13	54:R8:42:ARG:N	2.28	0.48
1:XA:14:U:H2'	1:XA:16:A:OP2	2.13	0.48
1:XA:585:G:O2'	1:XA:879:C:H5''	2.14	0.48
2:XB:212:GLN:CD	2:XB:212:GLN:C	2.82	0.48
3:XC:148:GLY:O	3:XC:202:ILE:HA	2.14	0.48
3:XC:195:VAL:CG1	3:XC:196:LEU:H	2.27	0.48
4:XD:22:LYS:HD3	4:XD:26:CYS:SG	2.49	0.48
4:XD:154:ASN:O	4:XD:155:LEU:O	2.32	0.48
5:XE:78:HIS:CE1	5:XE:142:LEU:HD23	2.48	0.48
5:XE:84:PHE:HD2	5:XE:130:ASN:O	1.97	0.48
5:XE:96:PRO:HA	5:XE:117:ASP:OD2	2.14	0.48
7:XG:79:ARG:O	7:XG:80:VAL:HG23	2.14	0.48
8:XH:82:HIS:CD2	8:XH:82:HIS:C	2.90	0.48
10:XJ:47:PHE:CE1	10:XJ:63:PHE:HB2	2.32	0.48
12:XL:22:SER:C	12:XL:24:VAL:H	2.22	0.48
16:XP:25:ARG:HG3	16:XP:25:ARG:HH11	1.79	0.48
19:XS:43:GLU:OE2	19:XS:43:GLU:N	2.45	0.48
25:YA:823:G:H2'	25:YA:824:A:H8	1.79	0.48
25:YA:839:U:H2'	25:YA:840:C:H6	1.79	0.48
25:YA:1004:C:O5'	25:YA:1004:C:H6	1.97	0.48
25:YA:1204:A:C2	25:YA:1241:A:N1	2.79	0.48
25:YA:1728:G:H3'	25:YA:1729:A:C5'	2.43	0.48
25:YA:1815:A:OP2	27:YD:54:ARG:NH2	2.47	0.48
25:YA:1826:G:O2'	27:YD:242:ARG:NH2	2.46	0.48
25:YA:2100:G:C4	25:YA:2190:G:C2	3.02	0.48
25:YA:2208:U:O2'	25:YA:2209:C:H5'	2.12	0.48
25:YA:2266:A:H4'	25:YA:2267:A:N3	2.28	0.48
25:YA:2758:A:C4	31:YH:67:LEU:HD21	2.48	0.48
25:YA:2790:A:H2'	25:YA:2791:C:H5''	1.95	0.48
26:YB:30:C:H2'	26:YB:31:C:O4'	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:35:LYS:HD2	27:YD:104:TYR:CE1	2.49	0.48
28:YE:23:VAL:HG12	28:YE:173:VAL:HG21	1.94	0.48
28:YE:77:ILE:CD1	28:YE:78:LEU:N	2.70	0.48
29:YF:45:ARG:NH1	29:YF:45:ARG:HG2	2.28	0.48
30:YG:125:PHE:HB3	30:YG:166:ASP:HB2	1.95	0.48
31:YH:7:LEU:N	31:YH:8:PRO:CD	2.77	0.48
31:YH:124:GLU:HB3	31:YH:132:ARG:CD	2.44	0.48
35:YP:35:HIS:O	35:YP:36:LYS:O	2.31	0.48
36:YQ:19:GLY:O	36:YQ:98:LYS:HD3	2.14	0.48
39:YT:96:ARG:NH1	39:YT:96:ARG:CB	2.77	0.48
44:YY:11:ASP:HB2	44:YY:27:VAL:HG11	1.94	0.48
48:Y2:27:GLU:H	48:Y2:27:GLU:CD	2.17	0.48
48:Y2:69:ARG:HH11	48:Y2:69:ARG:HB3	1.79	0.48
50:Y4:42:PHE:O	50:Y4:44:THR:O	2.31	0.48
53:Y7:12:ARG:HG3	53:Y7:12:ARG:HH11	1.78	0.48
1:QA:335:C:H2'	1:QA:336:C:C6	2.49	0.48
1:QA:527:G:O2'	1:QA:535:A:N1	2.41	0.48
1:QA:1112:C:O2	3:QC:179:ARG:HG2	2.13	0.48
1:QA:1298:C:C6	7:QG:114:ARG:NH1	2.82	0.48
2:QB:87:ARG:NH1	2:QB:220:ASP:OD1	2.46	0.48
2:QB:206:ASP:HA	2:QB:211:ILE:HD11	1.94	0.48
3:QC:14:ILE:C	3:QC:16:ARG:H	2.21	0.48
4:QD:25:ARG:C	4:QD:27:TYR:H	2.21	0.48
4:QD:100:ARG:CZ	4:QD:137:SER:HA	2.44	0.48
5:QE:75:THR:HG23	5:QE:76:ILE:O	2.14	0.48
7:QG:79:ARG:O	7:QG:80:VAL:HG23	2.14	0.48
7:QG:80:VAL:HG12	7:QG:81:GLY:N	2.28	0.48
8:QH:45:ILE:O	8:QH:45:ILE:HG13	2.13	0.48
8:QH:109:ILE:HG12	8:QH:110:ALA:N	2.28	0.48
11:QK:20:TYR:C	11:QK:21:ILE:HD12	2.38	0.48
16:QP:57:ARG:HG3	16:QP:57:ARG:HH11	1.79	0.48
16:QP:60:LEU:CA	16:QP:64:ALA:HB3	2.43	0.48
19:QS:9:VAL:O	19:QS:10:PHE:HB3	2.13	0.48
21:QU:9:ARG:HH11	21:QU:9:ARG:HG2	1.78	0.48
25:RA:719:C:O2'	25:RA:720:C:H5'	2.14	0.48
25:RA:807:U:C2	25:RA:808:G:C8	3.01	0.48
25:RA:2115:G:N1	25:RA:2164:C:OP2	2.47	0.48
25:RA:2291:U:OP1	25:RA:2380:C:O2'	2.26	0.48
25:RA:2553:G:N2	56:Z6:76:PPU:C2	2.76	0.48
26:RB:11:C:H5''	26:RB:12:C:OP2	2.14	0.48
26:RB:56:G:P	30:RG:27:ASN:ND2	2.87	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:77:ILE:CD1	28:RE:78:LEU:N	2.70	0.48
31:RH:131:VAL:HG12	31:RH:132:ARG:N	2.29	0.48
33:RN:103:VAL:O	33:RN:104:LYS:C	2.57	0.48
35:RP:138:LEU:HD11	35:RP:144:GLU:CG	2.42	0.48
36:RQ:19:GLY:O	36:RQ:98:LYS:HD3	2.14	0.48
37:RR:61:HIS:O	37:RR:65:LEU:HD13	2.14	0.48
39:RT:57:PHE:O	39:RT:59:THR:N	2.46	0.48
45:RZ:9:TYR:HE2	45:RZ:61:LEU:HD13	1.79	0.48
51:R5:49:CYS:SG	51:R5:58:LEU:HB2	2.53	0.48
55:R9:1:MET:HE2	55:R9:10:ILE:HD13	1.95	0.48
1:XA:456:C:H2'	1:XA:457:C:C6	2.47	0.48
1:XA:767:A:H2'	1:XA:768:A:O4'	2.12	0.48
1:XA:975:A:N6	1:XA:1367:C:O4'	2.46	0.48
1:XA:1031:G:H8	1:XA:1031:G:OP2	1.97	0.48
1:XA:1521:G:H2'	1:XA:1522:U:C6	2.49	0.48
2:XB:5:ILE:O	2:XB:6:THR:O	2.32	0.48
2:XB:214:ILE:O	2:XB:218:ALA:HB2	2.13	0.48
3:XC:71:ALA:HA	3:XC:106:VAL:HB	1.95	0.48
4:XD:6:GLY:O	4:XD:8:VAL:HG23	2.14	0.48
4:XD:198:VAL:CG1	4:XD:199:ASN:N	2.75	0.48
5:XE:36:ASP:C	5:XE:37:ARG:HG2	2.38	0.48
5:XE:60:TYR:CE1	5:XE:64:ARG:NH2	2.77	0.48
8:XH:10:LEU:H	8:XH:10:LEU:CD2	2.15	0.48
8:XH:44:PHE:CD1	8:XH:80:ILE:HG12	2.49	0.48
9:XI:59:PHE:CZ	9:XI:88:TYR:CE1	3.01	0.48
11:XK:19:ALA:CB	11:XK:32:ILE:HG22	2.42	0.48
11:XK:82:VAL:O	11:XK:108:ILE:HA	2.13	0.48
12:XL:38:THR:CG2	12:XL:57:LYS:HB3	2.44	0.48
13:XM:50:GLU:O	13:XM:54:VAL:HG23	2.13	0.48
20:XT:101:GLY:C	20:XT:103:GLY:H	2.22	0.48
25:YA:195:A:H5''	35:YP:46:LYS:HZ1	1.79	0.48
25:YA:281:G:O2'	25:YA:282:A:O4'	2.25	0.48
25:YA:761:A:H8	25:YA:761:A:O5'	1.97	0.48
25:YA:888:C:C3'	25:YA:889:C:H4'	2.44	0.48
25:YA:1301:A:C2	25:YA:1303:G:C6	3.02	0.48
25:YA:2040:C:H2'	25:YA:2041:U:O4'	2.14	0.48
25:YA:2063:C:C4	25:YA:2064:C:C4	3.01	0.48
25:YA:2363:C:O2'	46:Y0:39:ARG:NH1	2.42	0.48
25:YA:2583:G:C6	25:YA:2584:U:C5	3.01	0.48
25:YA:2795:G:H3'	25:YA:2797:U:H5'	1.96	0.48
25:YA:2838:G:C4	25:YA:2839:G:C8	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:35:LYS:CG	27:YD:64:ILE:CG2	2.92	0.48
28:YE:55:ASN:O	28:YE:57:LYS:N	2.44	0.48
29:YF:34:TRP:HD1	35:YP:6:LEU:HB3	1.79	0.48
29:YF:129:PHE:CD2	29:YF:163:VAL:HG21	2.48	0.48
31:YH:119:GLU:CD	31:YH:120:GLY:H	2.22	0.48
33:YN:103:VAL:O	33:YN:104:LYS:C	2.56	0.48
37:YR:42:LYS:HA	37:YR:45:ARG:HD2	1.95	0.48
37:YR:48:VAL:O	37:YR:49:ASP:C	2.57	0.48
39:YT:16:ARG:NE	39:YT:19:LEU:HD21	2.27	0.48
39:YT:94:ALA:O	39:YT:95:ARG:CB	2.61	0.48
39:YT:105:LEU:C	39:YT:107:ASP:OD1	2.56	0.48
43:YX:44:GLU:OE1	43:YX:50:LYS:HD2	2.13	0.48
47:Y1:8:SER:OG	47:Y1:10:LYS:HG3	2.13	0.48
47:Y1:76:ARG:HD2	47:Y1:76:ARG:N	2.29	0.48
50:Y4:10:VAL:CG2	50:Y4:11:PRO:HD2	2.43	0.48
1:QA:74:C:H42	1:QA:96:G:H1	1.60	0.48
1:QA:103:C:P	20:QT:17:ARG:HH21	2.36	0.48
1:QA:115:G:C2	1:QA:289:G:N7	2.82	0.48
1:QA:190:G:O2'	1:QA:191(A):G:P	2.72	0.48
1:QA:615:C:C2	1:QA:616:G:C8	3.02	0.48
1:QA:953:G:H2'	1:QA:954:G:O4'	2.14	0.48
1:QA:953:G:C5'	1:QA:965:A:H61	2.26	0.48
1:QA:1190:G:OP1	3:QC:5:ILE:HG23	2.14	0.48
1:QA:1199:U:H5''	1:QA:1200:C:OP2	2.14	0.48
2:QB:97:TRP:HZ2	2:QB:102:LEU:HD13	1.78	0.48
2:QB:109:SER:C	2:QB:111:ARG:H	2.21	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
11:QK:19:ALA:CA	11:QK:32:ILE:HG22	2.43	0.48
11:QK:41:THR:HG22	11:QK:42:TRP:N	2.28	0.48
11:QK:48:ILE:HG21	11:QK:63:LEU:HD13	1.96	0.48
19:QS:11:VAL:O	19:QS:12:ASP:CB	2.61	0.48
24:QY:40:G:O2'	24:QY:41:A:H5'	2.13	0.48
25:RA:135:G:C2	25:RA:136:G:C8	3.02	0.48
25:RA:804:A:H2'	25:RA:806:C:C4	2.49	0.48
25:RA:836:G:H2'	25:RA:837:C:C6	2.48	0.48
25:RA:845:G:O2'	25:RA:846:C:H5	1.97	0.48
25:RA:857:C:H4'	46:R0:23:VAL:HG21	1.95	0.48
25:RA:934:G:H2'	25:RA:935:C:C6	2.49	0.48
25:RA:1259:G:H2'	25:RA:1260:G:C8	2.49	0.48
25:RA:1946:U:H2'	25:RA:1947:C:H6	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2351:G:O6	54:R8:39:LYS:HG2	2.14	0.48
27:RD:130:ALA:HA	27:RD:192:THR:HA	1.96	0.48
32:RI:3:VAL:HG12	32:RI:38:LEU:HA	1.95	0.48
33:RN:57:ALA:O	33:RN:58:ASP:CB	2.61	0.48
33:RN:82:LEU:HD12	33:RN:83:LYS:N	2.27	0.48
33:RN:96:GLU:O	33:RN:97:ARG:C	2.57	0.48
35:RP:71:VAL:HG13	35:RP:72:PRO:CD	2.44	0.48
35:RP:75:ILE:H	35:RP:75:ILE:CD1	2.14	0.48
37:RR:63:ARG:NH1	37:RR:63:ARG:HG3	2.29	0.48
45:RZ:103:ARG:HD3	45:RZ:136:PHE:CD1	2.49	0.48
50:R4:60:GLN:O	50:R4:63:TYR:HB3	2.14	0.48
54:R8:40:GLU:O	54:R8:41:ILE:C	2.56	0.48
1:XA:131:C:H2'	1:XA:132:C:C6	2.48	0.48
1:XA:254:G:OP1	17:XQ:67:LYS:O	2.31	0.48
1:XA:683:G:C6	1:XA:684:A:C5	3.01	0.48
1:XA:889:A:C8	1:XA:891:U:C2	3.02	0.48
1:XA:936:C:H2'	1:XA:937:A:O4'	2.13	0.48
1:XA:1044:A:C6	1:XA:1045:C:H1'	2.49	0.48
1:XA:1234:C:H1'	1:XA:1364:U:O2	2.13	0.48
1:XA:1357:A:C6	1:XA:1358:U:C4	3.02	0.48
1:XA:1387:G:C6	1:XA:1388:C:N4	2.82	0.48
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.48	0.48
2:XB:24:TRP:CD1	2:XB:26:PRO:HD3	2.49	0.48
3:XC:36:ASP:HA	3:XC:39:ILE:HD12	1.94	0.48
4:XD:60:GLU:O	4:XD:63:LYS:HB3	2.14	0.48
5:XE:75:THR:HG23	5:XE:76:ILE:O	2.14	0.48
11:XK:20:TYR:C	11:XK:21:ILE:HD12	2.38	0.48
12:XL:61:THR:O	12:XL:63:GLY:N	2.45	0.48
13:XM:72:ALA:O	13:XM:76:ALA:HB2	2.14	0.48
16:XP:34:GLU:HG2	16:XP:35:LYS:N	2.29	0.48
19:XS:41:VAL:CB	19:XS:42:PRO:CA	2.76	0.48
20:XT:30:LYS:O	20:XT:33:ILE:HG12	2.14	0.48
25:YA:1899:G:H21	25:YA:1902:C:H5	1.61	0.48
25:YA:2088:G:C6	25:YA:2089:U:C4	3.01	0.48
25:YA:2420:C:OP1	54:Y8:34:TRP:HB2	2.14	0.48
26:YB:94:C:H2'	26:YB:95:U:H6	1.79	0.48
31:YH:45:VAL:O	31:YH:45:VAL:HG13	2.14	0.48
33:YN:118:LYS:C	33:YN:120:LEU:H	2.20	0.48
33:YN:120:LEU:HD11	33:YN:122:VAL:CG2	2.42	0.48
36:YQ:42:ILE:HD12	36:YQ:42:ILE:N	2.29	0.48
38:YS:66:ALA:HA	38:YS:69:VAL:HG12	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:11:PRO:HB3	43:YX:92:LEU:CD2	2.43	0.48
45:YZ:134:PRO:HB3	45:YZ:137:ILE:HD11	1.96	0.48
52:Y6:8:LYS:O	52:Y6:27:LYS:HA	2.13	0.48
54:Y8:53:PRO:CD	54:Y8:54:GLU:N	2.77	0.48
1:QA:49:U:C2	1:QA:361:G:N2	2.82	0.48
1:QA:245:C:C2	1:QA:284:G:C2	3.02	0.48
1:QA:678:U:H2'	1:QA:679:C:C6	2.48	0.48
1:QA:1252:A:H2'	1:QA:1253:G:O4'	2.14	0.48
2:QB:24:TRP:CD1	2:QB:26:PRO:HD3	2.49	0.48
3:QC:153:VAL:HA	3:QC:197:GLY:O	2.13	0.48
5:QE:84:PHE:HD2	5:QE:130:ASN:O	1.97	0.48
5:QE:141:GLN:HA	5:QE:143:ARG:HH12	1.79	0.48
7:QG:97:GLN:O	7:QG:101:LEU:HG	2.14	0.48
13:QM:90:LEU:HA	13:QM:93:ARG:CD	2.33	0.48
14:QN:12:ARG:C	14:QN:14:PRO:CD	2.81	0.48
14:QN:43:CYS:O	14:QN:46:GLU:N	2.43	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:30:LYS:O	20:QT:33:ILE:HG12	2.14	0.48
20:QT:50:GLU:HA	20:QT:100:ILE:CG2	2.44	0.48
20:QT:64:ASP:O	20:QT:67:ALA:N	2.47	0.48
25:RA:39:C:H2'	25:RA:40:C:H6	1.79	0.48
25:RA:71:A:H4'	25:RA:72:U:C5'	2.42	0.48
25:RA:226:G:O2'	25:RA:228:A:N6	2.47	0.48
25:RA:646:A:H5'	25:RA:646:A:N3	2.29	0.48
25:RA:1007:C:H5''	33:RN:35:ARG:NH1	2.29	0.48
25:RA:1359:A:N6	25:RA:1372:U:H3	2.11	0.48
25:RA:1576:U:O2'	25:RA:1577:C:H5'	2.14	0.48
25:RA:2712:U:O2'	25:RA:2712(A):A:P	2.71	0.48
28:RE:55:ASN:C	28:RE:57:LYS:N	2.62	0.48
28:RE:61:ARG:CB	28:RE:62:PRO:CD	2.90	0.48
28:RE:69:LYS:C	28:RE:71:GLY:N	2.71	0.48
28:RE:203:LYS:HD2	28:RE:203:LYS:C	2.39	0.48
29:RF:34:TRP:HD1	35:RP:6:LEU:HB3	1.79	0.48
29:RF:51:THR:O	29:RF:93:LYS:NZ	2.38	0.48
36:RQ:119:ARG:O	36:RQ:123:HIS:HD2	1.97	0.48
40:RU:79:PHE:HE2	40:RU:83:LEU:CD2	2.27	0.48
1:XA:267:C:H2'	1:XA:268:C:C6	2.48	0.48
1:XA:988:G:N2	1:XA:989:C:H1'	2.28	0.48
1:XA:1074:G:O2'	1:XA:1101:A:N1	2.45	0.48
1:XA:1304:G:N2	1:XA:1332:A:N7	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:33:TYR:C	2:XB:33:TYR:CD1	2.92	0.48
2:XB:178:ARG:HD2	8:XH:71:GLY:C	2.38	0.48
3:XC:12:LEU:C	3:XC:14:ILE:H	2.21	0.48
3:XC:95:THR:CG2	3:XC:96:GLY:H	2.09	0.48
3:XC:101:LEU:HD23	3:XC:101:LEU:C	2.39	0.48
5:XE:72:GLN:C	5:XE:74:GLY:H	2.22	0.48
7:XG:97:GLN:O	7:XG:101:LEU:HG	2.14	0.48
9:XI:95:LYS:HD3	9:XI:95:LYS:C	2.39	0.48
10:XJ:74:ILE:HG12	10:XJ:74:ILE:O	2.14	0.48
11:XK:110:ASP:HB2	18:XR:88:LYS:HD3	1.95	0.48
12:XL:52:LEU:O	12:XL:54:LYS:NZ	2.30	0.48
13:XM:50:GLU:OE1	50:Y4:32:TYR:CE2	2.67	0.48
13:XM:69:GLU:O	13:XM:70:LEU:C	2.56	0.48
19:XS:24:ALA:O	19:XS:25:LYS:HB2	2.13	0.48
20:XT:50:GLU:HA	20:XT:100:ILE:CG2	2.43	0.48
25:YA:478:A:C6	25:YA:480:A:C6	3.01	0.48
25:YA:572:A:C8	25:YA:573:G:C8	3.02	0.48
25:YA:1006:C:H1'	33:YN:106:MET:HE3	1.96	0.48
25:YA:1416:G:N2	25:YA:1417:C:N3	2.62	0.48
25:YA:2009:G:H2'	25:YA:2010:G:H5'	1.96	0.48
25:YA:2396:G:C2	25:YA:2421:G:C2	3.01	0.48
25:YA:2418:A:OP2	54:Y8:29:LYS:HE2	2.13	0.48
25:YA:2494:G:C4	25:YA:2495:G:C8	3.02	0.48
25:YA:2756:U:N3	25:YA:2759:G:O6	2.47	0.48
27:YD:12:SER:C	27:YD:14:ARG:N	2.70	0.48
27:YD:27:THR:O	27:YD:29:PRO:CD	2.62	0.48
27:YD:130:ALA:HA	27:YD:192:THR:HA	1.95	0.48
28:YE:15:PHE:CD1	28:YE:20:ALA:HB2	2.49	0.48
28:YE:61:ARG:CB	28:YE:62:PRO:HD3	2.41	0.48
28:YE:119:ARG:HD3	28:YE:160:TYR:HD2	1.78	0.48
31:YH:41:MET:HG3	31:YH:54:ARG:HA	1.96	0.48
31:YH:127:GLU:HB3	31:YH:128:PRO:HD2	1.92	0.48
33:YN:34:LEU:O	33:YN:49:GLY:HA3	2.13	0.48
36:YQ:60:ARG:NH2	36:YQ:60:ARG:HB2	2.28	0.48
37:YR:1:MET:SD	37:YR:1:MET:N	2.75	0.48
37:YR:63:ARG:NH1	37:YR:63:ARG:HG3	2.29	0.48
40:YU:79:PHE:C	40:YU:79:PHE:HD2	2.18	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:CD2	2.27	0.48
40:YU:79:PHE:HE2	40:YU:83:LEU:HD22	1.78	0.48
41:YV:21:ARG:HD2	41:YV:91:TYR:CZ	2.49	0.48
41:YV:38:LEU:HD23	41:YV:39:LEU:H	1.79	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:YX:6:ASP:OD1	48:Y2:29:LYS:NZ	2.47	0.48
47:Y1:92:LYS:O	47:Y1:93:GLU:C	2.56	0.48
50:Y4:8:LYS:O	50:Y4:9:LEU:CB	2.62	0.48
50:Y4:60:GLN:O	50:Y4:63:TYR:HB3	2.13	0.48
1:QA:96:G:C6	1:QA:97:U:C4	3.02	0.47
1:QA:189:U:O2'	17:QQ:63:ARG:NH2	2.47	0.47
1:QA:243:A:N6	1:QA:281:G:O2'	2.45	0.47
1:QA:563:A:C8	1:QA:567:G:H1'	2.49	0.47
1:QA:570:G:C4	1:QA:571:U:C5	3.02	0.47
1:QA:615:C:H2'	1:QA:616:G:O4'	2.14	0.47
1:QA:978:A:H5'	1:QA:1224:G:O6	2.13	0.47
1:QA:1014:A:C2	1:QA:1219:U:H1'	2.49	0.47
4:QD:153:ARG:CZ	4:QD:181:MET:HG3	2.44	0.47
5:QE:82:VAL:CG1	5:QE:83:GLU:H	2.27	0.47
5:QE:96:PRO:HA	5:QE:117:ASP:OD2	2.14	0.47
8:QH:44:PHE:CD1	8:QH:80:ILE:HG12	2.49	0.47
9:QI:7:THR:O	9:QI:83:ARG:HD2	2.14	0.47
9:QI:22:GLY:HA3	9:QI:60:ASP:OD2	2.13	0.47
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
15:QO:83:GLU:C	15:QO:85:LEU:N	2.71	0.47
16:QP:21:VAL:HG23	16:QP:34:GLU:H	1.79	0.47
16:QP:34:GLU:HG2	16:QP:35:LYS:N	2.29	0.47
20:QT:37:SER:HB3	20:QT:84:LEU:CD2	2.44	0.47
20:QT:44:ALA:C	20:QT:91:LEU:HB3	2.39	0.47
22:QV:19:G:H4'	22:QV:20:U:OP2	2.14	0.47
23:QX:4:C:C3'	23:QX:5:C:H5'	2.41	0.47
25:RA:335:C:H4'	44:RY:73:ARG:CZ	2.44	0.47
25:RA:469:G:O6	53:R7:37:LYS:HE2	2.12	0.47
25:RA:492:A:H2'	25:RA:493:G:O4'	2.13	0.47
25:RA:966:G:H1'	25:RA:2267:A:H62	1.79	0.47
25:RA:1005:C:O2'	33:RN:28:THR:HG21	2.13	0.47
25:RA:1181:C:H2'	25:RA:1182:A:C8	2.49	0.47
25:RA:1628:G:H2'	25:RA:1629:U:H6	1.78	0.47
25:RA:2384:G:H5''	25:RA:2386:C:OP1	2.14	0.47
27:RD:145:VAL:O	27:RD:153:ALA:HA	2.14	0.47
33:RN:87:LEU:C	33:RN:87:LEU:CD2	2.86	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:N	2.77	0.47
36:RQ:42:ILE:HD12	36:RQ:42:ILE:N	2.29	0.47
38:RS:5:THR:HG1	38:RS:7:TYR:HB3	1.78	0.47
38:RS:55:ALA:O	38:RS:56:LEU:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RV:35:LEU:HD21	41:RV:57:VAL:CG2	2.30	0.47
41:RV:35:LEU:O	41:RV:37:VAL:N	2.47	0.47
44:RY:11:ASP:HB2	44:RY:27:VAL:HG11	1.94	0.47
44:RY:56:PRO:O	44:RY:58:GLY:N	2.47	0.47
51:R5:57:VAL:O	51:R5:57:VAL:HG13	2.13	0.47
53:R7:32:LYS:O	53:R7:33:ARG:C	2.56	0.47
1:XA:18:C:H5''	5:XE:127:ASN:ND2	2.29	0.47
1:XA:455:C:O5'	1:XA:455:C:H6	1.97	0.47
1:XA:1274:G:H2'	1:XA:1275:A:H8	1.79	0.47
1:XA:1324:A:C4'	1:XA:1362:C:H4'	2.43	0.47
4:XD:100:ARG:CZ	4:XD:137:SER:HA	2.44	0.47
6:XF:79:LEU:O	6:XF:85:VAL:HG11	2.14	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
14:YN:6:LEU:HD22	14:YN:23:ARG:NH2	2.29	0.47
14:YN:15:LYS:HD2	14:YN:16:PHE:CE2	2.49	0.47
17:XQ:63:ARG:HG2	17:XQ:64:PRO:N	2.28	0.47
21:XU:15:ARG:HG2	21:XU:15:ARG:NH1	2.28	0.47
25:YA:30:G:O2'	25:YA:31:C:H5'	2.14	0.47
25:YA:836:G:C5	25:YA:837:C:C4	3.02	0.47
25:YA:1169:G:N2	25:YA:1181:C:C2	2.82	0.47
25:YA:1389:G:C2	25:YA:1399:C:O2	2.67	0.47
25:YA:1815:A:C5	25:YA:1817:G:C6	3.02	0.47
25:YA:2280:G:H2'	25:YA:2281:C:H5'	1.95	0.47
25:YA:2408:U:O2'	25:YA:2409:G:H5'	2.14	0.47
25:YA:2421:G:H5''	25:YA:2422:A:OP2	2.14	0.47
25:YA:2431:U:H2'	25:YA:2433:A:OP2	2.13	0.47
25:YA:2647:U:H2'	25:YA:2648:C:H6	1.78	0.47
25:YA:2700:C:O2'	25:YA:2701:C:H5'	2.14	0.47
30:YG:111:LEU:HD22	30:YG:120:LEU:HD21	1.96	0.47
33:YN:90:MET:O	33:YN:91:LEU:C	2.57	0.47
35:YP:61:ARG:HH21	54:Y8:13:ARG:HD2	1.78	0.47
37:YR:10:LEU:O	37:YR:12:ARG:HG3	2.13	0.47
37:YR:44:LEU:HD22	37:YR:48:VAL:CG2	2.43	0.47
45:YZ:48:PHE:CZ	45:YZ:52:SER:HA	2.48	0.47
47:Y1:94:LEU:O	47:Y1:95:LEU:CB	2.62	0.47
50:Y4:48:ARG:C	50:Y4:49:PHE:HD1	2.22	0.47
52:Y6:20:ASN:ND2	52:Y6:42:TRP:CZ2	2.82	0.47
53:Y7:32:LYS:O	53:Y7:33:ARG:C	2.55	0.47
1:QA:32:A:H3'	1:QA:33:A:H8	1.78	0.47
1:QA:734:G:H2'	1:QA:735:C:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1066:C:H3'	1:QA:1067:A:C8	2.49	0.47
1:QA:1347:G:N2	1:QA:1373:G:H2'	2.29	0.47
1:QA:1502:A:H2	1:QA:1505:G:N2	2.12	0.47
2:QB:33:TYR:C	2:QB:33:TYR:HD1	2.22	0.47
2:QB:116:GLU:HA	2:QB:119:GLU:HB3	1.96	0.47
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	1.95	0.47
7:QG:51:GLN:HA	7:QG:51:GLN:OE1	2.14	0.47
7:QG:63:LYS:O	7:QG:63:LYS:HD2	2.13	0.47
7:QG:69:VAL:O	7:QG:69:VAL:CG1	2.62	0.47
10:QJ:4:ILE:CB	10:QJ:74:ILE:HD11	2.36	0.47
10:QJ:39:PRO:CB	10:QJ:70:ARG:HH12	2.27	0.47
11:QK:13:GLN:HG3	11:QK:75:TYR:O	2.14	0.47
17:QQ:3:LYS:HD2	17:QQ:60:ILE:HD11	1.95	0.47
25:RA:270(R):G:H2'	25:RA:270(S):G:C8	2.49	0.47
25:RA:301:G:H1	25:RA:316:C:N4	2.12	0.47
25:RA:582:G:H2'	25:RA:583:G:H8	1.78	0.47
25:RA:1050:A:H8	25:RA:2751:G:O2'	1.97	0.47
25:RA:1356:G:C6	25:RA:1357:U:C4	3.02	0.47
25:RA:2544:G:H2'	25:RA:2545:G:C8	2.46	0.47
27:RD:35:LYS:CG	27:RD:64:ILE:CG2	2.92	0.47
28:RE:18:ASP:O	28:RE:19:ARG:C	2.56	0.47
28:RE:120:TRP:O	28:RE:121:ASN:HB2	2.14	0.47
30:RG:12:TYR:O	30:RG:16:ARG:HB3	2.15	0.47
33:RN:4:TYR:OH	33:RN:7:LYS:NZ	2.46	0.47
33:RN:90:MET:O	33:RN:91:LEU:C	2.57	0.47
33:RN:113:GLY:O	33:RN:116:LEU:HB2	2.14	0.47
33:RN:118:LYS:O	33:RN:120:LEU:N	2.43	0.47
34:RO:8:LEU:HB2	34:RO:19:ILE:CD1	2.43	0.47
35:RP:47:ASP:OD1	35:RP:50:ARG:NH2	2.47	0.47
37:RR:48:VAL:O	37:RR:49:ASP:C	2.57	0.47
40:RU:92:ARG:CZ	40:RU:94:ASN:HD22	2.28	0.47
40:RU:107:ALA:O	40:RU:110:VAL:HB	2.14	0.47
42:RW:66:GLU:O	42:RW:69:LEU:HG	2.15	0.47
47:R1:8:SER:OG	47:R1:10:LYS:HG3	2.13	0.47
48:R2:6:VAL:O	48:R2:7:ARG:C	2.57	0.47
1:XA:714:G:H2'	1:XA:715:A:C8	2.49	0.47
1:XA:1006:C:H2'	1:XA:1007:C:C6	2.49	0.47
1:XA:1287:A:H2'	1:XA:1288:A:C8	2.49	0.47
1:XA:1366:C:H2'	1:XA:1367:C:C6	2.41	0.47
1:XA:1505:G:H4'	1:XA:1506:U:H5''	1.97	0.47
2:XB:204:ASN:HD22	2:XB:204:ASN:C	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:79:PHE:HE2	4:XD:83:SER:HB2	1.79	0.47
5:XE:141:GLN:HA	5:XE:143:ARG:HH12	1.79	0.47
8:XH:16:ALA:HB2	8:XH:24:THR:CG2	2.44	0.47
11:XK:48:ILE:HG21	11:XK:63:LEU:HD13	1.96	0.47
14:XN:26:ARG:NH1	14:XN:43:CYS:SG	2.86	0.47
15:XO:50:HIS:O	15:XO:53:HIS:N	2.47	0.47
19:XS:36:ARG:HB3	19:XS:36:ARG:NH1	2.28	0.47
19:XS:64:GLU:CD	50:Y4:55:ARG:HH22	2.21	0.47
22:XV:19:G:H4'	22:XV:20:U:OP2	2.14	0.47
25:YA:142:G:O3'	43:YX:35:THR:HG21	2.15	0.47
25:YA:152:G:H2'	25:YA:153:C:H6	1.77	0.47
25:YA:284:U:O2'	25:YA:285:C:O5'	2.28	0.47
25:YA:809:G:H2'	25:YA:810:U:C6	2.48	0.47
25:YA:2133:G:H2'	25:YA:2157:G:N2	2.28	0.47
25:YA:2151:G:H2'	25:YA:2152:G:C8	2.48	0.47
25:YA:2263:C:H2'	25:YA:2264:C:C6	2.50	0.47
25:YA:2388:A:C8	25:YA:2389:G:C5	3.02	0.47
25:YA:2529:G:H5''	25:YA:2530:A:H5''	1.95	0.47
25:YA:2648:C:H1'	25:YA:2673:G:N2	2.29	0.47
29:YF:127:GLU:OE1	29:YF:127:GLU:HA	2.07	0.47
30:YG:12:TYR:O	30:YG:16:ARG:HB3	2.14	0.47
30:YG:97:ASP:N	30:YG:100:TRP:HD1	2.05	0.47
33:YN:57:ALA:O	33:YN:58:ASP:CB	2.62	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:H	2.27	0.47
34:YO:8:LEU:HB2	34:YO:19:ILE:CD1	2.43	0.47
34:YO:107:ARG:NH1	39:YT:36:GLU:OE1	2.46	0.47
39:YT:132:LYS:O	39:YT:136:GLN:HG3	2.13	0.47
44:YY:57:GLN:O	44:YY:58:GLY:O	2.32	0.47
53:Y7:25:PRO:HA	53:Y7:28:ARG:CZ	2.45	0.47
54:Y8:41:ILE:HG13	54:Y8:42:ARG:N	2.28	0.47
1:QA:957:U:O2	1:QA:959:A:C8	2.67	0.47
2:QB:24:TRP:CZ3	2:QB:26:PRO:HA	2.49	0.47
2:QB:164:VAL:HB	2:QB:186:ALA:HB1	1.95	0.47
4:QD:3:ARG:O	4:QD:5:ILE:HG13	2.14	0.47
4:QD:6:GLY:O	4:QD:8:VAL:HG23	2.14	0.47
9:QI:9:ARG:HA	9:QI:76:ALA:HB1	1.97	0.47
10:QJ:40:LEU:HB2	10:QJ:69:ASN:CB	2.40	0.47
13:QM:12:ASN:O	13:QM:13:LYS:HB2	2.13	0.47
14:QN:6:LEU:CD2	14:QN:23:ARG:NH2	2.77	0.47
16:QP:40:ASP:C	16:QP:42:ARG:N	2.73	0.47
18:QR:31:LEU:H	18:QR:31:LEU:CD2	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:388:G:H5'	25:RA:389:G:OP2	2.13	0.47
25:RA:1009:A:OP1	33:RN:37:LYS:NZ	2.47	0.47
25:RA:1058:G:N2	25:RA:1080:C:O2	2.25	0.47
25:RA:1165:U:H3	25:RA:1184:G:H1	1.60	0.47
25:RA:1932:A:N6	25:RA:1933:G:C2	2.82	0.47
25:RA:2025:C:H2'	25:RA:2026:C:C6	2.49	0.47
25:RA:2126:A:H4'	25:RA:2127:G:O5'	2.14	0.47
25:RA:2372:G:H4'	52:R6:46:HIS:CD2	2.49	0.47
25:RA:2469:A:N7	25:RA:2482:G:C8	2.82	0.47
26:RB:57:A:C4	30:RG:29:TRP:HB2	2.49	0.47
28:RE:174:ASP:O	28:RE:182:LEU:HD12	2.14	0.47
30:RG:5:VAL:HG22	50:R4:25:TYR:CE2	2.50	0.47
31:RH:124:GLU:HB3	31:RH:132:ARG:CD	2.44	0.47
31:RH:154:PRO:CG	31:RH:162:ILE:O	2.61	0.47
33:RN:67:LEU:O	33:RN:88:GLU:HG3	2.14	0.47
33:RN:97:ARG:HA	33:RN:100:GLU:HB3	1.96	0.47
33:RN:131:GLN:HE21	33:RN:132:ALA:H	1.58	0.47
35:RP:6:LEU:O	35:RP:7:ARG:O	2.31	0.47
36:RQ:21:THR:HB	36:RQ:22:LYS:H	1.42	0.47
36:RQ:57:HIS:ND1	36:RQ:58:PHE:N	2.62	0.47
37:RR:10:LEU:O	37:RR:12:ARG:HG3	2.14	0.47
41:RV:2:PHE:CD2	41:RV:13:ARG:NH2	2.82	0.47
41:RV:66:ARG:NH1	41:RV:88:ARG:NH1	2.62	0.47
44:RY:75:ILE:HG12	44:RY:76:CYS:H	1.79	0.47
45:RZ:102:LEU:HB3	45:RZ:104:PHE:HE1	1.78	0.47
47:R1:94:LEU:O	47:R1:95:LEU:CB	2.62	0.47
1:XA:61:G:H2'	1:XA:62:U:O4'	2.14	0.47
1:XA:403:C:N4	1:XA:547:A:H5'	2.29	0.47
1:XA:1269:A:H2	1:XA:1312:G:N3	2.12	0.47
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.49	0.47
2:XB:4:GLU:CG	2:XB:5:ILE:H	2.00	0.47
2:XB:24:TRP:CZ3	2:XB:26:PRO:HA	2.49	0.47
2:XB:181:PHE:HE1	8:XH:70:GLN:O	1.97	0.47
4:XD:9:CYS:SG	4:XD:22:LYS:HE3	2.55	0.47
4:XD:165:MET:CE	4:XD:168:ARG:HD2	2.44	0.47
5:XE:153:LYS:HB2	5:XE:153:LYS:HZ3	1.79	0.47
9:XI:42:ARG:NH2	9:XI:75:ASP:OD2	2.47	0.47
11:XK:19:ALA:CA	11:XK:32:ILE:HG22	2.43	0.47
11:XK:32:ILE:HD11	11:XK:68:ALA:O	2.14	0.47
20:XT:64:ASP:O	20:XT:67:ALA:N	2.47	0.47
25:YA:431:U:O5'	25:YA:431:U:H6	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1045:A:H1'	25:YA:1047:G:C2	2.49	0.47
25:YA:1109:C:HO2'	25:YA:1110:G:P	2.36	0.47
25:YA:1407:C:N4	25:YA:1595:G:H1	2.10	0.47
25:YA:1657:C:H4'	28:YE:133:LYS:HB3	1.96	0.47
25:YA:1831:G:N2	25:YA:1974:C:O2	2.46	0.47
25:YA:1835:G:C4	25:YA:1931:U:N3	2.82	0.47
25:YA:2059:A:H5'	25:YA:2060:A:OP2	2.15	0.47
25:YA:2294:C:H5	38:YS:13:ARG:NH1	2.12	0.47
25:YA:2298:A:H62	25:YA:2318:G:H8	1.61	0.47
25:YA:2522:U:H3	25:YA:2543:G:H1	1.63	0.47
27:YD:32:SER:O	27:YD:33:LEU:CB	2.60	0.47
27:YD:33:LEU:HB3	27:YD:34:VAL:H	1.49	0.47
29:YF:155:LEU:HA	29:YF:174:VAL:HG12	1.95	0.47
31:YH:154:PRO:CG	31:YH:162:ILE:O	2.61	0.47
32:YI:88:ILE:HG12	32:YI:122:GLU:N	2.29	0.47
32:YI:129:THR:HG22	32:YI:137:PRO:HB3	1.96	0.47
35:YP:13:ASN:C	35:YP:15:ARG:H	2.21	0.47
35:YP:47:ASP:OD1	35:YP:50:ARG:NH2	2.47	0.47
38:YS:105:ALA:C	38:YS:110:LEU:HD21	2.39	0.47
40:YU:53:ARG:C	40:YU:55:ARG:H	2.20	0.47
41:YV:2:PHE:CD2	41:YV:13:ARG:NH2	2.83	0.47
42:YW:30:GLU:O	42:YW:34:ASN:ND2	2.46	0.47
47:Y1:81:LYS:HE2	47:Y1:81:LYS:H	1.62	0.47
51:Y5:56:LYS:O	51:Y5:57:VAL:C	2.57	0.47
54:Y8:56:GLU:O	54:Y8:58:ILE:N	2.47	0.47
55:Y9:27:CYS:SG	55:Y9:28:GLU:N	2.87	0.47
1:QA:321:A:H62	1:QA:328:C:H1'	1.80	0.47
1:QA:881:G:OP1	12:QL:12:ARG:NH2	2.46	0.47
1:QA:1095:U:H5''	1:QA:1109:C:O2	2.14	0.47
1:QA:1133:G:N2	1:QA:1141:C:O2	2.38	0.47
1:QA:1435:G:H2'	1:QA:1436:U:C6	2.49	0.47
2:QB:33:TYR:C	2:QB:33:TYR:CD1	2.92	0.47
3:QC:16:ARG:NH2	3:QC:183:ASP:OD2	2.47	0.47
3:QC:95:THR:CG2	3:QC:97:LYS:HZ3	2.27	0.47
4:QD:19:LEU:O	4:QD:20:TYR:C	2.57	0.47
4:QD:154:ASN:O	4:QD:155:LEU:O	2.32	0.47
9:QI:33:PHE:HZ	9:QI:47:LEU:HD21	1.76	0.47
10:QJ:24:VAL:HG21	10:QJ:37:PRO:CG	2.43	0.47
12:QL:120:TYR:O	12:QL:121:GLY:C	2.57	0.47
14:QN:15:LYS:HD2	14:QN:16:PHE:CE2	2.49	0.47
20:QT:101:GLY:C	20:QT:103:GLY:H	2.21	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1328:G:H8	25:RA:1328:G:O5'	1.98	0.47
25:RA:1711:C:H2'	25:RA:1712:C:H6	1.80	0.47
25:RA:1952:A:OP1	34:RO:44:LYS:NZ	2.28	0.47
25:RA:2439:A:C8	25:RA:2439:A:C5'	2.96	0.47
28:RE:3:GLY:HA3	28:RE:81:ILE:HG21	1.97	0.47
28:RE:195:LEU:HD12	28:RE:196:VAL:N	2.29	0.47
29:RF:183:VAL:O	29:RF:184:TYR:C	2.57	0.47
30:RG:13:GLU:O	30:RG:13:GLU:HG3	2.14	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:HB3	1.95	0.47
31:RH:82:GLY:O	31:RH:83:TYR:O	2.32	0.47
32:RI:19:VAL:HG22	32:RI:20:ASP:H	1.78	0.47
35:RP:126:VAL:HA	35:RP:145:PRO:HD2	1.95	0.47
38:RS:43:GLU:HG2	46:R0:49:LYS:HE2	1.96	0.47
38:RS:105:ALA:C	38:RS:110:LEU:HD21	2.39	0.47
39:RT:96:ARG:NH1	39:RT:96:ARG:CB	2.77	0.47
41:RV:4:ILE:HA	41:RV:12:TYR:O	2.14	0.47
41:RV:21:ARG:HD2	41:RV:91:TYR:CZ	2.49	0.47
44:RY:81:LYS:NZ	44:RY:98:VAL:HB	2.30	0.47
44:RY:97:ARG:HG2	44:RY:97:ARG:NH1	2.28	0.47
47:R1:7:ILE:HD12	47:R1:62:VAL:HG11	1.96	0.47
1:XA:1004:A:N1	1:XA:1024:G:H2'	2.28	0.47
1:XA:1202:G:H1'	14:XN:29:ARG:HD2	1.96	0.47
4:XD:29:PRO:O	4:XD:30:LYS:HB3	2.15	0.47
6:XF:97:PHE:CD2	18:XR:31:LEU:HD21	2.48	0.47
8:XH:86:ILE:HG12	8:XH:135:CYS:HA	1.96	0.47
9:XI:5:TYR:OH	9:XI:7:THR:HG23	2.15	0.47
10:XJ:24:VAL:HG21	10:XJ:37:PRO:CG	2.43	0.47
13:XM:30:ALA:O	13:XM:33:ALA:N	2.47	0.47
25:YA:186:G:C2	25:YA:211:A:C2	3.02	0.47
25:YA:399:G:H2'	25:YA:400:G:O4'	2.15	0.47
25:YA:456:C:C4	43:YX:69:TYR:CE1	3.02	0.47
25:YA:604:G:H5''	25:YA:604:G:H8	1.79	0.47
25:YA:814:C:O2'	25:YA:815:C:H5'	2.14	0.47
25:YA:954:G:OP1	36:YQ:15:GLY:N	2.39	0.47
25:YA:1144:G:C6	25:YA:1145:C:C4	3.02	0.47
25:YA:1693:U:H1'	27:YD:14:ARG:NH2	2.29	0.47
25:YA:1804:C:H42	25:YA:1813:G:H1	1.62	0.47
25:YA:2328:A:H2'	25:YA:2329:G:C8	2.50	0.47
25:YA:2400:G:C5	25:YA:2401:U:C5	3.02	0.47
25:YA:2408:U:H2'	25:YA:2409:G:H8	1.78	0.47
25:YA:2616:C:O2	25:YA:2616:C:C2'	2.60	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:114:G:O5'	26:YB:114:G:H8	1.97	0.47
27:YD:134:ARG:HB2	27:YD:135:PHE:CD2	2.49	0.47
28:YE:65:GLY:HA2	28:YE:70:ALA:HB3	1.95	0.47
28:YE:203:LYS:HD2	28:YE:203:LYS:C	2.39	0.47
31:YH:123:PHE:O	31:YH:125:VAL:HG23	2.13	0.47
33:YN:9:VAL:HG21	33:YN:48:MET:CB	2.44	0.47
33:YN:137:LYS:CG	33:YN:138:LEU:N	2.77	0.47
35:YP:112:LEU:HD12	35:YP:127:ALA:CB	2.44	0.47
36:YQ:59:ARG:CD	36:YQ:59:ARG:N	2.73	0.47
37:YR:117:VAL:O	37:YR:118:GLU:CB	2.62	0.47
40:YU:92:ARG:CZ	40:YU:94:ASN:HD22	2.27	0.47
41:YV:35:LEU:O	41:YV:37:VAL:N	2.47	0.47
41:YV:36:PRO:HA	41:YV:56:SER:CB	2.44	0.47
41:YV:59:ALA:HB2	41:YV:96:ILE:HD13	1.97	0.47
45:YZ:72:ARG:HH22	45:YZ:97:GLU:HB2	1.78	0.47
47:Y1:7:ILE:HD12	47:Y1:62:VAL:HG11	1.96	0.47
48:Y2:6:VAL:O	48:Y2:7:ARG:C	2.57	0.47
51:Y5:3:LYS:O	51:Y5:4:HIS:C	2.56	0.47
1:QA:507:C:C4	1:QA:508:C:C4	3.02	0.47
1:QA:1129:C:H5'	1:QA:1130:A:OP1	2.15	0.47
1:QA:1287:A:H2'	1:QA:1288:A:H8	1.75	0.47
3:QC:101:LEU:HD23	3:QC:101:LEU:C	2.38	0.47
3:QC:113:ALA:C	3:QC:115:LEU:N	2.72	0.47
4:QD:60:GLU:O	4:QD:63:LYS:HB3	2.14	0.47
4:QD:135:LEU:O	4:QD:137:SER:N	2.48	0.47
6:QF:79:LEU:O	6:QF:85:VAL:HG11	2.14	0.47
8:QH:39:LEU:HD11	8:QH:111:ILE:HD11	1.96	0.47
9:QI:42:ARG:NH2	9:QI:75:ASP:OD2	2.47	0.47
18:QR:53:ARG:C	18:QR:55:ARG:H	2.22	0.47
25:RA:34:C:OP1	25:RA:34:C:O4'	2.33	0.47
25:RA:83:G:C2	25:RA:102:G:H1'	2.49	0.47
25:RA:540:G:H5'	25:RA:541:C:OP2	2.14	0.47
25:RA:595:C:H6	25:RA:595:C:H5''	1.79	0.47
25:RA:2349:G:OP2	54:R8:42:ARG:HD3	2.14	0.47
25:RA:2710:C:OP1	37:RR:15:SER:HB2	2.14	0.47
25:RA:2854:G:C6	25:RA:2855:C:C4	3.02	0.47
27:RD:134:ARG:HB2	27:RD:135:PHE:CD2	2.49	0.47
28:RE:56:PRO:O	28:RE:57:LYS:CB	2.61	0.47
30:RG:56:ALA:HB2	30:RG:153:ARG:NE	2.27	0.47
30:RG:106:LEU:HA	30:RG:110:ALA:CB	2.44	0.47
31:RH:45:VAL:O	31:RH:45:VAL:HG13	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:67:LEU:O	31:RH:71:LEU:HB2	2.14	0.47
32:RI:78:THR:H	32:RI:104:GLN:NE2	2.05	0.47
33:RN:15:LEU:C	33:RN:15:LEU:HD13	2.40	0.47
35:RP:19:VAL:CG2	35:RP:20:GLY:H	1.98	0.47
35:RP:147:LEU:N	35:RP:147:LEU:HD22	2.29	0.47
38:RS:83:LYS:HG2	38:RS:109:GLY:H	1.76	0.47
41:RV:16:PRO:HA	41:RV:96:ILE:O	2.14	0.47
41:RV:38:LEU:HD23	41:RV:39:LEU:H	1.79	0.47
52:R6:8:LYS:O	52:R6:27:LYS:HG2	2.15	0.47
1:XA:187:C:H1'	1:XA:191(A):G:N2	2.30	0.47
1:XA:655:A:N1	1:XA:754:C:N4	2.63	0.47
1:XA:1158:C:N3	1:XA:1160:G:N7	2.63	0.47
1:XA:1292:U:H2'	1:XA:1293:G:H8	1.80	0.47
1:XA:1333:A:C8	1:XA:1334:G:C8	3.02	0.47
2:XB:60:ASP:C	2:XB:62:ALA:N	2.71	0.47
2:XB:200:ILE:H	2:XB:200:ILE:HD12	1.79	0.47
4:XD:114:ARG:NH1	4:XD:114:ARG:CG	2.77	0.47
4:XD:150:GLU:C	4:XD:152:SER:N	2.73	0.47
10:XJ:49:VAL:HG23	14:XN:34:TYR:OH	2.13	0.47
25:YA:325:G:N2	25:YA:326:G:C4	2.82	0.47
25:YA:443:A:H1'	25:YA:1201:C:O4'	2.14	0.47
25:YA:984:A:H5''	25:YA:985:C:C5	2.47	0.47
25:YA:1364:G:N7	47:Y1:2:SER:N	2.62	0.47
25:YA:1764:G:C6	25:YA:1989:G:C2	3.02	0.47
25:YA:2163:C:H2'	25:YA:2164:C:C6	2.50	0.47
26:YB:44:G:H1'	26:YB:47:C:N4	2.29	0.47
28:YE:56:PRO:O	28:YE:57:LYS:CB	2.61	0.47
30:YG:5:VAL:HG22	50:Y4:25:TYR:CE2	2.50	0.47
33:YN:57:ALA:HA	33:YN:60:ILE:CD1	2.43	0.47
33:YN:67:LEU:O	33:YN:88:GLU:HG3	2.14	0.47
37:YR:56:LYS:HE2	37:YR:94:TYR:OH	2.14	0.47
38:YS:40:ILE:HG22	38:YS:41:ASP:N	2.28	0.47
40:YU:106:PHE:O	40:YU:109:LEU:HB2	2.15	0.47
48:Y2:17:SER:CB	48:Y2:18:PRO:CA	2.92	0.47
51:Y5:48:GLU:HA	51:Y5:59:GLU:CG	2.43	0.47
1:QA:164:U:H2'	1:QA:165:C:C6	2.49	0.47
1:QA:559:A:H5''	1:QA:560:U:H3'	1.96	0.47
1:QA:728:A:C6	1:QA:729:A:C6	3.03	0.47
1:QA:1216:G:H5''	14:QN:5:ALA:CB	2.45	0.47
1:QA:1342:C:O2'	9:QI:124:GLN:HA	2.14	0.47
1:QA:1386:G:C2	1:QA:1387:G:C8	3.02	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.95	0.47
3:QC:148:GLY:O	3:QC:202:ILE:HA	2.13	0.47
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
25:RA:26:G:H1'	25:RA:514:A:H61	1.79	0.47
25:RA:103:A:OP2	25:RA:103:A:C8	2.67	0.47
25:RA:516:C:O2'	25:RA:517:C:H5'	2.14	0.47
25:RA:1054:A:N6	25:RA:1055:G:C6	2.82	0.47
25:RA:1328:G:H2'	25:RA:1330:C:C5	2.50	0.47
25:RA:1468:C:H2'	25:RA:1469:A:H8	1.78	0.47
25:RA:1889:A:O2'	25:RA:2087:G:H5'	2.15	0.47
25:RA:2531:A:H4'	31:RH:157:TYR:CD2	2.50	0.47
28:RE:54:GLN:N	28:RE:54:GLN:CD	2.73	0.47
31:RH:53:GLU:CD	31:RH:54:ARG:H	2.21	0.47
32:RI:133:HIS:HB2	32:RI:134:PRO:CD	2.45	0.47
37:RR:117:VAL:O	37:RR:118:GLU:CB	2.62	0.47
43:RX:6:ASP:OD1	48:R2:29:LYS:NZ	2.47	0.47
44:RY:19:LYS:HE3	44:RY:20:TYR:CE1	2.49	0.47
44:RY:39:VAL:O	44:RY:40:GLU:OE2	2.32	0.47
44:RY:81:LYS:CD	44:RY:97:ARG:HE	2.20	0.47
44:RY:95:LYS:HB2	44:RY:95:LYS:HZ1	1.78	0.47
52:R6:20:ASN:ND2	52:R6:42:TRP:CZ2	2.82	0.47
52:R6:33:LYS:C	52:R6:35:GLU:H	2.22	0.47
54:R8:44:LYS:HD2	54:R8:44:LYS:N	2.30	0.47
55:R9:1:MET:SD	55:R9:31:LYS:O	2.72	0.47
1:XA:722:A:H2'	1:XA:724:G:C8	2.50	0.47
1:XA:857:C:H2'	1:XA:858:G:O4'	2.14	0.47
1:XA:1220:G:H21	19:XS:54:GLY:CA	2.28	0.47
2:XB:71:VAL:HG23	2:XB:164:VAL:HG13	1.97	0.47
2:XB:96:ARG:HD2	2:XB:96:ARG:N	2.20	0.47
2:XB:109:SER:C	2:XB:111:ARG:H	2.22	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
5:XE:63:ARG:C	5:XE:66:MET:HE2	2.39	0.47
7:XG:51:GLN:OE1	7:XG:51:GLN:HA	2.14	0.47
7:XG:92:SER:HB3	7:XG:95:ARG:CB	2.45	0.47
8:XH:6:ILE:O	8:XH:10:LEU:HG	2.14	0.47
9:XI:106:ALA:O	9:XI:108:VAL:HG13	2.15	0.47
16:XP:40:ASP:C	16:XP:42:ARG:N	2.73	0.47
17:XQ:29:HIS:N	17:XQ:33:GLY:O	2.48	0.47
20:XT:49:ALA:HB2	20:XT:99:LEU:HD22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:463:G:C6	25:YA:467:G:C6	3.03	0.47
25:YA:679:C:H2'	25:YA:680:G:C8	2.49	0.47
25:YA:1034:G:C6	25:YA:1035:U:C4	3.02	0.47
25:YA:1228:G:OP1	40:YU:13:LYS:HG2	2.15	0.47
25:YA:2092:U:H4'	25:YA:2093:G:O5'	2.15	0.47
25:YA:2243:U:O2'	25:YA:2244:U:H5'	2.15	0.47
25:YA:2601:C:H2'	25:YA:2602:A:OP2	2.14	0.47
25:YA:2675:A:OP1	34:YO:31:LYS:HB2	2.14	0.47
25:YA:2770:G:H5''	25:YA:2771:C:OP2	2.15	0.47
25:YA:2871:C:H5''	25:YA:2872:G:OP1	2.14	0.47
26:YB:82:G:C4	26:YB:83:G:C8	3.03	0.47
30:YG:14:GLU:O	30:YG:17:PRO:HG2	2.15	0.47
30:YG:36:LYS:HA	30:YG:95:ARG:HG2	1.95	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:CB	2.44	0.47
31:YH:127:GLU:OE2	31:YH:130:ARG:NH2	2.48	0.47
31:YH:131:VAL:HG12	31:YH:132:ARG:N	2.29	0.47
32:YI:32:PRO:C	32:YI:34:GLY:H	2.23	0.47
35:YP:107:LYS:O	35:YP:108:LYS:C	2.58	0.47
35:YP:125:VAL:C	35:YP:145:PRO:HD2	2.39	0.47
35:YP:147:LEU:N	35:YP:147:LEU:HD22	2.29	0.47
43:YX:35:THR:O	43:YX:37:THR:N	2.47	0.47
44:YY:19:LYS:HE3	44:YY:20:TYR:CE1	2.49	0.47
44:YY:39:VAL:O	44:YY:40:GLU:OE2	2.32	0.47
47:Y1:83:GLU:OE1	47:Y1:85:LEU:HB2	2.14	0.47
48:Y2:48:HIS:O	48:Y2:49:LYS:C	2.57	0.47
52:Y6:33:LYS:C	52:Y6:35:GLU:H	2.22	0.47
1:QA:78:G:C2	1:QA:79:G:H1'	2.50	0.47
1:QA:116:A:H8	1:QA:116:A:O5'	1.98	0.47
1:QA:502:G:C2	1:QA:503:C:C2	3.03	0.47
1:QA:600:C:H2'	1:QA:601:C:H6	1.79	0.47
1:QA:685:G:N2	1:QA:686:U:C4	2.83	0.47
1:QA:757:U:O2'	1:QA:879:C:H1'	2.14	0.47
1:QA:760:G:O2'	17:QQ:98:LEU:HD23	2.14	0.47
1:QA:763:G:H2'	1:QA:764:C:H6	1.80	0.47
1:QA:1068:G:N7	1:QA:1094:G:C8	2.83	0.47
1:QA:1158:C:C2	1:QA:1160:G:C8	3.03	0.47
1:QA:1237:C:OP1	1:QA:1238:A:H1'	2.15	0.47
2:QB:5:ILE:O	2:QB:6:THR:O	2.32	0.47
2:QB:60:ASP:C	2:QB:62:ALA:N	2.72	0.47
2:QB:92:TYR:C	2:QB:92:TYR:HD1	2.22	0.47
2:QB:204:ASN:HD22	2:QB:204:ASN:C	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:223:ILE:HA	2:QB:226:ARG:HB3	1.97	0.47
3:QC:195:VAL:CG1	3:QC:196:LEU:H	2.27	0.47
4:QD:7:PRO:O	4:QD:10:ARG:HG2	2.15	0.47
7:QG:79:ARG:HG2	7:QG:79:ARG:NH1	2.30	0.47
7:QG:107:ALA:CB	7:QG:134:ALA:HB2	2.44	0.47
8:QH:80:ILE:HG23	8:QH:137:VAL:HG12	1.97	0.47
8:QH:86:ILE:HG22	8:QH:87:SER:N	2.29	0.47
9:QI:106:ALA:O	9:QI:108:VAL:HG13	2.15	0.47
11:QK:124:LYS:O	11:QK:126:ARG:N	2.40	0.47
12:QL:50:SER:O	12:QL:51:ALA:HB2	2.14	0.47
16:QP:55:ARG:O	16:QP:56:ALA:C	2.57	0.47
17:QQ:76:LEU:HD11	17:QQ:79:SER:H	1.80	0.47
18:QR:64:ARG:O	18:QR:65:ILE:C	2.58	0.47
18:QR:82:THR:HG22	18:QR:83:GLU:H	1.79	0.47
25:RA:120:U:H4'	25:RA:121:G:C5'	2.45	0.47
25:RA:244:A:H2'	25:RA:245:G:O4'	2.15	0.47
25:RA:300:A:OP1	44:RY:84:ARG:NH2	2.47	0.47
25:RA:389:G:N1	35:RP:71:VAL:HG12	2.28	0.47
25:RA:459:U:H5''	53:R7:40:TRP:CD2	2.50	0.47
25:RA:483:A:O5'	25:RA:484:C:H5	1.98	0.47
25:RA:656:G:H2'	25:RA:657:U:O4'	2.14	0.47
25:RA:796:C:H2'	25:RA:797:C:C6	2.50	0.47
25:RA:852:G:H2'	25:RA:853:G:C8	2.49	0.47
25:RA:863:A:O2'	25:RA:864:G:H5'	2.14	0.47
25:RA:968:G:C2	25:RA:969:U:C2	3.03	0.47
25:RA:1045:A:H4'	25:RA:1046:A:C5'	2.45	0.47
25:RA:1153:C:H2'	25:RA:1154:G:O4'	2.14	0.47
25:RA:1222:C:C2	25:RA:1229(A):G:C2	3.03	0.47
25:RA:1335:U:OP2	43:RX:65:ARG:NH2	2.47	0.47
25:RA:1346:G:C6	25:RA:1347:G:N7	2.83	0.47
25:RA:1630:G:N2	25:RA:1636:C:O2	2.40	0.47
25:RA:1652:A:N7	25:RA:1653:G:C6	2.83	0.47
25:RA:2284:C:C5	52:R6:27:LYS:HE2	2.49	0.47
25:RA:2380:C:C4	25:RA:2381:C:C4	3.03	0.47
25:RA:2543:G:H2'	25:RA:2544:G:C8	2.49	0.47
25:RA:2576:G:O2'	25:RA:2579:C:OP2	2.22	0.47
25:RA:2734:A:N6	25:RA:2770:G:O2'	2.32	0.47
25:RA:2832:U:O2'	25:RA:2833:G:P	2.73	0.47
25:RA:2845:G:O2'	25:RA:2846:G:H5'	2.14	0.47
26:RB:21:G:H2'	26:RB:22:U:O4'	2.15	0.47
26:RB:47:C:H5'	26:RB:48:A:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:49:C:H2'	26:RB:50:G:C8	2.49	0.47
26:RB:59:A:H2'	26:RB:60:C:O4'	2.14	0.47
27:RD:72:LYS:CG	27:RD:103:ARG:NH2	2.77	0.47
27:RD:177:LEU:C	27:RD:179:SER:H	2.23	0.47
28:RE:197:ILE:CD1	28:RE:199:ARG:HH12	2.26	0.47
29:RF:162:LEU:HD23	29:RF:165:ARG:HH21	1.80	0.47
29:RF:184:TYR:CD2	29:RF:188:ARG:HD2	2.50	0.47
30:RG:109:VAL:C	30:RG:112:PRO:HD2	2.39	0.47
31:RH:126:PRO:CG	31:RH:127:GLU:N	2.65	0.47
33:RN:57:ALA:CA	33:RN:60:ILE:HD11	2.44	0.47
33:RN:137:LYS:CG	33:RN:138:LEU:H	2.27	0.47
34:RO:37:ASP:O	34:RO:62:VAL:HG23	2.14	0.47
34:RO:120:GLU:OE1	39:RT:67:SER:OG	2.24	0.47
35:RP:13:ASN:C	35:RP:15:ARG:H	2.21	0.47
35:RP:37:GLY:O	35:RP:41:ARG:HD3	2.15	0.47
36:RQ:34:LEU:HD11	36:RQ:129:THR:CB	2.35	0.47
36:RQ:66:ILE:H	36:RQ:104:PHE:HA	1.80	0.47
36:RQ:83:MET:H	46:R0:7:LEU:HD12	1.78	0.47
36:RQ:86:GLY:O	36:RQ:88:GLY:N	2.46	0.47
38:RS:40:ILE:HG22	38:RS:41:ASP:N	2.29	0.47
38:RS:108:GLY:O	38:RS:110:LEU:N	2.48	0.47
42:RW:14:PRO:O	42:RW:15:ARG:C	2.58	0.47
42:RW:81:ALA:C	42:RW:82:LEU:HD12	2.40	0.47
44:RY:81:LYS:HZ2	44:RY:98:VAL:CG1	2.27	0.47
50:R4:8:LYS:O	50:R4:9:LEU:CB	2.62	0.47
1:XA:509:A:C2	1:XA:510:A:C2	3.02	0.47
1:XA:936:C:O2	1:XA:1382:C:N4	2.47	0.47
1:XA:1020:U:H2'	1:XA:1021:G:H8	1.80	0.47
1:XA:1128:C:C2	1:XA:1144:G:N2	2.83	0.47
1:XA:1316:G:N2	1:XA:1318:A:H3'	2.29	0.47
1:XA:1441:G:H5''	1:XA:1442:G:H5'	1.97	0.47
2:XB:33:TYR:C	2:XB:33:TYR:HD1	2.22	0.47
2:XB:158:LEU:HD12	2:XB:158:LEU:C	2.39	0.47
2:XB:168:THR:CB	2:XB:192:SER:HB2	2.41	0.47
2:XB:220:ASP:O	2:XB:223:ILE:N	2.48	0.47
2:XB:223:ILE:HA	2:XB:226:ARG:HB3	1.97	0.47
3:XC:16:ARG:NH2	3:XC:183:ASP:OD2	2.48	0.47
3:XC:127:ARG:CG	3:XC:127:ARG:NH1	2.74	0.47
3:XC: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:153:ARG:CZ	4:XD:181:MET:HG3	2.44	0.47
5:XE:82:VAL:CG1	5:XE:83:GLU:H	2.27	0.47
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.97	0.47
6:XF:40:VAL:HG22	6:XF:41:GLU:N	2.30	0.47
7:XG:50:ILE:HG21	7:XG:61:VAL:HG21	1.97	0.47
7:XG:78:ARG:HG3	7:XG:78:ARG:HH11	1.78	0.47
8:XH:39:LEU:HD11	8:XH:111:ILE:HD11	1.96	0.47
8:XH:82:HIS:CD2	8:XH:83:ILE:N	2.82	0.47
9:XI:18:PHE:HB2	9:XI:62:TYR:HB3	1.96	0.47
9:XI:80:GLY:C	9:XI:82:ALA:N	2.70	0.47
9:XI:100:GLY:C	9:XI:102:LEU:N	2.71	0.47
11:XK:33:THR:HB	11:XK:37:GLY:C	2.40	0.47
12:XL:115:LYS:O	12:XL:117:ARG:N	2.47	0.47
13:XM:23:TYR:HB2	13:XM:67:GLU:OE1	2.15	0.47
13:XM: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
18:XR:31:LEU:H	18:XR:31:LEU:CD2	2.27	0.47
25:YA:271(B):G:HO2'	25:YA:271(C):U:P	2.37	0.47
25:YA:284:U:H2'	25:YA:285:C:C6	2.49	0.47
25:YA:576:U:OP1	25:YA:2503:A:OP1	2.32	0.47
25:YA:612:G:N3	25:YA:613:U:O2	2.47	0.47
25:YA:755:C:H2'	25:YA:756:C:C6	2.49	0.47
25:YA:823:G:C6	25:YA:835:A:N1	2.83	0.47
25:YA:1048:A:C5	25:YA:1111:A:C2	3.03	0.47
25:YA:1270:C:H5''	25:YA:1271:G:C5'	2.45	0.47
25:YA:1292:U:H2'	25:YA:1293:C:H6	1.77	0.47
25:YA:1417:C:H2'	25:YA:1418:G:O4'	2.15	0.47
25:YA:1460:A:H4'	25:YA:1461:G:OP2	2.14	0.47
25:YA:1483:G:N2	25:YA:1507:A:H1'	2.30	0.47
25:YA:1817:G:OP1	27:YD:88:ARG:NH2	2.46	0.47
25:YA:1900:A:N1	25:YA:1970:A:C6	2.83	0.47
25:YA:2210:G:H5'	25:YA:2211:G:C4	2.49	0.47
25:YA:2352:A:H2'	25:YA:2353:G:O4'	2.14	0.47
25:YA:2533:A:H2'	25:YA:2534:A:O4'	2.14	0.47
26:YB:11:C:OP1	46:Y0:72:ARG:HD2	2.15	0.47
26:YB:78:A:C2	26:YB:99:A:C4	3.03	0.47
27:YD:31:LYS:C	27:YD:32:SER:O	2.54	0.47
27:YD:35:LYS:HD3	27:YD:63:ARG:HB3	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:72:LYS:CG	27:YD:103:ARG:NH2	2.77	0.47
27:YD:145:VAL:O	27:YD:153:ALA:HA	2.14	0.47
27:YD:177:LEU:C	27:YD:179:SER:H	2.23	0.47
27:YD:231:HIS:ND1	27:YD:232:PRO:HD2	2.30	0.47
28:YE:52:LEU:HB2	28:YE:75:VAL:CG2	2.40	0.47
28:YE:54:GLN:N	28:YE:54:GLN:CD	2.73	0.47
28:YE:78:LEU:CD2	28:YE:79:ARG:HD2	2.43	0.47
28:YE:89:ASP:O	28:YE:90:THR:O	2.33	0.47
30:YG:16:ARG:NH2	30:YG:28:VAL:O	2.48	0.47
32:YI:11:ASN:O	32:YI:12:LEU:HB2	2.15	0.47
33:YN:15:LEU:C	33:YN:15:LEU:HD13	2.40	0.47
34:YO:104:ARG:HD3	39:YT:36:GLU:OE2	2.15	0.47
35:YP:98:GLU:O	35:YP:99:LEU:C	2.57	0.47
35:YP:115:LEU:CD1	35:YP:116:GLY:N	2.78	0.47
35:YP:126:VAL:HA	35:YP:145:PRO:HD2	1.95	0.47
36:YQ:86:GLY:O	36:YQ:88:GLY:N	2.46	0.47
38:YS:46:VAL:HG12	38:YS:47:THR:N	2.28	0.47
39:YT:29:ARG:NH1	39:YT:46:GLU:OE1	2.48	0.47
39:YT:51:ARG:CG	39:YT:98:LYS:HG3	2.44	0.47
39:YT:111:ARG:C	39:YT:113:LYS:N	2.64	0.47
40:YU:107:ALA:O	40:YU:110:VAL:HB	2.14	0.47
42:YW:66:GLU:O	42:YW:69:LEU:HG	2.14	0.47
42:YW:81:ALA:C	42:YW:82:LEU:HD12	2.40	0.47
43:YX:43:VAL:HG11	43:YX:51:VAL:HG21	1.97	0.47
43:YX:87:GLN:C	43:YX:88:LYS:HG3	2.40	0.47
44:YY:44:ILE:O	44:YY:62:GLU:O	2.32	0.47
50:Y4:33:VAL:CG1	50:Y4:34:GLU:H	2.22	0.47
51:Y5:57:VAL:O	51:Y5:57:VAL:HG13	2.14	0.47
1:QA:619:U:O2	4:QD:135:LEU:HD23	2.15	0.47
1:QA:955:U:H2'	1:QA:956:U:C6	2.48	0.47
1:QA:1076:C:C2	1:QA:1082:G:N2	2.82	0.47
1:QA:1228:C:OP1	13:QM:114:ARG:HA	2.15	0.47
2:QB:158:LEU:HD12	2:QB:158:LEU:C	2.39	0.47
2:QB:220:ASP:O	2:QB:223:ILE:N	2.48	0.47
3:QC:11:ARG:HG2	3:QC:11:ARG:HH11	1.80	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:N	2.73	0.47
8:QH:82:HIS:CD2	8:QH:83:ILE:N	2.82	0.47
18:QR:32:ARG:HH11	18:QR:65:ILE:HD13	1.80	0.47
20:QT:99:LEU:O	20:QT:100:ILE:HB	2.15	0.47
21:QU:14:TRP:CE3	21:QU:15:ARG:NH1	2.83	0.47
25:RA:826:U:H2'	25:RA:828:U:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1042:G:H2'	25:RA:1043:C:C6	2.50	0.47
25:RA:1139:G:O2'	25:RA:1143:A:N1	2.29	0.47
25:RA:1204:A:C2	25:RA:1241:A:C2	3.02	0.47
25:RA:1285:G:N2	25:RA:1328:G:H5''	2.29	0.47
25:RA:1301:A:H2'	25:RA:1301:A:N3	2.30	0.47
25:RA:1342:A:C6	25:RA:1345:C:N3	2.82	0.47
25:RA:1901:A:OP2	27:RD:255:LYS:NZ	2.33	0.47
25:RA:1910:G:H1	25:RA:1920:C:H42	1.63	0.47
25:RA:2508:G:HO2'	25:RA:2554:U:HO2'	1.58	0.47
25:RA:2555:U:O2	56:Z6:74:C:C6	2.68	0.47
25:RA:2558:C:H2'	25:RA:2559:C:O4'	2.15	0.47
26:RB:24:G:H4'	26:RB:25:A:O5'	2.15	0.47
26:RB:44:G:N2	26:RB:48:A:N3	2.63	0.47
28:RE:63:LEU:O	28:RE:64:LYS:CB	2.62	0.47
28:RE:65:GLY:HA2	28:RE:70:ALA:HB3	1.95	0.47
28:RE:101:ARG:C	28:RE:201:THR:OG1	2.58	0.47
38:RS:66:ALA:HA	38:RS:69:VAL:HG12	1.96	0.47
38:RS:95:HIS:O	38:RS:96:GLY:C	2.57	0.47
39:RT:3:ARG:O	39:RT:4:GLY:C	2.58	0.47
41:RV:36:PRO:HA	41:RV:56:SER:CB	2.45	0.47
42:RW:28:SER:C	42:RW:30:GLU:N	2.69	0.47
43:RX:26:TYR:HB3	43:RX:92:LEU:HD12	1.97	0.47
44:RY:61:ILE:HG22	44:RY:62:GLU:N	2.28	0.47
1:XA:313:A:H2'	1:XA:314:C:H6	1.80	0.47
1:XA:902:G:H2'	1:XA:903:G:C8	2.46	0.47
1:XA:1296:C:H1'	1:XA:1302:U:C5	2.50	0.47
1:XA:1305:G:N2	1:XA:1331:G:C4	2.83	0.47
1:XA:1352:C:N3	1:XA:1370:G:N2	2.52	0.47
2:XB:92:TYR:C	2:XB:92:TYR:HD1	2.22	0.47
2:XB:116:GLU:HA	2:XB:119:GLU:HB3	1.96	0.47
5:XE:13:ILE:HG22	5:XE:13:ILE:O	2.14	0.47
13:XM:77:ASN:CG	50:Y4:71:ARG:NH1	2.72	0.47
14:XN:41:ARG:NE	14:XN:42:ILE:HG13	2.29	0.47
19:XS:9:VAL:HG12	50:Y4:66:SER:O	2.14	0.47
25:YA:557:U:H2'	25:YA:558:G:H8	1.80	0.47
25:YA:680:G:H1	25:YA:797:C:H42	1.61	0.47
25:YA:1534:G:H2'	25:YA:1534:G:N3	2.30	0.47
25:YA:1899:G:N2	25:YA:1902:C:C5	2.83	0.47
25:YA:2056:G:N2	25:YA:2057:A:C4	2.83	0.47
25:YA:2335:A:C8	25:YA:2337:G:C5	3.03	0.47
25:YA:2756:U:H5''	55:Y9:19:ARG:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:YB:45:A:O4'	30:YG:95:ARG:NH1	2.48	0.47
28:YE:22:PRO:O	28:YE:22:PRO:CG	2.63	0.47
28:YE:120:TRP:O	28:YE:121:ASN:HB2	2.15	0.47
28:YE:188:VAL:O	28:YE:188:VAL:HG13	2.15	0.47
30:YG:106:LEU:HA	30:YG:110:ALA:HB3	1.95	0.47
31:YH:67:LEU:O	31:YH:71:LEU:HB2	2.15	0.47
33:YN:73:THR:HA	33:YN:83:LYS:O	2.15	0.47
35:YP:81:GLN:HB3	35:YP:110:TYR:HB3	1.97	0.47
36:YQ:34:LEU:HD11	36:YQ:129:THR:CB	2.35	0.47
38:YS:95:HIS:O	38:YS:96:GLY:C	2.57	0.47
39:YT:3:ARG:O	39:YT:4:GLY:C	2.58	0.47
40:YU:66:ASN:CB	40:YU:76:TYR:HB2	2.44	0.47
41:YV:4:ILE:HA	41:YV:12:TYR:O	2.14	0.47
42:YW:4:LYS:HA	42:YW:106:ILE:HA	1.97	0.47
44:YY:81:LYS:NZ	44:YY:98:VAL:HB	2.30	0.47
1:QA:973:G:N3	10:QJ:55:LYS:HE2	2.30	0.47
1:QA:976:G:H5''	1:QA:1358:U:O2'	2.15	0.47
2:QB: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
3:QC:23:TYR:CG	3:QC:24:ALA:N	2.83	0.47
3:QC:203:PHE:O	3:QC:204:LEU:HD23	2.15	0.47
4:QD:30:LYS:CD	4:QD:30:LYS:H	2.24	0.47
4:QD:110:PHE:HD1	4:QD:110:PHE:H	1.63	0.47
5:QE:13:ILE:HG22	5:QE:13:ILE:O	2.14	0.47
9:QI:22:GLY:O	9:QI:23:ASN:C	2.57	0.47
10:QJ:47:PHE:CE1	10:QJ:63:PHE:HB2	2.33	0.47
12:QL:22:SER:C	12:QL:24:VAL:H	2.22	0.47
12:QL:115:LYS:O	12:QL:117:ARG:N	2.47	0.47
13:QM:23:TYR:HB3	13:QM:67:GLU:CG	2.39	0.47
14:QN:41:ARG:CG	14:QN:41:ARG:HH11	2.28	0.47
15:QO:76:GLU:O	15:QO:78:TYR:N	2.48	0.47
17:QQ:63:ARG:HG2	17:QQ:64:PRO:CD	2.45	0.47
18:QR:46:GLU:HG3	18:QR:47:THR:N	2.29	0.47
22:QV:76:A:C2	25:RA:2450:A:H2'	2.50	0.47
25:RA:47:C:O2	25:RA:178:G:N2	2.30	0.47
25:RA:217:G:H2'	25:RA:218:A:O4'	2.14	0.47
25:RA:413:C:H6	25:RA:413:C:O5'	1.98	0.47
25:RA:467:G:H8	25:RA:467:G:O5'	1.98	0.47
25:RA:520:G:H2'	25:RA:521:G:C8	2.50	0.47
25:RA:804:A:H2'	25:RA:806:C:N4	2.29	0.47
25:RA:1009:A:OP2	25:RA:1010:A:OP2	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1210:A:O5'	25:RA:1212:G:H5'	2.15	0.47
25:RA:1281:G:C5	25:RA:1282:U:C5	3.03	0.47
25:RA:1543:A:C2	25:RA:1545:A:C8	3.03	0.47
25:RA:2549:G:N2	25:RA:2560:C:C2	2.82	0.47
25:RA:2626:C:N4	25:RA:2777:G:H1	2.10	0.47
25:RA:2842:G:N2	25:RA:2876:G:H1'	2.30	0.47
25:RA:2881:C:H2'	25:RA:2882:A:C8	2.50	0.47
25:RA:2887:U:O2'	25:RA:2888:C:H5'	2.14	0.47
26:RB:45:A:C2'	26:RB:46:A:H5'	2.45	0.47
28:RE:17:ASP:N	28:RE:17:ASP:OD2	2.46	0.47
28:RE:121:ASN:O	28:RE:122:PHE:C	2.57	0.47
30:RG:16:ARG:NH2	30:RG:28:VAL:O	2.48	0.47
30:RG:44:GLY:HA2	30:RG:88:ILE:HG12	1.97	0.47
31:RH:18:GLU:HA	31:RH:18:GLU:OE2	2.14	0.47
32:RI:69:LYS:O	32:RI:73:GLU:HB2	2.15	0.47
34:RO:53:LYS:CD	34:RO:56:ASP:OD1	2.63	0.47
37:RR:74:LYS:O	37:RR:76:VAL:N	2.45	0.47
38:RS:61:ASN:O	38:RS:65:VAL:HG23	2.15	0.47
45:RZ:35:ARG:HH11	45:RZ:35:ARG:HB3	1.79	0.47
45:RZ:165:VAL:HG12	45:RZ:166:SER:N	2.30	0.47
50:R4:3:GLU:HG3	50:R4:4:GLY:H	1.79	0.47
51:R5:39:MET:C	51:R5:40:LYS:HG3	2.39	0.47
53:R7:25:PRO:HA	53:R7:28:ARG:CZ	2.45	0.47
1:XA:16:A:N1	1:XA:919:A:H2	2.13	0.47
1:XA:345:C:H4'	1:XA:346:G:O5'	2.15	0.47
1:XA:433:C:H6	1:XA:433:C:O5'	1.97	0.47
1:XA:745:C:OP1	1:XA:851:G:O2'	2.27	0.47
1:XA:1122:U:C4	1:XA:1123:A:N7	2.83	0.47
2:XB:67:THR:C	2:XB:68:ILE:HD12	2.40	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
6:XF:40:VAL:HG22	6:XF:41:GLU:H	1.80	0.47
7:XG:50:ILE:CG2	7:XG:61:VAL:HG21	2.45	0.47
7:XG:70:LYS:O	7:XG:138:LYS:HE3	2.15	0.47
8:XH:68:ARG:HH11	8:XH:68:ARG:HG2	1.80	0.47
11:XK:32:ILE:HD12	11:XK:72:ALA:CB	2.36	0.47
14:XN:12:ARG:C	14:XN:14:PRO:CD	2.81	0.47
16:XP:55:ARG:O	16:XP:56:ALA:C	2.57	0.47
18:XR:31:LEU:HD23	18:XR:31:LEU:N	2.29	0.47
18:XR:53:ARG:C	18:XR:55:ARG:H	2.22	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:40:ILE:CG1	19:XS:41:VAL:N	2.78	0.47
25:YA:902:C:O2'	25:YA:903:C:H5'	2.15	0.47
25:YA:2055:C:H4'	25:YA:2056:G:H5''	1.97	0.47
25:YA:2469:A:H2	25:YA:2481:G:N2	2.10	0.47
27:YD:136:ILE:HD12	27:YD:136:ILE:N	2.30	0.47
27:YD:183:ARG:CG	27:YD:183:ARG:NH1	2.69	0.47
28:YE:61:ARG:O	28:YE:63:LEU:CG	2.57	0.47
28:YE:101:ARG:HD2	28:YE:171:GLU:HA	1.97	0.47
29:YF:109:GLY:O	29:YF:110:LEU:C	2.58	0.47
29:YF:162:LEU:HD23	29:YF:165:ARG:HH21	1.79	0.47
30:YG:88:ILE:O	30:YG:88:ILE:CD1	2.54	0.47
30:YG:109:VAL:C	30:YG:112:PRO:HD2	2.40	0.47
31:YH:104:GLU:HG3	31:YH:114:VAL:HG22	1.96	0.47
33:YN:42:TRP:HA	33:YN:48:MET:CE	2.42	0.47
33:YN:57:ALA:CA	33:YN:60:ILE:HD11	2.44	0.47
34:YO:50:GLY:O	34:YO:51:ALA:C	2.57	0.47
34:YO:53:LYS:CD	34:YO:56:ASP:OD1	2.63	0.47
36:YQ:80:GLU:HG3	36:YQ:81:VAL:N	2.27	0.47
44:YY:56:PRO:O	44:YY:58:GLY:N	2.48	0.47
50:Y4:50:VAL:O	50:Y4:50:VAL:HG13	2.15	0.47
52:Y6:8:LYS:O	52:Y6:27:LYS:HG2	2.15	0.47
52:Y6:20:ASN:O	52:Y6:21:TYR:HB2	2.15	0.47
1:QA:20:U:H1'	1:QA:916:G:N2	2.29	0.47
1:QA:719:C:C2	18:QR:50:ILE:HD13	2.50	0.47
1:QA:1190:G:P	3:QC:5:ILE:HG23	2.55	0.47
1:QA:1362:C:H2'	1:QA:1362(A):C:H5''	1.96	0.47
1:QA:1401:G:N2	1:QA:1501:C:O2	2.43	0.47
2:QB:172:ILE:O	2:QB:175:ARG:CB	2.63	0.47
4:QD:79:PHE:HE2	4:QD:83:SER:HB2	1.79	0.47
4:QD:146:ILE:HG22	4:QD:146:ILE:O	2.15	0.47
6:QF:40:VAL:HG22	6:QF:41:GLU:N	2.30	0.47
6:QF:41:GLU:HG2	6:QF:43:LEU:CD1	2.44	0.47
7:QG:70:LYS:O	7:QG:138:LYS:HE3	2.15	0.47
10:QJ:74:ILE:HG12	10:QJ:74:ILE:O	2.14	0.47
10:QJ:80:LYS:NZ	10:QJ:80:LYS:HB2	2.30	0.47
11:QK:32:ILE:HD11	11:QK:68:ALA:O	2.14	0.47
16:QP:25:ARG:HG3	16:QP:25:ARG:HH11	1.79	0.47
16:QP:69:THR:O	16:QP:73:LEU:HG	2.14	0.47
17:QQ:82:MET:C	17:QQ:84:LEU:N	2.72	0.47
20:QT:101:GLY:C	20:QT:103:GLY:N	2.73	0.47
21:QU:15:ARG:HG2	21:QU:15:ARG:NH1	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:76:C:H1'	48:R2:62:THR:HG21	1.96	0.47
25:RA:134:C:H2'	25:RA:135:G:C8	2.50	0.47
25:RA:322:A:C5	25:RA:340:A:C2	3.02	0.47
25:RA:971:C:H2'	25:RA:972:G:O4'	2.15	0.47
25:RA:1614:A:N1	42:RW:91:GLY:HA2	2.29	0.47
25:RA:1678:G:N2	25:RA:1989:G:N2	2.60	0.47
25:RA:1826:G:H2'	25:RA:1827:C:H6	1.79	0.47
25:RA:2123:G:N2	25:RA:2176:A:H1'	2.30	0.47
26:RB:36:C:H42	26:RB:49:C:H1'	1.80	0.47
26:RB:46:A:H2'	26:RB:47:C:H6	1.79	0.47
27:RD:102:LYS:O	27:RD:103:ARG:HG3	2.15	0.47
27:RD:231:HIS:ND1	27:RD:232:PRO:HD2	2.30	0.47
29:RF:29:ASN:H	29:RF:112:MET:HE3	1.75	0.47
29:RF:65:TRP:CH2	29:RF:72:ARG:HB3	2.50	0.47
31:RH:41:MET:HG3	31:RH:54:ARG:HA	1.96	0.47
32:RI:78:THR:N	32:RI:104:GLN:HE22	2.05	0.47
37:RR:56:LYS:HE2	37:RR:94:TYR:OH	2.14	0.47
43:RX:54:VAL:C	43:RX:55:ASN:HD22	2.23	0.47
50:R4:53:GLU:O	50:R4:57:GLU:HG3	2.14	0.47
53:R7:2:LYS:HG2	53:R7:3:ARG:N	2.30	0.47
1:XA:224:C:H2'	1:XA:225:C:H6	1.77	0.47
1:XA:236:G:OP1	17:XQ:40:LYS:NZ	2.32	0.47
1:XA:667:G:H8	1:XA:667:G:O5'	1.98	0.47
1:XA:778:G:H8	1:XA:778:G:O5'	1.98	0.47
1:XA:1094:G:HO2'	1:XA:1095:U:P	2.34	0.47
1:XA:1205:U:H5'	3:XC:190:ARG:NH2	2.30	0.47
1:XA:1309:G:C6	1:XA:1329:A:C2	3.02	0.47
4:XD:31:CYS:O	4:XD:32:ALA:CB	2.62	0.47
4:XD:110:PHE:HD1	4:XD:110:PHE:H	1.62	0.47
5:XE:77:PRO:HG2	5:XE:142:LEU:HD22	1.97	0.47
6:XF:69:GLU:O	6:XF:71:ARG:N	2.48	0.47
9:XI:17:VAL:HG11	9:XI:81:ILE:HA	1.96	0.47
18:XR:64:ARG:O	18:XR:65:ILE:C	2.58	0.47
25:YA:270(I):G:N3	25:YA:270(R):G:N2	2.63	0.47
25:YA:313:C:O5'	25:YA:313:C:H6	1.98	0.47
25:YA:980:A:C6	25:YA:981:A:N1	2.83	0.47
25:YA:1006:C:H1'	33:YN:106:MET:CE	2.44	0.47
25:YA:1030:G:OP2	36:YQ:128:LYS:HE2	2.15	0.47
25:YA:1449:A:C2	25:YA:1530:G:H1'	2.50	0.47
25:YA:1525:G:H2'	25:YA:1526:G:C8	2.50	0.47
25:YA:1769:G:C6	25:YA:1984:G:C6	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1803:A:O2'	27:YD:259:THR:HG21	2.15	0.47
25:YA:1914:C:H2'	25:YA:1915:U:O4'	2.15	0.47
25:YA:2437:U:O2'	25:YA:2438:U:H5'	2.15	0.47
25:YA:2439:A:O2'	25:YA:2440:C:OP2	2.29	0.47
25:YA:2525:G:C2	25:YA:2539:C:C2	3.03	0.47
25:YA:2576:G:OP1	25:YA:2577:A:OP1	2.32	0.47
25:YA:2688:U:C5	25:YA:2720:U:OP2	2.67	0.47
25:YA:2857:G:N1	25:YA:2861:G:C6	2.83	0.47
28:YE:18:ASP:O	28:YE:19:ARG:C	2.55	0.47
30:YG:13:GLU:O	30:YG:13:GLU:HG3	2.14	0.47
30:YG:52:ILE:HG22	30:YG:52:ILE:O	2.15	0.47
30:YG:104:GLU:OE1	50:Y4:23:GLU:HB3	2.15	0.47
31:YH:9:ILE:O	31:YH:10:PRO:O	2.33	0.47
31:YH:18:GLU:HA	31:YH:18:GLU:OE2	2.15	0.47
31:YH:94:TYR:N	31:YH:94:TYR:CD1	2.82	0.47
32:YI:120:ILE:HD11	32:YI:126:TYR:CZ	2.50	0.47
33:YN:96:GLU:O	33:YN:97:ARG:C	2.57	0.47
34:YO:37:ASP:O	34:YO:62:VAL:HG23	2.14	0.47
40:YU:27:LEU:O	40:YU:30:LYS:N	2.41	0.47
40:YU:27:LEU:C	40:YU:29:SER:N	2.73	0.47
44:YY:68:HIS:O	44:YY:71:LYS:HB2	2.14	0.47
44:YY:81:LYS:HZ2	44:YY:98:VAL:CG1	2.28	0.47
54:Y8:9:GLY:O	54:Y8:13:ARG:HG2	2.15	0.47
54:Y8:40:GLU:O	54:Y8:41:ILE:C	2.56	0.47
1:QA:56:U:H4'	32:YI:82:ARG:HH12	1.79	0.46
1:QA:73:G:C2	1:QA:74:C:C2	3.04	0.46
1:QA:252:U:C4	1:QA:253:U:O4	2.68	0.46
1:QA:410:G:H5''	1:QA:411:A:OP1	2.15	0.46
1:QA:1159:U:O2'	1:QA:1160:G:N7	2.49	0.46
1:QA:1366:C:H2'	1:QA:1367:C:C6	2.49	0.46
1:QA:1523:G:H2'	1:QA:1524:C:C6	2.50	0.46
2:QB:168:THR:CB	2:QB:192:SER:HB2	2.41	0.46
2:QB:174:VAL:O	2:QB:178:ARG:HB3	2.16	0.46
3:QC:58:GLU:O	3:QC:59:ARG:HG3	2.15	0.46
3:QC:172:ARG:O	3:QC:173:VAL:HG23	2.15	0.46
5:QE:20:GLN:O	5:QE:21:ALA:C	2.57	0.46
5:QE:63:ARG:C	5:QE:66:MET:HE2	2.39	0.46
7:QG:92:SER:HB3	7:QG:95:ARG:CB	2.45	0.46
8:QH:74:PRO:O	8:QH:75:ARG:C	2.58	0.46
11:QK:33:THR:HB	11:QK:37:GLY:C	2.40	0.46
15:QO:82:ILE:O	15:QO:86:GLY:N	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:QQ:59:ILE:N	17:QQ:59:ILE:CD1	2.78	0.46
19:QS:3:ARG:HG3	19:QS:4:SER:N	2.24	0.46
25:RA:154:G:C2	25:RA:173:G:C2	3.03	0.46
25:RA:270(S):G:C2'	25:RA:270(T):G:H5'	2.45	0.46
25:RA:571:A:C5	25:RA:575:A:N7	2.83	0.46
25:RA:733:G:O6	25:RA:761:A:C8	2.68	0.46
25:RA:747:U:N1	51:R5:2:ALA:HB3	2.30	0.46
25:RA:1605:C:H5'	25:RA:1610:A:N6	2.30	0.46
25:RA:2380:C:H2'	25:RA:2381:C:O4'	2.16	0.46
25:RA:2590:A:O2'	25:RA:2591:C:H5'	2.14	0.46
26:RB:43:C:H1'	30:RG:93:THR:O	2.15	0.46
26:RB:80:U:O2'	26:RB:81:G:H5''	2.15	0.46
27:RD:18:VAL:CG1	27:RD:19:ALA:N	2.78	0.46
27:RD:35:LYS:HD3	27:RD:63:ARG:HB3	1.96	0.46
27:RD:183:ARG:CG	27:RD:183:ARG:NH1	2.69	0.46
28:RE:87:GLU:O	28:RE:89:ASP:N	2.48	0.46
28:RE:188:VAL:O	28:RE:188:VAL:HG13	2.15	0.46
30:RG:98:ARG:CA	30:RG:101:ILE:HG12	2.40	0.46
33:RN:9:VAL:HG21	33:RN:48:MET:CB	2.45	0.46
33:RN:27:ALA:O	33:RN:28:THR:C	2.57	0.46
37:RR:78:LYS:O	37:RR:78:LYS:HG2	2.15	0.46
38:RS:52:SER:O	38:RS:56:LEU:CD2	2.60	0.46
48:R2:17:SER:CB	48:R2:18:PRO:CA	2.92	0.46
52:R6:48:VAL:O	52:R6:49:HIS:HB2	2.15	0.46
54:R8:56:GLU:C	54:R8:58:ILE:N	2.73	0.46
55:R9:19:ARG:NH2	55:R9:26:ILE:HD11	2.30	0.46
1:XA:338:A:C6	1:XA:339:C:C4	3.03	0.46
1:XA:342:C:C2	1:XA:348:G:N2	2.83	0.46
1:XA:1187:G:C4	1:XA:1188:A:C8	3.03	0.46
1:XA:1298:C:H4'	1:XA:1299:A:C4	2.50	0.46
2:XB:15:VAL:HG23	2:XB:209:ARG:HE	1.80	0.46
3:XC:113:ALA:O	3:XC:115:LEU:N	2.48	0.46
4:XD:126:ILE:HG22	4:XD:127:THR:H	1.80	0.46
4:XD:192:GLU:H	4:XD:192:GLU:HG3	1.57	0.46
7:XG:140:ASP:HA	7:XG:143:ARG:HH11	1.79	0.46
13:XM:119:GLY:HA3	22:XV:29:G:OP1	2.15	0.46
25:YA:754:C:H2'	25:YA:755:C:C6	2.51	0.46
25:YA:851:U:H5'	49:Y3:49:LYS:HD2	1.97	0.46
25:YA:928:G:H5''	25:YA:929:G:OP2	2.14	0.46
25:YA:1021:A:H62	25:YA:1141:U:H3	1.63	0.46
25:YA:1204:A:HO2'	25:YA:1205:U:P	2.37	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1471:A:C8	25:YA:1521:G:N2	2.83	0.46
25:YA:2084:C:O2'	25:YA:2085:C:H5'	2.15	0.46
25:YA:2293:C:H42	25:YA:2339:G:H1	1.63	0.46
25:YA:2824:C:C4	25:YA:2825:C:C4	3.03	0.46
25:YA:2869:G:H2'	25:YA:2870:C:O4'	2.15	0.46
30:YG:135:LEU:HD11	30:YG:157:ILE:HD12	1.98	0.46
31:YH:86:GLU:O	31:YH:132:ARG:HA	2.16	0.46
33:YN:35:ARG:HG3	33:YN:35:ARG:O	2.16	0.46
35:YP:46:LYS:O	35:YP:48:PRO:N	2.48	0.46
37:YR:28:LEU:HD13	37:YR:28:LEU:C	2.40	0.46
37:YR:61:HIS:O	37:YR:65:LEU:HD13	2.14	0.46
41:YV:6:LYS:HD3	41:YV:11:GLN:HG2	1.96	0.46
51:Y5:45:VAL:HG12	51:Y5:45:VAL:O	2.13	0.46
54:Y8:29:LYS:HE3	54:Y8:41:ILE:O	2.15	0.46
1:QA:540:G:H2'	1:QA:541:G:O4'	2.15	0.46
1:QA:618:C:N4	1:QA:621:A:N7	2.62	0.46
1:QA:953:G:C6	1:QA:954:G:C4	3.04	0.46
1:QA:980:C:H3'	1:QA:981:U:H6	1.80	0.46
2:QB:95:GLN:NE2	2:QB:147:LYS:HE2	2.27	0.46
4:QD:9:CYS:SG	4:QD:22:LYS:HE3	2.55	0.46
5:QE:12:LEU:HB3	5:QE:31:LEU:HB2	1.98	0.46
7:QG:95:ARG:O	7:QG:96:GLN:C	2.58	0.46
9:QI:59:PHE:CZ	9:QI:88:TYR:CE1	3.01	0.46
11:QK:70:LYS:HA	11:QK:73:MET:HE3	1.97	0.46
11:QK:104:GLN:O	11:QK:106:LYS:HG3	2.15	0.46
12:QL:43:VAL:HG23	12:QL:93:LEU:HD22	1.97	0.46
13:QM:80:ARG:O	13:QM:82:MET:O	2.33	0.46
19:QS:24:ALA:O	19:QS:25:LYS:CB	2.63	0.46
19:QS:40:ILE:CG1	19:QS:41:VAL:N	2.78	0.46
20:QT:53:LEU:HD12	20:QT:100:ILE:HG23	1.98	0.46
25:RA:224:G:C2	25:RA:225:A:C4	3.03	0.46
25:RA:526:A:N1	25:RA:2625:G:O2'	2.44	0.46
25:RA:612:G:C2	25:RA:617:G:C5	3.03	0.46
25:RA:1365:A:OP2	47:R1:3:LYS:HB2	2.15	0.46
25:RA:1542:G:O6	25:RA:1543:A:C6	2.65	0.46
25:RA:1662:C:O2'	25:RA:2687:U:OP1	2.29	0.46
25:RA:1846:G:H5'	25:RA:1847:A:OP2	2.15	0.46
25:RA:2071:A:H2	25:RA:2441:C:N3	2.12	0.46
25:RA:2102:U:H2'	25:RA:2103:C:C6	2.50	0.46
25:RA:2224:G:OP1	27:RD:268:ARG:HD3	2.15	0.46
25:RA:2538:C:H2'	25:RA:2539:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2711:A:H5''	25:RA:2712:U:H5'	1.97	0.46
26:RB:33:G:O2'	26:RB:34:U:H5'	2.16	0.46
27:RD:27:THR:O	27:RD:29:PRO:CD	2.62	0.46
27:RD:110:GLY:O	27:RD:111:LEU:C	2.59	0.46
29:RF:61:GLY:O	29:RF:62:ARG:C	2.58	0.46
31:RH:4:ILE:H	31:RH:4:ILE:CD1	2.25	0.46
31:RH:153:LYS:HG3	31:RH:162:ILE:H	1.78	0.46
34:RO:50:GLY:O	34:RO:51:ALA:C	2.57	0.46
34:RO:104:ARG:HD3	39:RT:36:GLU:OE2	2.15	0.46
35:RP:37:GLY:O	35:RP:38:GLN:C	2.58	0.46
35:RP:98:GLU:O	35:RP:99:LEU:C	2.57	0.46
38:RS:99:LYS:C	38:RS:101:LEU:N	2.72	0.46
41:RV:30:GLY:O	41:RV:31:ALA:O	2.34	0.46
44:RY:68:HIS:O	44:RY:71:LYS:HB2	2.15	0.46
47:R1:79:GLY:N	47:R1:80:LEU:HD23	2.30	0.46
51:R5:43:HIS:N	51:R5:43:HIS:ND1	2.63	0.46
51:R5:56:LYS:O	51:R5:57:VAL:C	2.57	0.46
54:R8:29:LYS:HE3	54:R8:41:ILE:O	2.15	0.46
1:XA:44:G:H2'	1:XA:45:U:O4'	2.15	0.46
1:XA:655:A:C2	1:XA:754:C:C4	3.04	0.46
1:XA:977:A:H1'	1:XA:982:U:O4	2.15	0.46
1:XA:986:A:H2'	1:XA:987:G:C8	2.50	0.46
1:XA:1124:G:OP2	1:XA:1124:G:C8	2.67	0.46
2:XB:174:VAL:O	2:XB:178:ARG:HB3	2.15	0.46
3:XC:11:ARG:HG2	3:XC:11:ARG:HH11	1.79	0.46
3:XC:134:ILE:HG23	3:XC:151:VAL:HB	1.98	0.46
6:XF:41:GLU:HG2	6:XF:43:LEU:CD1	2.44	0.46
7:XG:95:ARG:O	7:XG:96:GLN:C	2.58	0.46
8:XH:80:ILE:HG23	8:XH:137:VAL:HG12	1.97	0.46
10:XJ:80:LYS:HB2	10:XJ:80:LYS:NZ	2.30	0.46
13:XM:36:LYS:C	13:XM:36:LYS:CD	2.85	0.46
16:XP:60:LEU:CA	16:XP:64:ALA:HB3	2.43	0.46
18:XR:46:GLU:HG3	18:XR:47:THR:N	2.29	0.46
25:YA:24:G:C5	25:YA:25:U:C5	3.03	0.46
25:YA:83:G:O2'	25:YA:84:A:P	2.74	0.46
25:YA:273:G:C2	25:YA:273(A):G:C8	3.03	0.46
25:YA:531:C:H4'	25:YA:532:A:H5''	1.97	0.46
25:YA:1004:C:H5''	25:YA:1005:C:OP1	2.15	0.46
25:YA:1104:C:H2'	25:YA:1105:U:C6	2.49	0.46
25:YA:1203:G:N1	25:YA:1241:A:OP2	2.44	0.46
25:YA:1319:G:O6	25:YA:1333:C:N4	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2404:C:O3'	35:YP:77:ARG:NH2	2.48	0.46
26:YB:77:U:P	45:YZ:19:ARG:HH22	2.38	0.46
27:YD:110:GLY:O	27:YD:111:LEU:C	2.58	0.46
28:YE:7:VAL:HG11	39:YT:1:MET:CE	2.45	0.46
28:YE:103:ASP:OD2	28:YE:168:MET:HG2	2.15	0.46
29:YF:46:ARG:CG	29:YF:46:ARG:NH1	2.71	0.46
31:YH:89:ILE:HD13	31:YH:89:ILE:H	1.80	0.46
38:YS:24:LEU:HB2	38:YS:85:VAL:HG12	1.98	0.46
38:YS:99:LYS:C	38:YS:101:LEU:N	2.72	0.46
40:YU:73:GLY:O	40:YU:74:LEU:CB	2.63	0.46
41:YV:5:VAL:HG13	41:YV:14:VAL:HG21	1.97	0.46
43:YX:14:SER:O	43:YX:15:GLU:C	2.57	0.46
43:YX:26:TYR:HB3	43:YX:92:LEU:HD12	1.97	0.46
47:Y1:76:ARG:H	47:Y1:76:ARG:CD	2.28	0.46
1:QA:509:A:H3'	1:QA:509:A:C8	2.51	0.46
1:QA:513:C:H42	1:QA:538:G:H1	1.62	0.46
1:QA:540:G:H2'	1:QA:541:G:H8	1.77	0.46
1:QA:715:A:H2'	1:QA:716:A:C8	2.51	0.46
1:QA:1053:G:N7	1:QA:1199:U:H3'	2.31	0.46
1:QA:1054:C:P	1:QA:1197:G:OP2	2.67	0.46
1:QA:1122:U:C4	1:QA:1123:A:N7	2.83	0.46
1:QA:1154:G:N3	1:QA:1155:G:C8	2.84	0.46
1:QA:1321:C:N4	1:QA:1322:C:N3	2.64	0.46
2:QB:155:LEU:C	2:QB:157:ARG:H	2.23	0.46
7:QG:50:ILE:CG2	7:QG:61:VAL:HG21	2.45	0.46
8:QH:28:ALA:CB	8:QH:57:PRO:HB2	2.45	0.46
17:QQ:29:HIS:N	17:QQ:33:GLY:O	2.47	0.46
25:RA:309:G:O3'	44:RY:18:GLY:HA2	2.15	0.46
25:RA:587:C:C5	25:RA:671:C:H1'	2.50	0.46
25:RA:869:G:N2	25:RA:908:C:O2	2.48	0.46
25:RA:1749:A:H2'	25:RA:1750:G:O4'	2.15	0.46
25:RA:1777:U:O2'	25:RA:1778:U:H5'	2.15	0.46
25:RA:2197:U:H1'	25:RA:2198:A:N7	2.30	0.46
25:RA:2327:A:N6	25:RA:2387:U:O4	2.48	0.46
25:RA:2419:U:O4	54:R8:30:ARG:CZ	2.63	0.46
26:RB:48:A:H2'	26:RB:49:C:C6	2.50	0.46
27:RD:27:THR:CG2	27:RD:28:GLU:N	2.66	0.46
30:RG:60:LEU:HD23	30:RG:60:LEU:C	2.41	0.46
31:RH:9:ILE:O	31:RH:10:PRO:O	2.33	0.46
31:RH:127:GLU:OE2	31:RH:130:ARG:NH2	2.47	0.46
32:RI:11:ASN:O	32:RI:12:LEU:HB2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:RN:134:ARG:N	33:RN:135:PRO:CD	2.58	0.46
34:RO:112:MET:O	34:RO:115:VAL:CG2	2.64	0.46
43:RX:12:VAL:O	43:RX:12:VAL:HG13	2.15	0.46
43:RX:24:GLY:O	43:RX:82:GLN:HA	2.16	0.46
43:RX:87:GLN:C	43:RX:88:LYS:HG3	2.40	0.46
45:RZ:43:GLU:O	45:RZ:47:VAL:HG23	2.15	0.46
48:R2:7:ARG:HG3	48:R2:7:ARG:NH1	2.25	0.46
1:XA:60:A:P	1:XA:60:A:H8	2.37	0.46
1:XA:278:G:N2	17:XQ:95:TYR:HB3	2.30	0.46
1:XA:735:C:H2'	1:XA:736:C:C6	2.50	0.46
1:XA:980:C:H5'	1:XA:981:U:OP2	2.16	0.46
1:XA:987:G:H1	1:XA:1218:C:N4	2.08	0.46
1:XA:1096:C:H2'	1:XA:1097:C:C6	2.49	0.46
1:XA:1112:C:O2	3:XC:178:LEU:HB2	2.15	0.46
1:XA:1150:U:O2	10:XJ:39:PRO:HG2	2.16	0.46
2:XB:77:ALA:HB1	2:XB:211:ILE:HG21	1.97	0.46
3:XC:73:PRO:O	3:XC:77:ILE:HG13	2.16	0.46
9:XI:9:ARG:HA	9:XI:76:ALA:HB1	1.96	0.46
10:XJ:38:ILE:CD1	10:XJ:71:LEU:HB3	2.46	0.46
11:XK:80:VAL:O	11:XK:106:LYS:HD3	2.16	0.46
12:XL:120:TYR:O	12:XL:121:GLY:C	2.57	0.46
12:XL:127:GLU:O	12:XL:128:ALA:CB	2.62	0.46
15:XO:82:ILE:HD11	15:XO:88:ARG:HG2	1.95	0.46
20:XT:93:GLU:HG2	20:XT:93:GLU:O	2.15	0.46
20:XT:96:GLY:O	20:XT:99:LEU:HD13	2.16	0.46
21:XU:2:GLY:C	21:XU:4:GLY:H	2.23	0.46
25:YA:270(S):G:H8	25:YA:270(S):G:O5'	1.96	0.46
25:YA:282:A:C8	25:YA:359:A:C6	3.04	0.46
25:YA:377:C:H2'	25:YA:378:C:C6	2.50	0.46
25:YA:971:C:N4	25:YA:972:G:C2	2.84	0.46
25:YA:1568:G:OP1	27:YD:61:LEU:N	2.48	0.46
25:YA:1605:C:C5	25:YA:1606:G:C5	3.03	0.46
29:YF:184:TYR:CD2	29:YF:188:ARG:HD2	2.50	0.46
30:YG:20:ILE:HD13	30:YG:25:TYR:HB2	1.98	0.46
32:YI:53:ALA:O	32:YI:56:LYS:HG3	2.14	0.46
33:YN:30:ILE:O	33:YN:34:LEU:CD2	2.63	0.46
34:YO:61:VAL:O	34:YO:84:ALA:HB1	2.16	0.46
35:YP:37:GLY:O	35:YP:41:ARG:HD3	2.15	0.46
35:YP:85:LEU:HD23	35:YP:88:LEU:HD22	1.96	0.46
37:YR:10:LEU:C	37:YR:12:ARG:N	2.72	0.46
40:YU:57:PHE:C	40:YU:59:ARG:N	2.74	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:61:VAL:HA	41:YV:94:LEU:HD23	1.97	0.46
42:YW:36:LEU:CD1	42:YW:47:VAL:HG12	2.44	0.46
46:Y0:74:ARG:C	46:Y0:74:ARG:HD3	2.40	0.46
50:Y4:15:ILE:HG22	50:Y4:20:ASN:CA	2.45	0.46
52:Y6:15:GLU:HB3	52:Y6:16:CYS:H	1.46	0.46
55:Y9:19:ARG:NH2	55:Y9:26:ILE:HD11	2.31	0.46
1:QA:230:G:C2	1:QA:231:G:C4	3.04	0.46
1:QA:451:A:H1'	1:QA:452:A:C8	2.51	0.46
1:QA:474:G:H5''	16:QP:81:ARG:HE	1.81	0.46
1:QA:590:C:H2'	1:QA:591:U:C6	2.49	0.46
1:QA:1415:G:C6	1:QA:1486:G:C6	3.04	0.46
2:QB:224:GLN:HA	2:QB:229:VAL:HG23	1.97	0.46
3:QC:127:ARG:CG	3:QC:127:ARG:NH1	2.74	0.46
5:QE:72:GLN:C	5:QE:74:GLY:H	2.23	0.46
10:QJ:49:VAL:HG22	14:QN:41:ARG:CD	2.45	0.46
11:QK:34:ASP:HB2	11:QK:35:PRO:CD	2.45	0.46
14:QN:41:ARG:HH11	14:QN:41:ARG:HG2	1.79	0.46
20:QT:44:ALA:O	20:QT:91:LEU:HB3	2.16	0.46
20:QT:98:PRO:O	20:QT:100:ILE:N	2.42	0.46
25:RA:195:A:H2'	25:RA:198:C:N4	2.30	0.46
25:RA:219:G:O2'	25:RA:220:G:H5'	2.16	0.46
25:RA:966:G:H2'	25:RA:967:C:C6	2.50	0.46
25:RA:1135:C:N4	25:RA:1139:G:C6	2.84	0.46
25:RA:2156:G:C6	25:RA:2157:G:N2	2.83	0.46
25:RA:2232:U:P	47:R1:40:ARG:HH12	2.39	0.46
25:RA:2320:A:H2'	25:RA:2320:A:N3	2.31	0.46
25:RA:2667:C:O2	31:RH:109:PHE:HB3	2.15	0.46
28:RE:33:VAL:HG12	28:RE:90:THR:H	1.81	0.46
28:RE:94:GLU:C	28:RE:96:PHE:N	2.73	0.46
29:RF:31:HIS:O	29:RF:34:TRP:HB3	2.15	0.46
32:RI:48:GLU:O	32:RI:51:ILE:HB	2.15	0.46
32:RI:112:LYS:H	32:RI:112:LYS:HG2	1.33	0.46
35:RP:23:PRO:HG2	35:RP:23:PRO:O	2.14	0.46
35:RP:81:GLN:HB3	35:RP:110:TYR:HB3	1.97	0.46
37:RR:29:LEU:N	37:RR:29:LEU:CD1	2.79	0.46
39:RT:29:ARG:NH1	39:RT:46:GLU:OE1	2.48	0.46
40:RU:27:LEU:HD12	40:RU:31:SER:HB3	1.98	0.46
41:RV:81:TYR:C	41:RV:82:ARG:CG	2.89	0.46
42:RW:4:LYS:HA	42:RW:106:ILE:HA	1.98	0.46
44:RY:15:VAL:O	44:RY:21:LYS:HA	2.16	0.46
44:RY:35:TYR:CD1	44:RY:35:TYR:O	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:49:VAL:HG12	47:R1:51:VAL:CG2	2.45	0.46
49:R3:56:VAL:CG1	49:R3:57:GLU:N	2.74	0.46
49:R3:59:VAL:CG1	49:R3:60:GLU:H	2.28	0.46
50:R4:61:ARG:C	50:R4:63:TYR:N	2.73	0.46
50:R4:64:GLY:C	50:R4:66:SER:N	2.73	0.46
52:R6:18:ARG:O	52:R6:19:ARG:O	2.33	0.46
54:R8:52:LYS:O	54:R8:52:LYS:CG	2.64	0.46
1:XA:352:C:H4'	1:XA:354:G:OP1	2.15	0.46
1:XA:1053:G:N7	1:XA:1199:U:H3'	2.30	0.46
1:XA:1206:G:C5	1:XA:1207:G:N7	2.84	0.46
1:XA:1263:C:H2'	1:XA:1264:C:H6	1.80	0.46
1:XA:1446:A:O2'	1:XA:1447:G:O4'	2.34	0.46
2:XB:17:PHE:CD2	2:XB:44:LEU:HD21	2.47	0.46
2:XB:24:TRP:CZ2	2:XB:26:PRO:HB3	2.51	0.46
3:XC:23:TYR:CG	3:XC:24:ALA:N	2.83	0.46
3:XC:172:ARG:O	3:XC:173:VAL:CG2	2.63	0.46
4:XD:135:LEU:O	4:XD:137:SER:N	2.48	0.46
6:XF:100:ASN:HD22	6:XF:100:ASN:HA	1.48	0.46
8:XH:86:ILE:CG1	8:XH:133:LEU:HD22	2.46	0.46
12:XL:43:VAL:HG13	12:XL:55:VAL:CG2	2.45	0.46
15:XO:77:ARG:HA	15:XO:80:ALA:HB3	1.95	0.46
17:XQ:92:ARG:HG3	17:XQ:92:ARG:NH1	2.30	0.46
25:YA:65:C:H5'	43:YX:71:GLY:HA3	1.96	0.46
25:YA:846:C:C4	25:YA:930:U:C4	3.04	0.46
25:YA:1166:C:N4	25:YA:1183:G:H1	2.11	0.46
25:YA:1203:G:H3'	25:YA:1204:A:H5''	1.96	0.46
25:YA:1204:A:H1'	25:YA:1206:G:C8	2.51	0.46
25:YA:1374:G:C6	25:YA:1375:C:N3	2.83	0.46
25:YA:1608:A:C8	25:YA:1611:C:N4	2.83	0.46
25:YA:2451:A:N1	56:Z8:76:PPU:HE2	2.30	0.46
25:YA:2572:A:C4	28:YE:144:ARG:NH2	2.83	0.46
25:YA:2822:G:H2'	25:YA:2823:A:H5''	1.97	0.46
27:YD:18:VAL:CG1	27:YD:19:ALA:N	2.78	0.46
27:YD:102:LYS:O	27:YD:103:ARG:HG3	2.15	0.46
28:YE:54:GLN:HE21	28:YE:54:GLN:CA	2.27	0.46
31:YH:4:ILE:HG13	31:YH:6:ARG:HD3	1.97	0.46
34:YO:92:GLU:O	34:YO:93:PRO:C	2.58	0.46
34:YO:104:ARG:HG2	34:YO:121:VAL:HG12	1.97	0.46
35:YP:144:GLU:OE1	35:YP:144:GLU:N	2.48	0.46
36:YQ:109:VAL:HG13	36:YQ:113:GLN:OE1	2.16	0.46
37:YR:79:LEU:HD23	37:YR:79:LEU:O	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:85:PRO:C	37:YR:87:TYR:N	2.73	0.46
38:YS:28:VAL:HG11	38:YS:98:VAL:HG12	1.97	0.46
39:YT:96:ARG:CB	39:YT:96:ARG:HH11	2.29	0.46
1:QA:564:C:C4	1:QA:565:U:C4	3.04	0.46
1:QA:579:G:C6	1:QA:580:U:C4	3.04	0.46
1:QA:688:G:H2'	1:QA:689:C:H6	1.80	0.46
1:QA:1172:C:H2'	1:QA:1173:G:H8	1.79	0.46
1:QA:1310:G:OP1	13:QM:77:ASN:ND2	2.46	0.46
1:QA:1326:C:OP1	21:QU:17:THR:OG1	2.18	0.46
6:QF:3:ARG:HG3	6:QF:3:ARG:HH11	1.81	0.46
7:QG:95:ARG:NE	7:QG:99:LEU:HD11	2.30	0.46
9:QI:118:LYS:HZ2	9:QI:118:LYS:HB2	1.81	0.46
13:QM:7:VAL:CG1	30:RG:115:ARG:HH12	2.28	0.46
13:QM:23:TYR:HB2	13:QM:67:GLU:OE1	2.15	0.46
13:QM:30:ALA:O	13:QM:33:ALA:N	2.47	0.46
13:QM:65:LYS:NZ	13:QM:69:GLU:HG2	2.30	0.46
17:QQ:100:LYS:O	17:QQ:101:ARG:HB2	2.15	0.46
25:RA:588:U:O4	25:RA:670:A:H1'	2.16	0.46
25:RA:1204:A:C2	25:RA:1206:G:C2	3.04	0.46
25:RA:1818:U:H2'	27:RD:157:ARG:HG3	1.98	0.46
25:RA:1988:C:H2'	25:RA:1989:G:O4'	2.16	0.46
25:RA:2703:C:H2'	25:RA:2703:C:O2	2.14	0.46
28:RE:89:ASP:O	28:RE:90:THR:O	2.33	0.46
31:RH:86:GLU:O	31:RH:132:ARG:HA	2.15	0.46
34:RO:101:PRO:HA	34:RO:120:GLU:O	2.16	0.46
36:RQ:66:ILE:O	36:RQ:104:PHE:N	2.49	0.46
37:RR:75:LEU:HA	37:RR:78:LYS:HB3	1.97	0.46
43:RX:8:ILE:CD1	43:RX:42:ALA:HB1	2.46	0.46
44:RY:87:LYS:HB2	44:RY:87:LYS:HZ2	1.79	0.46
47:R1:76:ARG:HD2	47:R1:76:ARG:N	2.29	0.46
47:R1:83:GLU:OE1	47:R1:85:LEU:HB2	2.15	0.46
48:R2:15:LYS:H	48:R2:67:LYS:HZ3	1.63	0.46
1:XA:51:A:N7	1:XA:114:U:O2'	2.44	0.46
1:XA:437:U:H2'	1:XA:438:G:O4'	2.15	0.46
1:XA:468:A:O3'	16:XP:80:PHE:O	2.33	0.46
1:XA:833:U:H3	1:XA:853:G:H1	1.64	0.46
2:XB:155:LEU:C	2:XB:157:ARG:H	2.23	0.46
8:XH:122:ARG:O	8:XH:125:ARG:N	2.46	0.46
10:XJ:32:ALA:HB3	10:XJ:76:ASN:CB	2.34	0.46
11:XK:34:ASP:HB2	11:XK:35:PRO:CD	2.45	0.46
17:XQ:76:LEU:HD11	17:XQ:79:SER:H	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:XT:48:LYS:O	20:XT:49:ALA:C	2.59	0.46
25:YA:682:G:C6	25:YA:683:C:C4	3.03	0.46
25:YA:1180:C:H5'	25:YA:1181:C:OP2	2.15	0.46
25:YA:1862:G:C2	25:YA:1863:G:N7	2.84	0.46
25:YA:2031:A:N7	25:YA:2498:C:H1'	2.30	0.46
25:YA:2073:C:H2'	25:YA:2074:U:C6	2.47	0.46
25:YA:2301:C:C4	25:YA:2302:G:N7	2.84	0.46
25:YA:2532:G:H4'	25:YA:2657:A:C2	2.50	0.46
25:YA:2556:C:H2'	25:YA:2557:G:O4'	2.14	0.46
26:YB:111:U:H2'	26:YB:112:G:C8	2.51	0.46
27:YD:35:LYS:HE3	27:YD:65:ILE:N	2.31	0.46
27:YD:48:ARG:HG3	27:YD:48:ARG:NH1	2.31	0.46
27:YD:105:ILE:HG23	27:YD:106:ILE:O	2.15	0.46
28:YE:3:GLY:HA3	28:YE:81:ILE:HG21	1.97	0.46
28:YE:63:LEU:O	28:YE:64:LYS:CB	2.62	0.46
29:YF:183:VAL:O	29:YF:184:TYR:C	2.57	0.46
30:YG:36:LYS:O	30:YG:37:VAL:HG23	2.15	0.46
30:YG:102:PHE:HA	30:YG:105:LYS:HE3	1.98	0.46
31:YH:106:THR:HG22	31:YH:112:PRO:HB3	1.97	0.46
33:YN:46:VAL:HG13	33:YN:47:ALA:N	2.31	0.46
33:YN:97:ARG:HA	33:YN:100:GLU:HB3	1.97	0.46
34:YO:7:TYR:CD1	34:YO:20:MET:HB2	2.50	0.46
36:YQ:87:LYS:O	36:YQ:89:ASN:N	2.43	0.46
37:YR:1:MET:O	37:YR:2:ARG:HB2	2.15	0.46
39:YT:6:LEU:O	39:YT:10:VAL:HG23	2.16	0.46
39:YT:118:ARG:NH2	39:YT:121:ILE:HD12	2.31	0.46
41:YV:16:PRO:HA	41:YV:96:ILE:O	2.14	0.46
42:YW:17:VAL:O	42:YW:18:ARG:C	2.57	0.46
49:Y3:28:LEU:HA	49:Y3:33:GLN:OE1	2.16	0.46
51:Y5:39:MET:C	51:Y5:40:LYS:HG3	2.39	0.46
1:QA:429:U:C4'	1:QA:430:A:H5''	2.45	0.46
1:QA:1195:C:N3	1:QA:1197:G:C8	2.84	0.46
1:QA:1223:C:OP1	19:QS:78:ARG:NH1	2.48	0.46
2:QB:17:PHE:CD2	2:QB:44:LEU:HD21	2.47	0.46
2:QB:170:GLU:CA	2:QB:172:ILE:HD12	2.46	0.46
3:QC:108:ASN:HB3	3:QC:111:LEU:HG	1.98	0.46
4:QD:126:ILE:HG22	4:QD:127:THR:H	1.80	0.46
5:QE:12:LEU:HD21	5:QE:14:ARG:HB3	1.98	0.46
7:QG:57:GLU:O	7:QG:59:LEU:N	2.49	0.46
8:QH:91:ARG:HG2	8:QH:91:ARG:NH1	2.25	0.46
10:QJ:44:VAL:HG12	10:QJ:45:ARG:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:95:GLU:OE2	10:QJ:95:GLU:HA	2.16	0.46
18:QR:20:ALA:C	18:QR:21:LYS:HG3	2.41	0.46
20:QT:26:ASN:N	20:QT:26:ASN:ND2	2.62	0.46
20:QT:49:ALA:HB2	20:QT:99:LEU:HD22	1.97	0.46
25:RA:26:G:C6	25:RA:27:G:N1	2.84	0.46
25:RA:145:G:H2'	25:RA:146:G:C8	2.51	0.46
25:RA:256:A:C2	25:RA:257:A:C4	3.03	0.46
25:RA:345:A:C2'	25:RA:347:A:H62	2.29	0.46
25:RA:1461:G:H2'	25:RA:1462:C:H6	1.79	0.46
25:RA:1797:C:C4	25:RA:1798:U:C5	3.04	0.46
25:RA:2197:U:O2'	25:RA:2198:A:H5''	2.16	0.46
25:RA:2211:G:N3	25:RA:2211:G:H2'	2.31	0.46
26:RB:29:A:P	38:RS:32:LEU:HG	2.56	0.46
26:RB:116:G:H4'	38:RS:54:LEU:O	2.16	0.46
27:RD:45:ASN:CG	27:RD:46:GLN:N	2.68	0.46
27:RD:61:LEU:HB3	27:RD:63:ARG:NH1	2.31	0.46
27:RD:136:ILE:HD12	27:RD:136:ILE:N	2.30	0.46
28:RE:54:GLN:CA	28:RE:54:GLN:HE21	2.27	0.46
30:RG:37:VAL:HG22	30:RG:159:VAL:CA	2.34	0.46
31:RH:4:ILE:HG13	31:RH:6:ARG:HD3	1.97	0.46
33:RN:30:ILE:O	33:RN:34:LEU:CD2	2.63	0.46
35:RP:85:LEU:HD23	35:RP:88:LEU:HD22	1.97	0.46
35:RP:107:LYS:O	35:RP:108:LYS:C	2.58	0.46
35:RP:125:VAL:C	35:RP:145:PRO:HD2	2.39	0.46
36:RQ:109:VAL:HG13	36:RQ:113:GLN:OE1	2.16	0.46
38:RS:13:ARG:O	38:RS:14:VAL:HB	2.16	0.46
38:RS:28:VAL:HG11	38:RS:98:VAL:HG12	1.97	0.46
39:RT:96:ARG:CB	39:RT:96:ARG:HH11	2.29	0.46
39:RT:118:ARG:NH2	39:RT:121:ILE:HD12	2.31	0.46
41:RV:47:VAL:O	41:RV:48:GLY:O	2.34	0.46
46:R0:43:THR:O	46:R0:43:THR:HG23	2.16	0.46
49:R3:18:ASP:O	49:R3:21:ALA:N	2.49	0.46
54:R8:53:PRO:CD	54:R8:54:GLU:N	2.77	0.46
1:XA:156:G:H1	1:XA:165:C:H42	1.63	0.46
1:XA:890:G:O2'	1:XA:906:G:N1	2.47	0.46
1:XA:948:C:C5	13:XM:106:ASN:ND2	2.78	0.46
1:XA:1157:A:N1	1:XA:1180:A:C5	2.84	0.46
1:XA:1178:G:C8	1:XA:1180:A:OP2	2.69	0.46
1:XA:1492:A:OP1	12:XL:47:LYS:HG3	2.16	0.46
2:XB:75:LYS:C	2:XB:77:ALA:H	2.24	0.46
3:XC:58:GLU:O	3:XC:59:ARG:HG3	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:93:PRO:HG3	8:XH:105:ARG:HG3	1.98	0.46
10:XJ:44:VAL:HG12	10:XJ:45:ARG:N	2.30	0.46
16:XP:75:ARG:C	16:XP:77:ALA:N	2.72	0.46
19:XS:5:LEU:CD2	50:Y4:66:SER:HB2	2.45	0.46
21:XU:14:TRP:CE3	21:XU:15:ARG:NH1	2.83	0.46
24:XY:40:G:H2'	24:XY:41:A:C8	2.51	0.46
25:YA:348:G:C2	25:YA:349:G:C8	3.03	0.46
25:YA:1587:A:H2'	25:YA:1588:C:C6	2.51	0.46
25:YA:1843:C:N4	25:YA:1844:C:N4	2.64	0.46
25:YA:2024:G:C6	25:YA:2025:C:C4	3.04	0.46
25:YA:2063:C:C4	25:YA:2064:C:C5	3.04	0.46
25:YA:2097:C:H2'	25:YA:2098:U:O4'	2.16	0.46
25:YA:2336:A:H61	46:Y0:43:THR:CG2	2.28	0.46
25:YA:2389:G:H5''	25:YA:2390:U:C5'	2.45	0.46
25:YA:2592:G:C6	25:YA:2593:U:N3	2.84	0.46
25:YA:2661:G:H2'	25:YA:2662:A:C8	2.51	0.46
25:YA:2674:G:H2'	25:YA:2675:A:C8	2.51	0.46
25:YA:2877:G:H2'	25:YA:2878:U:O4'	2.16	0.46
26:YB:95:U:H2'	26:YB:96:G:H8	1.79	0.46
27:YD:148:GLU:HB2	27:YD:151:LYS:HD2	1.98	0.46
27:YD:211:ARG:HG2	27:YD:211:ARG:HH11	1.80	0.46
28:YE:87:GLU:O	28:YE:89:ASP:N	2.48	0.46
31:YH:86:GLU:O	31:YH:87:LEU:CB	2.64	0.46
33:YN:27:ALA:O	33:YN:28:THR:C	2.57	0.46
33:YN:28:THR:O	33:YN:29:LYS:C	2.59	0.46
33:YN:128:HIS:HB2	33:YN:129:PRO:CD	2.46	0.46
34:YO:8:LEU:N	34:YO:8:LEU:CD2	2.76	0.46
34:YO:101:PRO:HA	34:YO:120:GLU:O	2.16	0.46
35:YP:1:MET:O	35:YP:2:LYS:HG3	2.16	0.46
35:YP:23:PRO:HG2	35:YP:23:PRO:O	2.15	0.46
36:YQ:66:ILE:H	36:YQ:104:PHE:HA	1.80	0.46
36:YQ:87:LYS:O	36:YQ:87:LYS:HG2	2.15	0.46
37:YR:75:LEU:HA	37:YR:78:LYS:HB3	1.97	0.46
41:YV:22:VAL:HG12	41:YV:23:GLU:H	1.76	0.46
41:YV:81:TYR:C	41:YV:82:ARG:CG	2.89	0.46
43:YX:12:VAL:O	43:YX:12:VAL:HG13	2.15	0.46
43:YX:35:THR:O	43:YX:35:THR:HG23	2.16	0.46
43:YX:65:ARG:N	43:YX:65:ARG:CD	2.79	0.46
44:YY:15:VAL:O	44:YY:21:LYS:HA	2.16	0.46
49:Y3:39:ASP:O	49:Y3:40:THR:C	2.59	0.46
49:Y3:59:VAL:CG1	49:Y3:60:GLU:H	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:156:G:N2	1:QA:165:C:N3	2.57	0.46
1:QA:585:G:O3'	17:QQ:34:LYS:NZ	2.40	0.46
1:QA:701:C:O2'	1:QA:702:A:OP2	2.29	0.46
1:QA:1349:A:H2'	1:QA:1350:A:H8	1.81	0.46
2:QB:163:PHE:CE1	2:QB:215:LEU:HD22	2.50	0.46
3:QC:15:THR:HG22	3:QC:15:THR:O	2.15	0.46
3:QC:113:ALA:O	3:QC:115:LEU:N	2.48	0.46
6:QF:68:PRO:HG3	6:QF:71:ARG:NH2	2.31	0.46
6:QF:72:VAL:HG23	6:QF:90:VAL:HG11	1.98	0.46
6:QF:101:ALA:HA	18:QR:28:GLU:CG	2.46	0.46
7:QG:54:THR:O	7:QG:54:THR:HG23	2.16	0.46
8:QH:86:ILE:HG13	8:QH:133:LEU:CD2	2.44	0.46
8:QH:110:ALA:HB3	8:QH:121:ASP:HB3	1.98	0.46
22:QV:49:G:O6	22:QV:65:C:N4	2.49	0.46
25:RA:78:A:H2'	25:RA:79:G:H8	1.81	0.46
25:RA:140:A:C8	25:RA:1408:C:O2'	2.66	0.46
25:RA:186:G:H2'	25:RA:187:G:H8	1.81	0.46
25:RA:250:G:H2'	25:RA:251:A:C8	2.51	0.46
25:RA:462:C:C2	25:RA:463:G:C8	3.03	0.46
25:RA:787:U:H5''	25:RA:788:A:H5'	1.97	0.46
25:RA:1386:C:C5'	25:RA:1396:U:H5	2.28	0.46
25:RA:1632:A:N7	25:RA:1633:G:C6	2.83	0.46
25:RA:1638:C:H2'	25:RA:1639:U:O4'	2.15	0.46
25:RA:1764:G:H4'	25:RA:1764:G:OP2	2.16	0.46
25:RA:2100:G:H1	25:RA:2189:U:H3	1.63	0.46
25:RA:2376:A:N6	38:RS:89:ARG:HH11	2.12	0.46
25:RA:2426:A:H3'	25:RA:2427:C:H5'	1.98	0.46
25:RA:2801:A:H8	25:RA:2801:A:O5'	1.98	0.46
28:RE:50:GLY:CA	28:RE:74:PRO:HG3	2.45	0.46
29:RF:111:ALA:O	29:RF:112:MET:C	2.59	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HD2	2.16	0.46
30:RG:111:LEU:HD22	30:RG:120:LEU:HD21	1.96	0.46
30:RG:135:LEU:HD11	30:RG:157:ILE:HD12	1.98	0.46
33:RN:36:GLY:O	33:RN:42:TRP:HE3	1.98	0.46
35:RP:6:LEU:N	35:RP:6:LEU:HD22	2.31	0.46
35:RP:45:LEU:CD1	35:RP:45:LEU:N	2.79	0.46
38:RS:24:LEU:HB2	38:RS:85:VAL:HG12	1.98	0.46
38:RS:42:ASP:C	38:RS:44:LYS:N	2.72	0.46
40:RU:69:CYS:O	40:RU:74:LEU:HD12	2.16	0.46
45:RZ:48:PHE:CZ	45:RZ:52:SER:HA	2.51	0.46
50:R4:4:GLY:O	50:R4:5:ILE:C	2.59	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:R4:15:ILE:HG22	50:R4:20:ASN:CA	2.45	0.46
50:R4:56:VAL:HA	50:R4:60:GLN:CB	2.28	0.46
1:XA:781:A:H4'	1:XA:1522:U:O2'	2.16	0.46
1:XA:1127:G:N2	1:XA:1145:C:C2	2.82	0.46
2:XB:95:GLN:O	2:XB:96:ARG:C	2.59	0.46
3:XC:46:GLU:C	3:XC:48:TYR:H	2.23	0.46
3:XC:108:ASN:CG	3:XC:111:LEU:HG	2.41	0.46
4:XD:146:ILE:N	4:XD:146:ILE:CD1	2.73	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
13:XM:23:TYR:HB3	13:XM:67:GLU:HA	1.98	0.46
16:XP:71:ARG:HB2	16:XP:71:ARG:HH11	1.79	0.46
20:XT:99:LEU:O	20:XT:100:ILE:HB	2.15	0.46
25:YA:78:A:H2'	25:YA:79:G:C8	2.50	0.46
25:YA:323:G:O2'	25:YA:1205:U:N3	2.48	0.46
25:YA:389:G:N1	35:YP:71:VAL:HG12	2.30	0.46
25:YA:524:U:H2'	25:YA:525:U:C6	2.51	0.46
25:YA:841:A:H2'	25:YA:842:G:C8	2.51	0.46
25:YA:937:U:H2'	25:YA:938:G:O4'	2.15	0.46
25:YA:1174:A:N3	25:YA:1174:A:H2'	2.31	0.46
25:YA:1621:U:HO2'	25:YA:1622:G:H8	1.64	0.46
25:YA:2171:A:O2'	25:YA:2172:U:O5'	2.34	0.46
25:YA:2209:C:O2	25:YA:2216:G:C2	2.68	0.46
25:YA:2277:G:H5''	36:YQ:85:LYS:CB	2.46	0.46
25:YA:2660:A:H2'	25:YA:2661:G:O4'	2.15	0.46
25:YA:2682:U:O4	25:YA:2728:U:H1'	2.16	0.46
27:YD:61:LEU:HB3	27:YD:63:ARG:NH1	2.31	0.46
28:YE:137:HIS:CB	28:YE:138:PRO:HD2	2.41	0.46
30:YG:60:LEU:HD23	30:YG:60:LEU:C	2.41	0.46
30:YG:116:ASP:O	30:YG:117:PHE:CB	2.51	0.46
31:YH:151:ILE:O	31:YH:152:ARG:O	2.34	0.46
33:YN:36:GLY:O	33:YN:42:TRP:HE3	1.98	0.46
33:YN:114:ARG:C	33:YN:116:LEU:N	2.74	0.46
37:YR:78:LYS:HG2	37:YR:78:LYS:O	2.15	0.46
38:YS:61:ASN:O	38:YS:65:VAL:HG23	2.15	0.46
42:YW:14:PRO:C	42:YW:16:LYS:N	2.73	0.46
42:YW:29:LEU:HD23	42:YW:29:LEU:C	2.41	0.46
45:YZ:73:GLN:HB3	45:YZ:87:ASP:OD1	2.16	0.46
48:Y2:15:LYS:H	48:Y2:67:LYS:HZ3	1.64	0.46
50:Y4:4:GLY:O	50:Y4:5:ILE:C	2.59	0.46
54:Y8:44:LYS:HD2	54:Y8:44:LYS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:458:C:C2	1:QA:464:G:C8	3.04	0.46
1:QA:784:C:H4'	25:RA:1837:C:OP1	2.16	0.46
1:QA:1510:U:O2	1:QA:1526:G:C2	2.68	0.46
3:QC: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
7:QG:103:TRP:O	7:QG:104:LEU:C	2.58	0.46
11:QK:41:THR:CG2	11:QK:42:TRP:N	2.79	0.46
13:QM:3:ARG:O	13:QM:4:ILE:HD13	2.16	0.46
13:QM:10:PRO:HG3	13:QM:18:ALA:O	2.16	0.46
16:QP:58:TYR:O	16:QP:61:SER:OG	2.27	0.46
21:QU:2:GLY:C	21:QU:4:GLY:H	2.23	0.46
25:RA:271:G:H2'	25:RA:272:G:H8	1.81	0.46
25:RA:807:U:H2'	25:RA:808:G:H8	1.80	0.46
25:RA:1709:U:H2'	25:RA:1710:C:C6	2.51	0.46
25:RA:2128:C:O2'	25:RA:2129:C:H5'	2.16	0.46
25:RA:2226:C:H2'	25:RA:2227:A:O4'	2.16	0.46
28:RE:7:VAL:HG11	39:RT:1:MET:CE	2.45	0.46
28:RE:103:ASP:OD2	28:RE:168:MET:HG2	2.15	0.46
28:RE:172:VAL:HG13	28:RE:182:LEU:HD11	1.98	0.46
30:RG:104:GLU:OE1	50:R4:23:GLU:HB3	2.15	0.46
31:RH:13:LYS:HE2	31:RH:13:LYS:CA	2.40	0.46
32:RI:13:GLY:HA3	32:RI:17:GLN:OE1	2.16	0.46
34:RO:86:ILE:H	34:RO:86:ILE:CD1	2.28	0.46
35:RP:1:MET:O	35:RP:2:LYS:HG3	2.16	0.46
38:RS:26:LEU:HD22	38:RS:87:PHE:CD1	2.46	0.46
39:RT:51:ARG:CG	39:RT:98:LYS:HG3	2.44	0.46
39:RT:58:ASN:HD22	39:RT:58:ASN:N	2.10	0.46
45:RZ:5:LEU:HB3	45:RZ:59:LEU:HA	1.98	0.46
47:R1:60:PHE:CE2	47:R1:91:LYS:NZ	2.84	0.46
50:R4:50:VAL:O	50:R4:50:VAL:HG13	2.15	0.46
1:XA:636:U:H2'	1:XA:637:G:H8	1.78	0.46
1:XA:1126:U:C5	1:XA:1127:G:C4	3.04	0.46
1:XA:1186:G:H21	14:XN:61:TRP:C	2.24	0.46
1:XA:1314:C:C5	19:XS:4:SER:HB2	2.47	0.46
1:XA:1497:G:C2'	1:XA:1498:U:H5'	2.38	0.46
3:XC:129:ALA:C	3:XC:131:ARG:N	2.72	0.46
4:XD:30:LYS:O	4:XD:32:ALA:N	2.49	0.46
9:XI:20:ARG:O	9:XI:21:PRO:C	2.59	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
12:XL:27:LEU:HD13	12:XL:28:LYS:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:83:GLU:C	15:XO:85:LEU:N	2.71	0.46
17:XQ:100:LYS:O	17:XQ:101:ARG:HB2	2.15	0.46
25:YA:273:G:N3	25:YA:273(A):G:C8	2.84	0.46
25:YA:696:G:N2	25:YA:697:C:C2	2.84	0.46
25:YA:952:G:P	36:YQ:16:ARG:HH12	2.39	0.46
25:YA:1473:G:H8	25:YA:1473:G:O5'	1.98	0.46
25:YA:2151:G:H2'	25:YA:2152:G:H8	1.81	0.46
25:YA:2236:C:H2'	25:YA:2237:G:O4'	2.15	0.46
25:YA:2439:A:H8	25:YA:2439:A:C5'	2.26	0.46
25:YA:2469:A:H4'	25:YA:2469:A:OP1	2.14	0.46
25:YA:2547:U:H2'	25:YA:2548:G:C8	2.50	0.46
25:YA:2592:G:C6	25:YA:2593:U:C2	3.04	0.46
25:YA:2831:G:O2'	25:YA:2883:A:H2'	2.16	0.46
26:YB:74:U:H2'	26:YB:75:G:O4'	2.16	0.46
30:YG:14:GLU:HB3	30:YG:15:VAL:H	1.56	0.46
30:YG:83:ARG:HG3	30:YG:86:MET:CE	2.46	0.46
31:YH:88:LEU:HD22	31:YH:163:TYR:O	2.16	0.46
33:YN:36:GLY:O	33:YN:42:TRP:CE3	2.69	0.46
35:YP:37:GLY:O	35:YP:38:GLN:C	2.58	0.46
36:YQ:63:LYS:HE2	36:YQ:65:PHE:CZ	2.51	0.46
40:YU:69:CYS:O	40:YU:74:LEU:HD12	2.16	0.46
42:YW:14:PRO:C	42:YW:18:ARG:HD2	2.41	0.46
49:Y3:18:ASP:O	49:Y3:21:ALA:N	2.49	0.46
49:Y3:43:ILE:O	49:Y3:47:VAL:HG23	2.16	0.46
1:QA:46:G:O2'	1:QA:365:U:H1'	2.16	0.46
1:QA:153:C:H6	1:QA:153:C:O5'	1.99	0.46
1:QA:468:A:H1'	16:QP:82:GLN:HE21	1.79	0.46
1:QA:493:G:H2'	1:QA:494:U:C5	2.50	0.46
1:QA:578:C:H1'	1:QA:729:A:H1'	1.98	0.46
1:QA:598:U:H2'	1:QA:599:C:C6	2.50	0.46
1:QA:937:A:C2	1:QA:1379:G:C6	3.03	0.46
1:QA:1061:G:O4'	10:QJ:56:HIS:CD2	2.69	0.46
1:QA:1072:G:H2'	1:QA:1073:U:C6	2.51	0.46
1:QA:1101:A:H4'	1:QA:1102:A:O5'	2.16	0.46
1:QA:1502:A:H2	1:QA:1505:G:H22	1.64	0.46
2:QB:162:ILE:CD1	2:QB:184:VAL:HG13	2.44	0.46
3:QC:43:LEU:HD22	3:QC:47:LEU:CD2	2.46	0.46
3:QC:53:ALA:O	3:QC:54:ARG:HB2	2.16	0.46
3:QC:68:VAL:HG12	3:QC:70:VAL:HG23	1.98	0.46
3:QC:172:ARG:O	3:QC:173:VAL:CG2	2.63	0.46
4:QD:13:ARG:NH2	4:QD:36:ARG:NH2	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:55:VAL:O	5:QE:58:ALA:HB3	2.16	0.46
6:QF:44:GLY:HA2	6:QF:59:TYR:CE2	2.51	0.46
8:QH:49:GLU:HG3	8:QH:49:GLU:O	2.14	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
20:QT:22:ARG:O	20:QT:26:ASN:ND2	2.49	0.46
20:QT:56:MET:HG3	20:QT:88:VAL:HG21	1.98	0.46
25:RA:49:A:H5''	25:RA:51:G:H5'	1.97	0.46
25:RA:452:G:C2	25:RA:458:G:C5	3.04	0.46
25:RA:686:G:N7	53:R7:5:TRP:CH2	2.84	0.46
25:RA:689:A:H2'	25:RA:690:G:C8	2.51	0.46
25:RA:879:G:N3	25:RA:880:G:H1'	2.31	0.46
25:RA:1312:U:H5'	25:RA:1312:U:H6	1.81	0.46
25:RA:1654:A:OP1	37:RR:1:MET:O	2.33	0.46
25:RA:1853:A:N3	25:RA:2233:U:O2'	2.43	0.46
25:RA:2298:A:C8	25:RA:2299:G:C8	3.04	0.46
25:RA:2466:C:H5'	55:R9:5:ALA:HB3	1.98	0.46
27:RD:35:LYS:HE3	27:RD:65:ILE:N	2.31	0.46
27:RD:105:ILE:HG23	27:RD:106:ILE:O	2.15	0.46
28:RE:47:VAL:O	28:RE:47:VAL:HG23	2.16	0.46
30:RG:14:GLU:O	30:RG:17:PRO:HG2	2.15	0.46
30:RG:44:GLY:C	30:RG:46:ALA:N	2.73	0.46
31:RH:37:VAL:HG11	31:RH:68:THR:HG23	1.98	0.46
31:RH:59:ARG:CG	31:RH:59:ARG:NH1	2.79	0.46
31:RH:66:GLY:O	31:RH:67:LEU:C	2.58	0.46
31:RH:88:LEU:HD22	31:RH:163:TYR:O	2.16	0.46
33:RN:112:LEU:O	33:RN:116:LEU:HG	2.16	0.46
34:RO:61:VAL:O	34:RO:84:ALA:HB1	2.16	0.46
40:RU:106:PHE:O	40:RU:109:LEU:HB2	2.15	0.46
42:RW:17:VAL:O	42:RW:18:ARG:C	2.57	0.46
43:RX:43:VAL:HG11	43:RX:51:VAL:HG21	1.97	0.46
44:RY:90:LEU:N	44:RY:90:LEU:CD2	2.73	0.46
46:R0:51:VAL:HG21	46:R0:79:VAL:O	2.16	0.46
52:R6:15:GLU:OE2	52:R6:44:ARG:NH1	2.49	0.46
1:XA:385:C:H2'	1:XA:386:C:C6	2.51	0.46
1:XA:503:C:OP2	12:XL:116:SER:HB3	2.16	0.46
1:XA:1145:C:H5'	1:XA:1146:A:OP1	2.16	0.46
3:XC:108:ASN:HB3	3:XC:111:LEU:HG	1.97	0.46
5:XE:42:GLY:CA	5:XE:136:MET:HE1	2.46	0.46
7:XG:57:GLU:O	7:XG:59:LEU:N	2.49	0.46
9:XI:11:LYS:O	9:XI:12:GLU:HB2	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:42:ARG:O	9:XI:45:ALA:HB3	2.16	0.46
10:XJ:21:GLN:HG2	10:XJ:21:GLN:O	2.16	0.46
10:XJ:39:PRO:CB	10:XJ:70:ARG:HH12	2.27	0.46
17:XQ:84:LEU:O	17:XQ:86:GLU:N	2.49	0.46
18:XR:20:ALA:C	18:XR:21:LYS:HG3	2.41	0.46
19:XS:24:ALA:O	19:XS:25:LYS:CB	2.63	0.46
20:XT:101:GLY:C	20:XT:103:GLY:N	2.73	0.46
25:YA:357:A:H2'	25:YA:358:U:H6	1.81	0.46
25:YA:596:G:C4	25:YA:662:G:N2	2.84	0.46
25:YA:618(A):C:O2	25:YA:618(A):C:H2'	2.16	0.46
25:YA:742:G:H2'	25:YA:743:G:H8	1.80	0.46
25:YA:1153:C:P	40:YU:76:TYR:HH	2.39	0.46
25:YA:1222:C:H2'	25:YA:1223:C:C6	2.48	0.46
25:YA:1548:C:H2'	25:YA:1549:C:C6	2.51	0.46
25:YA:1727:U:H2'	25:YA:1728:G:O4'	2.16	0.46
25:YA:1777:U:O2	25:YA:1777:U:H2'	2.16	0.46
25:YA:1832:C:N4	25:YA:1833:U:C4	2.84	0.46
25:YA:2127:G:O6	25:YA:2161:C:N4	2.49	0.46
25:YA:2271:G:OP1	46:Y0:18:ALA:HB1	2.15	0.46
25:YA:2612:C:C5	25:YA:2613:U:H5	2.34	0.46
26:YB:7:G:N3	26:YB:114:G:N2	2.64	0.46
27:YD:14:ARG:HG3	27:YD:15:PHE:N	2.31	0.46
27:YD:36:PRO:HB3	27:YD:62:TYR:O	2.16	0.46
28:YE:94:GLU:C	28:YE:96:PHE:N	2.73	0.46
28:YE:195:LEU:HD12	28:YE:196:VAL:N	2.29	0.46
30:YG:6:ALA:HB3	30:YG:104:GLU:OE2	2.16	0.46
30:YG:14:GLU:O	30:YG:17:PRO:HD2	2.16	0.46
30:YG:129:GLY:O	30:YG:130:ASN:OD1	2.34	0.46
31:YH:51:ARG:HG3	31:YH:51:ARG:NH1	2.30	0.46
31:YH:128:PRO:HD2	31:YH:129:THR:N	2.25	0.46
35:YP:98:GLU:HG2	35:YP:99:LEU:N	2.30	0.46
39:YT:54:ARG:HG2	39:YT:54:ARG:NH1	2.23	0.46
47:Y1:80:LEU:CB	47:Y1:81:LYS:HE2	2.44	0.46
51:Y5:43:HIS:ND1	51:Y5:43:HIS:N	2.63	0.46
52:Y6:11:LEU:HD11	52:Y6:51:GLU:HG3	1.98	0.46
54:Y8:48:PHE:N	54:Y8:48:PHE:HD1	2.14	0.46
1:QA:392:G:H2'	1:QA:393:A:C8	2.51	0.46
1:QA:421:U:H5''	1:QA:422:C:OP2	2.16	0.46
1:QA:1087:G:N2	1:QA:1099:G:N3	2.64	0.46
1:QA:1103:C:H2'	1:QA:1104:G:O4'	2.16	0.46
1:QA:1411:C:C2	1:QA:1412:C:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1511:G:C6	1:QA:1512:U:C2	3.03	0.46
2:QB:95:GLN:HA	2:QB:95:GLN:OE1	2.16	0.46
4:QD:52:SER:N	4:QD:55:ALA:HB3	2.31	0.46
5:QE:150:ARG:HG2	5:QE:150:ARG:O	2.16	0.46
6:QF:69:GLU:O	6:QF:71:ARG:N	2.48	0.46
9:QI:5:TYR:OH	9:QI:7:THR:HG23	2.15	0.46
9:QI:71:SER:O	9:QI:72:GLY:C	2.58	0.46
20:QT:93:GLU:HG2	20:QT:93:GLU:O	2.15	0.46
24:QY:40:G:H2'	24:QY:41:A:C8	2.51	0.46
25:RA:29:U:H2'	25:RA:30:G:H8	1.78	0.46
25:RA:34:C:H41	25:RA:447:A:H61	1.64	0.46
25:RA:307:G:H22	25:RA:310:A:P	2.39	0.46
25:RA:464:U:H4'	53:R7:5:TRP:CZ3	2.51	0.46
25:RA:709:U:O2	25:RA:723:G:N2	2.49	0.46
25:RA:1090:U:H3	25:RA:1102:C:H1'	1.81	0.46
25:RA:1731:G:N2	25:RA:1732:A:C4	2.84	0.46
25:RA:1870:C:O5'	25:RA:1870:C:H6	1.98	0.46
25:RA:2094:G:N2	25:RA:2196:C:H1'	2.31	0.46
25:RA:2271:G:OP1	46:R0:18:ALA:HB1	2.16	0.46
25:RA:2455:G:H8	25:RA:2455:G:O5'	1.98	0.46
26:RB:27:C:H5''	38:RS:33:LYS:NZ	2.23	0.46
27:RD:80:ALA:O	27:RD:113:VAL:HG13	2.16	0.46
28:RE:61:ARG:O	28:RE:63:LEU:CG	2.57	0.46
30:RG:76:SER:CB	30:RG:83:ARG:HA	2.46	0.46
32:RI:88:ILE:HD11	32:RI:122:GLU:O	2.16	0.46
33:RN:73:THR:HA	33:RN:83:LYS:O	2.15	0.46
34:RO:7:TYR:CD1	34:RO:20:MET:HB2	2.50	0.46
35:RP:46:LYS:O	35:RP:48:PRO:N	2.48	0.46
35:RP:115:LEU:CD1	35:RP:116:GLY:N	2.78	0.46
36:RQ:26:TYR:O	36:RQ:27:VAL:O	2.34	0.46
36:RQ:85:LYS:HD3	36:RQ:86:GLY:H	1.80	0.46
36:RQ:87:LYS:O	36:RQ:87:LYS:HG2	2.15	0.46
38:RS:109:GLY:O	38:RS:110:LEU:HB2	2.16	0.46
40:RU:79:PHE:CE2	40:RU:83:LEU:HD13	2.51	0.46
41:RV:67:GLY:O	41:RV:68:LYS:C	2.59	0.46
42:RW:14:PRO:C	42:RW:18:ARG:HD2	2.41	0.46
48:R2:65:ASN:O	48:R2:66:GLU:C	2.59	0.46
49:R3:7:LYS:HE2	49:R3:32:GLN:HA	1.98	0.46
51:R5:41:PRO:HA	51:R5:42:PRO:HD3	1.82	0.46
55:R9:25:VAL:HG11	55:R9:34:GLN:HE21	1.79	0.46
1:XA:622:A:C8	1:XA:623:C:C6	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:781:A:C6	1:XA:802:A:C2	3.03	0.46
1:XA:1407:C:O2'	25:YA:1912:A:N1	2.47	0.46
1:XA:1415:G:H2'	1:XA:1416:G:H8	1.81	0.46
2:XB:87:ARG:NH1	2:XB:220:ASP:OD1	2.46	0.46
2:XB:162:ILE:CD1	2:XB:184:VAL:HG13	2.44	0.46
3:XC:78:GLY:HA3	3:XC:83:ARG:HB3	1.98	0.46
4:XD:92:VAL:O	4:XD:96:LEU:CD2	2.64	0.46
4:XD:146:ILE:HG22	4:XD:146:ILE:O	2.15	0.46
4:XD:173:TRP:NE1	4:XD:174:LEU:HG	2.31	0.46
7:XG:54:THR:O	7:XG:54:THR:HG23	2.16	0.46
9:XI:43:ALA:C	9:XI:45:ALA:N	2.73	0.46
11:XK:32:ILE:HD11	11:XK:72:ALA:HB2	1.95	0.46
13:XM:3:ARG:O	13:XM:4:ILE:HD13	2.16	0.46
19:XS:15:LEU:N	19:XS:15:LEU:CD2	2.79	0.46
25:YA:299:A:H8	25:YA:299:A:H5''	1.81	0.46
25:YA:381:G:C5	25:YA:394:A:C2	3.04	0.46
25:YA:467:G:OP1	53:Y7:33:ARG:NH1	2.49	0.46
25:YA:747:U:N1	51:Y5:2:ALA:HB3	2.30	0.46
25:YA:910:A:N6	25:YA:911:A:N6	2.64	0.46
25:YA:1022:G:HO2'	25:YA:1023:U:P	2.38	0.46
25:YA:1624:G:H2'	25:YA:1625:C:H6	1.81	0.46
25:YA:2562:U:O2'	34:YO:23:ARG:NH1	2.49	0.46
25:YA:2591:C:OP2	27:YD:238:GLY:HA3	2.15	0.46
25:YA:2692:C:OP1	25:YA:2871:C:H5'	2.16	0.46
25:YA:2752:C:H5'	25:YA:2753:A:OP2	2.16	0.46
27:YD:11:PRO:O	27:YD:12:SER:CB	2.65	0.46
27:YD:79:VAL:HG21	27:YD:111:LEU:HD21	1.98	0.46
28:YE:1:MET:HA	28:YE:200:GLU:OE2	2.16	0.46
28:YE:36:ARG:O	28:YE:37:ARG:C	2.59	0.46
29:YF:31:HIS:O	29:YF:34:TRP:HB3	2.15	0.46
30:YG:44:GLY:C	30:YG:46:ALA:N	2.73	0.46
30:YG:76:SER:CB	30:YG:83:ARG:HA	2.46	0.46
32:YI:67:ARG:NH2	32:YI:68:LEU:HB2	2.31	0.46
33:YN:96:GLU:O	33:YN:99:LEU:N	2.34	0.46
35:YP:12:ALA:C	35:YP:14:LYS:N	2.73	0.46
36:YQ:11:LYS:HE2	36:YQ:87:LYS:HA	1.98	0.46
38:YS:108:GLY:O	38:YS:110:LEU:N	2.48	0.46
44:YY:11:ASP:HB2	44:YY:27:VAL:CG1	2.46	0.46
44:YY:48:ALA:CB	44:YY:61:ILE:HD13	2.45	0.46
45:YZ:114:GLY:HA3	45:YZ:177:PRO:HG3	1.97	0.46
46:Y0:21:LEU:HD11	46:Y0:41:ARG:CZ	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:Y1:79:GLY:N	47:Y1:80:LEU:HD23	2.30	0.46
49:Y3:7:LYS:HE2	49:Y3:32:GLN:HA	1.98	0.46
54:Y8:56:GLU:C	54:Y8:58:ILE:N	2.73	0.46
55:Y9:25:VAL:HG11	55:Y9:34:GLN:HE21	1.81	0.46
1:QA:9:G:C2	1:QA:10:A:C4	3.04	0.45
1:QA:15:G:O4'	5:QE:24:ARG:NH1	2.49	0.45
1:QA:918:A:H2'	1:QA:919:A:O4'	2.15	0.45
1:QA:953:G:H5''	1:QA:965:A:H61	1.81	0.45
1:QA:1036:G:H3'	1:QA:1037:C:C6	2.51	0.45
1:QA:1360:A:H2'	1:QA:1361:G:C8	2.51	0.45
2:QB:77:ALA:HB1	2:QB:211:ILE:HG21	1.97	0.45
4:QD:29:PRO:CD	4:QD:30:LYS:H	2.29	0.45
4:QD:93:PHE:CZ	4:QD:97:LEU:HD11	2.51	0.45
5:QE:64:ARG:HH11	5:QE:64:ARG:HG3	1.81	0.45
6:QF:98:LEU:HD12	6:QF:98:LEU:C	2.41	0.45
7:QG:107:ALA:O	7:QG:110:GLN:HB2	2.16	0.45
8:QH:68:ARG:HH11	8:QH:68:ARG:HG2	1.81	0.45
10:QJ:4:ILE:O	10:QJ:74:ILE:HD13	2.16	0.45
11:QK:80:VAL:O	11:QK:106:LYS:HD3	2.15	0.45
12:QL:27:LEU:HD13	12:QL:28:LYS:N	2.30	0.45
13:QM:8:GLU:C	13:QM:9:ILE:CG2	2.90	0.45
13:QM:23:TYR:HB3	13:QM:67:GLU:HA	1.98	0.45
15:QO:30:ALA:HA	15:QO:85:LEU:HD11	1.97	0.45
15:QO:82:ILE:HD11	15:QO:88:ARG:HG2	1.95	0.45
25:RA:270(L):U:C4	32:RI:50:ARG:NH1	2.84	0.45
25:RA:399:G:O6	25:RA:400:G:C2	2.68	0.45
25:RA:637:A:C8	35:RP:117:GLU:OE2	2.69	0.45
25:RA:719:C:H6	25:RA:719:C:O5'	1.99	0.45
25:RA:1266:G:N7	42:RW:15:ARG:NH1	2.64	0.45
25:RA:1558:A:H4'	25:RA:1559:G:O5'	2.16	0.45
25:RA:1731:G:C2	25:RA:1732:A:C4	3.04	0.45
25:RA:2134:A:H62	25:RA:2157:G:H1'	1.80	0.45
25:RA:2252:G:H2'	25:RA:2253:G:C8	2.51	0.45
25:RA:2311:A:H1'	30:RG:82:LEU:HD11	1.98	0.45
25:RA:2536:G:C6	25:RA:2537:U:C4	3.04	0.45
26:RB:71:C:C4	26:RB:72:G:N7	2.84	0.45
27:RD:211:ARG:HH11	27:RD:211:ARG:HG2	1.80	0.45
28:RE:1:MET:HE2	28:RE:1:MET:N	2.31	0.45
30:RG:52:ILE:HG22	30:RG:52:ILE:O	2.15	0.45
35:RP:90:ARG:HB3	35:RP:91:PHE:H	1.60	0.45
36:RQ:63:LYS:HE2	36:RQ:65:PHE:CZ	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:104:PHE:O	36:RQ:105:GLU:CB	2.65	0.45
39:RT:6:LEU:O	39:RT:10:VAL:HG23	2.16	0.45
43:RX:53:LYS:HZ2	43:RX:55:ASN:HD21	1.65	0.45
44:RY:19:LYS:O	44:RY:19:LYS:CG	2.60	0.45
44:RY:75:ILE:HA	44:RY:80:GLY:HA2	1.99	0.45
47:R1:85:LEU:N	47:R1:85:LEU:HD22	2.31	0.45
48:R2:18:PRO:C	48:R2:20:GLU:N	2.74	0.45
52:R6:7:ILE:O	52:R6:8:LYS:HG2	2.16	0.45
54:R8:48:PHE:N	54:R8:48:PHE:HD1	2.14	0.45
1:XA:18:C:H5''	5:XE:127:ASN:HD21	1.80	0.45
1:XA:129(A):G:O2'	1:XA:189:U:H3'	2.16	0.45
1:XA:376:G:H2'	1:XA:377:G:H8	1.77	0.45
1:XA:1396:A:O4'	1:XA:1398:A:H1'	2.16	0.45
2:XB:163:PHE:CE1	2:XB:215:LEU:HD22	2.50	0.45
3:XC:15:THR:HG22	3:XC:15:THR:O	2.15	0.45
4:XD:199:ASN:O	4:XD:201:GLN:N	2.50	0.45
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
8:XH:33:GLU:C	8:XH:35:ILE:H	2.25	0.45
8:XH:33:GLU:O	8:XH:35:ILE:N	2.49	0.45
11:XK:41:THR:CG2	11:XK:42:TRP:N	2.79	0.45
15:XO:5:LYS:O	15:XO:8:LYS:CG	2.63	0.45
16:XP:19:ILE:HB	16:XP:37:GLY:O	2.17	0.45
16:XP:40:ASP:O	16:XP:42:ARG:N	2.50	0.45
17:XQ:86:GLU:O	17:XQ:87:LYS:C	2.59	0.45
20:XT:22:ARG:O	20:XT:26:ASN:ND2	2.49	0.45
20:XT:96:GLY:O	20:XT:97:ALA:CB	2.64	0.45
25:YA:17:G:H2'	25:YA:18:C:C6	2.51	0.45
25:YA:242:G:N2	25:YA:254:G:H2'	2.31	0.45
25:YA:270(G):C:H2'	25:YA:270(H):C:C6	2.51	0.45
25:YA:547:A:H8	25:YA:547:A:OP2	1.99	0.45
25:YA:565:C:H4'	25:YA:1253:A:C6	2.51	0.45
25:YA:1654:A:C2	28:YE:113:PHE:CD1	3.04	0.45
25:YA:1669:A:H5''	25:YA:1670:C:OP2	2.16	0.45
25:YA:2306:C:H3'	25:YA:2307:G:H5''	1.97	0.45
25:YA:2346:A:C2	25:YA:2383:G:C2	3.04	0.45
25:YA:2375:G:H8	25:YA:2375:G:O5'	1.99	0.45
25:YA:2412:A:N6	25:YA:2413:G:N3	2.64	0.45
25:YA:2820:A:N3	37:YR:4:LEU:HD21	2.31	0.45
26:YB:55:U:H2'	26:YB:56:G:C8	2.51	0.45
27:YD:206:LEU:HD23	27:YD:206:LEU:HA	1.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:51:PHE:HD1	28:YE:52:LEU:H	1.59	0.45
28:YE:62:PRO:O	28:YE:63:LEU:C	2.59	0.45
30:YG:78:SER:O	30:YG:79:ASN:C	2.59	0.45
35:YP:144:GLU:HA	35:YP:145:PRO:HD3	1.76	0.45
36:YQ:27:VAL:HG22	36:YQ:105:GLU:CD	2.41	0.45
36:YQ:65:PHE:O	36:YQ:66:ILE:CG1	2.48	0.45
38:YS:13:ARG:O	38:YS:14:VAL:HB	2.15	0.45
41:YV:5:VAL:HG22	41:YV:14:VAL:CG2	2.46	0.45
43:YX:53:LYS:HZ2	43:YX:55:ASN:HD21	1.63	0.45
43:YX:54:VAL:C	43:YX:55:ASN:HD22	2.24	0.45
45:YZ:5:LEU:HB3	45:YZ:59:LEU:HD23	1.98	0.45
51:Y5:16:ARG:O	51:Y5:20:ARG:HG3	2.16	0.45
55:Y9:1:MET:SD	55:Y9:31:LYS:O	2.74	0.45
1:QA:62:U:H2'	1:QA:63:C:C6	2.51	0.45
1:QA:189:U:C4	17:QQ:72:ARG:NH2	2.85	0.45
1:QA:377:G:P	16:QP:5:ARG:HH11	2.38	0.45
1:QA:1179:A:H2'	1:QA:1180:A:O4'	2.16	0.45
2:QB:24:TRP:CZ2	2:QB:26:PRO:HB3	2.51	0.45
2:QB:96:ARG:HD2	2:QB:96:ARG:N	2.20	0.45
3:QC:108:ASN:HB3	3:QC:111:LEU:HD12	1.98	0.45
5:QE:48:ALA:C	5:QE:50:GLU:H	2.24	0.45
6:QF:75:LEU:HD23	6:QF:75:LEU:C	2.41	0.45
9:QI:11:LYS:O	9:QI:12:GLU:HB2	2.16	0.45
10:QJ:63:PHE:CD1	14:QN:58:LYS:HA	2.35	0.45
11:QK:121:PRO:HD2	11:QK:126:ARG:CD	2.46	0.45
12:QL:64:TYR:O	12:QL:65:GLU:HB2	2.16	0.45
12:QL:113:ARG:NH2	12:QL:120:TYR:CE2	2.85	0.45
16:QP:75:ARG:C	16:QP:77:ALA:N	2.72	0.45
24:QY:39:C:O2'	24:QY:40:G:P	2.75	0.45
25:RA:177:G:H3'	25:RA:178:G:C8	2.50	0.45
25:RA:292:C:O5'	25:RA:292:C:H6	1.98	0.45
25:RA:1321:A:H2'	25:RA:1322:A:O4'	2.16	0.45
25:RA:1533:C:H2'	25:RA:1534:G:N7	2.31	0.45
25:RA:1628:G:H2'	25:RA:1629:U:C6	2.51	0.45
25:RA:2116:G:H1	25:RA:2162:G:P	2.40	0.45
25:RA:2370:G:N2	52:R6:45:LYS:HZ3	2.14	0.45
25:RA:2505:G:H2'	25:RA:2576:G:O6	2.17	0.45
25:RA:2712:U:C2'	25:RA:2712(A):A:O5'	2.64	0.45
25:RA:2776:A:C6	25:RA:2778:A:C6	3.04	0.45
26:RB:16:G:C2	26:RB:17:C:C4	3.04	0.45
26:RB:17:C:H2'	26:RB:18:G:O4'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:65:ILE:HD11	27:RD:67:PHE:CE1	2.51	0.45
28:RE:15:PHE:CD1	28:RE:20:ALA:HB2	2.50	0.45
30:RG:88:ILE:O	30:RG:88:ILE:CD1	2.54	0.45
31:RH:137:ASP:HB2	31:RH:140:LYS:HE3	1.98	0.45
31:RH:151:ILE:O	31:RH:152:ARG:O	2.34	0.45
32:RI:14:ASP:H	32:RI:17:GLN:HB2	1.81	0.45
33:RN:17:ASP:O	33:RN:55:VAL:O	2.34	0.45
33:RN:114:ARG:C	33:RN:116:LEU:N	2.74	0.45
35:RP:21:ARG:HB3	35:RP:22:GLY:H	1.65	0.45
36:RQ:27:VAL:HG22	36:RQ:105:GLU:CD	2.41	0.45
36:RQ:81:VAL:HG23	36:RQ:82:ARG:N	2.32	0.45
37:RR:1:MET:O	37:RR:2:ARG:HB2	2.15	0.45
38:RS:5:THR:OG1	38:RS:8:GLU:HG3	2.17	0.45
39:RT:24:PRO:HD3	39:RT:52:ILE:HD12	1.98	0.45
40:RU:57:PHE:O	40:RU:59:ARG:N	2.50	0.45
45:RZ:165:VAL:HG12	45:RZ:166:SER:OG	2.17	0.45
48:R2:48:HIS:O	48:R2:49:LYS:C	2.57	0.45
1:XA:75:C:H2'	1:XA:76:G:O4'	2.16	0.45
1:XA:105:G:H2'	1:XA:106:C:C6	2.51	0.45
1:XA:475:G:H2'	1:XA:476:G:C8	2.50	0.45
1:XA:1216:G:N1	1:XA:1217:C:C4	2.84	0.45
1:XA:1306:A:H61	1:XA:1331:G:H1'	1.79	0.45
2:XB:109:SER:C	2:XB:111:ARG:N	2.73	0.45
3:XC:43:LEU:HD22	3:XC:47:LEU:CD2	2.46	0.45
3:XC:53:ALA:O	3:XC:54:ARG:HB2	2.16	0.45
4:XD:100:ARG:NH2	4:XD:137:SER:HA	2.32	0.45
5:XE:153:LYS:HD3	5:XE:153:LYS:C	2.41	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
12:XL:47:LYS:HB2	12:XL:48:PRO:HD3	1.98	0.45
13:XM:10:PRO:HG3	13:XM:18:ALA:O	2.16	0.45
13:XM:80:ARG:O	13:XM:82:MET:O	2.33	0.45
14:XN:43:CYS:C	14:XN:45:ARG:N	2.73	0.45
17:XQ:3:LYS:HD3	17:XQ:61:GLU:O	2.17	0.45
18:XR:32:ARG:HH11	18:XR:65:ILE:HD13	1.80	0.45
20:XT:24:LEU:O	20:XT:24:LEU:HD13	2.16	0.45
20:XT:26:ASN:ND2	20:XT:26:ASN:N	2.62	0.45
25:YA:97:C:O2	25:YA:97:C:H2'	2.17	0.45
25:YA:389:G:H22	35:YP:72:PRO:CD	2.29	0.45
25:YA:811:U:O2'	25:YA:812:C:H5''	2.16	0.45
25:YA:855:G:C6	25:YA:856:C:N4	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1021:A:O2'	25:YA:1123:C:H5''	2.16	0.45
25:YA:1036:G:H1	25:YA:1119:C:H42	1.64	0.45
25:YA:1140:C:P	33:YN:24:GLY:HA3	2.56	0.45
25:YA:1245:G:N2	25:YA:1246:A:H1'	2.30	0.45
25:YA:1252:G:O4'	40:YU:33:ARG:HD3	2.16	0.45
25:YA:1374:G:H2'	25:YA:1375:C:O4'	2.17	0.45
25:YA:1488:G:C6	25:YA:1489:U:C4	3.04	0.45
25:YA:1785:A:OP2	25:YA:1982:C:H5'	2.17	0.45
25:YA:1838:C:C2	25:YA:1898:U:C4	3.03	0.45
25:YA:1936:A:H3'	25:YA:1937:A:H5'	1.98	0.45
25:YA:2405:G:H8	25:YA:2405:G:O5'	2.00	0.45
25:YA:2766:G:C2	25:YA:2767:C:C6	3.03	0.45
27:YD:118:VAL:O	27:YD:129:ASN:HA	2.16	0.45
28:YE:1:MET:N	28:YE:1:MET:HE2	2.32	0.45
28:YE:77:ILE:O	28:YE:78:LEU:O	2.35	0.45
29:YF:65:TRP:CH2	29:YF:72:ARG:HB3	2.50	0.45
31:YH:109:PHE:CE1	31:YH:152:ARG:NH1	2.85	0.45
33:YN:10:GLU:HA	33:YN:11:PRO:HD3	1.73	0.45
34:YO:112:MET:O	34:YO:115:VAL:CG2	2.64	0.45
35:YP:115:LEU:HA	35:YP:134:ALA:CB	2.47	0.45
39:YT:107:ASP:HB2	39:YT:108:ARG:H	1.48	0.45
41:YV:4:ILE:HG22	41:YV:39:LEU:HD23	1.98	0.45
43:YX:8:ILE:CD1	43:YX:42:ALA:HB1	2.46	0.45
43:YX:24:GLY:O	43:YX:82:GLN:HA	2.16	0.45
44:YY:35:TYR:CD1	44:YY:35:TYR:O	2.69	0.45
44:YY:49:VAL:O	44:YY:50:ARG:C	2.59	0.45
47:Y1:49:VAL:HG12	47:Y1:51:VAL:CG2	2.45	0.45
1:QA:1129:C:O2'	1:QA:1131:G:N7	2.46	0.45
1:QA:1237:C:C5	1:QA:1336:C:C4	3.04	0.45
1:QA:1288:A:C4	1:QA:1289:A:C8	3.03	0.45
1:QA:1346:A:H5'	9:QI:120:ARG:NH1	2.22	0.45
1:QA:1385:G:C6	1:QA:1386:G:N7	2.84	0.45
1:QA:1525:G:H2'	1:QA:1526:G:C8	2.51	0.45
2:QB:22:LYS:O	2:QB:24:TRP:N	2.50	0.45
2:QB:30:ARG:O	2:QB:31:TYR:HD2	2.00	0.45
4:QD:52:SER:H	4:QD:55:ALA:HB3	1.82	0.45
4:QD:92:VAL:O	4:QD:96:LEU:CD2	2.64	0.45
4:QD:100:ARG:NH2	4:QD:137:SER:HA	2.31	0.45
4:QD:114:ARG:NH1	4:QD:114:ARG:CG	2.77	0.45
4:QD:133:VAL:HG12	4:QD:135:LEU:H	1.81	0.45
5:QE:153:LYS:HD3	5:QE:153:LYS:C	2.41	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:40:VAL:HG22	6:QF:41:GLU:H	1.80	0.45
7:QG:95:ARG:HG2	7:QG:99:LEU:HD12	1.98	0.45
9:QI:42:ARG:O	9:QI:45:ALA:HB3	2.16	0.45
9:QI:43:ALA:C	9:QI:45:ALA:N	2.73	0.45
9:QI:80:GLY:C	9:QI:82:ALA:N	2.70	0.45
10:QJ:21:GLN:HG2	10:QJ:21:GLN:O	2.16	0.45
10:QJ:96:ILE:N	10:QJ:96:ILE:CD1	2.79	0.45
14:QN:26:ARG:NE	14:QN:47:LEU:HD21	2.30	0.45
16:QP:40:ASP:O	16:QP:42:ARG:N	2.50	0.45
17:QQ:86:GLU:O	17:QQ:87:LYS:C	2.59	0.45
25:RA:570:G:H2'	25:RA:2030:A:C5	2.51	0.45
25:RA:675:A:C8	25:RA:804:A:C6	3.05	0.45
25:RA:910:A:H2	25:RA:2264:C:O2	1.99	0.45
25:RA:1540:G:C6	25:RA:1541:U:C4	3.05	0.45
25:RA:2584:U:H5''	56:Z6:76:PPU:H92	1.97	0.45
26:RB:70:C:H2'	26:RB:71:C:C6	2.52	0.45
27:RD:2:ALA:HB1	27:RD:20:ASP:CB	2.46	0.45
27:RD:145:VAL:HB	27:RD:155:LEU:HB2	1.99	0.45
27:RD:148:GLU:HB2	27:RD:151:LYS:HD2	1.98	0.45
27:RD:154:LYS:C	27:RD:155:LEU:HD12	2.41	0.45
30:RG:83:ARG:HG3	30:RG:86:MET:CE	2.46	0.45
31:RH:94:TYR:N	31:RH:94:TYR:CD1	2.82	0.45
32:RI:124:GLY:H	32:RI:142:VAL:HG23	1.81	0.45
35:RP:62:LEU:CD2	35:RP:62:LEU:H	2.19	0.45
35:RP:65:ARG:C	35:RP:66:GLY:O	2.59	0.45
35:RP:98:GLU:HG2	35:RP:99:LEU:N	2.30	0.45
36:RQ:5:ARG:O	36:RQ:6:ARG:O	2.34	0.45
36:RQ:52:VAL:O	36:RQ:53:ALA:C	2.59	0.45
37:RR:10:LEU:C	37:RR:12:ARG:N	2.72	0.45
37:RR:28:LEU:HD13	37:RR:28:LEU:C	2.40	0.45
40:RU:27:LEU:C	40:RU:29:SER:N	2.74	0.45
40:RU:73:GLY:O	40:RU:74:LEU:CB	2.64	0.45
42:RW:14:PRO:C	42:RW:16:LYS:N	2.73	0.45
42:RW:29:LEU:HD23	42:RW:29:LEU:C	2.41	0.45
42:RW:65:LEU:CD1	42:RW:68:ARG:NH1	2.75	0.45
44:RY:47:LYS:O	44:RY:49:VAL:N	2.48	0.45
45:RZ:54:HIS:NE2	45:RZ:101:PRO:HG3	2.31	0.45
45:RZ:94:GLU:HB2	45:RZ:130:PRO:CD	2.39	0.45
46:R0:26:TYR:H	46:R0:29:GLN:NE2	2.13	0.45
49:R3:60:GLU:HG2	49:R3:60:GLU:O	2.16	0.45
52:R6:20:ASN:O	52:R6:21:TYR:HB2	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:R8:40:GLU:C	54:R8:42:ARG:N	2.68	0.45
1:XA:17:U:C1'	1:XA:1080:A:H1'	2.46	0.45
1:XA:260:G:H2'	1:XA:261:U:C6	2.52	0.45
1:XA:346:G:H1'	1:XA:347:G:H5'	1.97	0.45
1:XA:564:C:C6	17:XQ:31:LEU:HD11	2.51	0.45
1:XA:701:C:HO2'	1:XA:702:A:P	2.33	0.45
1:XA:1314:C:H5''	19:XS:6:LYS:HZ1	1.82	0.45
1:XA:1412:C:N4	1:XA:1488:G:H1	2.13	0.45
1:XA:1422:G:C2	1:XA:1423:G:C5	3.05	0.45
2:XB:51:LEU:O	2:XB:55:PHE:HD2	2.00	0.45
2:XB:95:GLN:OE1	2:XB:95:GLN:HA	2.16	0.45
4:XD:104:VAL:O	4:XD:107:ARG:N	2.49	0.45
4:XD:187:ARG:HH11	4:XD:187:ARG:HG2	1.81	0.45
5:XE:90:VAL:C	5:XE:91:LEU:HD12	2.42	0.45
5:XE:132:ALA:O	5:XE:133:TYR:C	2.59	0.45
7:XG:79:ARG:HG2	7:XG:79:ARG:NH1	2.29	0.45
12:XL:113:ARG:NH2	12:XL:120:TYR:CE2	2.85	0.45
15:XO:11:VAL:O	15:XO:12:ILE:C	2.60	0.45
15:XO:82:ILE:O	15:XO:86:GLY:N	2.49	0.45
25:YA:76:C:O2'	48:Y2:62:THR:HG21	2.17	0.45
25:YA:298:G:N2	25:YA:341:G:O6	2.50	0.45
25:YA:583:G:H5''	40:YU:10:ARG:NH1	2.26	0.45
25:YA:972:G:OP2	25:YA:974:G:H5''	2.16	0.45
25:YA:996:A:H2'	25:YA:997:G:H8	1.80	0.45
25:YA:1412:A:C6	25:YA:1413:G:C6	3.05	0.45
25:YA:2013:A:H2'	25:YA:2014:A:H5'	1.98	0.45
26:YB:7:G:H2'	26:YB:8:U:O4'	2.16	0.45
26:YB:50:G:P	38:YS:62:LYS:HB2	2.57	0.45
27:YD:2:ALA:HB1	27:YD:20:ASP:CB	2.46	0.45
29:YF:167:ALA:HB1	29:YF:173:VAL:HG11	1.98	0.45
34:YO:86:ILE:H	34:YO:86:ILE:CD1	2.28	0.45
36:YQ:26:TYR:O	36:YQ:27:VAL:O	2.34	0.45
36:YQ:30:GLY:CA	36:YQ:107:ALA:HB2	2.39	0.45
36:YQ:85:LYS:HD3	36:YQ:86:GLY:H	1.81	0.45
38:YS:102:ALA:C	38:YS:104:GLY:N	2.73	0.45
38:YS:109:GLY:O	38:YS:110:LEU:HB2	2.16	0.45
40:YU:57:PHE:O	40:YU:58:ARG:C	2.59	0.45
41:YV:47:VAL:O	41:YV:48:GLY:O	2.34	0.45
45:YZ:163:LEU:H	45:YZ:163:LEU:HG	1.61	0.45
47:Y1:82:LEU:HD13	47:Y1:83:GLU:C	2.36	0.45
48:Y2:65:ASN:O	48:Y2:66:GLU:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:3:GLU:HG3	50:Y4:4:GLY:H	1.79	0.45
52:Y6:17:LYS:O	52:Y6:18:ARG:CB	2.64	0.45
52:Y6:45:LYS:HD3	52:Y6:45:LYS:HA	1.79	0.45
1:QA:248:C:H2'	1:QA:249:U:C6	2.51	0.45
1:QA:920:U:O4'	1:QA:1080:A:C2	2.70	0.45
1:QA:988:G:C2	1:QA:989:C:C2	3.03	0.45
1:QA:1091:U:O2	1:QA:1093:A:C8	2.70	0.45
1:QA:1346:A:C4	7:QG:10:ARG:NH1	2.85	0.45
1:QA:1405:G:C2	1:QA:1406:U:C5	3.05	0.45
1:QA:1428:A:H2'	1:QA:1429:C:O4'	2.17	0.45
1:QA:1476:G:C6	1:QA:1477:C:C4	3.04	0.45
2:QB:95:GLN:O	2:QB:96:ARG:C	2.59	0.45
2:QB:240:GLN:HG2	2:QB:240:GLN:O	2.16	0.45
3:QC:46:GLU:C	3:QC:48:TYR:H	2.23	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:101:LEU:HD21	4:QD:121:VAL:HG13	1.99	0.45
4:QD:104:VAL:O	4:QD:107:ARG:N	2.49	0.45
4:QD:173:TRP:NE1	4:QD:174:LEU:HG	2.31	0.45
8:QH:33:GLU:C	8:QH:35:ILE:H	2.25	0.45
12:QL:6:THR:H	12:QL:9:GLN:NE2	1.97	0.45
16:QP:19:ILE:HB	16:QP:37:GLY:O	2.16	0.45
19:QS:10:PHE:CD1	19:QS:38:SER:HB2	2.52	0.45
20:QT:47:GLY:C	20:QT:49:ALA:N	2.72	0.45
20:QT:71:THR:HG22	20:QT:72:LEU:N	2.32	0.45
25:RA:85:G:C5	25:RA:98:G:C2	3.05	0.45
25:RA:92:G:H2'	25:RA:93:C:C6	2.52	0.45
25:RA:977:G:C6	25:RA:987:G:C6	3.03	0.45
25:RA:1061:U:H2'	25:RA:1063:G:OP1	2.16	0.45
25:RA:1658:C:H42	25:RA:2002:G:H1	1.64	0.45
25:RA:1848:A:H2'	25:RA:1849:G:O4'	2.17	0.45
25:RA:2046:G:C4	25:RA:2047:U:C5	3.04	0.45
25:RA:2736:G:C2	25:RA:2737:G:C8	3.04	0.45
28:RE:1:MET:HA	28:RE:200:GLU:OE2	2.16	0.45
30:RG:20:ILE:HD13	30:RG:25:TYR:HB2	1.98	0.45
31:RH:89:ILE:H	31:RH:89:ILE:HD13	1.81	0.45
31:RH:106:THR:HG22	31:RH:112:PRO:HB3	1.97	0.45
31:RH:109:PHE:CE1	31:RH:152:ARG:NH1	2.84	0.45
33:RN:22:THR:O	33:RN:60:ILE:HG22	2.16	0.45
34:RO:31:LYS:C	34:RO:32:TYR:CD2	2.94	0.45
34:RO:104:ARG:HG2	34:RO:121:VAL:HG12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:93:TYR:CD1	36:RQ:93:TYR:N	2.84	0.45
49:R3:43:ILE:O	49:R3:47:VAL:HG23	2.16	0.45
1:XA:186:C:O3'	20:XT:82:SER:HB3	2.17	0.45
1:XA:538:G:H5''	12:XL:114:LYS:HB2	1.97	0.45
1:XA:947:G:O2'	1:XA:1306:A:H4'	2.17	0.45
1:XA:987:G:C2	1:XA:988:G:N7	2.85	0.45
1:XA:1097:C:H2'	1:XA:1098:C:H6	1.82	0.45
1:XA:1190:G:H5'	3:XC:176:HIS:NE2	2.32	0.45
2:XB:25:ASN:HA	2:XB:26:PRO:HD2	1.86	0.45
2:XB:214:ILE:HD13	2:XB:217:ARG:HH22	1.81	0.45
3:XC:22:TRP:HB3	3:XC:59:ARG:HB2	1.99	0.45
3:XC:172:ARG:O	3:XC:173:VAL:HG23	2.15	0.45
4:XD:52:SER:H	4:XD:55:ALA:HB3	1.81	0.45
5:XE:10:MET:HB2	5:XE:32:VAL:HG22	1.94	0.45
6:XF:3:ARG:HH11	6:XF:3:ARG:HG3	1.80	0.45
6:XF:44:GLY:HA2	6:XF:59:TYR:CE2	2.51	0.45
6:XF:61:LEU:HD23	6:XF:63:TYR:OH	2.17	0.45
7:XG:107:ALA:O	7:XG:110:GLN:HB2	2.15	0.45
8:XH:64:LYS:HB3	8:XH:79:VAL:HG21	1.98	0.45
11:XK:104:GLN:O	11:XK:106:LYS:HG3	2.16	0.45
12:XL:64:TYR:O	12:XL:65:GLU:HB2	2.16	0.45
13:XM:15:VAL:O	13:XM:19:LEU:CD2	2.64	0.45
20:XT:71:THR:HG22	20:XT:72:LEU:N	2.32	0.45
25:YA:851:U:C1'	49:Y3:46:ASN:HD21	2.26	0.45
25:YA:1058:G:C2	25:YA:1059:G:N7	2.85	0.45
25:YA:1589:C:H2'	25:YA:1590:U:H6	1.82	0.45
25:YA:2072:G:N2	25:YA:2073:C:C2	2.84	0.45
25:YA:2146:C:H4'	25:YA:2147:G:C8	2.52	0.45
25:YA:2250:G:C5	36:YQ:82:ARG:HD2	2.52	0.45
25:YA:2277:G:H5''	36:YQ:85:LYS:HG3	1.98	0.45
25:YA:2532:G:H8	25:YA:2532:G:O5'	2.00	0.45
25:YA:2592:G:N1	25:YA:2601:C:N3	2.52	0.45
27:YD:65:ILE:HD11	27:YD:67:PHE:CE1	2.51	0.45
28:YE:13:ARG:HH11	28:YE:13:ARG:HB3	1.82	0.45
28:YE:47:VAL:O	28:YE:47:VAL:HG23	2.16	0.45
28:YE:101:ARG:C	28:YE:201:THR:OG1	2.58	0.45
29:YF:7:TYR:CD1	29:YF:7:TYR:N	2.85	0.45
30:YG:44:GLY:HA2	30:YG:88:ILE:HG12	1.97	0.45
31:YH:66:GLY:O	31:YH:67:LEU:C	2.58	0.45
32:YI:69:LYS:HG3	32:YI:136:VAL:HB	1.99	0.45
33:YN:113:GLY:O	33:YN:116:LEU:HB2	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:YN:114:ARG:O	33:YN:115:ARG:CB	2.65	0.45
34:YO:97:ARG:H	34:YO:117:LEU:CD2	2.24	0.45
36:YQ:52:VAL:O	36:YQ:53:ALA:C	2.59	0.45
37:YR:29:LEU:N	37:YR:29:LEU:CD1	2.79	0.45
38:YS:78:LEU:HD21	38:YS:108:GLY:HA2	1.99	0.45
39:YT:10:VAL:O	39:YT:11:GLU:C	2.60	0.45
41:YV:30:GLY:O	41:YV:31:ALA:O	2.34	0.45
42:YW:14:PRO:O	42:YW:15:ARG:C	2.58	0.45
44:YY:75:ILE:HA	44:YY:80:GLY:HA2	1.99	0.45
47:Y1:60:PHE:CE2	47:Y1:91:LYS:NZ	2.84	0.45
47:Y1:85:LEU:N	47:Y1:85:LEU:HD22	2.31	0.45
48:Y2:18:PRO:C	48:Y2:20:GLU:H	2.24	0.45
50:Y4:64:GLY:C	50:Y4:66:SER:N	2.73	0.45
1:QA:280:C:C2	17:QQ:38:ARG:HG3	2.51	0.45
1:QA:575:G:OP1	1:QA:575:G:H4'	2.16	0.45
1:QA:835:U:H2'	1:QA:836:G:H8	1.82	0.45
2:QB:15:VAL:HG23	2:QB:209:ARG:HE	1.80	0.45
4:QD:150:GLU:C	4:QD:152:SER:N	2.73	0.45
4:QD:199:ASN:O	4:QD:201:GLN:N	2.49	0.45
5:QE:12:LEU:HB3	5:QE:31:LEU:CB	2.47	0.45
6:QF:9:VAL:HB	6:QF:87:ARG:HB2	1.97	0.45
8:QH:97:VAL:CG1	8:QH:98:LYS:H	2.30	0.45
13:QM:65:LYS:HZ1	50:R4:52:THR:CB	2.29	0.45
15:QO:11:VAL:O	15:QO:12:ILE:C	2.60	0.45
15:QO:82:ILE:CG2	15:QO:83:GLU:N	2.79	0.45
16:QP:50:LYS:HD3	16:QP:50:LYS:C	2.42	0.45
25:RA:35:G:H1'	25:RA:454:A:C4	2.51	0.45
25:RA:54:G:C6	25:RA:117:G:N2	2.84	0.45
25:RA:172:C:H2'	25:RA:173:G:C8	2.52	0.45
25:RA:328:U:H4'	44:RY:68:HIS:CD2	2.52	0.45
25:RA:698:C:O2'	25:RA:734:A:N6	2.49	0.45
25:RA:774:A:HO2'	25:RA:775:G:P	2.38	0.45
25:RA:1943:U:C4	25:RA:1945:G:O4'	2.69	0.45
25:RA:1986:A:H2'	25:RA:1987:G:C8	2.51	0.45
25:RA:2272:U:H5''	25:RA:2273:A:OP1	2.16	0.45
25:RA:2468:G:H5''	36:RQ:120:ILE:HD12	1.97	0.45
26:RB:87:G:N2	26:RB:90:C:C2	2.84	0.45
27:RD:35:LYS:CE	27:RD:64:ILE:C	2.89	0.45
27:RD:109:ASP:HB2	27:RD:197:GLY:CA	2.46	0.45
28:RE:22:PRO:O	28:RE:22:PRO:CG	2.63	0.45
28:RE:62:PRO:O	28:RE:63:LEU:C	2.59	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:RG:14:GLU:HB3	30:RG:15:VAL:H	1.56	0.45
30:RG:51:ARG:NH2	30:RG:52:ILE:HD11	2.32	0.45
32:RI:6:LEU:HB2	32:RI:35:LEU:HA	1.97	0.45
34:RO:40:VAL:CG1	34:RO:41:ALA:N	2.80	0.45
34:RO:47:ILE:HG13	34:RO:48:PRO:HD2	1.99	0.45
35:RP:144:GLU:OE1	35:RP:144:GLU:N	2.48	0.45
39:RT:36:GLU:CG	39:RT:41:ARG:HD3	2.46	0.45
41:RV:59:ALA:HB2	41:RV:96:ILE:HD13	1.97	0.45
44:RY:36:ALA:HB1	44:RY:67:LEU:O	2.16	0.45
45:RZ:25:PRO:HD2	45:RZ:84:GLU:O	2.15	0.45
50:R4:26:SER:C	50:R4:27:THR:O	2.58	0.45
51:R5:16:ARG:O	51:R5:20:ARG:HG3	2.16	0.45
1:XA:123:C:O2'	1:XA:290:C:O2	2.34	0.45
1:XA:317:G:C5	1:XA:318:G:N7	2.84	0.45
1:XA:667:G:H4'	15:XO:51:HIS:ND1	2.30	0.45
1:XA:1158:C:C2	1:XA:1160:G:C8	3.04	0.45
1:XA:1446:A:C5	39:YT:118:ARG:NH1	2.84	0.45
2:XB:37:ASN:C	2:XB:39:ILE:N	2.74	0.45
2:XB:95:GLN:NE2	2:XB:96:ARG:NH1	2.65	0.45
2:XB:240:GLN:HG2	2:XB:240:GLN:O	2.16	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:HB2	1.98	0.45
7:XG:95:ARG:HG2	7:XG:99:LEU:HD12	1.98	0.45
13:XM:57:ARG:HD2	13:XM:61:GLU:OE2	2.17	0.45
13:XM:65:LYS:NZ	13:XM:69:GLU:HG2	2.30	0.45
15:XO:77:ARG:HA	15:XO:80:ALA:HB2	1.99	0.45
19:XS:69:HIS:O	19:XS:70:LYS:O	2.34	0.45
25:YA:187:G:C6	25:YA:188:G:C5	3.05	0.45
25:YA:205:G:HO2'	25:YA:206:U:P	2.38	0.45
25:YA:701:G:H5''	25:YA:701:G:H8	1.81	0.45
25:YA:1050:A:C8	25:YA:2751:G:C4	3.04	0.45
25:YA:1412:A:H2'	25:YA:1413:G:O4'	2.17	0.45
25:YA:1541:U:H2'	25:YA:1542:G:O4'	2.17	0.45
25:YA:1641:A:H3'	25:YA:1642:G:C8	2.52	0.45
25:YA:1834:U:H1'	25:YA:1969:A:C2	2.52	0.45
25:YA:1965:C:H3'	25:YA:1966:A:H2'	1.98	0.45
25:YA:2020:A:C2	25:YA:2022:U:O4'	2.70	0.45
25:YA:2228:G:H5''	25:YA:2229:C:OP2	2.16	0.45
25:YA:2310:A:H62	30:YG:77:ILE:CG2	2.27	0.45
25:YA:2335:A:N7	25:YA:2337:G:C5	2.84	0.45
25:YA:2412:A:N6	25:YA:2413:G:C2	2.84	0.45
25:YA:2447:G:O6	25:YA:2504:U:O4	2.35	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2470:G:C5'	36:YQ:56:ARG:HH22	2.29	0.45
25:YA:2615:U:C2	51:Y5:7:PRO:HA	2.52	0.45
26:YB:88:C:H2'	26:YB:89:G:C8	2.51	0.45
27:YD:68:LYS:HD2	27:YD:70:TRP:CZ2	2.52	0.45
27:YD:109:ASP:HB2	27:YD:197:GLY:CA	2.46	0.45
27:YD:198:ASN:ND2	27:YD:198:ASN:O	2.50	0.45
28:YE:111:ARG:NE	28:YE:160:TYR:CE1	2.76	0.45
31:YH:16:SER:OG	31:YH:17:VAL:N	2.50	0.45
36:YQ:104:PHE:O	36:YQ:105:GLU:CB	2.65	0.45
36:YQ:133:ARG:CG	36:YQ:134:ARG:N	2.78	0.45
38:YS:5:THR:OG1	38:YS:8:GLU:HG3	2.17	0.45
40:YU:95:LEU:HD13	41:YV:4:ILE:HD12	1.98	0.45
44:YY:97:ARG:HG2	44:YY:97:ARG:HH11	1.82	0.45
47:Y1:54:ALA:O	47:Y1:55:GLY:O	2.35	0.45
48:Y2:18:PRO:C	48:Y2:20:GLU:N	2.73	0.45
52:Y6:9:LEU:CD1	52:Y6:26:ASN:ND2	2.80	0.45
52:Y6:11:LEU:H	52:Y6:25:LYS:HA	1.81	0.45
53:Y7:24:THR:O	53:Y7:28:ARG:HG3	2.16	0.45
1:QA:248:C:O2'	1:QA:249:U:H5'	2.16	0.45
1:QA:686:U:O2'	1:QA:687:A:O5'	2.35	0.45
1:QA:814:A:C8	1:QA:816:A:C8	3.04	0.45
1:QA:922:G:N3	1:QA:1398:A:H2	2.14	0.45
1:QA:991:U:O2	1:QA:993:G:H8	2.00	0.45
1:QA:1060:C:O2	10:QJ:56:HIS:CE1	2.70	0.45
1:QA:1127:G:N2	1:QA:1147:C:H41	2.14	0.45
1:QA:1129:C:C4'	1:QA:1130:A:H5'	2.44	0.45
1:QA:1179:A:C6	1:QA:1180:A:C2	3.05	0.45
1:QA:1298:C:HO2'	1:QA:1299:A:P	2.37	0.45
2:QB:24:TRP:CD2	2:QB:26:PRO:HD3	2.52	0.45
3:QC: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:73:ARG:O	4:QD:74:GLN:C	2.58	0.45
4:QD:96:LEU:C	4:QD:98:GLU:N	2.72	0.45
5:QE:52:PRO:HB2	5:QE:53:LEU:HD12	1.97	0.45
6:QF:35:ALA:HA	6:QF:67:MET:HB3	1.99	0.45
7:QG:50:ILE:HG21	7:QG:61:VAL:HG21	1.97	0.45
8:QH:33:GLU:O	8:QH:35:ILE:N	2.49	0.45
13:QM:108:ARG:O	13:QM:111:LYS:N	2.48	0.45
15:QO:5:LYS:O	15:QO:8:LYS:CG	2.63	0.45
17:QQ:41:LYS:HZ3	17:QQ:92:ARG:HH22	1.60	0.45
20:QT:24:LEU:HD13	20:QT:24:LEU:O	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:70:G:C2	25:RA:114:U:C4	3.04	0.45
25:RA:241:A:H5'	25:RA:243:U:O4'	2.17	0.45
25:RA:1534:G:H1	25:RA:1538:G:H21	1.63	0.45
25:RA:2396:G:C2'	25:RA:2397:G:H5'	2.47	0.45
27:RD:36:PRO:HB3	27:RD:62:TYR:O	2.16	0.45
27:RD:213:ARG:HA	27:RD:213:ARG:HD2	1.60	0.45
29:RF:123:LEU:HD12	29:RF:124:LEU:H	1.82	0.45
31:RH:6:ARG:C	31:RH:8:PRO:CD	2.90	0.45
31:RH:86:GLU:O	31:RH:87:LEU:CB	2.64	0.45
33:RN:5:VAL:O	33:RN:5:VAL:HG13	2.16	0.45
33:RN:128:HIS:HB2	33:RN:129:PRO:CD	2.46	0.45
35:RP:65:ARG:O	35:RP:66:GLY:C	2.60	0.45
35:RP:88:LEU:O	35:RP:90:ARG:N	2.50	0.45
35:RP:92:GLU:HA	35:RP:123:LEU:HD23	1.98	0.45
36:RQ:30:GLY:CA	36:RQ:107:ALA:HB2	2.39	0.45
41:RV:95:LEU:HD13	41:RV:95:LEU:C	2.42	0.45
44:RY:49:VAL:O	44:RY:50:ARG:C	2.59	0.45
44:RY:57:GLN:O	44:RY:58:GLY:C	2.60	0.45
45:RZ:104:PHE:HB3	45:RZ:141:VAL:CG1	2.47	0.45
47:R1:80:LEU:CB	47:R1:81:LYS:HE2	2.44	0.45
49:R3:28:LEU:HA	49:R3:33:GLN:OE1	2.16	0.45
1:XA:186(A):C:H1'	20:XT:104:LEU:HD13	1.99	0.45
1:XA:243:A:H4'	1:XA:244:U:O5'	2.17	0.45
1:XA:592:G:C2	1:XA:593:G:C8	3.05	0.45
1:XA:730:G:C5	1:XA:731:G:H1'	2.52	0.45
1:XA:974:A:N3	14:YN:31:ARG:NE	2.64	0.45
1:XA:1305:G:N2	1:XA:1331:G:H2'	2.32	0.45
2:XB:170:GLU:CA	2:XB:172:ILE:HD12	2.46	0.45
3:XC:42:LEU:HD12	3:XC:45:LYS:NZ	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	1.81	0.45
5:XE:55:VAL:O	5:XE:58:ALA:HB3	2.16	0.45
11:XK:48:ILE:HD11	11:XK:64:ALA:N	2.32	0.45
11:XK:70:LYS:HA	11:XK:73:MET:HE3	1.98	0.45
13:XM:28:ALA:C	13:XM:30:ALA:H	2.24	0.45
13:XM:65:LYS:NZ	50:Y4:52:THR:CG2	2.78	0.45
15:XO:30:ALA:HA	15:XO:85:LEU:HD11	1.97	0.45
17:XQ:48:GLU:O	17:XQ:50:LYS:N	2.50	0.45
19:XS:3:ARG:CG	19:XS:4:SER:H	2.20	0.45
25:YA:213:A:H2'	25:YA:214:G:O4'	2.16	0.45
25:YA:222:A:HO2'	25:YA:223:A:P	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:807:U:H2'	25:YA:808:G:H8	1.82	0.45
25:YA:1092:C:O2'	31:YH:170:ARG:NE	2.49	0.45
25:YA:1318:C:H5''	25:YA:1319:G:OP2	2.17	0.45
25:YA:1423:G:H2'	25:YA:1424:G:H8	1.82	0.45
25:YA:1580:A:H8	25:YA:1580:A:OP2	2.00	0.45
25:YA:1637:A:H4'	25:YA:2711:A:O2'	2.17	0.45
25:YA:2397:G:H5''	47:Y1:28:GLY:HA2	1.99	0.45
25:YA:2436:G:C5	25:YA:2437:U:C5	3.04	0.45
25:YA:2574:G:H2'	25:YA:2575:C:C6	2.52	0.45
25:YA:2652:C:H2'	25:YA:2653:U:O4'	2.16	0.45
25:YA:2881:C:O3'	37:YR:96:ARG:HG3	2.17	0.45
26:YB:72:G:H5''	26:YB:73:A:OP1	2.16	0.45
27:YD:25:THR:CG2	27:YD:25:THR:O	2.65	0.45
27:YD:35:LYS:CE	27:YD:64:ILE:C	2.89	0.45
27:YD:154:LYS:C	27:YD:155:LEU:HD12	2.41	0.45
28:YE:33:VAL:HG12	28:YE:90:THR:H	1.81	0.45
28:YE:199:ARG:HH11	28:YE:199:ARG:HG3	1.82	0.45
29:YF:61:GLY:O	29:YF:62:ARG:C	2.57	0.45
29:YF:117:ARG:NH2	29:YF:189:THR:O	2.50	0.45
30:YG:51:ARG:NH2	30:YG:52:ILE:HD11	2.32	0.45
33:YN:7:LYS:HD3	33:YN:9:VAL:H	1.80	0.45
40:YU:5:LYS:C	40:YU:7:GLY:N	2.74	0.45
40:YU:27:LEU:HD12	40:YU:31:SER:HB3	1.98	0.45
45:YZ:3:TYR:O	45:YZ:58:VAL:HG23	2.16	0.45
45:YZ:95:PRO:HG2	45:YZ:127:LYS:HD3	1.99	0.45
50:Y4:51:ASP:O	50:Y4:51:ASP:CG	2.60	0.45
1:QA:96:G:H2'	1:QA:97:U:O4'	2.17	0.45
1:QA:186(D):C:H2'	1:QA:186(E):C:C6	2.52	0.45
1:QA:339:C:H2'	1:QA:340:U:C6	2.51	0.45
1:QA:342:C:H2'	1:QA:343:U:O4'	2.17	0.45
1:QA:368:U:OP1	32:YI:91:SER:OG	2.31	0.45
1:QA:392:G:H2'	1:QA:393:A:H8	1.82	0.45
1:QA:701:C:H1'	1:QA:703:G:C6	2.52	0.45
1:QA:895:G:H1	1:QA:904:C:H42	1.63	0.45
1:QA:939:G:H5''	7:QG:102:ARG:NH1	2.31	0.45
1:QA:1089:G:H1	1:QA:1096:C:H42	1.64	0.45
1:QA:1114:C:O2	14:QN:60:SER:HB3	2.17	0.45
1:QA:1216:G:H5''	14:QN:5:ALA:HB2	1.99	0.45
2:QB:95:GLN:NE2	2:QB:96:ARG:NH1	2.64	0.45
2:QB:109:SER:C	2:QB:111:ARG:N	2.72	0.45
2:QB:178:ARG:HE	8:QH:71:GLY:H	1.62	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:11:LEU:O	4:QD:12:CYS:C	2.59	0.45
4:QD:120:LEU:CD2	4:QD:125:HIS:HB2	2.46	0.45
5:QE:77:PRO:HG2	5:QE:142:LEU:HD22	1.98	0.45
7:QG:111:ARG:HD2	7:QG:123:GLU:HB2	1.98	0.45
11:QK:17:GLY:CA	11:QK:77:MET:HE1	2.25	0.45
13:QM:28:ALA:C	13:QM:30:ALA:H	2.25	0.45
18:QR:63:GLN:HA	18:QR:63:GLN:OE1	2.17	0.45
25:RA:27:G:C4	25:RA:512:G:N2	2.85	0.45
25:RA:48:G:C2	25:RA:178:G:C6	3.05	0.45
25:RA:122:G:OP1	25:RA:149:A:O2'	2.29	0.45
25:RA:557:U:O2	33:RN:45:ASN:HB2	2.16	0.45
25:RA:590:A:H2'	25:RA:591:C:C6	2.52	0.45
25:RA:1022:G:N2	25:RA:1142(A):A:H2	2.14	0.45
25:RA:1032:A:H4'	55:R9:16:VAL:HG11	1.98	0.45
25:RA:1429:G:C5	25:RA:1568:G:C6	3.05	0.45
25:RA:1510:A:H2'	25:RA:1510:A:N3	2.32	0.45
25:RA:1831:G:H1	25:RA:1974:C:H42	1.65	0.45
25:RA:2649:U:H2'	25:RA:2650:U:C6	2.52	0.45
25:RA:2722:G:H4'	37:RR:4:LEU:HB2	1.98	0.45
27:RD:14:ARG:HG3	27:RD:15:PHE:N	2.31	0.45
28:RE:21:VAL:HG23	28:RE:22:PRO:CD	2.46	0.45
29:RF:184:TYR:CE2	29:RF:188:ARG:HD2	2.52	0.45
30:RG:78:SER:O	30:RG:79:ASN:C	2.59	0.45
30:RG:102:PHE:HA	30:RG:105:LYS:HE3	1.98	0.45
33:RN:28:THR:O	33:RN:29:LYS:C	2.59	0.45
33:RN:35:ARG:HG3	33:RN:35:ARG:O	2.16	0.45
37:RR:17:ARG:O	37:RR:20:LEU:HB3	2.17	0.45
37:RR:84:ALA:O	37:RR:85:PRO:C	2.59	0.45
42:RW:14:PRO:O	42:RW:16:LYS:N	2.50	0.45
44:RY:87:LYS:C	44:RY:88:LYS:NZ	2.75	0.45
46:R0:50:ASN:HB3	46:R0:63:VAL:HG22	1.98	0.45
48:R2:28:LYS:HB3	48:R2:57:ILE:HG12	1.98	0.45
52:R6:11:LEU:H	52:R6:25:LYS:HA	1.81	0.45
1:XA:598:U:H2'	1:XA:599:C:C6	2.51	0.45
1:XA:775:G:O2'	1:XA:776:G:H5'	2.17	0.45
1:XA:960:U:H1'	1:XA:1223:C:H5'	1.99	0.45
1:XA:1129:C:N3	1:XA:1132:C:N4	2.63	0.45
1:XA:1237:C:O2'	1:XA:1300:G:N1	2.49	0.45
1:XA:1322:C:OP2	19:XS:78:ARG:NH2	2.50	0.45
4:XD:52:SER:N	4:XD:55:ALA:HB3	2.32	0.45
4:XD:178:VAL:O	4:XD:181:MET:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:82:VAL:HG12	5:XE:83:GLU:H	1.77	0.45
6:XF:68:PRO:HG3	6:XF:71:ARG:NH2	2.31	0.45
6:XF:101:ALA:HA	18:XR:28:GLU:CG	2.46	0.45
8:XH:102:ARG:NH1	8:XH:105:ARG:CZ	2.80	0.45
12:XL:126:LYS:HB2	12:XL:126:LYS:HZ3	1.81	0.45
16:XP:22:THR:CA	16:XP:33:ILE:HG12	2.41	0.45
16:XP:50:LYS:HD3	16:XP:50:LYS:C	2.42	0.45
17:XQ:82:MET:C	17:XQ:84:LEU:H	2.25	0.45
18:XR:63:GLN:HA	18:XR:63:GLN:OE1	2.17	0.45
20:XT:53:LEU:HD12	20:XT:100:ILE:HG23	1.98	0.45
25:YA:383:U:H5''	25:YA:384:U:OP2	2.16	0.45
25:YA:489:G:C5	25:YA:1284:A:C2	3.04	0.45
25:YA:564:C:H2'	25:YA:565:C:O4'	2.17	0.45
25:YA:581:C:H2'	25:YA:582:G:H8	1.81	0.45
25:YA:747:U:O5'	25:YA:747:U:H6	1.99	0.45
25:YA:1049:C:C2'	25:YA:1050:A:H5''	2.40	0.45
25:YA:1446:C:C2	25:YA:1447:G:C8	3.05	0.45
25:YA:1821:A:N6	25:YA:1822:G:O6	2.50	0.45
25:YA:1845:G:OP1	27:YD:258:LYS:NZ	2.43	0.45
25:YA:2038:G:H2'	25:YA:2039:C:O4'	2.17	0.45
25:YA:2131:G:C4'	25:YA:2132:U:H4'	2.46	0.45
25:YA:2493:U:H2'	25:YA:2494:G:O4'	2.16	0.45
25:YA:2639:A:H1'	25:YA:2778:A:C2	2.52	0.45
25:YA:2737:G:H2'	25:YA:2738:A:H8	1.80	0.45
26:YB:12:C:H2'	46:Y0:73:GLY:HA3	1.99	0.45
26:YB:24:G:C2	26:YB:56:G:C2	3.04	0.45
26:YB:34:U:O2'	26:YB:44:G:O6	2.34	0.45
27:YD:166:GLN:CA	27:YD:166:GLN:NE2	2.78	0.45
28:YE:2:LYS:O	28:YE:199:ARG:HA	2.17	0.45
28:YE:95:ILE:HG22	28:YE:95:ILE:O	2.16	0.45
29:YF:155:LEU:HA	29:YF:174:VAL:CG1	2.46	0.45
32:YI:56:LYS:NZ	32:YI:57:ARG:HA	2.31	0.45
33:YN:20:GLY:HA2	33:YN:61:ARG:HD2	1.99	0.45
33:YN:22:THR:O	33:YN:60:ILE:HG22	2.16	0.45
34:YO:22:ILE:HG12	34:YO:41:ALA:HA	1.98	0.45
34:YO:31:LYS:C	34:YO:32:TYR:CD2	2.95	0.45
35:YP:45:LEU:CD1	35:YP:45:LEU:N	2.79	0.45
39:YT:24:PRO:HD3	39:YT:52:ILE:HD12	1.98	0.45
40:YU:79:PHE:CE2	40:YU:83:LEU:HD13	2.51	0.45
45:YZ:29:TYR:HE2	45:YZ:87:ASP:HB3	1.81	0.45
50:Y4:68:ARG:O	50:Y4:69:LYS:HB2	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:48:VAL:O	52:Y6:49:HIS:HB2	2.15	0.45
1:QA:341:C:C2'	1:QA:342:C:H5'	2.47	0.45
1:QA:518:C:H5'	1:QA:530:G:O4'	2.17	0.45
1:QA:921:U:O2'	5:QE:19:MET:N	2.48	0.45
1:QA:972:C:H4'	10:QJ:57:LYS:HG3	1.99	0.45
1:QA:1051:C:C4	1:QA:1052:U:C4	3.05	0.45
1:QA:1118:C:O5'	1:QA:1118:C:H6	1.99	0.45
2:QB:33:TYR:HD1	2:QB:33:TYR:O	2.00	0.45
2:QB:75:LYS:C	2:QB:77:ALA:H	2.24	0.45
2:QB:214:ILE:HD13	2:QB:217:ARG:HH22	1.81	0.45
3:QC:172:ARG:C	3:QC:173:VAL:HG23	2.42	0.45
4:QD:29:PRO:HD2	4:QD:30:LYS:H	1.80	0.45
5:QE:42:GLY:CA	5:QE:136:MET:HE1	2.46	0.45
7:QG:95:ARG:HH11	7:QG:95:ARG:HG3	1.82	0.45
8:QH:86:ILE:CG1	8:QH:133:LEU:HD22	2.46	0.45
10:QJ:22:LYS:C	10:QJ:22:LYS:CD	2.89	0.45
10:QJ:38:ILE:CD1	10:QJ:71:LEU:HB3	2.46	0.45
11:QK:32:ILE:HD11	11:QK:72:ALA:HB2	1.96	0.45
13:QM:4:ILE:O	13:QM:5:ALA:C	2.60	0.45
13:QM:66:LEU:HB2	13:QM:67:GLU:H	1.61	0.45
20:QT:96:GLY:O	20:QT:99:LEU:HD13	2.16	0.45
25:RA:64:A:C4	43:RX:66:LEU:HD13	2.52	0.45
25:RA:330:A:H2	25:RA:1210:A:H2'	1.80	0.45
25:RA:902:C:H2'	25:RA:903:C:H6	1.81	0.45
25:RA:1181:C:H2'	25:RA:1182:A:H8	1.81	0.45
25:RA:1303:G:H1'	25:RA:1641:A:N1	2.32	0.45
25:RA:1693:U:C5	25:RA:1977:A:H1'	2.52	0.45
25:RA:1937:A:N7	25:RA:1939:U:H2'	2.32	0.45
25:RA:2075:U:H2'	25:RA:2238:G:N2	2.32	0.45
25:RA:2086:U:H2'	25:RA:2087:G:C8	2.52	0.45
26:RB:105:G:C2	26:RB:106:G:C8	3.05	0.45
27:RD:92:ILE:HD12	27:RD:104:TYR:HD2	1.81	0.45
28:RE:36:ARG:HH11	28:RE:36:ARG:CB	2.28	0.45
28:RE:93:VAL:C	28:RE:95:ILE:N	2.75	0.45
29:RF:119:ARG:HH11	29:RF:119:ARG:CG	2.29	0.45
29:RF:196:LEU:O	29:RF:200:GLU:HG2	2.17	0.45
30:RG:36:LYS:O	30:RG:37:VAL:HG23	2.16	0.45
32:RI:133:HIS:HB2	32:RI:134:PRO:HD2	1.98	0.45
34:RO:107:ARG:O	34:RO:112:MET:HE1	2.17	0.45
35:RP:21:ARG:HE	35:RP:21:ARG:HA	1.82	0.45
38:RS:102:ALA:C	38:RS:104:GLY:N	2.73	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:10:VAL:O	39:RT:11:GLU:C	2.59	0.45
40:RU:15:LYS:O	40:RU:16:LYS:C	2.60	0.45
40:RU:97:ASP:HA	40:RU:100:VAL:CG2	2.47	0.45
45:RZ:74:VAL:HG22	45:RZ:86:VAL:HG22	1.98	0.45
51:R5:15:ARG:HA	51:R5:18:ALA:HB3	1.99	0.45
54:R8:16:ILE:CD1	54:R8:57:ARG:HG2	2.42	0.45
1:XA:186(A):C:O4'	20:XT:85:MET:SD	2.75	0.45
1:XA:265:G:N2	1:XA:267:C:H5'	2.32	0.45
1:XA:440:A:H5''	1:XA:442:C:H5	1.81	0.45
1:XA:559:A:H4'	1:XA:560:U:H5''	1.98	0.45
1:XA:598:U:H2'	1:XA:599:C:H6	1.82	0.45
1:XA:652:U:C4	1:XA:752:G:N3	2.84	0.45
1:XA:993:G:H2'	1:XA:993:G:N3	2.32	0.45
1:XA:1054:C:H6	1:XA:1054:C:H5''	1.81	0.45
1:XA:1060:C:C2	1:XA:1198:G:C2	3.05	0.45
1:XA:1084:G:N7	1:XA:1085:U:C4	2.85	0.45
2:XB:77:ALA:HB2	2:XB:211:ILE:HG21	1.99	0.45
3:XC:92:ALA:HB2	3:XC:99:VAL:HG11	1.99	0.45
5:XE:7:GLU:HB3	5:XE:112:LEU:HD13	1.99	0.45
5:XE:150:ARG:HG2	5:XE:150:ARG:O	2.16	0.45
7:XG:103:TRP:O	7:XG:104:LEU:C	2.59	0.45
9:XI:71:SER:O	9:XI:72:GLY:C	2.58	0.45
10:XJ:63:PHE:HB3	14:YN:57:ARG:O	2.17	0.45
15:XO:74:ASP:C	15:XO:76:GLU:H	2.24	0.45
25:YA:7:G:H2'	25:YA:8:A:H8	1.82	0.45
25:YA:126:A:OP2	53:Y7:18:PHE:N	2.50	0.45
25:YA:205:G:O2'	25:YA:206:U:P	2.75	0.45
25:YA:221:A:N3	25:YA:233:A:H1'	2.30	0.45
25:YA:228:A:C5	25:YA:230:U:O2	2.70	0.45
25:YA:565:C:H2'	25:YA:566:U:O4'	2.16	0.45
25:YA:586:A:H5'	29:YF:89:VAL:HG21	1.98	0.45
25:YA:1273:U:H4'	25:YA:1275:A:OP1	2.17	0.45
25:YA:2011:U:C2'	25:YA:2012:G:H5'	2.46	0.45
25:YA:2064:C:H2'	25:YA:2065:C:C6	2.51	0.45
25:YA:2196:C:H2'	25:YA:2197:U:H6	1.82	0.45
25:YA:2457:U:C4	25:YA:2458:G:C6	3.04	0.45
27:YD:92:ILE:HD12	27:YD:104:TYR:HD2	1.82	0.45
28:YE:154:LYS:C	28:YE:154:LYS:HD3	2.42	0.45
29:YF:196:LEU:O	29:YF:200:GLU:HG2	2.17	0.45
34:YO:104:ARG:NH2	39:YT:34:VAL:HG11	2.32	0.45
34:YO:107:ARG:O	34:YO:112:MET:HE1	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:YP:21:ARG:HA	35:YP:21:ARG:HE	1.82	0.45
35:YP:92:GLU:HA	35:YP:123:LEU:HD23	1.99	0.45
36:YQ:34:LEU:HB2	36:YQ:118:LEU:HD22	1.99	0.45
37:YR:31:HIS:C	37:YR:33:ARG:H	2.25	0.45
41:YV:95:LEU:C	41:YV:95:LEU:HD13	2.42	0.45
42:YW:14:PRO:O	42:YW:16:LYS:N	2.50	0.45
42:YW:21:VAL:O	42:YW:21:VAL:HG12	2.17	0.45
42:YW:74:ALA:C	42:YW:75:TYR:HD1	2.24	0.45
44:YY:25:GLY:HA3	44:YY:39:VAL:CG1	2.47	0.45
48:Y2:28:LYS:HB3	48:Y2:57:ILE:HG12	1.98	0.45
53:Y7:2:LYS:HG2	53:Y7:3:ARG:N	2.31	0.45
54:Y8:36:LYS:HB3	54:Y8:40:GLU:HG2	1.98	0.45
1:QA:37:U:O2'	1:QA:500:G:H4'	2.16	0.45
1:QA:588:G:C4	1:QA:589:C:C5	3.04	0.45
1:QA:607:A:C2	16:QP:31:LYS:HB2	2.52	0.45
1:QA:797:C:O2'	1:QA:798:G:H5'	2.17	0.45
1:QA:976:G:C6	1:QA:1363:A:C2	3.05	0.45
1:QA:982:U:H5''	14:QN:6:LEU:CD1	2.47	0.45
1:QA:1271:G:H5'	1:QA:1314:C:H5'	1.99	0.45
1:QA:1346:A:O2'	1:QA:1347:G:P	2.75	0.45
2:QB:30:ARG:HH21	2:QB:194:PRO:HG2	1.82	0.45
2:QB:170:GLU:C	2:QB:172:ILE:N	2.74	0.45
5:QE:90:VAL:C	5:QE:91:LEU:HD12	2.42	0.45
7:QG:15:ASP:HB3	7:QG:20:ASP:N	2.15	0.45
8:QH:41:ARG:CG	8:QH:41:ARG:NH1	2.76	0.45
8:QH:64:LYS:HB3	8:QH:79:VAL:HG21	1.98	0.45
10:QJ:51:ARG:HG2	10:QJ:51:ARG:HH11	1.81	0.45
10:QJ:63:PHE:HB3	14:QN:57:ARG:O	2.17	0.45
13:QM:3:ARG:HD2	13:QM:9:ILE:CG1	2.45	0.45
13:QM:15:VAL:O	13:QM:19:LEU:CD2	2.64	0.45
13:QM:110:ARG:HH11	13:QM:110:ARG:HG3	1.82	0.45
16:QP:39:TYR:CZ	16:QP:41:PRO:HB3	2.52	0.45
19:QS:13:ASP:O	19:QS:14:HIS:C	2.60	0.45
19:QS:41:VAL:HG13	19:QS:44:MET:CB	2.39	0.45
25:RA:264:C:C2'	25:RA:265:A:H5''	2.47	0.45
25:RA:783:A:H8	25:RA:783:A:H2'	1.46	0.45
25:RA:1062:G:H2'	25:RA:1063:G:H8	1.81	0.45
25:RA:1167:U:C2	25:RA:1183:G:N2	2.85	0.45
25:RA:1310:G:OP2	53:R7:9:ARG:NH1	2.49	0.45
25:RA:1429:G:H2'	25:RA:1430:C:H6	1.82	0.45
25:RA:1588:C:H2'	25:RA:1589:C:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2510:C:H2'	25:RA:2511:U:C6	2.52	0.45
25:RA:2562:U:C1'	34:RO:23:ARG:NH1	2.76	0.45
25:RA:2655:G:O2'	25:RA:2656:U:C5	2.70	0.45
27:RD:68:LYS:HD2	27:RD:70:TRP:CZ2	2.52	0.45
27:RD:118:VAL:O	27:RD:129:ASN:HA	2.16	0.45
27:RD:166:GLN:HA	27:RD:166:GLN:NE2	2.32	0.45
28:RE:2:LYS:O	28:RE:199:ARG:HA	2.17	0.45
28:RE:77:ILE:O	28:RE:78:LEU:O	2.34	0.45
31:RH:53:GLU:OE1	31:RH:53:GLU:HA	2.16	0.45
35:RP:96:THR:HG22	35:RP:126:VAL:CB	2.47	0.45
35:RP:115:LEU:HA	35:RP:134:ALA:CB	2.47	0.45
36:RQ:11:LYS:HE2	36:RQ:87:LYS:HA	1.98	0.45
39:RT:118:ARG:O	39:RT:119:LYS:C	2.59	0.45
41:RV:61:VAL:HA	41:RV:94:LEU:HD23	1.97	0.45
44:RY:84:ARG:HD3	44:RY:86:ARG:HH11	1.82	0.45
52:R6:9:LEU:CD1	52:R6:26:ASN:ND2	2.79	0.45
1:XA:47:C:H5''	1:XA:365:U:C6	2.52	0.45
1:XA:246:A:C4	1:XA:282:A:N6	2.85	0.45
1:XA:390:C:O3'	16:XP:28:ARG:NH2	2.48	0.45
1:XA:392:G:P	16:XP:12:LYS:HG3	2.57	0.45
1:XA:665:A:H1'	1:XA:733:A:O4'	2.16	0.45
1:XA:831:U:H2'	1:XA:832:C:H6	1.82	0.45
1:XA:961:U:H2'	1:XA:962:C:H6	1.81	0.45
1:XA:977:A:O2'	1:XA:981:U:N3	2.38	0.45
1:XA:1031:G:O6	1:XA:1032:A:N6	2.49	0.45
1:XA:1077:G:H2'	1:XA:1079:G:N7	2.32	0.45
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.52	0.45
1:XA:1179:A:H4'	9:XI:103:THR:HA	1.99	0.45
1:XA:1207:G:H2'	1:XA:1208:C:C6	2.52	0.45
1:XA:1388:C:H2'	1:XA:1389:C:C6	2.51	0.45
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.52	0.45
2:XB:22:LYS:O	2:XB:24:TRP:N	2.50	0.45
2:XB:68:ILE:HB	2:XB:70:PHE:HE1	1.82	0.45
2:XB:98:LEU:O	2:XB:101:MET:HG3	2.17	0.45
2:XB:189:ASP:OD2	2:XB:205:ASP:OD1	2.34	0.45
2:XB:229:VAL:HG12	2:XB:229:VAL:O	2.17	0.45
3:XC:172:ARG:C	3:XC:173:VAL:HG23	2.42	0.45
4:XD:89:THR:O	4:XD:90:GLY:C	2.60	0.45
5:XE:12:LEU:HB3	5:XE:31:LEU:CB	2.47	0.45
5:XE:12:LEU:HD21	5:XE:14:ARG:HB3	1.98	0.45
5:XE:52:PRO:HB2	5:XE:53:LEU:HD12	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:101:ILE:HD13	5:XE:101:ILE:H	1.82	0.45
6:XF:22:GLU:OE1	6:XF:82:ARG:NH2	2.46	0.45
6:XF:29:ALA:O	6:XF:30:LEU:C	2.60	0.45
7:XG:45:ASP:O	7:XG:49:ILE:HG12	2.17	0.45
7:XG:95:ARG:HH11	7:XG:95:ARG:HG3	1.82	0.45
8:XH:122:ARG:O	8:XH:123:GLU:C	2.60	0.45
9:XI:47:LEU:HD22	9:XI:47:LEU:H	1.81	0.45
10:XJ:6:ILE:O	10:XJ:71:LEU:HD12	2.17	0.45
13:XM:108:ARG:O	13:XM:111:LYS:N	2.47	0.45
16:XP:47:ASP:C	16:XP:49:LEU:N	2.75	0.45
18:XR:44:LEU:C	18:XR:45:SER:O	2.59	0.45
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD13	2.16	0.45
25:YA:298:G:OP1	44:YY:85:VAL:HG22	2.17	0.45
25:YA:479:A:N3	25:YA:481:G:H5''	2.32	0.45
25:YA:528:A:H3'	25:YA:528:A:C8	2.52	0.45
25:YA:558:G:OP2	33:YN:111:PRO:HD2	2.17	0.45
25:YA:721:C:H3'	25:YA:722:A:H8	1.81	0.45
25:YA:780:G:H21	25:YA:783:A:N6	2.15	0.45
25:YA:828:U:H2'	25:YA:829:A:C8	2.52	0.45
25:YA:1169:G:N2	25:YA:1181:C:O2	2.49	0.45
25:YA:1416:G:HO2'	25:YA:1417:C:H6	1.60	0.45
25:YA:1422:G:N2	25:YA:1577:C:H1'	2.32	0.45
25:YA:2470:G:H5'	36:YQ:56:ARG:HH22	1.81	0.45
25:YA:2649:U:H2'	25:YA:2650:U:C6	2.51	0.45
27:YD:226:MET:H	27:YD:226:MET:HG2	1.53	0.45
28:YE:21:VAL:HG23	28:YE:22:PRO:CD	2.46	0.45
29:YF:144:LYS:C	29:YF:146:ALA:N	2.75	0.45
29:YF:198:ALA:C	29:YF:200:GLU:H	2.25	0.45
32:YI:56:LYS:CE	32:YI:57:ARG:HG2	2.46	0.45
34:YO:53:LYS:N	34:YO:53:LYS:CD	2.69	0.45
35:YP:75:ILE:HG12	35:YP:77:ARG:HH12	1.82	0.45
35:YP:112:LEU:CD1	35:YP:114:ILE:HG23	2.47	0.45
36:YQ:58:PHE:O	36:YQ:58:PHE:CD1	2.70	0.45
37:YR:12:ARG:HG3	37:YR:12:ARG:NH1	2.32	0.45
37:YR:17:ARG:O	37:YR:20:LEU:HB3	2.17	0.45
42:YW:88:ARG:CB	42:YW:92:ARG:HB3	2.47	0.45
44:YY:57:GLN:O	44:YY:58:GLY:C	2.60	0.45
52:Y6:7:ILE:O	52:Y6:8:LYS:HG2	2.16	0.45
52:Y6:15:GLU:OE2	52:Y6:44:ARG:NH1	2.49	0.45
52:Y6:18:ARG:O	52:Y6:19:ARG:O	2.33	0.45
54:Y8:52:LYS:O	54:Y8:52:LYS:CG	2.64	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:410:G:C2	1:QA:429:U:C2	3.05	0.45
1:QA:545:C:H5''	4:QD:72:GLU:HG2	1.99	0.45
1:QA:667:G:H4'	15:QO:51:HIS:ND1	2.31	0.45
1:QA:823:G:H2'	1:QA:824:C:O4'	2.17	0.45
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.98	0.45
3:QC:73:PRO:O	3:QC:77:ILE:HG13	2.16	0.45
4:QD:94:LEU:O	4:QD:98:GLU:N	2.50	0.45
4:QD:166:LYS:HG2	27:YD:135:PHE:CZ	2.51	0.45
4:QD:178:VAL:O	4:QD:181:MET:N	2.50	0.45
4:QD:199:ASN:C	4:QD:201:GLN:H	2.25	0.45
5:QE:132:ALA:O	5:QE:133:TYR:C	2.59	0.45
6:QF:29:ALA:O	6:QF:30:LEU:C	2.60	0.45
7:QG:26:PHE:HZ	7:QG:120:ILE:HG23	1.82	0.45
7:QG:140:ASP:C	7:QG:142:GLU:N	2.68	0.45
10:QJ:62:HIS:N	10:QJ:62:HIS:CD2	2.85	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
17:QQ:3:LYS:HD3	17:QQ:61:GLU:O	2.16	0.45
19:QS:15:LEU:O	19:QS:16:LEU:C	2.60	0.45
19:QS:69:HIS:O	19:QS:70:LYS:O	2.34	0.45
20:QT:28:ALA:O	20:QT:30:LYS:N	2.50	0.45
20:QT:48:LYS:O	20:QT:49:ALA:C	2.59	0.45
23:QX:5:C:H2'	23:QX:6:C:C6	2.51	0.45
25:RA:459:U:H2'	25:RA:460:A:H8	1.80	0.45
25:RA:547:A:H3'	25:RA:548:A:H8	1.79	0.45
25:RA:710:G:H2'	25:RA:711:G:C8	2.52	0.45
25:RA:781:A:H2	25:RA:1776:G:N3	2.15	0.45
25:RA:1258:C:O4'	29:RF:84:VAL:HG11	2.17	0.45
25:RA:1431:U:H2'	25:RA:1432:C:C6	2.52	0.45
25:RA:1977:A:H2'	25:RA:1978:A:O4'	2.17	0.45
25:RA:2188:C:H2'	25:RA:2189:U:O4'	2.17	0.45
25:RA:2216:G:H2'	25:RA:2217:G:C8	2.52	0.45
25:RA:2370:G:H21	52:R6:45:LYS:HZ3	1.65	0.45
25:RA:2525:G:N2	25:RA:2539:C:C2	2.85	0.45
25:RA:2817:G:C2	25:RA:2830:G:N3	2.85	0.45
28:RE:2:LYS:HG2	28:RE:95:ILE:HG22	1.99	0.45
28:RE:101:ARG:HD2	28:RE:171:GLU:HA	1.98	0.45
32:RI:19:VAL:HG22	32:RI:20:ASP:N	2.32	0.45
33:RN:46:VAL:HG13	33:RN:47:ALA:N	2.31	0.45
33:RN:63:THR:HG22	33:RN:66:LYS:HZ1	1.82	0.45
33:RN:96:GLU:O	33:RN:99:LEU:N	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:2:ILE:HD11	34:RO:82:ASN:ND2	2.16	0.45
34:RO:19:ILE:HD13	34:RO:19:ILE:H	1.82	0.45
34:RO:78:ARG:HH21	39:RT:103:ARG:HH22	1.64	0.45
35:RP:115:LEU:CB	35:RP:131:SER:HB2	2.47	0.45
36:RQ:10:ARG:O	36:RQ:11:LYS:CB	2.64	0.45
40:RU:86:ALA:CB	40:RU:88:ILE:HD11	2.47	0.45
41:RV:69:LYS:HG3	41:RV:87:HIS:O	2.17	0.45
42:RW:21:VAL:O	42:RW:21:VAL:HG12	2.17	0.45
43:RX:35:THR:O	43:RX:35:THR:HG23	2.16	0.45
44:RY:73:ARG:HE	44:RY:73:ARG:HB3	1.51	0.45
45:RZ:9:TYR:CE2	45:RZ:61:LEU:HD13	2.53	0.45
47:R1:49:VAL:HG12	47:R1:51:VAL:HG23	1.99	0.45
47:R1:94:LEU:O	47:R1:95:LEU:HB2	2.17	0.45
52:R6:11:LEU:HD11	52:R6:51:GLU:HG3	1.98	0.45
54:R8:9:GLY:O	54:R8:13:ARG:HG2	2.16	0.45
54:R8:36:LYS:HB3	54:R8:40:GLU:HG2	1.99	0.45
1:XA:524:G:H2'	1:XA:525:C:C6	2.52	0.45
1:XA:580:U:H5''	15:XO:58:MET:HG2	1.98	0.45
1:XA:771:G:C5	1:XA:772:U:C4	3.04	0.45
1:XA:963:G:H1	1:XA:972:C:H42	1.64	0.45
1:XA:976:G:P	14:XN:32:SER:H	2.40	0.45
1:XA:1266:G:N2	1:XA:1270:C:C2	2.85	0.45
2:XB:170:GLU:C	2:XB:172:ILE:N	2.74	0.45
2:XB:178:ARG:HD2	8:XH:71:GLY:CA	2.46	0.45
4:XD:94:LEU:O	4:XD:98:GLU:N	2.50	0.45
6:XF:75:LEU:HD23	6:XF:75:LEU:C	2.41	0.45
7:XG:16:LEU:HD13	9:XI:45:ALA:HB2	1.99	0.45
9:XI:7:THR:O	9:XI:83:ARG:CD	2.65	0.45
10:XJ:22:LYS:C	10:XJ:22:LYS:CD	2.90	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:8:GLU:C	13:XM:9:ILE:CG2	2.90	0.45
13:XM:56:LEU:HD13	13:XM:56:LEU:O	2.17	0.45
15:XO:82:ILE:CG2	15:XO:83:GLU:N	2.79	0.45
20:XT:44:ALA:O	20:XT:91:LEU:HB3	2.16	0.45
25:YA:66:C:H2'	25:YA:67:U:H6	1.82	0.45
25:YA:181:A:H2'	25:YA:182:A:C8	2.52	0.45
25:YA:226:G:O2'	25:YA:227:A:C8	2.68	0.45
25:YA:295:G:H1	25:YA:343:C:N4	2.15	0.45
25:YA:1827:C:H2'	25:YA:1828:G:O4'	2.17	0.45
25:YA:1846:G:N2	25:YA:1895:C:C2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2050:C:N4	25:YA:2618:G:H1	2.13	0.45
25:YA:2452:C:O4'	56:Z8:76:PPU:HB2	2.17	0.45
25:YA:2463:C:O2	25:YA:2488:A:C2	2.70	0.45
25:YA:2472:G:H2'	25:YA:2475:C:H42	1.82	0.45
25:YA:2584:U:H5''	56:Z8:76:PPU:H92	1.99	0.45
25:YA:2677:G:H2'	25:YA:2678:C:C6	2.49	0.45
25:YA:2751:G:O5'	25:YA:2751:G:C8	2.70	0.45
28:YE:4:ILE:HG12	28:YE:91:VAL:HG11	1.99	0.45
31:YH:6:ARG:C	31:YH:8:PRO:CD	2.89	0.45
33:YN:65:LYS:O	33:YN:66:LYS:C	2.60	0.45
34:YO:19:ILE:HD13	34:YO:19:ILE:H	1.83	0.45
34:YO:97:ARG:HA	34:YO:117:LEU:HD22	1.99	0.45
34:YO:112:MET:O	34:YO:113:LYS:C	2.60	0.45
36:YQ:5:ARG:O	36:YQ:6:ARG:O	2.35	0.45
42:YW:31:GLU:O	42:YW:32:ALA:C	2.60	0.45
44:YY:87:LYS:C	44:YY:88:LYS:NZ	2.75	0.45
45:YZ:98:MET:HE3	45:YZ:98:MET:HB2	1.75	0.45
45:YZ:144:LEU:HD11	45:YZ:149:SER:HA	1.99	0.45
51:Y5:56:LYS:O	51:Y5:58:LEU:N	2.50	0.45
1:QA:6:G:C8	5:QE:119:LEU:HD11	2.52	0.44
1:QA:430:A:C2	1:QA:431:A:H1'	2.51	0.44
1:QA:926:G:H2'	1:QA:1505:G:N3	2.31	0.44
1:QA:1031:G:O6	25:YA:2167:U:N3	2.50	0.44
1:QA:1122:U:C2	1:QA:1123:A:C8	3.05	0.44
1:QA:1216:G:H2'	1:QA:1217:C:H6	1.83	0.44
1:QA:1225:A:OP1	13:QM:102:ARG:HA	2.17	0.44
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.52	0.44
1:QA:1297:C:O2'	1:QA:1298:C:P	2.75	0.44
2:QB:221:LEU:HD13	2:QB:221:LEU:C	2.42	0.44
3:QC:22:TRP:HB3	3:QC:59:ARG:HB2	1.99	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:NZ	2.31	0.44
3:QC:140:ARG:HH11	3:QC:140:ARG:CG	2.30	0.44
5:QE:101:ILE:HD13	5:QE:101:ILE:H	1.82	0.44
10:QJ:33:GLN:HB2	10:QJ:75:ILE:HD11	1.99	0.44
12:QL:120:TYR:O	12:QL:121:GLY:O	2.36	0.44
13:QM:16:ASP:O	13:QM:19:LEU:HD23	2.17	0.44
13:QM:39:ILE:HD12	13:QM:56:LEU:HD23	1.99	0.44
13:QM:56:LEU:HD13	13:QM:56:LEU:O	2.17	0.44
16:QP:58:TYR:CD1	16:QP:58:TYR:C	2.94	0.44
20:QT:36:LEU:C	20:QT:38:LYS:N	2.71	0.44
25:RA:142:G:H2'	25:RA:143:C:H6	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:476:G:N1	25:RA:479:A:OP2	2.49	0.44
25:RA:520:G:H2'	25:RA:521:G:H8	1.82	0.44
25:RA:612:G:N2	25:RA:617:G:C5	2.85	0.44
25:RA:974(A):C:H2'	25:RA:974(A):C:O2	2.16	0.44
25:RA:1005:C:N4	25:RA:1006:C:H41	2.15	0.44
25:RA:1115:G:C6	25:RA:1116:C:N4	2.85	0.44
25:RA:1131:G:C2	25:RA:1132:A:C5	3.05	0.44
25:RA:1286:A:O2'	25:RA:1287:A:H5''	2.17	0.44
25:RA:1319:G:C6	25:RA:1320:C:N4	2.85	0.44
25:RA:2026:C:C2	25:RA:2027:G:C8	3.05	0.44
25:RA:2252:G:H2'	25:RA:2253:G:H8	1.81	0.44
25:RA:2303:G:C2'	25:RA:2304:G:H5'	2.47	0.44
25:RA:2311:A:C8	30:RG:82:LEU:HD11	2.52	0.44
25:RA:2517:C:C6	25:RA:2542:A:N7	2.86	0.44
25:RA:2532:G:H1'	25:RA:2663:G:N2	2.33	0.44
25:RA:2630:G:H2'	25:RA:2631:G:C8	2.51	0.44
25:RA:2631:G:N3	25:RA:2810:A:H2	2.15	0.44
27:RD:79:VAL:HG21	27:RD:111:LEU:HD21	1.97	0.44
27:RD:145:VAL:HG12	27:RD:146:GLU:N	2.32	0.44
27:RD:198:ASN:ND2	27:RD:198:ASN:O	2.50	0.44
28:RE:154:LYS:HD3	28:RE:154:LYS:C	2.42	0.44
30:RG:6:ALA:HB3	30:RG:104:GLU:OE2	2.16	0.44
30:RG:16:ARG:CZ	30:RG:31:VAL:HG11	2.47	0.44
30:RG:110:ALA:C	30:RG:112:PRO:HD2	2.42	0.44
30:RG:129:GLY:O	30:RG:130:ASN:OD1	2.34	0.44
31:RH:149:ARG:HA	31:RH:162:ILE:HG21	1.99	0.44
33:RN:57:ALA:HA	33:RN:60:ILE:CD1	2.43	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:HH12	1.82	0.44
36:RQ:119:ARG:HH11	36:RQ:119:ARG:CG	2.25	0.44
39:RT:54:ARG:NH1	39:RT:54:ARG:CG	2.80	0.44
40:RU:66:ASN:CB	40:RU:76:TYR:HB2	2.44	0.44
41:RV:4:ILE:HG22	41:RV:39:LEU:HD23	1.98	0.44
41:RV:5:VAL:HG13	41:RV:14:VAL:HG21	1.98	0.44
45:RZ:93:ASP:OD1	45:RZ:93:ASP:N	2.47	0.44
47:R1:48:LYS:HA	47:R1:60:PHE:O	2.17	0.44
47:R1:60:PHE:HZ	47:R1:90:ILE:HG21	1.82	0.44
54:R8:17:THR:O	54:R8:20:GLY:N	2.46	0.44
1:XA:20:U:O2'	1:XA:21:G:H5'	2.17	0.44
1:XA:511:C:O2'	1:XA:534:U:H1'	2.17	0.44
1:XA:803:G:C6	1:XA:804:U:N3	2.85	0.44
1:XA:895:G:H1	1:XA:904:C:N4	2.02	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1301:U:O2	1:XA:1301:U:H2'	2.17	0.44
1:XA:1343:G:C6	1:XA:1344:C:N4	2.85	0.44
4:XD:49:ARG:O	4:XD:50:ARG:C	2.60	0.44
4:XD:96:LEU:C	4:XD:98:GLU:N	2.72	0.44
6:XF:23:LYS:HG2	6:XF:27:GLN:OE1	2.18	0.44
7:XG:26:PHE:HZ	7:XG:120:ILE:HG23	1.82	0.44
7:XG:111:ARG:HD2	7:XG:123:GLU:HB2	1.99	0.44
9:XI:5:TYR:CD2	9:XI:6:GLY:N	2.85	0.44
10:XJ:51:ARG:HH11	10:XJ:51:ARG:HG2	1.82	0.44
13:XM:110:ARG:HH11	13:XM:110:ARG:HG3	1.82	0.44
15:XO:25:THR:HG22	15:XO:70:LEU:HD22	1.99	0.44
16:XP:58:TYR:C	16:XP:58:TYR:CD1	2.94	0.44
17:XQ:59:ILE:N	17:XQ:59:ILE:CD1	2.78	0.44
19:XS:13:ASP:O	19:XS:14:HIS:C	2.60	0.44
19:XS:15:LEU:O	19:XS:16:LEU:C	2.60	0.44
20:XT:36:LEU:C	20:XT:38:LYS:N	2.71	0.44
20:XT:56:MET:HG3	20:XT:88:VAL:HG21	1.98	0.44
25:YA:503:A:C8	25:YA:506:G:N7	2.85	0.44
25:YA:729:G:H2'	25:YA:1775:U:O2	2.17	0.44
25:YA:978:G:C2	25:YA:986:C:C2	3.05	0.44
25:YA:1778:U:H2'	25:YA:1784:A:H62	1.80	0.44
25:YA:2331:G:N2	25:YA:2385:C:C4	2.85	0.44
25:YA:2419:U:O4	54:Y8:30:ARG:NE	2.50	0.44
25:YA:2557:G:C6	25:YA:2558:C:C4	3.05	0.44
27:YD:52:ARG:HB2	27:YD:53:PHE:CD2	2.52	0.44
27:YD:80:ALA:O	27:YD:113:VAL:HG13	2.16	0.44
32:YI:79:ILE:N	32:YI:141:LYS:O	2.49	0.44
33:YN:5:VAL:O	33:YN:5:VAL:HG13	2.17	0.44
33:YN:99:LEU:O	33:YN:100:GLU:C	2.60	0.44
33:YN:112:LEU:O	33:YN:116:LEU:HG	2.16	0.44
35:YP:65:ARG:O	35:YP:66:GLY:C	2.60	0.44
35:YP:75:ILE:HG12	35:YP:77:ARG:NH1	2.32	0.44
38:YS:83:LYS:CE	38:YS:109:GLY:HA2	2.47	0.44
41:YV:61:VAL:O	41:YV:61:VAL:HG22	2.16	0.44
41:YV:69:LYS:HG3	41:YV:87:HIS:O	2.17	0.44
45:YZ:112:ARG:O	45:YZ:114:GLY:N	2.50	0.44
45:YZ:123:ASP:O	45:YZ:124:ILE:HG13	2.17	0.44
47:Y1:48:LYS:HA	47:Y1:60:PHE:O	2.17	0.44
49:Y3:60:GLU:HG2	49:Y3:60:GLU:O	2.16	0.44
52:Y6:7:ILE:HG23	52:Y6:8:LYS:N	2.32	0.44
1:QA:491:G:C2	1:QA:492:G:C4	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:939:G:H5''	7:QG:102:ARG:CZ	2.47	0.44
1:QA:1426:C:H1'	1:QA:1475:G:N2	2.31	0.44
1:QA:1521:G:H2'	1:QA:1522:U:C6	2.53	0.44
2:QB:98:LEU:O	2:QB:101:MET:HG3	2.17	0.44
3:QC:43:LEU:HD11	3:QC:66:VAL:HG11	1.98	0.44
4:QD:72:GLU:O	4:QD:73:ARG:C	2.52	0.44
5:QE:31:LEU:HD23	5:QE:45:PHE:CD1	2.53	0.44
5:QE:147:ASP:OD2	5:QE:147:ASP:N	2.50	0.44
6:QF:3:ARG:HG2	6:QF:93:SER:OG	2.17	0.44
6:QF:76:ALA:HB1	6:QF:80:ARG:HH21	1.82	0.44
9:QL:71:SER:C	9:QL:73:GLN:N	2.74	0.44
10:QJ:29:ARG:HG2	10:QJ:29:ARG:HH11	1.81	0.44
12:QL:117:ARG:NH2	12:QL:124:LYS:HD3	2.32	0.44
12:QL:120:TYR:N	12:QL:120:TYR:CD1	2.86	0.44
13:QM:101:GLN:HE21	13:QM:101:GLN:HB2	1.66	0.44
15:QO:29:VAL:HB	15:QO:81:LEU:HD21	1.99	0.44
16:QP:15:PRO:O	16:QP:16:HIS:ND1	2.51	0.44
18:QR:82:THR:CG2	18:QR:83:GLU:N	2.79	0.44
20:QT:89:ARG:HH12	20:QT:106:ALA:HB1	1.82	0.44
25:RA:118:A:H1'	25:RA:178:G:O4'	2.18	0.44
25:RA:934:G:H2'	25:RA:935:C:H6	1.82	0.44
25:RA:1077:A:H2	25:RA:1078:U:H4'	1.82	0.44
25:RA:1301:A:H2	25:RA:1626:G:N3	2.14	0.44
25:RA:1498:C:O4'	25:RA:1577:C:H4'	2.17	0.44
25:RA:1509:C:H2'	25:RA:1511:A:C8	2.53	0.44
25:RA:2377:A:H4'	38:RS:111:GLU:O	2.17	0.44
25:RA:2518:A:H8	25:RA:2518:A:O5'	1.99	0.44
25:RA:2528:U:O3'	25:RA:2529:G:H8	2.01	0.44
25:RA:2572:A:H62	28:RE:145:LYS:HG3	1.82	0.44
25:RA:2641:G:H5''	33:RN:76:SER:HB3	1.99	0.44
25:RA:2712:U:O2'	25:RA:2712(A):A:H8	1.99	0.44
26:RB:75:G:HO2'	45:RZ:85:HIS:CD2	2.31	0.44
27:RD:48:ARG:HG3	27:RD:48:ARG:NH1	2.31	0.44
27:RD:143:HIS:HD2	27:RD:144:ALA:HB2	1.83	0.44
28:RE:4:ILE:HG12	28:RE:91:VAL:HG11	1.99	0.44
28:RE:36:ARG:O	28:RE:37:ARG:C	2.59	0.44
29:RF:7:TYR:N	29:RF:7:TYR:CD1	2.85	0.44
30:RG:44:GLY:HA2	30:RG:88:ILE:HD11	1.99	0.44
31:RH:51:ARG:HG3	31:RH:51:ARG:NH1	2.30	0.44
33:RN:7:LYS:HD3	33:RN:9:VAL:H	1.81	0.44
34:RO:22:ILE:HG12	34:RO:41:ALA:HA	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:RT:49:VAL:O	39:RT:49:VAL:CG1	2.64	0.44
41:RV:5:VAL:HG22	41:RV:14:VAL:CG2	2.46	0.44
42:RW:1:MET:CE	42:RW:2:GLU:H	2.31	0.44
42:RW:67:ASP:OD2	42:RW:67:ASP:N	2.50	0.44
45:RZ:53:ILE:HA	45:RZ:70:LEU:HD21	2.00	0.44
45:RZ:177:PRO:HB2	45:RZ:178:GLU:H	1.58	0.44
48:R2:18:PRO:C	48:R2:20:GLU:H	2.24	0.44
50:R4:35:VAL:C	50:R4:37:SER:H	2.19	0.44
50:R4:51:ASP:O	50:R4:51:ASP:CG	2.60	0.44
51:R5:56:LYS:O	51:R5:58:LEU:N	2.50	0.44
1:XA:5:U:O2'	1:XA:6:G:N3	2.50	0.44
1:XA:289:G:H2'	1:XA:290:C:H6	1.82	0.44
1:XA:729:A:H2'	1:XA:730:G:H8	1.82	0.44
1:XA:883:C:N3	1:XA:884:U:C4	2.85	0.44
1:XA:1357:A:C5	1:XA:1358:U:C4	3.05	0.44
2:XB:30:ARG:O	2:XB:31:TYR:HD2	2.00	0.44
2:XB:188:ALA:CB	2:XB:200:ILE:HG23	2.47	0.44
3:XC:43:LEU:HD11	3:XC:66:VAL:HG11	1.98	0.44
4:XD:206:PHE:CD2	4:XD:207:TYR:CE1	3.05	0.44
5:XE:48:ALA:C	5:XE:50:GLU:H	2.24	0.44
8:XH:97:VAL:CG1	8:XH:98:LYS:H	2.30	0.44
9:XI:118:LYS:O	9:XI:119:ALA:CB	2.65	0.44
10:XJ:54:PHE:CE2	10:XJ:55:LYS:HD2	2.52	0.44
10:XJ:54:PHE:CD2	10:XJ:55:LYS:HD2	2.53	0.44
11:XK:13:GLN:HG3	11:XK:75:TYR:CA	2.48	0.44
12:XL:120:TYR:N	12:XL:120:TYR:CD1	2.85	0.44
13:XM:4:ILE:O	13:XM:5:ALA:C	2.60	0.44
13:XM:65:LYS:HB3	50:Y4:50:VAL:HG21	1.97	0.44
16:XP:72:ARG:CD	16:XP:73:LEU:HD23	2.48	0.44
19:XS:45:VAL:O	19:XS:62:ILE:O	2.35	0.44
20:XT:89:ARG:HH12	20:XT:106:ALA:HB1	1.82	0.44
24:XY:39:C:O2'	24:XY:40:G:P	2.74	0.44
25:YA:120:U:C2	25:YA:149:A:C6	3.06	0.44
25:YA:529:A:H8	25:YA:530:G:C6	2.36	0.44
25:YA:592:G:N2	25:YA:665:C:N3	2.57	0.44
25:YA:658:C:H2'	25:YA:659:C:C6	2.52	0.44
25:YA:722:A:H2'	25:YA:723:G:C8	2.53	0.44
25:YA:784:A:N7	27:YD:229:VAL:HG21	2.31	0.44
25:YA:902:C:H2'	25:YA:903:C:C6	2.53	0.44
25:YA:1654:A:OP1	37:YR:1:MET:O	2.34	0.44
25:YA:1840:G:H1	25:YA:1902:C:H42	1.63	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2228:G:OP1	27:YD:261:LYS:HE2	2.17	0.44
25:YA:2286:A:H4'	25:YA:2287:A:O4'	2.16	0.44
25:YA:2458:G:C4	25:YA:2490:G:C6	3.04	0.44
25:YA:2557:G:C6	25:YA:2558:C:N4	2.85	0.44
25:YA:2619:C:H1'	28:YE:156:MET:HE1	2.00	0.44
25:YA:2642:G:H4'	33:YN:78:TYR:CE2	2.52	0.44
25:YA:2711:A:OP1	25:YA:2712(A):A:P	2.74	0.44
26:YB:32:C:C2	26:YB:33:G:C8	3.05	0.44
27:YD:166:GLN:NE2	27:YD:166:GLN:HA	2.32	0.44
27:YD:177:LEU:O	27:YD:179:SER:N	2.51	0.44
27:YD:214:TRP:C	27:YD:216:GLY:H	2.26	0.44
28:YE:93:VAL:C	28:YE:95:ILE:N	2.75	0.44
30:YG:129:GLY:HA2	30:YG:169:ALA:HB2	1.99	0.44
31:YH:137:ASP:HB2	31:YH:140:LYS:HE3	1.98	0.44
35:YP:45:LEU:N	35:YP:45:LEU:HD12	2.32	0.44
36:YQ:93:TYR:CD1	36:YQ:93:TYR:N	2.85	0.44
38:YS:3:ARG:O	38:YS:4:LEU:O	2.35	0.44
38:YS:78:LEU:HD21	38:YS:108:GLY:CA	2.47	0.44
39:YT:36:GLU:CG	39:YT:41:ARG:HD3	2.46	0.44
40:YU:15:LYS:O	40:YU:16:LYS:C	2.60	0.44
40:YU:57:PHE:O	40:YU:59:ARG:N	2.50	0.44
41:YV:67:GLY:O	41:YV:68:LYS:C	2.59	0.44
52:Y6:19:ARG:HD2	52:Y6:19:ARG:HA	1.77	0.44
1:QA:133:U:H5''	1:QA:134:A:OP1	2.17	0.44
1:QA:730:G:H3'	1:QA:731:G:O4'	2.16	0.44
1:QA:819:A:N7	1:QA:1529:G:C2	2.85	0.44
1:QA:877:C:H5''	8:QH:88:LYS:CD	2.47	0.44
1:QA:1323:G:N2	1:QA:1361:G:O2'	2.50	0.44
1:QA:1329:A:OP1	13:QM:28:ALA:HB3	2.17	0.44
1:QA:1507:A:H2'	1:QA:1508:G:O4'	2.17	0.44
2:QB:189:ASP:OD2	2:QB:205:ASP:OD1	2.35	0.44
3:QC:69:HIS:N	3:QC:69:HIS:ND1	2.66	0.44
4:QD:25:ARG:CZ	4:QD:30:LYS:HE3	2.46	0.44
4:QD:122:ARG:HA	4:QD:134:ASP:HB2	2.00	0.44
5:QE:80:ILE:HG13	5:QE:82:VAL:HG23	1.99	0.44
7:QG:140:ASP:HA	7:QG:143:ARG:HH11	1.79	0.44
11:QK:83:ILE:HG12	11:QK:109:VAL:HG23	1.99	0.44
12:QL:61:THR:O	12:QL:63:GLY:N	2.45	0.44
17:QQ:66:SER:O	17:QQ:67:LYS:C	2.61	0.44
25:RA:44:A:O2'	25:RA:45:G:H5'	2.16	0.44
25:RA:264:C:O2'	25:RA:265:A:H5''	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:270(S):G:H2'	25:RA:270(T):G:H5'	1.98	0.44
25:RA:322:A:C6	25:RA:340:A:C2	3.05	0.44
25:RA:428:A:H3'	25:RA:429:A:C8	2.51	0.44
25:RA:688:U:H5'	25:RA:1780:A:C2	2.52	0.44
25:RA:778:G:H8	25:RA:778:G:O5'	2.00	0.44
25:RA:1006:C:H5'	33:RN:28:THR:HG23	1.98	0.44
25:RA:1270:C:H5''	25:RA:1271:G:C5'	2.34	0.44
25:RA:1363:C:C2	25:RA:1364:G:C8	3.05	0.44
25:RA:1519:G:C6	25:RA:1520:U:C4	3.05	0.44
25:RA:1581:G:H5''	25:RA:1581:G:C8	2.52	0.44
25:RA:2261:C:C2	25:RA:2280:G:C2	3.06	0.44
25:RA:2656:U:C5	25:RA:2664:G:N2	2.85	0.44
29:RF:132:VAL:HG23	29:RF:133:ASN:H	1.82	0.44
30:RG:67:LYS:CE	50:R4:6:HIS:NE2	2.74	0.44
33:RN:36:GLY:O	33:RN:42:TRP:CE3	2.69	0.44
33:RN:96:GLU:CG	33:RN:97:ARG:N	2.72	0.44
33:RN:133:GLN:C	33:RN:134:ARG:HG2	2.41	0.44
34:RO:104:ARG:NH2	39:RT:34:VAL:HG11	2.32	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:HA2	1.98	0.44
40:RU:92:ARG:HD2	41:RV:11:GLN:CD	2.42	0.44
42:RW:74:ALA:O	42:RW:75:TYR:CB	2.65	0.44
42:RW:88:ARG:HH11	42:RW:88:ARG:HG2	1.82	0.44
43:RX:87:GLN:HE21	43:RX:87:GLN:HB2	1.55	0.44
45:RZ:150:LEU:HD23	45:RZ:171:ILE:HG12	2.00	0.44
47:R1:10:LYS:HD2	47:R1:66:HIS:HE1	1.82	0.44
48:R2:41:ILE:HD12	48:R2:41:ILE:O	2.16	0.44
49:R3:39:ASP:O	49:R3:40:THR:C	2.59	0.44
50:R4:15:ILE:N	50:R4:15:ILE:CD1	2.78	0.44
50:R4:15:ILE:CG2	50:R4:20:ASN:ND2	2.81	0.44
52:R6:17:LYS:O	52:R6:18:ARG:CB	2.64	0.44
53:R7:24:THR:O	53:R7:28:ARG:HG3	2.16	0.44
54:R8:47:LYS:HD2	54:R8:48:PHE:N	2.33	0.44
1:XA:191(F):U:O2	20:XT:105:SER:HB2	2.17	0.44
1:XA:506:G:C5	1:XA:507:C:C4	3.04	0.44
1:XA:515:G:C5	1:XA:516:U:C5	3.05	0.44
1:XA:686:U:H2'	1:XA:687:A:C8	2.52	0.44
1:XA:807:A:H2'	1:XA:808:C:O4'	2.17	0.44
1:XA:1100:C:H2'	1:XA:1102:A:O5'	2.17	0.44
1:XA:1448:C:H42	1:XA:1455:G:H1	1.64	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:76:ARG:O	4:XD:79:PHE:HB3	2.17	0.44
4:XD:199:ASN:C	4:XD:201:GLN:H	2.25	0.44
9:XI:13:ALA:HB2	9:XI:68:GLY:CA	2.47	0.44
10:XJ:33:GLN:HB2	10:XJ:75:ILE:HD11	1.99	0.44
10:XJ:61:GLU:CG	14:XN:58:LYS:HE2	2.47	0.44
25:YA:85:G:OP1	44:YY:8:LYS:HA	2.17	0.44
25:YA:601:C:O2'	25:YA:605:C:OP1	2.32	0.44
25:YA:728:G:H4'	27:YD:13:ARG:HD2	1.99	0.44
25:YA:729:G:H2'	25:YA:1775:U:H1'	2.00	0.44
25:YA:1352:U:O2'	25:YA:1353:A:H5'	2.18	0.44
25:YA:1620:G:O2'	25:YA:1621:U:H5'	2.17	0.44
25:YA:1820:U:H4'	25:YA:1821:A:OP2	2.17	0.44
25:YA:1942:C:C4	25:YA:1943:U:C4	3.05	0.44
25:YA:2283:C:OP2	52:Y6:5:VAL:HG13	2.18	0.44
25:YA:2312:U:C5	25:YA:2313:C:H5	2.35	0.44
25:YA:2445:G:C2'	25:YA:2446:G:H5'	2.48	0.44
25:YA:2452:C:O2	56:Z8:76:PPU:CE1	2.65	0.44
28:YE:50:GLY:CA	28:YE:74:PRO:HG3	2.46	0.44
28:YE:121:ASN:O	28:YE:122:PHE:C	2.57	0.44
29:YF:111:ALA:O	29:YF:112:MET:C	2.59	0.44
30:YG:63:ILE:HG12	30:YG:64:THR:N	2.33	0.44
32:YI:5:LEU:HD11	32:YI:19:VAL:HG12	2.00	0.44
36:YQ:60:ARG:HB2	36:YQ:60:ARG:HH21	1.82	0.44
37:YR:84:ALA:O	37:YR:85:PRO:C	2.59	0.44
38:YS:56:LEU:O	38:YS:57:LYS:O	2.36	0.44
42:YW:28:SER:O	42:YW:30:GLU:N	2.51	0.44
47:Y1:10:LYS:HD2	47:Y1:66:HIS:HE1	1.82	0.44
47:Y1:60:PHE:HE2	47:Y1:91:LYS:NZ	2.15	0.44
50:Y4:15:ILE:CG2	50:Y4:20:ASN:ND2	2.81	0.44
50:Y4:33:VAL:CG1	50:Y4:34:GLU:N	2.80	0.44
1:QA:273:A:N6	1:QA:274:A:C6	2.85	0.44
1:QA:373:A:C2	1:QA:374:A:C8	3.05	0.44
1:QA:571:U:O2	1:QA:918:A:H5'	2.17	0.44
1:QA:1340:A:O2'	22:QV:31:G:O3'	2.35	0.44
2:QB:47:THR:O	2:QB:51:LEU:N	2.32	0.44
2:QB:132:LYS:HA	2:QB:135:GLN:CB	2.43	0.44
2:QB:229:VAL:O	2:QB:229:VAL:HG12	2.18	0.44
3:QC:6:HIS:C	3:QC:8:ILE:N	2.76	0.44
4:QD:60:GLU:HG2	4:QD:202:LEU:HD12	2.00	0.44
4:QD:76:ARG:O	4:QD:79:PHE:HB3	2.17	0.44
4:QD:166:LYS:CD	27:YD:135:PHE:HZ	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:QH:16:ALA:HB2	8:QH:24:THR:CG2	2.45	0.44
9:QI:20:ARG:O	9:QI:21:PRO:C	2.59	0.44
17:QQ:13:ASP:O	17:QQ:15:MET:N	2.51	0.44
17:QQ:48:GLU:O	17:QQ:50:LYS:N	2.50	0.44
17:QQ:78:GLU:O	17:QQ:79:SER:C	2.61	0.44
17:QQ:92:ARG:HG3	17:QQ:92:ARG:NH1	2.30	0.44
20:QT:44:ALA:HB1	20:QT:91:LEU:HB2	2.00	0.44
20:QT:48:LYS:HB3	20:QT:51:GLU:CG	2.48	0.44
20:QT:59:ALA:C	20:QT:61:SER:N	2.75	0.44
25:RA:278:A:H8	25:RA:278:A:OP2	2.01	0.44
25:RA:681:G:H2'	25:RA:682:G:C8	2.53	0.44
25:RA:780:G:H21	25:RA:783:A:H62	1.63	0.44
25:RA:929:G:H8	25:RA:929:G:O5'	2.01	0.44
25:RA:1061:U:H3'	25:RA:1062:G:H5''	1.98	0.44
25:RA:1464:C:H2'	25:RA:1465:G:H8	1.82	0.44
25:RA:1466:G:H2'	25:RA:1547:C:C5	2.53	0.44
25:RA:1542:G:H5''	25:RA:1543:A:OP2	2.17	0.44
25:RA:1948:G:N2	25:RA:1958:C:O2	2.43	0.44
25:RA:2584:U:C6	25:RA:2585:U:N3	2.86	0.44
25:RA:2623:G:C2	25:RA:2624:G:C8	3.05	0.44
25:RA:2693:A:H2'	25:RA:2694:G:H8	1.81	0.44
25:RA:2837:G:C2'	25:RA:2838:G:H5'	2.47	0.44
27:RD:155:LEU:N	27:RD:155:LEU:HD12	2.32	0.44
29:RF:155:LEU:HA	29:RF:174:VAL:CG1	2.46	0.44
33:RN:67:LEU:HA	33:RN:87:LEU:HD13	2.00	0.44
35:RP:45:LEU:N	35:RP:45:LEU:HD12	2.32	0.44
36:RQ:81:VAL:HG23	46:R0:7:LEU:CD1	2.48	0.44
38:RS:78:LEU:HD21	38:RS:108:GLY:CA	2.47	0.44
41:RV:61:VAL:O	41:RV:61:VAL:HG22	2.16	0.44
42:RW:29:LEU:HD11	42:RW:55:ALA:HB2	1.98	0.44
42:RW:74:ALA:C	42:RW:75:TYR:HD1	2.24	0.44
45:RZ:1:MET:HG2	45:RZ:2:GLU:H	1.81	0.44
45:RZ:54:HIS:CE1	45:RZ:101:PRO:HG3	2.53	0.44
47:R1:54:ALA:O	47:R1:55:GLY:O	2.35	0.44
50:R4:68:ARG:HH11	50:R4:69:LYS:HG2	1.82	0.44
52:R6:34:LEU:O	52:R6:36:LEU:HD22	2.17	0.44
1:XA:765:G:N2	1:XA:813:U:OP2	2.45	0.44
1:XA:922:G:C2	1:XA:1396:A:C6	3.05	0.44
2:XB:24:TRP:CD2	2:XB:26:PRO:HD3	2.52	0.44
8:XH:110:ALA:HB3	8:XH:121:ASP:HB3	1.99	0.44
9:XI:4:TYR:CZ	9:XI:88:TYR:HB2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:38:ILE:CG1	10:XJ:71:LEU:HB3	2.48	0.44
10:XJ:62:HIS:N	10:XJ:62:HIS:CD2	2.85	0.44
13:XM:16:ASP:O	13:XM:19:LEU:HD23	2.17	0.44
14:YN:24:CYS:HB3	14:YN:28:GLY:H	1.83	0.44
15:XO:29:VAL:HB	15:XO:81:LEU:HD21	1.99	0.44
16:XP:50:LYS:HD3	16:XP:50:LYS:O	2.17	0.44
16:XP:68:ASP:C	16:XP:70:ALA:N	2.75	0.44
16:XP:72:ARG:HD3	16:XP:72:ARG:O	2.18	0.44
17:XQ:66:SER:O	17:XQ:67:LYS:C	2.61	0.44
22:XV:35:A:C2	23:XX:3:G:C2	3.05	0.44
25:YA:655:A:C8	25:YA:656:G:O4'	2.70	0.44
25:YA:1263:U:O2'	51:Y5:11:THR:HG23	2.17	0.44
25:YA:1266:G:C8	42:YW:15:ARG:NH1	2.86	0.44
25:YA:1423:G:C2	25:YA:1424:G:C8	3.06	0.44
25:YA:1729:A:N6	25:YA:1731:G:C2	2.86	0.44
25:YA:2021:C:OP1	51:Y5:12:SER:OG	2.32	0.44
25:YA:2145:C:H2'	25:YA:2147:G:N2	2.33	0.44
25:YA:2196:C:H2'	25:YA:2197:U:C6	2.52	0.44
25:YA:2280:G:C2'	25:YA:2281:C:H5'	2.48	0.44
26:YB:13:A:C6	26:YB:70:C:H5'	2.52	0.44
26:YB:79:C:H42	26:YB:97:G:H1	1.64	0.44
29:YF:65:TRP:HZ3	29:YF:73:ALA:C	2.26	0.44
30:YG:19:LEU:HA	30:YG:22:ARG:HB2	1.99	0.44
30:YG:51:ARG:HB3	30:YG:51:ARG:NH1	2.33	0.44
30:YG:110:ALA:C	30:YG:112:PRO:HD2	2.42	0.44
33:YN:63:THR:HG23	33:YN:66:LYS:HE3	2.00	0.44
34:YO:40:VAL:CG1	34:YO:41:ALA:N	2.80	0.44
36:YQ:66:ILE:O	36:YQ:104:PHE:N	2.49	0.44
39:YT:80:SER:HA	39:YT:81:PRO:HD3	1.73	0.44
40:YU:91:ASP:C	40:YU:93:LYS:N	2.74	0.44
42:YW:1:MET:CE	42:YW:2:GLU:H	2.31	0.44
45:YZ:166:SER:HB2	45:YZ:167:PRO:C	2.42	0.44
50:Y4:50:VAL:O	50:Y4:50:VAL:CG1	2.63	0.44
54:Y8:47:LYS:HD2	54:Y8:48:PHE:N	2.33	0.44
1:QA:507:C:H3'	1:QA:508:C:H2'	2.00	0.44
1:QA:532:A:H2	3:QC:156:ARG:HH12	1.63	0.44
1:QA:741:G:H2'	1:QA:742:G:O4'	2.17	0.44
1:QA:779:C:O2'	1:QA:780:A:H5'	2.18	0.44
1:QA:830:G:C2	1:QA:857:C:C2	3.05	0.44
1:QA:977:A:C2	1:QA:1224:G:C6	3.06	0.44
1:QA:1052:U:O2	1:QA:1207:G:N2	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1158:C:N3	1:QA:1160:G:N7	2.66	0.44
5:QE:62:ALA:O	5:QE:64:ARG:N	2.51	0.44
7:QG:45:ASP:O	7:QG:49:ILE:HG12	2.17	0.44
9:QI:7:THR:O	9:QI:83:ARG:CD	2.66	0.44
10:QJ:61:GLU:CG	14:QN:58:LYS:HE2	2.47	0.44
16:QP:72:ARG:CD	16:QP:73:LEU:HD23	2.47	0.44
16:QP:83:GLU:HG3	16:QP:84:ALA:N	2.33	0.44
25:RA:301:G:C4	25:RA:302:C:C5	3.05	0.44
25:RA:445:C:O2'	25:RA:446:G:H5'	2.17	0.44
25:RA:671:C:H5	35:RP:33:ARG:HE	1.66	0.44
25:RA:715:G:H2'	25:RA:716:A:C8	2.52	0.44
25:RA:1209:G:O2'	25:RA:1237:A:N1	2.44	0.44
25:RA:1437:C:C4	25:RA:1438:U:C4	3.05	0.44
25:RA:2061:G:H5''	25:RA:2503:A:N1	2.32	0.44
25:RA:2088:G:C2	25:RA:2089:U:C2	3.05	0.44
25:RA:2404:C:C2	25:RA:2414:G:C2	3.06	0.44
25:RA:2494:G:H2'	25:RA:2495:G:H8	1.81	0.44
25:RA:2539:C:H5''	55:R9:3:VAL:HG21	1.99	0.44
25:RA:2623:G:H2'	25:RA:2624:G:H8	1.82	0.44
25:RA:2693:A:H2'	25:RA:2694:G:C8	2.53	0.44
25:RA:2805:G:H2'	25:RA:2807:G:C8	2.53	0.44
27:RD:52:ARG:HB2	27:RD:53:PHE:CD2	2.53	0.44
29:RF:117:ARG:NH2	29:RF:189:THR:O	2.50	0.44
29:RF:174:VAL:CG1	29:RF:174:VAL:O	2.65	0.44
30:RG:129:GLY:HA2	30:RG:169:ALA:HB2	1.99	0.44
33:RN:20:GLY:HA2	33:RN:61:ARG:HD2	1.99	0.44
33:RN:57:ALA:O	33:RN:124:ALA:HA	2.18	0.44
34:RO:91:LEU:N	34:RO:91:LEU:CD2	2.80	0.44
34:RO:92:GLU:O	34:RO:93:PRO:C	2.58	0.44
35:RP:83:VAL:HG11	35:RP:112:LEU:HD21	1.97	0.44
35:RP:101:VAL:HA	35:RP:106:LEU:HB2	1.99	0.44
35:RP:144:GLU:N	35:RP:144:GLU:CD	2.75	0.44
40:RU:5:LYS:C	40:RU:7:GLY:N	2.75	0.44
40:RU:57:PHE:C	40:RU:59:ARG:N	2.74	0.44
43:RX:70:LEU:HD23	43:RX:70:LEU:H	1.77	0.44
44:RY:88:LYS:HB3	44:RY:90:LEU:CD2	2.48	0.44
44:RY:95:LYS:HB2	44:RY:99:CYS:O	2.18	0.44
44:RY:97:ARG:HG2	44:RY:97:ARG:HH11	1.82	0.44
45:RZ:1:MET:HE2	45:RZ:3:TYR:CE2	2.52	0.44
45:RZ:102:LEU:HD13	45:RZ:123:ASP:HA	1.99	0.44
49:R3:50:VAL:HB	49:R3:53:LEU:HD12	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
53:R7:48:LYS:CG	53:R7:49:ARG:H	2.23	0.44
1:XA:430:A:OP1	4:XD:9:CYS:HB2	2.18	0.44
1:XA:598:U:H4'	8:XH:94:TYR:CG	2.52	0.44
1:XA:652:U:HO2'	1:XA:653:A:P	2.40	0.44
1:XA:864:A:H2'	1:XA:865:A:C8	2.52	0.44
1:XA:1316:G:H2'	1:XA:1317:C:H5''	2.00	0.44
2:XB:30:ARG:HH21	2:XB:194:PRO:HG2	1.82	0.44
5:XE:27:ARG:C	5:XE:28:PHE:CD1	2.96	0.44
6:XF:3:ARG:HG2	6:XF:93:SER:OG	2.17	0.44
11:XK:83:ILE:HG12	11:XK:109:VAL:HG23	1.99	0.44
13:XM:53:VAL:HG12	13:XM:57:ARG:HH12	1.82	0.44
20:XT:36:LEU:HD13	20:XT:36:LEU:HA	1.82	0.44
25:YA:20:C:C2	25:YA:521:G:N2	2.86	0.44
25:YA:407:G:H2'	25:YA:408:G:H8	1.83	0.44
25:YA:1027:A:N6	25:YA:1126:A:C4	2.86	0.44
25:YA:1426:G:O2'	25:YA:1572:A:N6	2.47	0.44
25:YA:1693:U:H1'	27:YD:14:ARG:HH22	1.82	0.44
25:YA:1709:U:H2'	25:YA:1710:C:C6	2.52	0.44
25:YA:2087:G:C2'	25:YA:2088:G:H5'	2.48	0.44
25:YA:2720:U:O4	25:YA:2872:G:C6	2.70	0.44
25:YA:2808:U:H3	25:YA:2892:A:H62	1.64	0.44
27:YD:44:ASN:CB	27:YD:49:ILE:HG22	2.46	0.44
29:YF:149:ASP:OD2	29:YF:151:SER:HB3	2.17	0.44
31:YH:37:VAL:HG11	31:YH:68:THR:HG23	1.98	0.44
35:YP:6:LEU:N	35:YP:6:LEU:HD22	2.31	0.44
35:YP:107:LYS:HB2	35:YP:110:TYR:HD2	1.83	0.44
36:YQ:21:THR:HB	36:YQ:22:LYS:H	1.42	0.44
40:YU:86:ALA:CB	40:YU:88:ILE:HD11	2.48	0.44
41:YV:35:LEU:C	41:YV:37:VAL:N	2.75	0.44
48:Y2:41:ILE:HD12	48:Y2:41:ILE:O	2.16	0.44
50:Y4:2:LYS:HD2	50:Y4:2:LYS:HA	1.61	0.44
50:Y4:39:CYS:HB3	50:Y4:41:PRO:HD2	2.00	0.44
1:QA:502:G:C6	1:QA:503:C:C4	3.06	0.44
1:QA:728:A:N6	1:QA:729:A:N6	2.66	0.44
1:QA:1069:C:H5''	5:QE:20:GLN:NE2	2.32	0.44
1:QA:1072:G:H2'	1:QA:1073:U:O4'	2.18	0.44
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.30	0.44
1:QA:1376:U:OP1	7:QG:98:SER:HB3	2.18	0.44
2:QB:29:ALA:O	2:QB:32:ILE:HG22	2.17	0.44
2:QB:51:LEU:O	2:QB:55:PHE:HD2	2.00	0.44
2:QB:192:SER:OG	2:QB:193:ASP:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:207:ALA:C	2:QB:209:ARG:N	2.76	0.44
3:QC:42:LEU:HD12	3:QC:45:LYS:HZ3	1.83	0.44
5:QE:27:ARG:C	5:QE:28:PHE:CD1	2.96	0.44
8:QH:88:LYS:HB3	8:QH:89:PRO:HD2	2.00	0.44
10:QJ:70:ARG:HH11	10:QJ:70:ARG:HG3	1.83	0.44
11:QK:48:ILE:HD11	11:QK:64:ALA:N	2.32	0.44
12:QL:7:ILE:HG23	17:QQ:32:TYR:HB3	1.98	0.44
13:QM:90:LEU:HD12	13:QM:91:ARG:N	2.33	0.44
15:QO:10:LYS:O	15:QO:14:GLU:HB2	2.18	0.44
16:QP:47:ASP:C	16:QP:49:LEU:N	2.75	0.44
22:QV:58:A:O2'	22:QV:60:U:OP2	2.16	0.44
25:RA:428:A:H3'	25:RA:429:A:H8	1.83	0.44
25:RA:588:U:H1'	29:RF:90:PHE:CG	2.52	0.44
25:RA:1221:C:OP1	41:RV:68:LYS:HE2	2.18	0.44
25:RA:1882:C:H5'	25:RA:1883:G:OP2	2.18	0.44
25:RA:2176:A:C5	25:RA:2177:C:C4	3.06	0.44
25:RA:2845:G:C2'	25:RA:2846:G:H5'	2.47	0.44
26:RB:14:U:OP2	26:RB:70:C:O2'	2.30	0.44
27:RD:95:LEU:HD12	27:RD:95:LEU:O	2.17	0.44
31:RH:84:SER:OG	31:RH:85:LYS:N	2.51	0.44
32:RI:102:SER:OG	32:RI:108:THR:HG22	2.18	0.44
33:RN:65:LYS:O	33:RN:66:LYS:C	2.60	0.44
34:RO:77:ILE:O	34:RO:77:ILE:HG23	2.17	0.44
37:RR:31:HIS:C	37:RR:33:ARG:H	2.25	0.44
38:RS:3:ARG:O	38:RS:4:LEU:O	2.35	0.44
40:RU:52:ARG:NH1	40:RU:52:ARG:CG	2.76	0.44
47:R1:8:SER:CB	47:R1:66:HIS:CE1	3.01	0.44
48:R2:4:SER:OG	48:R2:5:GLU:OE2	2.26	0.44
52:R6:11:LEU:HD12	52:R6:51:GLU:HG3	2.00	0.44
1:XA:538:G:H8	1:XA:538:G:O5'	2.01	0.44
1:XA:657:G:C2	1:XA:750:G:C5	3.06	0.44
1:XA:771:G:H2'	1:XA:772:U:C6	2.53	0.44
1:XA:1015:A:H2'	1:XA:1016:A:C8	2.52	0.44
1:XA:1022:G:H2'	1:XA:1023:G:C8	2.53	0.44
1:XA:1100:C:OP2	2:XB:96:ARG:HG2	2.17	0.44
1:XA:1309:G:H2'	1:XA:1310:G:O4'	2.17	0.44
1:XA:1429:C:H2'	1:XA:1430:C:H6	1.82	0.44
2:XB:54:THR:HG21	2:XB:201:ILE:HD11	2.00	0.44
3:XC:108:ASN:HB3	3:XC:111:LEU:HD12	1.99	0.44
4:XD:33:MET:HE1	4:XD:37:PRO:O	2.18	0.44
4:XD:132:ARG:HG2	4:XD:132:ARG:HH11	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:38:LEU:O	7:XG:42:ILE:HG13	2.17	0.44
11:XK:121:PRO:HD2	11:XK:126:ARG:CD	2.46	0.44
11:XK:124:LYS:HB3	11:XK:125:PHE:H	1.67	0.44
13:XM:3:ARG:C	13:XM:9:ILE:HG21	2.43	0.44
18:XR:82:THR:HG22	18:XR:83:GLU:H	1.80	0.44
25:YA:270(T):G:H5''	47:Y1:97:LEU:CD2	2.42	0.44
25:YA:463:G:N1	25:YA:467:G:C6	2.85	0.44
25:YA:467:G:H8	25:YA:467:G:O5'	1.99	0.44
25:YA:1690:A:H2'	25:YA:1691:C:O4'	2.17	0.44
25:YA:1870:C:H2'	25:YA:1871:A:O4'	2.17	0.44
25:YA:2219:G:H5''	27:YD:269:PHE:CZ	2.53	0.44
25:YA:2262:U:OP2	46:Y0:19:LYS:HE3	2.17	0.44
25:YA:2283:C:C2	25:YA:2389:G:C2	3.06	0.44
25:YA:2563:U:H4'	34:YO:28:SER:HA	1.99	0.44
25:YA:2748:A:H2'	25:YA:2749:A:H8	1.82	0.44
27:YD:145:VAL:HB	27:YD:155:LEU:HB2	1.99	0.44
28:YE:1:MET:HE2	28:YE:1:MET:H1	1.83	0.44
28:YE:172:VAL:HG13	28:YE:182:LEU:HD11	1.98	0.44
29:YF:201:VAL:HG13	29:YF:202:PHE:N	2.33	0.44
30:YG:16:ARG:CZ	30:YG:31:VAL:HG11	2.47	0.44
31:YH:6:ARG:CG	31:YH:7:LEU:N	2.81	0.44
33:YN:112:LEU:C	33:YN:114:ARG:O	2.61	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CZ	2.53	0.44
42:YW:14:PRO:HB3	42:YW:18:ARG:HE	1.83	0.44
50:Y4:23:GLU:O	50:Y4:24:THR:OG1	2.34	0.44
52:Y6:34:LEU:O	52:Y6:36:LEU:HD22	2.17	0.44
1:QA:109:A:C6	1:QA:327:A:C6	3.06	0.44
1:QA:416:G:N7	1:QA:417:C:C4	2.86	0.44
1:QA:539:A:C6	1:QA:540:G:C6	3.05	0.44
1:QA:636:U:H2'	1:QA:637:G:H8	1.78	0.44
1:QA:694:A:N1	1:QA:787:A:O2'	2.50	0.44
1:QA:867:G:O2'	1:QA:868:C:H5'	2.18	0.44
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.52	0.44
1:QA:1160:G:H1	1:QA:1177:G:H21	1.64	0.44
1:QA:1326:C:H2'	1:QA:1327:C:H6	1.83	0.44
1:QA:1347:G:H2'	1:QA:1373:G:O6	2.18	0.44
2:QB:17:PHE:CG	2:QB:44:LEU:HD11	2.53	0.44
2:QB:90:MET:HA	2:QB:91:PRO:HD3	1.82	0.44
3:QC:129:ALA:C	3:QC:131:ARG:N	2.72	0.44
4:QD:206:PHE:CD2	4:QD:207:TYR:CE1	3.05	0.44
5:QE:80:ILE:C	5:QE:81:GLU:HG2	2.43	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:21:VAL:HG23	7:QG:22:LEU:N	2.32	0.44
7:QG:62:PHE:O	7:QG:64:GLN:N	2.51	0.44
8:QH:28:ALA:O	8:QH:29:SER:HB2	2.17	0.44
9:QI:4:TYR:CZ	9:QI:88:TYR:HB2	2.51	0.44
9:QI:47:LEU:HD22	9:QI:47:LEU:H	1.81	0.44
9:QI:105:ASP:C	9:QI:107:ARG:N	2.74	0.44
10:QJ:54:PHE:CD2	10:QJ:55:LYS:HD2	2.52	0.44
15:QO:55:GLY:HA2	15:QO:58:MET:HE2	2.00	0.44
25:RA:57:C:O5'	25:RA:57:C:H6	2.01	0.44
25:RA:997:G:OP2	40:RU:58:ARG:HD2	2.18	0.44
25:RA:1199:U:H2'	25:RA:1200:C:C6	2.53	0.44
25:RA:1334:G:H2'	25:RA:1335:U:H6	1.82	0.44
25:RA:1373:A:C6	25:RA:1374:G:C4	3.05	0.44
25:RA:1448:G:H5'	25:RA:1543:A:OP1	2.18	0.44
25:RA:2055:C:H4'	25:RA:2056:G:H5''	2.00	0.44
25:RA:2343:C:O2'	25:RA:2373:G:O2'	2.25	0.44
25:RA:2562:U:C2'	34:RO:23:ARG:HH12	2.30	0.44
25:RA:2702:U:O2	25:RA:2702:U:H2'	2.17	0.44
25:RA:2821:A:OP2	25:RA:2822:G:OP2	2.36	0.44
25:RA:2867:G:O2'	25:RA:2868:A:O5'	2.36	0.44
27:RD:30:GLU:HG3	27:RD:63:ARG:NE	2.32	0.44
28:RE:11:MET:O	28:RE:12:THR:HB	2.18	0.44
28:RE:199:ARG:HH11	28:RE:199:ARG:HG3	1.82	0.44
29:RF:65:TRP:CZ2	29:RF:72:ARG:NH2	2.86	0.44
30:RG:67:LYS:HD2	30:RG:67:LYS:N	2.33	0.44
36:RQ:133:ARG:CG	36:RQ:134:ARG:N	2.78	0.44
37:RR:12:ARG:HG3	37:RR:12:ARG:NH1	2.32	0.44
43:RX:3:THR:HA	43:RX:6:ASP:OD2	2.18	0.44
1:XA:79:G:N2	1:XA:90:C:O2	2.45	0.44
1:XA:179:A:H2'	1:XA:180:U:H6	1.82	0.44
1:XA:416:G:H1	1:XA:427:U:H3	1.66	0.44
1:XA:546:G:P	4:XD:72:GLU:HB3	2.58	0.44
1:XA:837:G:C2	1:XA:850:U:O2	2.71	0.44
1:XA:948:C:H5	13:XM:106:ASN:HD22	1.58	0.44
1:XA:981:U:H5'	14:XM:21:TYR:CZ	2.52	0.44
1:XA:1183:A:O2'	1:XA:1184:G:OP1	2.25	0.44
1:XA:1202:G:C1'	14:XM:29:ARG:HD2	2.47	0.44
1:XA:1432:G:H8	1:XA:1432:G:O5'	2.01	0.44
3:XC:69:HIS:N	3:XC:69:HIS:ND1	2.66	0.44
3:XC:188:LEU:HD12	3:XC:195:VAL:CG1	2.48	0.44
4:XD:9:CYS:SG	4:XD:32:ALA:HB2	2.58	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:52:SER:HB3	4:XD:55:ALA:HB3	2.00	0.44
4:XD:93:PHE:CZ	4:XD:97:LEU:HD11	2.52	0.44
5:XE:62:ALA:O	5:XE:64:ARG:N	2.51	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
8:XH:6:ILE:HB	8:XH:85:ARG:HH11	1.74	0.44
8:XH:28:ALA:O	8:XH:29:SER:HB2	2.18	0.44
8:XH:74:PRO:O	8:XH:75:ARG:C	2.58	0.44
10:XJ:100:THR:O	10:XJ:101:VAL:HB	2.17	0.44
16:XP:15:PRO:O	16:XP:16:HIS:ND1	2.51	0.44
25:YA:84:A:H2	25:YA:98:G:N3	2.15	0.44
25:YA:377:C:H2'	25:YA:378:C:H6	1.83	0.44
25:YA:381:G:H1	25:YA:393:C:H42	1.66	0.44
25:YA:971:C:N4	25:YA:972:G:C4	2.86	0.44
25:YA:1053:C:N4	25:YA:1054:A:N7	2.66	0.44
25:YA:1288:U:C2	25:YA:1327:C:O2	2.70	0.44
25:YA:1494:A:O2'	25:YA:1495:A:H5'	2.17	0.44
25:YA:2033:A:N6	25:YA:2036:C:C2	2.86	0.44
25:YA:2210:G:H5'	25:YA:2211:G:C5	2.53	0.44
25:YA:2349:G:OP2	54:Y8:42:ARG:HD3	2.18	0.44
25:YA:2399:G:H2'	25:YA:2400:G:O4'	2.17	0.44
25:YA:2636:U:H2'	25:YA:2637:U:C6	2.53	0.44
25:YA:2734:A:N6	25:YA:2770:G:O2'	2.49	0.44
27:YD:17:THR:HG21	27:YD:204:ILE:HA	1.99	0.44
27:YD:143:HIS:HD2	27:YD:144:ALA:HB2	1.82	0.44
28:YE:120:TRP:CE3	28:YE:155:LYS:HD3	2.53	0.44
29:YF:24:LEU:HD12	29:YF:24:LEU:N	2.33	0.44
29:YF:65:TRP:CZ2	29:YF:72:ARG:NH2	2.86	0.44
29:YF:184:TYR:CE2	29:YF:188:ARG:HD2	2.52	0.44
32:YI:76:THR:OG1	32:YI:139:GLN:OE1	2.33	0.44
33:YN:131:GLN:CD	33:YN:132:ALA:N	2.74	0.44
34:YO:120:GLU:OE1	39:YT:67:SER:OG	2.24	0.44
35:YP:88:LEU:O	35:YP:90:ARG:N	2.50	0.44
35:YP:115:LEU:CB	35:YP:131:SER:HB2	2.47	0.44
38:YS:110:LEU:HA	38:YS:112:PHE:CE1	2.53	0.44
39:YT:99:LEU:CD1	39:YT:99:LEU:O	2.65	0.44
40:YU:79:PHE:CE2	40:YU:83:LEU:CD1	3.00	0.44
40:YU:97:ASP:HA	40:YU:100:VAL:CG2	2.47	0.44
41:YV:72:VAL:HG13	41:YV:85:LYS:HB3	2.00	0.44
44:YY:36:ALA:HB1	44:YY:67:LEU:O	2.16	0.44
44:YY:88:LYS:HB3	44:YY:90:LEU:CD2	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:Y4:39:CYS:O	50:Y4:40:HIS:CB	2.66	0.44
1:QA:323:U:H5'	20:QT:23:ARG:HB2	2.00	0.44
1:QA:363:A:C4	12:QL:31:PRO:HD2	2.53	0.44
1:QA:474:G:H5''	16:QP:81:ARG:NE	2.32	0.44
1:QA:502:G:H1	1:QA:543:C:H42	1.64	0.44
1:QA:593:G:H1	1:QA:646:U:H3	1.65	0.44
1:QA:616:G:H2'	1:QA:617:G:H5'	2.00	0.44
1:QA:854:G:C2	1:QA:855:G:C8	3.05	0.44
1:QA:1034:G:H2'	1:QA:1035:A:H8	1.80	0.44
1:QA:1187:G:H5'	1:QA:1188:A:OP2	2.17	0.44
1:QA:1333:A:H2'	1:QA:1334:G:O4'	2.18	0.44
2:QB:47:THR:HG22	2:QB:51:LEU:CG	2.48	0.44
2:QB:77:ALA:HB2	2:QB:211:ILE:HG21	2.00	0.44
2:QB:136:VAL:O	2:QB:140:HIS:N	2.44	0.44
4:QD:49:ARG:O	4:QD:50:ARG:C	2.60	0.44
8:QH:122:ARG:O	8:QH:123:GLU:C	2.60	0.44
9:QI:5:TYR:CD2	9:QI:6:GLY:N	2.86	0.44
9:QI:13:ALA:HB2	9:QI:68:GLY:CA	2.47	0.44
9:QI:43:ALA:O	9:QI:45:ALA:N	2.51	0.44
10:QJ:6:ILE:O	10:QJ:71:LEU:HD12	2.18	0.44
11:QK:13:GLN:HG3	11:QK:75:TYR:CA	2.48	0.44
11:QK:72:ALA:C	11:QK:74:ALA:H	2.26	0.44
11:QK:88:GLY:O	11:QK:89:ALA:C	2.61	0.44
20:QT:50:GLU:O	20:QT:52:ALA:N	2.51	0.44
25:RA:455:C:C4	25:RA:472:A:C5	3.06	0.44
25:RA:1264:G:H5'	51:R5:11:THR:HG21	2.00	0.44
25:RA:1339:G:H21	25:RA:1603:A:H1'	1.79	0.44
25:RA:1359:A:C6	25:RA:1373:A:C4	3.05	0.44
25:RA:1460:A:H5''	25:RA:1461:G:O5'	2.18	0.44
25:RA:1523:U:O5'	25:RA:1523:U:H6	2.00	0.44
25:RA:1680:U:H5''	25:RA:1681:G:OP2	2.18	0.44
25:RA:1946:U:H2'	25:RA:1947:C:C6	2.53	0.44
25:RA:1954:G:H1'	25:RA:1956:U:O4	2.18	0.44
25:RA:2083:G:C6	25:RA:2084:C:C4	3.06	0.44
25:RA:2241:A:H2'	25:RA:2242:G:C8	2.53	0.44
25:RA:2262:U:O4	46:R0:15:ASP:HA	2.18	0.44
25:RA:2458:G:C4	25:RA:2490:G:C6	3.06	0.44
25:RA:2626:C:H2'	25:RA:2627:G:O4'	2.18	0.44
27:RD:11:PRO:O	27:RD:12:SER:CB	2.65	0.44
28:RE:52:LEU:HB2	28:RE:75:VAL:CG2	2.40	0.44
28:RE:95:ILE:HG22	28:RE:95:ILE:O	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:RF:79:GLY:O	29:RF:80:ALA:C	2.61	0.44
29:RF:109:GLY:O	29:RF:110:LEU:C	2.58	0.44
30:RG:180:PHE:C	30:RG:182:LYS:N	2.76	0.44
31:RH:125:VAL:CG1	31:RH:126:PRO:CG	2.94	0.44
32:RI:144:VAL:HG22	32:RI:145:VAL:H	1.83	0.44
37:RR:33:ARG:HA	37:RR:114:VAL:O	2.18	0.44
37:RR:79:LEU:HD23	37:RR:79:LEU:O	2.16	0.44
40:RU:79:PHE:CE2	40:RU:83:LEU:CD1	3.00	0.44
41:RV:35:LEU:HD22	41:RV:35:LEU:N	2.23	0.44
41:RV:35:LEU:C	41:RV:37:VAL:N	2.75	0.44
41:RV:72:VAL:HG13	41:RV:85:LYS:HB3	2.00	0.44
50:R4:33:VAL:CG1	50:R4:34:GLU:H	2.22	0.44
50:R4:39:CYS:HB3	50:R4:41:PRO:HD2	2.00	0.44
51:R5:52:TYR:CD1	51:R5:52:TYR:N	2.85	0.44
1:XA:262:A:H2'	1:XA:263:A:C8	2.53	0.44
1:XA:428:G:C5	1:XA:430:A:C6	3.05	0.44
1:XA:498:A:N6	1:XA:547:A:C8	2.85	0.44
1:XA:783:C:OP1	1:XA:1515:C:O2'	2.32	0.44
1:XA:1061:G:C5	1:XA:1062:U:C5	3.06	0.44
1:XA:1207:G:C2	1:XA:1208:C:C2	3.05	0.44
1:XA:1374:A:O2'	7:XG:28:ASN:HB3	2.17	0.44
2:XB:33:TYR:HD1	2:XB:33:TYR:O	2.00	0.44
2:XB:192:SER:OG	2:XB:193:ASP:N	2.50	0.44
5:XE:48:ALA:HB2	5:XE:57:LYS:HD3	2.00	0.44
8:XH:1:MET:HE2	8:XH:1:MET:N	2.30	0.44
8:XH:109:ILE:HD11	8:XH:120:THR:HG22	2.00	0.44
11:XK:106:LYS:O	11:XK:107:SER:CB	2.66	0.44
13:XM:80:ARG:NH1	19:XS:65:ASN:O	2.51	0.44
15:XO:55:GLY:HA2	15:XO:58:MET:HE2	2.00	0.44
19:XS:10:PHE:CD1	19:XS:38:SER:HB2	2.52	0.44
25:YA:273(D):C:H2'	25:YA:273(E):U:C6	2.53	0.44
25:YA:347:A:H2'	25:YA:348:G:H8	1.83	0.44
25:YA:415:A:N1	25:YA:2409:G:C6	2.86	0.44
25:YA:442:G:O4'	29:YF:46:ARG:HD3	2.18	0.44
25:YA:679:C:H2'	25:YA:680:G:H8	1.83	0.44
25:YA:1319:G:H2'	25:YA:1319:G:N3	2.32	0.44
25:YA:1793:C:N4	25:YA:1826:G:H1	2.15	0.44
25:YA:1853:A:N3	25:YA:2233:U:O2'	2.50	0.44
25:YA:2063:C:N4	25:YA:2064:C:C4	2.86	0.44
25:YA:2621:A:N6	25:YA:2622:C:N4	2.66	0.44
25:YA:2794:C:N4	25:YA:2795:G:O6	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:145:VAL:HG12	27:YD:146:GLU:N	2.32	0.44
27:YD:155:LEU:N	27:YD:155:LEU:HD12	2.32	0.44
28:YE:2:LYS:HG2	28:YE:95:ILE:HG22	1.99	0.44
32:YI:56:LYS:HZ1	32:YI:57:ARG:HG2	1.83	0.44
33:YN:109:LYS:H	33:YN:109:LYS:CD	2.26	0.44
35:YP:19:VAL:HG22	35:YP:21:ARG:H	1.83	0.44
35:YP:70:GLN:N	35:YP:70:GLN:OE1	2.51	0.44
39:YT:49:VAL:O	39:YT:49:VAL:CG1	2.64	0.44
40:YU:27:LEU:O	40:YU:28:ARG:C	2.61	0.44
40:YU:81:HIS:O	40:YU:82:GLY:C	2.61	0.44
42:YW:88:ARG:HH11	42:YW:88:ARG:HG2	1.82	0.44
44:YY:15:VAL:HB	44:YY:20:TYR:O	2.17	0.44
44:YY:95:LYS:C	44:YY:96:ILE:O	2.61	0.44
45:YZ:24:LEU:N	45:YZ:39:VAL:O	2.49	0.44
50:Y4:35:VAL:C	50:Y4:37:SER:H	2.19	0.44
50:Y4:68:ARG:HH11	50:Y4:69:LYS:HG2	1.82	0.44
1:QA:523:A:H61	12:QL:92:ASP:HB2	1.82	0.44
1:QA:585:G:H8	1:QA:585:G:O5'	2.00	0.44
1:QA:731:G:OP1	1:QA:766:A:H1'	2.17	0.44
1:QA:778:G:H2'	1:QA:779:C:O4'	2.17	0.44
1:QA:1122:U:H2'	1:QA:1123:A:C8	2.53	0.44
1:QA:1137:C:O2'	1:QA:1138:G:C2	2.69	0.44
1:QA:1239:A:H62	1:QA:1299:A:N6	2.15	0.44
4:QD:146:ILE:H	4:QD:146:ILE:CD1	2.30	0.44
8:QH:1:MET:HE2	8:QH:1:MET:N	2.30	0.44
8:QH:118:VAL:O	8:QH:119:LEU:HD23	2.17	0.44
9:QI:10:ARG:NE	9:QI:105:ASP:CB	2.81	0.44
10:QJ:10:GLY:O	10:QJ:68:HIS:N	2.51	0.44
10:QJ:38:ILE:CG1	10:QJ:71:LEU:HB3	2.48	0.44
11:QK:106:LYS:O	11:QK:107:SER:CB	2.65	0.44
13:QM:53:VAL:HG12	13:QM:57:ARG:HH12	1.82	0.44
15:QO:50:HIS:O	15:QO:51:HIS:C	2.61	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
25:RA:76:C:O2'	25:RA:77:C:H5'	2.18	0.44
25:RA:140:A:C6	25:RA:141:A:N6	2.86	0.44
25:RA:270(I):G:H2'	25:RA:270(J):G:C8	2.52	0.44
25:RA:324:A:H61	25:RA:338:G:C2'	2.30	0.44
25:RA:738:G:C2	25:RA:759:G:C5	3.06	0.44
25:RA:922:U:C4	25:RA:923:C:N4	2.86	0.44
25:RA:1022:G:N1	25:RA:1140:C:N3	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1027:A:C6	25:RA:1126:A:C4	3.06	0.44
25:RA:2877:G:C2'	25:RA:2878:U:H5'	2.48	0.44
26:RB:55:U:C5'	30:RG:28:VAL:HG21	2.48	0.44
27:RD:12:SER:O	27:RD:14:ARG:N	2.51	0.44
27:RD:25:THR:CG2	27:RD:25:THR:O	2.65	0.44
27:RD:155:LEU:HD23	27:RD:177:LEU:HD21	2.00	0.44
27:RD:172:TYR:HD1	27:RD:185:VAL:C	2.26	0.44
28:RE:51:PHE:CD1	28:RE:52:LEU:N	2.76	0.44
29:RF:127:GLU:C	29:RF:129:PHE:H	2.26	0.44
29:RF:201:VAL:HG13	29:RF:202:PHE:N	2.33	0.44
30:RG:53:LEU:C	30:RG:55:LYS:H	2.26	0.44
31:RH:58:GLU:O	31:RH:59:ARG:C	2.61	0.44
35:RP:75:ILE:HG12	35:RP:77:ARG:NH1	2.32	0.44
36:RQ:34:LEU:HB2	36:RQ:118:LEU:HD22	2.00	0.44
39:RT:105:LEU:C	39:RT:107:ASP:N	2.74	0.44
40:RU:57:PHE:O	40:RU:58:ARG:C	2.59	0.44
44:RY:11:ASP:HB2	44:RY:27:VAL:CG1	2.46	0.44
44:RY:95:LYS:C	44:RY:96:ILE:O	2.61	0.44
50:R4:50:VAL:O	50:R4:50:VAL:CG1	2.63	0.44
54:R8:40:GLU:O	54:R8:43:GLN:N	2.50	0.44
1:XA:57:G:H2'	1:XA:58:C:O4'	2.18	0.44
1:XA:319:G:H5'	1:XA:1468:A:H4'	2.00	0.44
1:XA:775:G:H2'	1:XA:776:G:H8	1.83	0.44
1:XA:971:G:N2	1:XA:1363:A:OP2	2.44	0.44
3:XC:68:VAL:HG12	3:XC:70:VAL:HG23	1.98	0.44
4:XD:95:GLY:O	4:XD:99:SER:N	2.51	0.44
5:XE:80:ILE:C	5:XE:81:GLU:HG2	2.43	0.44
6:XF:35:ALA:HA	6:XF:67:MET:HB3	1.99	0.44
8:XH:23:SER:HB3	8:XH:62:TYR:HA	2.00	0.44
8:XH:88:LYS:HB3	8:XH:89:PRO:HD2	2.00	0.44
19:XS:8:GLY:O	19:XS:9:VAL:CG2	2.57	0.44
20:XT:28:ALA:O	20:XT:30:LYS:N	2.50	0.44
20:XT:48:LYS:HB3	20:XT:51:GLU:CG	2.48	0.44
25:YA:83:G:N2	25:YA:103:A:OP2	2.47	0.44
25:YA:701:G:H5''	25:YA:701:G:C8	2.53	0.44
25:YA:725:G:C6	25:YA:726:G:N1	2.86	0.44
25:YA:943:U:P	35:YP:36:LYS:HD3	2.58	0.44
25:YA:1067:A:OP1	25:YA:1067:A:H8	2.01	0.44
25:YA:1517:G:H2'	25:YA:1518:C:C6	2.53	0.44
25:YA:1683:C:H2'	25:YA:1684:C:C6	2.53	0.44
25:YA:1776:G:H2'	25:YA:1777:U:H5'	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2416:C:N3	25:YA:2417:C:C5	2.86	0.44
25:YA:2422:A:C8	25:YA:2424:C:H5	2.35	0.44
25:YA:2552:U:C2	25:YA:2554:U:H5''	2.53	0.44
26:YB:9:G:H1	26:YB:111:U:H3	1.65	0.44
27:YD:30:GLU:HG3	27:YD:63:ARG:NE	2.32	0.44
29:YF:42:ALA:O	29:YF:45:ARG:HB2	2.18	0.44
31:YH:153:LYS:HG3	31:YH:162:ILE:H	1.79	0.44
32:YI:47:LEU:O	32:YI:51:ILE:N	2.47	0.44
32:YI:56:LYS:HZ2	32:YI:57:ARG:HA	1.83	0.44
33:YN:67:LEU:HA	33:YN:87:LEU:HD13	2.00	0.44
34:YO:91:LEU:N	34:YO:91:LEU:CD2	2.80	0.44
36:YQ:81:VAL:HG23	36:YQ:82:ARG:N	2.32	0.44
38:YS:57:LYS:O	38:YS:58:LEU:HB3	2.18	0.44
38:YS:86:ALA:O	38:YS:87:PHE:CB	2.65	0.44
39:YT:29:ARG:HA	39:YT:45:PHE:O	2.17	0.44
42:YW:67:ASP:OD2	42:YW:67:ASP:N	2.50	0.44
44:YY:95:LYS:HB2	44:YY:99:CYS:O	2.17	0.44
47:Y1:49:VAL:HG12	47:Y1:51:VAL:HG23	1.99	0.44
1:QA:391:G:C6	1:QA:392:G:C5	3.06	0.43
1:QA:557:G:H2'	1:QA:558:G:C8	2.52	0.43
1:QA:1058:G:H2'	1:QA:1059:C:O4'	2.18	0.43
2:QB:87:ARG:HH11	2:QB:223:ILE:HD11	1.83	0.43
2:QB:115:LEU:HD21	2:QB:153:ARG:HD3	1.99	0.43
7:QG:38:LEU:O	7:QG:42:ILE:HG13	2.17	0.43
10:QJ:54:PHE:CE2	10:QJ:55:LYS:HD2	2.52	0.43
15:QO:25:THR:HG22	15:QO:70:LEU:HD22	1.99	0.43
25:RA:16:G:H2'	25:RA:17:G:H8	1.82	0.43
25:RA:145:G:H2'	25:RA:146:G:H8	1.83	0.43
25:RA:222:A:H5''	25:RA:421:U:OP1	2.17	0.43
25:RA:259:G:H21	25:RA:621:A:H8	1.66	0.43
25:RA:312:G:H4'	25:RA:331:A:C2	2.52	0.43
25:RA:442:G:H1'	29:RF:48:THR:HG21	1.99	0.43
25:RA:512:G:O2'	25:RA:513:A:P	2.76	0.43
25:RA:593:G:O2'	54:R8:61:LEU:HD13	2.17	0.43
25:RA:612:G:C4	25:RA:613:U:O2	2.71	0.43
25:RA:776:G:C6	25:RA:793:A:C8	3.06	0.43
25:RA:846:C:N4	25:RA:931:G:H1	2.10	0.43
25:RA:1046:A:H3'	25:RA:1046:A:N3	2.33	0.43
25:RA:1306:C:O2	25:RA:1623:G:C2	2.71	0.43
25:RA:1441:G:H4'	25:RA:1627:G:O3'	2.18	0.43
25:RA:1592:C:H2'	25:RA:1593:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1638:C:H5'	25:RA:2710:C:O2'	2.18	0.43
25:RA:1676:A:N6	25:RA:1677:A:C6	2.86	0.43
25:RA:1678:G:N3	25:RA:1678:G:H2'	2.33	0.43
25:RA:1858:G:O2'	25:RA:1884:A:N6	2.51	0.43
25:RA:1900:A:N1	25:RA:1970:A:C6	2.86	0.43
25:RA:1975:G:C4	25:RA:1976:U:C6	3.05	0.43
25:RA:2292:C:H2'	25:RA:2293:C:C6	2.53	0.43
25:RA:2341:G:H2'	25:RA:2342:C:C6	2.53	0.43
25:RA:2704:C:H2'	25:RA:2705:A:O4'	2.18	0.43
25:RA:2737:G:C2	25:RA:2738:A:C4	3.06	0.43
27:RD:44:ASN:H	27:RD:44:ASN:ND2	1.97	0.43
27:RD:214:TRP:C	27:RD:216:GLY:H	2.26	0.43
28:RE:3:GLY:CA	28:RE:81:ILE:HG21	2.48	0.43
28:RE:13:ARG:HH11	28:RE:13:ARG:HB3	1.82	0.43
29:RF:24:LEU:HD12	29:RF:24:LEU:N	2.33	0.43
32:RI:60:GLU:HG3	32:RI:61:ARG:HH12	1.83	0.43
32:RI:129:THR:HA	32:RI:137:PRO:HA	2.00	0.43
33:RN:30:ILE:HG22	33:RN:34:LEU:CD2	2.48	0.43
33:RN:114:ARG:O	33:RN:115:ARG:CB	2.65	0.43
34:RO:97:ARG:HA	34:RO:117:LEU:HD22	2.00	0.43
35:RP:101:VAL:HG13	35:RP:102:ARG:N	2.33	0.43
36:RQ:20:ALA:C	36:RQ:21:THR:HG23	2.43	0.43
36:RQ:27:VAL:HG13	36:RQ:28:ALA:N	2.32	0.43
38:RS:38:GLN:CG	38:RS:47:THR:HG21	2.48	0.43
38:RS:86:ALA:O	38:RS:87:PHE:CB	2.65	0.43
39:RT:29:ARG:HA	39:RT:45:PHE:O	2.17	0.43
39:RT:99:LEU:CD1	39:RT:99:LEU:O	2.65	0.43
41:RV:25:LEU:H	41:RV:92:THR:CG2	2.28	0.43
43:RX:14:SER:HB2	43:RX:15:GLU:OE1	2.18	0.43
44:RY:15:VAL:HB	44:RY:20:TYR:O	2.17	0.43
50:R4:39:CYS:O	50:R4:40:HIS:CB	2.66	0.43
1:XA:143:A:H2	1:XA:220:G:H22	1.66	0.43
1:XA:161:A:C6	1:XA:162:A:C6	3.06	0.43
1:XA:280:C:N3	17:XQ:38:ARG:HG3	2.33	0.43
1:XA:313:A:H2'	1:XA:314:C:C6	2.53	0.43
1:XA:450:G:N7	1:XA:481:G:C6	2.85	0.43
1:XA:1054:C:C5	1:XA:1196:U:C5	3.05	0.43
1:XA:1286:A:H2'	1:XA:1287:A:H4'	2.00	0.43
2:XB:77:ALA:HB1	2:XB:165:VAL:HG11	2.00	0.43
2:XB:95:GLN:HE21	2:XB:147:LYS:CE	2.28	0.43
3:XC:59:ARG:HH12	3:XC:97:LYS:CD	2.31	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:154:GLY:O	5:XE:155:GLU:C	2.61	0.43
6:XF:27:GLN:HG2	6:XF:27:GLN:H	1.65	0.43
7:XG:69:VAL:O	7:XG:69:VAL:CG1	2.62	0.43
7:XG:96:GLN:O	7:XG:97:GLN:C	2.61	0.43
9:XI:10:ARG:NE	9:XI:105:ASP:CB	2.81	0.43
9:XI:29:ASN:OD1	9:XI:65:VAL:N	2.48	0.43
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
14:YN:17:LYS:HG3	14:YN:18:VAL:N	2.33	0.43
14:YN:51:GLY:C	14:YN:53:LEU:H	2.26	0.43
18:XR:82:THR:CG2	18:XR:83:GLU:N	2.79	0.43
25:YA:242:G:H5''	54:Y8:3:LYS:CE	2.39	0.43
25:YA:290:G:H2'	25:YA:291:C:H6	1.83	0.43
25:YA:389:G:H1	35:YP:71:VAL:HG12	1.83	0.43
25:YA:422:A:C6	25:YA:423:A:C5	3.06	0.43
25:YA:663:G:C5	25:YA:664:C:C5	3.06	0.43
25:YA:869:G:H2'	25:YA:870:A:C8	2.53	0.43
25:YA:1065:U:H5''	25:YA:1066:U:H6	1.82	0.43
25:YA:1308:A:H2'	25:YA:1309:G:O4'	2.18	0.43
25:YA:1360:A:C6	25:YA:1372:U:C4	3.06	0.43
25:YA:1567:A:H5'	27:YD:58:HIS:ND1	2.32	0.43
25:YA:1783:A:H5'	25:YA:2608:G:H4'	2.00	0.43
25:YA:2250:G:C4	36:YQ:82:ARG:HG3	2.53	0.43
25:YA:2405:G:HO2'	25:YA:2406:U:P	2.41	0.43
25:YA:2762:G:H2'	25:YA:2763:G:H5'	2.00	0.43
27:YD:44:ASN:HB2	27:YD:49:ILE:HA	1.93	0.43
29:YF:108:LYS:O	29:YF:109:GLY:C	2.61	0.43
29:YF:174:VAL:CG1	29:YF:174:VAL:O	2.65	0.43
30:YG:67:LYS:CE	50:Y4:6:HIS:NE2	2.74	0.43
34:YO:47:ILE:HG13	34:YO:48:PRO:HD2	1.99	0.43
34:YO:77:ILE:HG23	34:YO:77:ILE:O	2.17	0.43
35:YP:101:VAL:HA	35:YP:106:LEU:HB2	1.99	0.43
37:YR:33:ARG:HA	37:YR:114:VAL:O	2.18	0.43
38:YS:14:VAL:CG1	38:YS:15:ARG:N	2.81	0.43
39:YT:107:ASP:OD2	39:YT:109:GLU:HB2	2.18	0.43
41:YV:27:ALA:O	41:YV:28:GLU:C	2.61	0.43
42:YW:111:HIS:CG	42:YW:112:GLY:H	2.36	0.43
1:QA:443:C:C2	1:QA:492:G:N2	2.86	0.43
1:QA:444:C:H2'	1:QA:445:G:C8	2.53	0.43
1:QA:624:C:O3'	16:QP:10:GLY:HA2	2.18	0.43
4:QD:109:GLY:C	4:QD:111:ALA:N	2.76	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:7:GLU:HB3	5:QE:112:LEU:HD13	1.99	0.43
5:QE:94:ALA:HB2	5:QE:119:LEU:HG	2.00	0.43
7:QG:155:ARG:HD3	7:QG:155:ARG:H	1.83	0.43
8:QH:23:SER:HB3	8:QH:62:TYR:HA	2.00	0.43
9:QI:100:GLY:C	9:QI:102:LEU:H	2.26	0.43
10:QJ:8:LEU:C	10:QJ:16:LEU:HD21	2.44	0.43
11:QK:34:ASP:OD1	11:QK:38:ASN:HB2	2.18	0.43
11:QK:75:TYR:N	11:QK:75:TYR:CD1	2.86	0.43
13:QM:19:LEU:HD22	13:QM:19:LEU:N	2.33	0.43
17:QQ:82:MET:C	17:QQ:84:LEU:H	2.25	0.43
25:RA:479:A:N3	25:RA:481:G:H5''	2.33	0.43
25:RA:571:A:N1	25:RA:575:A:OP1	2.51	0.43
25:RA:780:G:H21	25:RA:783:A:N6	2.16	0.43
25:RA:888:C:HO2'	25:RA:889:C:H4'	1.83	0.43
25:RA:1337:G:C4	25:RA:1338:G:C8	3.06	0.43
25:RA:1442:G:O2'	25:RA:1443:G:H5'	2.18	0.43
25:RA:1557:C:H5''	25:RA:1558:A:OP2	2.19	0.43
25:RA:1627:G:N2	25:RA:1640:C:H1'	2.32	0.43
25:RA:2142:C:H2'	25:RA:2143:C:H6	1.82	0.43
25:RA:2154:G:H2'	25:RA:2155:G:H8	1.83	0.43
25:RA:2315:G:H2'	25:RA:2316:C:C6	2.53	0.43
25:RA:2353:G:H2'	25:RA:2354:G:O4'	2.17	0.43
25:RA:2419:U:H2'	25:RA:2420:C:H6	1.83	0.43
25:RA:2549:G:H5''	25:RA:2549:G:H8	1.83	0.43
25:RA:2591:C:OP1	27:RD:239:ARG:HG3	2.17	0.43
25:RA:2689:U:H4'	25:RA:2690:C:O5'	2.18	0.43
27:RD:102:LYS:O	27:RD:103:ARG:CG	2.66	0.43
27:RD:237:GLU:HB3	27:RD:238:GLY:H	1.49	0.43
29:RF:63:LYS:CE	29:RF:67:GLN:HB2	2.48	0.43
29:RF:149:ASP:OD2	29:RF:151:SER:HB3	2.17	0.43
30:RG:19:LEU:HA	30:RG:22:ARG:HB2	1.99	0.43
30:RG:139:LEU:HA	30:RG:144:ILE:HG21	2.00	0.43
32:RI:5:LEU:HA	32:RI:36:ALA:HA	1.99	0.43
32:RI:114:LEU:HD12	32:RI:129:THR:O	2.18	0.43
32:RI:118:LYS:HA	32:RI:119:PRO:HD3	1.82	0.43
32:RI:128:LEU:N	32:RI:138:ILE:O	2.47	0.43
33:RN:99:LEU:O	33:RN:100:GLU:C	2.60	0.43
33:RN:112:LEU:C	33:RN:114:ARG:O	2.60	0.43
34:RO:63:VAL:O	34:RO:63:VAL:HG23	2.18	0.43
37:RR:75:LEU:C	37:RR:75:LEU:CD1	2.91	0.43
42:RW:14:PRO:HB3	42:RW:18:ARG:HE	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:70:TYR:HD2	42:RW:70:TYR:N	2.06	0.43
43:RX:7:VAL:O	43:RX:30:VAL:CG1	2.66	0.43
44:RY:25:GLY:HA3	44:RY:39:VAL:CG1	2.47	0.43
47:R1:53:VAL:CG1	47:R1:54:ALA:N	2.81	0.43
50:R4:49:PHE:N	50:R4:49:PHE:HD1	2.16	0.43
54:R8:28:GLY:O	54:R8:29:LYS:C	2.61	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CG	2.66	0.43
54:R8:58:ILE:O	54:R8:61:LEU:CD1	2.67	0.43
1:XA:101:A:H8	1:XA:101:A:OP2	2.00	0.43
1:XA:501:C:OP1	12:XL:117:ARG:NH2	2.45	0.43
1:XA:690:G:N2	11:XK:55:LYS:HZ1	2.16	0.43
1:XA:1054:C:P	1:XA:1197:G:OP1	2.76	0.43
1:XA:1222:G:OP1	19:XS:77:THR:HG21	2.18	0.43
1:XA:1256:A:H2	1:XA:1277:C:C6	2.36	0.43
1:XA:1468:A:H8	1:XA:1468:A:O5'	2.01	0.43
2:XB:162:ILE:O	2:XB:185:ILE:HG13	2.18	0.43
2:XB:207:ALA:C	2:XB:209:ARG:N	2.76	0.43
3:XC:106:VAL:HG11	3:XC:109:PRO:HA	2.00	0.43
5:XE:31:LEU:HD23	5:XE:45:PHE:CD1	2.53	0.43
7:XG:62:PHE:O	7:XG:64:GLN:N	2.51	0.43
10:XJ:51:ARG:HG2	10:XJ:51:ARG:NH1	2.33	0.43
10:XJ:96:ILE:N	10:XJ:96:ILE:CD1	2.79	0.43
10:XJ:96:ILE:HD13	10:XJ:96:ILE:H	1.83	0.43
13:XM:39:ILE:HD12	13:XM:56:LEU:HD23	1.99	0.43
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
18:XR:20:ALA:O	18:XR:21:LYS:HG3	2.18	0.43
25:YA:181:A:C2	25:YA:182:A:C4	3.06	0.43
25:YA:307:G:H8	25:YA:307:G:O5'	2.01	0.43
25:YA:635:C:O2'	25:YA:639:U:OP1	2.35	0.43
25:YA:722:A:C2	25:YA:723:G:C4	3.06	0.43
25:YA:1310:G:OP2	53:Y7:9:ARG:NH1	2.51	0.43
25:YA:1326:U:O2'	25:YA:1327:C:H5'	2.18	0.43
25:YA:2060:A:N7	25:YA:2502:G:C2	2.86	0.43
25:YA:2114:A:H3'	25:YA:2114:A:N3	2.33	0.43
25:YA:2511:U:H2'	25:YA:2512:C:O4'	2.18	0.43
26:YB:40:U:C2	26:YB:43:C:OP2	2.71	0.43
27:YD:95:LEU:HD12	27:YD:95:LEU:O	2.17	0.43
27:YD:102:LYS:O	27:YD:103:ARG:CG	2.66	0.43
27:YD:213:ARG:HD2	27:YD:213:ARG:HA	1.60	0.43
30:YG:136:ARG:O	30:YG:137:GLU:C	2.61	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:YH:92:ILE:CD1	31:YH:160:LYS:HD3	2.48	0.43
31:YH:137:ASP:OD1	31:YH:138:LYS:N	2.51	0.43
35:YP:96:THR:HG22	35:YP:126:VAL:CB	2.46	0.43
36:YQ:80:GLU:C	36:YQ:81:VAL:CG1	2.88	0.43
38:YS:38:GLN:CG	38:YS:47:THR:HG21	2.48	0.43
39:YT:114:LEU:HA	39:YT:114:LEU:HD23	1.74	0.43
43:YX:3:THR:HA	43:YX:6:ASP:OD2	2.18	0.43
50:Y4:48:ARG:NH1	50:Y4:51:ASP:HA	2.34	0.43
50:Y4:59:PHE:CE1	50:Y4:70:GLY:N	2.87	0.43
53:Y7:19:ARG:HG2	53:Y7:19:ARG:NH1	2.33	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CD1	2.67	0.43
1:QA:191(E):G:H2'	1:QA:191(F):U:H6	1.81	0.43
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.57	0.43
1:QA:1247:U:H2'	1:QA:1248:A:O4'	2.18	0.43
1:QA:1472:U:N3	1:QA:1473:A:N7	2.65	0.43
2:QB:87:ARG:NH1	2:QB:223:ILE:HD12	2.33	0.43
3:QC:69:HIS:HA	3:QC:104:GLN:HB2	2.00	0.43
3:QC:106:VAL:HG11	3:QC:109:PRO:HA	2.00	0.43
5:QE:154:GLY:O	5:QE:155:GLU:C	2.61	0.43
7:QG:16:LEU:HD13	9:QI:45:ALA:HB2	1.99	0.43
10:QJ:100:THR:O	10:QJ:101:VAL:HB	2.17	0.43
13:QM: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
22:QV:4:G:C6	22:QV:70:G:N1	2.86	0.43
24:QY:39:C:H4'	24:QY:40:G:OP1	2.18	0.43
25:RA:27:G:O2'	25:RA:28:A:C8	2.68	0.43
25:RA:186:G:C2	25:RA:211:A:C2	3.06	0.43
25:RA:298:G:P	44:RY:85:VAL:HG22	2.58	0.43
25:RA:1056:G:N1	25:RA:1104:C:N4	2.67	0.43
25:RA:1197:G:N2	25:RA:1250:G:C5	2.87	0.43
25:RA:1485:G:H5''	25:RA:1485:G:C8	2.51	0.43
25:RA:1653:G:H4'	25:RA:1654:A:O5'	2.18	0.43
25:RA:1725:G:H5'	25:RA:1726:G:OP2	2.17	0.43
25:RA:1954:G:N2	25:RA:1956:U:H3	2.16	0.43
25:RA:2273:A:O2'	25:RA:2274:A:H5'	2.18	0.43
25:RA:2536:G:C5	25:RA:2537:U:C5	3.06	0.43
25:RA:2674:G:H2'	25:RA:2675:A:C8	2.53	0.43
27:RD:17:THR:HG22	27:RD:204:ILE:HA	1.97	0.43
28:RE:7:VAL:HG11	39:RT:1:MET:HE3	2.00	0.43
28:RE:16:ARG:O	28:RE:18:ASP:O	2.36	0.43
28:RE:31:CYS:HB3	28:RE:49:LEU:HG	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:RH:136:ILE:HD12	31:RH:136:ILE:N	2.31	0.43
31:RH:137:ASP:OD1	31:RH:138:LYS:N	2.51	0.43
35:RP:107:LYS:HB2	35:RP:110:TYR:HD2	1.83	0.43
36:RQ:62:GLY:O	45:RZ:178:GLU:HG2	2.18	0.43
37:RR:81:ASP:N	37:RR:81:ASP:OD2	2.50	0.43
38:RS:14:VAL:CG1	38:RS:15:ARG:N	2.81	0.43
38:RS:56:LEU:O	38:RS:57:LYS:O	2.36	0.43
38:RS:57:LYS:O	38:RS:58:LEU:HB3	2.18	0.43
41:RV:66:ARG:NH1	41:RV:88:ARG:CD	2.74	0.43
44:RY:6:HIS:ND1	44:RY:6:HIS:N	2.66	0.43
44:RY:48:ALA:CB	44:RY:61:ILE:HD13	2.45	0.43
47:R1:80:LEU:O	47:R1:81:LYS:CD	2.65	0.43
48:R2:27:GLU:H	48:R2:27:GLU:CD	2.17	0.43
52:R6:7:ILE:HG23	52:R6:8:LYS:N	2.32	0.43
52:R6:20:ASN:O	52:R6:21:TYR:CG	2.71	0.43
53:R7:5:TRP:CD1	53:R7:7:PRO:HG3	2.53	0.43
1:XA:411:A:C5	1:XA:413:G:N3	2.86	0.43
1:XA:661:G:H1	1:XA:744:C:H42	1.66	0.43
1:XA:927:G:OP2	1:XA:927:G:H4'	2.18	0.43
1:XA:1322:C:H5'	13:XM:100:GLY:HA2	1.99	0.43
2:XB:47:THR:HG22	2:XB:51:LEU:CG	2.48	0.43
2:XB:204:ASN:ND2	2:XB:204:ASN:C	2.76	0.43
3:XC:22:TRP:CB	3:XC:59:ARG:HB2	2.48	0.43
4:XD:71:SER:O	4:XD:72:GLU:C	2.60	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
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.36	0.43
12:XL:27:LEU:HD13	12:XL:28:LYS:H	1.84	0.43
17:XQ:13:ASP:O	17:XQ:15:MET:N	2.51	0.43
20:XT:32:ALA:O	20:XT:33:ILE:C	2.60	0.43
20:XT:59:ALA:C	20:XT:61:SER:N	2.75	0.43
22:XV:49:G:O6	22:XV:65:C:N4	2.49	0.43
22:XV:54:U:C4	22:XV:55:U:C4	3.06	0.43
25:YA:384:U:H2'	25:YA:385:C:H6	1.83	0.43
25:YA:629:G:H5'	25:YA:650:C:O2'	2.19	0.43
25:YA:695:G:C2	25:YA:696:G:C8	3.07	0.43
25:YA:1145:C:H2'	25:YA:1146:C:H6	1.84	0.43
25:YA:1176:G:OP1	25:YA:1176:G:H4'	2.19	0.43
25:YA:1341:U:H2'	25:YA:1397:U:O2	2.18	0.43
25:YA:1504:C:H5'	25:YA:1505:C:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1906:G:N2	25:YA:1925:C:O2	2.51	0.43
25:YA:2018:G:C6	25:YA:2019:A:C5	3.07	0.43
25:YA:2416:C:H2'	25:YA:2417:C:H6	1.83	0.43
25:YA:2502:G:H5''	25:YA:2503:A:H5''	2.00	0.43
25:YA:2869:G:H2'	25:YA:2870:C:C6	2.53	0.43
27:YD:35:LYS:HB3	27:YD:36:PRO:HA	2.01	0.43
27:YD:44:ASN:HB3	27:YD:49:ILE:CG2	2.47	0.43
27:YD:272:ALA:HB1	27:YD:273:ARG:H	1.58	0.43
28:YE:11:MET:O	28:YE:12:THR:HB	2.18	0.43
28:YE:25:VAL:HG21	39:YT:8:LYS:HG3	2.00	0.43
31:YH:35:VAL:CG2	31:YH:75:ALA:HB2	2.48	0.43
32:YI:5:LEU:HD12	32:YI:5:LEU:N	2.33	0.43
37:YR:75:LEU:C	37:YR:75:LEU:CD1	2.91	0.43
38:YS:99:LYS:C	38:YS:101:LEU:H	2.25	0.43
40:YU:90:VAL:C	40:YU:92:ARG:N	2.76	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:NH1	2.61	0.43
43:YX:14:SER:HB2	43:YX:15:GLU:OE1	2.18	0.43
44:YY:75:ILE:HG12	44:YY:76:CYS:H	1.79	0.43
47:Y1:60:PHE:HZ	47:Y1:90:ILE:HG21	1.82	0.43
47:Y1:82:LEU:HD12	47:Y1:82:LEU:O	2.10	0.43
52:Y6:11:LEU:HD12	52:Y6:51:GLU:HG3	2.00	0.43
52:Y6:20:ASN:O	52:Y6:21:TYR:CG	2.71	0.43
54:Y8:40:GLU:O	54:Y8:43:GLN:N	2.50	0.43
54:Y8:58:ILE:O	54:Y8:61:LEU:CG	2.66	0.43
55:Y9:1:MET:HE1	55:Y9:32:HIS:CD2	2.54	0.43
1:QA:35:G:N2	12:QL:118:SER:OG	2.51	0.43
1:QA:187:C:N4	1:QA:188:U:C2	2.85	0.43
1:QA:234:C:H2'	1:QA:235:C:C6	2.53	0.43
1:QA:620:C:C2	4:QD:135:LEU:HG	2.53	0.43
1:QA:818:G:C3'	1:QA:819:A:H5''	2.48	0.43
1:QA:1437:C:H2'	1:QA:1438:G:C8	2.54	0.43
2:QB:100:GLY:N	2:QB:176:GLU:OE2	2.52	0.43
2:QB:128:GLU:O	2:QB:129:GLU:C	2.61	0.43
3:QC:67:THR:O	3:QC:69:HIS:CE1	2.72	0.43
4:QD:132:ARG:HH11	4:QD:132:ARG:HG2	1.83	0.43
7:QG:15:ASP:OD1	7:QG:23:VAL:HG11	2.19	0.43
7:QG:23:VAL:C	7:QG:27:ILE:HD13	2.44	0.43
7:QG:78:ARG:HH11	7:QG:78:ARG:CG	2.31	0.43
9:QI:41:VAL:HG12	9:QI:41:VAL:O	2.18	0.43
16:QP:68:ASP:C	16:QP:70:ALA:N	2.75	0.43
19:QS:45:VAL:O	19:QS:62:ILE:O	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:51:VAL:HG12	19:QS:52:TYR:N	2.33	0.43
22:QV:12:G:N3	25:RA:1923:U:O2'	2.50	0.43
22:QV:15:G:N2	22:QV:48:C:H42	2.17	0.43
22:QV:74:C:N3	25:RA:2252:G:N2	2.61	0.43
25:RA:111:A:C2	25:RA:112:U:C2	3.06	0.43
25:RA:693:C:O2'	25:RA:1353:A:N3	2.46	0.43
25:RA:856:C:C6	25:RA:856:C:C3'	3.02	0.43
25:RA:1500:G:O2'	27:RD:100:GLY:O	2.28	0.43
25:RA:2016:U:H2'	25:RA:2017:U:O4'	2.18	0.43
25:RA:2133:G:H2'	25:RA:2157:G:N2	2.33	0.43
25:RA:2159:G:H2'	25:RA:2160:G:C8	2.54	0.43
26:RB:45:A:C2	26:RB:46:A:H1'	2.54	0.43
27:RD:227:ASN:CB	27:RD:228:PRO:CD	2.93	0.43
28:RE:36:ARG:HB3	28:RE:36:ARG:NH1	2.30	0.43
28:RE:52:LEU:O	28:RE:74:PRO:HA	2.18	0.43
29:RF:101:LEU:HD12	29:RF:102:PRO:N	2.33	0.43
29:RF:144:LYS:C	29:RF:146:ALA:N	2.75	0.43
29:RF:167:ALA:HB1	29:RF:173:VAL:HG11	1.99	0.43
35:RP:47:ASP:CG	35:RP:49:ARG:NH1	2.77	0.43
38:RS:110:LEU:HA	38:RS:112:PHE:CE1	2.53	0.43
39:RT:89:VAL:O	39:RT:90:GLN:HB2	2.19	0.43
39:RT:105:LEU:O	39:RT:105:LEU:HG	2.19	0.43
39:RT:114:LEU:HD23	39:RT:114:LEU:HA	1.74	0.43
40:RU:88:ILE:HG22	40:RU:90:VAL:CG2	2.44	0.43
44:RY:95:LYS:HA	44:RY:101:LYS:N	2.33	0.43
52:R6:15:GLU:HB3	52:R6:16:CYS:H	1.46	0.43
1:XA:638:G:H2'	1:XA:639:G:O4'	2.18	0.43
1:XA:853:G:O2'	1:XA:854:G:H5'	2.18	0.43
1:XA:920:U:H5''	1:XA:921:U:OP2	2.18	0.43
1:XA:1231:G:O3'	9:XI:126:SER:OG	2.36	0.43
1:XA:1365:G:H3'	1:XA:1365:G:OP2	2.19	0.43
2:XB:132:LYS:HA	2:XB:135:GLN:CB	2.43	0.43
3:XC:27:LYS:HB3	3:XC:27:LYS:NZ	2.34	0.43
3:XC:69:HIS:HA	3:XC:104:GLN:HB2	2.00	0.43
4:XD:128:VAL:C	4:XD:130:GLY:N	2.76	0.43
6:XF:73:ASN:O	6:XF:76:ALA:HB3	2.19	0.43
6:XF:91:VAL:CG1	18:XR:72:ARG:NH1	2.82	0.43
7:XG:75:VAL:HG13	7:XG:145:ALA:HA	2.00	0.43
9:XI:43:ALA:O	9:XI:45:ALA:N	2.51	0.43
9:XI:100:GLY:C	9:XI:102:LEU:H	2.26	0.43
12:XL:120:TYR:O	12:XL:121:GLY:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:XM:107:ALA:O	13:XM:108:ARG:C	2.62	0.43
20:XT:50:GLU:O	20:XT:52:ALA:N	2.51	0.43
25:YA:24:G:C4	25:YA:25:U:C6	3.06	0.43
25:YA:252:G:H21	25:YA:253:C:H1'	1.82	0.43
25:YA:552:G:H2'	25:YA:553:U:O4'	2.18	0.43
25:YA:683:C:H42	25:YA:794:G:H1	1.64	0.43
25:YA:1230:C:H2'	25:YA:1231:G:H8	1.83	0.43
25:YA:1445:C:C2	25:YA:1446:C:C5	3.07	0.43
25:YA:1454:U:O2	37:YR:64:ARG:NH1	2.41	0.43
25:YA:2259:G:H1'	25:YA:2427:C:C2	2.53	0.43
25:YA:2400:G:N3	25:YA:2400:G:H2'	2.33	0.43
25:YA:2637:U:C4	25:YA:2638:G:C6	3.07	0.43
25:YA:2667:C:H2'	25:YA:2668:G:O4'	2.19	0.43
26:YB:77:U:H4'	45:YZ:84:GLU:OE1	2.17	0.43
27:YD:172:TYR:HD1	27:YD:185:VAL:C	2.26	0.43
28:YE:3:GLY:CA	28:YE:81:ILE:HG21	2.49	0.43
28:YE:48:GLN:HE21	28:YE:48:GLN:HB3	1.55	0.43
30:YG:44:GLY:HA2	30:YG:88:ILE:HD11	2.00	0.43
30:YG:67:LYS:N	30:YG:67:LYS:HD2	2.33	0.43
33:YN:17:ASP:O	33:YN:55:VAL:O	2.34	0.43
33:YN:133:GLN:C	33:YN:134:ARG:HG2	2.41	0.43
34:YO:51:ALA:O	34:YO:53:LYS:HE3	2.18	0.43
34:YO:63:VAL:O	34:YO:63:VAL:HG23	2.17	0.43
35:YP:36:LYS:HZ3	35:YP:36:LYS:HG3	1.42	0.43
38:YS:110:LEU:HD23	38:YS:112:PHE:CE2	2.54	0.43
39:YT:89:VAL:O	39:YT:90:GLN:HB2	2.19	0.43
40:YU:99:ALA:HA	40:YU:106:PHE:HB2	2.01	0.43
41:YV:66:ARG:NH1	41:YV:88:ARG:CD	2.74	0.43
42:YW:17:VAL:C	42:YW:19:LEU:N	2.76	0.43
42:YW:29:LEU:HD11	42:YW:55:ALA:HB2	1.98	0.43
42:YW:50:VAL:O	42:YW:53:SER:N	2.50	0.43
46:Y0:74:ARG:HD3	46:Y0:74:ARG:O	2.18	0.43
48:Y2:59:ARG:O	48:Y2:62:THR:HG23	2.18	0.43
49:Y3:39:ASP:O	49:Y3:39:ASP:CG	2.62	0.43
50:Y4:26:SER:C	50:Y4:27:THR:O	2.58	0.43
1:QA:189:U:HO2'	1:QA:190:G:P	2.41	0.43
1:QA:901:A:H8	1:QA:901:A:O5'	2.01	0.43
1:QA:1208:C:H2'	1:QA:1209:C:H6	1.84	0.43
1:QA:1216:G:H2'	1:QA:1217:C:C6	2.53	0.43
1:QA:1240:U:C5	7:QG:32:ARG:HD2	2.54	0.43
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:71:SER:O	4:QD:72:GLU:C	2.60	0.43
6:QF:91:VAL:CG1	18:QR:72:ARG:NH1	2.81	0.43
7:QG:23:VAL:O	7:QG:24:THR:C	2.62	0.43
7:QG:23:VAL:O	7:QG:27:ILE:HD12	2.19	0.43
7:QG:88:PRO:HB3	7:QG:145:ALA:HA	2.01	0.43
10:QJ:90:LEU:N	10:QJ:91:PRO:CD	2.81	0.43
11:QK:105:VAL:O	11:QK:105:VAL:HG23	2.19	0.43
12:QL:27:LEU:HD13	12:QL:28:LYS:H	1.83	0.43
15:QO:64:ARG:CD	15:QO:68:ARG:NH2	2.82	0.43
15:QO:83:GLU:HA	15:QO:83:GLU:OE1	2.18	0.43
16:QP:72:ARG:HD3	16:QP:72:ARG:O	2.18	0.43
25:RA:571:A:C6	25:RA:575:A:H8	2.37	0.43
25:RA:728:G:H4'	27:RD:13:ARG:HD2	1.99	0.43
25:RA:832:G:P	35:RP:38:GLN:HB3	2.59	0.43
25:RA:846:C:O2'	25:RA:847:U:OP2	2.16	0.43
25:RA:864:G:N2	25:RA:913:U:C2	2.87	0.43
25:RA:1078:U:O2'	25:RA:1079:C:OP2	2.30	0.43
25:RA:1747:G:C2'	25:RA:1748:G:H5'	2.48	0.43
25:RA:1774:C:O5'	25:RA:1774:C:H6	2.00	0.43
25:RA:2114:A:H5''	25:RA:2117:A:O5'	2.18	0.43
25:RA:2163:C:OP1	25:RA:2172:U:H5''	2.19	0.43
25:RA:2400:G:N2	25:RA:2417:C:C2	2.86	0.43
25:RA:2417:C:H2'	25:RA:2418:A:C8	2.52	0.43
26:RB:28:C:OP2	38:RS:33:LYS:HE3	2.18	0.43
27:RD:206:LEU:HD23	27:RD:206:LEU:HA	1.49	0.43
28:RE:16:ARG:C	28:RE:17:ASP:CG	2.86	0.43
30:RG:59:GLU:O	30:RG:62:LEU:HB3	2.19	0.43
30:RG:125:PHE:C	30:RG:127:GLY:N	2.76	0.43
30:RG:131:TYR:HE2	30:RG:133:LEU:HD22	1.84	0.43
31:RH:92:ILE:CD1	31:RH:160:LYS:HD3	2.48	0.43
32:RI:109:ILE:HB	32:RI:130:TYR:OH	2.19	0.43
34:RO:51:ALA:O	34:RO:53:LYS:HE3	2.19	0.43
35:RP:81:GLN:HE21	35:RP:81:GLN:HB2	1.59	0.43
37:RR:54:LEU:O	37:RR:62:ALA:HB1	2.19	0.43
38:RS:99:LYS:C	38:RS:101:LEU:H	2.25	0.43
41:RV:15:GLU:O	41:RV:96:ILE:HB	2.19	0.43
42:RW:31:GLU:O	42:RW:32:ALA:C	2.60	0.43
43:RX:31:HIS:HA	43:RX:32:PRO:HD3	1.88	0.43
45:RZ:14:LYS:HA	45:RZ:15:PRO:HD3	1.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:486:U:C2	1:XA:487:A:C8	3.06	0.43
1:XA:590:C:H42	1:XA:649:G:H1	1.66	0.43
1:XA:1041:A:C6	1:XA:1042:G:C5	3.06	0.43
1:XA:1154:G:H2'	1:XA:1155:G:H8	1.84	0.43
1:XA:1370:G:O3'	9:XI:12:GLU:HG3	2.18	0.43
1:XA:1502:A:H2	1:XA:1505:G:N1	2.15	0.43
2:XB:29:ALA:O	2:XB:32:ILE:HG22	2.17	0.43
2:XB:115:LEU:HD21	2:XB:153:ARG:HD3	2.00	0.43
2:XB:127:ILE:HG23	2:XB:128:GLU:N	2.34	0.43
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
4:XD:120:LEU:HD23	4:XD:120:LEU:HA	1.83	0.43
4:XD:163:GLU:OE2	4:XD:163:GLU:HA	2.19	0.43
6:XF:85:VAL:HG12	6:XF:85:VAL:O	2.18	0.43
8:XH:45:ILE:C	8:XH:47:GLY:N	2.76	0.43
9:XI:41:VAL:HG12	9:XI:41:VAL:O	2.18	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
13:XM:87:TYR:HA	13:XM:90:LEU:HG	2.01	0.43
15:XO:83:GLU:HA	15:XO:83:GLU:OE1	2.19	0.43
18:XR:63:GLN:O	18:XR:66:LEU:HB3	2.18	0.43
18:XR:67:ALA:O	18:XR:68:LYS:C	2.62	0.43
19:XS:36:ARG:NH1	19:XS:52:TYR:O	2.51	0.43
25:YA:188:G:H1	25:YA:208:C:N4	2.11	0.43
25:YA:304:G:C2	25:YA:314:A:C2	3.07	0.43
25:YA:380:U:H2'	25:YA:381:G:C8	2.47	0.43
25:YA:448:U:H1'	29:YF:84:VAL:CG2	2.49	0.43
25:YA:1423:G:N3	25:YA:1424:G:C8	2.86	0.43
25:YA:1710:C:N3	25:YA:1749:A:C2	2.86	0.43
25:YA:1964:G:N2	25:YA:1967:C:C2	2.87	0.43
25:YA:2094:G:C2	25:YA:2095:C:C2	3.06	0.43
25:YA:2119:A:N1	25:YA:2170:A:N7	2.67	0.43
27:YD:43:ARG:CZ	27:YD:49:ILE:HG21	2.49	0.43
28:YE:3:GLY:HA3	28:YE:81:ILE:CD1	2.48	0.43
31:YH:27:LYS:HD2	31:YH:27:LYS:C	2.44	0.43
31:YH:149:ARG:HA	31:YH:162:ILE:HG21	1.99	0.43
37:YR:54:LEU:O	37:YR:62:ALA:HB1	2.19	0.43
47:Y1:94:LEU:O	47:Y1:95:LEU:HB2	2.17	0.43
51:Y5:15:ARG:HA	51:Y5:18:ALA:HB3	1.99	0.43
53:Y7:17:GLY:O	53:Y7:20:ALA:HB3	2.18	0.43
1:QA:417:C:O2'	1:QA:418:C:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:514:C:N3	1:QA:537:G:N1	2.58	0.43
1:QA:1215:G:C6	1:QA:1216:G:N7	2.87	0.43
2:QB:32:ILE:HD13	2:QB:190:THR:CG2	2.48	0.43
2:QB:54:THR:HG21	2:QB:201:ILE:HD11	2.00	0.43
2:QB:142:LEU:HD23	2:QB:142:LEU:O	2.19	0.43
2:QB:200:ILE:HD12	2:QB:200:ILE:N	2.34	0.43
3:QC:59:ARG:HH12	3:QC:97:LYS:CD	2.31	0.43
4:QD:163:GLU:OE2	4:QD:163:GLU:HA	2.19	0.43
5:QE:67:VAL:HG22	5:QE:68:GLU:N	2.33	0.43
6:QF:61:LEU:HD23	6:QF:63:TYR:OH	2.17	0.43
6:QF:88:VAL:HG12	6:QF:89:MET:N	2.34	0.43
7:QG:49:ILE:C	7:QG:51:GLN:H	2.27	0.43
9:QI:100:GLY:C	9:QI:102:LEU:N	2.72	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
11:QK:124:LYS:HB3	11:QK:125:PHE:H	1.67	0.43
12:QL:119:LYS:HB2	12:QL:120:TYR:HD1	1.83	0.43
13:QM:3:ARG:C	13:QM:9:ILE:HG21	2.43	0.43
15:QO:77:ARG:HA	15:QO:80:ALA:HB2	1.99	0.43
16:QP:21:VAL:HG23	16:QP:34:GLU:N	2.34	0.43
18:QR:29:PHE:N	18:QR:29:PHE:HD2	2.17	0.43
19:QS:8:GLY:O	19:QS:9:VAL:CG2	2.57	0.43
19:QS: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
22:QV:54:U:C4	22:QV:55:U:C4	3.06	0.43
25:RA:70:G:H4'	25:RA:71:A:OP1	2.18	0.43
25:RA:270(V):G:H2'	25:RA:270(W):G:H8	1.83	0.43
25:RA:464:U:H2'	25:RA:465:G:O4'	2.19	0.43
25:RA:572:A:C5	25:RA:573:G:C8	3.07	0.43
25:RA:620:G:H4'	25:RA:621:A:C5'	2.47	0.43
25:RA:1332:G:H8	25:RA:1332:G:H2'	1.70	0.43
25:RA:1434:A:N6	25:RA:1558:A:H62	1.95	0.43
25:RA:1718:G:C2	25:RA:1742:C:C2	3.07	0.43
25:RA:1853:A:C6	25:RA:1889:A:C5	3.05	0.43
25:RA:1929:G:H4'	25:RA:1930:G:OP1	2.19	0.43
25:RA:1995:U:C2	25:RA:1996:C:C5	3.07	0.43
25:RA:2329:G:H2'	25:RA:2330:G:C8	2.54	0.43
25:RA:2338:G:C2	25:RA:2339:G:N7	2.86	0.43
25:RA:2645:G:O5'	25:RA:2645:G:H8	2.01	0.43
25:RA:2847:U:C5	25:RA:2848:G:C6	3.06	0.43
27:RD:69:ARG:NH2	27:RD:130:ALA:HB2	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:RD:76:PRO:O	27:RD:98:VAL:CG2	2.65	0.43
27:RD:177:LEU:O	27:RD:179:SER:N	2.51	0.43
28:RE:120:TRP:CE3	28:RE:155:LYS:HD3	2.53	0.43
28:RE:143:ASN:N	28:RE:143:ASN:ND2	2.65	0.43
29:RF:62:ARG:NH1	29:RF:62:ARG:CB	2.82	0.43
34:RO:116:SER:C	34:RO:118:ALA:N	2.76	0.43
35:RP:12:ALA:C	35:RP:14:LYS:N	2.73	0.43
35:RP:135:LEU:HD13	35:RP:139:LYS:HE3	2.01	0.43
37:RR:85:PRO:C	37:RR:87:TYR:N	2.73	0.43
38:RS:110:LEU:HD23	38:RS:112:PHE:CE2	2.53	0.43
39:RT:6:LEU:HD12	39:RT:9:LEU:HD12	2.00	0.43
44:RY:26:LYS:O	44:RY:27:VAL:C	2.62	0.43
47:R1:44:PRO:O	47:R1:46:LEU:N	2.51	0.43
1:XA:908:A:H2'	1:XA:909:A:H8	1.81	0.43
1:XA:925:G:C2	1:XA:927:G:C8	3.06	0.43
1:XA:957:U:N3	1:XA:960:U:OP2	2.51	0.43
4:XD:122:ARG:HA	4:XD:134:ASP:HB2	2.00	0.43
7:XG:88:PRO:HB3	7:XG:145:ALA:HA	2.01	0.43
7:XG:122:HIS:HA	7:XG:125:MET:HB2	2.00	0.43
7:XG:148:ASN:O	7:XG:150:ALA:N	2.51	0.43
10:XJ:90:LEU:N	10:XJ:91:PRO:CD	2.82	0.43
13:XM:90:LEU:HD12	13:XM:91:ARG:N	2.33	0.43
15:XO:17:ARG:HD3	15:XO:26:GLU:HG3	2.01	0.43
15:XO:25:THR:O	15:XO:29:VAL:HG23	2.18	0.43
16:XP:39:TYR:CZ	16:XP:41:PRO:HB3	2.52	0.43
20:XT:44:ALA:HB1	20:XT:91:LEU:HB2	2.00	0.43
25:YA:231:C:C5	25:YA:232:G:C5	3.07	0.43
25:YA:704:G:O2'	25:YA:705:A:O5'	2.33	0.43
25:YA:856:C:H1'	46:Y0:27:GLU:CB	2.47	0.43
25:YA:950:G:C6	25:YA:951:C:C4	3.06	0.43
25:YA:1375:C:H2'	25:YA:1376:C:H6	1.83	0.43
25:YA:1524:G:C6	25:YA:1525:G:N7	2.86	0.43
25:YA:2090:G:H2'	25:YA:2091:U:O4'	2.19	0.43
25:YA:2375:G:H3'	25:YA:2375:G:C8	2.54	0.43
25:YA:2388:A:N7	25:YA:2389:G:C5	2.87	0.43
25:YA:2414:G:H21	35:YP:67:MET:CE	2.32	0.43
25:YA:2470:G:C5'	36:YQ:56:ARG:NH2	2.81	0.43
25:YA:2805:G:N2	25:YA:2807:G:C2	2.87	0.43
25:YA:2816:C:O3'	37:YR:99:LYS:NZ	2.51	0.43
28:YE:13:ARG:HH11	28:YE:13:ARG:HB2	1.81	0.43
28:YE:16:ARG:O	28:YE:18:ASP:O	2.36	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:51:PHE:O	28:YE:74:PRO:CB	2.67	0.43
28:YE:143:ASN:N	28:YE:143:ASN:ND2	2.65	0.43
29:YF:79:GLY:O	29:YF:80:ALA:C	2.61	0.43
30:YG:131:TYR:HE2	30:YG:133:LEU:HD22	1.83	0.43
31:YH:59:ARG:CG	31:YH:59:ARG:NH1	2.79	0.43
31:YH:136:ILE:HD12	31:YH:136:ILE:N	2.31	0.43
38:YS:88:ASP:CG	38:YS:89:ARG:N	2.77	0.43
39:YT:118:ARG:O	39:YT:119:LYS:C	2.60	0.43
44:YY:6:HIS:ND1	44:YY:6:HIS:N	2.66	0.43
47:Y1:44:PRO:O	47:Y1:46:LEU:N	2.51	0.43
50:Y4:43:TYR:O	50:Y4:46:GLN:HA	2.19	0.43
1:QA:321:A:N6	1:QA:329:A:OP2	2.52	0.43
1:QA:596:C:N4	1:QA:644:G:H1	2.16	0.43
1:QA:669:U:H2'	1:QA:670:G:O4'	2.17	0.43
1:QA:828:A:H5'	1:QA:870:U:O4	2.18	0.43
1:QA:874:G:H2'	1:QA:875:C:C6	2.52	0.43
1:QA:1224:G:O2'	1:QA:1322:C:OP2	2.33	0.43
1:QA:1346:A:C5	7:QG:10:ARG:NH1	2.87	0.43
2:QB:37:ASN:C	2:QB:39:ILE:N	2.73	0.43
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.83	0.43
4:QD:25:ARG:NH1	4:QD:30:LYS:CE	2.75	0.43
5:QE:56:GLN:C	5:QE:58:ALA:H	2.26	0.43
5:QE:78:HIS:HE1	5:QE:143:ARG:N	2.12	0.43
7:QG:122:HIS:HA	7:QG:125:MET:HB2	2.00	0.43
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
19:QS:21:GLU:HG3	19:QS:22:LEU:CD1	2.49	0.43
25:RA:26:G:C2	25:RA:27:G:N2	2.87	0.43
25:RA:220:G:H21	25:RA:429:A:N6	2.17	0.43
25:RA:588:U:H1'	29:RF:90:PHE:CD1	2.53	0.43
25:RA:847:U:OP2	25:RA:929:G:O6	2.36	0.43
25:RA:1022:G:O6	33:RN:66:LYS:HE2	2.18	0.43
25:RA:1027:A:C6	25:RA:1126:A:C5	3.06	0.43
25:RA:1068:G:O2'	25:RA:1096:A:N3	2.52	0.43
25:RA:1526:G:C6	25:RA:1527:G:C2	3.06	0.43
25:RA:2029:G:H2'	25:RA:2031:A:OP2	2.19	0.43
25:RA:2255:G:H21	46:R0:9:SER:HB3	1.83	0.43
25:RA:2642:G:C2	25:RA:2643:G:C4	3.07	0.43
25:RA:2653:U:O2'	31:RH:110:SER:HB2	2.19	0.43
26:RB:52:A:O2'	26:RB:53:A:N7	2.52	0.43
27:RD:44:ASN:CB	27:RD:49:ILE:HG22	2.46	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:188:VAL:HA	28:RE:189:PRO:HD2	1.79	0.43
29:RF:198:ALA:C	29:RF:200:GLU:H	2.25	0.43
30:RG:51:ARG:HB3	30:RG:51:ARG:NH1	2.33	0.43
33:RN:1:MET:HG3	33:RN:1:MET:O	2.19	0.43
35:RP:70:GLN:N	35:RP:70:GLN:OE1	2.51	0.43
36:RQ:83:MET:H	46:R0:7:LEU:CD1	2.32	0.43
40:RU:95:LEU:HD13	41:RV:4:ILE:HD12	1.98	0.43
53:R7:19:ARG:HG2	53:R7:19:ARG:NH1	2.33	0.43
55:R9:7:VAL:HG21	55:R9:36:GLN:HB2	2.00	0.43
1:XA:329:A:C5	1:XA:332:G:C6	3.07	0.43
1:XA:1324:A:C5	1:XA:1325:C:C5	3.07	0.43
1:XA:1486:G:H5''	1:XA:1487:G:OP2	2.18	0.43
2:XB:32:ILE:HD13	2:XB:190:THR:CG2	2.48	0.43
4:XD:90:GLY:O	4:XD:93:PHE:HB3	2.19	0.43
5:XE:64:ARG:HH11	5:XE:64:ARG:HG3	1.81	0.43
5:XE:67:VAL:HG22	5:XE:68:GLU:N	2.33	0.43
6:XF:48:LEU:HD23	6:XF:48:LEU:HA	1.85	0.43
8:XH:29:SER:O	8:XH:30:ARG:C	2.62	0.43
10:XJ:8:LEU:C	10:XJ:16:LEU:HD21	2.43	0.43
10:XJ:30:SER:OG	10:XJ:81:THR:HG22	2.19	0.43
12:XL:76:ASN:O	12:XL:76:ASN:CG	2.62	0.43
16:XP:21:VAL:HG23	16:XP:34:GLU:N	2.34	0.43
25:YA:124:G:N2	25:YA:126:A:O2'	2.51	0.43
25:YA:140:A:H1'	25:YA:1408:C:O2'	2.19	0.43
25:YA:273(E):U:H2'	25:YA:273(F):C:H6	1.83	0.43
25:YA:275:G:N2	25:YA:276:A:H62	2.17	0.43
25:YA:476:G:N2	25:YA:479:A:C8	2.86	0.43
25:YA:729:G:C4	25:YA:1775:U:C2	3.07	0.43
25:YA:735:A:H5''	25:YA:736:C:OP2	2.18	0.43
25:YA:1027:A:C6	25:YA:1126:A:C5	3.07	0.43
25:YA:1288:U:H4'	25:YA:1289:C:OP2	2.19	0.43
25:YA:1346:G:C5	25:YA:1347:G:N7	2.87	0.43
25:YA:1365:A:N6	25:YA:1366:A:C6	2.87	0.43
25:YA:1409:C:H2'	25:YA:1410:G:O4'	2.19	0.43
25:YA:2001:A:C2	25:YA:2002:G:C5	3.06	0.43
25:YA:2069:G:N2	25:YA:2070:G:C4	2.87	0.43
25:YA:2456:C:C4	25:YA:2457:U:C5	3.06	0.43
25:YA:2662:A:H2'	25:YA:2663:G:O4'	2.18	0.43
28:YE:155:LYS:O	28:YE:156:MET:HG3	2.19	0.43
30:YG:114:ILE:O	30:YG:116:ASP:N	2.51	0.43
30:YG:136:ARG:O	30:YG:154:GLY:CA	2.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:YG:139:LEU:C	30:YG:139:LEU:HD12	2.43	0.43
31:YH:120:GLY:O	31:YH:136:ILE:HD12	2.19	0.43
33:YN:26:LEU:HG	33:YN:30:ILE:CD1	2.49	0.43
33:YN:30:ILE:HG22	33:YN:34:LEU:CD2	2.48	0.43
33:YN:57:ALA:O	33:YN:124:ALA:HA	2.18	0.43
36:YQ:27:VAL:HG13	36:YQ:28:ALA:N	2.32	0.43
36:YQ:83:MET:H	46:Y0:7:LEU:CD2	2.25	0.43
37:YR:51:LEU:HD13	37:YR:66:VAL:HG22	2.01	0.43
37:YR:74:LYS:O	37:YR:76:VAL:N	2.45	0.43
38:YS:30:ARG:NH2	38:YS:92:TYR:HD1	2.17	0.43
39:YT:64:ARG:HH11	39:YT:64:ARG:HG2	1.84	0.43
40:YU:53:ARG:C	40:YU:55:ARG:N	2.77	0.43
43:YX:70:LEU:HD23	43:YX:70:LEU:H	1.77	0.43
44:YY:26:LYS:O	44:YY:27:VAL:C	2.62	0.43
44:YY:84:ARG:HD3	44:YY:86:ARG:HH11	1.83	0.43
48:Y2:62:THR:O	48:Y2:65:ASN:HB2	2.18	0.43
50:Y4:15:ILE:N	50:Y4:15:ILE:CD1	2.78	0.43
1:QA:7:G:H5'	1:QA:298:A:O4'	2.19	0.43
1:QA:59:A:C5	1:QA:354:G:C6	3.06	0.43
1:QA:392:G:OP2	16:QP:12:LYS:HG3	2.19	0.43
1:QA:454:C:N4	1:QA:479:C:N3	2.67	0.43
1:QA:515:G:C6	1:QA:516:U:C4	3.06	0.43
1:QA:652:U:HO2'	1:QA:653:A:P	2.42	0.43
1:QA:825:G:H2'	1:QA:826:C:O4'	2.18	0.43
1:QA:935:A:H1'	1:QA:1384:C:N3	2.33	0.43
1:QA:1069:C:H5''	5:QE:20:GLN:HE21	1.84	0.43
1:QA:1107:C:C4	1:QA:1108:G:C8	3.07	0.43
2:QB:77:ALA:HB1	2:QB:165:VAL:HG11	2.00	0.43
2:QB:95:GLN:HE21	2:QB:147:LYS:CE	2.28	0.43
2:QB:127:ILE:HG23	2:QB:128:GLU:N	2.34	0.43
4:QD:13:ARG:HB3	4:QD:33:MET:HE3	1.92	0.43
4:QD:89:THR:O	4:QD:90:GLY:C	2.60	0.43
4:QD:90:GLY:O	4:QD:93:PHE:HB3	2.19	0.43
6:QF:73:ASN:O	6:QF:76:ALA:HB3	2.19	0.43
7:QG:148:ASN:O	7:QG:150:ALA:N	2.51	0.43
9:QI:26:VAL:CG1	9:QI:63:ILE:HD13	2.49	0.43
11:QK:75:TYR:N	11:QK:75:TYR:HD1	2.17	0.43
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.19	0.43
14:QN:17:LYS:HG3	14:QN:18:VAL:N	2.33	0.43
18:QR:43:PHE:HA	18:QR:51:LEU:HD12	2.01	0.43
19:QS:44:MET:HE2	19:QS:49:ILE:HD11	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:144:C:H2'	25:RA:145:G:C8	2.54	0.43
25:RA:624:C:H2'	25:RA:625:G:H5'	2.01	0.43
25:RA:1069:A:H4'	25:RA:1070:A:H5''	2.01	0.43
25:RA:1285:G:H21	25:RA:1328:G:H5''	1.83	0.43
25:RA:1527:G:H5''	25:RA:1528:A:OP1	2.19	0.43
25:RA:2056:G:C2	25:RA:2057:A:C8	3.06	0.43
25:RA:2128:C:H2'	25:RA:2129:C:C6	2.53	0.43
25:RA:2422:A:N7	25:RA:2424:C:C5	2.87	0.43
25:RA:2516:G:C6	25:RA:2517:C:C4	3.07	0.43
25:RA:2572:A:C2	28:RE:144:ARG:NH2	2.87	0.43
26:RB:39:A:O2'	26:RB:46:A:N1	2.34	0.43
27:RD:44:ASN:HB3	27:RD:49:ILE:CG2	2.47	0.43
28:RE:51:PHE:O	28:RE:74:PRO:CB	2.67	0.43
31:RH:6:ARG:CG	31:RH:7:LEU:N	2.81	0.43
31:RH:35:VAL:CG2	31:RH:75:ALA:HB2	2.48	0.43
31:RH:119:GLU:CD	31:RH:120:GLY:N	2.77	0.43
33:RN:61:ARG:HA	33:RN:61:ARG:NE	2.33	0.43
33:RN:63:THR:HG23	33:RN:66:LYS:HE3	2.00	0.43
35:RP:19:VAL:HG22	35:RP:21:ARG:H	1.83	0.43
35:RP:112:LEU:CD1	35:RP:114:ILE:HG23	2.47	0.43
35:RP:120:ALA:HB1	35:RP:138:LEU:CB	2.49	0.43
37:RR:10:LEU:O	37:RR:12:ARG:N	2.52	0.43
38:RS:18:ILE:O	38:RS:19:LYS:C	2.62	0.43
39:RT:107:ASP:OD2	39:RT:109:GLU:HB2	2.18	0.43
42:RW:1:MET:CB	42:RW:64:MET:HE3	2.48	0.43
42:RW:19:LEU:O	42:RW:22:ASP:HB2	2.19	0.43
42:RW:111:HIS:CG	42:RW:112:GLY:H	2.37	0.43
50:R4:48:ARG:NH1	50:R4:51:ASP:HA	2.34	0.43
50:R4:68:ARG:O	50:R4:69:LYS:HB2	2.17	0.43
1:XA:881:G:H2'	1:XA:882:C:O4'	2.18	0.43
1:XA:967:C:O5'	1:XA:967:C:H6	2.02	0.43
1:XA:977:A:C8	1:XA:1223:C:C4	3.07	0.43
1:XA:1025:U:O2'	1:XA:1026:G:H8	2.02	0.43
1:XA:1311:G:N2	1:XA:1327:C:C2	2.87	0.43
1:XA:1439:C:C4	1:XA:1440:C:C5	3.07	0.43
1:XA:1440:C:H2'	1:XA:1441:G:O4'	2.18	0.43
2:XB:163:PHE:HD2	2:XB:163:PHE:HA	1.70	0.43
6:XF:45:LEU:CD1	6:XF:59:TYR:HD1	2.31	0.43
7:XG:49:ILE:C	7:XG:51:GLN:H	2.26	0.43
9:XI:17:VAL:HG21	9:XI:80:GLY:C	2.44	0.43
9:XI:26:VAL:CG1	9:XI:63:ILE:HD13	2.48	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
11:XK:75:TYR:N	11:XK:75:TYR:HD1	2.16	0.43
25:YA:120:U:O2	25:YA:120:U:O4'	2.37	0.43
25:YA:137(A):G:H1'	43:YX:41:ASN:HD22	1.84	0.43
25:YA:481:G:C4	25:YA:507:A:C2	3.07	0.43
25:YA:593:G:C6	25:YA:594:U:C4	3.06	0.43
25:YA:971:C:C4	25:YA:972:G:C4	3.06	0.43
25:YA:1199:U:H2'	25:YA:1200:C:C6	2.54	0.43
25:YA:1485:G:C2'	25:YA:1486:A:H5'	2.48	0.43
25:YA:1816:G:C8	27:YD:62:TYR:CE1	3.07	0.43
25:YA:1894:C:H2'	25:YA:1895:C:H6	1.84	0.43
25:YA:2277:G:H5''	36:YQ:85:LYS:HB2	2.00	0.43
25:YA:2492:U:O2'	25:YA:2493:U:H5'	2.19	0.43
25:YA:2584:U:H2'	25:YA:2585:U:C6	2.54	0.43
25:YA:2621:A:C6	25:YA:2622:C:C4	3.07	0.43
25:YA:2632:A:H2'	25:YA:2632:A:N3	2.34	0.43
25:YA:2675:A:N6	25:YA:2676:C:C4	2.87	0.43
27:YD:17:THR:HG22	27:YD:204:ILE:HA	1.98	0.43
30:YG:59:GLU:O	30:YG:62:LEU:HB3	2.18	0.43
30:YG:145:THR:O	30:YG:146:TYR:HB3	2.19	0.43
31:YH:119:GLU:CD	31:YH:120:GLY:N	2.77	0.43
32:YI:40:THR:O	32:YI:44:LEU:HB2	2.18	0.43
39:YT:19:LEU:HA	39:YT:20:PRO:HD3	1.88	0.43
41:YV:35:LEU:HD22	41:YV:35:LEU:N	2.23	0.43
44:YY:47:LYS:O	44:YY:49:VAL:N	2.48	0.43
46:Y0:57:PHE:HD2	46:Y0:57:PHE:N	2.17	0.43
47:Y1:29:GLY:O	47:Y1:31:GLY:N	2.49	0.43
51:Y5:40:LYS:HE2	51:Y5:47:PRO:CG	2.49	0.43
54:Y8:28:GLY:O	54:Y8:29:LYS:C	2.61	0.43
1:QA:49:U:H5	1:QA:365:U:O4	2.01	0.43
1:QA:132:C:H2'	1:QA:133:U:O4'	2.19	0.43
1:QA:596:C:H42	1:QA:644:G:H1	1.66	0.43
1:QA:701:C:O2'	1:QA:702:A:P	2.76	0.43
1:QA:973:G:O6	1:QA:974:A:N6	2.52	0.43
1:QA:1060:C:N4	1:QA:1198:G:O6	2.51	0.43
1:QA:1154:G:H2'	1:QA:1155:G:C8	2.41	0.43
1:QA:1307:U:O5'	1:QA:1307:U:H6	2.00	0.43
1:QA:1312:G:N7	19:QS:2:PRO:HD2	2.34	0.43
5:QE:48:ALA:HB2	5:QE:57:LYS:HD3	2.00	0.43
9:QI:29:ASN:OD1	9:QI:65:VAL:N	2.48	0.43
11:QK:44:SER:O	11:QK:48:ILE:HG12	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:76:ASN:O	12:QL:76:ASN:CG	2.61	0.43
13:QM:87:TYR:HA	13:QM:90:LEU:HG	2.01	0.43
17:QQ:77:VAL:O	17:QQ:78:GLU:HB2	2.18	0.43
25:RA:107:C:H2'	25:RA:108:U:C6	2.53	0.43
25:RA:482:A:O2'	25:RA:497:A:N1	2.45	0.43
25:RA:615:G:C8	29:RF:44:ARG:NH1	2.87	0.43
25:RA:715:G:C6	25:RA:716:A:C6	3.06	0.43
25:RA:1340:U:OP2	43:RX:78:LYS:NZ	2.50	0.43
25:RA:1590:U:C2	25:RA:1591:G:C8	3.06	0.43
25:RA:1666:G:N2	25:RA:1995:U:C2	2.86	0.43
25:RA:2087:G:C4	25:RA:2088:G:C8	3.06	0.43
25:RA:2128:C:C2'	25:RA:2129:C:H5'	2.49	0.43
25:RA:2168:G:H2'	25:RA:2168:G:N3	2.34	0.43
25:RA:2317:C:H2'	25:RA:2318:G:O4'	2.19	0.43
25:RA:2560:C:H2'	25:RA:2561:A:C8	2.54	0.43
25:RA:2578:G:O2'	25:RA:2579:C:H5'	2.18	0.43
25:RA:2728:U:O2'	25:RA:2729:G:H5'	2.18	0.43
27:RD:33:LEU:HB3	27:RD:34:VAL:H	1.49	0.43
29:RF:176:LEU:HD11	29:RF:180:GLY:O	2.19	0.43
32:RI:79:ILE:HD13	32:RI:79:ILE:HA	1.70	0.43
33:RN:7:LYS:HD2	33:RN:7:LYS:N	2.29	0.43
34:RO:17:ARG:HH11	34:RO:17:ARG:HG2	1.84	0.43
34:RO:61:VAL:O	34:RO:61:VAL:HG13	2.18	0.43
34:RO:112:MET:O	34:RO:113:LYS:C	2.60	0.43
35:RP:52:GLU:OE2	35:RP:58:THR:N	2.52	0.43
39:RT:64:ARG:HH11	39:RT:64:ARG:HG2	1.84	0.43
40:RU:91:ASP:O	40:RU:95:LEU:N	2.42	0.43
41:RV:27:ALA:O	41:RV:28:GLU:C	2.62	0.43
41:RV:36:PRO:HA	41:RV:56:SER:HG	1.84	0.43
46:R0:7:LEU:N	46:R0:7:LEU:HD23	2.34	0.43
50:R4:43:TYR:O	50:R4:46:GLN:HA	2.19	0.43
50:R4:59:PHE:CE1	50:R4:70:GLY:N	2.87	0.43
1:XA:32:A:H2'	1:XA:33:A:H8	1.81	0.43
1:XA:262:A:C6	1:XA:263:A:C6	3.06	0.43
1:XA:411:A:C5	1:XA:429:U:C5	3.07	0.43
1:XA:415:A:H2'	1:XA:416:G:H8	1.83	0.43
1:XA:422:C:OP2	1:XA:422:C:O4'	2.37	0.43
1:XA:524:G:C6	1:XA:525:C:N4	2.87	0.43
1:XA:530:G:H4'	1:XA:531:U:OP2	2.19	0.43
1:XA:554:C:H2'	1:XA:555:C:C6	2.54	0.43
1:XA:756:C:H2'	1:XA:757:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:935:A:O2'	1:XA:1383:C:N3	2.48	0.43
1:XA:1298:C:H4'	1:XA:1299:A:N9	2.33	0.43
2:XB:100:GLY:N	2:XB:176:GLU:OE2	2.51	0.43
2:XB:197:VAL:CG1	2:XB:198:ASP:N	2.82	0.43
3:XC:67:THR:O	3:XC:69:HIS:CE1	2.72	0.43
4:XD:59:ARG:NE	4:XD:59:ARG:HA	2.34	0.43
6:XF:3:ARG:HB3	6:XF:93:SER:CB	2.48	0.43
6:XF:76:ALA:HB1	6:XF:80:ARG:HH21	1.82	0.43
7:XG:23:VAL:O	7:XG:27:ILE:HD12	2.19	0.43
7:XG:79:ARG:HH12	7:XG:82:GLY:HA2	1.84	0.43
8:XH:64:LYS:CB	8:XH:79:VAL:HG21	2.48	0.43
8:XH:86:ILE:CB	8:XH:133:LEU:HD22	2.49	0.43
8:XH:118:VAL:O	8:XH:119:LEU:HD23	2.18	0.43
13:XM:54:VAL:O	13:XM:58:GLU:OE2	2.37	0.43
15:XO:71:GLN:HB2	15:XO:78:TYR:CE1	2.54	0.43
22:XV:53:G:HO2'	22:XV:54:U:H6	1.65	0.43
25:YA:118:A:N3	25:YA:178:G:H1'	2.34	0.43
25:YA:579:G:C8	25:YA:2017:U:C4	3.07	0.43
25:YA:607:U:N3	25:YA:621:A:C2	2.81	0.43
25:YA:951:C:H42	25:YA:966:G:H1	1.67	0.43
25:YA:1327:C:C4	25:YA:1328:G:C6	3.07	0.43
25:YA:1628:G:O2'	25:YA:1629:U:H5'	2.19	0.43
25:YA:2517:C:C4	25:YA:2542:A:C6	3.07	0.43
25:YA:2792:G:C5	25:YA:2805:G:N2	2.86	0.43
25:YA:2827:C:H6	25:YA:2827:C:O5'	2.01	0.43
27:YD:117:VAL:HG21	27:YD:128:GLY:C	2.44	0.43
28:YE:52:LEU:O	28:YE:74:PRO:HA	2.19	0.43
31:YH:125:VAL:CG1	31:YH:126:PRO:CG	2.94	0.43
32:YI:96:ASP:OD2	32:YI:96:ASP:N	2.49	0.43
39:YT:89:VAL:O	39:YT:90:GLN:CB	2.67	0.43
40:YU:43:GLY:HA3	41:YV:73:SER:OG	2.19	0.43
49:Y3:27:GLY:C	49:Y3:28:LEU:HD23	2.43	0.43
49:Y3:50:VAL:HB	49:Y3:53:LEU:HD12	2.00	0.43
1:QA:9:G:C6	1:QA:26:A:N6	2.87	0.43
1:QA:303:A:H2'	1:QA:304:U:O4'	2.18	0.43
1:QA:377:G:P	16:QP:5:ARG:NH1	2.91	0.43
1:QA:683:G:C6	1:QA:684:A:C6	3.07	0.43
1:QA:1272:G:H2'	1:QA:1273:G:O4'	2.19	0.43
2:QB:68:ILE:HB	2:QB:70:PHE:HE1	1.82	0.43
2:QB:162:ILE:O	2:QB:185:ILE:HG13	2.18	0.43
2:QB:178:ARG:NH2	8:QH:74:PRO:CB	2.70	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:76:VAL:CG2	3:QC:103:VAL:HG11	2.49	0.43
3:QC:188:LEU:HD12	3:QC:195:VAL:CG1	2.48	0.43
4:QD:52:SER:O	4:QD:55:ALA:N	2.52	0.43
5:QE:105:VAL:HB	5:QE:106:PRO:CD	2.49	0.43
6:QF:27:GLN:HG2	6:QF:27:GLN:H	1.65	0.43
6:QF:85:VAL:HG12	6:QF:85:VAL:O	2.18	0.43
7:QG:79:ARG:HH12	7:QG:82:GLY:HA2	1.84	0.43
8:QH:64:LYS:CB	8:QH:79:VAL:HG21	2.49	0.43
13:QM:77:ASN:O	13:QM:78:ILE:C	2.62	0.43
17:QQ:22:LEU:HD13	17:QQ:41:LYS:HG2	2.01	0.43
19:QS:30:LEU:C	19:QS:30:LEU:HD22	2.44	0.43
19:QS:41:VAL:CG1	19:QS:45:VAL:H	2.31	0.43
22:QV:43:A:H2'	22:QV:44:A:C8	2.54	0.43
25:RA:273(A):G:C2	25:RA:273(B):C:C2	3.07	0.43
25:RA:316:C:H6	25:RA:316:C:H5''	1.84	0.43
25:RA:448:U:O4	25:RA:583:G:H1'	2.18	0.43
25:RA:535:C:H1'	25:RA:559:G:N2	2.34	0.43
25:RA:1006:C:H2'	25:RA:1007:C:C6	2.54	0.43
25:RA:1026:U:H1'	25:RA:1027:A:O5'	2.19	0.43
25:RA:1286:A:HO2'	25:RA:1288:U:P	2.34	0.43
25:RA:1341:U:H4'	25:RA:1342:A:OP2	2.19	0.43
25:RA:1640:C:H5'	25:RA:1641:A:OP2	2.19	0.43
25:RA:1728:G:C6	25:RA:1730:U:OP2	2.72	0.43
25:RA:1933:G:C2	25:RA:1934:C:C2	3.07	0.43
25:RA:2094:G:C6	25:RA:2095:C:C4	3.07	0.43
25:RA:2104:G:H1	25:RA:2185:C:H42	1.67	0.43
25:RA:2340:G:O2'	25:RA:2341:G:H5'	2.19	0.43
25:RA:2370:G:H21	52:R6:45:LYS:CE	2.32	0.43
25:RA:2539:C:C5'	55:R9:3:VAL:HG21	2.49	0.43
27:RD:17:THR:HG21	27:RD:204:ILE:HA	1.99	0.43
28:RE:25:VAL:HG21	39:RT:8:LYS:HG3	2.00	0.43
29:RF:65:TRP:HZ3	29:RF:73:ALA:C	2.26	0.43
30:RG:25:TYR:CZ	30:RG:32:PRO:HD3	2.54	0.43
30:RG:114:ILE:O	30:RG:116:ASP:N	2.51	0.43
32:RI:37:VAL:CG1	32:RI:38:LEU:HD12	2.49	0.43
38:RS:52:SER:HB2	38:RS:55:ALA:CB	2.49	0.43
40:RU:27:LEU:O	40:RU:28:ARG:C	2.60	0.43
40:RU:53:ARG:C	40:RU:55:ARG:N	2.77	0.43
40:RU:90:VAL:C	40:RU:92:ARG:N	2.76	0.43
41:RV:44:LYS:HB3	41:RV:45:THR:H	1.56	0.43
41:RV:72:VAL:HG13	41:RV:72:VAL:O	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:28:SER:O	42:RW:30:GLU:N	2.50	0.43
45:RZ:1:MET:HG2	45:RZ:2:GLU:N	2.34	0.43
45:RZ:5:LEU:O	45:RZ:6:LYS:HB2	2.19	0.43
45:RZ:158:PRO:HG2	45:RZ:161:VAL:HG21	2.01	0.43
47:R1:13:ILE:CG1	47:R1:42:GLN:HB2	2.49	0.43
47:R1:60:PHE:HE2	47:R1:91:LYS:NZ	2.16	0.43
48:R2:62:THR:O	48:R2:65:ASN:HB2	2.19	0.43
50:R4:22:ILE:CG2	50:R4:23:GLU:N	2.81	0.43
52:R6:50:ARG:HH11	52:R6:50:ARG:HG2	1.84	0.43
53:R7:17:GLY:O	53:R7:20:ALA:HB3	2.19	0.43
54:R8:28:GLY:O	54:R8:29:LYS:O	2.36	0.43
55:R9:1:MET:HE2	55:R9:10:ILE:CD1	2.49	0.43
1:XA:398:C:O5'	1:XA:398:C:H6	2.02	0.43
1:XA:684:A:H2'	1:XA:685:G:C8	2.54	0.43
1:XA:748:C:OP2	1:XA:748:C:H6	2.02	0.43
1:XA:764:C:H3'	1:XA:765:G:H8	1.83	0.43
1:XA:842:C:H5'	1:XA:843:U:OP1	2.19	0.43
1:XA:892:A:C6	1:XA:893:C:C4	3.06	0.43
1:XA:1222:G:P	19:XS:77:THR:HG21	2.58	0.43
1:XA:1226:C:H42	13:XM:104:ARG:HD2	1.84	0.43
1:XA:1352:C:N4	1:XA:1370:G:H1	2.17	0.43
1:XA:1357:A:N6	1:XA:1358:U:O4	2.52	0.43
2:XB:87:ARG:NH1	2:XB:223:ILE:HD12	2.33	0.43
3:XC:149:ALA:O	3:XC:169:ALA:CA	2.67	0.43
4:XD:72:GLU:O	4:XD:73:ARG:C	2.61	0.43
5:XE:147:ASP:N	5:XE:147:ASP:OD2	2.50	0.43
7:XG:79:ARG:NH1	7:XG:82:GLY:HA2	2.34	0.43
11:XK:34:ASP:OD1	11:XK:38:ASN:HB2	2.18	0.43
11:XK:72:ALA:C	11:XK:74:ALA:H	2.27	0.43
14:XN:44:LEU:CD1	14:XN:48:ALA:HB2	2.47	0.43
15:XO:8:LYS:NZ	15:XO:31:LEU:HD11	2.34	0.43
15:XO:10:LYS:O	15:XO:14:GLU:HB2	2.18	0.43
19:XS:51:VAL:HG12	19:XS:52:TYR:N	2.33	0.43
20:XT:96:GLY:O	20:XT:99:LEU:CD1	2.67	0.43
25:YA:99:U:H4'	25:YA:101:G:H5''	2.00	0.43
25:YA:180:G:H5''	25:YA:181:A:P	2.59	0.43
25:YA:389:G:C6	35:YP:70:GLN:HB3	2.54	0.43
25:YA:426:C:O2'	25:YA:427:U:H5'	2.18	0.43
25:YA:653:A:HO2'	25:YA:654:A:P	2.40	0.43
25:YA:910:A:H2'	25:YA:2264:C:O2'	2.19	0.43
25:YA:993:G:OP1	40:YU:50:ARG:CZ	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1459:G:C2'	25:YA:1460:A:H5'	2.48	0.43
25:YA:2014:A:O2'	51:Y5:2:ALA:HB2	2.19	0.43
25:YA:2443:C:O2'	25:YA:2444:G:H5'	2.18	0.43
26:YB:15:A:H1'	26:YB:109:G:C8	2.53	0.43
28:YE:23:VAL:HG12	28:YE:184:VAL:O	2.19	0.43
29:YF:45:ARG:HH11	29:YF:45:ARG:HG2	1.82	0.43
31:YH:58:GLU:O	31:YH:59:ARG:C	2.61	0.43
31:YH:125:VAL:HG12	31:YH:126:PRO:CD	2.49	0.43
35:YP:101:VAL:HG13	35:YP:102:ARG:N	2.33	0.43
35:YP:144:GLU:N	35:YP:144:GLU:CD	2.75	0.43
36:YQ:57:HIS:ND1	36:YQ:58:PHE:N	2.66	0.43
37:YR:94:TYR:N	37:YR:94:TYR:CD2	2.87	0.43
40:YU:98:LEU:C	40:YU:100:VAL:N	2.77	0.43
45:YZ:112:ARG:C	45:YZ:114:GLY:N	2.76	0.43
48:Y2:4:SER:OG	48:Y2:5:GLU:OE2	2.26	0.43
51:Y5:40:LYS:HZ1	51:Y5:48:GLU:CB	2.21	0.43
53:Y7:5:TRP:CD1	53:Y7:7:PRO:HG3	2.53	0.43
1:QA:265:G:H5'	17:QQ:64:PRO:O	2.19	0.42
1:QA:451:A:N6	1:QA:481:G:C4	2.87	0.42
1:QA:728:A:C5	15:QO:54:ARG:HD2	2.53	0.42
1:QA:766:A:H2'	1:QA:767:A:O4'	2.19	0.42
1:QA:877:C:H5''	8:QH:88:LYS:HD3	2.00	0.42
1:QA:937:A:H1'	1:QA:1379:G:N2	2.33	0.42
2:QB:95:GLN:HB3	2:QB:148:TYR:HD1	1.84	0.42
4:QD:13:ARG:HA	4:QD:33:MET:CE	2.44	0.42
7:QG:111:ARG:HH11	7:QG:111:ARG:CB	2.23	0.42
8:QH:20:TYR:CD1	8:QH:65:TYR:HD2	2.35	0.42
9:QI:17:VAL:HG21	9:QI:80:GLY:C	2.43	0.42
15:QO:8:LYS:NZ	15:QO:31:LEU:HD11	2.34	0.42
19:QS:29:ARG:HH11	19:QS:29:ARG:HG2	1.84	0.42
25:RA:28:A:C4	25:RA:513:A:C8	3.07	0.42
25:RA:234:C:H2'	25:RA:235:U:O4'	2.19	0.42
25:RA:291:C:H2'	25:RA:292:C:C6	2.53	0.42
25:RA:532:A:N7	25:RA:2021:C:H2'	2.34	0.42
25:RA:784:A:O2'	25:RA:785:G:H5''	2.19	0.42
25:RA:945:A:C6	25:RA:2448:A:C5	3.07	0.42
25:RA:1743:G:C2	25:RA:1746:G:C8	3.07	0.42
25:RA:1924:C:H2'	25:RA:1925:C:O4'	2.18	0.42
25:RA:2538:C:C2	25:RA:2539:C:C5	3.07	0.42
25:RA:2562:U:C2'	25:RA:2563:U:H5'	2.49	0.42
25:RA:2650:U:H2'	25:RA:2651:C:H6	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2752:C:H5'	25:RA:2753:A:OP2	2.19	0.42
26:RB:15:A:H1'	26:RB:109:G:C8	2.54	0.42
27:RD:33:LEU:O	27:RD:35:LYS:N	2.52	0.42
27:RD:71:ASP:CB	27:RD:103:ARG:HH22	2.32	0.42
27:RD:134:ARG:H	27:RD:134:ARG:HG3	1.55	0.42
28:RE:23:VAL:HG12	28:RE:184:VAL:O	2.19	0.42
29:RF:20:LEU:HD12	29:RF:21:ALA:N	2.26	0.42
29:RF:64:ILE:HG23	29:RF:65:TRP:CD1	2.54	0.42
30:RG:4:ASP:O	30:RG:5:VAL:HB	2.19	0.42
30:RG:31:VAL:O	30:RG:31:VAL:HG13	2.18	0.42
32:RI:78:THR:OG1	32:RI:104:GLN:NE2	2.52	0.42
33:RN:30:ILE:HG22	33:RN:34:LEU:HD21	2.01	0.42
34:RO:112:MET:HE2	34:RO:112:MET:N	2.34	0.42
38:RS:110:LEU:HA	38:RS:112:PHE:CZ	2.53	0.42
39:RT:80:SER:HA	39:RT:81:PRO:HD3	1.73	0.42
40:RU:64:ARG:CG	40:RU:64:ARG:NH2	2.70	0.42
40:RU:98:LEU:O	40:RU:102:GLU:N	2.49	0.42
44:RY:94:LYS:HE3	44:RY:101:LYS:HZ1	1.80	0.42
45:RZ:121:HIS:CE1	45:RZ:169:GLU:HG2	2.54	0.42
46:R0:47:PRO:HB2	46:R0:51:VAL:O	2.19	0.42
49:R3:27:GLY:C	49:R3:28:LEU:HD23	2.44	0.42
52:R6:19:ARG:HA	52:R6:19:ARG:HD2	1.76	0.42
53:R7:47:ARG:HB2	53:R7:48:LYS:H	1.64	0.42
55:R9:1:MET:HE1	55:R9:32:HIS:CD2	2.53	0.42
1:XA:273:A:N6	1:XA:274:A:N6	2.67	0.42
1:XA:428:G:H4'	1:XA:429:U:OP1	2.18	0.42
1:XA:439:A:OP2	1:XA:493:G:N2	2.52	0.42
1:XA:523:A:H61	12:XL:92:ASP:HB2	1.83	0.42
1:XA:978:A:O2'	1:XA:1322:C:N3	2.42	0.42
1:XA:1028:C:C4	1:XA:1034:G:C2	3.07	0.42
2:XB:69:LEU:HD12	2:XB:91:PRO:O	2.19	0.42
2:XB:130:ARG:NH2	2:XB:138:LEU:HD21	2.34	0.42
2:XB:178:ARG:HH22	8:XH:68:ARG:HH22	1.66	0.42
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
5:XE:105:VAL:HB	5:XE:106:PRO:CD	2.49	0.42
5:XE:126:ARG:CG	5:XE:126:ARG:NH1	2.79	0.42
10:XJ:10:GLY:O	10:XJ:68:HIS:N	2.51	0.42
11:XK:44:SER:O	11:XK:48:ILE:HG12	2.18	0.42
11:XK:105:VAL:O	11:XK:105:VAL:HG23	2.19	0.42
19:XS:12:ASP:CG	19:XS:37:ARG:HD2	2.43	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:XS:29:ARG:HH11	19:XS:29:ARG:HG2	1.84	0.42
22:XV:4:G:C6	22:XV:70:G:N1	2.86	0.42
25:YA:103:A:H5''	25:YA:104:U:OP2	2.18	0.42
25:YA:322:A:H3'	25:YA:323:G:H5'	1.99	0.42
25:YA:669:G:N1	25:YA:801:G:O6	2.52	0.42
25:YA:942:G:O2'	25:YA:1189:A:H2'	2.18	0.42
25:YA:1053:C:N3	25:YA:1106:G:N2	2.59	0.42
25:YA:1244:G:C2	25:YA:1245:G:C8	3.07	0.42
25:YA:1798:U:C4	25:YA:1819:A:C2	3.07	0.42
25:YA:1852:C:H5''	25:YA:1853:A:OP1	2.18	0.42
25:YA:1954:G:N3	25:YA:2551:C:H5''	2.34	0.42
25:YA:2027:G:H8	25:YA:2027:G:H5''	1.84	0.42
26:YB:61:G:N1	26:YB:62:C:C4	2.87	0.42
27:YD:11:PRO:O	27:YD:12:SER:OG	2.29	0.42
27:YD:108:PRO:HG2	27:YD:111:LEU:HB2	2.01	0.42
27:YD:181:GLU:HA	27:YD:272:ALA:CB	2.39	0.42
30:YG:16:ARG:NE	30:YG:31:VAL:HG11	2.34	0.42
30:YG:25:TYR:CZ	30:YG:32:PRO:HD3	2.54	0.42
30:YG:139:LEU:HA	30:YG:144:ILE:HG21	2.00	0.42
32:YI:9:LEU:HD11	32:YI:12:LEU:HD23	2.01	0.42
33:YN:62:VAL:HG12	33:YN:66:LYS:HB2	2.01	0.42
34:YO:78:ARG:HH21	39:YT:103:ARG:HH22	1.64	0.42
35:YP:26:GLY:C	35:YP:28:GLY:H	2.26	0.42
36:YQ:25:ASP:H	36:YQ:102:VAL:HG23	1.84	0.42
37:YR:81:ASP:N	37:YR:81:ASP:OD2	2.51	0.42
42:YW:65:LEU:CD1	42:YW:68:ARG:NH1	2.75	0.42
44:YY:97:ARG:HH21	44:YY:98:VAL:CG2	2.32	0.42
45:YZ:72:ARG:NH2	45:YZ:97:GLU:HB2	2.34	0.42
47:Y1:53:VAL:CG1	47:Y1:54:ALA:N	2.81	0.42
49:Y3:46:ASN:O	49:Y3:50:VAL:HG22	2.19	0.42
50:Y4:45:GLY:O	50:Y4:46:GLN:C	2.62	0.42
52:Y6:50:ARG:HH11	52:Y6:50:ARG:HG2	1.84	0.42
1:QA:148:G:N2	1:QA:149:A:C4	2.87	0.42
1:QA:451:A:N7	1:QA:481:G:C2	2.87	0.42
1:QA:575:G:N1	1:QA:821:G:N7	2.67	0.42
1:QA:756:C:H2'	1:QA:757:U:O4'	2.19	0.42
1:QA:1063:C:C6	1:QA:1064:G:C8	3.07	0.42
1:QA:1178:G:H2'	1:QA:1180:A:OP2	2.20	0.42
1:QA:1216:G:N2	1:QA:1217:C:C2	2.87	0.42
1:QA:1286:A:C8	1:QA:1287:A:H4'	2.54	0.42
1:QA:1324:A:C5	1:QA:1325:C:C5	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1396:A:H4'	1:QA:1397:C:C5'	2.48	0.42
2:QB:188:ALA:CB	2:QB:200:ILE:HG23	2.47	0.42
2:QB:211:ILE:O	2:QB:215:LEU:HB2	2.19	0.42
5:QE:75:THR:CG2	5:QE:76:ILE:N	2.80	0.42
6:QF:22:GLU:OE1	6:QF:82:ARG:NH2	2.46	0.42
6:QF:69:GLU:C	6:QF:71:ARG:N	2.77	0.42
7:QG:6:ARG:O	7:QG:7:ALA:C	2.62	0.42
7:QG:79:ARG:NH1	7:QG:82:GLY:HA2	2.34	0.42
7:QG:126:ASP:N	7:QG:126:ASP:OD2	2.53	0.42
8:QH:91:ARG:HH11	8:QH:91:ARG:CG	2.23	0.42
10:QJ:30:SER:OG	10:QJ:81:THR:HG22	2.19	0.42
13:QM:54:VAL:O	13:QM:58:GLU:OE2	2.37	0.42
14:QN:24:CYS:SG	14:QN:39:LEU:C	3.02	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
18:QR:73:ALA:HB3	18:QR:79:LEU:CD1	2.47	0.42
19:QS:29:ARG:HD3	19:QS:30:LEU:H	1.83	0.42
19:QS:62:ILE:HG22	19:QS:63:THR:N	2.34	0.42
19:QS:66:MET:O	19:QS:66:MET:HG3	2.19	0.42
20:QT:96:GLY:O	20:QT:99:LEU:CD1	2.67	0.42
22:QV:11:A:H4'	25:RA:1909:C:O2'	2.19	0.42
25:RA:110:G:C2	25:RA:111:A:C8	3.07	0.42
25:RA:270(O):U:H5''	25:RA:270(P):C:OP2	2.19	0.42
25:RA:418:G:C2'	25:RA:419:C:H5'	2.48	0.42
25:RA:833:U:C4	25:RA:834:C:N4	2.87	0.42
25:RA:994:C:H3'	40:RU:54:LYS:HE3	2.00	0.42
25:RA:1487:G:C4	25:RA:1488:G:C8	3.06	0.42
25:RA:1927:A:H2'	25:RA:1928:A:C8	2.55	0.42
25:RA:2050:C:C4	25:RA:2051:A:C6	3.07	0.42
25:RA:2198:A:O2'	25:RA:2199:A:O5'	2.31	0.42
25:RA:2210:G:C3'	25:RA:2211:G:H8	2.26	0.42
25:RA:2410:G:H2'	25:RA:2411:A:O4'	2.20	0.42
25:RA:2891:G:H8	25:RA:2891:G:OP2	2.02	0.42
27:RD:117:VAL:HG21	27:RD:128:GLY:C	2.44	0.42
28:RE:3:GLY:HA3	28:RE:81:ILE:CD1	2.47	0.42
28:RE:76:ARG:C	28:RE:78:LEU:N	2.76	0.42
29:RF:105:VAL:O	29:RF:106:ARG:C	2.63	0.42
31:RH:16:SER:OG	31:RH:17:VAL:N	2.50	0.42
31:RH:26:VAL:CG1	31:RH:33:LEU:HB2	2.49	0.42
33:RN:10:GLU:OE2	33:RN:11:PRO:CD	2.67	0.42
35:RP:119:GLU:OE1	35:RP:119:GLU:HA	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RQ:81:VAL:HG23	46:R0:7:LEU:HD11	2.00	0.42
37:RR:51:LEU:HD13	37:RR:66:VAL:HG22	2.01	0.42
39:RT:50:ILE:HD11	39:RT:102:ILE:HG12	2.01	0.42
40:RU:79:PHE:CD2	40:RU:83:LEU:HD13	2.54	0.42
40:RU:81:HIS:O	40:RU:82:GLY:C	2.61	0.42
41:RV:44:LYS:C	41:RV:46:VAL:N	2.77	0.42
42:RW:88:ARG:CB	42:RW:92:ARG:HB3	2.47	0.42
45:RZ:27:VAL:HG12	45:RZ:87:ASP:HB3	2.00	0.42
49:R3:39:ASP:O	49:R3:39:ASP:CG	2.62	0.42
50:R4:35:VAL:C	50:R4:37:SER:N	2.77	0.42
51:R5:3:LYS:HA	51:R5:3:LYS:CE	2.36	0.42
1:XA:162:A:N7	1:XA:163:C:H1'	2.35	0.42
1:XA:380:G:N2	1:XA:384:G:C6	2.87	0.42
1:XA:451:A:H4'	1:XA:452:A:O4'	2.20	0.42
1:XA:456:C:C2	1:XA:477:G:N2	2.87	0.42
1:XA:658:G:H2'	1:XA:659:U:H6	1.84	0.42
1:XA:1299:A:H2'	1:XA:1301:U:H1'	2.01	0.42
1:XA:1370:G:O2'	1:XA:1371:G:H5'	2.19	0.42
1:XA:1446:A:N3	39:YT:118:ARG:HD2	2.34	0.42
1:XA:1461:G:H2'	1:XA:1462:G:H8	1.81	0.42
2:XB:17:PHE:CG	2:XB:44:LEU:HD11	2.53	0.42
2:XB:142:LEU:O	2:XB:145:LEU:HB2	2.19	0.42
2:XB:163:PHE:CD2	2:XB:185:ILE:HD12	2.54	0.42
4:XD:88:VAL:O	4:XD:89:THR:C	2.62	0.42
9:XI:25:LYS:O	9:XI:60:ASP:OD1	2.37	0.42
10:XJ:74:ILE:H	10:XJ:74:ILE:CD1	2.21	0.42
11:XK:62:GLN:O	11:XK:64:ALA:N	2.52	0.42
14:YN:48:ALA:HA	14:YN:53:LEU:HD12	2.01	0.42
16:XP:20:VAL:CG2	16:XP:21:VAL:N	2.82	0.42
16:XP:23:ASP:O	16:XP:26:ARG:HB2	2.18	0.42
19:XS:21:GLU:HG3	19:XS:22:LEU:CD1	2.49	0.42
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
20:XT:13:LEU:CD1	20:XT:17:ARG:NH1	2.82	0.42
25:YA:270(T):G:OP1	47:Y1:97:LEU:HD22	2.19	0.42
25:YA:426:C:C2'	25:YA:427:U:H5'	2.48	0.42
25:YA:451:C:H4'	29:YF:52:LYS:HZ1	1.80	0.42
25:YA:559:G:N2	40:YU:49:HIS:CE1	2.81	0.42
25:YA:685:A:C8	25:YA:774:A:C6	3.07	0.42
25:YA:696:G:O2'	25:YA:697:C:H5'	2.18	0.42
25:YA:1026:U:O2	25:YA:1027:A:H3'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1071:G:H8	25:YA:1071:G:O5'	2.02	0.42
25:YA:1350:C:N3	25:YA:1382:G:N2	2.66	0.42
25:YA:1510:A:H2'	25:YA:1510:A:N3	2.34	0.42
25:YA:1530:G:C6	25:YA:1531:C:C4	3.07	0.42
25:YA:1592:C:H2'	25:YA:1593:G:H8	1.84	0.42
25:YA:1761:C:H42	25:YA:1762:A:N6	2.13	0.42
25:YA:1786:A:H4'	25:YA:1787:A:OP2	2.18	0.42
25:YA:1952:A:OP1	34:YO:44:LYS:NZ	2.39	0.42
25:YA:2086:U:H2'	25:YA:2087:G:H8	1.75	0.42
25:YA:2600:A:H62	27:YD:237:GLU:HG2	1.83	0.42
27:YD:155:LEU:HD23	27:YD:177:LEU:HD21	2.00	0.42
28:YE:197:ILE:CD1	28:YE:199:ARG:HH12	2.26	0.42
30:YG:7:LEU:CD2	30:YG:176:LEU:HD22	2.45	0.42
30:YG:31:VAL:O	30:YG:31:VAL:HG13	2.18	0.42
30:YG:53:LEU:C	30:YG:55:LYS:H	2.27	0.42
30:YG:77:ILE:H	30:YG:82:LEU:HB2	1.84	0.42
33:YN:43:THR:HA	33:YN:44:PRO:HD2	1.92	0.42
35:YP:52:GLU:OE2	35:YP:58:THR:N	2.52	0.42
35:YP:119:GLU:HA	35:YP:119:GLU:OE1	2.18	0.42
35:YP:120:ALA:HB1	35:YP:138:LEU:CB	2.49	0.42
38:YS:42:ASP:C	38:YS:44:LYS:N	2.72	0.42
38:YS:64:GLU:O	38:YS:68:GLN:HG3	2.19	0.42
41:YV:38:LEU:CD2	41:YV:39:LEU:N	2.82	0.42
42:YW:19:LEU:O	42:YW:22:ASP:HB2	2.19	0.42
46:Y0:66:VAL:O	46:Y0:81:VAL:HA	2.19	0.42
47:Y1:8:SER:CB	47:Y1:66:HIS:CE1	3.01	0.42
47:Y1:13:ILE:CG1	47:Y1:42:GLN:HB2	2.49	0.42
47:Y1:56:GLN:HB2	47:Y1:57:GLU:H	1.47	0.42
47:Y1:72:GLU:O	47:Y1:75:GLU:HB2	2.19	0.42
48:Y2:48:HIS:C	48:Y2:50:ILE:N	2.76	0.42
53:Y7:47:ARG:HB2	53:Y7:48:LYS:H	1.64	0.42
1:QA:408:A:C6	1:QA:409:G:C5	3.07	0.42
1:QA:614:A:OP1	4:QD:85:LYS:NZ	2.52	0.42
1:QA:728:A:C6	1:QA:729:A:N6	2.88	0.42
1:QA:1065:U:O2'	1:QA:1066:C:OP2	2.28	0.42
2:QB:99:GLY:O	2:QB:108:ILE:HD11	2.20	0.42
3:QC:83:ARG:O	3:QC:86:VAL:HG22	2.19	0.42
4:QD:22:LYS:CD	4:QD:26:CYS:SG	3.05	0.42
5:QE:71:LEU:HD11	5:QE:113:ALA:O	2.20	0.42
6:QF:23:LYS:HG2	6:QF:27:GLN:OE1	2.18	0.42
7:QG:75:VAL:HG13	7:QG:145:ALA:HA	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:58:MET:O	15:QO:59:MET:C	2.61	0.42
21:QU:2:GLY:C	21:QU:4:GLY:N	2.77	0.42
25:RA:299:A:N3	25:RA:319:C:O2'	2.41	0.42
25:RA:345:A:H5''	25:RA:346:A:OP1	2.19	0.42
25:RA:459:U:OP1	53:R7:39:ARG:HA	2.19	0.42
25:RA:817:C:H3'	25:RA:818:G:H8	1.84	0.42
25:RA:867:C:C4	25:RA:868:U:C4	3.08	0.42
25:RA:1021:A:N6	25:RA:1141:U:H3	2.07	0.42
25:RA:1285:G:H22	25:RA:1329:U:P	2.38	0.42
25:RA:1568:G:H1'	27:RD:58:HIS:HE1	1.83	0.42
25:RA:1779:U:C6	25:RA:1783:A:C5	3.07	0.42
25:RA:1889:A:C6	25:RA:1890:A:C6	3.07	0.42
25:RA:1899:G:O4'	25:RA:1901:A:C8	2.73	0.42
25:RA:2053:G:O6	25:RA:2614:A:H2	2.03	0.42
25:RA:2128:C:H2'	25:RA:2129:C:H6	1.85	0.42
25:RA:2207:C:O2'	27:RD:151:LYS:NZ	2.41	0.42
25:RA:2261:C:C2	25:RA:2280:G:N2	2.87	0.42
25:RA:2289:G:N2	25:RA:2344:U:C2	2.86	0.42
25:RA:2839:G:N2	37:RR:92:GLY:HA3	2.33	0.42
26:RB:43:C:C4	26:RB:45:A:C6	3.07	0.42
27:RD:108:PRO:HG2	27:RD:111:LEU:HB2	2.01	0.42
28:RE:48:GLN:HE21	28:RE:48:GLN:HB3	1.55	0.42
29:RF:135:LYS:O	29:RF:136:THR:C	2.61	0.42
30:RG:41:GLN:NE2	30:RG:154:GLY:O	2.52	0.42
30:RG:83:ARG:CB	30:RG:86:MET:HE3	2.49	0.42
30:RG:83:ARG:CG	30:RG:86:MET:HE3	2.49	0.42
33:RN:26:LEU:HG	33:RN:30:ILE:CD1	2.49	0.42
34:RO:2:ILE:N	34:RO:2:ILE:CD1	2.82	0.42
34:RO:31:LYS:O	34:RO:32:TYR:HD2	2.02	0.42
35:RP:49:ARG:HG2	35:RP:49:ARG:HH11	1.84	0.42
35:RP:114:ILE:CD1	35:RP:130:PHE:CE1	2.98	0.42
40:RU:27:LEU:O	40:RU:30:LYS:N	2.41	0.42
44:RY:42:VAL:HG11	44:RY:65:ALA:HB3	2.02	0.42
45:RZ:24:LEU:HD12	45:RZ:25:PRO:N	2.35	0.42
45:RZ:150:LEU:HD21	45:RZ:172:ALA:HB3	2.01	0.42
46:R0:58:THR:C	46:R0:59:LEU:HD23	2.45	0.42
47:R1:29:GLY:C	47:R1:31:GLY:H	2.26	0.42
50:R4:2:LYS:HD2	50:R4:2:LYS:HA	1.61	0.42
51:R5:35:GLU:O	51:R5:36:CYS:C	2.63	0.42
52:R6:7:ILE:O	52:R6:8:LYS:CG	2.68	0.42
1:XA:777:A:H2'	1:XA:778:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1015:A:N3	1:XA:1218:C:O2'	2.49	0.42
1:XA:1124:G:H3'	1:XA:1145:C:H41	1.84	0.42
1:XA:1129:C:C4'	1:XA:1130:A:H5'	2.45	0.42
1:XA:1277:C:O2'	1:XA:1279:A:H1'	2.19	0.42
1:XA:1306:A:H2'	1:XA:1307:U:C6	2.53	0.42
1:XA:1342:C:O2'	9:XI:124:GLN:HA	2.19	0.42
2:XB:221:LEU:HD13	2:XB:221:LEU:C	2.42	0.42
3:XC:83:ARG:O	3:XC:86:VAL:HG22	2.19	0.42
5:XE:56:GLN:C	5:XE:58:ALA:N	2.78	0.42
9:XI:8:GLY:CA	9:XI:79:LEU:HD12	2.49	0.42
9:XI:88:TYR:O	9:XI:89:ASN:HB2	2.20	0.42
13:XM:3:ARG:HD2	13:XM:9:ILE:CG1	2.45	0.42
17:XQ:13:ASP:C	17:XQ:15:MET:N	2.77	0.42
17:XQ:77:VAL:O	17:XQ:78:GLU:HB2	2.18	0.42
18:XR:21:LYS:O	18:XR:22:VAL:C	2.63	0.42
19:XS:30:LEU:C	19:XS:30:LEU:HD22	2.44	0.42
20:XT:81:LYS:C	20:XT:83:ARG:H	2.27	0.42
25:YA:154:G:H2'	25:YA:155:C:O4'	2.18	0.42
25:YA:568:U:O2'	25:YA:570:G:N7	2.41	0.42
25:YA:1429:G:N3	25:YA:1430:C:C6	2.87	0.42
25:YA:1901:A:H2'	25:YA:1901:A:N3	2.33	0.42
25:YA:1964:G:H4'	25:YA:1965:C:OP2	2.20	0.42
25:YA:2061:G:H5''	25:YA:2503:A:C2	2.54	0.42
25:YA:2312:U:H6	25:YA:2312:U:H3'	1.84	0.42
25:YA:2357:U:OP1	46:Y0:20:ARG:NE	2.52	0.42
25:YA:2489:G:O6	25:YA:2490:G:O6	2.37	0.42
25:YA:2758:A:C6	25:YA:2759:G:C8	3.07	0.42
25:YA:2863:C:O2'	25:YA:2864:G:H5'	2.19	0.42
28:YE:70:ALA:O	28:YE:71:GLY:C	2.62	0.42
29:YF:63:LYS:CE	29:YF:67:GLN:HB2	2.49	0.42
30:YG:83:ARG:CB	30:YG:86:MET:HE3	2.49	0.42
30:YG:83:ARG:CG	30:YG:86:MET:HE3	2.50	0.42
30:YG:121:ASN:HA	30:YG:181:ARG:NH2	2.34	0.42
37:YR:10:LEU:O	37:YR:12:ARG:N	2.52	0.42
40:YU:91:ASP:OD2	40:YU:96:ALA:HB2	2.19	0.42
45:YZ:96:VAL:O	45:YZ:127:LYS:HA	2.18	0.42
45:YZ:128:VAL:HG22	45:YZ:129:SER:H	1.85	0.42
47:Y1:60:PHE:HE2	47:Y1:91:LYS:HZ1	1.65	0.42
54:Y8:28:GLY:O	54:Y8:29:LYS:O	2.36	0.42
54:Y8:53:PRO:HD2	54:Y8:54:GLU:H	1.84	0.42
1:QA:949:A:C1'	1:QA:1364:U:H3	2.22	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1046:A:N3	1:QA:1046:A:H2'	2.34	0.42
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.55	0.42
1:QA:1156:G:H2'	1:QA:1157:A:H5''	2.01	0.42
1:QA:1353:G:C2	1:QA:1370:G:C2	3.07	0.42
2:QB:16:HIS:CD2	2:QB:213:LEU:HD13	2.54	0.42
2:QB:69:LEU:HD12	2:QB:91:PRO:O	2.19	0.42
3:QC:149:ALA:O	3:QC:169:ALA:CA	2.67	0.42
4:QD:59:ARG:HA	4:QD:59:ARG:NE	2.35	0.42
4:QD:127:THR:HG23	4:QD:130:GLY:O	2.20	0.42
9:QI:71:SER:O	9:QI:74:ILE:N	2.52	0.42
9:QI:128:ARG:CD	22:QV:32:C:OP2	2.66	0.42
10:QJ:49:VAL:HG13	10:QJ:50:ILE:N	2.35	0.42
13:QM:4:ILE:CG2	13:QM:5:ALA:H	2.29	0.42
20:QT:14:LYS:O	20:QT:15:ARG:C	2.62	0.42
20:QT:81:LYS:C	20:QT:83:ARG:H	2.27	0.42
20:QT:96:GLY:O	20:QT:97:ALA:CB	2.64	0.42
22:QV:1:C:O2'	22:QV:2:G:H5'	2.19	0.42
25:RA:686:G:O6	53:R7:12:ARG:NH1	2.51	0.42
25:RA:727:A:C2	27:RD:9:TYR:CD2	3.07	0.42
25:RA:822:U:H5	25:RA:944:G:H1'	1.84	0.42
25:RA:859:G:O2'	25:RA:860:U:O5'	2.37	0.42
25:RA:948:G:C2	25:RA:970:C:O2	2.71	0.42
25:RA:977:G:H2'	25:RA:978:G:H8	1.84	0.42
25:RA:1003:G:N2	25:RA:1153:C:C2	2.87	0.42
25:RA:1069:A:H2'	25:RA:1073:A:N7	2.34	0.42
25:RA:1161:C:O2'	41:RV:8:GLY:HA2	2.19	0.42
25:RA:1416:G:H2'	25:RA:1417:C:C5	2.54	0.42
25:RA:1494:A:C6	25:RA:1495:A:C6	3.06	0.42
25:RA:1507:A:N6	25:RA:1508:A:N7	2.67	0.42
25:RA:2756:U:OP2	55:R9:19:ARG:NE	2.53	0.42
25:RA:2795:G:H3'	25:RA:2797:U:H5'	2.01	0.42
27:RD:14:ARG:CG	27:RD:15:PHE:N	2.83	0.42
28:RE:24:THR:HB	28:RE:184:VAL:HG23	2.01	0.42
28:RE:155:LYS:O	28:RE:156:MET:HG3	2.19	0.42
29:RF:63:LYS:HE2	29:RF:67:GLN:HB2	2.00	0.42
30:RG:27:ASN:HB3	30:RG:30:GLU:OE2	2.20	0.42
30:RG:55:LYS:O	30:RG:59:GLU:HB2	2.19	0.42
30:RG:139:LEU:C	30:RG:139:LEU:HD12	2.43	0.42
31:RH:58:GLU:O	31:RH:60:ARG:N	2.53	0.42
31:RH:89:ILE:CD1	31:RH:89:ILE:H	2.32	0.42
35:RP:26:GLY:C	35:RP:28:GLY:H	2.27	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RR:29:LEU:HD11	37:RR:48:VAL:CG1	2.50	0.42
40:RU:92:ARG:NH2	41:RV:11:GLN:O	2.53	0.42
42:RW:8:ARG:HG3	42:RW:8:ARG:NH1	2.34	0.42
49:R3:46:ASN:O	49:R3:50:VAL:HG22	2.19	0.42
51:R5:20:ARG:HA	51:R5:23:HIS:CE1	2.54	0.42
1:XA:67:C:O2'	1:XA:171:A:N3	2.39	0.42
1:XA:130:A:O2'	1:XA:263:A:O2'	2.36	0.42
1:XA:139:G:N2	1:XA:225:C:C2	2.87	0.42
1:XA:176:C:O2'	1:XA:1451:A:N1	2.51	0.42
1:XA:295:C:H2'	1:XA:296:U:C6	2.49	0.42
1:XA:363:A:C4	12:XL:31:PRO:HD2	2.54	0.42
1:XA:409:G:H2'	1:XA:410:G:C8	2.54	0.42
1:XA:1287:A:N6	1:XA:1288:A:N6	2.67	0.42
2:XB:44:LEU:H	2:XB:44:LEU:CD1	2.26	0.42
2:XB:142:LEU:HD23	2:XB:142:LEU:O	2.18	0.42
4:XD:10:ARG:HG3	4:XD:10:ARG:NH1	2.33	0.42
4:XD:36:ARG:HA	4:XD:37:PRO:HD2	1.82	0.42
4:XD:206:PHE:CD2	4:XD:207:TYR:HD1	2.37	0.42
6:XF:36:ARG:CZ	6:XF:38:GLU:HG2	2.50	0.42
7:XG:11:GLN:HG3	7:XG:12:LEU:H	1.84	0.42
7:XG:89:MET:CE	7:XG:156:TRP:H	2.22	0.42
8:XH:20:TYR:CD1	8:XH:65:TYR:HD2	2.35	0.42
9:XI:128:ARG:HD3	22:XV:32:C:OP2	2.19	0.42
12:XL:47:LYS:C	12:XL:49:ASN:N	2.78	0.42
12:XL:119:LYS:HB2	12:XL:120:TYR:HD1	1.83	0.42
16:XP:83:GLU:HG3	16:XP:84:ALA:N	2.33	0.42
19:XS:18:LYS:O	19:XS:18:LYS:HD2	2.19	0.42
24:XY:39:C:H4'	24:XY:40:G:OP1	2.18	0.42
25:YA:8:A:H5''	33:YN:51:PHE:CZ	2.54	0.42
25:YA:77:C:C4	25:YA:78:A:N7	2.88	0.42
25:YA:237:C:O2'	25:YA:238:C:H5'	2.18	0.42
25:YA:428:A:N6	25:YA:429:A:C6	2.88	0.42
25:YA:644:A:C6	25:YA:646:A:C6	3.07	0.42
25:YA:980:A:N6	25:YA:981:A:N1	2.67	0.42
25:YA:1364:G:C8	47:Y1:2:SER:N	2.87	0.42
25:YA:1422:G:C6	25:YA:1423:G:C5	3.07	0.42
25:YA:1931:U:C6	25:YA:1932:A:C8	3.07	0.42
25:YA:2090:G:C2	25:YA:2230:G:C5	3.07	0.42
25:YA:2282:G:H4'	25:YA:2389:G:O2'	2.19	0.42
25:YA:2283:C:C5	25:YA:2389:G:H2'	2.55	0.42
25:YA:2306:C:N4	30:YG:42:GLY:O	2.51	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2372:G:H4'	52:Y6:46:HIS:CD2	2.54	0.42
25:YA:2492:U:C2	25:YA:2493:U:C5	3.07	0.42
25:YA:2498:C:OP2	25:YA:2499:C:OP2	2.37	0.42
25:YA:2529:G:O6	55:Y9:31:LYS:NZ	2.53	0.42
25:YA:2689:U:OP1	25:YA:2719:G:N1	2.42	0.42
25:YA:2785:C:O2'	28:YE:64:LYS:HD3	2.20	0.42
26:YB:16:G:H2'	26:YB:17:C:C6	2.54	0.42
27:YD:33:LEU:O	27:YD:35:LYS:N	2.52	0.42
28:YE:36:ARG:HH11	28:YE:36:ARG:CB	2.28	0.42
28:YE:104:VAL:CG1	28:YE:188:VAL:HG23	2.49	0.42
28:YE:179:GLU:CB	28:YE:181:LEU:HD23	2.24	0.42
29:YF:135:LYS:O	29:YF:136:THR:C	2.62	0.42
30:YG:110:ALA:O	30:YG:111:LEU:C	2.62	0.42
30:YG:114:ILE:HG22	30:YG:117:PHE:HB2	2.01	0.42
34:YO:1:MET:HG2	34:YO:67:LYS:HG2	2.01	0.42
35:YP:26:GLY:C	35:YP:28:GLY:N	2.78	0.42
36:YQ:20:ALA:C	36:YQ:21:THR:HG23	2.43	0.42
36:YQ:20:ALA:HA	36:YQ:98:LYS:HB3	2.02	0.42
39:YT:110:ILE:CG2	39:YT:111:ARG:N	2.82	0.42
40:YU:113:ALA:C	40:YU:115:ALA:H	2.27	0.42
44:YY:60:PHE:CD2	44:YY:60:PHE:N	2.87	0.42
47:Y1:66:HIS:C	47:Y1:68:PRO:CD	2.92	0.42
48:Y2:27:GLU:N	48:Y2:27:GLU:CD	2.77	0.42
53:Y7:12:ARG:HH21	53:Y7:44:PRO:HB3	1.85	0.42
1:QA:185:A:C2	1:QA:193:C:C2	3.07	0.42
1:QA:189:U:O2'	1:QA:190:G:OP1	2.37	0.42
1:QA:521:G:O2'	1:QA:522:C:H5'	2.20	0.42
1:QA:730:G:H5''	1:QA:731:G:OP2	2.19	0.42
1:QA:754:C:H5'	15:QO:72:ARG:HH22	1.84	0.42
1:QA:1022:G:C6	1:QA:1023:G:C6	3.07	0.42
1:QA:1202:G:O4'	14:QN:29:ARG:HD2	2.19	0.42
1:QA:1409:C:H5'	25:RA:1916:A:C2	2.54	0.42
3:QC:22:TRP:CB	3:QC:59:ARG:HB2	2.48	0.42
3:QC:58:GLU:HB2	3:QC:65:ALA:HB3	2.01	0.42
3:QC:125:GLU:CD	3:QC:189:ALA:HA	2.44	0.42
4:QD:150:GLU:O	4:QD:152:SER:N	2.53	0.42
5:QE:31:LEU:HD23	5:QE:45:PHE:HD1	1.85	0.42
8:QH:109:ILE:HD11	8:QH:120:THR:HG22	2.00	0.42
13:QM:13:LYS:HA	13:QM:44:ARG:CD	2.48	0.42
13:QM:16:ASP:HB3	13:QM:34:LEU:CD1	2.49	0.42
15:QO:17:ARG:HD3	15:QO:26:GLU:HG3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:QO:18:PHE:O	15:QO:19:PRO:C	2.62	0.42
15:QO:25:THR:O	15:QO:29:VAL:HG23	2.18	0.42
16:QP:1:MET:O	16:QP:2:VAL:C	2.63	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
20:QT:13:LEU:CD1	20:QT:17:ARG:NH1	2.82	0.42
25:RA:16:G:O2'	25:RA:17:G:H5'	2.19	0.42
25:RA:532:A:C8	25:RA:2021:C:C5	3.07	0.42
25:RA:822:U:H2'	25:RA:823:G:C8	2.55	0.42
25:RA:856:C:H3'	25:RA:857:C:H5	1.85	0.42
25:RA:1716:U:O2'	25:RA:1717:G:H5'	2.20	0.42
25:RA:1824:G:O2'	25:RA:1825:A:H5'	2.20	0.42
25:RA:1837:C:H42	25:RA:1903:G:H1	1.67	0.42
25:RA:2059:A:H5'	25:RA:2060:A:OP2	2.20	0.42
25:RA:2088:G:C6	25:RA:2089:U:C4	3.07	0.42
25:RA:2405:G:P	35:RP:77:ARG:HH21	2.41	0.42
25:RA:2509:G:C2'	25:RA:2510:C:H5'	2.49	0.42
25:RA:2583:G:C6	25:RA:2584:U:C5	3.07	0.42
25:RA:2818:G:OP2	37:RR:42:LYS:NZ	2.42	0.42
28:RE:28:ALA:HB3	28:RE:93:VAL:CG2	2.46	0.42
28:RE:35:GLN:HB3	28:RE:48:GLN:HB2	2.01	0.42
28:RE:72:VAL:O	28:RE:73:GLU:C	2.63	0.42
29:RF:179:GLU:CD	29:RF:179:GLU:N	2.77	0.42
30:RG:145:THR:O	30:RG:146:TYR:HB3	2.19	0.42
31:RH:125:VAL:HG12	31:RH:126:PRO:CD	2.49	0.42
31:RH:136:ILE:O	31:RH:137:ASP:O	2.38	0.42
33:RN:42:TRP:HA	33:RN:48:MET:CE	2.42	0.42
40:RU:104:GLN:H	40:RU:104:GLN:CD	2.16	0.42
41:RV:29:PRO:C	41:RV:61:VAL:HG22	2.45	0.42
44:RY:20:TYR:CE1	44:RY:42:VAL:HA	2.55	0.42
44:RY:75:ILE:C	44:RY:75:ILE:CD1	2.92	0.42
46:R0:53:MET:HA	46:R0:58:THR:O	2.18	0.42
46:R0:66:VAL:O	46:R0:82:ARG:N	2.52	0.42
48:R2:16:LEU:C	48:R2:16:LEU:HD12	2.45	0.42
48:R2:59:ARG:O	48:R2:62:THR:HG23	2.19	0.42
50:R4:6:HIS:O	50:R4:7:PRO:C	2.63	0.42
1:XA:445:G:N1	1:XA:446:G:C6	2.87	0.42
1:XA:525:C:H2'	1:XA:526:C:H6	1.85	0.42
1:XA:620:C:C2	4:XD:135:LEU:HG	2.55	0.42
1:XA:654:G:C4	1:XA:753:A:C6	3.07	0.42
1:XA:729:A:H2'	1:XA:730:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1000:A:H8	1:XA:1000:A:O5'	2.03	0.42
1:XA:1061:G:H2'	1:XA:1062:U:O4'	2.19	0.42
1:XA:1312:G:H5''	50:Y4:67:TYR:OH	2.20	0.42
2:XB:16:HIS:CD2	2:XB:213:LEU:HD13	2.54	0.42
2:XB:200:ILE:HD12	2:XB:200:ILE:N	2.34	0.42
7:XG:140:ASP:O	7:XG:142:GLU:N	2.52	0.42
9:XI:118:LYS:HZ3	9:XI:118:LYS:HB3	1.84	0.42
14:YN:9:LYS:HG2	14:YN:9:LYS:O	2.19	0.42
15:XO:64:ARG:CD	15:XO:68:ARG:NH2	2.82	0.42
21:XU:5:ASP:O	21:XU:11:GLY:HA3	2.20	0.42
22:XV:15:G:N2	22:XV:48:C:H42	2.17	0.42
25:YA:7:G:H1	25:YA:2896:C:H42	1.67	0.42
25:YA:78:A:H2'	25:YA:79:G:H8	1.83	0.42
25:YA:191:A:H2'	25:YA:192:C:O4'	2.19	0.42
25:YA:243:U:H6	25:YA:243:U:O5'	2.03	0.42
25:YA:863:A:O2'	25:YA:864:G:H5'	2.19	0.42
25:YA:1085:A:H4'	25:YA:1086:A:OP1	2.19	0.42
25:YA:1851:U:H5''	25:YA:1852:C:OP2	2.19	0.42
25:YA:1860:G:O5'	25:YA:1860:G:H8	2.02	0.42
25:YA:2123:G:H2'	25:YA:2124:G:H8	1.84	0.42
25:YA:2656:U:H3	25:YA:2665:A:H2	1.67	0.42
28:YE:117:MET:HA	28:YE:122:PHE:N	2.35	0.42
28:YE:176:ILE:HD12	28:YE:176:ILE:N	2.35	0.42
29:YF:11:VAL:HG12	29:YF:12:LEU:H	1.84	0.42
29:YF:32:LEU:C	29:YF:32:LEU:CD1	2.83	0.42
29:YF:128:ALA:O	29:YF:129:PHE:CB	2.67	0.42
30:YG:73:ALA:O	30:YG:84:LYS:O	2.38	0.42
30:YG:117:PHE:CE1	30:YG:119:GLY:CA	3.03	0.42
31:YH:26:VAL:CG1	31:YH:33:LEU:HB2	2.50	0.42
32:YI:110:ASP:HB3	32:YI:112:LYS:N	2.34	0.42
38:YS:15:ARG:O	38:YS:19:LYS:HD3	2.20	0.42
44:YY:51:VAL:CG1	44:YY:52:SER:N	2.74	0.42
44:YY:95:LYS:HA	44:YY:101:LYS:N	2.33	0.42
45:YZ:150:LEU:HD22	45:YZ:171:ILE:HB	2.01	0.42
47:Y1:29:GLY:C	47:Y1:31:GLY:H	2.27	0.42
50:Y4:54:GLY:HA2	50:Y4:57:GLU:CG	2.50	0.42
51:Y5:20:ARG:HA	51:Y5:23:HIS:CE1	2.55	0.42
1:QA:347:G:O2'	1:QA:348:G:P	2.78	0.42
1:QA:686:U:O4	1:QA:703:G:O2'	2.31	0.42
1:QA:957:U:H2'	1:QA:959:A:OP2	2.20	0.42
1:QA:1329:A:C5'	13:QM:29:ARG:HG3	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1336:C:H1'	1:QA:1337:G:C2	2.54	0.42
3:QC:35:GLU:O	3:QC:38:ARG:N	2.53	0.42
3:QC:142:MET:HG2	3:QC:149:ALA:HB2	2.02	0.42
4:QD:29:PRO:CG	4:QD:30:LYS:CE	2.86	0.42
4:QD:93:PHE:CE1	4:QD:97:LEU:HD11	2.55	0.42
6:QF:45:LEU:O	6:QF:46:ARG:HB2	2.19	0.42
8:QH:102:ARG:NH1	8:QH:105:ARG:CZ	2.80	0.42
9:QI:25:LYS:O	9:QI:60:ASP:OD1	2.37	0.42
13:QM:119:GLY:O	13:QM:120:LYS:C	2.63	0.42
17:QQ:77:VAL:O	17:QQ:77:VAL:HG12	2.20	0.42
24:QY:36:G:C2	24:QY:37:1MG:C4	3.07	0.42
25:RA:142:G:H1'	43:RX:37:THR:HG22	2.01	0.42
25:RA:271(A):C:H1'	25:RA:272:G:H1'	2.02	0.42
25:RA:319:C:H2'	25:RA:320:A:C8	2.54	0.42
25:RA:598:G:O2'	29:RF:31:HIS:NE2	2.46	0.42
25:RA:604:G:H2'	25:RA:605:C:C6	2.55	0.42
25:RA:638:G:C6	25:RA:639:U:C4	3.07	0.42
25:RA:685:A:C2	25:RA:689:A:C6	3.07	0.42
25:RA:820:A:H2'	25:RA:821:A:O4'	2.20	0.42
25:RA:911:A:H2'	36:RQ:9:TYR:OH	2.19	0.42
25:RA:1149:G:H2'	25:RA:1150:C:C6	2.55	0.42
25:RA:1464:C:H2'	25:RA:1465:G:C8	2.54	0.42
25:RA:1567:A:H4'	27:RD:58:HIS:CE1	2.54	0.42
25:RA:2396:G:N2	25:RA:2421:G:C8	2.81	0.42
25:RA:2464:C:O2	25:RA:2487:G:C2	2.73	0.42
25:RA:2555:U:C2	56:Z6:74:C:C6	3.07	0.42
25:RA:2758:A:C4	31:RH:67:LEU:HD21	2.55	0.42
25:RA:2870:C:H5''	37:RR:65:LEU:HD21	2.02	0.42
26:RB:6:C:H42	26:RB:114:G:H1	1.67	0.42
26:RB:45:A:H2'	26:RB:46:A:O4'	2.19	0.42
27:RD:43:ARG:CZ	27:RD:49:ILE:HG21	2.49	0.42
28:RE:104:VAL:CG1	28:RE:188:VAL:HG23	2.49	0.42
28:RE:143:ASN:HB2	28:RE:147:PRO:HD2	2.00	0.42
29:RF:164:ARG:HG2	29:RF:164:ARG:NH1	2.34	0.42
30:RG:63:ILE:HG12	30:RG:64:THR:N	2.33	0.42
31:RH:120:GLY:O	31:RH:136:ILE:HD12	2.19	0.42
33:RN:75:TYR:HA	33:RN:82:LEU:HA	2.01	0.42
33:RN:131:GLN:HE21	33:RN:131:GLN:HB3	1.57	0.42
34:RO:104:ARG:C	34:RO:106:LEU:N	2.77	0.42
36:RQ:139:GLU:H	36:RQ:139:GLU:CD	2.28	0.42
38:RS:51:ALA:HB3	38:RS:73:LEU:HD23	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RS:88:ASP:CG	38:RS:89:ARG:N	2.77	0.42
39:RT:89:VAL:O	39:RT:90:GLN:CB	2.67	0.42
40:RU:91:ASP:OD2	40:RU:96:ALA:HB2	2.19	0.42
45:RZ:69:THR:HB	45:RZ:88:PHE:HB3	2.01	0.42
50:R4:54:GLY:HA2	50:R4:57:GLU:CG	2.50	0.42
1:XA:487:A:H5''	1:XA:488:C:OP2	2.20	0.42
1:XA:498:A:H4'	1:XA:500:G:OP1	2.19	0.42
1:XA:693:G:C2	1:XA:694:A:C4	3.07	0.42
1:XA:1036:G:C8	1:XA:1037:C:C4	3.08	0.42
1:XA:1126:U:H5	1:XA:1127:G:C4	2.38	0.42
1:XA:1348:U:C6	1:XA:1349:A:C8	3.07	0.42
1:XA:1399:C:C2	1:XA:1401:G:C5	3.07	0.42
1:XA:1490:C:O2'	1:XA:1491:G:H5'	2.19	0.42
2:XB: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
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:15:ASP:OD1	7:XG:23:VAL:HG11	2.19	0.42
7:XG:151:TYR:HE1	11:XK:54:ARG:HD3	1.85	0.42
8:XH:85:ARG:HA	8:XH:135:CYS:HB3	2.02	0.42
9:XI:71:SER:O	9:XI:74:ILE:N	2.52	0.42
13:XM:88:ARG:HD2	13:XM:88:ARG:O	2.20	0.42
15:XO:50:HIS:O	15:XO:51:HIS:C	2.61	0.42
16:XP:45:THR:CG2	16:XP:46:PRO:HD2	2.47	0.42
18:XR:43:PHE:HA	18:XR:51:LEU:HD12	2.01	0.42
18:XR:74:ARG:NH2	18:XR:81:PHE:HA	2.35	0.42
19:XS:39:THR:CG2	19:XS:40:ILE:H	2.23	0.42
19:XS:41:VAL:HG12	19:XS:45:VAL:H	1.85	0.42
24:XY:36:G:C2	24:XY:37:1MG:C4	3.07	0.42
25:YA:66:C:H2'	25:YA:67:U:C6	2.54	0.42
25:YA:89:G:N1	25:YA:90:U:O4	2.52	0.42
25:YA:99:U:C6	25:YA:102:G:C2	3.08	0.42
25:YA:278:A:H4'	25:YA:279:C:OP1	2.20	0.42
25:YA:396:G:H1'	47:Y1:42:GLN:HB3	2.02	0.42
25:YA:1788:C:H5''	27:YD:222:ARG:NH2	2.35	0.42
25:YA:2467:C:OP1	55:Y9:6:SER:OG	2.26	0.42
25:YA:2675:A:C5	25:YA:2676:C:C5	3.07	0.42
26:YB:30:C:OP2	38:YS:32:LEU:HD11	2.20	0.42
27:YD:2:ALA:O	27:YD:3:VAL:CB	2.68	0.42
27:YD:25:THR:HG23	27:YD:27:THR:HB	2.02	0.42
27:YD:75:ILE:HG21	27:YD:99:ASP:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:16:ARG:C	28:YE:17:ASP:CG	2.86	0.42
28:YE:36:ARG:HB3	28:YE:36:ARG:NH1	2.31	0.42
28:YE:76:ARG:C	28:YE:78:LEU:N	2.76	0.42
29:YF:62:ARG:NH1	29:YF:62:ARG:CB	2.82	0.42
30:YG:4:ASP:O	30:YG:5:VAL:HB	2.19	0.42
30:YG:55:LYS:O	30:YG:59:GLU:HB2	2.19	0.42
30:YG:126:ASP:CG	30:YG:130:ASN:HB2	2.45	0.42
31:YH:105:LEU:CD1	31:YH:105:LEU:N	2.81	0.42
35:YP:47:ASP:CG	35:YP:49:ARG:NH1	2.77	0.42
35:YP:64:LYS:HG3	54:Y8:25:MET:CE	2.50	0.42
38:YS:52:SER:HB2	38:YS:55:ALA:CB	2.49	0.42
39:YT:54:ARG:HA	39:YT:59:THR:HG23	2.02	0.42
39:YT:96:ARG:HB2	39:YT:96:ARG:CZ	2.49	0.42
41:YV:38:LEU:CD1	41:YV:55:ALA:HB1	2.50	0.42
41:YV:59:ALA:HA	41:YV:95:LEU:O	2.19	0.42
44:YY:20:TYR:C	44:YY:21:LYS:O	2.62	0.42
48:Y2:16:LEU:C	48:Y2:16:LEU:HD12	2.45	0.42
52:Y6:25:LYS:HE2	52:Y6:27:LYS:CD	2.49	0.42
53:Y7:9:ARG:NH1	53:Y7:47:ARG:HG3	2.35	0.42
1:QA:122:G:H2'	1:QA:123:C:O4'	2.19	0.42
1:QA:413:G:H22	1:QA:429:U:H5''	1.83	0.42
1:QA:494:U:H6	1:QA:494:U:O5'	2.03	0.42
1:QA:687:A:C6	1:QA:704:A:N7	2.88	0.42
1:QA:927:G:C2	1:QA:1391:U:O2	2.73	0.42
1:QA:936:C:H2'	1:QA:937:A:O4'	2.20	0.42
1:QA:1050:G:C6	1:QA:1051:C:C4	3.08	0.42
1:QA:1183:A:O2'	1:QA:1184:G:OP1	2.30	0.42
1:QA:1332:A:C2'	1:QA:1333:A:H5'	2.50	0.42
2:QB:25:ASN:C	2:QB:27:LYS:H	2.24	0.42
2:QB:83:MET:C	2:QB:85:ALA:H	2.27	0.42
3:QC:88:ARG:NH2	3:QC:101:LEU:O	2.53	0.42
7:QG:11:GLN:HG3	7:QG:12:LEU:H	1.85	0.42
7:QG:18:TYR:CD2	7:QG:59:LEU:HD13	2.55	0.42
8:QH:26:VAL:O	8:QH:27:PRO:C	2.63	0.42
8:QH:33:GLU:O	8:QH:36:LEU:N	2.53	0.42
8:QH:95:VAL:O	8:QH:95:VAL:HG23	2.20	0.42
11:QK:21:ILE:HD13	11:QK:84:VAL:HG12	2.02	0.42
18:QR:63:GLN:O	18:QR:66:LEU:HB3	2.18	0.42
18:QR:76:LEU:HD22	18:QR:76:LEU:N	2.35	0.42
19:QS:30:LEU:O	19:QS:31:ILE:HB	2.19	0.42
19:QS:41:VAL:HG11	19:QS:45:VAL:HG13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:QU:5:ASP:O	21:QU:11:GLY:HA3	2.20	0.42
22:QV:17:C:H2'	22:QV:17:C:O2	2.20	0.42
22:QV:74:C:N4	25:RA:2252:G:H1	2.15	0.42
25:RA:90:U:H6	25:RA:90:U:OP1	2.02	0.42
25:RA:190:A:C8	25:RA:207:A:C6	3.08	0.42
25:RA:250:G:OP1	54:R8:13:ARG:NH2	2.53	0.42
25:RA:302:C:H2'	25:RA:303:U:H6	1.83	0.42
25:RA:792:G:H5''	25:RA:793:A:H5'	2.02	0.42
25:RA:1411:C:N4	25:RA:1591:G:H1	2.17	0.42
25:RA:1414:G:C6	25:RA:1415:U:C4	3.07	0.42
25:RA:1966:A:H4'	25:RA:1967:C:OP1	2.19	0.42
25:RA:2255:G:H1	25:RA:2275:C:N4	2.18	0.42
25:RA:2324:C:H5''	25:RA:2325:G:C5'	2.49	0.42
25:RA:2335:A:C8	25:RA:2337:G:C5	3.07	0.42
25:RA:2352:A:C2	46:R0:33:ALA:O	2.72	0.42
25:RA:2399:G:C2	25:RA:2400:G:C4	3.08	0.42
26:RB:85:G:H2'	26:RB:86:G:H8	1.85	0.42
27:RD:182:LEU:N	27:RD:272:ALA:HB3	2.32	0.42
30:RG:121:ASN:HA	30:RG:181:ARG:NH2	2.34	0.42
31:RH:27:LYS:HD2	31:RH:27:LYS:C	2.44	0.42
31:RH:169:VAL:HG22	31:RH:170:ARG:N	2.26	0.42
33:RN:43:THR:HA	33:RN:44:PRO:HD2	1.92	0.42
34:RO:1:MET:HG2	34:RO:67:LYS:HG2	2.02	0.42
34:RO:97:ARG:CA	34:RO:117:LEU:HD22	2.50	0.42
35:RP:115:LEU:HB3	35:RP:131:SER:HB2	2.02	0.42
38:RS:30:ARG:NH2	38:RS:92:TYR:HD1	2.17	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:CG	2.49	0.42
38:RS:83:LYS:CE	38:RS:109:GLY:HA2	2.47	0.42
39:RT:24:PRO:HA	39:RT:49:VAL:CG1	2.39	0.42
39:RT:134:GLU:OE1	39:RT:135:ALA:N	2.53	0.42
40:RU:39:LEU:O	40:RU:42:ALA:N	2.53	0.42
40:RU:43:GLY:HA3	41:RV:73:SER:OG	2.19	0.42
41:RV:59:ALA:HA	41:RV:95:LEU:O	2.19	0.42
42:RW:71:VAL:HA	42:RW:107:LEU:HD12	2.02	0.42
45:RZ:110:GLY:HA2	45:RZ:111:VAL:O	2.20	0.42
47:R1:66:HIS:C	47:R1:68:PRO:CD	2.92	0.42
47:R1:72:GLU:O	47:R1:75:GLU:HB2	2.20	0.42
55:R9:2:LYS:HD2	55:R9:2:LYS:HA	1.93	0.42
1:XA:189:U:H3	17:XQ:63:ARG:CB	2.33	0.42
1:XA:445:G:H2'	1:XA:446:G:C8	2.54	0.42
1:XA:544:G:C6	1:XA:545:C:N4	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:564:C:H5'	17:XQ:32:TYR:CE2	2.54	0.42
1:XA:811:C:C2'	1:XA:812:C:H5'	2.50	0.42
1:XA:818:G:O2'	1:XA:819:A:H5''	2.19	0.42
1:XA:909:A:OP1	12:XL:21:LYS:HG2	2.20	0.42
1:XA:1310:G:C2	1:XA:1328:C:N3	2.88	0.42
1:XA:1398:A:H5''	1:XA:1399:C:OP1	2.20	0.42
1:XA:1403:C:H1'	1:XA:1500:A:N1	2.35	0.42
1:XA:1427:U:H2'	1:XA:1428:A:C8	2.55	0.42
2:XB:211:ILE:O	2:XB:215:LEU:HB2	2.20	0.42
3:XC:23:TYR:CD2	3:XC:24:ALA:N	2.88	0.42
4:XD:146:ILE:H	4:XD:146:ILE:CD1	2.30	0.42
5:XE:56:GLN:C	5:XE:58:ALA:H	2.27	0.42
7:XG:64:GLN:C	7:XG:66:VAL:N	2.77	0.42
7:XG:108:ALA:C	7:XG:110:GLN:N	2.78	0.42
8:XH:11:THR:HA	8:XH:14:ARG:NH1	2.35	0.42
9:XI:35:GLU:O	9:XI:35:GLU:HG2	2.19	0.42
13:XM:16:ASP:HB3	13:XM:34:LEU:CD1	2.49	0.42
18:XR:29:PHE:N	18:XR:29:PHE:HD2	2.17	0.42
19:XS:4:SER:O	19:XS:5:LEU:HD13	2.20	0.42
20:XT:28:ALA:C	20:XT:30:LYS:H	2.28	0.42
21:XU:2:GLY:C	21:XU:4:GLY:N	2.77	0.42
25:YA:49:A:N7	25:YA:120:U:C5	2.87	0.42
25:YA:429:A:C6	25:YA:430:G:N1	2.88	0.42
25:YA:507:A:H5''	25:YA:508:G:H5'	2.01	0.42
25:YA:846:C:N4	25:YA:931:G:H1	2.17	0.42
25:YA:1029:A:N6	25:YA:1125:G:O2'	2.47	0.42
25:YA:1431:U:H2'	25:YA:1432:C:O4'	2.19	0.42
25:YA:1973:G:H2'	25:YA:1974:C:C6	2.54	0.42
25:YA:1997:G:H5'	28:YE:117:MET:HE2	2.00	0.42
25:YA:2009:G:C2'	25:YA:2010:G:H5'	2.49	0.42
25:YA:2063:C:H2'	25:YA:2064:C:H5'	2.00	0.42
25:YA:2286:A:H8	52:Y6:37:ARG:HH11	1.68	0.42
25:YA:2317:C:H2'	25:YA:2318:G:O4'	2.20	0.42
25:YA:2420:C:N4	54:Y8:30:ARG:HD2	2.34	0.42
25:YA:2646:C:H6	25:YA:2646:C:O5'	2.02	0.42
25:YA:2881:C:HO2'	37:YR:96:ARG:HA	1.84	0.42
26:YB:34:U:OP1	30:YG:2:PRO:HG2	2.19	0.42
27:YD:12:SER:O	27:YD:14:ARG:N	2.51	0.42
27:YD:71:ASP:CB	27:YD:103:ARG:HH22	2.32	0.42
27:YD:263:ARG:NH1	27:YD:263:ARG:CB	2.75	0.42
28:YE:28:ALA:HB3	28:YE:93:VAL:CG2	2.46	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:YE:72:VAL:O	28:YE:73:GLU:C	2.63	0.42
28:YE:128:SER:O	28:YE:129:HIS:HB2	2.19	0.42
28:YE:143:ASN:HB2	28:YE:147:PRO:HD2	2.00	0.42
28:YE:152:LYS:HG2	33:YN:78:TYR:CD1	2.55	0.42
29:YF:183:VAL:HG22	29:YF:184:TYR:N	2.35	0.42
31:YH:77:LYS:HB3	31:YH:77:LYS:HZ2	1.78	0.42
31:YH:89:ILE:CD1	31:YH:89:ILE:H	2.32	0.42
31:YH:136:ILE:O	31:YH:137:ASP:O	2.38	0.42
33:YN:75:TYR:HA	33:YN:82:LEU:HA	2.02	0.42
34:YO:20:MET:O	34:YO:41:ALA:CB	2.67	0.42
34:YO:104:ARG:C	34:YO:106:LEU:N	2.77	0.42
35:YP:65:ARG:HH21	54:Y8:15:LYS:HB3	1.84	0.42
35:YP:65:ARG:C	35:YP:66:GLY:O	2.59	0.42
35:YP:83:VAL:HG11	35:YP:112:LEU:HD21	1.97	0.42
36:YQ:20:ALA:HB2	36:YQ:99:PRO:HD2	1.99	0.42
36:YQ:51:ARG:O	36:YQ:52:VAL:C	2.63	0.42
37:YR:28:LEU:HD12	37:YR:29:LEU:HD12	2.01	0.42
38:YS:18:ILE:O	38:YS:19:LYS:C	2.62	0.42
38:YS:26:LEU:HB3	38:YS:87:PHE:HA	2.02	0.42
40:YU:79:PHE:CD2	40:YU:83:LEU:HD13	2.54	0.42
41:YV:47:VAL:HG13	41:YV:48:GLY:N	2.27	0.42
43:YX:60:ARG:HH12	53:Y7:47:ARG:HH22	1.67	0.42
50:Y4:12:ALA:HB1	50:Y4:30:GLU:N	2.35	0.42
52:Y6:7:ILE:O	52:Y6:8:LYS:CG	2.68	0.42
1:QA:35:G:C5	1:QA:36:C:N4	2.87	0.42
1:QA:49:U:C5	1:QA:364:A:C6	3.08	0.42
1:QA:145:G:H2'	1:QA:146:G:O4'	2.20	0.42
1:QA:309:G:H1'	1:QA:608:A:C2	2.54	0.42
1:QA:392:G:OP1	16:QP:13:HIS:N	2.42	0.42
1:QA:598:U:H2'	1:QA:599:C:H6	1.85	0.42
1:QA:833:U:O2	1:QA:854:G:C2	2.73	0.42
1:QA:978:A:HO2'	1:QA:1322:C:N4	2.17	0.42
1:QA:1015:A:C6	1:QA:1016:A:C6	3.08	0.42
1:QA:1151:A:N3	10:QJ:39:PRO:HG3	2.35	0.42
4:QD:33:MET:HE2	4:QD:37:PRO:HA	2.01	0.42
4:QD:95:GLY:O	4:QD:99:SER:N	2.51	0.42
10:QJ:75:ILE:CG1	10:QJ:76:ASN:H	2.17	0.42
16:QP:8:ARG:HG2	16:QP:8:ARG:NH1	2.31	0.42
17:QQ:76:LEU:HD21	17:QQ:79:SER:HB2	2.01	0.42
20:QT:36:LEU:HD13	20:QT:36:LEU:HA	1.82	0.42
20:QT:99:LEU:O	20:QT:100:ILE:CB	2.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:92:G:O2'	25:RA:93:C:H5'	2.20	0.42
25:RA:171:G:N2	25:RA:172:C:C2	2.88	0.42
25:RA:528:A:C2	25:RA:2043:C:H4'	2.55	0.42
25:RA:974(A):C:H4'	25:RA:975:G:C5'	2.49	0.42
25:RA:1137:G:H2'	25:RA:1138:G:O4'	2.20	0.42
25:RA:1216:G:P	40:RU:12:ARG:HH21	2.43	0.42
25:RA:1326:U:O2'	25:RA:1327:C:H5'	2.20	0.42
25:RA:1475:G:C2	25:RA:1519:G:C2	3.08	0.42
25:RA:1844:C:O2'	25:RA:1845:G:H5'	2.20	0.42
25:RA:2441:C:H2'	25:RA:2442:C:H6	1.85	0.42
25:RA:2588:G:O6	25:RA:2607:G:C6	2.73	0.42
25:RA:2787:C:O2'	28:RE:61:ARG:HB3	2.20	0.42
25:RA:2831:G:O2'	25:RA:2883:A:H2'	2.19	0.42
26:RB:42:C:C4	26:RB:43:C:C5	3.07	0.42
27:RD:168:ARG:O	27:RD:169:GLU:HB2	2.19	0.42
28:RE:128:SER:O	28:RE:129:HIS:HB2	2.19	0.42
28:RE:137:HIS:CB	28:RE:138:PRO:HD2	2.42	0.42
30:RG:16:ARG:NE	30:RG:31:VAL:HG11	2.34	0.42
30:RG:51:ARG:NH1	30:RG:51:ARG:CB	2.83	0.42
35:RP:26:GLY:C	35:RP:28:GLY:N	2.78	0.42
36:RQ:118:LEU:HD23	36:RQ:118:LEU:HA	1.87	0.42
37:RR:44:LEU:HD23	37:RR:44:LEU:HA	1.79	0.42
38:RS:83:LYS:HE3	38:RS:84:GLN:HG3	2.02	0.42
38:RS:88:ASP:CG	38:RS:89:ARG:H	2.28	0.42
39:RT:110:ILE:CG2	39:RT:111:ARG:N	2.82	0.42
40:RU:97:ASP:HA	40:RU:100:VAL:HG23	2.02	0.42
40:RU:99:ALA:HA	40:RU:106:PHE:HB2	2.01	0.42
44:RY:60:PHE:CD2	44:RY:60:PHE:N	2.87	0.42
1:XA:92:G:C5	1:XA:93:U:C4	3.08	0.42
1:XA:122:G:H2'	1:XA:123:C:O4'	2.19	0.42
1:XA:259:G:N2	1:XA:260:G:H1'	2.34	0.42
1:XA:376:G:H1	1:XA:387:U:H3	1.67	0.42
1:XA:587:G:N2	1:XA:755:G:C5	2.88	0.42
1:XA:1206:G:C5	1:XA:1207:G:C8	3.07	0.42
1:XA:1234:C:O2'	1:XA:1235:U:H5'	2.19	0.42
2:XB:97:TRP:HZ3	2:XB:172:ILE:HG22	1.85	0.42
2:XB:162:ILE:O	2:XB:185:ILE:CG1	2.67	0.42
4:XD:91:SER:O	4:XD:92:VAL:C	2.63	0.42
4:XD:202:LEU:C	4:XD:204:ILE:N	2.78	0.42
5:XE:31:LEU:HD23	5:XE:45:PHE:HD1	1.85	0.42
5:XE:71:LEU:HD11	5:XE:113:ALA:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:88:VAL:HG12	6:XF:89:MET:N	2.34	0.42
7:XG:6:ARG:O	7:XG:7:ALA:C	2.62	0.42
8:XH:4:ASP:HA	8:XH:5:PRO:HD3	1.85	0.42
9:XI:6:GLY:HA3	9:XI:84:ALA:HB2	2.01	0.42
10:XJ:49:VAL:HG13	10:XJ:50:ILE:N	2.35	0.42
12:XL:53:ARG:HH12	12:XL:92:ASP:CB	2.33	0.42
12:XL:109:GLY:HA3	12:XL:121:GLY:O	2.20	0.42
14:XN:6:LEU:HD23	14:XN:6:LEU:C	2.45	0.42
15:XO:18:PHE:O	15:XO:19:PRO:C	2.62	0.42
19:XS:30:LEU:O	19:XS:31:ILE:HB	2.19	0.42
19:XS:41:VAL:HG13	19:XS:44:MET:CB	2.38	0.42
22:XV:43:A:H2'	22:XV:44:A:C8	2.54	0.42
25:YA:250:G:H2'	25:YA:251:A:O4'	2.19	0.42
25:YA:270:A:C2	25:YA:366:C:H4'	2.55	0.42
25:YA:401:A:H2'	25:YA:402:A:C8	2.55	0.42
25:YA:416:C:H2'	25:YA:417:C:C6	2.55	0.42
25:YA:516:C:OP1	51:Y5:13:LYS:NZ	2.52	0.42
25:YA:547:A:OP2	25:YA:547:A:C8	2.72	0.42
25:YA:1204:A:H1'	25:YA:1206:G:C4	2.54	0.42
25:YA:1316:U:O2'	25:YA:1317:A:H5'	2.20	0.42
25:YA:1471:A:C2	25:YA:1472:A:C4	3.08	0.42
25:YA:1526:G:O2'	25:YA:1527:G:H5'	2.19	0.42
25:YA:1770:G:C5	25:YA:1771:C:C5	3.08	0.42
25:YA:1991:U:C2'	25:YA:1992:G:H5''	2.49	0.42
25:YA:2060:A:C5	25:YA:2502:G:C2	3.08	0.42
25:YA:2419:U:O2'	25:YA:2420:C:H5'	2.20	0.42
25:YA:2699:C:H2'	25:YA:2700:C:O4'	2.20	0.42
27:YD:158:ALA:HB3	27:YD:161:THR:CG2	2.49	0.42
27:YD:165:ILE:O	27:YD:166:GLN:NE2	2.53	0.42
28:YE:7:VAL:HG11	39:YT:1:MET:HE3	2.00	0.42
28:YE:9:VAL:HB	28:YE:10:GLY:H	1.70	0.42
28:YE:31:CYS:HB3	28:YE:49:LEU:HG	2.01	0.42
28:YE:35:GLN:HB3	28:YE:48:GLN:HB2	2.01	0.42
29:YF:101:LEU:HD12	29:YF:102:PRO:N	2.33	0.42
30:YG:99:MET:O	30:YG:103:LEU:HB2	2.20	0.42
31:YH:58:GLU:O	31:YH:60:ARG:N	2.53	0.42
31:YH:84:SER:O	31:YH:85:LYS:CB	2.64	0.42
34:YO:2:ILE:HG12	34:YO:8:LEU:HD11	2.02	0.42
34:YO:97:ARG:CA	34:YO:117:LEU:HD22	2.50	0.42
36:YQ:27:VAL:HG11	36:YQ:134:ARG:HG3	2.00	0.42
36:YQ:81:VAL:CG2	46:Y0:7:LEU:HD11	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:25:LEU:H	41:YV:92:THR:CG2	2.29	0.42
42:YW:74:ALA:O	42:YW:75:TYR:CB	2.65	0.42
44:YY:91:GLU:CG	44:YY:92:ASN:N	2.83	0.42
46:Y0:38:VAL:O	46:Y0:58:THR:HG23	2.19	0.42
46:Y0:57:PHE:N	46:Y0:57:PHE:CD2	2.88	0.42
47:Y1:83:GLU:C	47:Y1:83:GLU:CD	2.87	0.42
51:Y5:40:LYS:HE2	51:Y5:47:PRO:HG2	2.02	0.42
52:Y6:36:LEU:HD13	52:Y6:50:ARG:HH12	1.81	0.42
55:Y9:17:ILE:CG2	55:Y9:18:ARG:N	2.82	0.42
1:QA:186(A):C:H2'	1:QA:186(B):C:C6	2.54	0.42
1:QA:337:C:H2'	1:QA:338:A:H8	1.85	0.42
1:QA:481:G:O2'	1:QA:482:A:P	2.78	0.42
1:QA:524:G:C6	1:QA:525:C:N4	2.88	0.42
1:QA:769:G:H4'	1:QA:1513:A:H4'	2.02	0.42
1:QA:892:A:H2'	1:QA:893:C:H6	1.84	0.42
1:QA:960:U:O2	1:QA:960:U:C2'	2.67	0.42
1:QA:1348:U:C5	1:QA:1349:A:N7	2.88	0.42
1:QA:1349:A:C4	1:QA:1350:A:C8	3.07	0.42
1:QA:1368:G:O2'	1:QA:1369:C:H5'	2.19	0.42
1:QA:1370:G:O3'	9:QI:12:GLU:HG3	2.20	0.42
2:QB:130:ARG:NH2	2:QB:138:LEU:HD21	2.34	0.42
2:QB:162:ILE:O	2:QB:185:ILE:CG1	2.67	0.42
2:QB:197:VAL:CG1	2:QB:198:ASP:N	2.82	0.42
3:QC:120:VAL:O	3:QC:123:GLN:HB2	2.20	0.42
4:QD:30:LYS:HG3	4:QD:35:ARG:CZ	2.47	0.42
4:QD:91:SER:O	4:QD:92:VAL:C	2.63	0.42
4:QD:201:GLN:HE22	5:QE:116:THR:HG23	1.83	0.42
5:QE:144:THR:C	5:QE:146:ALA:N	2.76	0.42
6:QF:45:LEU:CD1	6:QF:59:TYR:HD1	2.31	0.42
7:QG:140:ASP:O	7:QG:142:GLU:N	2.52	0.42
9:QI:35:GLU:HG2	9:QI:35:GLU:O	2.19	0.42
11:QK:62:GLN:C	11:QK:64:ALA:N	2.76	0.42
11:QK:72:ALA:HB1	11:QK:77:MET:HG2	2.02	0.42
16:QP:21:VAL:HG21	16:QP:59:TRP:NE1	2.35	0.42
16:QP:45:THR:CG2	16:QP:46:PRO:HD2	2.47	0.42
17:QQ:11:VAL:HG23	17:QQ:12:SER:N	2.35	0.42
19:QS:18:LYS:O	19:QS:18:LYS:HD2	2.19	0.42
22:QV:75:C:OP1	25:RA:2602:A:OP1	2.37	0.42
25:RA:28:A:C2	25:RA:513:A:C8	3.08	0.42
25:RA:195:A:OP1	35:RP:46:LYS:HE2	2.19	0.42
25:RA:570:G:H2'	25:RA:2030:A:N6	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:714:U:O2	25:RA:716:A:C8	2.72	0.42
25:RA:1335:U:OP1	43:RX:65:ARG:NE	2.52	0.42
25:RA:1612:C:N4	25:RA:1619:G:H1	2.18	0.42
25:RA:1785:A:O2'	25:RA:1786:A:H2'	2.20	0.42
25:RA:1835:G:N3	25:RA:1931:U:N3	2.67	0.42
25:RA:1975:G:C5	25:RA:1976:U:C5	3.08	0.42
25:RA:2123:G:N1	25:RA:2176:A:C4	2.88	0.42
25:RA:2259:G:C2	25:RA:2282:G:N1	2.88	0.42
25:RA:2341:G:C6	25:RA:2342:C:C4	3.08	0.42
25:RA:2508:G:C2	25:RA:2582:G:O6	2.73	0.42
25:RA:2627:G:N3	25:RA:2781:A:C2	2.87	0.42
26:RB:63:G:C2	26:RB:64:C:C2	3.07	0.42
26:RB:70:C:H2'	26:RB:71:C:H6	1.84	0.42
27:RD:158:ALA:HB3	27:RD:161:THR:CG2	2.49	0.42
27:RD:165:ILE:O	27:RD:166:GLN:NE2	2.53	0.42
28:RE:10:GLY:HA3	39:RT:8:LYS:HD3	2.02	0.42
28:RE:117:MET:HA	28:RE:122:PHE:N	2.35	0.42
29:RF:34:TRP:CA	35:RP:6:LEU:HD12	2.46	0.42
30:RG:73:ALA:O	30:RG:84:LYS:O	2.38	0.42
30:RG:78:SER:O	30:RG:80:PHE:N	2.53	0.42
30:RG:99:MET:O	30:RG:103:LEU:HB2	2.20	0.42
31:RH:76:VAL:C	31:RH:78:GLY:N	2.78	0.42
32:RI:135:GLU:CD	32:RI:135:GLU:H	2.28	0.42
33:RN:62:VAL:HG12	33:RN:66:LYS:HB2	2.01	0.42
35:RP:85:LEU:C	35:RP:87:ASP:N	2.77	0.42
36:RQ:27:VAL:HG11	36:RQ:134:ARG:HG3	2.01	0.42
37:RR:55:ALA:HA	37:RR:80:PHE:CE2	2.55	0.42
40:RU:35:ALA:O	40:RU:39:LEU:HG	2.19	0.42
49:R3:37:LEU:HD12	49:R3:43:ILE:CG2	2.50	0.42
50:R4:38:LYS:HG3	50:R4:44:THR:OG1	2.20	0.42
50:R4:68:ARG:HB2	50:R4:69:LYS:H	1.35	0.42
51:R5:40:LYS:HE2	51:R5:47:PRO:HG2	2.02	0.42
1:XA:154:C:H6	1:XA:154:C:O5'	2.03	0.42
1:XA:289:G:H2'	1:XA:290:C:C6	2.54	0.42
1:XA:539:A:OP2	12:XL:115:LYS:HE3	2.20	0.42
1:XA:588:G:C2	1:XA:589:C:C5	3.08	0.42
1:XA:691:G:N7	11:XK:26:ASN:ND2	2.68	0.42
1:XA:895:G:H2'	1:XA:896:C:H6	1.83	0.42
1:XA:1320:C:H5'	1:XA:1320:C:H6	1.85	0.42
2:XB:5:ILE:HB	2:XB:221:LEU:HD23	2.01	0.42
3:XC:35:GLU:O	3:XC:38:ARG:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:52:SER:O	4:XD:55:ALA:N	2.52	0.42
4:XD:150:GLU:O	4:XD:152:SER:N	2.53	0.42
6:XF:46:ARG:HG3	6:XF:47:ARG:N	2.34	0.42
7:XG:18:TYR:CD2	7:XG:59:LEU:HD13	2.55	0.42
7:XG:79:ARG:CZ	7:XG:82:GLY:HA2	2.50	0.42
8:XH:28:ALA:CB	8:XH:57:PRO:HB2	2.45	0.42
12:XL:61:THR:C	12:XL:63:GLY:H	2.27	0.42
13:XM:19:LEU:HD22	13:XM:19:LEU:N	2.33	0.42
15:XO:41:GLU:O	15:XO:42:HIS:C	2.63	0.42
18:XR:37:VAL:O	18:XR:38:GLU:C	2.63	0.42
18:XR:74:ARG:NE	18:XR:80:PRO:O	2.48	0.42
19:XS:29:ARG:HD3	19:XS:30:LEU:H	1.84	0.42
19:XS:41:VAL:CG1	19:XS:45:VAL:H	2.32	0.42
19:XS:58:VAL:O	19:XS:58:VAL:HG23	2.20	0.42
19:XS:66:MET:O	19:XS:66:MET:HG3	2.19	0.42
20:XT:50:GLU:O	20:XT:51:GLU:C	2.62	0.42
20:XT:63:ILE:CG2	20:XT:77:ALA:HB1	2.47	0.42
25:YA:60:G:N2	25:YA:74:A:C4	2.88	0.42
25:YA:104:U:H5''	25:YA:105:C:OP2	2.20	0.42
25:YA:190:A:C4	25:YA:207:A:C2	3.08	0.42
25:YA:625:G:OP1	54:Y8:64:TYR:HD1	2.03	0.42
25:YA:871:U:OP1	36:YQ:5:ARG:HG2	2.20	0.42
25:YA:1061:U:H4'	25:YA:1070:A:H1'	2.02	0.42
25:YA:1270:C:N4	25:YA:1648:C:N4	2.67	0.42
25:YA:1279:G:H4'	37:YR:31:HIS:CD2	2.44	0.42
25:YA:1429:G:C4	25:YA:1430:C:C5	3.08	0.42
25:YA:1509:C:N4	25:YA:1511:A:H62	2.17	0.42
25:YA:1608:A:H1'	25:YA:1610:A:OP2	2.19	0.42
25:YA:2123:G:H1	25:YA:2175:C:N4	2.13	0.42
25:YA:2413:G:H2'	25:YA:2414:G:O4'	2.19	0.42
25:YA:2629:A:N6	25:YA:2895:U:C2	2.88	0.42
25:YA:2716:U:C2'	25:YA:2717:G:H5'	2.50	0.42
25:YA:2756:U:H6	25:YA:2756:U:O5'	2.02	0.42
26:YB:60:C:C2	26:YB:61:G:C8	3.07	0.42
28:YE:25:VAL:CG1	39:YT:11:GLU:HG2	2.50	0.42
29:YF:105:VAL:O	29:YF:106:ARG:C	2.63	0.42
29:YF:123:LEU:HD12	29:YF:124:LEU:H	1.82	0.42
29:YF:132:VAL:HG23	29:YF:133:ASN:H	1.83	0.42
30:YG:27:ASN:HB3	30:YG:30:GLU:OE2	2.20	0.42
32:YI:47:LEU:O	32:YI:51:ILE:HG13	2.19	0.42
32:YI:48:GLU:O	32:YI:51:ILE:HB	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:YR:34:ILE:HG22	37:YR:35:THR:N	2.35	0.42
39:YT:6:LEU:HD12	39:YT:9:LEU:HD12	2.01	0.42
39:YT:105:LEU:O	39:YT:105:LEU:HG	2.19	0.42
40:YU:6:THR:HG21	40:YU:10:ARG:CZ	2.50	0.42
45:YZ:10:ARG:HH11	45:YZ:36:LYS:HD3	1.85	0.42
46:Y0:42:GLY:O	46:Y0:57:PHE:HD1	2.02	0.42
54:Y8:26:LYS:HD3	54:Y8:26:LYS:HA	1.86	0.42
55:Y9:1:MET:HE2	55:Y9:10:ILE:CD1	2.49	0.42
1:QA:76:G:C6	1:QA:77:C:C4	3.08	0.42
1:QA:198:G:H2'	1:QA:199:G:O4'	2.20	0.42
1:QA:464:G:O6	1:QA:466:C:H5'	2.20	0.42
1:QA:1350:A:H2'	1:QA:1351:U:O4'	2.20	0.42
1:QA:1446:A:O2'	1:QA:1447:G:O5'	2.37	0.42
3:QC:47:LEU:HD11	3:QC:76:VAL:CG1	2.42	0.42
4:QD:178:VAL:HG12	4:QD:179:GLU:N	2.35	0.42
5:QE:123:LEU:O	5:QE:124:GLY:C	2.62	0.42
6:QF:46:ARG:HG3	6:QF:47:ARG:N	2.34	0.42
7:QG:44:TYR:O	7:QG:47:CYS:N	2.53	0.42
7:QG:80:VAL:CG1	7:QG:81:GLY:N	2.83	0.42
8:QH:29:SER:O	8:QH:30:ARG:C	2.62	0.42
8:QH:86:ILE:CB	8:QH:133:LEU:HD22	2.49	0.42
9:QI:6:GLY:HA3	9:QI:84:ALA:HB2	2.01	0.42
9:QI:85:LEU:HD12	9:QI:85:LEU:C	2.45	0.42
12:QL:21:LYS:N	12:QL:21:LYS:CD	2.83	0.42
12:QL:38:THR:HG22	12:QL:57:LYS:HB3	2.01	0.42
15:QO:71:GLN:HB2	15:QO:78:TYR:CE1	2.54	0.42
18:QR:84:LYS:H	18:QR:84:LYS:HG2	1.56	0.42
19:QS:7:LYS:CG	19:QS:8:GLY:N	2.83	0.42
19:QS:15:LEU:N	19:QS:15:LEU:CD2	2.79	0.42
20:QT:10:LEU:O	20:QT:12:ALA:N	2.53	0.42
25:RA:39:C:H2'	25:RA:40:C:C6	2.53	0.42
25:RA:579:G:H2'	25:RA:580:C:H6	1.85	0.42
25:RA:629:G:H1	25:RA:634:C:H42	1.68	0.42
25:RA:747:U:OP1	51:R5:3:LYS:HG2	2.20	0.42
25:RA:859:G:O2'	25:RA:860:U:P	2.77	0.42
25:RA:1024:G:O6	25:RA:1025:G:C2	2.73	0.42
25:RA:1197:G:H8	25:RA:1197:G:O5'	2.03	0.42
25:RA:1418:G:N1	25:RA:1579:A:OP2	2.35	0.42
25:RA:1495:A:H2'	25:RA:1496:A:N3	2.35	0.42
25:RA:1718:G:N2	25:RA:1742:C:C2	2.88	0.42
25:RA:1844:C:OP1	27:RD:257:LEU:HD23	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1948:G:C2'	25:RA:1949:G:H5'	2.49	0.42
25:RA:2250:G:C5	36:RQ:82:ARG:HD2	2.54	0.42
25:RA:2347:C:C2	25:RA:2348:U:C5	3.08	0.42
25:RA:2745:C:H2'	25:RA:2746:U:C6	2.54	0.42
25:RA:2757:A:C2	31:RH:63:SER:HB3	2.54	0.42
25:RA:2773:C:O2'	25:RA:2774:C:H5'	2.20	0.42
25:RA:2817:G:N2	25:RA:2830:G:H1'	2.35	0.42
25:RA:2875:C:H4'	39:RT:5:ALA:HB2	2.02	0.42
26:RB:63:G:H2'	26:RB:64:C:C6	2.55	0.42
27:RD:9:TYR:CZ	27:RD:13:ARG:HD3	2.54	0.42
27:RD:35:LYS:HB3	27:RD:36:PRO:HA	2.00	0.42
28:RE:7:VAL:CG2	28:RE:8:LYS:H	2.11	0.42
29:RF:118:ALA:HA	29:RF:123:LEU:HB3	2.02	0.42
30:RG:22:ARG:HH22	30:RG:175:LEU:HD21	1.85	0.42
30:RG:126:ASP:CG	30:RG:130:ASN:HB2	2.45	0.42
31:RH:105:LEU:CD1	31:RH:105:LEU:N	2.81	0.42
31:RH:146:ALA:HA	31:RH:164:TYR:OH	2.20	0.42
34:RO:16:ALA:HA	34:RO:46:ALA:CB	2.50	0.42
34:RO:71:ARG:HH11	39:RT:74:ARG:HH21	1.65	0.42
35:RP:144:GLU:HA	35:RP:145:PRO:HD3	1.76	0.42
36:RQ:65:PHE:O	36:RQ:66:ILE:CG1	2.48	0.42
36:RQ:134:ARG:HD3	45:RZ:122:ARG:NH1	2.34	0.42
38:RS:49:VAL:HG21	38:RS:77:ALA:HA	2.02	0.42
38:RS:53:SER:HA	38:RS:56:LEU:CD2	2.50	0.42
39:RT:39:ARG:CG	39:RT:40:THR:H	2.22	0.42
40:RU:75:ASN:O	40:RU:76:TYR:C	2.63	0.42
40:RU:113:ALA:C	40:RU:115:ALA:H	2.28	0.42
41:RV:35:LEU:HB2	41:RV:37:VAL:CG2	2.49	0.42
42:RW:19:LEU:HA	42:RW:19:LEU:HD12	1.79	0.42
43:RX:15:GLU:CD	43:RX:15:GLU:H	2.27	0.42
43:RX:57:LEU:HD12	43:RX:57:LEU:H	1.85	0.42
47:R1:74:VAL:O	47:R1:74:VAL:CG1	2.64	0.42
47:R1:76:ARG:H	47:R1:76:ARG:CD	2.29	0.42
47:R1:83:GLU:C	47:R1:83:GLU:CD	2.87	0.42
49:R3:37:LEU:N	49:R3:37:LEU:HD23	2.35	0.42
52:R6:25:LYS:HE2	52:R6:27:LYS:CD	2.49	0.42
53:R7:9:ARG:NH1	53:R7:47:ARG:HG3	2.35	0.42
1:XA:102:G:C4	1:XA:103:C:C5	3.08	0.42
1:XA:195:A:N7	1:XA:196:A:C6	2.88	0.42
1:XA:674:G:N2	1:XA:717:C:O2	2.52	0.42
1:XA:825:G:H2'	1:XA:826:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:972:C:O3'	10:XJ:57:LYS:HG2	2.19	0.42
1:XA:1095:U:P	1:XA:1108:G:H22	2.43	0.42
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.53	0.42
1:XA:1312:G:C2	1:XA:1326:C:N3	2.88	0.42
1:XA:1336:C:O2'	1:XA:1337:G:O5'	2.37	0.42
1:XA:1413:A:C2	1:XA:1488:G:C2	3.08	0.42
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	2.01	0.42
4:XD:109:GLY:C	4:XD:111:ALA:N	2.76	0.42
5:XE:31:LEU:HD22	5:XE:31:LEU:HA	1.86	0.42
6:XF:36:ARG:NH2	6:XF:38:GLU:HG2	2.35	0.42
7:XG:24:THR:HA	7:XG:27:ILE:HD13	2.01	0.42
8:XH:95:VAL:O	8:XH:95:VAL:HG23	2.20	0.42
8:XH:105:ARG:O	8:XH:107:LEU:N	2.47	0.42
14:YN:9:LYS:HB3	14:YN:9:LYS:HE2	1.85	0.42
15:XO:54:ARG:NH1	15:XO:58:MET:SD	2.93	0.42
17:XQ:76:LEU:HD21	17:XQ:79:SER:HB2	2.01	0.42
19:XS:42:PRO:HD3	50:Y4:63:TYR:CE2	2.50	0.42
20:XT:99:LEU:O	20:XT:100:ILE:CB	2.68	0.42
25:YA:660:G:O3'	29:YF:38:ARG:NH2	2.52	0.42
25:YA:1061:U:H3'	25:YA:1062:G:C5'	2.50	0.42
25:YA:1252:G:O2'	25:YA:1253:A:H5''	2.20	0.42
25:YA:1607:C:N4	25:YA:1622:G:OP2	2.36	0.42
25:YA:2095:C:H2'	25:YA:2096:U:O4'	2.19	0.42
25:YA:2294:C:H2'	25:YA:2295:C:H6	1.84	0.42
26:YB:44:G:C2	26:YB:48:A:C2	3.07	0.42
28:YE:10:GLY:HA3	39:YT:8:LYS:HD3	2.02	0.42
30:YG:78:SER:O	30:YG:80:PHE:N	2.53	0.42
32:YI:128:LEU:HD13	32:YI:128:LEU:HA	1.68	0.42
33:YN:10:GLU:OE2	33:YN:11:PRO:CD	2.68	0.42
33:YN:30:ILE:HG22	33:YN:34:LEU:HD21	2.01	0.42
33:YN:52:VAL:CG1	33:YN:53:VAL:N	2.82	0.42
34:YO:2:ILE:N	34:YO:2:ILE:CD1	2.82	0.42
34:YO:116:SER:C	34:YO:118:ALA:N	2.76	0.42
35:YP:85:LEU:C	35:YP:87:ASP:N	2.77	0.42
35:YP:135:LEU:HD13	35:YP:139:LYS:HE3	2.01	0.42
39:YT:50:ILE:HD11	39:YT:102:ILE:HG12	2.01	0.42
39:YT:67:SER:O	39:YT:68:TYR:C	2.63	0.42
40:YU:35:ALA:O	40:YU:39:LEU:HG	2.19	0.42
44:YY:20:TYR:CE1	44:YY:42:VAL:HA	2.55	0.42
45:YZ:150:LEU:H	45:YZ:150:LEU:CD1	2.33	0.42
47:Y1:80:LEU:O	47:Y1:81:LYS:CD	2.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:Y6:24:GLU:HB3	52:Y6:25:LYS:H	1.56	0.42
53:Y7:25:PRO:HA	53:Y7:28:ARG:NH2	2.35	0.42
1:QA:177:C:H2'	1:QA:178:C:H6	1.85	0.41
1:QA:363:A:H2'	1:QA:364:A:O4'	2.20	0.41
1:QA:559:A:H4'	1:QA:560:U:C5'	2.50	0.41
1:QA:803:G:H2'	1:QA:804:U:O4'	2.20	0.41
1:QA:811:C:C5	1:QA:812:C:N4	2.88	0.41
1:QA:1305:G:O2'	1:QA:1306:A:P	2.78	0.41
2:QB:29:ALA:C	2:QB:31:TYR:H	2.27	0.41
2:QB:125:PRO:O	2:QB:126:GLU:HB2	2.20	0.41
2:QB:142:LEU:O	2:QB:145:LEU:HB2	2.19	0.41
2:QB: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
4:QD:31:CYS:O	4:QD:31:CYS:SG	2.78	0.41
4:QD:111:ALA:HB3	4:QD:117:ALA:HB2	2.02	0.41
4:QD:115:ARG:O	4:QD:116:GLN:C	2.63	0.41
6:QF:36:ARG:CZ	6:QF:38:GLU:HG2	2.50	0.41
7:QG:89:MET:CE	7:QG:156:TRP:H	2.22	0.41
8:QH:53:VAL:HG12	8:QH:54:ASP:OD2	2.20	0.41
8:QH:85:ARG:HA	8:QH:135:CYS:HB3	2.02	0.41
9:QI:8:GLY:CA	9:QI:79:LEU:HD12	2.49	0.41
10:QJ:29:ARG:O	10:QJ:30:SER:HB3	2.20	0.41
10:QJ:84:GLN:H	10:QJ:84:GLN:HG3	1.50	0.41
12:QL:61:THR:C	12:QL:63:GLY:H	2.27	0.41
12:QL:117:ARG:HB3	12:QL:122:THR:HB	2.02	0.41
14:QN:3:ARG:CG	14:QN:4:LYS:N	2.83	0.41
15:QO:54:ARG:NH1	15:QO:58:MET:SD	2.93	0.41
17:QQ:27:PHE:HA	17:QQ:28:PRO:HD3	1.92	0.41
17:QQ:52:LYS:O	17:QQ:53:LEU:C	2.63	0.41
25:RA:78:A:C2	25:RA:109:G:C2	3.08	0.41
25:RA:397:G:H1'	25:RA:2231:C:O2'	2.19	0.41
25:RA:415:A:N1	25:RA:2409:G:C6	2.88	0.41
25:RA:452:G:C6	25:RA:453:C:N4	2.88	0.41
25:RA:510:C:H2'	25:RA:511:U:O4'	2.20	0.41
25:RA:1053:C:C4	25:RA:1054:A:N7	2.88	0.41
25:RA:1677:A:H2'	25:RA:1678:G:C8	2.54	0.41
25:RA:1798:U:H5''	27:RD:259:THR:HG22	2.01	0.41
25:RA:2399:G:C6	25:RA:2418:A:C6	3.08	0.41
25:RA:2469:A:H3'	25:RA:2470:G:H8	1.83	0.41
25:RA:2620:C:O5'	25:RA:2620:C:H6	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2837:G:O5'	25:RA:2837:G:H8	2.03	0.41
26:RB:116:G:H5'	38:RS:55:ALA:HA	2.02	0.41
28:RE:144:ARG:HB3	28:RE:145:LYS:H	1.58	0.41
28:RE:176:ILE:HD12	28:RE:176:ILE:N	2.35	0.41
31:RH:128:PRO:CG	31:RH:129:THR:H	2.33	0.41
32:RI:135:GLU:HB2	32:RI:136:VAL:H	1.55	0.41
34:RO:86:ILE:N	34:RO:86:ILE:CD1	2.83	0.41
36:RQ:20:ALA:HA	36:RQ:98:LYS:HB3	2.02	0.41
39:RT:96:ARG:HB2	39:RT:96:ARG:CZ	2.49	0.41
39:RT:123:GLN:O	39:RT:124:ASP:C	2.63	0.41
41:RV:21:ARG:HD2	41:RV:91:TYR:CE2	2.55	0.41
43:RX:60:ARG:HH12	53:R7:47:ARG:HH22	1.67	0.41
43:RX:60:ARG:HA	43:RX:75:ASP:OD2	2.20	0.41
44:RY:41:GLY:O	44:RY:42:VAL:C	2.63	0.41
44:RY:91:GLU:CG	44:RY:92:ASN:N	2.83	0.41
44:RY:97:ARG:NE	44:RY:97:ARG:C	2.78	0.41
45:RZ:71:VAL:HB	45:RZ:88:PHE:CE2	2.55	0.41
47:R1:29:GLY:O	47:R1:31:GLY:N	2.49	0.41
52:R6:41:PRO:HG3	52:R6:44:ARG:HB2	2.01	0.41
53:R7:25:PRO:HA	53:R7:28:ARG:NH2	2.35	0.41
1:XA:104:G:C4	1:XA:105:G:C8	3.08	0.41
1:XA:113:G:H2'	1:XA:114:U:C6	2.54	0.41
1:XA:1104:G:H2'	1:XA:1105:A:O4'	2.20	0.41
2:XB:99:GLY:O	2:XB:108:ILE:HD11	2.19	0.41
3:XC:59:ARG:NH1	3:XC:97:LYS:HE3	2.34	0.41
4:XD:94:LEU:HA	4:XD:97:LEU:HD12	2.01	0.41
4:XD:198:VAL:CG1	4:XD:199:ASN:H	2.32	0.41
7:XG:21:VAL:O	7:XG:22:LEU:C	2.62	0.41
11:XK:72:ALA:HB1	11:XK:77:MET:HG2	2.02	0.41
14:XN:3:ARG:CG	14:XN:4:LYS:N	2.83	0.41
15:XO:50:HIS:O	15:XO:53:HIS:HB3	2.20	0.41
17:XQ:74:LEU:HD13	17:XQ:74:LEU:O	2.20	0.41
19:XS:41:VAL:HG11	19:XS:45:VAL:HG13	2.02	0.41
25:YA:1282:U:H2'	25:YA:1283:G:O4'	2.20	0.41
25:YA:1316:U:H1'	25:YA:1392:A:H2	1.85	0.41
25:YA:1322:A:C5	25:YA:1323:U:C5	3.08	0.41
25:YA:1350:C:N3	25:YA:1382:G:C2	2.88	0.41
25:YA:1408:C:C2	25:YA:1595:G:N2	2.88	0.41
25:YA:1682:G:C5	25:YA:1683:C:C4	3.07	0.41
25:YA:1778:U:O2'	25:YA:1779:U:H5'	2.20	0.41
25:YA:1816:G:N7	27:YD:62:TYR:CE1	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1826:G:H4'	27:YD:242:ARG:NH2	2.31	0.41
25:YA:1925:C:C2'	25:YA:1926:U:H5'	2.49	0.41
25:YA:1999:C:H5''	25:YA:2723:C:O2'	2.20	0.41
25:YA:2037:G:H2'	25:YA:2038:G:H8	1.79	0.41
25:YA:2080:G:N2	25:YA:2241:A:C4	2.87	0.41
25:YA:2309:A:C8	25:YA:2309:A:H3'	2.55	0.41
25:YA:2837:G:C5	25:YA:2838:G:N7	2.88	0.41
26:YB:87:G:C2	26:YB:90:C:N3	2.88	0.41
27:YD:9:TYR:CZ	27:YD:13:ARG:HD3	2.54	0.41
27:YD:109:ASP:HB2	27:YD:197:GLY:HA2	2.02	0.41
28:YE:4:ILE:HG22	28:YE:198:VAL:HB	2.02	0.41
30:YG:41:GLN:NE2	30:YG:154:GLY:O	2.52	0.41
30:YG:51:ARG:C	30:YG:53:LEU:H	2.28	0.41
33:YN:58:ASP:HB3	33:YN:95:PRO:HB3	2.02	0.41
34:YO:31:LYS:O	34:YO:32:TYR:HD2	2.03	0.41
34:YO:61:VAL:O	34:YO:61:VAL:HG13	2.18	0.41
35:YP:42:SER:O	35:YP:43:GLY:C	2.63	0.41
35:YP:114:ILE:CD1	35:YP:130:PHE:CE1	2.98	0.41
35:YP:115:LEU:HB3	35:YP:131:SER:HB2	2.02	0.41
36:YQ:34:LEU:HD23	36:YQ:104:PHE:CD1	2.55	0.41
38:YS:49:VAL:HG21	38:YS:77:ALA:HA	2.02	0.41
38:YS:92:TYR:HB2	38:YS:98:VAL:HG11	2.02	0.41
41:YV:35:LEU:HB2	41:YV:37:VAL:CG2	2.49	0.41
41:YV:72:VAL:HG13	41:YV:72:VAL:O	2.19	0.41
43:YX:57:LEU:HD12	43:YX:57:LEU:H	1.85	0.41
43:YX:60:ARG:HH22	53:Y7:47:ARG:HH12	1.68	0.41
45:YZ:100:VAL:HA	45:YZ:101:PRO:HD3	1.86	0.41
50:Y4:6:HIS:O	50:Y4:7:PRO:C	2.63	0.41
50:Y4:49:PHE:N	50:Y4:49:PHE:HD1	2.17	0.41
51:Y5:35:GLU:O	51:Y5:36:CYS:C	2.63	0.41
1:QA:634:C:O2'	1:QA:635:G:H5'	2.20	0.41
1:QA:1004:A:C8	1:QA:1026:G:N7	2.89	0.41
1:QA:1084:G:H2'	1:QA:1085:U:C6	2.55	0.41
2:QB:231:GLU:HG3	2:QB:233:SER:H	1.86	0.41
4:QD:9:CYS:SG	4:QD:31:CYS:C	2.99	0.41
4:QD:178:VAL:O	4:QD:179:GLU:C	2.63	0.41
5:QE:26:PHE:CD1	5:QE:26:PHE:N	2.87	0.41
7:QG:17:VAL:HG12	7:QG:18:TYR:CD1	2.55	0.41
8:QH:21:LYS:O	8:QH:22:GLU:C	2.63	0.41
12:QL:10:LEU:CD1	17:QQ:32:TYR:CD2	3.03	0.41
13:QM:82:MET:HE3	13:QM:93:ARG:CG	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:88:ARG:HD2	13:QM:88:ARG:O	2.19	0.41
14:QN:9:LYS:HG2	14:QN:9:LYS:O	2.19	0.41
14:QN:41:ARG:HG3	14:QN:42:ILE:N	2.35	0.41
22:QV:23:C:H2'	22:QV:24:U:C6	2.55	0.41
25:RA:270(E):G:C2	25:RA:270(F):U:C2	3.08	0.41
25:RA:270(I):G:H2'	25:RA:270(J):G:H8	1.86	0.41
25:RA:328:U:H4'	44:RY:68:HIS:NE2	2.35	0.41
25:RA:432:A:H2'	25:RA:433:C:O4'	2.20	0.41
25:RA:544:C:C2	25:RA:550:G:N2	2.88	0.41
25:RA:825:C:O2'	25:RA:2428:G:H2'	2.20	0.41
25:RA:1229(A):G:C6	25:RA:1230:C:C4	3.09	0.41
25:RA:1535:U:H5''	25:RA:1537:C:C4	2.55	0.41
25:RA:1783:A:C6	25:RA:2587:A:C2	3.08	0.41
25:RA:1824:G:OP1	27:RD:52:ARG:HD3	2.21	0.41
25:RA:2397:G:H5''	47:R1:28:GLY:HA2	2.01	0.41
25:RA:2712:U:H1'	25:RA:2712(A):A:N7	2.35	0.41
26:RB:31:C:C2'	26:RB:32:C:H5'	2.50	0.41
28:RE:25:VAL:CG1	39:RT:11:GLU:HG2	2.50	0.41
28:RE:152:LYS:HG2	33:RN:78:TYR:CD1	2.55	0.41
29:RF:42:ALA:O	29:RF:45:ARG:HB2	2.18	0.41
29:RF:198:ALA:HA	29:RF:201:VAL:CG1	2.41	0.41
30:RG:110:ALA:O	30:RG:111:LEU:C	2.62	0.41
33:RN:7:LYS:C	33:RN:9:VAL:H	2.28	0.41
38:RS:64:GLU:O	38:RS:68:GLN:HG3	2.19	0.41
38:RS:99:LYS:HE2	38:RS:103:GLU:OE2	2.20	0.41
41:RV:16:PRO:HB3	41:RV:97:LYS:O	2.20	0.41
47:R1:92:LYS:C	47:R1:94:LEU:H	2.27	0.41
48:R2:50:ILE:H	48:R2:50:ILE:HG13	1.64	0.41
51:R5:40:LYS:HE2	51:R5:47:PRO:CG	2.49	0.41
52:R6:6:ARG:HA	52:R6:6:ARG:NE	2.35	0.41
1:XA:198:G:N7	1:XA:220:G:N2	2.68	0.41
1:XA:414:A:H2'	1:XA:415:A:H8	1.83	0.41
1:XA:416:G:H2'	1:XA:417:C:C6	2.55	0.41
1:XA:428:G:O4'	1:XA:430:A:C8	2.74	0.41
1:XA:695:A:OP1	11:XK:52:GLY:HA3	2.20	0.41
1:XA:891:U:C2	1:XA:892:A:C8	3.08	0.41
1:XA:1126:U:H1'	1:XA:1280:A:C5	2.55	0.41
1:XA:1226:C:H4'	19:XS:80:TYR:CZ	2.55	0.41
2:XB:60:ASP:C	2:XB:62:ALA:H	2.28	0.41
3:XC:76:VAL:CG2	3:XC:103:VAL:HG11	2.49	0.41
3:XC:113:ALA:HB3	3:XC:114:PRO:CD	2.43	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:96:LEU:O	4:XD:97:LEU:C	2.63	0.41
5:XE:51:VAL:CB	5:XE:52:PRO:HD3	2.38	0.41
7:XG:44:TYR:O	7:XG:47:CYS:N	2.53	0.41
7:XG:87:VAL:HG11	7:XG:155:ARG:HA	2.03	0.41
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	2.02	0.41
12:XL:89:ARG:HB3	12:XL:97:ARG:HA	2.02	0.41
13:XM:77:ASN:HA	50:Y4:71:ARG:HH22	1.71	0.41
14:XN:18:VAL:CG2	14:XN:19:ARG:N	2.82	0.41
20:XT:14:LYS:O	20:XT:15:ARG:C	2.62	0.41
20:XT:74:LYS:C	20:XT:76:ALA:N	2.77	0.41
25:YA:458:G:O2'	53:Y7:39:ARG:HD3	2.20	0.41
25:YA:570:G:H2'	25:YA:2030:A:C6	2.55	0.41
25:YA:588:U:H1'	29:YF:90:PHE:CG	2.55	0.41
25:YA:630:G:H4'	25:YA:640:C:H4'	2.02	0.41
25:YA:680:G:C4	25:YA:798:G:N2	2.88	0.41
25:YA:684:G:C4	25:YA:794:G:N2	2.88	0.41
25:YA:928:G:O6	25:YA:929:G:C2	2.73	0.41
25:YA:1053:C:C4	25:YA:1054:A:C8	3.08	0.41
25:YA:1169:G:H1	25:YA:1180:C:N4	2.18	0.41
25:YA:1717:G:H2'	25:YA:1718:G:O4'	2.20	0.41
25:YA:1769:G:C2	25:YA:1984:G:C5	3.08	0.41
25:YA:1936:A:C8	25:YA:1940:U:O2	2.73	0.41
25:YA:2263:C:O2	25:YA:2277:G:N2	2.35	0.41
25:YA:2766:G:C2	25:YA:2767:C:C5	3.08	0.41
25:YA:2816:C:H2'	25:YA:2817:G:H8	1.85	0.41
25:YA:2887:U:C2	25:YA:2888:C:C5	3.08	0.41
26:YB:110:G:C5	26:YB:111:U:C6	3.08	0.41
28:YE:35:GLN:HG3	28:YE:37:ARG:NH2	2.35	0.41
29:YF:80:ALA:O	29:YF:83:PHE:HB2	2.20	0.41
31:YH:84:SER:OG	31:YH:85:LYS:N	2.51	0.41
34:YO:17:ARG:HG2	34:YO:17:ARG:HH11	1.84	0.41
35:YP:81:GLN:HE21	35:YP:81:GLN:HB2	1.59	0.41
36:YQ:118:LEU:HD13	36:YQ:131:ILE:HG23	2.02	0.41
39:YT:24:PRO:HA	39:YT:49:VAL:CG1	2.39	0.41
39:YT:123:GLN:O	39:YT:124:ASP:C	2.63	0.41
41:YV:15:GLU:O	41:YV:96:ILE:HB	2.19	0.41
41:YV:44:LYS:C	41:YV:46:VAL:N	2.77	0.41
52:Y6:41:PRO:HG3	52:Y6:44:ARG:HB2	2.02	0.41
1:QA:16:A:N1	1:QA:919:A:C2	2.88	0.41
1:QA:128:G:C6	1:QA:129:U:C5	3.09	0.41
1:QA:378:G:O2'	1:QA:379:C:H5'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:849:C:H2'	1:QA:850:U:O4'	2.20	0.41
1:QA:965:A:C2	1:QA:969:A:C2	3.09	0.41
1:QA:1099:G:C6	1:QA:1100:C:N3	2.89	0.41
1:QA:1316:G:N2	1:QA:1318:A:H3'	2.35	0.41
1:QA:1348:U:N3	1:QA:1374:A:H2	2.18	0.41
5:QE:56:GLN:C	5:QE:58:ALA:N	2.78	0.41
8:QH:11:THR:HA	8:QH:14:ARG:NH1	2.35	0.41
9:QI:118:LYS:NZ	9:QI:118:LYS:HB3	2.34	0.41
11:QK:92:GLU:O	11:QK:95:ILE:N	2.54	0.41
13:QM:80:ARG:NH1	19:QS:65:ASN:O	2.51	0.41
14:QN:22:THR:HB	14:QN:33:VAL:CG1	2.50	0.41
15:QO:83:GLU:O	15:QO:84:LYS:C	2.63	0.41
16:QP:22:THR:HB	16:QP:32:TYR:HB3	2.03	0.41
17:QQ:11:VAL:CG2	17:QQ:20:THR:HB	2.50	0.41
19:QS:10:PHE:CD2	19:QS:10:PHE:C	2.98	0.41
20:QT:50:GLU:HA	20:QT:100:ILE:HG22	2.02	0.41
23:QX:4:C:H2'	23:QX:4:C:O2	2.20	0.41
25:RA:648:G:H1'	25:RA:2351:G:OP1	2.20	0.41
25:RA:709:U:H2'	25:RA:710:G:H8	1.85	0.41
25:RA:816:C:C4	25:RA:1192:G:C2	3.07	0.41
25:RA:834:C:H2'	25:RA:835:A:H8	1.85	0.41
25:RA:1389:G:C2	25:RA:1399:C:O2	2.72	0.41
25:RA:1437:C:N4	25:RA:1438:U:O4	2.53	0.41
25:RA:1569:A:H2'	25:RA:1570:A:O4'	2.20	0.41
25:RA:2259:G:C2	25:RA:2282:G:C2	3.08	0.41
25:RA:2621:A:OP1	28:RE:119:ARG:NH2	2.53	0.41
26:RB:45:A:C4'	30:RG:95:ARG:NH1	2.83	0.41
27:RD:13:ARG:HG2	27:RD:13:ARG:O	2.20	0.41
27:RD:166:GLN:CA	27:RD:166:GLN:NE2	2.78	0.41
28:RE:13:ARG:HH11	28:RE:13:ARG:HB2	1.82	0.41
28:RE:35:GLN:HG3	28:RE:37:ARG:NH2	2.35	0.41
30:RG:53:LEU:CD1	30:RG:87:PRO:HB2	2.51	0.41
31:RH:86:GLU:HG3	31:RH:165:ALA:CA	2.49	0.41
32:RI:94:ALA:HB1	32:RI:114:LEU:HD23	2.02	0.41
33:RN:62:VAL:CG1	33:RN:66:LYS:HB2	2.51	0.41
34:RO:31:LYS:HA	34:RO:31:LYS:HD3	1.92	0.41
35:RP:18:ARG:HD2	35:RP:27:HIS:CD2	2.56	0.41
40:RU:83:LEU:HG	40:RU:88:ILE:HG13	2.02	0.41
40:RU:91:ASP:OD2	40:RU:96:ALA:CA	2.68	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:HB1	2.50	0.41
45:RZ:94:GLU:HG3	45:RZ:129:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:R1:29:GLY:C	47:R1:30:VAL:HG23	2.43	0.41
50:R4:45:GLY:O	50:R4:46:GLN:C	2.62	0.41
1:XA:29:G:N2	1:XA:554:C:O2	2.40	0.41
1:XA:186:C:C5'	20:XT:78:ALA:HB1	2.49	0.41
1:XA:776:G:O2'	1:XA:777:A:C8	2.74	0.41
1:XA:1240:U:O2'	7:XG:38:LEU:HD23	2.19	0.41
1:XA:1250:A:H2'	1:XA:1251:A:C8	2.54	0.41
1:XA:1336:C:O2	1:XA:1336:C:H2'	2.20	0.41
1:XA:1347:G:H22	1:XA:1373:G:H2'	1.86	0.41
2:XB:166:ASP:O	2:XB:170:GLU:OE1	2.39	0.41
3:XC:88:ARG:NH2	3:XC:101:LEU:O	2.53	0.41
3:XC:120:VAL:O	3:XC:121:ALA:C	2.63	0.41
3:XC:142:MET:HG2	3:XC:149:ALA:HB2	2.02	0.41
6:XF:67:MET:HB2	6:XF:68:PRO:CD	2.47	0.41
7:XG:23:VAL:O	7:XG:24:THR:C	2.62	0.41
9:XI:118:LYS:NZ	9:XI:118:LYS:HB3	2.34	0.41
12:XL:53:ARG:HH12	12:XL:92:ASP:HB3	1.85	0.41
13:XM:77:ASN:O	13:XM:78:ILE:C	2.62	0.41
13:XM:82:MET:HE3	13:XM:93:ARG:CG	2.50	0.41
14:XN:22:THR:HB	14:XN:33:VAL:CG1	2.50	0.41
16:XP:9:PHE:HB3	16:XP:10:GLY:H	1.64	0.41
16:XP:21:VAL:HG21	16:XP:59:TRP:NE1	2.35	0.41
17:XQ:22:LEU:HD13	17:XQ:41:LYS:HG2	2.01	0.41
17:XQ:78:GLU:O	17:XQ:79:SER:C	2.61	0.41
25:YA:237:C:H2'	25:YA:238:C:H6	1.84	0.41
25:YA:479:A:C2	25:YA:481:G:H5''	2.56	0.41
25:YA:503:A:C6	25:YA:506:G:C6	3.08	0.41
25:YA:624:C:H5''	25:YA:624:C:C6	2.55	0.41
25:YA:1332:G:H8	25:YA:1332:G:H2'	1.46	0.41
25:YA:1589:C:H2'	25:YA:1590:U:C6	2.55	0.41
25:YA:1651:G:C2	25:YA:2007:C:N3	2.89	0.41
25:YA:1697:G:OP2	25:YA:1698:A:O2'	2.27	0.41
25:YA:1747:G:O2'	25:YA:1748:G:H5'	2.20	0.41
25:YA:1767:C:H2'	25:YA:1768:U:O4'	2.20	0.41
25:YA:1799:G:H5'	25:YA:1819:A:H61	1.85	0.41
25:YA:1857:G:N2	25:YA:1886:C:N4	2.68	0.41
25:YA:2584:U:H4'	56:Z8:76:PPU:C5	2.49	0.41
25:YA:2630:G:C2	25:YA:2631:G:C4	3.07	0.41
25:YA:2693:A:H2'	25:YA:2694:G:H8	1.85	0.41
27:YD:14:ARG:CG	27:YD:15:PHE:N	2.83	0.41
27:YD:134:ARG:H	27:YD:134:ARG:HG3	1.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:182:LEU:N	27:YD:272:ALA:HB3	2.32	0.41
29:YF:53:THR:O	29:YF:55:GLY:N	2.53	0.41
29:YF:160:ASN:CG	29:YF:163:VAL:HG23	2.45	0.41
29:YF:176:LEU:HD11	29:YF:180:GLY:O	2.19	0.41
32:YI:3:VAL:HG12	32:YI:38:LEU:HA	2.02	0.41
32:YI:88:ILE:H	32:YI:122:GLU:H	1.69	0.41
35:YP:49:ARG:HG2	35:YP:49:ARG:HH11	1.84	0.41
38:YS:51:ALA:HB3	38:YS:73:LEU:HD23	2.01	0.41
39:YT:23:ARG:CB	39:YT:24:PRO:HD2	2.40	0.41
39:YT:62:THR:HG22	39:YT:75:ILE:CG1	2.35	0.41
39:YT:77:PRO:C	39:YT:79:HIS:H	2.28	0.41
39:YT:134:GLU:O	39:YT:135:ALA:CB	2.69	0.41
40:YU:83:LEU:HG	40:YU:88:ILE:HG13	2.02	0.41
40:YU:92:ARG:NH2	41:YV:11:GLN:O	2.53	0.41
40:YU:97:ASP:HA	40:YU:100:VAL:HG23	2.02	0.41
41:YV:29:PRO:C	41:YV:61:VAL:HG22	2.44	0.41
42:YW:8:ARG:HG3	42:YW:8:ARG:NH1	2.34	0.41
42:YW:73:ALA:HB3	42:YW:106:ILE:CG1	2.46	0.41
44:YY:6:HIS:O	44:YY:7:VAL:CG1	2.59	0.41
45:YZ:10:ARG:NH2	45:YZ:26:GLY:H	2.16	0.41
51:Y5:41:PRO:HA	51:Y5:42:PRO:HD3	1.82	0.41
1:QA:354:G:H2'	1:QA:355:C:H5'	2.01	0.41
1:QA:521:G:O5'	12:QL:73:GLU:HG3	2.20	0.41
1:QA:675:A:H2'	1:QA:676:A:O4'	2.19	0.41
1:QA:765:G:H5''	1:QA:766:A:OP1	2.20	0.41
1:QA:858:G:H8	1:QA:858:G:OP2	2.03	0.41
1:QA:1227:A:OP2	13:QM:111:LYS:HE3	2.20	0.41
1:QA:1253:G:H2'	1:QA:1254:C:C6	2.56	0.41
1:QA:1381:U:C4	1:QA:1382:C:C4	3.09	0.41
1:QA:1394:A:H4'	1:QA:1395:C:OP2	2.20	0.41
2:QB:97:TRP:HZ3	2:QB:172:ILE:HG22	1.85	0.41
4:QD:30:LYS:HB3	4:QD:35:ARG:CG	2.36	0.41
4:QD:88:VAL:O	4:QD:89:THR:C	2.62	0.41
4:QD:101:LEU:CD2	4:QD:121:VAL:HG11	2.50	0.41
7:QG:92:SER:HB3	7:QG:95:ARG:HB2	2.03	0.41
7:QG:141:VAL:O	7:QG:141:VAL:CG1	2.65	0.41
8:QH:122:ARG:HG3	8:QH:122:ARG:HH11	1.85	0.41
9:QI:83:ARG:HA	9:QI:86:VAL:HG12	2.02	0.41
10:QJ:45:ARG:HG3	10:QJ:45:ARG:HH11	1.86	0.41
13:QM:119:GLY:O	13:QM:120:LYS:O	2.39	0.41
14:QN:48:ALA:HA	14:QN:53:LEU:HD12	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:20:VAL:HG22	16:QP:21:VAL:H	1.83	0.41
17:QQ:74:LEU:HD13	17:QQ:74:LEU:O	2.20	0.41
20:QT:95:ALA:O	20:QT:97:ALA:N	2.53	0.41
22:QV:53:G:HO2'	22:QV:54:U:H6	1.67	0.41
25:RA:9:U:O4	25:RA:2629:A:C8	2.74	0.41
25:RA:142:G:H1'	43:RX:37:THR:CG2	2.50	0.41
25:RA:270(A):A:O2'	25:RA:270(B):A:H5'	2.19	0.41
25:RA:527:C:H2'	25:RA:2779:U:C5	2.56	0.41
25:RA:534:U:O2	40:RU:49:HIS:HE1	2.04	0.41
25:RA:871:U:OP1	36:RQ:5:ARG:HG2	2.21	0.41
25:RA:1371:G:H8	25:RA:1371:G:O5'	2.03	0.41
25:RA:2037:G:C6	25:RA:2038:G:C6	3.08	0.41
25:RA:2257:U:C4	25:RA:2258:C:N4	2.88	0.41
25:RA:2413:G:N2	25:RA:2414:G:H1'	2.35	0.41
25:RA:2439:A:H5'	25:RA:2439:A:H8	1.78	0.41
26:RB:109:G:C6	26:RB:110:G:C5	3.09	0.41
27:RD:269:PHE:CD2	27:RD:269:PHE:N	2.88	0.41
28:RE:179:GLU:CB	28:RE:181:LEU:HD23	2.23	0.41
29:RF:53:THR:O	29:RF:55:GLY:N	2.53	0.41
30:RG:135:LEU:N	30:RG:135:LEU:CD1	2.84	0.41
33:RN:21:LYS:O	33:RN:22:THR:O	2.39	0.41
33:RN:52:VAL:CG1	33:RN:53:VAL:N	2.82	0.41
35:RP:64:LYS:HG3	54:R8:25:MET:CE	2.50	0.41
36:RQ:34:LEU:HD23	36:RQ:104:PHE:CD1	2.55	0.41
37:RR:28:LEU:HD12	37:RR:29:LEU:HD12	2.01	0.41
39:RT:134:GLU:O	39:RT:135:ALA:CB	2.69	0.41
41:RV:38:LEU:CD1	41:RV:55:ALA:CB	2.99	0.41
41:RV:38:LEU:CD2	41:RV:39:LEU:N	2.82	0.41
41:RV:44:LYS:C	41:RV:46:VAL:H	2.29	0.41
44:RY:5:MET:CE	44:RY:32:PRO:HB3	2.51	0.41
46:R0:48:GLY:H	46:R0:51:VAL:HB	1.86	0.41
54:R8:16:ILE:HD11	54:R8:57:ARG:CG	2.44	0.41
1:XA:20:U:H2'	1:XA:21:G:O4'	2.21	0.41
1:XA:114:U:H2'	1:XA:115:G:C8	2.55	0.41
1:XA:133:U:OP1	20:XT:74:LYS:NZ	2.40	0.41
1:XA:147:G:C4	1:XA:148:G:C8	3.08	0.41
1:XA:164:U:H2'	1:XA:165:C:C6	2.55	0.41
1:XA:233:C:H2'	1:XA:234:C:H6	1.86	0.41
1:XA:254:G:O2'	17:XQ:16:GLN:O	2.37	0.41
1:XA:358:U:H2'	1:XA:359:U:O4'	2.20	0.41
1:XA:571:U:O2	1:XA:918:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:683:G:C6	1:XA:684:A:C6	3.08	0.41
1:XA:779:C:H4'	11:XK:121:PRO:O	2.20	0.41
1:XA:836:G:C6	1:XA:851:G:C6	3.08	0.41
1:XA:969:A:C2	1:XA:970:C:C2	3.08	0.41
1:XA:1191:A:OP1	3:XC:4:LYS:HG3	2.20	0.41
1:XA:1296:C:H1'	1:XA:1302:U:H5	1.84	0.41
1:XA:1316:G:H5''	14:XN:17:LYS:CE	2.50	0.41
1:XA:1392:G:O2'	1:XA:1502:A:OP1	2.36	0.41
2:XB:12:GLU:C	2:XB:14:GLY:H	2.29	0.41
2:XB:23:ARG:H	2:XB:23:ARG:CD	2.30	0.41
2:XB:130:ARG:HH22	2:XB:138:LEU:HD21	1.85	0.41
3:XC:59:ARG:HH12	3:XC:97:LYS:CE	2.33	0.41
3:XC:128:PHE:O	3:XC:130:VAL:N	2.54	0.41
4:XD:115:ARG:O	4:XD:116:GLN:C	2.63	0.41
5:XE:144:THR:C	5:XE:146:ALA:N	2.76	0.41
7:XG:101:LEU:O	7:XG:104:LEU:HB2	2.20	0.41
7:XG:141:VAL:O	7:XG:141:VAL:CG1	2.65	0.41
8:XH: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
10:XJ:45:ARG:HG3	10:XJ:45:ARG:HH11	1.86	0.41
11:XK:56:GLY:O	11:XK:89:ALA:HB3	2.21	0.41
11:XK:124:LYS:HB3	11:XK:125:PHE:CD1	2.47	0.41
17:XQ:11:VAL:HG23	17:XQ:12:SER:N	2.35	0.41
18:XR: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
18:XR:84:LYS:H	18:XR:84:LYS:HG2	1.56	0.41
25:YA:422:A:C6	25:YA:423:A:C6	3.08	0.41
25:YA:1200:C:H1'	40:YU:2:PRO:HG2	2.02	0.41
25:YA:1216:G:OP2	40:YU:12:ARG:NH2	2.43	0.41
25:YA:1448:G:H1'	25:YA:1528:A:N6	2.35	0.41
25:YA:1449:A:N3	25:YA:1530:G:H1'	2.35	0.41
25:YA:1764:G:C5	25:YA:1989:G:N2	2.89	0.41
25:YA:1869:G:N2	25:YA:1878:G:C5	2.88	0.41
25:YA:1922:G:C2'	25:YA:1923:U:H5'	2.50	0.41
25:YA:1984:G:C2	25:YA:1985:G:C8	3.08	0.41
25:YA:2081:C:C5	25:YA:2237:G:N2	2.88	0.41
25:YA:2355:C:H5''	25:YA:2356:C:OP2	2.20	0.41
25:YA:2572:A:N3	28:YE:144:ARG:NH2	2.68	0.41
25:YA:2581:G:H2'	25:YA:2581:G:N3	2.36	0.41
25:YA:2616:C:O2	25:YA:2616:C:H2'	2.19	0.41
26:YB:106:G:C2	26:YB:107:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:145:VAL:CG1	27:YD:146:GLU:N	2.84	0.41
28:YE:167:VAL:CG1	28:YE:189:PRO:HD3	2.50	0.41
28:YE:186:GLY:C	28:YE:188:VAL:H	2.28	0.41
29:YF:20:LEU:HD12	29:YF:21:ALA:N	2.26	0.41
30:YG:51:ARG:NH1	30:YG:51:ARG:CB	2.82	0.41
30:YG:180:PHE:C	30:YG:182:LYS:N	2.76	0.41
31:YH:76:VAL:C	31:YH:78:GLY:N	2.78	0.41
32:YI:112:LYS:H	32:YI:112:LYS:HG2	1.39	0.41
33:YN:7:LYS:C	33:YN:9:VAL:H	2.28	0.41
33:YN:109:LYS:N	33:YN:109:LYS:CD	2.83	0.41
33:YN:113:GLY:C	33:YN:114:ARG:O	2.58	0.41
35:YP:39:LYS:HA	35:YP:45:LEU:HD11	1.83	0.41
36:YQ:80:GLU:OE1	46:Y0:7:LEU:HG	2.20	0.41
36:YQ:132:VAL:HG11	45:YZ:81:ARG:NH1	2.35	0.41
37:YR:55:ALA:HA	37:YR:80:PHE:CE2	2.55	0.41
39:YT:134:GLU:OE1	39:YT:135:ALA:N	2.53	0.41
41:YV:16:PRO:HB3	41:YV:97:LYS:O	2.20	0.41
42:YW:25:ARG:NH1	42:YW:25:ARG:CB	2.79	0.41
43:YX:31:HIS:HA	43:YX:32:PRO:HD3	1.88	0.41
44:YY:41:GLY:O	44:YY:42:VAL:C	2.63	0.41
44:YY:95:LYS:H	44:YY:95:LYS:CD	2.32	0.41
49:Y3:37:LEU:HD23	49:Y3:37:LEU:N	2.35	0.41
50:Y4:48:ARG:O	50:Y4:49:PHE:C	2.63	0.41
54:Y8:53:PRO:C	54:Y8:55:ALA:N	2.76	0.41
1:QA:258:G:H1	1:QA:268:C:H42	1.68	0.41
1:QA:590:C:O2'	1:QA:591:U:H5'	2.21	0.41
1:QA:935:A:N6	7:QG:3:ARG:HG3	2.36	0.41
1:QA:1064:G:O2'	1:QA:1065:U:P	2.77	0.41
1:QA:1072:G:OP1	5:QE:49:PRO:HD2	2.20	0.41
1:QA:1234:C:C4'	1:QA:1364:U:H1'	2.50	0.41
1:QA:1504:G:H4'	1:QA:1505:G:O4'	2.20	0.41
2:QB:166:ASP:O	2:QB:170:GLU:OE1	2.38	0.41
2:QB:200:ILE:CG2	2:QB:201:ILE:N	2.83	0.41
4:QD:96:LEU:O	4:QD:97:LEU:C	2.64	0.41
5:QE:144:THR:O	5:QE:145:LYS:C	2.63	0.41
6:QF:101:ALA:HA	18:QR:28:GLU:CD	2.46	0.41
7:QG:79:ARG:CZ	7:QG:82:GLY:HA2	2.51	0.41
11:QK:20:TYR:N	11:QK:31:THR:O	2.54	0.41
11:QK:22:HIS:HB3	11:QK:29:ILE:HG22	2.03	0.41
11:QK:56:GLY:O	11:QK:89:ALA:HB3	2.21	0.41
25:RA:121:G:H1'	25:RA:148:C:C2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:363:G:H2'	25:RA:363(A):A:H8	1.84	0.41
25:RA:685:A:H5''	25:RA:788:A:H62	1.86	0.41
25:RA:686:G:C2	53:R7:11:LYS:HE3	2.54	0.41
25:RA:871:U:H2'	25:RA:872:A:C8	2.55	0.41
25:RA:1021:A:C8	25:RA:1021:A:C3'	3.03	0.41
25:RA:1085:A:O2'	25:RA:1086:A:P	2.78	0.41
25:RA:1337:G:O5'	25:RA:1337:G:H8	2.02	0.41
25:RA:1451:C:H4'	25:RA:1453:A:H5'	2.03	0.41
25:RA:1565:C:C2	25:RA:1567:A:C8	3.08	0.41
25:RA:1820:U:O2	27:RD:202:LYS:N	2.53	0.41
25:RA:2318:G:N2	38:RS:2:ALA:HA	2.35	0.41
25:RA:2456:C:C4	25:RA:2457:U:C5	3.08	0.41
25:RA:2572:A:N3	28:RE:144:ARG:NH2	2.68	0.41
26:RB:31:C:H2'	26:RB:32:C:H5'	2.02	0.41
27:RD:2:ALA:O	27:RD:3:VAL:CB	2.68	0.41
27:RD:68:LYS:HG3	27:RD:68:LYS:O	2.20	0.41
27:RD:75:ILE:HG21	27:RD:99:ASP:HB2	2.02	0.41
27:RD:134:ARG:HD3	27:RD:135:PHE:HE2	1.82	0.41
27:RD:158:ALA:O	27:RD:196:VAL:HG11	2.21	0.41
29:RF:118:ALA:C	29:RF:120:GLU:N	2.78	0.41
29:RF:133:ASN:O	29:RF:134:GLY:C	2.63	0.41
30:RG:77:ILE:H	30:RG:82:LEU:HB2	1.84	0.41
30:RG:117:PHE:CE1	30:RG:119:GLY:CA	3.03	0.41
32:RI:29:TYR:O	32:RI:33:ARG:HB2	2.21	0.41
32:RI:37:VAL:HG12	32:RI:38:LEU:HD12	2.03	0.41
35:RP:146:VAL:C	35:RP:147:LEU:HD22	2.45	0.41
36:RQ:80:GLU:C	36:RQ:81:VAL:CG1	2.89	0.41
38:RS:61:ASN:OD1	38:RS:63:THR:OG1	2.29	0.41
42:RW:55:ALA:O	42:RW:58:ALA:HB3	2.21	0.41
44:RY:20:TYR:C	44:RY:21:LYS:O	2.62	0.41
44:RY:86:ARG:HD2	44:RY:86:ARG:HA	1.91	0.41
46:R0:70:GLN:NE2	46:R0:72:ARG:HD3	2.36	0.41
48:R2:61:LEU:HD23	48:R2:64:LEU:HD12	2.03	0.41
50:R4:12:ALA:HB1	50:R4:30:GLU:N	2.34	0.41
1:XA:23:C:H2'	1:XA:24:U:O4'	2.20	0.41
1:XA:53:A:N1	1:XA:54:C:C2	2.88	0.41
1:XA:126:G:H4'	1:XA:634:C:O2	2.19	0.41
1:XA:160:A:H2'	1:XA:161:A:O4'	2.21	0.41
1:XA:442:C:H2'	1:XA:443:C:C6	2.54	0.41
1:XA:1039:C:H6	1:XA:1039:C:OP2	2.04	0.41
1:XA:1259:C:H1'	1:XA:1283:G:H21	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1451:A:N3	1:XA:1451:A:H2'	2.36	0.41
2:XB:200:ILE:CG2	2:XB:201:ILE:N	2.83	0.41
4:XD:111:ALA:HB3	4:XD:117:ALA:HB2	2.02	0.41
4:XD:127:THR:HG23	4:XD:130:GLY:O	2.20	0.41
5:XE:68:GLU:O	5:XE:68:GLU:CG	2.68	0.41
5:XE:78:HIS:HE1	5:XE:143:ARG:N	2.12	0.41
9:XI:127:LYS:CE	22:XV:34:C:OP2	2.68	0.41
11:XK:20:TYR:N	11:XK:31:THR:O	2.54	0.41
12:XL:41:ARG:NH2	12:XL:43:VAL:HG12	2.35	0.41
12:XL:62:SER:HB2	12:XL:64:TYR:CD1	2.56	0.41
14:XN:34:TYR:N	14:XN:34:TYR:CD1	2.89	0.41
15:XO:83:GLU:O	15:XO:84:LYS:C	2.63	0.41
16:XP:20:VAL:CG2	16:XP:32:TYR:CD2	3.04	0.41
16:XP:59:TRP:O	16:XP:60:LEU:C	2.63	0.41
19:XS:39:THR:HG23	19:XS:68:GLY:O	2.21	0.41
20:XT:10:LEU:O	20:XT:12:ALA:N	2.53	0.41
22:XV:17:C:O2	22:XV:17:C:H2'	2.20	0.41
23:XX:2:U:HO2'	23:XX:3:G:H5'	1.80	0.41
25:YA:270(T):G:H2'	25:YA:270(U):C:C6	2.54	0.41
25:YA:456:C:C5	43:YX:69:TYR:CE1	3.09	0.41
25:YA:729:G:N7	27:YD:208:LYS:HB2	2.36	0.41
25:YA:811:U:O2	25:YA:1250:G:H5''	2.21	0.41
25:YA:947:G:N2	25:YA:971:C:C2	2.89	0.41
25:YA:1026:U:H1'	25:YA:1027:A:C5'	2.51	0.41
25:YA:1081:U:H3'	25:YA:1082:U:C5'	2.50	0.41
25:YA:1105:U:OP2	25:YA:1105:U:H6	2.03	0.41
25:YA:1398:C:H6	25:YA:1398:C:O5'	2.03	0.41
25:YA:1432:C:H2'	25:YA:1433:U:O4'	2.20	0.41
25:YA:1674:G:H1'	25:YA:1676:A:N6	2.36	0.41
25:YA:2584:U:C6	25:YA:2585:U:C4	3.09	0.41
25:YA:2662:A:H8	25:YA:2662:A:O5'	2.03	0.41
25:YA:2749:A:H1'	31:YH:63:SER:OG	2.21	0.41
26:YB:89(A):A:O5'	26:YB:89(A):A:H8	2.04	0.41
26:YB:116:G:H4'	38:YS:54:LEU:HD13	2.01	0.41
27:YD:168:ARG:O	27:YD:169:GLU:HB2	2.19	0.41
27:YD:269:PHE:CD2	27:YD:269:PHE:N	2.88	0.41
28:YE:161:GLY:O	28:YE:162:ALA:HB3	2.20	0.41
29:YF:34:TRP:CA	35:YP:6:LEU:HD12	2.47	0.41
29:YF:64:ILE:HG23	29:YF:65:TRP:CD1	2.54	0.41
29:YF:129:PHE:O	29:YF:142:TRP:HD1	2.03	0.41
33:YN:21:LYS:O	33:YN:22:THR:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:112:MET:HE2	34:YO:112:MET:N	2.35	0.41
36:YQ:83:MET:SD	46:Y0:7:LEU:HD13	2.60	0.41
38:YS:66:ALA:HA	38:YS:69:VAL:CG1	2.51	0.41
38:YS:83:LYS:HE3	38:YS:84:GLN:CG	2.49	0.41
40:YU:75:ASN:O	40:YU:76:TYR:C	2.63	0.41
40:YU:89:GLU:C	40:YU:90:VAL:O	2.62	0.41
40:YU:92:ARG:HD2	41:YV:11:GLN:CD	2.43	0.41
41:YV:21:ARG:HD2	41:YV:91:TYR:CE2	2.55	0.41
41:YV:44:LYS:C	41:YV:46:VAL:H	2.28	0.41
42:YW:1:MET:HG3	42:YW:2:GLU:N	2.36	0.41
43:YX:7:VAL:O	43:YX:30:VAL:CG1	2.67	0.41
45:YZ:5:LEU:HD12	45:YZ:7:ALA:HB2	2.01	0.41
45:YZ:45:ASP:O	45:YZ:49:ARG:HG2	2.20	0.41
47:Y1:63:ALA:C	47:Y1:65:SER:N	2.78	0.41
49:Y3:37:LEU:HD12	49:Y3:43:ILE:CG2	2.50	0.41
50:Y4:38:LYS:HG3	50:Y4:44:THR:OG1	2.20	0.41
54:Y8:14:VAL:CG1	54:Y8:60:LEU:HD11	2.50	0.41
1:QA:77:C:H42	1:QA:92:G:H1	1.68	0.41
1:QA:255:G:OP1	17:QQ:69:LYS:NZ	2.54	0.41
1:QA:515:G:C5	1:QA:516:U:C5	3.08	0.41
1:QA:1079:G:H5'	5:QE:129:ILE:HG21	2.03	0.41
1:QA:1095:U:H2'	1:QA:1096:C:O4'	2.20	0.41
1:QA:1149:C:O5'	1:QA:1149:C:H6	2.03	0.41
1:QA:1219:U:OP1	14:QN:19:ARG:NH2	2.41	0.41
1:QA:1337:G:H5''	1:QA:1338:G:OP1	2.20	0.41
1:QA:1385:G:C2	1:QA:1386:G:C8	3.09	0.41
2:QB:5:ILE:HB	2:QB:221:LEU:HD23	2.01	0.41
3:QC:8:ILE:C	3:QC:10:PHE:H	2.29	0.41
3:QC:78:GLY:HA3	3:QC:83:ARG:HB2	2.03	0.41
4:QD:52:SER:HB3	4:QD:55:ALA:HB3	2.00	0.41
4:QD:107:ARG:C	4:QD:109:GLY:N	2.79	0.41
4:QD:198:VAL:CG1	4:QD:199:ASN:H	2.32	0.41
6:QF:92:LYS:NZ	6:QF:92:LYS:CB	2.84	0.41
7:QG:21:VAL:O	7:QG:22:LEU:C	2.63	0.41
7:QG:22:LEU:O	7:QG:25:ALA:HB3	2.21	0.41
7:QG:78:ARG:NH1	7:QG:78:ARG:CG	2.84	0.41
7:QG:118:VAL:HG23	7:QG:119:ARG:N	2.35	0.41
10:QJ:40:LEU:HB3	10:QJ:41:PRO:HD2	2.02	0.41
10:QJ:45:ARG:HB2	10:QJ:65:LEU:HB3	2.03	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:HB3	1.85	0.41
13:QM:47:ASP:O	13:QM:48:LEU:HB3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:QR:53:ARG:O	18:QR:55:ARG:N	2.53	0.41
19:QS:5:LEU:HD21	50:R4:67:TYR:CE2	2.52	0.41
19:QS:41:VAL:HG12	19:QS:45:VAL:H	1.84	0.41
22:QV:16:C:O2'	22:QV:17:C:OP1	2.39	0.41
22:QV:21:A:N6	22:QV:46:G:H2'	2.36	0.41
25:RA:78:A:H2'	25:RA:79:G:C8	2.55	0.41
25:RA:226:G:O2'	25:RA:227:A:H5'	2.21	0.41
25:RA:639:U:H2'	25:RA:640:C:H6	1.85	0.41
25:RA:912:C:O2	25:RA:912:C:H2'	2.19	0.41
25:RA:1065:U:O2'	25:RA:1074:G:N2	2.54	0.41
25:RA:1619:G:H8	25:RA:1619:G:O5'	2.03	0.41
25:RA:1649:G:C6	25:RA:2009:G:C6	3.08	0.41
25:RA:1668:A:N7	25:RA:1674:G:C6	2.88	0.41
25:RA:1716:U:H2'	25:RA:1717:G:H8	1.84	0.41
25:RA:2259:G:H1'	25:RA:2427:C:H2'	2.01	0.41
25:RA:2415:G:C6	25:RA:2416:C:C4	3.08	0.41
25:RA:2871:C:H5''	25:RA:2872:G:OP1	2.20	0.41
27:RD:153:ALA:C	27:RD:154:LYS:HG3	2.46	0.41
28:RE:93:VAL:HG21	28:RE:180:ASN:HA	2.03	0.41
28:RE:167:VAL:CG1	28:RE:189:PRO:HD3	2.50	0.41
28:RE:197:ILE:HD11	28:RE:199:ARG:NH1	2.30	0.41
29:RF:160:ASN:CG	29:RF:163:VAL:HG23	2.45	0.41
30:RG:34:LEU:HD11	30:RG:99:MET:CE	2.49	0.41
30:RG:47:LYS:HB2	30:RG:47:LYS:HE3	1.80	0.41
33:RN:94:HIS:C	33:RN:95:PRO:O	2.64	0.41
35:RP:9:ASN:HB2	35:RP:10:PRO:HD2	2.03	0.41
44:RY:13:VAL:O	44:RY:24:VAL:HA	2.20	0.41
44:RY:97:ARG:HH21	44:RY:98:VAL:CG2	2.32	0.41
46:R0:12:ASN:HB3	46:R0:13:GLY:H	1.57	0.41
50:R4:14:ILE:HA	50:R4:31:ILE:O	2.21	0.41
52:R6:8:LYS:O	52:R6:9:LEU:HB2	2.20	0.41
1:XA:104:G:O2'	1:XA:105:G:H5'	2.20	0.41
1:XA:126:G:C2	1:XA:127:G:H1'	2.55	0.41
1:XA:227:G:H2'	1:XA:228:A:O4'	2.19	0.41
1:XA:242:C:C2	1:XA:285:G:N2	2.88	0.41
1:XA:337:C:H2'	1:XA:338:A:H8	1.83	0.41
1:XA:402:G:C2'	1:XA:403:C:H5'	2.50	0.41
1:XA:411:A:C5	1:XA:413:G:H1'	2.55	0.41
1:XA:939:G:H2'	1:XA:940:C:H6	1.83	0.41
1:XA:1410:G:C2	1:XA:1491:G:C2	3.09	0.41
2:XB:29:ALA:C	2:XB:31:TYR:H	2.27	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:231:GLU:HG3	2:XB:233:SER:H	1.86	0.41
4:XD:101:LEU:C	4:XD:101:LEU:HD12	2.45	0.41
4:XD:170:VAL:CG2	4:XD:171:GLY:H	2.17	0.41
4:XD:209:ARG:NE	4:XD:209:ARG:HA	2.36	0.41
7:XG:17:VAL:HG12	7:XG:18:TYR:CD1	2.55	0.41
7:XG:111:ARG:HH11	7:XG:111:ARG:CB	2.23	0.41
7:XG:126:ASP:OD2	7:XG:126:ASP:N	2.53	0.41
8:XH:122:ARG:HH11	8:XH:122:ARG:HG3	1.85	0.41
9:XI:49:PRO:O	9:XI:85:LEU:HD21	2.20	0.41
10:XJ:29:ARG:O	10:XJ:30:SER:HB3	2.20	0.41
11:XK:21:ILE:HD13	11:XK:84:VAL:HG12	2.02	0.41
12:XL:8:ASN:O	12:XL:11:VAL:HG23	2.20	0.41
13:XM:13:LYS:HA	13:XM:44:ARG:CD	2.48	0.41
13:XM:119:GLY:O	13:XM:120:LYS:C	2.63	0.41
17:XQ:77:VAL:O	17:XQ:77:VAL:HG12	2.20	0.41
18:XR:53:ARG:O	18:XR:55:ARG:N	2.53	0.41
18:XR:74:ARG:HG2	18:XR:79:LEU:HB2	2.01	0.41
19:XS:39:THR:O	19:XS:40:ILE:HB	2.20	0.41
20:XT:89:ARG:HH12	20:XT:106:ALA:CB	2.34	0.41
25:YA:284:U:H2'	25:YA:285:C:O4'	2.20	0.41
25:YA:301:G:C6	25:YA:317:G:C5	3.09	0.41
25:YA:465:G:C2	25:YA:466:A:C2	3.09	0.41
25:YA:747:U:O2'	42:YW:88:ARG:HG3	2.21	0.41
25:YA:770:G:N3	25:YA:1354:A:H2	2.18	0.41
25:YA:873:G:H1	25:YA:904:C:H42	1.68	0.41
25:YA:915:C:O2'	26:YB:100:G:H5''	2.20	0.41
25:YA:1047:G:HO2'	25:YA:1048:A:H8	1.64	0.41
25:YA:1056:G:H5'	25:YA:1085:A:C2	2.56	0.41
25:YA:1171:G:C6	25:YA:1174:A:N6	2.89	0.41
25:YA:1534:G:O2'	25:YA:1535:U:H4'	2.21	0.41
25:YA:1547:C:H2'	25:YA:1548:C:C6	2.55	0.41
25:YA:1627:G:H2'	25:YA:1628:G:H8	1.86	0.41
25:YA:1761:C:C4	25:YA:1762:A:N7	2.89	0.41
25:YA:1945:G:O2'	25:YA:1946:U:H5'	2.21	0.41
25:YA:2263:C:H42	25:YA:2278:A:N6	2.18	0.41
25:YA:2458:G:C5	25:YA:2490:G:C6	3.08	0.41
25:YA:2488:A:N6	25:YA:2489:G:C6	2.88	0.41
25:YA:2677:G:O2'	25:YA:2678:C:H5'	2.21	0.41
25:YA:2712:U:OP1	25:YA:2714:G:H4'	2.20	0.41
27:YD:145:VAL:O	27:YD:154:LYS:N	2.48	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:YD:158:ALA:O	27:YD:196:VAL:HG11	2.21	0.41
29:YF:133:ASN:O	29:YF:134:GLY:C	2.63	0.41
30:YG:22:ARG:HH22	30:YG:175:LEU:HD21	1.85	0.41
30:YG:67:LYS:NZ	50:Y4:6:HIS:CD2	2.89	0.41
30:YG:95:ARG:CA	30:YG:99:MET:HB3	2.50	0.41
31:YH:53:GLU:OE1	31:YH:53:GLU:HA	2.16	0.41
31:YH:86:GLU:HG3	31:YH:165:ALA:CA	2.49	0.41
32:YI:114:LEU:HD13	32:YI:130:TYR:CD1	2.56	0.41
33:YN:94:HIS:C	33:YN:95:PRO:O	2.64	0.41
35:YP:96:THR:O	35:YP:97:PRO:C	2.63	0.41
35:YP:146:VAL:C	35:YP:147:LEU:HD22	2.45	0.41
40:YU:39:LEU:O	40:YU:42:ALA:N	2.53	0.41
41:YV:38:LEU:O	41:YV:51:VAL:HA	2.20	0.41
42:YW:14:PRO:HG3	42:YW:101:SER:OG	2.21	0.41
43:YX:60:ARG:HA	43:YX:75:ASP:OD2	2.20	0.41
43:YX:83:VAL:CG1	43:YX:87:GLN:HB2	2.50	0.41
45:YZ:39:VAL:HG21	45:YZ:44:PHE:HB2	2.02	0.41
45:YZ:150:LEU:H	45:YZ:150:LEU:HD13	1.86	0.41
47:Y1:86:SER:O	47:Y1:89:GLU:HB2	2.21	0.41
52:Y6:27:LYS:NZ	52:Y6:27:LYS:CB	2.73	0.41
54:Y8:25:MET:HB3	54:Y8:26:LYS:H	1.69	0.41
1:QA:132:C:C2	1:QA:231:G:N2	2.88	0.41
1:QA:198:G:C6	1:QA:220:G:C2	3.09	0.41
1:QA:310:G:H4'	16:QP:31:LYS:HD3	2.03	0.41
1:QA:448:A:C2	1:QA:449:C:C4	3.09	0.41
1:QA:767:A:H2'	1:QA:768:A:O4'	2.21	0.41
1:QA:972:C:O3'	10:QJ:57:LYS:HG2	2.21	0.41
2:QB:32:ILE:HD13	2:QB:190:THR:HG21	2.03	0.41
2:QB:60:ASP:C	2:QB:62:ALA:H	2.28	0.41
2:QB:71:VAL:HG23	2:QB:164:VAL:HG22	2.02	0.41
2:QB:115:LEU:O	2:QB:119:GLU:N	2.54	0.41
2:QB:168:THR:CG2	2:QB:192:SER:HB2	2.51	0.41
2:QB:239:VAL:O	2:QB:240:GLN:C	2.62	0.41
3:QC:55:VAL:HG12	3:QC:55:VAL:O	2.20	0.41
3:QC:108:ASN:HB3	3:QC:111:LEU:CG	2.51	0.41
4:QD:36:ARG:HA	4:QD:37:PRO:HD2	1.82	0.41
4:QD:94:LEU:HA	4:QD:97:LEU:HD12	2.01	0.41
4:QD:120:LEU:HD23	4:QD:120:LEU:HA	1.83	0.41
4:QD:202:LEU:C	4:QD:204:ILE:N	2.78	0.41
5:QE:6:PHE:HB2	5:QE:63:ARG:HH12	1.86	0.41
5:QE:27:ARG:CG	5:QE:28:PHE:N	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:64:ARG:CZ	5:QE:64:ARG:HB2	2.51	0.41
7:QG:24:THR:HA	7:QG:27:ILE:HD13	2.02	0.41
7:QG:101:LEU:O	7:QG:104:LEU:HB2	2.20	0.41
7:QG:108:ALA:C	7:QG:110:GLN:N	2.77	0.41
10:QJ:71:LEU:HD12	10:QJ:72:VAL:H	1.85	0.41
11:QK:74:ALA:C	11:QK:76:GLY:H	2.29	0.41
12:QL:90:VAL:HG12	12:QL:92:ASP:H	1.86	0.41
13:QM:20:THR:C	13:QM:22:ILE:H	2.29	0.41
13:QM:82:MET:HG2	13:QM:93:ARG:HG3	2.03	0.41
14:QN:6:LEU:HD23	14:QN:6:LEU:C	2.45	0.41
14:QN:9:LYS:HB3	14:QN:9:LYS:HE2	1.85	0.41
15:QO:33:THR:O	15:QO:34:LEU:C	2.63	0.41
16:QP:6:LEU:N	16:QP:6:LEU:CD1	2.84	0.41
17:QQ:89:LEU:HD23	17:QQ:89:LEU:HA	1.92	0.41
20:QT:32:ALA:O	20:QT:33:ILE:C	2.61	0.41
20:QT:50:GLU:O	20:QT:51:GLU:C	2.62	0.41
25:RA:297:C:H5''	44:RY:85:VAL:HG21	2.03	0.41
25:RA:312:G:C6	25:RA:313:C:N3	2.89	0.41
25:RA:556:G:C6	25:RA:557:U:C4	3.08	0.41
25:RA:631:A:N3	25:RA:2415:G:O2'	2.47	0.41
25:RA:668:G:N7	25:RA:670:A:C8	2.89	0.41
25:RA:780:G:C2	25:RA:782:A:C2	3.09	0.41
25:RA:1007:C:O3'	33:RN:108:PRO:HB3	2.21	0.41
25:RA:1050:A:C8	25:RA:2751:G:C8	3.09	0.41
25:RA:1429:G:H2'	25:RA:1430:C:C6	2.56	0.41
25:RA:1443:G:H1	25:RA:1548:C:H42	1.69	0.41
25:RA:2338:G:N1	25:RA:2339:G:C5	2.89	0.41
25:RA:2451:A:N1	56:Z6:76:PPU:HE2	2.35	0.41
25:RA:2463:C:O5'	25:RA:2463:C:H6	2.04	0.41
25:RA:2653:U:C2	25:RA:2668:G:N2	2.89	0.41
25:RA:2654:A:N6	25:RA:2667:C:N4	2.69	0.41
29:RF:108:LYS:O	29:RF:109:GLY:C	2.61	0.41
29:RF:183:VAL:HG22	29:RF:184:TYR:N	2.35	0.41
31:RH:45:VAL:O	31:RH:45:VAL:CG1	2.69	0.41
31:RH:137:ASP:HB2	31:RH:140:LYS:CE	2.51	0.41
32:RI:97:ILE:HD12	32:RI:140:LEU:CD1	2.51	0.41
33:RN:133:GLN:CB	33:RN:135:PRO:HD3	2.42	0.41
34:RO:111:PHE:N	34:RO:112:MET:HE2	2.36	0.41
37:RR:47:PHE:O	37:RR:51:LEU:HD23	2.21	0.41
38:RS:15:ARG:O	38:RS:19:LYS:HD3	2.20	0.41
40:RU:6:THR:HG21	40:RU:10:ARG:CZ	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RU:76:TYR:O	40:RU:80:ILE:HG12	2.21	0.41
41:RV:22:VAL:CG1	41:RV:23:GLU:H	2.32	0.41
43:RX:53:LYS:HZ1	43:RX:55:ASN:CG	2.29	0.41
44:RY:2:ARG:O	44:RY:3:VAL:O	2.38	0.41
45:RZ:4:ARG:HH12	45:RZ:58:VAL:HG21	1.86	0.41
47:R1:63:ALA:C	47:R1:65:SER:N	2.78	0.41
48:R2:41:ILE:HD12	48:R2:43:GLN:N	2.35	0.41
48:R2:48:HIS:C	48:R2:50:ILE:N	2.76	0.41
54:R8:14:VAL:CG1	54:R8:60:LEU:HD11	2.50	0.41
1:XA:108:G:H5''	1:XA:109:A:C5'	2.48	0.41
1:XA:848:C:H6	1:XA:848:C:O5'	2.04	0.41
1:XA:892:A:C6	1:XA:907:A:C8	3.09	0.41
1:XA:998(A):C:H2'	1:XA:999:U:H6	1.85	0.41
1:XA:1141:C:O2'	1:XA:1142:G:H5'	2.21	0.41
1:XA:1176:A:N6	1:XA:1177:G:C6	2.89	0.41
1:XA:1221:G:H4'	19:XS:53:ASN:O	2.21	0.41
1:XA:1312:G:P	50:Y4:58:ARG:HH12	2.43	0.41
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.55	0.41
1:XA:1430:C:C2	1:XA:1471:G:N2	2.89	0.41
2:XB:172:ILE:O	2:XB:173:ALA:C	2.64	0.41
3:XC:47:LEU:CD1	3:XC:76:VAL:HG12	2.42	0.41
4:XD:93:PHE:CE1	4:XD:97:LEU:HD11	2.55	0.41
5:XE:68:GLU:HG3	5:XE:70:PRO:HD3	2.03	0.41
5:XE:123:LEU:O	5:XE:124:GLY:C	2.62	0.41
7:XG:80:VAL:CG1	7:XG:81:GLY:N	2.83	0.41
7:XG:92:SER:HB3	7:XG:95:ARG:HB2	2.03	0.41
10:XJ:45:ARG:HB2	10:XJ:65:LEU:HB3	2.03	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
16:XP:22:THR:HB	16:XP:32:TYR:HB3	2.03	0.41
19:XS:7:LYS:CG	19:XS:8:GLY:N	2.83	0.41
19:XS:13:ASP:O	19:XS:14:HIS:O	2.39	0.41
25:YA:263:C:O2'	25:YA:429:A:N3	2.53	0.41
25:YA:270(U):C:H2'	25:YA:270(V):G:C8	2.56	0.41
25:YA:540:G:H2'	25:YA:540:G:N3	2.35	0.41
25:YA:701:G:N2	25:YA:732:C:C4	2.89	0.41
25:YA:705:A:C2	25:YA:727:A:H1'	2.55	0.41
25:YA:823:G:C6	25:YA:835:A:C2	3.09	0.41
25:YA:989:G:OP1	25:YA:1157:G:H4'	2.20	0.41
25:YA:1374:G:C6	25:YA:1375:C:C4	3.09	0.41
25:YA:1776:G:N3	25:YA:1777:U:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1798:U:C2	25:YA:1822:G:C2	3.09	0.41
25:YA:2056:G:C8	25:YA:2577:A:C6	3.09	0.41
25:YA:2232:U:P	47:Y1:40:ARG:HH12	2.44	0.41
25:YA:2366:A:N6	25:YA:2367:G:C2	2.89	0.41
26:YB:101:A:H8	26:YB:101:A:OP2	2.04	0.41
28:YE:24:THR:HB	28:YE:184:VAL:HG23	2.02	0.41
28:YE:63:LEU:CD1	28:YE:64:LYS:N	2.71	0.41
33:YN:62:VAL:CG1	33:YN:66:LYS:HB2	2.51	0.41
34:YO:10:VAL:HG21	34:YO:16:ALA:HB3	2.03	0.41
34:YO:71:ARG:HH11	39:YT:74:ARG:HH21	1.65	0.41
38:YS:53:SER:HA	38:YS:56:LEU:CD2	2.50	0.41
39:YT:28:VAL:HG23	39:YT:87:ASP:O	2.21	0.41
40:YU:92:ARG:O	40:YU:92:ARG:CG	2.54	0.41
42:YW:55:ALA:O	42:YW:58:ALA:HB3	2.20	0.41
44:YY:5:MET:HE1	44:YY:32:PRO:HB3	2.02	0.41
44:YY:95:LYS:HB2	44:YY:95:LYS:HZ1	1.86	0.41
48:Y2:61:LEU:HD23	48:Y2:61:LEU:HA	1.85	0.41
1:QA:102:G:C6	1:QA:103:C:N4	2.89	0.41
1:QA:107:G:H2'	1:QA:108:G:O4'	2.20	0.41
1:QA:151:A:H2'	1:QA:152:A:O4'	2.21	0.41
1:QA:562:C:H4'	1:QA:563:A:O5'	2.21	0.41
1:QA:612:C:O2	1:QA:629:G:N2	2.53	0.41
1:QA:674:G:C2'	1:QA:675:A:H5'	2.51	0.41
1:QA:709:G:H2'	1:QA:710:G:C8	2.51	0.41
1:QA:988:G:C6	1:QA:989:C:C4	3.09	0.41
2:QB:86:GLU:C	2:QB:88:ALA:N	2.78	0.41
6:QF:36:ARG:NH2	6:QF:38:GLU:HG2	2.35	0.41
7:QG:121:ALA:O	7:QG:125:MET:HG3	2.21	0.41
12:QL:62:SER:HB2	12:QL:64:TYR:CD1	2.56	0.41
12:QL:109:GLY:HA3	12:QL:121:GLY:O	2.20	0.41
13:QM:117:VAL:O	13:QM:119:GLY:N	2.53	0.41
14:QN:15:LYS:O	14:QN:16:PHE:C	2.63	0.41
16:QP:12:LYS:HB3	16:QP:12:LYS:HE2	1.73	0.41
16:QP:22:THR:CA	16:QP:33:ILE:HG12	2.42	0.41
17:QQ:67:LYS:O	17:QQ:68:ARG:HB3	2.21	0.41
18:QR:67:ALA:O	18:QR:68:LYS:C	2.62	0.41
19:QS:39:THR:HG23	19:QS:68:GLY:O	2.21	0.41
25:RA:80:G:C2	25:RA:81:G:C4	3.09	0.41
25:RA:83:G:O2'	25:RA:84:A:C8	2.74	0.41
25:RA:298:G:H5''	25:RA:299:A:OP1	2.21	0.41
25:RA:415:A:H2'	25:RA:416:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:422:A:H2'	25:RA:423:A:C8	2.56	0.41
25:RA:546:C:C5	25:RA:547:A:C4	3.08	0.41
25:RA:870:A:H2'	25:RA:871:U:H6	1.82	0.41
25:RA:1530:G:H2'	25:RA:1531:C:H6	1.86	0.41
25:RA:1980:G:O2'	25:RA:1982:C:OP2	2.35	0.41
25:RA:2032:G:O4'	25:RA:2032:G:N3	2.50	0.41
25:RA:2125:G:O2'	25:RA:2173:A:N6	2.54	0.41
25:RA:2164:C:H2'	25:RA:2165:G:O4'	2.20	0.41
25:RA:2199:A:H3'	25:RA:2205:C:C6	2.55	0.41
25:RA:2308:G:H2'	25:RA:2308:G:N3	2.35	0.41
25:RA:2311:A:C1'	30:RG:82:LEU:HD11	2.51	0.41
25:RA:2445:G:C2'	25:RA:2446:G:H5'	2.51	0.41
25:RA:2625:G:C2	25:RA:2626:C:C2	3.08	0.41
25:RA:2647:U:H2'	25:RA:2648:C:C6	2.56	0.41
27:RD:147:LEU:CD1	27:RD:155:LEU:HD21	2.51	0.41
27:RD:197:GLY:O	27:RD:198:ASN:HB3	2.21	0.41
28:RE:71:GLY:O	28:RE:72:VAL:C	2.63	0.41
28:RE:111:ARG:NE	28:RE:160:TYR:CE1	2.76	0.41
28:RE:186:GLY:C	28:RE:188:VAL:H	2.28	0.41
29:RF:46:ARG:CG	29:RF:46:ARG:NH1	2.72	0.41
29:RF:116:ASP:OD2	35:RP:1:MET:N	2.44	0.41
30:RG:51:ARG:C	30:RG:53:LEU:H	2.29	0.41
30:RG:61:ALA:CB	30:RG:67:LYS:HA	2.50	0.41
30:RG:95:ARG:HA	30:RG:99:MET:HB3	2.03	0.41
30:RG:136:ARG:O	30:RG:137:GLU:C	2.61	0.41
30:RG:146:TYR:C	30:RG:148:MET:H	2.28	0.41
33:RN:10:GLU:OE2	33:RN:11:PRO:HD2	2.21	0.41
34:RO:48:PRO:O	34:RO:50:GLY:N	2.54	0.41
35:RP:42:SER:O	35:RP:43:GLY:C	2.63	0.41
35:RP:55:ARG:HG2	35:RP:55:ARG:NH2	2.36	0.41
36:RQ:139:GLU:CG	36:RQ:140:ALA:N	2.84	0.41
37:RR:55:ALA:O	37:RR:58:GLY:HA3	2.21	0.41
37:RR:94:TYR:N	37:RR:94:TYR:CD2	2.87	0.41
39:RT:67:SER:O	39:RT:68:TYR:C	2.63	0.41
40:RU:33:ARG:O	40:RU:37:GLU:HB2	2.21	0.41
40:RU:89:GLU:C	40:RU:90:VAL:O	2.62	0.41
42:RW:17:VAL:C	42:RW:19:LEU:N	2.76	0.41
43:RX:83:VAL:CG1	43:RX:87:GLN:HB2	2.50	0.41
47:R1:94:LEU:HA	47:R1:94:LEU:HD23	1.81	0.41
54:R8:3:LYS:HE2	54:R8:3:LYS:HB3	1.82	0.41
1:XA:259:G:C2	1:XA:260:G:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:304:U:H2'	1:XA:305:G:C8	2.56	0.41
1:XA:677:U:H1'	11:XK:119:CYS:SG	2.60	0.41
1:XA:688:G:H2'	1:XA:689:C:O4'	2.20	0.41
1:XA:1015:A:H2'	1:XA:1016:A:H8	1.85	0.41
2:XB:87:ARG:HH11	2:XB:223:ILE:HD11	1.82	0.41
2:XB:115:LEU:O	2:XB:119:GLU:N	2.54	0.41
2:XB:212:GLN:NE2	2:XB:212:GLN:O	2.54	0.41
2:XB:224:GLN:C	2:XB:226:ARG:H	2.28	0.41
3:XC:70:VAL:HG12	3:XC:71:ALA:H	1.84	0.41
4:XD:178:VAL:HG12	4:XD:179:GLU:N	2.35	0.41
5:XE:26:PHE:CD1	5:XE:26:PHE:N	2.88	0.41
8:XH:26:VAL:O	8:XH:27:PRO:C	2.63	0.41
8:XH:109:ILE:HG13	8:XH:120:THR:HB	2.03	0.41
8:XH:133:LEU:C	8:XH:133:LEU:HD23	2.46	0.41
9:XI:113:LYS:H	9:XI:113:LYS:CD	2.28	0.41
11:XK:74:ALA:C	11:XK:76:GLY:H	2.29	0.41
12:XL:38:THR:HG22	12:XL:57:LYS:HB3	2.01	0.41
12:XL:62:SER:O	12:XL:64:TYR:N	2.54	0.41
12:XL:90:VAL:HG12	12:XL:92:ASP:H	1.85	0.41
14:YN:15:LYS:HD3	14:YN:15:LYS:HA	1.86	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
25:YA:222:A:H8	25:YA:222:A:H2'	1.76	0.41
25:YA:460:A:C2	25:YA:470:A:C4	3.09	0.41
25:YA:554:U:H2'	25:YA:556:G:H8	1.85	0.41
25:YA:1445:C:H2'	25:YA:1446:C:H6	1.86	0.41
25:YA:1519:G:C5	25:YA:1520:U:C5	3.08	0.41
25:YA:1797:C:C2'	25:YA:1798:U:H5'	2.51	0.41
25:YA:2212:A:H1'	25:YA:2215:G:C5	2.56	0.41
25:YA:2417:C:O2'	25:YA:2418:A:H5'	2.20	0.41
25:YA:2487:G:H2'	25:YA:2488:A:O4'	2.21	0.41
25:YA:2610:C:H4'	25:YA:2611:U:OP2	2.21	0.41
25:YA:2680:C:O2'	25:YA:2681:C:H5'	2.21	0.41
25:YA:2702:U:O2	25:YA:2702:U:H2'	2.20	0.41
26:YB:55:U:N3	26:YB:56:G:N7	2.69	0.41
27:YD:197:GLY:O	27:YD:198:ASN:HB3	2.21	0.41
27:YD:215:LEU:H	27:YD:215:LEU:HG	1.59	0.41
28:YE:179:GLU:C	28:YE:181:LEU:H	2.28	0.41
31:YH:169:VAL:HG22	31:YH:170:ARG:N	2.26	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YO:48:PRO:O	34:YO:50:GLY:N	2.54	0.41
36:YQ:139:GLU:CD	36:YQ:139:GLU:H	2.28	0.41
42:YW:1:MET:CB	42:YW:64:MET:HE3	2.48	0.41
42:YW:68:ARG:O	42:YW:110:LYS:N	2.46	0.41
44:YY:97:ARG:NE	44:YY:97:ARG:C	2.78	0.41
45:YZ:1:MET:HG2	45:YZ:2:GLU:N	2.35	0.41
53:Y7:24:THR:HB	53:Y7:25:PRO:HD2	2.03	0.41
1:QA:18:C:O3'	5:QE:127:ASN:ND2	2.49	0.41
1:QA:129(A):G:H4'	1:QA:130:A:H5''	2.02	0.41
1:QA:199:G:C2'	1:QA:200:G:H5'	2.50	0.41
1:QA:572:A:C2	1:QA:916:G:N2	2.89	0.41
1:QA:587:G:C2	1:QA:755:G:C5	3.09	0.41
1:QA:724:G:H2'	1:QA:725:G:C8	2.52	0.41
1:QA:855:G:H2'	1:QA:856:C:C6	2.55	0.41
1:QA:946:A:H2'	1:QA:947:G:C8	2.56	0.41
1:QA:1092:A:C2	1:QA:1183:A:C2	3.09	0.41
1:QA:1118:C:H1'	1:QA:1179:A:C5	2.56	0.41
1:QA:1160:G:H2'	1:QA:1161:C:O5'	2.20	0.41
1:QA:1162:C:C2	1:QA:1175:G:N2	2.88	0.41
1:QA:1238:A:H62	1:QA:1299:A:N6	2.18	0.41
1:QA:1275:A:C2	1:QA:1276:G:H1'	2.56	0.41
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.56	0.41
2:QB:17:PHE:HB2	2:QB:42:ILE:CG2	2.50	0.41
2:QB:97:TRP:O	2:QB:98:LEU:C	2.64	0.41
2:QB:223:ILE:O	2:QB:226:ARG:HB3	2.21	0.41
3:QC:23:TYR:CD2	3:QC:24:ALA:N	2.88	0.41
3:QC:47:LEU:CD1	3:QC:76:VAL:HG12	2.42	0.41
3:QC:120:VAL:O	3:QC:121:ALA:C	2.63	0.41
4:QD:27:TYR:CZ	6:XF:15:ASP:OD2	2.69	0.41
4:QD:101:LEU:HD12	4:QD:101:LEU:C	2.45	0.41
4:QD:199:ASN:C	4:QD:201:GLN:N	2.79	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
7:QG:87:VAL:HG11	7:QG:155:ARG:HA	2.03	0.41
7:QG:96:GLN:O	7:QG:97:GLN:C	2.61	0.41
8:QH:6:ILE:HB	8:QH:85:ARG:HH11	1.74	0.41
8:QH:38:ILE:CD1	8:QH:118:VAL:HG12	2.49	0.41
9:QI:9:ARG:CG	9:QI:14:VAL:HG22	2.51	0.41
9:QI:88:TYR:O	9:QI:89:ASN:HB2	2.20	0.41
9:QI:91:ASP:C	9:QI:93:ARG:H	2.29	0.41
12:QL:8:ASN:O	12:QL:11:VAL:HG23	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:43:VAL:HG13	12:QL:55:VAL:HG21	2.03	0.41
12:QL:62:SER:C	12:QL:64:TYR:N	2.79	0.41
12:QL:89:ARG:HB3	12:QL:97:ARG:HA	2.02	0.41
13:QM:15:VAL:O	13:QM:19:LEU:HD22	2.21	0.41
13:QM:105:THR:O	13:QM:106:ASN:C	2.64	0.41
13:QM:110:ARG:HG3	13:QM:110:ARG:O	2.20	0.41
14:QN:18:VAL:CG2	14:QN:19:ARG:H	2.32	0.41
14:QN:26:ARG:HB3	14:QN:27:CYS:H	1.64	0.41
15:QO: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:50:HIS:O	15:QO:53:HIS:HB3	2.20	0.41
15:QO:69:TYR:CZ	15:QO:73:GLU:HG3	2.56	0.41
16:QP:59:TRP:O	16:QP:60:LEU:C	2.63	0.41
17:QQ:11:VAL:HG23	17:QQ:12:SER:H	1.85	0.41
18:QR:64:ARG:C	18:QR:66:LEU:N	2.79	0.41
19:QS:4:SER:O	19:QS:5:LEU:HD13	2.20	0.41
19:QS:58:VAL:O	19:QS:58:VAL:HG23	2.20	0.41
25:RA:24:G:C5	25:RA:25:U:C5	3.09	0.41
25:RA:51:G:N2	25:RA:120:U:O2'	2.53	0.41
25:RA:194:G:H2'	25:RA:195:A:O4'	2.21	0.41
25:RA:224:G:H2'	25:RA:225:A:O4'	2.21	0.41
25:RA:304:G:N1	25:RA:305:U:C2	2.89	0.41
25:RA:312:G:H5''	25:RA:313:C:OP2	2.20	0.41
25:RA:370:G:H3'	25:RA:423:A:C2	2.56	0.41
25:RA:503:A:C4	25:RA:506:G:N7	2.89	0.41
25:RA:529:A:H2'	25:RA:529:A:N3	2.36	0.41
25:RA:537:C:H5'	25:RA:539:G:OP2	2.20	0.41
25:RA:658:C:H2'	25:RA:659:C:C6	2.55	0.41
25:RA:893:C:H5'	25:RA:894:C:OP2	2.21	0.41
25:RA:944:G:H5''	25:RA:945:A:O5'	2.21	0.41
25:RA:951:C:O2'	25:RA:952:G:H5'	2.21	0.41
25:RA:959:A:N3	25:RA:2457:U:O2'	2.45	0.41
25:RA:972:G:OP2	25:RA:973:A:O2'	2.37	0.41
25:RA:978:G:H1	25:RA:985:C:N4	2.19	0.41
25:RA:1008:C:N4	25:RA:1136:G:C6	2.89	0.41
25:RA:1110:G:H2'	25:RA:1111:A:C8	2.56	0.41
25:RA:1132:A:O2'	25:RA:1133:U:H5'	2.20	0.41
25:RA:1268:A:C2	25:RA:2013:A:C4	3.08	0.41
25:RA:1271:G:N2	25:RA:1617:C:O4'	2.54	0.41
25:RA:1401:G:C6	25:RA:1402:C:C4	3.09	0.41
25:RA:1484:G:H2'	25:RA:1485:G:H5''	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:1579:A:H2'	25:RA:1580:A:O4'	2.20	0.41
25:RA:1694:C:H4'	25:RA:1695:G:O5'	2.20	0.41
25:RA:1821:A:H8	25:RA:1821:A:O5'	2.04	0.41
25:RA:1837:C:C2	25:RA:1903:G:N2	2.83	0.41
25:RA:2152:G:H2'	25:RA:2153:G:C8	2.51	0.41
25:RA:2250:G:H8	25:RA:2496:C:H5''	1.82	0.41
25:RA:2256:G:C2	25:RA:2275:C:N4	2.89	0.41
25:RA:2287:A:N6	25:RA:2344:U:N3	2.66	0.41
25:RA:2351:G:H2'	25:RA:2365:G:N2	2.36	0.41
25:RA:2633:G:H1'	28:RE:62:PRO:HG2	2.03	0.41
25:RA:2767:C:H2'	25:RA:2768:C:C6	2.55	0.41
25:RA:2795:G:H3'	25:RA:2797:U:C5'	2.50	0.41
26:RB:42:C:N4	26:RB:43:C:C4	2.89	0.41
27:RD:145:VAL:CG1	27:RD:146:GLU:N	2.83	0.41
27:RD:272:ALA:HB1	27:RD:273:ARG:H	1.58	0.41
28:RE:4:ILE:HG22	28:RE:198:VAL:HB	2.02	0.41
28:RE:51:PHE:CG	28:RE:52:LEU:N	2.89	0.41
28:RE:161:GLY:O	28:RE:162:ALA:HB3	2.20	0.41
28:RE:179:GLU:C	28:RE:181:LEU:H	2.28	0.41
29:RF:28:ILE:HD12	29:RF:28:ILE:C	2.46	0.41
29:RF:150:GLY:C	29:RF:152:GLU:H	2.29	0.41
30:RG:7:LEU:CD2	30:RG:176:LEU:HD22	2.45	0.41
30:RG:67:LYS:NZ	50:R4:6:HIS:CD2	2.89	0.41
30:RG:95:ARG:CA	30:RG:99:MET:HB3	2.50	0.41
32:RI:16:GLY:O	32:RI:18:VAL:HG23	2.21	0.41
32:RI:88:ILE:H	32:RI:88:ILE:HG12	1.46	0.41
33:RN:56:ASN:ND2	33:RN:126:PRO:N	2.69	0.41
33:RN:58:ASP:HB3	33:RN:95:PRO:HB3	2.02	0.41
34:RO:2:ILE:HG12	34:RO:8:LEU:HD11	2.02	0.41
34:RO:10:VAL:HG21	34:RO:16:ALA:HB3	2.03	0.41
35:RP:66:GLY:O	35:RP:67:MET:CB	2.63	0.41
35:RP:101:VAL:HG23	35:RP:106:LEU:HB3	2.03	0.41
36:RQ:20:ALA:HB1	36:RQ:99:PRO:CG	2.51	0.41
36:RQ:76:LYS:HB3	36:RQ:90:VAL:CG1	2.51	0.41
38:RS:6:ALA:O	38:RS:10:ARG:HD3	2.21	0.41
38:RS:66:ALA:HA	38:RS:69:VAL:CG1	2.51	0.41
38:RS:100:ALA:CA	38:RS:103:GLU:HG2	2.49	0.41
39:RT:28:VAL:HG23	39:RT:87:ASP:O	2.21	0.41
39:RT:76:PHE:HA	39:RT:77:PRO:HD3	1.75	0.41
40:RU:57:PHE:O	40:RU:60:LEU:N	2.54	0.41
40:RU:83:LEU:CD1	40:RU:113:ALA:HB2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:RW:1:MET:HG3	42:RW:2:GLU:N	2.36	0.41
42:RW:14:PRO:HG3	42:RW:101:SER:OG	2.21	0.41
42:RW:28:SER:C	42:RW:30:GLU:H	2.28	0.41
42:RW:50:VAL:O	42:RW:53:SER:N	2.50	0.41
44:RY:43:ASN:O	44:RY:43:ASN:OD1	2.39	0.41
46:R0:40:GLN:OE1	46:R0:45:PHE:N	2.54	0.41
47:R1:18:ILE:O	47:R1:18:ILE:HG22	2.21	0.41
48:R2:27:GLU:N	48:R2:27:GLU:CD	2.77	0.41
50:R4:48:ARG:O	50:R4:49:PHE:C	2.63	0.41
53:R7:8:ASN:OD1	53:R7:8:ASN:C	2.64	0.41
53:R7:24:THR:HB	53:R7:25:PRO:HD2	2.03	0.41
1:XA:51:A:C6	1:XA:353:A:C2	3.09	0.41
1:XA:189:U:O2	17:XQ:63:ARG:NH2	2.54	0.41
1:XA:456:C:H2'	1:XA:457:C:H6	1.86	0.41
1:XA:582:U:H5'	15:XO:64:ARG:NH2	2.35	0.41
1:XA:728:A:C5	15:XO:54:ARG:HD2	2.56	0.41
1:XA:746:A:H8	1:XA:746:A:O5'	2.04	0.41
1:XA:921:U:C4	1:XA:922:G:N7	2.89	0.41
1:XA:960:U:C2	1:XA:1225:A:C8	3.08	0.41
1:XA:1039:C:H2'	1:XA:1040:U:O4'	2.20	0.41
1:XA:1068:G:C8	1:XA:1094:G:C8	3.08	0.41
1:XA:1118:C:OP1	9:XI:9:ARG:HD3	2.21	0.41
1:XA:1175:G:H2'	1:XA:1176:A:C8	2.55	0.41
1:XA:1221:G:O3'	19:XS:77:THR:CG2	2.68	0.41
1:XA:1221:G:C6	1:XA:1222:G:C5	3.08	0.41
1:XA:1244:C:H2'	1:XA:1245:A:H8	1.86	0.41
1:XA:1310:G:N2	1:XA:1328:C:C2	2.89	0.41
1:XA:1320:C:C5'	19:XS:70:LYS:HG3	2.51	0.41
1:XA:1502:A:H2	1:XA:1505:G:N2	2.18	0.41
1:XA:1523:G:C5	1:XA:1524:C:C5	3.09	0.41
2:XB:95:GLN:HB3	2:XB:148:TYR:HD1	1.84	0.41
2:XB:114:ARG:O	2:XB:118:LEU:HG	2.21	0.41
2:XB:213:LEU:C	2:XB:213:LEU:HD23	2.46	0.41
3:XC:19:GLU:HA	3:XC:54:ARG:NH1	2.14	0.41
3:XC:47:LEU:HD11	3:XC:76:VAL:CG1	2.42	0.41
4:XD:14:ARG:HD3	4:XD:14:ARG:C	2.43	0.41
4:XD:15:GLU:N	4:XD:15:GLU:OE1	2.54	0.41
4:XD:101:LEU:CD2	4:XD:121:VAL:HG11	2.50	0.41
4:XD:165:MET:HE3	4:XD:165:MET:CA	2.44	0.41
8:XH:33:GLU:O	8:XH:36:LEU:N	2.53	0.41
9:XI:10:ARG:CG	9:XI:105:ASP:HB2	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:54:PHE:CZ	10:XJ:55:LYS:CE	3.04	0.41
12:XL:21:LYS:N	12:XL:21:LYS:CD	2.83	0.41
12:XL:22:SER:C	12:XL:24:VAL:N	2.79	0.41
12:XL:91:LYS:HE2	12:XL:91:LYS:HB2	1.76	0.41
13:XM:15:VAL:O	13:XM:19:LEU:HD22	2.21	0.41
13:XM:117:VAL:O	13:XM:119:GLY:N	2.53	0.41
13:XM:117:VAL:CG2	13:XM:118:ALA:H	2.31	0.41
16:XP:1:MET:O	16:XP:2:VAL:C	2.63	0.41
18:XR:73:ALA:HB3	18:XR:79:LEU:CD1	2.47	0.41
25:YA:18:C:N3	25:YA:522:G:N1	2.63	0.41
25:YA:38:A:H1'	29:YF:48:THR:OG1	2.21	0.41
25:YA:48:G:H22	25:YA:177:G:H5'	1.86	0.41
25:YA:219:G:H2'	25:YA:220:G:O4'	2.20	0.41
25:YA:270(T):G:H2'	25:YA:270(U):C:H6	1.86	0.41
25:YA:373:U:H1'	25:YA:423:A:N3	2.36	0.41
25:YA:456:C:N4	43:YX:69:TYR:CE2	2.89	0.41
25:YA:534:U:O2	40:YU:49:HIS:CE1	2.73	0.41
25:YA:596:G:H2'	25:YA:597:U:O4'	2.20	0.41
25:YA:826:U:H2'	25:YA:828:U:O4'	2.21	0.41
25:YA:867:C:C4	25:YA:868:U:C4	3.09	0.41
25:YA:871:U:H5'	25:YA:872:A:P	2.60	0.41
25:YA:918:A:H1'	26:YB:80:U:O2'	2.21	0.41
25:YA:1042:G:C2	25:YA:1043:C:C2	3.08	0.41
25:YA:1187:G:H5''	41:YV:81:TYR:HE2	1.76	0.41
25:YA:1376:C:O2'	25:YA:1377:G:H5'	2.20	0.41
25:YA:1494:A:C6	25:YA:1495:A:C5	3.08	0.41
25:YA:1537:C:H2'	25:YA:1538:G:O4'	2.21	0.41
25:YA:1564:C:O2'	25:YA:1565:C:H5'	2.21	0.41
25:YA:1576:U:H2'	25:YA:1577:C:H6	1.86	0.41
25:YA:1637:A:C6	25:YA:1638:C:C4	3.09	0.41
25:YA:1858:G:O2'	25:YA:1884:A:N6	2.53	0.41
25:YA:1859:A:N6	25:YA:1883:G:O2'	2.54	0.41
25:YA:2056:G:C5	25:YA:2577:A:C4	3.08	0.41
25:YA:2197:U:O2'	25:YA:2198:A:H2'	2.21	0.41
25:YA:2208:U:H1'	27:YD:151:LYS:HE2	2.03	0.41
25:YA:2290:G:C6	25:YA:2291:U:C4	3.09	0.41
25:YA:2406:U:O4'	35:YP:75:ILE:HG22	2.21	0.41
25:YA:2537:U:H2'	25:YA:2538:C:H6	1.83	0.41
25:YA:2550:G:C5	25:YA:2551:C:C5	3.08	0.41
25:YA:2641:G:H2'	25:YA:2642:G:O4'	2.20	0.41
25:YA:2688:U:H1'	25:YA:2721:A:H61	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2693:A:H2'	25:YA:2694:G:C8	2.55	0.41
25:YA:2720:U:H2'	25:YA:2721:A:C8	2.56	0.41
25:YA:2756:U:OP2	55:Y9:19:ARG:CZ	2.68	0.41
27:YD:98:VAL:C	27:YD:100:GLY:N	2.79	0.41
27:YD:117:VAL:HG22	27:YD:118:VAL:N	2.35	0.41
29:YF:13:SER:OG	29:YF:14:PRO:HD2	2.21	0.41
29:YF:28:ILE:HD12	29:YF:28:ILE:C	2.46	0.41
29:YF:68:LYS:O	29:YF:69:HIS:HB2	2.21	0.41
29:YF:116:ASP:OD2	35:YP:1:MET:N	2.44	0.41
30:YG:18:GLU:HA	30:YG:18:GLU:OE2	2.21	0.41
30:YG:34:LEU:HD11	30:YG:99:MET:CE	2.49	0.41
30:YG:53:LEU:CD1	30:YG:87:PRO:HB2	2.51	0.41
30:YG:112:PRO:CA	50:Y4:37:SER:HB2	2.51	0.41
30:YG:146:TYR:C	30:YG:148:MET:H	2.28	0.41
31:YH:137:ASP:HB2	31:YH:140:LYS:CE	2.51	0.41
31:YH:145:ALA:O	31:YH:148:ILE:HB	2.21	0.41
31:YH:146:ALA:HB2	31:YH:164:TYR:OH	2.21	0.41
31:YH:146:ALA:HA	31:YH:164:TYR:OH	2.20	0.41
32:YI:109:ILE:HB	32:YI:130:TYR:OH	2.21	0.41
33:YN:9:VAL:HB	33:YN:10:GLU:H	1.70	0.41
33:YN:39:ARG:C	33:YN:41:ASP:H	2.28	0.41
33:YN:101:HIS:HD2	33:YN:102:ALA:N	2.19	0.41
35:YP:18:ARG:HD2	35:YP:27:HIS:CD2	2.56	0.41
35:YP:101:VAL:HG23	35:YP:106:LEU:HB3	2.03	0.41
35:YP:101:VAL:O	35:YP:103:ALA:N	2.53	0.41
37:YR:29:LEU:HD11	37:YR:48:VAL:CG1	2.50	0.41
37:YR:55:ALA:O	37:YR:58:GLY:HA3	2.21	0.41
38:YS:61:ASN:OD1	38:YS:63:THR:OG1	2.29	0.41
38:YS:88:ASP:CG	38:YS:89:ARG:H	2.28	0.41
40:YU:57:PHE:O	40:YU:60:LEU:N	2.54	0.41
40:YU:91:ASP:OD2	40:YU:96:ALA:CA	2.69	0.41
41:YV:38:LEU:CD1	41:YV:55:ALA:CB	2.99	0.41
42:YW:28:SER:C	42:YW:30:GLU:H	2.28	0.41
44:YY:2:ARG:O	44:YY:3:VAL:O	2.38	0.41
44:YY:13:VAL:O	44:YY:24:VAL:HA	2.20	0.41
45:YZ:103:ARG:HD3	45:YZ:138:GLU:OE1	2.20	0.41
48:Y2:41:ILE:HD12	48:Y2:43:GLN:N	2.35	0.41
48:Y2:53:LEU:O	48:Y2:57:ILE:HG13	2.21	0.41
50:Y4:60:GLN:HB3	50:Y4:61:ARG:H	1.56	0.41
52:Y6:8:LYS:O	52:Y6:9:LEU:HB2	2.21	0.41
53:Y7:8:ASN:OD1	53:Y7:8:ASN:C	2.64	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:Y8:40:GLU:O	54:Y8:42:ARG:N	2.54	0.41
1:QA:63:C:OP1	1:QA:383:A:N6	2.53	0.41
1:QA:157:G:H1	1:QA:164:U:H3	1.69	0.41
1:QA:668:G:O2'	1:QA:669:U:H5'	2.21	0.41
1:QA:759:A:H2'	1:QA:760:G:H5'	2.03	0.41
1:QA:1074:G:H5''	1:QA:1075:C:OP2	2.21	0.41
1:QA:1431:C:C2	1:QA:1470:G:N2	2.90	0.41
2:QB:143:GLU:O	2:QB:147:LYS:HB2	2.21	0.41
4:QD:15:GLU:OE1	4:QD:15:GLU:N	2.54	0.41
4:QD:29:PRO:HD2	4:QD:30:LYS:HE2	2.03	0.41
4:QD:172:PRO:C	4:QD:174:LEU:H	2.29	0.41
4:QD:199:ASN:OD1	4:QD:201:GLN:HB3	2.21	0.41
5:QE:82:VAL:HG12	5:QE:83:GLU:H	1.77	0.41
5:QE:101:ILE:HD13	5:QE:118:ILE:O	2.21	0.41
6:QF:62:TRP:C	6:QF:63:TYR:CD2	2.92	0.41
12:QL:53:ARG:HH12	12:QL:92:ASP:CB	2.33	0.41
15:QO:3:ILE:H	15:QO:3:ILE:CD1	2.20	0.41
19:QS:29:ARG:HG2	19:QS:29:ARG:NH1	2.36	0.41
19:QS:31:ILE:HG23	19:QS:31:ILE:O	2.21	0.41
25:RA:188:G:N2	25:RA:209:C:C2	2.89	0.41
25:RA:229:A:OP1	25:RA:229:A:H4'	2.21	0.41
25:RA:244:A:C8	25:RA:245:G:C8	3.09	0.41
25:RA:303:U:H6	25:RA:303:U:O5'	2.02	0.41
25:RA:553:U:H2'	25:RA:554:U:O4'	2.21	0.41
25:RA:581:C:N4	25:RA:582:G:O6	2.53	0.41
25:RA:663:G:C6	25:RA:664:C:C4	3.09	0.41
25:RA:816:C:N4	25:RA:1192:G:N1	2.68	0.41
25:RA:921:G:H2'	25:RA:922:U:O4'	2.20	0.41
25:RA:1123:C:H2'	25:RA:1124:C:C6	2.56	0.41
25:RA:1130:U:O2'	25:RA:1131:G:O5'	2.36	0.41
25:RA:1188:U:H2'	25:RA:1189:A:H5'	2.03	0.41
25:RA:1350:C:C2'	25:RA:1351:C:H5'	2.51	0.41
25:RA:1910:G:N2	25:RA:1921:G:C4	2.89	0.41
25:RA:2305:A:H2'	25:RA:2306:C:C6	2.56	0.41
25:RA:2331:G:H4'	46:R0:43:THR:N	2.36	0.41
25:RA:2536:G:H2'	25:RA:2537:U:O4'	2.21	0.41
25:RA:2563:U:O2	25:RA:2565:A:H8	2.04	0.41
26:RB:14:U:H2'	26:RB:15:A:C2	2.56	0.41
26:RB:46:A:C4	26:RB:47:C:C6	3.08	0.41
26:RB:54:G:H2'	26:RB:55:U:H5'	2.03	0.41
27:RD:31:LYS:O	27:RD:32:SER:O	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:RE:147:PRO:HB2	28:RE:149:ARG:HG2	2.03	0.41
31:RH:26:VAL:HG12	31:RH:33:LEU:HB2	2.03	0.41
31:RH:145:ALA:O	31:RH:148:ILE:HB	2.21	0.41
34:RO:20:MET:O	34:RO:41:ALA:CB	2.67	0.41
34:RO:47:ILE:HD12	34:RO:48:PRO:CD	2.43	0.41
36:RQ:39:PRO:HA	36:RQ:97:VAL:O	2.21	0.41
36:RQ:139:GLU:HG2	36:RQ:140:ALA:N	2.36	0.41
37:RR:22:ARG:O	37:RR:26:LYS:HG3	2.21	0.41
50:R4:63:TYR:O	50:R4:65:ASP:N	2.54	0.41
54:R8:64:TYR:HB3	54:R8:65:GLU:H	1.40	0.41
1:XA:148:G:H1	1:XA:174:C:H42	1.68	0.41
1:XA:357:G:C2	1:XA:358:U:C5	3.09	0.41
1:XA:453:A:H4'	16:XP:72:ARG:HB2	2.03	0.41
1:XA:484:G:N7	1:XA:486:U:C2	2.89	0.41
1:XA:700:G:H4'	1:XA:704:A:H1'	2.03	0.41
1:XA:775:G:H2'	1:XA:776:G:C8	2.56	0.41
1:XA:1044:A:C5	1:XA:1045:C:H1'	2.56	0.41
1:XA:1104:G:N2	1:XA:1105:A:H1'	2.36	0.41
1:XA:1285:A:H4'	1:XA:1286:A:C5'	2.50	0.41
1:XA:1415:G:H2'	1:XA:1416:G:C8	2.55	0.41
7:XG:62:PHE:C	7:XG:64:GLN:N	2.79	0.41
8:XH:1:MET:O	8:XH:2:LEU:HB2	2.21	0.41
9:XI:80:GLY:C	9:XI:82:ALA:H	2.29	0.41
9:XI:85:LEU:HD12	9:XI:85:LEU:C	2.45	0.41
12:XL:117:ARG:HB3	12:XL:122:THR:HB	2.02	0.41
13:XM:54:VAL:O	13:XM:54:VAL:HG12	2.21	0.41
14:XN:44:LEU:HD12	14:XN:53:LEU:HD12	1.94	0.41
16:XP:8:ARG:HG2	16:XP:8:ARG:NH1	2.31	0.41
16:XP:50:LYS:HD3	16:XP:51:VAL:O	2.21	0.41
17:XQ:63:ARG:HG2	17:XQ:64:PRO:HD2	2.03	0.41
17:XQ:94:ASN:O	17:XQ:97:SER:N	2.53	0.41
19:XS:3:ARG:CG	19:XS:4:SER:N	2.83	0.41
19:XS:10:PHE:CD2	19:XS:10:PHE:C	2.98	0.41
20:XT:47:GLY:C	20:XT:49:ALA:N	2.72	0.41
22:XV:23:C:H2'	22:XV:24:U:C6	2.55	0.41
25:YA:48:G:C2	25:YA:178:G:C5	3.09	0.41
25:YA:153:C:H6	25:YA:153:C:O5'	2.04	0.41
25:YA:191:A:O5'	25:YA:191:A:H8	2.04	0.41
25:YA:374:A:H3'	25:YA:375:C:C6	2.56	0.41
25:YA:690:G:H2'	25:YA:691:C:O4'	2.21	0.41
25:YA:730:C:OP2	25:YA:731:C:OP2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:784:A:C5	27:YD:229:VAL:HG21	2.56	0.41
25:YA:910:A:H2	25:YA:2264:C:O2	2.03	0.41
25:YA:1033:U:H6	25:YA:1033:U:H2'	1.67	0.41
25:YA:1085:A:C2	25:YA:1086:A:C8	3.09	0.41
25:YA:1423:G:O2'	25:YA:1424:G:H5'	2.21	0.41
25:YA:1654:A:H2'	25:YA:1655:A:H8	1.86	0.41
25:YA:2391:G:OP2	54:Y8:32:LEU:HD13	2.21	0.41
25:YA:2457:U:C2'	25:YA:2458:G:H5'	2.51	0.41
25:YA:2472:G:H22	25:YA:2477:C:H5'	1.85	0.41
25:YA:2864:G:N2	25:YA:2865:U:O2	2.54	0.41
26:YB:4:C:H42	26:YB:116:G:H1	1.68	0.41
26:YB:40:U:N3	26:YB:43:C:H5''	2.23	0.41
26:YB:55:U:C2	26:YB:56:G:C8	3.09	0.41
27:YD:31:LYS:O	27:YD:32:SER:O	2.39	0.41
27:YD:68:LYS:O	27:YD:68:LYS:HG3	2.20	0.41
27:YD:147:LEU:CD1	27:YD:155:LEU:HD21	2.51	0.41
27:YD:228:PRO:HD3	27:YD:234:GLY:O	2.21	0.41
29:YF:59:TYR:HB3	29:YF:60:SER:H	1.70	0.41
31:YH:20:ALA:HB3	31:YH:23:ARG:HG2	2.03	0.41
31:YH:45:VAL:O	31:YH:45:VAL:CG1	2.69	0.41
31:YH:65:HIS:O	31:YH:66:GLY:C	2.63	0.41
32:YI:92:VAL:HG13	32:YI:120:ILE:CG2	2.39	0.41
34:YO:31:LYS:HA	34:YO:31:LYS:HD3	1.92	0.41
37:YR:61:HIS:CE1	37:YR:65:LEU:HD11	2.56	0.41
38:YS:93:LYS:HE3	38:YS:93:LYS:HB2	1.93	0.41
39:YT:76:PHE:HA	39:YT:77:PRO:HD3	1.75	0.41
44:YY:5:MET:CE	44:YY:32:PRO:HB3	2.51	0.41
45:YZ:24:LEU:HA	45:YZ:25:PRO:HD3	1.88	0.41
47:Y1:85:LEU:N	47:Y1:85:LEU:CD2	2.84	0.41
48:Y2:11:GLU:HA	48:Y2:14:ARG:HD2	2.02	0.41
52:Y6:6:ARG:HA	52:Y6:6:ARG:NE	2.35	0.41
1:QA:97:U:H2'	1:QA:99:C:C6	2.55	0.40
1:QA:219:C:C4	1:QA:220:G:C8	3.08	0.40
1:QA:385:C:H2'	1:QA:386:C:O4'	2.21	0.40
1:QA:654:G:C2	1:QA:753:A:C4	3.08	0.40
1:QA:1053:G:H2'	1:QA:1199:U:H5	1.86	0.40
1:QA:1157:A:O2'	1:QA:1158:C:H5''	2.21	0.40
1:QA:1313:U:OP1	19:QS:5:LEU:HB2	2.21	0.40
2:QB:212:GLN:NE2	2:QB:212:GLN:O	2.54	0.40
3:QC:92:ALA:HB2	3:QC:99:VAL:HG13	2.04	0.40
3:QC:140:ARG:HB2	3:QC:140:ARG:NH1	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:QF:53:ALA:C	6:QF:55:ASP:N	2.79	0.40
7:QG:64:GLN:C	7:QG:66:VAL:N	2.77	0.40
8:QH:1:MET:O	8:QH:2:LEU:HB2	2.21	0.40
8:QH:18:ARG:HA	8:QH:18:ARG:HD2	1.92	0.40
8:QH:97:VAL:O	8:QH:100:ILE:HG13	2.21	0.40
9:QI:13:ALA:H	9:QI:68:GLY:HA3	1.86	0.40
9:QI:49:PRO:O	9:QI:85:LEU:HD21	2.20	0.40
10:QJ:101:VAL:O	10:QJ:101:VAL:HG13	2.21	0.40
11:QK:83:ILE:HG12	11:QK:109:VAL:CG2	2.51	0.40
13:QM:39:ILE:CD1	13:QM:56:LEU:HB2	2.51	0.40
25:RA:282:A:C6	25:RA:284:U:C2	3.09	0.40
25:RA:841:A:C2	25:RA:938:G:C2	3.09	0.40
25:RA:852:G:O2'	25:RA:853:G:H5'	2.21	0.40
25:RA:1216:G:N2	25:RA:1233:C:O2	2.28	0.40
25:RA:1574:C:O5'	25:RA:1574:C:H6	2.03	0.40
25:RA:1587:A:H8	25:RA:1587:A:OP2	2.05	0.40
25:RA:2134:A:H62	25:RA:2157:G:C1'	2.34	0.40
25:RA:2193:G:C5	25:RA:2194:G:N7	2.89	0.40
25:RA:2360:A:H2'	25:RA:2361:A:O4'	2.21	0.40
25:RA:2485:G:C2	25:RA:2486:G:C8	3.09	0.40
25:RA:2600:A:H2'	25:RA:2601:C:C6	2.56	0.40
25:RA:2839:G:H5'	37:RR:46:GLY:HA2	2.03	0.40
25:RA:2846:G:C6	25:RA:2847:U:C4	3.09	0.40
26:RB:113:C:C2	26:RB:114:G:C8	3.08	0.40
27:RD:263:ARG:NH1	27:RD:263:ARG:CB	2.75	0.40
29:RF:13:SER:OG	29:RF:14:PRO:HD2	2.21	0.40
29:RF:128:ALA:O	29:RF:129:PHE:CB	2.67	0.40
33:RN:23:LEU:CD1	33:RN:99:LEU:HD23	2.51	0.40
35:RP:84:ASN:HB2	35:RP:87:ASP:OD2	2.22	0.40
39:RT:77:PRO:C	39:RT:79:HIS:H	2.29	0.40
40:RU:25:TRP:O	40:RU:26:GLY:C	2.65	0.40
41:RV:38:LEU:O	41:RV:51:VAL:HA	2.21	0.40
41:RV:55:ALA:O	41:RV:56:SER:OG	2.31	0.40
42:RW:88:ARG:HA	42:RW:88:ARG:HD2	1.92	0.40
46:R0:36:ILE:HD13	46:R0:36:ILE:O	2.21	0.40
46:R0:64:ASP:HB3	46:R0:65:GLY:H	1.61	0.40
47:R1:85:LEU:N	47:R1:85:LEU:CD2	2.84	0.40
48:R2:11:GLU:HA	48:R2:14:ARG:HD2	2.02	0.40
48:R2:32:LEU:O	48:R2:32:LEU:HD23	2.21	0.40
50:R4:26:SER:O	50:R4:27:THR:O	2.40	0.40
50:R4:42:PHE:CZ	50:R4:43:TYR:HB3	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:34:C:H6	1:XA:34:C:O5'	2.04	0.40
1:XA:89:U:O2'	1:XA:90:C:OP1	2.33	0.40
1:XA:122:G:C2	1:XA:123:C:C2	3.10	0.40
1:XA:163:C:H2'	1:XA:164:U:H6	1.86	0.40
1:XA:375:U:H4'	16:XP:17:TYR:CE2	2.53	0.40
1:XA:435:C:H5'	1:XA:436:C:OP2	2.21	0.40
1:XA:452:A:N6	1:XA:480:U:C2	2.89	0.40
1:XA:537:G:H2'	1:XA:538:G:C8	2.56	0.40
1:XA:538:G:H2'	1:XA:539:A:O4'	2.21	0.40
1:XA:684:A:C5	1:XA:685:G:N7	2.89	0.40
1:XA:920:U:H1'	1:XA:1080:A:C2	2.56	0.40
1:XA:924:C:H2'	1:XA:925:G:C8	2.55	0.40
1:XA:1157:A:H62	1:XA:1178:G:N2	2.19	0.40
1:XA:1415:G:C4	1:XA:1486:G:C2	3.09	0.40
1:XA:1464:G:H2'	1:XA:1465:C:H6	1.85	0.40
1:XA:1500:A:OP1	1:XA:1508:G:OP1	2.39	0.40
2:XB:17:PHE:HB2	2:XB:42:ILE:CG2	2.50	0.40
2:XB:47:THR:O	2:XB:51:LEU:N	2.32	0.40
2:XB:143:GLU:O	2:XB:147:LYS:HB2	2.22	0.40
3:XC:5:ILE:CD1	3:XC:5:ILE:H	2.34	0.40
3:XC:108:ASN:HB3	3:XC:111:LEU:CG	2.51	0.40
4:XD:19:LEU:HG	4:XD:21:LEU:HG	2.03	0.40
6:XF:42:GLU:C	6:XF:44:GLY:H	2.30	0.40
7:XG:21:VAL:HG23	7:XG:22:LEU:N	2.32	0.40
7:XG:118:VAL:HG23	7:XG:119:ARG:N	2.35	0.40
9:XI:9:ARG:CG	9:XI:14:VAL:HG22	2.51	0.40
11:XK:92:GLU:O	11:XK:95:ILE:N	2.54	0.40
13:XM:110:ARG:HG3	13:XM:110:ARG:O	2.20	0.40
14:YN:15:LYS:O	14:YN:16:PHE:C	2.63	0.40
17:XQ:68:ARG:O	17:XQ:68:ARG:HG3	2.21	0.40
17:XQ:85:VAL:HG12	17:XQ:85:VAL:O	2.20	0.40
19:XS:10:PHE:CD2	19:XS:11:VAL:N	2.90	0.40
20:XT:28:ALA:O	20:XT:29:LYS:C	2.64	0.40
20:XT:50:GLU:HA	20:XT:100:ILE:HG22	2.02	0.40
22:XV:21:A:N6	22:XV:46:G:H2'	2.36	0.40
25:YA:918:A:C6	25:YA:919:G:H1'	2.55	0.40
25:YA:1219:G:OP2	40:YU:19:LYS:HD2	2.21	0.40
25:YA:1449:A:O2'	25:YA:1530:G:N2	2.50	0.40
25:YA:1506:C:H5'	25:YA:1507:A:OP2	2.20	0.40
25:YA:1590:U:H2'	25:YA:1591:G:H8	1.85	0.40
25:YA:1835:G:N3	25:YA:1931:U:N3	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:2018:G:C6	25:YA:2019:A:C6	3.09	0.40
25:YA:2056:G:H1	51:Y5:4:HIS:HD2	1.68	0.40
25:YA:2286:A:H8	52:Y6:37:ARG:NH1	2.19	0.40
25:YA:2564:A:C5	25:YA:2565:A:C6	3.08	0.40
26:YB:40:U:H3	26:YB:43:C:C5'	2.23	0.40
27:YD:13:ARG:HG2	27:YD:13:ARG:O	2.20	0.40
28:YE:93:VAL:HG21	28:YE:180:ASN:HA	2.03	0.40
28:YE:134:ILE:C	28:YE:134:ILE:CD1	2.94	0.40
29:YF:62:ARG:HB3	29:YF:62:ARG:CZ	2.52	0.40
30:YG:47:LYS:HE3	30:YG:47:LYS:HB2	1.80	0.40
33:YN:1:MET:O	33:YN:1:MET:HG3	2.19	0.40
33:YN:10:GLU:OE2	33:YN:11:PRO:HD2	2.21	0.40
33:YN:61:ARG:C	33:YN:62:VAL:CG2	2.93	0.40
34:YO:13:ASN:HD21	34:YO:97:ARG:HB3	1.86	0.40
34:YO:16:ALA:HA	34:YO:46:ALA:CB	2.50	0.40
34:YO:47:ILE:HD12	34:YO:48:PRO:CD	2.43	0.40
34:YO:106:LEU:HD23	34:YO:106:LEU:HA	1.88	0.40
35:YP:84:ASN:HB2	35:YP:87:ASP:OD2	2.22	0.40
36:YQ:139:GLU:CG	36:YQ:140:ALA:N	2.84	0.40
38:YS:20:ARG:HE	38:YS:21:THR:HA	1.86	0.40
38:YS:24:LEU:HD22	38:YS:24:LEU:N	2.36	0.40
38:YS:89:ARG:HG2	38:YS:89:ARG:NH1	2.36	0.40
39:YT:20:PRO:HG2	39:YT:86:ILE:O	2.21	0.40
39:YT:39:ARG:HG2	39:YT:40:THR:N	2.25	0.40
40:YU:76:TYR:O	40:YU:80:ILE:HG12	2.21	0.40
42:YW:71:VAL:HA	42:YW:107:LEU:HD12	2.02	0.40
44:YY:97:ARG:NH2	44:YY:98:VAL:CG2	2.85	0.40
48:Y2:47:ASN:HD22	48:Y2:47:ASN:N	1.99	0.40
52:Y6:50:ARG:NH1	52:Y6:50:ARG:HG2	2.37	0.40
54:Y8:64:TYR:HB3	54:Y8:65:GLU:H	1.40	0.40
55:Y9:2:LYS:HD2	55:Y9:2:LYS:HA	1.96	0.40
1:QA:52:G:O2'	1:QA:53:A:H5'	2.21	0.40
1:QA:126:G:H1	1:QA:235:C:N4	2.18	0.40
1:QA:255:G:C4	1:QA:256:U:C5	3.09	0.40
1:QA:310:G:OP2	16:QP:27:LYS:HE3	2.21	0.40
1:QA:390:C:H4'	16:QP:28:ARG:HH21	1.87	0.40
1:QA:509:A:H5''	4:QD:55:ALA:HB2	2.02	0.40
1:QA:838:G:C5	1:QA:842:C:H1'	2.56	0.40
1:QA:960:U:O2	1:QA:1225:A:C5	2.74	0.40
1:QA:995:C:H5'	14:QN:8:GLU:HG2	2.03	0.40
1:QA:1057:G:C2	1:QA:1204:A:N3	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1079:G:H4'	5:QE:14:ARG:HH22	1.86	0.40
1:QA:1424:C:H2'	1:QA:1425:U:O4'	2.21	0.40
1:QA:1525:G:H2'	1:QA:1526:G:H8	1.85	0.40
2:QB:62:ALA:O	2:QB:65:GLY:N	2.53	0.40
2:QB:130:ARG:HH22	2:QB:138:LEU:HD21	1.85	0.40
3:QC:59:ARG:NH1	3:QC:97:LYS:HE3	2.34	0.40
3:QC:178:LEU:N	3:QC:178:LEU:CD2	2.85	0.40
4:QD:63:LYS:O	4:QD:67:ILE:HG13	2.21	0.40
4:QD:128:VAL:C	4:QD:130:GLY:N	2.76	0.40
5:QE:41:VAL:O	5:QE:66:MET:HA	2.21	0.40
6:QF:42:GLU:C	6:QF:44:GLY:H	2.30	0.40
11:QK:25:TYR:H	11:QK:25:TYR:HD1	1.69	0.40
11:QK:105:VAL:C	11:QK:107:SER:H	2.29	0.40
13:QM:36:LYS:HE3	13:QM:59:TYR:CD1	2.57	0.40
17:QQ:85:VAL:HG12	17:QQ:85:VAL:O	2.20	0.40
18:QR:37:VAL:O	18:QR:38:GLU:C	2.63	0.40
18:QR:37:VAL:O	18:QR:40:LEU:N	2.54	0.40
18:QR:52:PRO:HG2	18:QR:55:ARG:HG2	2.04	0.40
18:QR:74:ARG:HG2	18:QR:79:LEU:HB2	2.01	0.40
19:QS:32:LYS:HA	19:QS:50:ALA:HB3	2.03	0.40
20:QT:44:ALA:HB3	20:QT:91:LEU:HD12	2.03	0.40
25:RA:472:A:H2'	25:RA:473:G:H5'	2.03	0.40
25:RA:478:A:N6	25:RA:480:A:N1	2.69	0.40
25:RA:563:G:C6	25:RA:564:C:C4	3.09	0.40
25:RA:1022:G:H4'	25:RA:1023:U:H5'	2.02	0.40
25:RA:1079:C:O4'	25:RA:1088:A:N6	2.53	0.40
25:RA:1252:G:O4'	40:RU:33:ARG:HD3	2.20	0.40
25:RA:1439:A:H2'	25:RA:1440:G:O4'	2.21	0.40
25:RA:1487:G:H1	25:RA:1502:C:H42	1.69	0.40
25:RA:1644:C:O2	25:RA:1644:C:H2'	2.20	0.40
25:RA:1691:C:H2'	25:RA:1692:U:O4'	2.20	0.40
25:RA:1930:G:H2'	25:RA:1968:G:H1	1.84	0.40
25:RA:2116:G:H22	25:RA:2162:G:P	2.45	0.40
25:RA:2193:G:C4	25:RA:2194:G:C8	3.09	0.40
25:RA:2259:G:C1'	25:RA:2427:C:H2'	2.52	0.40
25:RA:2320:A:H1'	25:RA:2321:G:C6	2.56	0.40
25:RA:2328:A:H2'	25:RA:2329:G:C8	2.56	0.40
25:RA:2439:A:C5'	25:RA:2439:A:H8	2.32	0.40
25:RA:2534:A:C6	25:RA:2535:G:N7	2.89	0.40
25:RA:2623:G:N3	25:RA:2624:G:C8	2.89	0.40
25:RA:2841:C:C2	25:RA:2877:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2847:U:C2'	25:RA:2848:G:H5'	2.52	0.40
26:RB:66:A:N3	26:RB:108:C:C4	2.90	0.40
26:RB:83:G:N2	26:RB:84:C:C2	2.89	0.40
26:RB:104:A:H4'	45:RZ:89:PHE:CE2	2.57	0.40
27:RD:176:ARG:HH11	27:RD:176:ARG:CG	2.30	0.40
27:RD:177:LEU:C	27:RD:179:SER:N	2.80	0.40
27:RD:210:GLY:O	27:RD:211:ARG:C	2.63	0.40
28:RE:119:ARG:HG2	28:RE:160:TYR:HB2	2.03	0.40
33:RN:137:LYS:HA	33:RN:137:LYS:HD2	1.88	0.40
34:RO:106:LEU:HA	34:RO:106:LEU:HD23	1.89	0.40
35:RP:19:VAL:HG22	35:RP:21:ARG:N	2.36	0.40
35:RP:96:THR:O	35:RP:97:PRO:C	2.63	0.40
36:RQ:80:GLU:CD	46:R0:7:LEU:HB3	2.46	0.40
38:RS:106:ARG:HB2	38:RS:106:ARG:CZ	2.49	0.40
39:RT:39:ARG:HG2	39:RT:40:THR:N	2.25	0.40
40:RU:34:LYS:CE	40:RU:34:LYS:CA	2.96	0.40
44:RY:95:LYS:HA	44:RY:101:LYS:CB	2.51	0.40
45:RZ:101:PRO:C	45:RZ:102:LEU:HD12	2.45	0.40
47:R1:96:LYS:O	47:R1:96:LYS:HG2	2.21	0.40
52:R6:50:ARG:NH1	52:R6:50:ARG:HG2	2.37	0.40
1:XA:52:G:C4	1:XA:53:A:C8	3.09	0.40
1:XA:78:G:O2'	1:XA:79:G:OP1	2.30	0.40
1:XA:648:A:C6	1:XA:649:G:C6	3.09	0.40
1:XA:719:C:O2'	18:XR:50:ILE:O	2.35	0.40
1:XA:724:G:C2	1:XA:725:G:C8	3.09	0.40
1:XA:825:G:C6	1:XA:826:C:N3	2.89	0.40
1:XA:936:C:H1'	1:XA:1382:C:N4	2.36	0.40
1:XA:939:G:C6	1:XA:940:C:N4	2.89	0.40
1:XA:949:A:H61	1:XA:1232:U:H3	1.69	0.40
1:XA:980:C:H5''	1:XA:981:U:C5	2.55	0.40
1:XA:1089:G:H2'	1:XA:1090:U:O4'	2.21	0.40
1:XA:1121:U:C4	1:XA:1122:U:C5	3.09	0.40
1:XA:1142:G:H2'	1:XA:1143:G:C8	2.56	0.40
1:XA:1259:C:O2'	1:XA:1283:G:N2	2.54	0.40
2:XB:76:GLN:OE1	2:XB:206:ASP:HB3	2.21	0.40
2:XB:97:TRP:O	2:XB:98:LEU:C	2.64	0.40
2:XB:97:TRP:CH2	2:XB:176:GLU:HB2	2.54	0.40
2:XB:132:LYS:HA	2:XB:135:GLN:CG	2.51	0.40
2:XB:168:THR:CG2	2:XB:192:SER:HB2	2.51	0.40
2:XB:172:ILE:H	2:XB:172:ILE:CD1	2.18	0.40
2:XB:223:ILE:O	2:XB:226:ARG:HB3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:138:VAL:HG22	3:XC:151:VAL:HG23	2.03	0.40
3:XC:140:ARG:HB2	3:XC:140:ARG:NH1	2.36	0.40
5:XE:6:PHE:HB2	5:XE:63:ARG:HH12	1.86	0.40
7:XG:121:ALA:O	7:XG:125:MET:HG3	2.21	0.40
8:XH:53:VAL:HG12	8:XH:54:ASP:OD2	2.20	0.40
11:XK:105:VAL:C	11:XK:107:SER:H	2.29	0.40
13:XM:119:GLY:O	13:XM:120:LYS:O	2.38	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
19:XS:31:ILE:HG23	19:XS:31:ILE:O	2.21	0.40
22:XV:16:C:O2'	22:XV:17:C:OP1	2.39	0.40
25:YA:388:G:OP2	47:Y1:32:LYS:HG2	2.21	0.40
25:YA:517:C:O2'	42:YW:18:ARG:NH2	2.55	0.40
25:YA:540:G:H5'	25:YA:541:C:OP2	2.21	0.40
25:YA:707:G:C6	25:YA:708:C:C4	3.10	0.40
25:YA:997:G:OP1	40:YU:93:LYS:HD3	2.21	0.40
25:YA:1214:A:N6	25:YA:1235:G:O2'	2.53	0.40
25:YA:1246:A:N1	25:YA:1247:A:C4	2.89	0.40
25:YA:1374:G:C2'	25:YA:1375:C:H5'	2.51	0.40
25:YA:1449:A:C6	25:YA:1449(A):G:C4	3.09	0.40
25:YA:1578:U:C2'	25:YA:1579:A:H5'	2.51	0.40
25:YA:1628:G:C2	25:YA:1629:U:C4	3.08	0.40
25:YA:1660:C:O2	25:YA:2000:G:N2	2.52	0.40
25:YA:1769:G:N2	25:YA:1984:G:C4	2.90	0.40
25:YA:1926:U:O2	25:YA:1928:A:C8	2.74	0.40
25:YA:2320:A:C8	25:YA:2333:A:N6	2.90	0.40
25:YA:2360:A:H2'	25:YA:2361:A:O4'	2.22	0.40
25:YA:2486:G:N2	25:YA:2487:G:H1'	2.36	0.40
25:YA:2506:U:H6	56:Z8:76:PPU:HN'3	1.69	0.40
25:YA:2517:C:C6	25:YA:2542:A:N7	2.88	0.40
25:YA:2629:A:O2'	25:YA:2630:G:H5''	2.21	0.40
25:YA:2762:G:C6	25:YA:2763:G:C4	3.09	0.40
25:YA:2818:G:N2	25:YA:2819:G:C4	2.89	0.40
28:YE:71:GLY:O	28:YE:72:VAL:C	2.63	0.40
28:YE:94:GLU:C	28:YE:96:PHE:H	2.29	0.40
28:YE:119:ARG:HG2	28:YE:160:TYR:HB2	2.03	0.40
29:YF:118:ALA:C	29:YF:120:GLU:N	2.78	0.40
31:YH:26:VAL:HG12	31:YH:33:LEU:HB2	2.03	0.40
32:YI:124:GLY:H	32:YI:142:VAL:HG23	1.86	0.40
39:YT:29:ARG:HB2	39:YT:29:ARG:NH1	2.36	0.40
39:YT:50:ILE:CG2	39:YT:62:THR:OG1	2.67	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YV:35:LEU:O	41:YV:36:PRO:C	2.65	0.40
42:YW:66:GLU:HG2	42:YW:67:ASP:N	2.37	0.40
42:YW:82:LEU:N	42:YW:98:LYS:O	2.42	0.40
44:YY:14:LEU:HD23	44:YY:14:LEU:C	2.46	0.40
44:YY:42:VAL:HG21	44:YY:67:LEU:CD1	2.52	0.40
44:YY:97:ARG:O	44:YY:97:ARG:CG	2.69	0.40
46:Y0:37:LEU:O	46:Y0:38:VAL:HG23	2.20	0.40
50:Y4:63:TYR:O	50:Y4:65:ASP:N	2.54	0.40
1:QA:109:A:C6	1:QA:326:G:C6	3.10	0.40
1:QA:187:C:H6	1:QA:187:C:O5'	2.04	0.40
1:QA:507:C:OP2	1:QA:508:C:O2'	2.39	0.40
1:QA:645:C:C4	1:QA:646:U:C4	3.09	0.40
1:QA:689:C:C2'	1:QA:690:G:H5'	2.51	0.40
1:QA:977:A:H8	1:QA:982:U:O4	2.04	0.40
1:QA:1320:C:C4	1:QA:1321:C:N3	2.90	0.40
1:QA:1336:C:O2	1:QA:1336:C:H2'	2.20	0.40
1:QA:1402:C:H2'	1:QA:1403:C:O4'	2.21	0.40
1:QA:1409:C:H5'	25:RA:1916:A:N1	2.36	0.40
2:QB:76:GLN:OE1	2:QB:206:ASP:HB3	2.21	0.40
3:QC:178:LEU:C	3:QC:180:ALA:H	2.29	0.40
4:QD:110:PHE:HE2	4:QD:148:VAL:HG23	1.86	0.40
5:QE:32:VAL:CG2	5:QE:58:ALA:HB1	2.51	0.40
6:QF:61:LEU:HB3	6:QF:63:TYR:CE2	2.53	0.40
10:QJ:65:LEU:HA	14:QN:55:GLY:O	2.22	0.40
12:QL:22:SER:C	12:QL:24:VAL:N	2.79	0.40
14:QN:34:TYR:CD1	14:QN:34:TYR:N	2.89	0.40
16:QP:20:VAL:CG2	16:QP:32:TYR:CD2	3.04	0.40
20:QT:28:ALA:O	20:QT:29:LYS:C	2.64	0.40
25:RA:14:A:C6	25:RA:526:A:C2	3.10	0.40
25:RA:572:A:H2'	25:RA:573:G:O4'	2.21	0.40
25:RA:1026:U:H4'	25:RA:1027:A:OP1	2.20	0.40
25:RA:1360:A:C6	25:RA:1372:U:C4	3.10	0.40
25:RA:1543:A:H2	25:RA:1545:A:N7	2.20	0.40
25:RA:1563:G:C5	25:RA:1564:C:C5	3.09	0.40
25:RA:1797:C:H4'	27:RD:257:LEU:O	2.22	0.40
25:RA:1839:G:N3	25:RA:1839:G:H2'	2.35	0.40
25:RA:2067:G:C2	25:RA:2069:G:C8	3.09	0.40
25:RA:2105:C:H2'	25:RA:2106:G:C8	2.55	0.40
25:RA:2171:A:C2	25:RA:2172:U:C2	3.08	0.40
25:RA:2352:A:C5	25:RA:2366:A:C2	3.09	0.40
25:RA:2623:G:H5'	25:RA:2826:A:H1'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:RB:111:U:H2'	26:RB:112:G:H8	1.85	0.40
27:RD:117:VAL:HG22	27:RD:118:VAL:N	2.36	0.40
27:RD:228:PRO:HD3	27:RD:234:GLY:O	2.21	0.40
28:RE:65:GLY:O	28:RE:66:HIS:C	2.65	0.40
28:RE:70:ALA:O	28:RE:71:GLY:C	2.62	0.40
29:RF:36:VAL:HG11	29:RF:183:VAL:HG11	2.04	0.40
29:RF:62:ARG:HB3	29:RF:62:ARG:CZ	2.52	0.40
29:RF:80:ALA:O	29:RF:83:PHE:HB2	2.20	0.40
30:RG:41:GLN:HB3	30:RG:43:LEU:CD1	2.51	0.40
31:RH:20:ALA:HB3	31:RH:23:ARG:HG2	2.03	0.40
32:RI:45:LYS:O	32:RI:48:GLU:N	2.54	0.40
33:RN:61:ARG:C	33:RN:62:VAL:CG2	2.94	0.40
35:RP:65:ARG:HH21	54:R8:15:LYS:HB3	1.84	0.40
38:RS:12:PHE:HD2	38:RS:12:PHE:HA	1.80	0.40
38:RS:24:LEU:HD22	38:RS:24:LEU:N	2.36	0.40
38:RS:62:LYS:HD3	38:RS:97:ARG:CZ	2.52	0.40
38:RS:66:ALA:O	38:RS:67:ARG:C	2.64	0.40
45:RZ:111:VAL:HG22	45:RZ:112:ARG:N	2.34	0.40
47:R1:82:LEU:HD13	47:R1:83:GLU:CA	2.49	0.40
51:R5:6:VAL:HA	51:R5:7:PRO:HD3	1.81	0.40
52:R6:36:LEU:CD1	52:R6:50:ARG:NH1	2.82	0.40
54:R8:40:GLU:O	54:R8:42:ARG:N	2.54	0.40
54:R8:53:PRO:HD2	54:R8:54:GLU:H	1.84	0.40
54:R8:53:PRO:CG	54:R8:54:GLU:N	2.84	0.40
1:XA:59:A:H1'	1:XA:354:G:C2	2.56	0.40
1:XA:192:U:C4'	20:XT:103:GLY:HA2	2.51	0.40
1:XA:419:C:OP1	1:XA:513:C:O2'	2.37	0.40
1:XA:490:G:H2'	1:XA:491:G:C8	2.56	0.40
1:XA:738:C:H5''	6:XF:69:GLU:HB2	2.02	0.40
1:XA:792:A:C8	1:XA:794:A:C5	3.09	0.40
1:XA:1060:C:C5	3:XC:2:GLY:HA2	2.56	0.40
1:XA:1178:G:H3'	1:XA:1178:G:H8	1.85	0.40
1:XA:1205:U:O2'	3:XC:195:VAL:HG23	2.21	0.40
3:XC:120:VAL:O	3:XC:123:GLN:HB2	2.20	0.40
3:XC:178:LEU:N	3:XC:178:LEU:CD2	2.85	0.40
4:XD: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
4:XD:110:PHE:HE2	4:XD:148:VAL:HG23	1.85	0.40
6:XF:40:VAL:HA	6:XF:62:TRP:O	2.22	0.40
6:XF:101:ALA:HA	18:XR:28:GLU:CD	2.45	0.40
8:XH:20:TYR:CD1	8:XH:65:TYR:CD2	2.98	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:84:GLN:H	10:XJ:84:GLN:HG3	1.50	0.40
11:XK:21:ILE:CD1	11:XK:82:VAL:HG13	2.51	0.40
13:XM:47:ASP:O	13:XM:48:LEU:HB3	2.20	0.40
17:XQ:83:ASP:O	17:XQ:87:LYS:HG2	2.22	0.40
18:XR:37:VAL:O	18:XR:40:LEU:N	2.54	0.40
20:XT:97:ALA:C	20:XT:99:LEU:HD13	2.46	0.40
25:YA:99:U:H4'	25:YA:101:G:C5'	2.52	0.40
25:YA:482:A:C4'	44:YY:47:LYS:HD2	2.28	0.40
25:YA:860:U:C5	25:YA:861:A:N7	2.89	0.40
25:YA:1093:G:H4'	31:YH:170:ARG:CZ	2.52	0.40
25:YA:1216:G:P	40:YU:12:ARG:HH21	2.44	0.40
25:YA:1291:C:H2'	25:YA:1292:U:C5	2.57	0.40
25:YA:1380:G:N2	25:YA:1570:A:N1	2.65	0.40
25:YA:1387:C:C2	25:YA:1388:G:C8	3.10	0.40
25:YA:1436:G:H1'	25:YA:1477:A:O2'	2.21	0.40
25:YA:1509:C:N3	25:YA:1511:A:N6	2.69	0.40
25:YA:1778:U:C5	25:YA:1784:A:C5	3.09	0.40
25:YA:1794:U:H2'	25:YA:1795:C:H6	1.86	0.40
25:YA:2308:G:N2	25:YA:2311:A:C2	2.89	0.40
25:YA:2316:C:H1'	30:YG:128:ARG:HH22	1.86	0.40
25:YA:2507:C:H2'	25:YA:2508:G:C8	2.54	0.40
25:YA:2655:G:O2'	25:YA:2656:U:P	2.80	0.40
25:YA:2824:C:C5	25:YA:2825:C:C5	3.09	0.40
25:YA:2845:G:H5''	39:YT:55:ASN:HA	2.03	0.40
27:YD:177:LEU:C	27:YD:179:SER:N	2.79	0.40
27:YD:210:GLY:O	27:YD:211:ARG:C	2.63	0.40
28:YE:93:VAL:H	28:YE:95:ILE:CD1	2.23	0.40
29:YF:33:LEU:O	29:YF:37:VAL:HG23	2.21	0.40
29:YF:118:ALA:HA	29:YF:123:LEU:HB3	2.02	0.40
29:YF:119:ARG:HH11	29:YF:119:ARG:CG	2.29	0.40
30:YG:121:ASN:C	30:YG:123:ASN:N	2.79	0.40
31:YH:128:PRO:CG	31:YH:129:THR:H	2.33	0.40
32:YI:115:ALA:HB3	32:YI:128:LEU:HD12	2.02	0.40
33:YN:7:LYS:CG	33:YN:8:GLN:N	2.81	0.40
34:YO:86:ILE:N	34:YO:86:ILE:CD1	2.83	0.40
35:YP:126:VAL:HG12	35:YP:147:LEU:CD2	2.23	0.40
36:YQ:20:ALA:HB1	36:YQ:99:PRO:CG	2.51	0.40
39:YT:55:ASN:O	39:YT:55:ASN:CG	2.64	0.40
40:YU:33:ARG:O	40:YU:37:GLU:HB2	2.21	0.40
44:YY:95:LYS:HA	44:YY:101:LYS:CB	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YZ:15:PRO:O	45:YZ:19:ARG:HB2	2.21	0.40
45:YZ:23:LYS:HB3	45:YZ:38:TYR:HD1	1.87	0.40
47:Y1:91:LYS:HG3	47:Y1:92:LYS:N	2.32	0.40
47:Y1:96:LYS:O	47:Y1:96:LYS:HG2	2.21	0.40
48:Y2:37:PHE:O	48:Y2:40:SER:HB3	2.22	0.40
50:Y4:21:VAL:O	50:Y4:22:ILE:O	2.40	0.40
50:Y4:52:THR:O	50:Y4:53:GLU:CB	2.69	0.40
54:Y8:17:THR:O	54:Y8:20:GLY:N	2.46	0.40
54:Y8:39:LYS:HD2	54:Y8:39:LYS:O	2.22	0.40
54:Y8:53:PRO:O	54:Y8:54:GLU:C	2.64	0.40
1:QA:475:G:O2'	1:QA:476:G:H5'	2.21	0.40
1:QA:673:G:C4	1:QA:734:G:N2	2.89	0.40
1:QA:757:U:H2'	1:QA:758:G:O4'	2.22	0.40
1:QA:995:C:H6	1:QA:995:C:O5'	2.03	0.40
1:QA:1002:G:H1	1:QA:1038:C:H42	1.69	0.40
1:QA:1122:U:H2'	1:QA:1123:A:O4'	2.22	0.40
3:QC:128:PHE:O	3:QC:130:VAL:N	2.54	0.40
4:QD:129:ASN:CA	4:QD:145:GLU:HB2	2.51	0.40
6:QF:8:ILE:HG22	6:QF:10:LEU:HD12	2.03	0.40
7:QG:69:VAL:HG12	7:QG:100:ALA:HA	2.03	0.40
8:QH:105:ARG:O	8:QH:107:LEU:N	2.47	0.40
8:QH:133:LEU:C	8:QH:133:LEU:HD23	2.46	0.40
9:QI:118:LYS:CB	9:QI:118:LYS:HZ2	2.35	0.40
20:QT:82:SER:O	20:QT:86:ARG:CB	2.70	0.40
22:QV:75:C:OP1	25:RA:2602:A:P	2.80	0.40
25:RA:43:G:C6	25:RA:44:A:C5	3.09	0.40
25:RA:88:G:N3	25:RA:88:G:H2'	2.34	0.40
25:RA:191:A:H2'	25:RA:192:C:C6	2.57	0.40
25:RA:259:G:C2'	25:RA:621:A:O2'	2.70	0.40
25:RA:270(T):G:C6	25:RA:270(U):C:C4	3.09	0.40
25:RA:320:A:N3	29:RF:169:ASN:ND2	2.70	0.40
25:RA:1005:C:O2	25:RA:1143:A:C5	2.75	0.40
25:RA:1007:C:OP2	25:RA:1008:C:O2'	2.31	0.40
25:RA:1309:G:P	53:R7:9:ARG:HD3	2.61	0.40
25:RA:1312:U:H4'	25:RA:1313:U:O5'	2.21	0.40
25:RA:1973:G:H2'	25:RA:1974:C:C6	2.56	0.40
25:RA:1985:G:C2'	25:RA:1986:A:H5'	2.52	0.40
25:RA:2224:G:H4'	25:RA:2226:C:C2	2.57	0.40
25:RA:2376:A:OP1	25:RA:2376:A:H8	2.04	0.40
25:RA:2422:A:OP2	52:R6:6:ARG:NH1	2.54	0.40
25:RA:2592:G:H2'	25:RA:2593:U:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:RA:2882:A:P	37:RR:96:ARG:NH1	2.95	0.40
26:RB:5:C:H2'	26:RB:6:C:C6	2.57	0.40
27:RD:72:LYS:HG3	27:RD:97:TYR:CE2	2.56	0.40
27:RD:185:VAL:HG12	27:RD:186:HIS:N	2.37	0.40
29:RF:68:LYS:O	29:RF:69:HIS:HB2	2.21	0.40
30:RG:112:PRO:CA	50:R4:37:SER:HB2	2.51	0.40
32:RI:52:ARG:HB3	32:RI:52:ARG:HH11	1.87	0.40
34:RO:13:ASN:HD21	34:RO:97:ARG:HB3	1.86	0.40
36:RQ:66:ILE:O	36:RQ:67:ARG:HB2	2.22	0.40
37:RR:18:LEU:HD11	37:RR:22:ARG:NE	2.36	0.40
38:RS:92:TYR:HB2	38:RS:98:VAL:HG11	2.02	0.40
39:RT:23:ARG:O	39:RT:49:VAL:HG11	2.21	0.40
42:RW:100:THR:O	42:RW:100:THR:HG23	2.22	0.40
43:RX:60:ARG:HH22	53:R7:47:ARG:HH12	1.68	0.40
44:RY:5:MET:HE1	44:RY:32:PRO:HB3	2.02	0.40
44:RY:43:ASN:OD1	44:RY:43:ASN:C	2.64	0.40
44:RY:90:LEU:HB2	44:RY:91:GLU:H	1.53	0.40
44:RY:98:VAL:O	44:RY:99:CYS:HB3	2.21	0.40
48:R2:53:LEU:O	48:R2:57:ILE:HG13	2.21	0.40
50:R4:21:VAL:O	50:R4:22:ILE:O	2.40	0.40
54:R8:32:LEU:HD23	54:R8:32:LEU:HA	1.94	0.40
54:R8:38:GLY:C	54:R8:40:GLU:H	2.30	0.40
55:R9:10:ILE:HD12	55:R9:32:HIS:CG	2.56	0.40
1:XA:8:A:N6	4:XD:205:GLU:O	2.53	0.40
1:XA:89:U:H2'	1:XA:90:C:H6	1.86	0.40
1:XA:489:C:P	4:XD:132:ARG:HH22	2.42	0.40
1:XA:665:A:C5	1:XA:733:A:C5	3.09	0.40
1:XA:1073:U:OP2	5:XE:57:LYS:NZ	2.34	0.40
1:XA:1178:G:C8	1:XA:1178:G:H3'	2.57	0.40
1:XA:1327:C:OP1	21:XU:21:TYR:HD1	2.05	0.40
1:XA:1489:G:H2'	1:XA:1490:C:O4'	2.21	0.40
3:XC:13:GLY:O	3:XC:14:ILE:HB	2.22	0.40
3:XC:92:ALA:HB2	3:XC:99:VAL:HG13	2.03	0.40
3:XC:178:LEU:C	3:XC:180:ALA:H	2.29	0.40
4:XD:178:VAL:O	4:XD:179:GLU:C	2.63	0.40
6:XF:8:ILE:HG22	6:XF:10:LEU:HD12	2.03	0.40
7:XG:50:ILE:HA	7:XG:54:THR:CG2	2.52	0.40
13:XM:20:THR:C	13:XM:22:ILE:H	2.29	0.40
13:XM:56:LEU:HD13	13:XM:60:VAL:CG2	2.51	0.40
13:XM:94:ARG:O	13:XM:95:GLY:C	2.65	0.40
13:XM:122:LYS:O	13:XM:122:LYS:HE2	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:XO:70:LEU:HD23	15:XO:81:LEU:HD23	2.04	0.40
15:XO:87:ILE:CG2	15:XO:88:ARG:N	2.71	0.40
17:XQ:8:GLY:HA3	17:XQ:21:VAL:HG12	2.03	0.40
20:XT:49:ALA:HA	20:XT:92:LEU:HD21	2.04	0.40
22:XV:74:C:H2'	22:XV:75:C:H5'	2.03	0.40
25:YA:270(F):U:H2'	25:YA:270(G):C:H6	1.86	0.40
25:YA:330:A:O2'	25:YA:331:A:C8	2.58	0.40
25:YA:764:A:H5'	27:YD:210:GLY:HA2	2.04	0.40
25:YA:911:A:H5''	25:YA:912:C:H5''	2.04	0.40
25:YA:1613:G:C2	25:YA:1617:C:C2	3.09	0.40
25:YA:2043:C:C2	25:YA:2777:G:N2	2.89	0.40
25:YA:2585:U:H5	56:Z8:76:PPU:O2'	2.04	0.40
25:YA:2624:G:C2'	25:YA:2625:G:H5'	2.51	0.40
25:YA:2705:A:H2'	25:YA:2706:G:O4'	2.21	0.40
29:YF:124:LEU:HD12	29:YF:125:LEU:O	2.22	0.40
29:YF:198:ALA:HA	29:YF:201:VAL:CG1	2.41	0.40
30:YG:61:ALA:CB	30:YG:67:LYS:HA	2.51	0.40
30:YG:98:ARG:CA	30:YG:101:ILE:HG12	2.40	0.40
34:YO:34:THR:O	34:YO:35:VAL:C	2.64	0.40
34:YO:67:LYS:O	34:YO:68:GLU:C	2.63	0.40
34:YO:111:PHE:N	34:YO:112:MET:HE2	2.36	0.40
36:YQ:139:GLU:HG2	36:YQ:140:ALA:N	2.36	0.40
42:YW:19:LEU:HD12	42:YW:19:LEU:HA	1.79	0.40
43:YX:15:GLU:CD	43:YX:15:GLU:H	2.27	0.40
44:YY:21:LYS:HE2	44:YY:21:LYS:HB2	1.96	0.40
45:YZ:14:LYS:O	45:YZ:18:LEU:HD12	2.21	0.40
46:Y0:14:ARG:O	46:Y0:15:ASP:HB2	2.20	0.40
47:Y1:94:LEU:HD23	47:Y1:94:LEU:HA	1.82	0.40
49:Y3:17:LYS:O	49:Y3:20:LYS:HB2	2.21	0.40
50:Y4:42:PHE:CZ	50:Y4:43:TYR:HB3	2.57	0.40
50:Y4:61:ARG:C	50:Y4:63:TYR:N	2.73	0.40
54:Y8:38:GLY:C	54:Y8:40:GLU:N	2.79	0.40
1:QA:111:G:H8	1:QA:111:G:O5'	2.04	0.40
1:QA:149:A:C2	1:QA:172:A:N6	2.89	0.40
1:QA:186:C:O2	20:QT:85:MET:HE1	2.21	0.40
1:QA:230:G:H2'	1:QA:231:G:O4'	2.22	0.40
1:QA:1267:C:O2'	21:QU:20:LYS:HG3	2.21	0.40
1:QA:1347:G:H2'	1:QA:1373:G:C6	2.57	0.40
1:QA:1349:A:H2'	1:QA:1350:A:C8	2.56	0.40
2:QB:114:ARG:O	2:QB:118:LEU:HG	2.21	0.40
4:QD:3:ARG:HB3	4:QD:69:GLY:O	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:QE:126:ARG:NH1	5:QE:126:ARG:CG	2.79	0.40
7:QG:122:HIS:ND1	7:QG:122:HIS:N	2.69	0.40
8:QH:36:LEU:O	8:QH:45:ILE:HD11	2.22	0.40
8:QH:109:ILE:HG13	8:QH:120:THR:HB	2.03	0.40
9:QI:128:ARG:HH21	22:QV:35:A:P	2.44	0.40
11:QK:21:ILE:CD1	11:QK:82:VAL:HG13	2.51	0.40
13:QM:54:VAL:O	13:QM:54:VAL:HG12	2.21	0.40
15:QO:77:ARG:CA	15:QO:80:ALA:HB3	2.52	0.40
16:QP:26:ARG:HH21	16:QP:31:LYS:HG2	1.86	0.40
17:QQ:8:GLY:HA3	17:QQ:21:VAL:HG12	2.03	0.40
17:QQ:60:ILE:O	17:QQ:60:ILE:HG23	2.21	0.40
17:QQ:68:ARG:O	17:QQ:68:ARG:HG3	2.22	0.40
19:QS:39:THR:O	19:QS:40:ILE:HB	2.20	0.40
20:QT:89:ARG:HH12	20:QT:106:ALA:CB	2.34	0.40
25:RA:52:A:N1	25:RA:178:G:O2'	2.44	0.40
25:RA:199:A:N1	25:RA:2434:A:C2	2.90	0.40
25:RA:511:U:C5	25:RA:512:G:C5	3.10	0.40
25:RA:1204:A:C2	25:RA:1206:G:N2	2.90	0.40
25:RA:1225:C:O2'	41:RV:85:LYS:HA	2.21	0.40
25:RA:1480:G:C2	25:RA:1514:U:O2	2.74	0.40
25:RA:1771:C:H2'	25:RA:1772:G:C8	2.56	0.40
25:RA:1799:G:H5'	25:RA:1819:A:N6	2.33	0.40
25:RA:2451:A:C2	56:Z6:76:PPU:HD2	2.56	0.40
25:RA:2464:C:O2	25:RA:2487:G:N2	2.54	0.40
25:RA:2472:G:H21	25:RA:2478:A:H62	1.69	0.40
25:RA:2654:A:O3'	25:RA:2655:G:H4'	2.22	0.40
25:RA:2684:U:O2'	34:RO:68:GLU:HG3	2.21	0.40
25:RA:2711:A:C8	25:RA:2714:G:O4'	2.75	0.40
27:RD:92:ILE:CD1	27:RD:104:TYR:CD2	3.05	0.40
27:RD:142:VAL:HA	27:RD:194:GLY:H	1.86	0.40
29:RF:33:LEU:O	29:RF:37:VAL:HG23	2.21	0.40
29:RF:64:ILE:HD12	29:RF:64:ILE:HA	1.89	0.40
30:RG:114:ILE:HG22	30:RG:117:PHE:HB2	2.01	0.40
31:RH:65:HIS:O	31:RH:66:GLY:C	2.63	0.40
32:RI:82:ARG:C	32:RI:89:TYR:HD1	2.28	0.40
32:RI:130:TYR:C	32:RI:131:LYS:HD2	2.47	0.40
33:RN:39:ARG:C	33:RN:41:ASP:H	2.28	0.40
33:RN:75:TYR:O	33:RN:76:SER:O	2.40	0.40
33:RN:89:LYS:O	33:RN:90:MET:C	2.65	0.40
33:RN:101:HIS:HD2	33:RN:102:ALA:N	2.19	0.40
34:RO:67:LYS:O	34:RO:68:GLU:C	2.63	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RO:112:MET:O	34:RO:115:VAL:HG23	2.22	0.40
35:RP:2:LYS:O	35:RP:5:ASP:CB	2.70	0.40
36:RQ:51:ARG:O	36:RQ:52:VAL:C	2.62	0.40
37:RR:34:ILE:HG22	37:RR:35:THR:N	2.35	0.40
38:RS:89:ARG:HG2	38:RS:89:ARG:NH1	2.36	0.40
39:RT:23:ARG:O	39:RT:24:PRO:C	2.65	0.40
39:RT:50:ILE:HD11	39:RT:102:ILE:CG1	2.52	0.40
39:RT:54:ARG:HA	39:RT:59:THR:HG23	2.02	0.40
40:RU:62:ILE:HG23	40:RU:76:TYR:CE1	2.57	0.40
40:RU:78:THR:O	40:RU:79:PHE:C	2.64	0.40
45:RZ:119:GLU:HG3	45:RZ:122:ARG:HD2	2.03	0.40
47:R1:86:SER:O	47:R1:89:GLU:HB2	2.21	0.40
49:R3:7:LYS:O	49:R3:7:LYS:HG2	2.20	0.40
52:R6:36:LEU:HD23	52:R6:36:LEU:N	2.37	0.40
1:XA:799:G:C6	1:XA:800:G:C4	3.09	0.40
1:XA:1097:C:O2'	1:XA:1169:A:N3	2.48	0.40
1:XA:1225:A:H3'	1:XA:1226:C:C6	2.57	0.40
1:XA:1327:C:H2'	1:XA:1328:C:C6	2.57	0.40
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.57	0.40
2:XB:86:GLU:C	2:XB:88:ALA:N	2.78	0.40
2:XB:183:PRO:HA	2:XB:198:ASP:OD1	2.22	0.40
3:XC:70:VAL:CG1	3:XC:71:ALA:H	2.35	0.40
4:XD:190:ASP:OD1	4:XD:191:ARG:N	2.55	0.40
4:XD:199:ASN:OD1	4:XD:201:GLN:HB3	2.21	0.40
5:XE:36:ASP:O	5:XE:37:ARG:HG2	2.22	0.40
7:XG:46:ALA:O	7:XG:49:ILE:HB	2.21	0.40
8:XH:97:VAL:O	8:XH:100:ILE:HG13	2.21	0.40
9:XI:13:ALA:H	9:XI:68:GLY:HA3	1.86	0.40
10:XJ:65:LEU:HA	14:YN:55:GLY:O	2.21	0.40
11:XK:83:ILE:HG12	11:XK:109:VAL:CG2	2.52	0.40
13:XM:88:ARG:HG2	13:XM:98:VAL:CG1	2.52	0.40
15:XO:27:VAL:O	15:XO:28:GLN:C	2.64	0.40
20:XT:44:ALA:HB3	20:XT:91:LEU:HD12	2.03	0.40
25:YA:136:G:N2	25:YA:143:C:N3	2.53	0.40
25:YA:263:C:H2'	25:YA:264:C:O4'	2.21	0.40
25:YA:740:U:H2'	25:YA:741:G:H8	1.85	0.40
25:YA:996:A:H2'	25:YA:997:G:C8	2.55	0.40
25:YA:1002:G:H2'	25:YA:1003:G:O4'	2.21	0.40
25:YA:1071:G:N2	25:YA:1090:U:C5	2.89	0.40
25:YA:1111:A:OP1	31:YH:3:ARG:NH1	2.55	0.40
25:YA:1183:G:H4'	49:Y3:29:ARG:NH2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:YA:1446:C:C2'	25:YA:1447:G:H5'	2.52	0.40
25:YA:1448:G:H1'	25:YA:1528:A:H62	1.86	0.40
25:YA:1776:G:N2	25:YA:1777:U:H1'	2.37	0.40
25:YA:1957:C:O2'	25:YA:1985:G:H1'	2.21	0.40
25:YA:2518:A:H4'	25:YA:2519:U:OP1	2.21	0.40
25:YA:2639:A:H2'	25:YA:2640:G:O4'	2.22	0.40
25:YA:2823:A:C5	25:YA:2824:C:C5	3.09	0.40
27:YD:107:ALA:HA	27:YD:108:PRO:HD2	2.01	0.40
27:YD:230:ASP:OD2	27:YD:230:ASP:N	2.54	0.40
28:YE:92:THR:HB	28:YE:93:VAL:H	1.57	0.40
29:YF:36:VAL:HG11	29:YF:183:VAL:HG11	2.04	0.40
29:YF:127:GLU:C	29:YF:129:PHE:H	2.26	0.40
29:YF:179:GLU:CD	29:YF:179:GLU:N	2.77	0.40
30:YG:11:TYR:O	30:YG:16:ARG:HB2	2.22	0.40
30:YG:137:GLU:OE2	30:YG:139:LEU:HD11	2.22	0.40
31:YH:170:ARG:HB3	31:YH:171:LEU:H	1.47	0.40
33:YN:53:VAL:HG22	33:YN:121:LYS:HB2	2.04	0.40
33:YN:56:ASN:ND2	33:YN:126:PRO:N	2.69	0.40
35:YP:2:LYS:O	35:YP:5:ASP:CB	2.70	0.40
36:YQ:39:PRO:HA	36:YQ:97:VAL:O	2.21	0.40
36:YQ:79:LEU:CD1	46:Y0:5:LYS:HD3	2.52	0.40
37:YR:22:ARG:O	37:YR:26:LYS:HG3	2.21	0.40
38:YS:83:LYS:HE3	38:YS:84:GLN:HG3	2.02	0.40
39:YT:23:ARG:O	39:YT:24:PRO:C	2.65	0.40
39:YT:26:ASP:HB3	39:YT:92:GLY:H	1.86	0.40
39:YT:125:ARG:O	39:YT:128:GLU:N	2.50	0.40
43:YX:9:LEU:HA	48:Y2:36:ARG:HH21	1.86	0.40
44:YY:98:VAL:O	44:YY:99:CYS:HB3	2.21	0.40
45:YZ:76:LEU:HA	45:YZ:83:PRO:HA	2.03	0.40
47:Y1:86:SER:O	47:Y1:89:GLU:N	2.54	0.40
54:Y8:32:LEU:HD23	54:Y8:32:LEU:HA	1.94	0.40

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

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:RI:91:SER:OG	1:XA:368:U:OP1[4_555]	2.02	0.18

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

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%)	49 (24%)	22 (11%)	0	6
5	QE	149/162 (92%)	103 (69%)	31 (21%)	15 (10%)	0	8
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	10
6	XF	99/101 (98%)	66 (67%)	24 (24%)	9 (9%)	0	10
7	QG	153/156 (98%)	102 (67%)	36 (24%)	15 (10%)	0	8
7	XG	153/156 (98%)	103 (67%)	36 (24%)	14 (9%)	0	10
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	10
10	XJ	97/105 (92%)	68 (70%)	19 (20%)	10 (10%)	0	7
11	QK	117/129 (91%)	87 (74%)	21 (18%)	9 (8%)	1	12
11	XK	117/129 (91%)	87 (74%)	22 (19%)	8 (7%)	1	14
12	QL	123/132 (93%)	84 (68%)	24 (20%)	15 (12%)	0	4
12	XL	123/132 (93%)	83 (68%)	24 (20%)	16 (13%)	0	3
13	QM	119/126 (94%)	71 (60%)	29 (24%)	19 (16%)	0	3
13	XM	119/126 (94%)	72 (60%)	25 (21%)	22 (18%)	0	2
14	QN	58/61 (95%)	31 (53%)	15 (26%)	12 (21%)	0	1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
14	XN	58/61 (95%)	32 (55%)	14 (24%)	12 (21%)	0	1
15	QO	86/89 (97%)	61 (71%)	19 (22%)	6 (7%)	1	14
15	XO	86/89 (97%)	60 (70%)	20 (23%)	6 (7%)	1	14
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%)	46 (68%)	14 (21%)	8 (12%)	0	5
18	XR	68/88 (77%)	46 (68%)	14 (21%)	8 (12%)	0	5
19	QS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
19	XS	82/93 (88%)	46 (56%)	18 (22%)	18 (22%)	0	1
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%)	16 (70%)	3 (13%)	4 (17%)	0	2
21	XU	23/27 (85%)	16 (70%)	3 (13%)	4 (17%)	0	2
27	RD	270/276 (98%)	203 (75%)	48 (18%)	19 (7%)	1	14
27	YD	270/276 (98%)	204 (76%)	47 (17%)	19 (7%)	1	14
28	RE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	1
28	YE	203/206 (98%)	120 (59%)	41 (20%)	42 (21%)	0	1
29	RF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	8
29	YF	200/210 (95%)	144 (72%)	36 (18%)	20 (10%)	0	8
30	RG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	5
30	YG	179/182 (98%)	119 (66%)	39 (22%)	21 (12%)	0	5
31	RH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
31	YH	168/180 (93%)	94 (56%)	36 (21%)	38 (23%)	0	1
32	RI	144/148 (97%)	99 (69%)	32 (22%)	13 (9%)	0	10
32	YI	144/148 (97%)	93 (65%)	30 (21%)	21 (15%)	0	3
33	RN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
33	YN	136/140 (97%)	84 (62%)	30 (22%)	22 (16%)	0	3
34	RO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	13
34	YO	120/122 (98%)	90 (75%)	21 (18%)	9 (8%)	1	13

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
35	RP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
35	YP	148/150 (99%)	97 (66%)	19 (13%)	32 (22%)	0	1
36	RQ	139/141 (99%)	95 (68%)	30 (22%)	14 (10%)	0	8
36	YQ	139/141 (99%)	97 (70%)	28 (20%)	14 (10%)	0	8
37	RR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	4
37	YR	116/118 (98%)	82 (71%)	20 (17%)	14 (12%)	0	4
38	RS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	2
38	YS	109/112 (97%)	62 (57%)	28 (26%)	19 (17%)	0	2
39	RT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	3
39	YT	135/146 (92%)	83 (62%)	32 (24%)	20 (15%)	0	3
40	RU	115/118 (98%)	87 (76%)	19 (16%)	9 (8%)	1	12
40	YU	115/118 (98%)	86 (75%)	20 (17%)	9 (8%)	1	12
41	RV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	8
41	YV	99/101 (98%)	73 (74%)	16 (16%)	10 (10%)	0	8
42	RW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	4
42	YW	111/113 (98%)	75 (68%)	22 (20%)	14 (13%)	0	4
43	RX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	1	17
43	YX	90/96 (94%)	77 (86%)	8 (9%)	5 (6%)	1	17
44	RY	100/110 (91%)	58 (58%)	16 (16%)	26 (26%)	0	1
44	YY	100/110 (91%)	57 (57%)	16 (16%)	27 (27%)	0	1
45	RZ	181/206 (88%)	113 (62%)	46 (25%)	22 (12%)	0	4
45	YZ	181/206 (88%)	128 (71%)	36 (20%)	17 (9%)	0	9
46	R0	80/85 (94%)	66 (82%)	10 (12%)	4 (5%)	1	18
46	Y0	80/85 (94%)	66 (82%)	10 (12%)	4 (5%)	1	18
47	R1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	5
47	Y1	95/98 (97%)	64 (67%)	20 (21%)	11 (12%)	0	5
48	R2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	3
48	Y2	67/72 (93%)	47 (70%)	11 (16%)	9 (13%)	0	3
49	R3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	1	18
49	Y3	57/60 (95%)	45 (79%)	9 (16%)	3 (5%)	1	18
50	R4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
50	Y4	69/71 (97%)	23 (33%)	20 (29%)	26 (38%)	0	0
51	R5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
51	Y5	57/60 (95%)	33 (58%)	9 (16%)	15 (26%)	0	1
52	R6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
52	Y6	47/54 (87%)	15 (32%)	18 (38%)	14 (30%)	0	0
53	R7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	15
53	Y7	47/49 (96%)	37 (79%)	7 (15%)	3 (6%)	1	15
54	R8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
54	Y8	62/65 (95%)	36 (58%)	15 (24%)	11 (18%)	0	2
55	R9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
55	Y9	35/37 (95%)	31 (89%)	4 (11%)	0	100	100
All	All	11470/12128 (95%)	7621 (66%)	2356 (20%)	1493 (13%)	0	3

All (1493) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	QB	6	THR
2	QB	15	VAL
2	QB	26	PRO
2	QB	84	GLU
2	QB	88	ALA
2	QB	126	GLU
2	QB	230	VAL
2	QB	233	SER
3	QC	4	LYS
3	QC	12	LEU
3	QC	14	ILE
3	QC	29	TYR
3	QC	61	ALA
3	QC	189	ALA
3	QC	190	ARG
4	QD	28	SER
4	QD	29	PRO
4	QD	51	PRO
4	QD	89	THR
4	QD	129	ASN
4	QD	154	ASN
4	QD	155	LEU

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Mol	Chain	Res	Type
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	45	PRO
12	QL	62	SER
12	QL	121	GLY
13	QM	67	GLU
13	QM	70	LEU
13	QM	83	ASP
13	QM	106	ASN
13	QM	108	ARG
13	QM	118	ALA
14	QN	3	ARG
14	QN	16	PHE
14	QN	23	ARG
14	QN	24	CYS
14	QN	44	LEU
15	QO	88	ARG
16	QP	44	THR
16	QP	67	THR
17	QQ	34	LYS
17	QQ	49	GLU
18	QR	22	VAL
19	QS	3	ARG
19	QS	12	ASP
19	QS	14	HIS
19	QS	25	LYS
19	QS	26	GLY
19	QS	31	ILE

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Mol	Chain	Res	Type
19	QS	41	VAL
19	QS	70	LYS
19	QS	78	ARG
19	QS	79	THR
20	QT	48	LYS
20	QT	49	ALA
20	QT	74	LYS
20	QT	95	ALA
20	QT	96	GLY
20	QT	100	ILE
21	QU	7	ARG
21	QU	9	ARG
21	QU	22	ARG
27	RD	26	LYS
27	RD	28	GLU
27	RD	123	ALA
27	RD	231	HIS
28	RE	4	ILE
28	RE	7	VAL
28	RE	9	VAL
28	RE	22	PRO
28	RE	54	GLN
28	RE	57	LYS
28	RE	60	ASN
28	RE	63	LEU
28	RE	64	LYS
28	RE	68	ALA
28	RE	70	ALA
28	RE	73	GLU
28	RE	90	THR
28	RE	92	THR
28	RE	93	VAL
28	RE	169	ASN
28	RE	187	ALA
28	RE	189	PRO
29	RF	25	PRO
29	RF	66	PRO
29	RF	68	LYS
29	RF	73	ALA
29	RF	89	VAL
29	RF	128	ALA
29	RF	176	LEU

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Mol	Chain	Res	Type
30	RG	4	ASP
30	RG	14	GLU
30	RG	79	ASN
30	RG	86	MET
31	RH	10	PRO
31	RH	12	PRO
31	RH	83	TYR
31	RH	85	LYS
31	RH	86	GLU
31	RH	87	LEU
31	RH	90	LYS
31	RH	92	ILE
31	RH	126	PRO
31	RH	127	GLU
31	RH	128	PRO
31	RH	137	ASP
31	RH	138	LYS
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	169	VAL
32	RI	10	GLU
32	RI	117	GLU
32	RI	133	HIS
33	RN	6	PRO
33	RN	9	VAL
33	RN	22	THR
33	RN	36	GLY
33	RN	58	ASP
33	RN	95	PRO
33	RN	97	ARG
33	RN	119	ARG
33	RN	131	GLN
33	RN	133	GLN
33	RN	134	ARG
34	RO	49	ARG
35	RP	5	ASP
35	RP	10	PRO
35	RP	15	ARG
35	RP	19	VAL
35	RP	21	ARG
35	RP	25	SER

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Mol	Chain	Res	Type
35	RP	27	HIS
35	RP	36	LYS
35	RP	38	GLN
35	RP	42	SER
35	RP	65	ARG
35	RP	95	VAL
35	RP	106	LEU
35	RP	107	LYS
35	RP	141	ALA
35	RP	148	LEU
36	RQ	6	ARG
36	RQ	18	LYS
36	RQ	22	LYS
36	RQ	27	VAL
36	RQ	81	VAL
36	RQ	90	VAL
36	RQ	134	ARG
37	RR	2	ARG
37	RR	3	HIS
37	RR	4	LEU
37	RR	14	SER
37	RR	58	GLY
37	RR	86	ARG
37	RR	117	VAL
38	RS	4	LEU
38	RS	12	PHE
38	RS	14	VAL
38	RS	23	ARG
38	RS	56	LEU
38	RS	57	LYS
38	RS	88	ASP
38	RS	89	ARG
38	RS	90	GLY
38	RS	107	GLU
39	RT	2	ASN
39	RT	3	ARG
39	RT	39	ARG
39	RT	55	ASN
39	RT	58	ASN
39	RT	90	GLN
39	RT	94	ALA
39	RT	97	ALA

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Mol	Chain	Res	Type
39	RT	106	SER
39	RT	107	ASP
41	RV	28	GLU
41	RV	31	ALA
41	RV	45	THR
41	RV	48	GLY
41	RV	49	THR
41	RV	50	PRO
41	RV	53	GLU
41	RV	79	VAL
42	RW	59	VAL
42	RW	67	ASP
42	RW	75	TYR
42	RW	111	HIS
43	RX	36	LYS
44	RY	3	VAL
44	RY	23	ARG
44	RY	48	ALA
44	RY	49	VAL
44	RY	50	ARG
44	RY	53	PRO
44	RY	58	GLY
44	RY	63	LYS
44	RY	77	PRO
44	RY	78	ALA
44	RY	96	ILE
45	RZ	6	LYS
45	RZ	51	ALA
45	RZ	179	ASP
47	R1	30	VAL
47	R1	54	ALA
47	R1	81	LYS
47	R1	82	LEU
47	R1	95	LEU
48	R2	16	LEU
48	R2	43	GLN
48	R2	47	ASN
48	R2	48	HIS
48	R2	71	ASN
49	R3	3	ARG
50	R4	5	ILE
50	R4	14	ILE

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Mol	Chain	Res	Type
50	R4	16	CYS
50	R4	22	ILE
50	R4	23	GLU
50	R4	36	CYS
50	R4	37	SER
50	R4	40	HIS
50	R4	42	PHE
50	R4	43	TYR
50	R4	49	PHE
50	R4	50	VAL
50	R4	51	ASP
50	R4	53	GLU
50	R4	62	ARG
50	R4	66	SER
50	R4	68	ARG
51	R5	3	LYS
51	R5	4	HIS
51	R5	35	GLU
51	R5	51	TYR
51	R5	53	ALA
52	R6	7	ILE
52	R6	14	THR
52	R6	15	GLU
52	R6	19	ARG
52	R6	21	TYR
52	R6	33	LYS
52	R6	45	LYS
52	R6	48	VAL
54	R8	29	LYS
54	R8	31	HIS
54	R8	34	TRP
54	R8	52	LYS
54	R8	62	LEU
2	XB	6	THR
2	XB	15	VAL
2	XB	26	PRO
2	XB	84	GLU
2	XB	88	ALA
2	XB	126	GLU
2	XB	230	VAL
2	XB	233	SER
3	XC	4	LYS

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Mol	Chain	Res	Type
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
10	XJ	30	SER
10	XJ	33	GLN
11	XK	91	ARG
12	XL	18	VAL
12	XL	27	LEU
12	XL	46	LYS
12	XL	62	SER
12	XL	121	GLY
13	XM	70	LEU
13	XM	83	ASP
13	XM	106	ASN
13	XM	108	ARG
13	XM	118	ALA
14	XN	3	ARG
14	XN	16	PHE
14	XN	23	ARG
14	XN	43	CYS
14	XN	44	LEU

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Mol	Chain	Res	Type
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
21	XU	9	ARG
21	XU	22	ARG
27	YD	26	LYS
27	YD	28	GLU
27	YD	123	ALA
27	YD	231	HIS
28	YE	4	ILE
28	YE	7	VAL
28	YE	9	VAL
28	YE	22	PRO
28	YE	54	GLN
28	YE	57	LYS
28	YE	60	ASN
28	YE	63	LEU
28	YE	64	LYS
28	YE	68	ALA
28	YE	70	ALA
28	YE	73	GLU
28	YE	90	THR

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Mol	Chain	Res	Type
28	YE	92	THR
28	YE	93	VAL
28	YE	169	ASN
28	YE	187	ALA
28	YE	189	PRO
29	YF	25	PRO
29	YF	66	PRO
29	YF	68	LYS
29	YF	73	ALA
29	YF	89	VAL
29	YF	128	ALA
29	YF	176	LEU
30	YG	4	ASP
30	YG	14	GLU
30	YG	79	ASN
30	YG	86	MET
31	YH	10	PRO
31	YH	12	PRO
31	YH	83	TYR
31	YH	85	LYS
31	YH	86	GLU
31	YH	87	LEU
31	YH	90	LYS
31	YH	92	ILE
31	YH	126	PRO
31	YH	127	GLU
31	YH	128	PRO
31	YH	137	ASP
31	YH	138	LYS
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	169	VAL
32	YI	10	GLU
32	YI	72	LEU
32	YI	133	HIS
32	YI	145	VAL
33	YN	6	PRO
33	YN	9	VAL
33	YN	22	THR
33	YN	36	GLY
33	YN	58	ASP

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Mol	Chain	Res	Type
33	YN	95	PRO
33	YN	97	ARG
33	YN	119	ARG
33	YN	131	GLN
33	YN	133	GLN
33	YN	134	ARG
34	YO	49	ARG
35	YP	5	ASP
35	YP	10	PRO
35	YP	15	ARG
35	YP	19	VAL
35	YP	21	ARG
35	YP	25	SER
35	YP	27	HIS
35	YP	36	LYS
35	YP	38	GLN
35	YP	42	SER
35	YP	65	ARG
35	YP	95	VAL
35	YP	106	LEU
35	YP	107	LYS
35	YP	141	ALA
35	YP	148	LEU
36	YQ	6	ARG
36	YQ	18	LYS
36	YQ	22	LYS
36	YQ	27	VAL
36	YQ	81	VAL
36	YQ	90	VAL
36	YQ	134	ARG
37	YR	2	ARG
37	YR	3	HIS
37	YR	4	LEU
37	YR	14	SER
37	YR	58	GLY
37	YR	86	ARG
37	YR	117	VAL
38	YS	4	LEU
38	YS	12	PHE
38	YS	14	VAL
38	YS	23	ARG
38	YS	56	LEU

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Mol	Chain	Res	Type
38	YS	57	LYS
38	YS	88	ASP
38	YS	89	ARG
38	YS	90	GLY
38	YS	107	GLU
39	YT	2	ASN
39	YT	3	ARG
39	YT	39	ARG
39	YT	55	ASN
39	YT	58	ASN
39	YT	90	GLN
39	YT	94	ALA
39	YT	97	ALA
39	YT	106	SER
39	YT	107	ASP
41	YV	28	GLU
41	YV	31	ALA
41	YV	45	THR
41	YV	48	GLY
41	YV	49	THR
41	YV	50	PRO
41	YV	53	GLU
41	YV	79	VAL
42	YW	59	VAL
42	YW	67	ASP
42	YW	75	TYR
42	YW	111	HIS
43	YX	36	LYS
44	YY	3	VAL
44	YY	23	ARG
44	YY	48	ALA
44	YY	49	VAL
44	YY	50	ARG
44	YY	58	GLY
44	YY	63	LYS
44	YY	77	PRO
44	YY	78	ALA
44	YY	96	ILE
45	YZ	6	LYS
45	YZ	51	ALA
45	YZ	146	ILE
45	YZ	152	ALA

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Mol	Chain	Res	Type
45	YZ	166	SER
47	Y1	30	VAL
47	Y1	54	ALA
47	Y1	81	LYS
47	Y1	82	LEU
47	Y1	95	LEU
48	Y2	16	LEU
48	Y2	43	GLN
48	Y2	47	ASN
48	Y2	48	HIS
48	Y2	71	ASN
49	Y3	3	ARG
50	Y4	5	ILE
50	Y4	14	ILE
50	Y4	16	CYS
50	Y4	22	ILE
50	Y4	23	GLU
50	Y4	36	CYS
50	Y4	37	SER
50	Y4	40	HIS
50	Y4	42	PHE
50	Y4	43	TYR
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	51	ASP
50	Y4	53	GLU
50	Y4	62	ARG
50	Y4	66	SER
50	Y4	68	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	35	GLU
51	Y5	51	TYR
51	Y5	53	ALA
52	Y6	7	ILE
52	Y6	14	THR
52	Y6	15	GLU
52	Y6	19	ARG
52	Y6	21	TYR
52	Y6	33	LYS
52	Y6	45	LYS
52	Y6	48	VAL

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Mol	Chain	Res	Type
54	Y8	29	LYS
54	Y8	31	HIS
54	Y8	34	TRP
54	Y8	52	LYS
54	Y8	62	LEU
2	QB	18	GLY
2	QB	65	GLY
2	QB	208	ILE
2	QB	216	SER
2	QB	237	ALA
3	QC	60	ALA
3	QC	79	ARG
3	QC	129	ALA
3	QC	145	GLY
4	QD	7	PRO
4	QD	20	TYR
4	QD	164	ALA
4	QD	170	VAL
4	QD	179	GLU
4	QD	181	MET
4	QD	200	GLU
5	QE	21	ALA
5	QE	63	ARG
5	QE	108	ALA
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

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Mol	Chain	Res	Type
11	QK	125	PHE
11	QK	126	ARG
12	QL	65	GLU
12	QL	110	VAL
12	QL	115	LYS
12	QL	116	SER
12	QL	128	ALA
13	QM	49	THR
13	QM	68	GLY
13	QM	120	LYS
14	QN	14	PRO
14	QN	15	LYS
14	QN	27	CYS
15	QO	77	ARG
16	QP	49	LEU
17	QQ	14	LYS
17	QQ	33	GLY
17	QQ	78	GLU
17	QQ	100	LYS
18	QR	27	GLY
18	QR	54	ARG
18	QR	64	ARG
18	QR	65	ILE
19	QS	13	ASP
19	QS	45	VAL
20	QT	11	SER
20	QT	28	ALA
20	QT	62	LEU
20	QT	99	LEU
20	QT	102	GLY
20	QT	103	GLY
21	QU	3	LYS
27	RD	3	VAL
27	RD	32	SER
27	RD	58	HIS
27	RD	122	ASP
27	RD	169	GLU
28	RE	8	LYS
28	RE	37	ARG
28	RE	53	PRO
28	RE	61	ARG
28	RE	78	LEU

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Mol	Chain	Res	Type
28	RE	88	GLY
28	RE	186	GLY
28	RE	190	GLY
28	RE	204	ALA
29	RF	18	ARG
29	RF	107	LYS
29	RF	108	LYS
29	RF	111	ALA
29	RF	132	VAL
29	RF	134	GLY
29	RF	168	ARG
30	RG	5	VAL
30	RG	36	LYS
30	RG	81	LYS
30	RG	82	LEU
30	RG	96	ARG
30	RG	110	ALA
30	RG	115	ARG
30	RG	126	ASP
30	RG	136	ARG
31	RH	3	ARG
31	RH	8	PRO
31	RH	55	PRO
31	RH	59	ARG
31	RH	84	SER
31	RH	151	ILE
31	RH	156	ALA
31	RH	168	PRO
32	RI	11	ASN
32	RI	13	GLY
32	RI	72	LEU
32	RI	115	ALA
32	RI	145	VAL
33	RN	23	LEU
33	RN	76	SER
34	RO	51	ALA
34	RO	56	ASP
34	RO	68	GLU
35	RP	6	LEU
35	RP	11	GLY
35	RP	12	ALA
35	RP	16	ARG

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Mol	Chain	Res	Type
36	RQ	13	GLN
36	RQ	24	GLY
36	RQ	28	ALA
36	RQ	57	HIS
37	RR	11	ASN
38	RS	87	PHE
38	RS	96	GLY
38	RS	100	ALA
38	RS	109	GLY
38	RS	111	GLU
39	RT	4	GLY
39	RT	36	GLU
39	RT	43	GLN
39	RT	67	SER
39	RT	124	ASP
40	RU	9	VAL
40	RU	28	ARG
40	RU	73	GLY
40	RU	90	VAL
42	RW	63	ASP
42	RW	66	GLU
42	RW	68	ARG
43	RX	67	GLY
44	RY	4	LYS
44	RY	41	GLY
44	RY	56	PRO
44	RY	57	GLN
44	RY	99	CYS
45	RZ	66	SER
45	RZ	111	VAL
45	RZ	112	ARG
45	RZ	116	VAL
45	RZ	130	PRO
45	RZ	158	PRO
45	RZ	177	PRO
46	R0	3	HIS
46	R0	64	ASP
47	R1	45	ASN
47	R1	55	GLY
47	R1	84	GLY
48	R2	24	LEU
48	R2	44	LEU

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Mol	Chain	Res	Type
48	R2	70	GLN
50	R4	9	LEU
50	R4	24	THR
51	R5	43	HIS
51	R5	55	ARG
53	R7	39	ARG
2	XB	18	GLY
2	XB	65	GLY
2	XB	208	ILE
2	XB	216	SER
2	XB	237	ALA
3	XC	60	ALA
3	XC	79	ARG
3	XC	129	ALA
3	XC	145	GLY
4	XD	7	PRO
4	XD	20	TYR
4	XD	32	ALA
4	XD	164	ALA
4	XD	170	VAL
4	XD	179	GLU
4	XD	181	MET
4	XD	200	GLU
5	XE	21	ALA
5	XE	63	ARG
5	XE	108	ALA
6	XF	70	ASP
7	XG	4	ARG
7	XG	63	LYS
7	XG	141	VAL
8	XH	68	ARG
8	XH	69	ARG
8	XH	76	PRO
8	XH	122	ARG
9	XI	31	GLN
9	XI	41	VAL
9	XI	100	GLY
9	XI	109	VAL
10	XJ	36	GLY
10	XJ	68	HIS
11	XK	103	LEU
11	XK	107	SER

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Mol	Chain	Res	Type
11	XK	124	LYS
11	XK	125	PHE
11	XK	126	ARG
12	XL	65	GLU
12	XL	110	VAL
12	XL	115	LYS
12	XL	116	SER
12	XL	128	ALA
13	XM	49	THR
13	XM	67	GLU
13	XM	68	GLY
13	XM	120	LYS
14	XN	14	PRO
14	XN	15	LYS
14	XN	40	CYS
15	XO	77	ARG
16	XP	49	LEU
17	XQ	14	LYS
17	XQ	33	GLY
17	XQ	78	GLU
17	XQ	100	LYS
18	XR	27	GLY
18	XR	54	ARG
18	XR	64	ARG
18	XR	65	ILE
19	XS	13	ASP
19	XS	45	VAL
20	XT	11	SER
20	XT	28	ALA
20	XT	62	LEU
20	XT	99	LEU
20	XT	102	GLY
20	XT	103	GLY
21	XU	3	LYS
27	YD	3	VAL
27	YD	32	SER
27	YD	58	HIS
27	YD	122	ASP
27	YD	169	GLU
28	YE	8	LYS
28	YE	20	ALA
28	YE	37	ARG

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Mol	Chain	Res	Type
28	YE	53	PRO
28	YE	61	ARG
28	YE	78	LEU
28	YE	88	GLY
28	YE	186	GLY
28	YE	190	GLY
28	YE	204	ALA
29	YF	18	ARG
29	YF	107	LYS
29	YF	108	LYS
29	YF	111	ALA
29	YF	132	VAL
29	YF	134	GLY
29	YF	168	ARG
30	YG	5	VAL
30	YG	36	LYS
30	YG	81	LYS
30	YG	82	LEU
30	YG	96	ARG
30	YG	110	ALA
30	YG	126	ASP
30	YG	136	ARG
31	YH	3	ARG
31	YH	8	PRO
31	YH	55	PRO
31	YH	59	ARG
31	YH	84	SER
31	YH	151	ILE
31	YH	156	ALA
31	YH	168	PRO
32	YI	11	ASN
32	YI	15	VAL
32	YI	29	TYR
32	YI	84	GLY
32	YI	87	LYS
32	YI	102	SER
32	YI	113	ARG
32	YI	118	LYS
33	YN	23	LEU
33	YN	76	SER
34	YO	51	ALA
34	YO	56	ASP

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Mol	Chain	Res	Type
34	YO	68	GLU
35	YP	6	LEU
35	YP	11	GLY
35	YP	12	ALA
35	YP	16	ARG
36	YQ	13	GLN
36	YQ	24	GLY
36	YQ	28	ALA
37	YR	11	ASN
38	YS	61	ASN
38	YS	87	PHE
38	YS	96	GLY
38	YS	100	ALA
38	YS	109	GLY
38	YS	111	GLU
39	YT	4	GLY
39	YT	36	GLU
39	YT	43	GLN
39	YT	67	SER
39	YT	124	ASP
40	YU	9	VAL
40	YU	28	ARG
40	YU	73	GLY
40	YU	90	VAL
42	YW	63	ASP
42	YW	66	GLU
43	YX	67	GLY
44	YY	4	LYS
44	YY	41	GLY
44	YY	53	PRO
44	YY	56	PRO
44	YY	57	GLN
44	YY	99	CYS
45	YZ	13	GLU
45	YZ	81	ARG
45	YZ	153	SER
45	YZ	159	PRO
46	Y0	12	ASN
46	Y0	18	ALA
46	Y0	55	ARG
47	Y1	45	ASN
47	Y1	55	GLY

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Mol	Chain	Res	Type
47	Y1	84	GLY
48	Y2	24	LEU
48	Y2	44	LEU
48	Y2	70	GLN
50	Y4	9	LEU
50	Y4	24	THR
51	Y5	43	HIS
51	Y5	55	ARG
53	Y7	39	ARG
2	QB	155	LEU
2	QB	159	PRO
2	QB	175	ARG
3	QC	16	ARG
3	QC	45	LYS
3	QC	81	GLY
4	QD	26	CYS
4	QD	136	PRO
5	QE	37	ARG
6	QF	41	GLU
6	QF	87	ARG
7	QG	35	LYS
7	QG	62	PHE
7	QG	149	ARG
8	QH	2	LEU
9	QI	12	GLU
9	QI	13	ALA
10	QJ	57	LYS
12	QL	51	ALA
12	QL	123	LYS
13	QM	12	ASN
13	QM	101	GLN
13	QM	121	LYS
14	QN	9	LYS
14	QN	48	ALA
15	QO	14	GLU
15	QO	23	GLY
16	QP	8	ARG
16	QP	83	GLU
17	QQ	30	PRO
17	QQ	99	SER
18	QR	55	ARG
19	QS	6	LYS

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Mol	Chain	Res	Type
19	QS	27	GLU
20	QT	82	SER
20	QT	98	PRO
27	RD	111	LEU
27	RD	242	ARG
27	RD	262	ARG
28	RE	20	ALA
28	RE	62	PRO
28	RE	69	LYS
28	RE	71	GLY
28	RE	82	ARG
28	RE	117	MET
28	RE	130	GLY
28	RE	132	HIS
30	RG	128	ARG
30	RG	174	GLU
31	RH	50	VAL
31	RH	81	GLU
31	RH	152	ARG
32	RI	15	VAL
32	RI	112	LYS
33	RN	45	ASN
33	RN	130	HIS
33	RN	132	ALA
33	RN	135	PRO
35	RP	7	ARG
35	RP	14	LYS
35	RP	43	GLY
35	RP	89	ALA
35	RP	102	ARG
35	RP	115	LEU
36	RQ	88	GLY
36	RQ	91	GLU
37	RR	42	LYS
37	RR	45	ARG
37	RR	71	GLN
37	RR	107	ASP
38	RS	19	LYS
38	RS	61	ASN
38	RS	74	ALA
38	RS	75	GLU
39	RT	112	ARG

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Mol	Chain	Res	Type
40	RU	46	ALA
40	RU	58	ARG
40	RU	93	LYS
41	RV	54	GLY
42	RW	93	ALA
43	RX	48	LYS
43	RX	87	GLN
44	RY	21	LYS
44	RY	39	VAL
44	RY	42	VAL
44	RY	69	ALA
44	RY	91	GLU
44	RY	102	CYS
45	RZ	61	LEU
45	RZ	81	ARG
45	RZ	108	PRO
45	RZ	166	SER
46	R0	15	ASP
46	R0	57	PHE
47	R1	74	VAL
47	R1	91	LYS
47	R1	93	GLU
50	R4	27	THR
50	R4	46	GLN
52	R6	18	ARG
53	R7	32	LYS
54	R8	46	ARG
54	R8	47	LYS
2	XB	155	LEU
2	XB	159	PRO
2	XB	175	ARG
3	XC	16	ARG
3	XC	45	LYS
3	XC	81	GLY
4	XD	29	PRO
4	XD	73	ARG
4	XD	136	PRO
5	XE	37	ARG
6	XF	41	GLU
6	XF	87	ARG
7	XG	62	PHE
7	XG	149	ARG

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Mol	Chain	Res	Type
8	XH	2	LEU
8	XH	128	GLY
9	XI	12	GLU
9	XI	13	ALA
12	XL	45	PRO
12	XL	51	ALA
12	XL	123	LYS
13	XM	12	ASN
13	XM	101	GLN
13	XM	121	LYS
14	XN	9	LYS
14	XN	48	ALA
15	XO	14	GLU
15	XO	23	GLY
16	XP	8	ARG
16	XP	83	GLU
17	XQ	30	PRO
17	XQ	99	SER
18	XR	55	ARG
19	XS	6	LYS
19	XS	27	GLU
20	XT	82	SER
20	XT	98	PRO
27	YD	12	SER
27	YD	111	LEU
27	YD	239	ARG
27	YD	242	ARG
27	YD	262	ARG
28	YE	62	PRO
28	YE	69	LYS
28	YE	71	GLY
28	YE	82	ARG
28	YE	117	MET
28	YE	130	GLY
28	YE	132	HIS
30	YG	115	ARG
30	YG	128	ARG
30	YG	174	GLU
31	YH	50	VAL
31	YH	81	GLU
31	YH	152	ARG
31	YH	159	GLU

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Mol	Chain	Res	Type
32	YI	9	LEU
32	YI	104	GLN
32	YI	114	LEU
32	YI	115	ALA
33	YN	45	ASN
33	YN	130	HIS
33	YN	135	PRO
35	YP	7	ARG
35	YP	14	LYS
35	YP	43	GLY
35	YP	89	ALA
35	YP	102	ARG
35	YP	115	LEU
36	YQ	57	HIS
36	YQ	88	GLY
36	YQ	91	GLU
37	YR	42	LYS
37	YR	45	ARG
37	YR	71	GLN
37	YR	107	ASP
38	YS	19	LYS
38	YS	74	ALA
38	YS	75	GLU
39	YT	78	LEU
39	YT	112	ARG
40	YU	46	ALA
40	YU	58	ARG
40	YU	93	LYS
41	YV	54	GLY
42	YW	68	ARG
42	YW	93	ALA
43	YX	48	LYS
43	YX	87	GLN
44	YY	21	LYS
44	YY	39	VAL
44	YY	42	VAL
44	YY	69	ALA
44	YY	91	GLU
44	YY	102	CYS
47	Y1	74	VAL
47	Y1	91	LYS
47	Y1	93	GLU

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Mol	Chain	Res	Type
50	Y4	27	THR
50	Y4	46	GLN
52	Y6	18	ARG
53	Y7	32	LYS
54	Y8	46	ARG
54	Y8	47	LYS
2	QB	19	HIS
2	QB	131	PRO
2	QB	160	ASP
2	QB	177	ALA
3	QC	168	ALA
4	QD	151	LYS
5	QE	70	PRO
5	QE	72	GLN
5	QE	124	GLY
6	QF	13	ASN
6	QF	40	VAL
6	QF	42	GLU
7	QG	41	ARG
7	QG	109	ASN
7	QG	116	ALA
7	QG	117	ALA
8	QH	27	PRO
8	QH	49	GLU
10	QJ	93	GLY
12	QL	64	TYR
13	QM	4	ILE
13	QM	14	ARG
13	QM	69	GLU
13	QM	77	ASN
14	QN	26	ARG
15	QO	86	GLY
16	QP	26	ARG
16	QP	28	ARG
16	QP	48	TRP
19	QS	28	LYS
19	QS	44	MET
19	QS	64	GLU
20	QT	40	ALA
20	QT	51	GLU
27	RD	12	SER
27	RD	73	VAL

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Mol	Chain	Res	Type
27	RD	238	GLY
28	RE	66	HIS
28	RE	126	PRO
29	RF	43	LYS
29	RF	130	ALA
29	RF	136	THR
29	RF	145	GLU
30	RG	12	TYR
30	RG	117	PHE
30	RG	146	TYR
31	RH	13	LYS
31	RH	109	PHE
31	RH	159	GLU
32	RI	80	PRO
33	RN	96	GLU
33	RN	127	ASP
34	RO	17	ARG
34	RO	97	ARG
35	RP	29	LYS
35	RP	47	ASP
35	RP	139	LYS
39	RT	37	GLY
39	RT	78	LEU
39	RT	95	ARG
40	RU	74	LEU
42	RW	14	PRO
42	RW	48	ALA
45	RZ	13	GLU
45	RZ	59	LEU
45	RZ	62	PRO
50	R4	8	LYS
51	R5	14	ALA
51	R5	37	LYS
51	R5	45	VAL
51	R5	48	GLU
52	R6	8	LYS
52	R6	9	LEU
52	R6	10	LEU
52	R6	49	HIS
54	R8	25	MET
54	R8	53	PRO
54	R8	57	ARG

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Mol	Chain	Res	Type
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
20	XT	40	ALA
20	XT	51	GLU
27	YD	73	VAL
28	YE	66	HIS
28	YE	126	PRO
29	YF	43	LYS
29	YF	130	ALA
29	YF	136	THR
29	YF	145	GLU

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Mol	Chain	Res	Type
30	YG	12	TYR
30	YG	117	PHE
30	YG	146	TYR
31	YH	13	LYS
31	YH	109	PHE
32	YI	18	VAL
32	YI	83	ALA
33	YN	96	GLU
33	YN	127	ASP
33	YN	132	ALA
34	YO	17	ARG
34	YO	97	ARG
35	YP	29	LYS
35	YP	47	ASP
35	YP	139	LYS
39	YT	37	GLY
39	YT	95	ARG
40	YU	74	LEU
42	YW	14	PRO
42	YW	48	ALA
45	YZ	59	LEU
50	Y4	8	LYS
51	Y5	14	ALA
51	Y5	37	LYS
51	Y5	45	VAL
51	Y5	48	GLU
52	Y6	8	LYS
52	Y6	9	LEU
52	Y6	10	LEU
52	Y6	49	HIS
54	Y8	25	MET
54	Y8	53	PRO
2	QB	23	ARG
2	QB	25	ASN
2	QB	98	LEU
2	QB	129	GLU
2	QB	194	PRO
2	QB	229	VAL
2	QB	231	GLU
3	QC	125	GLU
5	QE	74	GLY
5	QE	77	PRO

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Mol	Chain	Res	Type
5	QE	112	LEU
5	QE	128	PRO
5	QE	132	ALA
6	QF	12	PRO
6	QF	32	ASN
6	QF	96	PRO
8	QH	29	SER
8	QH	34	GLU
8	QH	103	VAL
9	QI	44	VAL
9	QI	89	ASN
10	QJ	53	PRO
10	QJ	59	SER
10	QJ	75	ILE
11	QK	64	ALA
11	QK	105	VAL
12	QL	63	GLY
18	QR	58	LEU
19	QS	11	VAL
27	RD	33	LEU
28	RE	79	ARG
29	RF	47	GLY
29	RF	118	ALA
31	RH	11	VAL
31	RH	27	LYS
31	RH	47	GLU
31	RH	77	LYS
31	RH	170	ARG
32	RI	118	LYS
33	RN	29	LYS
33	RN	104	LYS
33	RN	128	HIS
34	RO	25	LEU
35	RP	50	ARG
35	RP	97	PRO
35	RP	108	LYS
37	RR	85	PRO
40	RU	91	ASP
42	RW	32	ALA
44	RY	7	VAL
45	RZ	5	LEU
45	RZ	7	ALA

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Mol	Chain	Res	Type
45	RZ	153	SER
45	RZ	165	VAL
49	R3	13	ILE
50	R4	30	GLU
50	R4	33	VAL
51	R5	42	PRO
52	R6	35	GLU
54	R8	64	TYR
2	XB	23	ARG
2	XB	25	ASN
2	XB	98	LEU
2	XB	129	GLU
2	XB	177	ALA
2	XB	194	PRO
2	XB	229	VAL
2	XB	231	GLU
3	XC	125	GLU
5	XE	74	GLY
5	XE	77	PRO
5	XE	112	LEU
5	XE	128	PRO
5	XE	132	ALA
6	XF	12	PRO
6	XF	96	PRO
7	XG	109	ASN
8	XH	34	GLU
8	XH	103	VAL
9	XI	44	VAL
9	XI	88	TYR
9	XI	89	ASN
10	XJ	53	PRO
10	XJ	59	SER
10	XJ	75	ILE
11	XK	64	ALA
11	XK	105	VAL
12	XL	63	GLY
18	XR	58	LEU
19	XS	11	VAL
27	YD	33	LEU
28	YE	79	ARG
29	YF	47	GLY
29	YF	118	ALA

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Mol	Chain	Res	Type
31	YH	11	VAL
31	YH	27	LYS
31	YH	47	GLU
31	YH	77	LYS
31	YH	170	ARG
32	YI	12	LEU
33	YN	29	LYS
33	YN	104	LYS
33	YN	128	HIS
34	YO	25	LEU
35	YP	50	ARG
35	YP	97	PRO
35	YP	108	LYS
37	YR	85	PRO
40	YU	91	ASP
42	YW	32	ALA
44	YY	7	VAL
45	YZ	53	ILE
45	YZ	117	LEU
46	Y0	15	ASP
49	Y3	13	ILE
50	Y4	30	GLU
50	Y4	33	VAL
50	Y4	70	GLY
51	Y5	42	PRO
52	Y6	35	GLU
53	Y7	44	PRO
54	Y8	57	ARG
54	Y8	64	TYR
3	QC	51	GLY
5	QE	115	VAL
9	QI	88	TYR
11	QK	106	LYS
12	QL	48	PRO
14	QN	20	ALA
16	QP	57	ARG
27	RD	178	PRO
30	RG	109	VAL
30	RG	181	ARG
31	RH	7	LEU
31	RH	26	VAL
39	RT	38	ASN

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Mol	Chain	Res	Type
41	RV	36	PRO
42	RW	11	ARG
42	RW	33	ARG
43	RX	19	ALA
50	R4	69	LYS
50	R4	70	GLY
51	R5	57	VAL
53	R7	44	PRO
3	XC	51	GLY
5	XE	115	VAL
6	XF	32	ASN
10	XJ	85	LEU
13	XM	13	LYS
13	XM	48	LEU
13	XM	109	THR
14	XN	20	ALA
16	XP	57	ARG
20	XT	70	SER
27	YD	178	PRO
27	YD	241	PRO
30	YG	109	VAL
30	YG	181	ARG
31	YH	7	LEU
31	YH	26	VAL
39	YT	38	ASN
41	YV	36	PRO
42	YW	11	ARG
42	YW	33	ARG
43	YX	19	ALA
44	YY	33	LYS
45	YZ	61	LEU
50	Y4	69	LYS
51	Y5	57	VAL
2	QB	202	PRO
2	QB	239	VAL
4	QD	88	VAL
5	QE	49	PRO
7	QG	55	GLY
7	QG	58	PRO
8	QH	106	GLY
18	QR	37	VAL
20	QT	63	ILE

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Mol	Chain	Res	Type
28	RE	86	PRO
28	RE	184	VAL
36	RQ	86	GLY
37	RR	32	GLY
42	RW	35	ILE
45	RZ	53	ILE
2	XB	202	PRO
2	XB	239	VAL
3	XC	114	PRO
4	XD	88	VAL
5	XE	49	PRO
7	XG	55	GLY
7	XG	58	PRO
18	XR	37	VAL
20	XT	63	ILE
28	YE	86	PRO
28	YE	184	VAL
32	YI	71	ILE
36	YQ	86	GLY
37	YR	32	GLY
42	YW	35	ILE
2	QB	227	GLY
3	QC	114	PRO
4	QD	90	GLY
9	QI	24	GLY
13	QM	60	VAL
15	QO	18	PHE
16	QP	53	VAL
27	RD	241	PRO
44	RY	27	VAL
44	RY	32	PRO
51	R5	46	CYS
2	XB	227	GLY
3	XC	134	ILE
4	XD	90	GLY
8	XH	106	GLY
9	XI	24	GLY
13	XM	60	VAL
15	XO	18	PHE
16	XP	53	VAL
30	YG	52	ILE
44	YY	27	VAL

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Mol	Chain	Res	Type
44	YY	32	PRO
45	YZ	171	ILE
51	Y5	46	CYS
3	QC	134	ILE
13	QM	84	ILE
27	RD	34	VAL
30	RG	52	ILE
34	RO	114	ILE
44	RY	51	VAL
51	R5	34	PRO
12	XL	48	PRO
13	XM	84	ILE
27	YD	34	VAL
34	YO	114	ILE
44	YY	51	VAL
45	YZ	94	GLU
45	YZ	160	GLY
51	Y5	34	PRO
9	QI	21	PRO
13	QM	78	ILE
16	QP	41	PRO
28	RE	52	LEU
28	RE	55	ASN
32	RI	18	VAL
34	RO	27	GLY
49	R3	40	THR
9	XI	21	PRO
13	XM	78	ILE
28	YE	52	LEU
28	YE	55	ASN
32	YI	110	ASP
34	YO	27	GLY
45	YZ	143	GLY
49	Y3	40	THR
7	QG	14	PRO
8	QH	51	VAL
20	QT	97	ALA
5	XE	129	ILE
8	XH	51	VAL
16	XP	41	PRO
20	XT	97	ALA
48	R2	18	PRO

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Mol	Chain	Res	Type
48	Y2	18	PRO

5.3.2 Protein sidechains ⓘ

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%)	182 (89%)	23 (11%)	6	23
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	18
4	XD	180/181 (99%)	162 (90%)	18 (10%)	7	27
5	QE	116/123 (94%)	105 (90%)	11 (10%)	8	28
5	XE	116/123 (94%)	105 (90%)	11 (10%)	8	28
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
8	QH	119/119 (100%)	105 (88%)	14 (12%)	5	21
8	XH	119/119 (100%)	104 (87%)	15 (13%)	4	20
9	QI	98/99 (99%)	85 (87%)	13 (13%)	4	18
9	XI	98/99 (99%)	85 (87%)	13 (13%)	4	18
10	QJ	89/92 (97%)	80 (90%)	9 (10%)	7	26
10	XJ	89/92 (97%)	80 (90%)	9 (10%)	7	26
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%)	87 (84%)	17 (16%)	2	14
12	XL	104/109 (95%)	84 (81%)	20 (19%)	1	10
13	QM	97/101 (96%)	83 (86%)	14 (14%)	3	17

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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	25
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	28
17	XQ	95/97 (98%)	86 (90%)	9 (10%)	8	28
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
27	RD	214/218 (98%)	174 (81%)	40 (19%)	1	10
27	YD	214/218 (98%)	174 (81%)	40 (19%)	1	10
28	RE	165/166 (99%)	125 (76%)	40 (24%)	1	5
28	YE	165/166 (99%)	125 (76%)	40 (24%)	1	5
29	RF	161/166 (97%)	138 (86%)	23 (14%)	3	17
29	YF	161/166 (97%)	138 (86%)	23 (14%)	3	17
30	RG	155/156 (99%)	133 (86%)	22 (14%)	3	17
30	YG	155/156 (99%)	134 (86%)	21 (14%)	4	18
31	RH	142/148 (96%)	111 (78%)	31 (22%)	1	6
31	YH	142/148 (96%)	111 (78%)	31 (22%)	1	6
32	RI	122/124 (98%)	88 (72%)	34 (28%)	0	3
32	YI	122/124 (98%)	93 (76%)	29 (24%)	1	5
33	RN	117/119 (98%)	97 (83%)	20 (17%)	2	13
33	YN	117/119 (98%)	97 (83%)	20 (17%)	2	13

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
34	RO	100/100 (100%)	88 (88%)	12 (12%)	5	21
34	YO	100/100 (100%)	89 (89%)	11 (11%)	6	23
35	RP	116/116 (100%)	88 (76%)	28 (24%)	1	5
35	YP	116/116 (100%)	88 (76%)	28 (24%)	1	5
36	RQ	111/111 (100%)	96 (86%)	15 (14%)	4	18
36	YQ	111/111 (100%)	96 (86%)	15 (14%)	4	18
37	RR	101/101 (100%)	85 (84%)	16 (16%)	2	15
37	YR	101/101 (100%)	85 (84%)	16 (16%)	2	15
38	RS	87/88 (99%)	73 (84%)	14 (16%)	2	14
38	YS	87/88 (99%)	73 (84%)	14 (16%)	2	14
39	RT	120/127 (94%)	99 (82%)	21 (18%)	2	12
39	YT	120/127 (94%)	99 (82%)	21 (18%)	2	12
40	RU	93/94 (99%)	81 (87%)	12 (13%)	4	19
40	YU	93/94 (99%)	81 (87%)	12 (13%)	4	19
41	RV	82/82 (100%)	67 (82%)	15 (18%)	2	11
41	YV	82/82 (100%)	67 (82%)	15 (18%)	2	11
42	RW	92/92 (100%)	76 (83%)	16 (17%)	2	12
42	YW	92/92 (100%)	76 (83%)	16 (17%)	2	12
43	RX	74/78 (95%)	61 (82%)	13 (18%)	2	12
43	YX	74/78 (95%)	61 (82%)	13 (18%)	2	12
44	RY	85/91 (93%)	67 (79%)	18 (21%)	1	7
44	YY	85/91 (93%)	66 (78%)	19 (22%)	1	6
45	RZ	162/179 (90%)	126 (78%)	36 (22%)	1	6
45	YZ	162/179 (90%)	127 (78%)	35 (22%)	1	6
46	R0	65/67 (97%)	58 (89%)	7 (11%)	6	24
46	Y0	65/67 (97%)	57 (88%)	8 (12%)	4	20
47	R1	82/83 (99%)	70 (85%)	12 (15%)	3	16
47	Y1	82/83 (99%)	70 (85%)	12 (15%)	3	16
48	R2	64/67 (96%)	56 (88%)	8 (12%)	4	20
48	Y2	64/67 (96%)	56 (88%)	8 (12%)	4	20
49	R3	51/52 (98%)	41 (80%)	10 (20%)	1	9

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
49	Y3	51/52 (98%)	41 (80%)	10 (20%)	1	9
50	R4	63/63 (100%)	46 (73%)	17 (27%)	0	3
50	Y4	63/63 (100%)	46 (73%)	17 (27%)	0	3
51	R5	51/52 (98%)	40 (78%)	11 (22%)	1	6
51	Y5	51/52 (98%)	40 (78%)	11 (22%)	1	6
52	R6	48/52 (92%)	36 (75%)	12 (25%)	0	4
52	Y6	48/52 (92%)	36 (75%)	12 (25%)	0	4
53	R7	42/42 (100%)	38 (90%)	4 (10%)	8	28
53	Y7	42/42 (100%)	38 (90%)	4 (10%)	8	28
54	R8	54/55 (98%)	41 (76%)	13 (24%)	1	5
54	Y8	54/55 (98%)	40 (74%)	14 (26%)	0	4
55	R9	34/34 (100%)	32 (94%)	2 (6%)	18	43
55	Y9	34/34 (100%)	32 (94%)	2 (6%)	18	43
All	All	9702/10066 (96%)	8187 (84%)	1515 (16%)	2	15

All (1515) 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
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

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Mol	Chain	Res	Type
2	QB	174	VAL
2	QB	178	ARG
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
27	RD	10	THR
27	RD	17	THR
27	RD	26	LYS
27	RD	28	GLU
27	RD	33	LEU
27	RD	43	ARG
27	RD	44	ASN
27	RD	52	ARG
27	RD	61	LEU
27	RD	65	ILE
27	RD	73	VAL
27	RD	94	LEU
27	RD	98	VAL
27	RD	105	ILE
27	RD	106	ILE
27	RD	131	LEU
27	RD	134	ARG
27	RD	135	PHE
27	RD	147	LEU
27	RD	155	LEU
27	RD	157	ARG
27	RD	166	GLN
27	RD	173	VAL
27	RD	177	LEU
27	RD	183	ARG
27	RD	192	THR
27	RD	198	ASN
27	RD	200	ASP
27	RD	215	LEU
27	RD	217	ARG

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Mol	Chain	Res	Type
27	RD	218	ARG
27	RD	221	VAL
27	RD	226	MET
27	RD	230	ASP
27	RD	233	HIS
27	RD	237	GLU
27	RD	257	LEU
27	RD	259	THR
27	RD	261	LYS
27	RD	271	ILE
28	RE	2	LYS
28	RE	4	ILE
28	RE	5	LEU
28	RE	13	ARG
28	RE	14	ILE
28	RE	17	ASP
28	RE	21	VAL
28	RE	25	VAL
28	RE	26	ILE
28	RE	27	LEU
28	RE	33	VAL
28	RE	36	ARG
28	RE	38	THR
28	RE	41	LYS
28	RE	45	THR
28	RE	48	GLN
28	RE	49	LEU
28	RE	54	GLN
28	RE	59	VAL
28	RE	61	ARG
28	RE	62	PRO
28	RE	66	HIS
28	RE	73	GLU
28	RE	75	VAL
28	RE	77	ILE
28	RE	78	LEU
28	RE	79	ARG
28	RE	80	GLU
28	RE	93	VAL
28	RE	117	MET
28	RE	119	ARG
28	RE	143	ASN

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Mol	Chain	Res	Type
28	RE	146	THR
28	RE	154	LYS
28	RE	167	VAL
28	RE	179	GLU
28	RE	184	VAL
28	RE	196	VAL
28	RE	200	GLU
28	RE	203	LYS
29	RF	7	TYR
29	RF	9	ILE
29	RF	25	PRO
29	RF	32	LEU
29	RF	33	LEU
29	RF	45	ARG
29	RF	46	ARG
29	RF	65	TRP
29	RF	66	PRO
29	RF	67	GLN
29	RF	70	THR
29	RF	82	ILE
29	RF	106	ARG
29	RF	108	LYS
29	RF	124	LEU
29	RF	127	GLU
29	RF	145	GLU
29	RF	161	GLU
29	RF	164	ARG
29	RF	179	GLU
29	RF	181	LEU
29	RF	183	VAL
29	RF	206	ILE
30	RG	4	ASP
30	RG	22	ARG
30	RG	26	GLN
30	RG	34	LEU
30	RG	40	ASN
30	RG	43	LEU
30	RG	45	GLU
30	RG	63	ILE
30	RG	67	LYS
30	RG	71	THR
30	RG	88	ILE

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Mol	Chain	Res	Type
30	RG	94	LEU
30	RG	96	ARG
30	RG	103	LEU
30	RG	115	ARG
30	RG	118	ARG
30	RG	135	LEU
30	RG	147	ASP
30	RG	155	MET
30	RG	156	ASP
30	RG	159	VAL
30	RG	174	GLU
31	RH	3	ARG
31	RH	4	ILE
31	RH	9	ILE
31	RH	10	PRO
31	RH	11	VAL
31	RH	16	SER
31	RH	27	LYS
31	RH	32	GLU
31	RH	37	VAL
31	RH	41	MET
31	RH	43	VAL
31	RH	44	VAL
31	RH	47	GLU
31	RH	59	ARG
31	RH	64	LEU
31	RH	77	LYS
31	RH	81	GLU
31	RH	88	LEU
31	RH	89	ILE
31	RH	105	LEU
31	RH	124	GLU
31	RH	132	ARG
31	RH	136	ILE
31	RH	139	GLN
31	RH	143	GLN
31	RH	144	VAL
31	RH	152	ARG
31	RH	153	LYS
31	RH	154	PRO
31	RH	155	SER
31	RH	169	VAL

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Mol	Chain	Res	Type
32	RI	1	MET
32	RI	2	LYS
32	RI	3	VAL
32	RI	7	GLU
32	RI	10	GLU
32	RI	27	ARG
32	RI	31	LEU
32	RI	38	LEU
32	RI	40	THR
32	RI	42	SER
32	RI	44	LEU
32	RI	51	ILE
32	RI	56	LYS
32	RI	57	ARG
32	RI	67	ARG
32	RI	70	GLU
32	RI	71	ILE
32	RI	79	ILE
32	RI	85	GLU
32	RI	88	ILE
32	RI	92	VAL
32	RI	93	THR
32	RI	101	LEU
32	RI	112	LYS
32	RI	113	ARG
32	RI	118	LYS
32	RI	128	LEU
32	RI	129	THR
32	RI	134	PRO
32	RI	135	GLU
32	RI	138	ILE
32	RI	139	GLN
32	RI	142	VAL
32	RI	145	VAL
33	RN	2	LYS
33	RN	7	LYS
33	RN	43	THR
33	RN	48	MET
33	RN	60	ILE
33	RN	61	ARG
33	RN	65	LYS
33	RN	73	THR

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Mol	Chain	Res	Type
33	RN	78	TYR
33	RN	90	MET
33	RN	93	THR
33	RN	94	HIS
33	RN	98	VAL
33	RN	101	HIS
33	RN	109	LYS
33	RN	112	LEU
33	RN	120	LEU
33	RN	127	ASP
33	RN	131	GLN
33	RN	136	GLU
34	RO	8	LEU
34	RO	9	GLU
34	RO	19	ILE
34	RO	23	ARG
34	RO	39	ILE
34	RO	49	ARG
34	RO	52	VAL
34	RO	53	LYS
34	RO	56	ASP
34	RO	63	VAL
34	RO	65	THR
34	RO	91	LEU
35	RP	5	ASP
35	RP	9	ASN
35	RP	10	PRO
35	RP	14	LYS
35	RP	16	ARG
35	RP	21	ARG
35	RP	27	HIS
35	RP	29	LYS
35	RP	30	THR
35	RP	32	THR
35	RP	33	ARG
35	RP	36	LYS
35	RP	50	ARG
35	RP	55	ARG
35	RP	61	ARG
35	RP	62	LEU
35	RP	64	LYS
35	RP	65	ARG

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Mol	Chain	Res	Type
35	RP	75	ILE
35	RP	81	GLN
35	RP	88	LEU
35	RP	91	PHE
35	RP	99	LEU
35	RP	100	LEU
35	RP	105	LEU
35	RP	144	GLU
35	RP	146	VAL
35	RP	149	GLU
36	RQ	2	LEU
36	RQ	25	ASP
36	RQ	26	TYR
36	RQ	27	VAL
36	RQ	54	MET
36	RQ	55	VAL
36	RQ	58	PHE
36	RQ	60	ARG
36	RQ	79	LEU
36	RQ	83	MET
36	RQ	89	ASN
36	RQ	90	VAL
36	RQ	91	GLU
36	RQ	112	GLU
36	RQ	139	GLU
37	RR	14	SER
37	RR	37	THR
37	RR	44	LEU
37	RR	51	LEU
37	RR	66	VAL
37	RR	67	LEU
37	RR	71	GLN
37	RR	75	LEU
37	RR	76	VAL
37	RR	81	ASP
37	RR	95	THR
37	RR	100	LEU
37	RR	104	ARG
37	RR	105	ARG
37	RR	107	ASP
37	RR	113	LEU
38	RS	4	LEU

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Mol	Chain	Res	Type
38	RS	12	PHE
38	RS	17	ARG
38	RS	18	ILE
38	RS	20	ARG
38	RS	44	LYS
38	RS	56	LEU
38	RS	57	LYS
38	RS	73	LEU
38	RS	89	ARG
38	RS	101	LEU
38	RS	103	GLU
38	RS	106	ARG
38	RS	111	GLU
39	RT	2	ASN
39	RT	14	TYR
39	RT	22	PHE
39	RT	23	ARG
39	RT	27	THR
39	RT	42	ILE
39	RT	48	ILE
39	RT	50	ILE
39	RT	58	ASN
39	RT	65	LYS
39	RT	73	GLU
39	RT	78	LEU
39	RT	86	ILE
39	RT	87	ASP
39	RT	100	TYR
39	RT	104	ASN
39	RT	107	ASP
39	RT	111	ARG
39	RT	112	ARG
39	RT	128	GLU
39	RT	134	GLU
40	RU	5	LYS
40	RU	9	VAL
40	RU	31	SER
40	RU	52	ARG
40	RU	60	LEU
40	RU	64	ARG
40	RU	79	PHE
40	RU	88	ILE

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Mol	Chain	Res	Type
40	RU	92	ARG
40	RU	98	LEU
40	RU	108	GLU
40	RU	117	GLN
41	RV	14	VAL
41	RV	18	LEU
41	RV	24	LYS
41	RV	35	LEU
41	RV	38	LEU
41	RV	39	LEU
41	RV	40	LEU
41	RV	47	VAL
41	RV	57	VAL
41	RV	61	VAL
41	RV	66	ARG
41	RV	70	ILE
41	RV	75	PHE
41	RV	91	TYR
41	RV	99	ILE
42	RW	11	ARG
42	RW	14	PRO
42	RW	16	LYS
42	RW	19	LEU
42	RW	20	VAL
42	RW	23	LEU
42	RW	63	ASP
42	RW	67	ASP
42	RW	69	LEU
42	RW	70	TYR
42	RW	87	PRO
42	RW	88	ARG
42	RW	92	ARG
42	RW	95	ILE
42	RW	107	LEU
42	RW	109	GLU
43	RX	3	THR
43	RX	15	GLU
43	RX	27	THR
43	RX	30	VAL
43	RX	49	VAL
43	RX	57	LEU
43	RX	65	ARG

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Mol	Chain	Res	Type
43	RX	70	LEU
43	RX	72	LYS
43	RX	76	ARG
43	RX	80	ILE
43	RX	81	VAL
43	RX	88	LYS
44	RY	7	VAL
44	RY	26	LYS
44	RY	27	VAL
44	RY	42	VAL
44	RY	45	VAL
44	RY	57	GLN
44	RY	61	ILE
44	RY	64	GLU
44	RY	72	VAL
44	RY	75	ILE
44	RY	77	PRO
44	RY	79	CYS
44	RY	87	LYS
44	RY	88	LYS
44	RY	89	PHE
44	RY	90	LEU
44	RY	95	LYS
44	RY	97	ARG
45	RZ	2	GLU
45	RZ	5	LEU
45	RZ	16	SER
45	RZ	20	ARG
45	RZ	24	LEU
45	RZ	35	ARG
45	RZ	37	VAL
45	RZ	39	VAL
45	RZ	56	VAL
45	RZ	60	GLU
45	RZ	70	LEU
45	RZ	71	VAL
45	RZ	76	LEU
45	RZ	81	ARG
45	RZ	82	ARG
45	RZ	87	ASP
45	RZ	90	VAL
45	RZ	93	ASP

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Mol	Chain	Res	Type
45	RZ	94	GLU
45	RZ	112	ARG
45	RZ	117	LEU
45	RZ	121	HIS
45	RZ	123	ASP
45	RZ	128	VAL
45	RZ	141	VAL
45	RZ	145	GLU
45	RZ	148	ASP
45	RZ	150	LEU
45	RZ	151	HIS
45	RZ	163	LEU
45	RZ	166	SER
45	RZ	168	GLU
45	RZ	174	VAL
45	RZ	179	ASP
45	RZ	182	LYS
45	RZ	183	LEU
46	R0	7	LEU
46	R0	10	THR
46	R0	11	ARG
46	R0	36	ILE
46	R0	43	THR
46	R0	66	VAL
46	R0	74	ARG
47	R1	2	SER
47	R1	11	ARG
47	R1	30	VAL
47	R1	41	ARG
47	R1	56	GLN
47	R1	75	GLU
47	R1	80	LEU
47	R1	81	LYS
47	R1	83	GLU
47	R1	87	PRO
47	R1	91	LYS
47	R1	97	LEU
48	R2	7	ARG
48	R2	9	GLN
48	R2	16	LEU
48	R2	24	LEU
48	R2	47	ASN

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

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Mol	Chain	Res	Type
52	R6	8	LYS
52	R6	10	LEU
52	R6	18	ARG
52	R6	19	ARG
52	R6	27	LYS
52	R6	33	LYS
52	R6	34	LEU
52	R6	37	ARG
52	R6	42	TRP
52	R6	44	ARG
52	R6	53	LYS
53	R7	1	MET
53	R7	9	ARG
53	R7	14	LYS
53	R7	43	THR
54	R8	16	ILE
54	R8	35	GLN
54	R8	39	LYS
54	R8	43	GLN
54	R8	47	LYS
54	R8	48	PHE
54	R8	49	VAL
54	R8	52	LYS
54	R8	53	PRO
54	R8	59	LYS
54	R8	62	LEU
54	R8	63	PRO
54	R8	65	GLU
55	R9	1	MET
55	R9	17	ILE
2	XB	5	ILE
2	XB	8	LYS
2	XB	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	6	ILE
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

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Mol	Chain	Res	Type
11	XK	92	GLU
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	43	VAL
12	XL	44	THR
12	XL	57	LYS
12	XL	60	LEU
12	XL	62	SER
12	XL	70	ILE
12	XL	73	GLU
12	XL	81	SER
12	XL	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

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Mol	Chain	Res	Type
14	XN	41	ARG
15	XO	3	ILE
15	XO	6	GLU
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

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Mol	Chain	Res	Type
19	XS	30	LEU
19	XS	41	VAL
19	XS	63	THR
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
27	YD	10	THR
27	YD	17	THR
27	YD	26	LYS
27	YD	28	GLU
27	YD	33	LEU
27	YD	43	ARG
27	YD	44	ASN
27	YD	52	ARG
27	YD	61	LEU
27	YD	65	ILE
27	YD	73	VAL
27	YD	94	LEU
27	YD	98	VAL
27	YD	105	ILE
27	YD	106	ILE
27	YD	131	LEU
27	YD	134	ARG
27	YD	135	PHE
27	YD	147	LEU
27	YD	155	LEU
27	YD	157	ARG
27	YD	166	GLN
27	YD	173	VAL
27	YD	177	LEU
27	YD	183	ARG
27	YD	192	THR
27	YD	198	ASN
27	YD	200	ASP
27	YD	215	LEU

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Mol	Chain	Res	Type
27	YD	217	ARG
27	YD	218	ARG
27	YD	221	VAL
27	YD	226	MET
27	YD	230	ASP
27	YD	233	HIS
27	YD	237	GLU
27	YD	257	LEU
27	YD	259	THR
27	YD	261	LYS
27	YD	271	ILE
28	YE	2	LYS
28	YE	4	ILE
28	YE	5	LEU
28	YE	13	ARG
28	YE	14	ILE
28	YE	17	ASP
28	YE	21	VAL
28	YE	25	VAL
28	YE	26	ILE
28	YE	27	LEU
28	YE	33	VAL
28	YE	36	ARG
28	YE	38	THR
28	YE	41	LYS
28	YE	45	THR
28	YE	48	GLN
28	YE	49	LEU
28	YE	54	GLN
28	YE	59	VAL
28	YE	61	ARG
28	YE	62	PRO
28	YE	66	HIS
28	YE	73	GLU
28	YE	75	VAL
28	YE	77	ILE
28	YE	78	LEU
28	YE	79	ARG
28	YE	80	GLU
28	YE	93	VAL
28	YE	117	MET
28	YE	119	ARG

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Mol	Chain	Res	Type
28	YE	143	ASN
28	YE	146	THR
28	YE	154	LYS
28	YE	167	VAL
28	YE	179	GLU
28	YE	184	VAL
28	YE	196	VAL
28	YE	200	GLU
28	YE	203	LYS
29	YF	7	TYR
29	YF	9	ILE
29	YF	25	PRO
29	YF	32	LEU
29	YF	33	LEU
29	YF	45	ARG
29	YF	46	ARG
29	YF	65	TRP
29	YF	66	PRO
29	YF	67	GLN
29	YF	70	THR
29	YF	82	ILE
29	YF	106	ARG
29	YF	108	LYS
29	YF	124	LEU
29	YF	127	GLU
29	YF	145	GLU
29	YF	161	GLU
29	YF	164	ARG
29	YF	179	GLU
29	YF	181	LEU
29	YF	183	VAL
29	YF	206	ILE
30	YG	4	ASP
30	YG	22	ARG
30	YG	26	GLN
30	YG	34	LEU
30	YG	43	LEU
30	YG	45	GLU
30	YG	63	ILE
30	YG	67	LYS
30	YG	71	THR
30	YG	88	ILE

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Mol	Chain	Res	Type
30	YG	94	LEU
30	YG	96	ARG
30	YG	103	LEU
30	YG	115	ARG
30	YG	118	ARG
30	YG	135	LEU
30	YG	147	ASP
30	YG	155	MET
30	YG	156	ASP
30	YG	159	VAL
30	YG	174	GLU
31	YH	3	ARG
31	YH	4	ILE
31	YH	9	ILE
31	YH	10	PRO
31	YH	11	VAL
31	YH	16	SER
31	YH	27	LYS
31	YH	32	GLU
31	YH	37	VAL
31	YH	41	MET
31	YH	43	VAL
31	YH	44	VAL
31	YH	47	GLU
31	YH	59	ARG
31	YH	64	LEU
31	YH	77	LYS
31	YH	81	GLU
31	YH	88	LEU
31	YH	89	ILE
31	YH	105	LEU
31	YH	124	GLU
31	YH	132	ARG
31	YH	136	ILE
31	YH	139	GLN
31	YH	143	GLN
31	YH	144	VAL
31	YH	152	ARG
31	YH	153	LYS
31	YH	154	PRO
31	YH	155	SER
31	YH	169	VAL

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Mol	Chain	Res	Type
32	YI	1	MET
32	YI	2	LYS
32	YI	3	VAL
32	YI	12	LEU
32	YI	27	ARG
32	YI	38	LEU
32	YI	44	LEU
32	YI	56	LYS
32	YI	67	ARG
32	YI	70	GLU
32	YI	72	LEU
32	YI	73	GLU
32	YI	81	VAL
32	YI	85	GLU
32	YI	88	ILE
32	YI	92	VAL
32	YI	93	THR
32	YI	96	ASP
32	YI	101	LEU
32	YI	110	ASP
32	YI	112	LYS
32	YI	118	LYS
32	YI	128	LEU
32	YI	134	PRO
32	YI	135	GLU
32	YI	136	VAL
32	YI	139	GLN
32	YI	141	LYS
32	YI	142	VAL
33	YN	2	LYS
33	YN	7	LYS
33	YN	43	THR
33	YN	48	MET
33	YN	60	ILE
33	YN	61	ARG
33	YN	65	LYS
33	YN	73	THR
33	YN	78	TYR
33	YN	90	MET
33	YN	93	THR
33	YN	94	HIS
33	YN	98	VAL

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Mol	Chain	Res	Type
33	YN	101	HIS
33	YN	109	LYS
33	YN	112	LEU
33	YN	120	LEU
33	YN	127	ASP
33	YN	131	GLN
33	YN	136	GLU
34	YO	8	LEU
34	YO	9	GLU
34	YO	19	ILE
34	YO	23	ARG
34	YO	39	ILE
34	YO	49	ARG
34	YO	52	VAL
34	YO	53	LYS
34	YO	63	VAL
34	YO	65	THR
34	YO	91	LEU
35	YP	5	ASP
35	YP	9	ASN
35	YP	10	PRO
35	YP	14	LYS
35	YP	16	ARG
35	YP	21	ARG
35	YP	27	HIS
35	YP	29	LYS
35	YP	30	THR
35	YP	32	THR
35	YP	33	ARG
35	YP	36	LYS
35	YP	50	ARG
35	YP	55	ARG
35	YP	61	ARG
35	YP	62	LEU
35	YP	64	LYS
35	YP	65	ARG
35	YP	75	ILE
35	YP	81	GLN
35	YP	88	LEU
35	YP	91	PHE
35	YP	99	LEU
35	YP	100	LEU

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Mol	Chain	Res	Type
35	YP	105	LEU
35	YP	144	GLU
35	YP	146	VAL
35	YP	149	GLU
36	YQ	2	LEU
36	YQ	25	ASP
36	YQ	26	TYR
36	YQ	27	VAL
36	YQ	54	MET
36	YQ	55	VAL
36	YQ	59	ARG
36	YQ	79	LEU
36	YQ	83	MET
36	YQ	89	ASN
36	YQ	90	VAL
36	YQ	91	GLU
36	YQ	106	VAL
36	YQ	112	GLU
36	YQ	139	GLU
37	YR	14	SER
37	YR	37	THR
37	YR	44	LEU
37	YR	51	LEU
37	YR	66	VAL
37	YR	67	LEU
37	YR	71	GLN
37	YR	75	LEU
37	YR	76	VAL
37	YR	81	ASP
37	YR	95	THR
37	YR	100	LEU
37	YR	104	ARG
37	YR	105	ARG
37	YR	107	ASP
37	YR	113	LEU
38	YS	4	LEU
38	YS	12	PHE
38	YS	17	ARG
38	YS	18	ILE
38	YS	20	ARG
38	YS	44	LYS
38	YS	56	LEU

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Mol	Chain	Res	Type
38	YS	57	LYS
38	YS	73	LEU
38	YS	89	ARG
38	YS	101	LEU
38	YS	103	GLU
38	YS	106	ARG
38	YS	111	GLU
39	YT	2	ASN
39	YT	14	TYR
39	YT	22	PHE
39	YT	23	ARG
39	YT	27	THR
39	YT	42	ILE
39	YT	48	ILE
39	YT	50	ILE
39	YT	58	ASN
39	YT	65	LYS
39	YT	73	GLU
39	YT	78	LEU
39	YT	86	ILE
39	YT	87	ASP
39	YT	100	TYR
39	YT	104	ASN
39	YT	107	ASP
39	YT	111	ARG
39	YT	112	ARG
39	YT	128	GLU
39	YT	134	GLU
40	YU	5	LYS
40	YU	9	VAL
40	YU	31	SER
40	YU	52	ARG
40	YU	60	LEU
40	YU	64	ARG
40	YU	79	PHE
40	YU	88	ILE
40	YU	92	ARG
40	YU	98	LEU
40	YU	108	GLU
40	YU	117	GLN
41	YV	14	VAL
41	YV	18	LEU

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Mol	Chain	Res	Type
41	YV	24	LYS
41	YV	35	LEU
41	YV	38	LEU
41	YV	39	LEU
41	YV	40	LEU
41	YV	47	VAL
41	YV	57	VAL
41	YV	61	VAL
41	YV	66	ARG
41	YV	70	ILE
41	YV	75	PHE
41	YV	91	TYR
41	YV	99	ILE
42	YW	11	ARG
42	YW	14	PRO
42	YW	16	LYS
42	YW	19	LEU
42	YW	20	VAL
42	YW	23	LEU
42	YW	63	ASP
42	YW	67	ASP
42	YW	69	LEU
42	YW	70	TYR
42	YW	87	PRO
42	YW	88	ARG
42	YW	92	ARG
42	YW	95	ILE
42	YW	107	LEU
42	YW	109	GLU
43	YX	3	THR
43	YX	15	GLU
43	YX	27	THR
43	YX	30	VAL
43	YX	49	VAL
43	YX	57	LEU
43	YX	65	ARG
43	YX	70	LEU
43	YX	72	LYS
43	YX	76	ARG
43	YX	80	ILE
43	YX	81	VAL
43	YX	88	LYS

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Mol	Chain	Res	Type
44	YY	7	VAL
44	YY	26	LYS
44	YY	27	VAL
44	YY	42	VAL
44	YY	43	ASN
44	YY	45	VAL
44	YY	57	GLN
44	YY	61	ILE
44	YY	64	GLU
44	YY	72	VAL
44	YY	75	ILE
44	YY	77	PRO
44	YY	79	CYS
44	YY	87	LYS
44	YY	88	LYS
44	YY	89	PHE
44	YY	90	LEU
44	YY	95	LYS
44	YY	97	ARG
45	YZ	2	GLU
45	YZ	8	TYR
45	YZ	19	ARG
45	YZ	20	ARG
45	YZ	39	VAL
45	YZ	41	LEU
45	YZ	52	SER
45	YZ	53	ILE
45	YZ	60	GLU
45	YZ	66	SER
45	YZ	70	LEU
45	YZ	71	VAL
45	YZ	76	LEU
45	YZ	78	LYS
45	YZ	81	ARG
45	YZ	82	ARG
45	YZ	86	VAL
45	YZ	87	ASP
45	YZ	90	VAL
45	YZ	91	LEU
45	YZ	93	ASP
45	YZ	94	GLU
45	YZ	111	VAL

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Mol	Chain	Res	Type
45	YZ	123	ASP
45	YZ	124	ILE
45	YZ	139	VAL
45	YZ	140	ASP
45	YZ	141	VAL
45	YZ	144	LEU
45	YZ	150	LEU
45	YZ	151	HIS
45	YZ	156	LYS
45	YZ	163	LEU
45	YZ	181	GLU
45	YZ	182	LYS
46	Y0	10	THR
46	Y0	11	ARG
46	Y0	14	ARG
46	Y0	36	ILE
46	Y0	38	VAL
46	Y0	41	ARG
46	Y0	68	GLU
46	Y0	74	ARG
47	Y1	2	SER
47	Y1	11	ARG
47	Y1	30	VAL
47	Y1	41	ARG
47	Y1	56	GLN
47	Y1	75	GLU
47	Y1	80	LEU
47	Y1	81	LYS
47	Y1	83	GLU
47	Y1	87	PRO
47	Y1	91	LYS
47	Y1	97	LEU
48	Y2	7	ARG
48	Y2	9	GLN
48	Y2	16	LEU
48	Y2	24	LEU
48	Y2	47	ASN
48	Y2	53	LEU
48	Y2	62	THR
48	Y2	64	LEU
49	Y3	4	LEU
49	Y3	8	LEU

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Mol	Chain	Res	Type
49	Y3	9	VAL
49	Y3	10	LYS
49	Y3	30	ARG
49	Y3	31	LEU
49	Y3	32	GLN
49	Y3	37	LEU
49	Y3	40	THR
49	Y3	44	ARG
50	Y4	6	HIS
50	Y4	15	ILE
50	Y4	18	CYS
50	Y4	21	VAL
50	Y4	23	GLU
50	Y4	39	CYS
50	Y4	42	PHE
50	Y4	49	PHE
50	Y4	50	VAL
50	Y4	53	GLU
50	Y4	57	GLU
50	Y4	61	ARG
50	Y4	62	ARG
50	Y4	63	TYR
50	Y4	68	ARG
50	Y4	69	LYS
50	Y4	71	ARG
51	Y5	3	LYS
51	Y5	4	HIS
51	Y5	6	VAL
51	Y5	11	THR
51	Y5	19	ARG
51	Y5	25	LEU
51	Y5	36	CYS
51	Y5	37	LYS
51	Y5	52	TYR
51	Y5	56	LYS
51	Y5	58	LEU
52	Y6	6	ARG
52	Y6	8	LYS
52	Y6	10	LEU
52	Y6	18	ARG
52	Y6	19	ARG
52	Y6	27	LYS

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Mol	Chain	Res	Type
52	Y6	33	LYS
52	Y6	34	LEU
52	Y6	37	ARG
52	Y6	42	TRP
52	Y6	44	ARG
52	Y6	53	LYS
53	Y7	1	MET
53	Y7	9	ARG
53	Y7	14	LYS
53	Y7	43	THR
54	Y8	16	ILE
54	Y8	30	ARG
54	Y8	35	GLN
54	Y8	39	LYS
54	Y8	43	GLN
54	Y8	47	LYS
54	Y8	48	PHE
54	Y8	49	VAL
54	Y8	52	LYS
54	Y8	53	PRO
54	Y8	59	LYS
54	Y8	62	LEU
54	Y8	63	PRO
54	Y8	65	GLU
55	Y9	1	MET
55	Y9	17	ILE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (153) 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
4	QD	119	GLN
5	QE	72	GLN
5	QE	73	ASN
5	QE	78	HIS
5	QE	127	ASN

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Mol	Chain	Res	Type
6	QF	64	GLN
6	QF	100	ASN
7	QG	28	ASN
7	QG	37	ASN
7	QG	86	GLN
7	QG	148	ASN
8	QH	15	ASN
8	QH	78	GLN
10	QJ	13	HIS
10	QJ	56	HIS
10	QJ	76	ASN
10	QJ	78	ASN
12	QL	9	GLN
13	QM	101	GLN
16	QP	82	GLN
19	QS	47	HIS
19	QS	65	ASN
20	QT	26	ASN
27	RD	44	ASN
27	RD	87	ASN
27	RD	112	GLN
27	RD	164	GLN
27	RD	166	GLN
27	RD	198	ASN
28	RE	55	ASN
28	RE	180	ASN
30	RG	123	ASN
31	RH	143	GLN
31	RH	147	ASN
32	RI	104	GLN
33	RN	56	ASN
33	RN	101	HIS
33	RN	130	HIS
33	RN	131	GLN
34	RO	5	GLN
34	RO	82	ASN
35	RP	81	GLN
35	RP	84	ASN
36	RQ	141	GLN
37	RR	3	HIS
37	RR	50	HIS
37	RR	61	HIS

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Mol	Chain	Res	Type
39	RT	58	ASN
39	RT	90	GLN
40	RU	81	HIS
40	RU	94	ASN
41	RV	11	GLN
41	RV	80	GLN
42	RW	40	ASN
42	RW	61	ASN
42	RW	102	HIS
43	RX	55	ASN
43	RX	87	GLN
44	RY	57	GLN
45	RZ	32	HIS
45	RZ	34	ASN
46	R0	29	GLN
47	R1	56	GLN
47	R1	66	HIS
48	R2	47	ASN
49	R3	19	GLN
49	R3	32	GLN
49	R3	46	ASN
52	R6	26	ASN
54	R8	33	ASN
55	R9	34	GLN
2	XB	95	GLN
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	86	GLN
7	XG	148	ASN
9	XI	31	GLN
10	XJ	76	ASN
10	XJ	78	ASN
10	XJ	84	GLN
12	XL	9	GLN

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Mol	Chain	Res	Type
13	XM	62	ASN
13	XM	101	GLN
19	XS	47	HIS
19	XS	65	ASN
20	XT	26	ASN
27	YD	44	ASN
27	YD	87	ASN
27	YD	112	GLN
27	YD	164	GLN
27	YD	166	GLN
27	YD	198	ASN
28	YE	48	GLN
28	YE	55	ASN
28	YE	180	ASN
29	YF	169	ASN
30	YG	123	ASN
30	YG	132	ASN
31	YH	143	GLN
31	YH	147	ASN
32	YI	43	ASN
33	YN	56	ASN
33	YN	101	HIS
33	YN	130	HIS
33	YN	131	GLN
34	YO	5	GLN
34	YO	29	ASN
34	YO	82	ASN
35	YP	81	GLN
35	YP	84	ASN
39	YT	2	ASN
39	YT	58	ASN
39	YT	90	GLN
40	YU	49	HIS
40	YU	94	ASN
41	YV	11	GLN
41	YV	80	GLN
42	YW	40	ASN
42	YW	102	HIS
43	YX	55	ASN
43	YX	87	GLN
44	YY	57	GLN
45	YZ	85	HIS

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Mol	Chain	Res	Type
45	YZ	151	HIS
47	Y1	56	GLN
47	Y1	66	HIS
48	Y2	9	GLN
48	Y2	38	GLN
48	Y2	46	GLN
48	Y2	47	ASN
49	Y3	19	GLN
49	Y3	32	GLN
49	Y3	46	ASN
51	Y5	22	HIS
52	Y6	26	ASN
52	Y6	32	ASN
54	Y8	33	ASN
55	Y9	34	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1498/1522 (98%)	387 (25%)	49 (3%)
1	XA	1498/1522 (98%)	379 (25%)	60 (4%)
22	QV	76/77 (98%)	30 (39%)	1 (1%)
22	XV	76/77 (98%)	30 (39%)	1 (1%)
23	QX	7/25 (28%)	5 (71%)	1 (14%)
23	XX	6/25 (24%)	3 (50%)	0
24	QY	13/18 (72%)	5 (38%)	1 (7%)
24	XY	13/18 (72%)	5 (38%)	1 (7%)
25	RA	2879/2916 (98%)	838 (29%)	82 (2%)
25	YA	2880/2916 (98%)	873 (30%)	93 (3%)
26	RB	119/122 (97%)	32 (26%)	3 (2%)
26	YB	119/122 (97%)	42 (35%)	2 (1%)
56	Z6	1/3 (33%)	0	0
56	Z8	1/3 (33%)	0	0
All	All	9186/9366 (98%)	2629 (28%)	294 (3%)

All (2629) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	7	G
1	QA	9	G
1	QA	10	A

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Mol	Chain	Res	Type
1	QA	22	G
1	QA	32	A
1	QA	39	G
1	QA	47	C
1	QA	48	C
1	QA	51	A
1	QA	64	G
1	QA	65	U
1	QA	66	G
1	QA	73	G
1	QA	76	G
1	QA	79	G
1	QA	80	G
1	QA	91	C
1	QA	95	G
1	QA	101	A
1	QA	108	G
1	QA	111	G
1	QA	115	G
1	QA	116	A
1	QA	121	C
1	QA	122	G
1	QA	129(A)	G
1	QA	130	A
1	QA	142	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	169	C
1	QA	171	A
1	QA	172	A
1	QA	173	U
1	QA	174	C
1	QA	182	U
1	QA	183	G
1	QA	190	G
1	QA	191(A)	G
1	QA	195	A
1	QA	197	A
1	QA	200	G
1	QA	209	U
1	QA	216	G

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Mol	Chain	Res	Type
1	QA	226	G
1	QA	243	A
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	251	G
1	QA	252	U
1	QA	267	C
1	QA	277	C
1	QA	278	G
1	QA	279	A
1	QA	280	C
1	QA	281	G
1	QA	282	A
1	QA	289	G
1	QA	298	A
1	QA	305	G
1	QA	306	G
1	QA	316	G
1	QA	319	G
1	QA	321	A
1	QA	328	C
1	QA	329	A
1	QA	332	G
1	QA	342	C
1	QA	344	A
1	QA	346	G
1	QA	347	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	355	C
1	QA	356	A
1	QA	367	U
1	QA	372	C
1	QA	373	A
1	QA	374	A
1	QA	382	A
1	QA	384	G
1	QA	388	G
1	QA	390	C

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Mol	Chain	Res	Type
1	QA	397	A
1	QA	398	C
1	QA	406	G
1	QA	410	G
1	QA	411	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	417	C
1	QA	421	U
1	QA	422	C
1	QA	423	G
1	QA	424	G
1	QA	428	G
1	QA	429	U
1	QA	430	A
1	QA	438	G
1	QA	439	A
1	QA	440	A
1	QA	442	C
1	QA	451	A
1	QA	452	A
1	QA	465	A
1	QA	466	C
1	QA	467	G
1	QA	468	A
1	QA	482	A
1	QA	483	C
1	QA	484	G
1	QA	485	G
1	QA	496	A
1	QA	497	U
1	QA	498	A
1	QA	505	G
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	513	C
1	QA	518	C
1	QA	525	C
1	QA	527	G
1	QA	532	A

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Mol	Chain	Res	Type
1	QA	533	A
1	QA	534	U
1	QA	535	A
1	QA	547	A
1	QA	554	C
1	QA	558	G
1	QA	559	A
1	QA	560	U
1	QA	561	U
1	QA	562	C
1	QA	567	G
1	QA	568	G
1	QA	572	A
1	QA	573	A
1	QA	576	G
1	QA	579	G
1	QA	588	G
1	QA	595	G
1	QA	596	C
1	QA	607	A
1	QA	614	A
1	QA	615	C
1	QA	620	C
1	QA	624	C
1	QA	630	G
1	QA	631	G
1	QA	635	G
1	QA	646	U
1	QA	652	U
1	QA	653	A
1	QA	665	A
1	QA	673	G
1	QA	674	G
1	QA	675	A
1	QA	679	C
1	QA	685	G
1	QA	687	A
1	QA	688	G
1	QA	701	C
1	QA	702	A
1	QA	703	G
1	QA	717	C

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Mol	Chain	Res	Type
1	QA	718	G
1	QA	721	G
1	QA	724	G
1	QA	729	A
1	QA	731	G
1	QA	734	G
1	QA	748	C
1	QA	749	C
1	QA	752	G
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	763	G
1	QA	774	G
1	QA	785	G
1	QA	786	G
1	QA	788	U
1	QA	792	A
1	QA	793	U
1	QA	794	A
1	QA	804	U
1	QA	812	C
1	QA	813	U
1	QA	817	C
1	QA	818	G
1	QA	819	A
1	QA	826	C
1	QA	828	A
1	QA	836	G
1	QA	841	U
1	QA	843	U
1	QA	848	C
1	QA	859	A
1	QA	870	U
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	881	G
1	QA	885	G
1	QA	889	A
1	QA	890	G
1	QA	902	G

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Mol	Chain	Res	Type
1	QA	914	A
1	QA	927	G
1	QA	934	C
1	QA	935	A
1	QA	940	C
1	QA	954	G
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	974	A
1	QA	976	G
1	QA	977	A
1	QA	978	A
1	QA	980	C
1	QA	981	U
1	QA	982	U
1	QA	984	C
1	QA	988	G
1	QA	991	U
1	QA	992	U
1	QA	993	G
1	QA	994	A
1	QA	995	C
1	QA	1001	G
1	QA	1002	G
1	QA	1004	A
1	QA	1006	C
1	QA	1009	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1028	C
1	QA	1029	G
1	QA	1032(A)	G
1	QA	1036	G
1	QA	1040	U
1	QA	1053	G
1	QA	1054	C

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Mol	Chain	Res	Type
1	QA	1055	A
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1067	A
1	QA	1074	G
1	QA	1081	G
1	QA	1094	G
1	QA	1095	U
1	QA	1099	G
1	QA	1101	A
1	QA	1111	A
1	QA	1112	C
1	QA	1113	C
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1130	A
1	QA	1131	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1146	A
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1160	G
1	QA	1161	C
1	QA	1163	C
1	QA	1170	A
1	QA	1171	G
1	QA	1177	G
1	QA	1180	A
1	QA	1181	G
1	QA	1182	G
1	QA	1183	A
1	QA	1185	G
1	QA	1187	G
1	QA	1190	G

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Mol	Chain	Res	Type
1	QA	1196	U
1	QA	1197	G
1	QA	1199	U
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1206	G
1	QA	1207	G
1	QA	1212	U
1	QA	1213	A
1	QA	1218	C
1	QA	1224	G
1	QA	1225	A
1	QA	1227	A
1	QA	1238	A
1	QA	1240	U
1	QA	1241	G
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1270	C
1	QA	1272	G
1	QA	1273	G
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C
1	QA	1286	A
1	QA	1287	A
1	QA	1297	C
1	QA	1298	C
1	QA	1299	A
1	QA	1301	U
1	QA	1302	U
1	QA	1303	C
1	QA	1305	G
1	QA	1306	A
1	QA	1314	C
1	QA	1317	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1331	G

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Mol	Chain	Res	Type
1	QA	1333	A
1	QA	1334	G
1	QA	1335	C
1	QA	1336	C
1	QA	1337	G
1	QA	1338	G
1	QA	1347	G
1	QA	1348	U
1	QA	1349	A
1	QA	1353	G
1	QA	1362(A)	C
1	QA	1364	U
1	QA	1370	G
1	QA	1388	C
1	QA	1396	A
1	QA	1397	C
1	QA	1401	G
1	QA	1411	C
1	QA	1419	G
1	QA	1426	C
1	QA	1427	U
1	QA	1439	C
1	QA	1442	G
1	QA	1443	G
1	QA	1446	A
1	QA	1447	G
1	QA	1450	U
1	QA	1452	C
1	QA	1453	G
1	QA	1454	G
1	QA	1461	G
1	QA	1485	U
1	QA	1487	G
1	QA	1492	A
1	QA	1497	G
1	QA	1498	U
1	QA	1499	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U
1	QA	1510	U

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Mol	Chain	Res	Type
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1528	U
1	QA	1529	G
1	QA	1530	G
22	QV	3	C
22	QV	4	G
22	QV	5	G
22	QV	7	G
22	QV	8	U
22	QV	14	A
22	QV	16	C
22	QV	17	C
22	QV	17(A)	U
22	QV	18	G
22	QV	19	G
22	QV	21	A
22	QV	22	G
22	QV	25	C
22	QV	31	G
22	QV	37	A
22	QV	42	G
22	QV	47	U
22	QV	48	C
22	QV	49	G
22	QV	50	U
22	QV	51	C
22	QV	52	G
22	QV	54	U
22	QV	59	A
22	QV	63	G
22	QV	67	C
22	QV	72	A
22	QV	75	C
22	QV	76	A
23	QX	3	G
23	QX	4	C
23	QX	5	C
23	QX	7	U
23	QX	8	A
24	QY	31	G

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Mol	Chain	Res	Type
24	QY	33	U
24	QY	36	G
24	QY	39	C
24	QY	40	G
25	RA	9	U
25	RA	10	G
25	RA	11	G
25	RA	15	G
25	RA	27	G
25	RA	34	C
25	RA	35	G
25	RA	46	C
25	RA	49	A
25	RA	50	U
25	RA	51	G
25	RA	54	G
25	RA	55	G
25	RA	61	G
25	RA	63	U
25	RA	69	C
25	RA	71	A
25	RA	72	U
25	RA	73	A
25	RA	74	A
25	RA	75	G
25	RA	83	G
25	RA	84	A
25	RA	88	G
25	RA	95	G
25	RA	99	U
25	RA	101	G
25	RA	102	G
25	RA	103	A
25	RA	104	U
25	RA	118	A
25	RA	120	U
25	RA	121	G
25	RA	122	G
25	RA	131	G
25	RA	137(A)	G
25	RA	146	G
25	RA	149	A

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Mol	Chain	Res	Type
25	RA	154	G
25	RA	161	U
25	RA	177	G
25	RA	181	A
25	RA	195	A
25	RA	196	A
25	RA	200	U
25	RA	201	C
25	RA	205	G
25	RA	215	G
25	RA	216	A
25	RA	221	A
25	RA	222	A
25	RA	223	A
25	RA	224	G
25	RA	226	G
25	RA	227	A
25	RA	228	A
25	RA	229	A
25	RA	230	U
25	RA	232	G
25	RA	233	A
25	RA	242	G
25	RA	243	U
25	RA	248	G
25	RA	249	C
25	RA	252	G
25	RA	265	A
25	RA	266	G
25	RA	269	U
25	RA	270(K)	C
25	RA	270(L)	U
25	RA	270(M)	U
25	RA	270(N)	G
25	RA	270(P)	C
25	RA	270(T)	G
25	RA	270(W)	G
25	RA	271(C)	U
25	RA	271	G
25	RA	273(E)	U
25	RA	275	G
25	RA	276	A

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Mol	Chain	Res	Type
25	RA	277	C
25	RA	278	A
25	RA	279	C
25	RA	283	A
25	RA	299	A
25	RA	300	A
25	RA	305	U
25	RA	306	U
25	RA	311	A
25	RA	316	C
25	RA	317	G
25	RA	323	G
25	RA	324	A
25	RA	329	G
25	RA	330	A
25	RA	333	G
25	RA	334	C
25	RA	335	C
25	RA	338	G
25	RA	342	G
25	RA	346	A
25	RA	347	A
25	RA	350	U
25	RA	352	G
25	RA	354	G
25	RA	360	G
25	RA	363(E)	U
25	RA	364	C
25	RA	371	A
25	RA	372	G
25	RA	373	U
25	RA	385	C
25	RA	386	G
25	RA	395	U
25	RA	396	G
25	RA	405	U
25	RA	411	G
25	RA	412	A
25	RA	413	C
25	RA	416	C
25	RA	428	A
25	RA	442	G

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Mol	Chain	Res	Type
25	RA	444	C
25	RA	448	U
25	RA	454	A
25	RA	455	C
25	RA	456	C
25	RA	457	A
25	RA	470	A
25	RA	477	A
25	RA	481	G
25	RA	483	A
25	RA	493	G
25	RA	494	G
25	RA	498	G
25	RA	503	A
25	RA	504	U
25	RA	505	A
25	RA	509	C
25	RA	513	A
25	RA	518	G
25	RA	527	C
25	RA	528	A
25	RA	529	A
25	RA	531	C
25	RA	532	A
25	RA	533	G
25	RA	537	C
25	RA	539	G
25	RA	540	G
25	RA	546	C
25	RA	549	G
25	RA	553	U
25	RA	556	G
25	RA	563	G
25	RA	567	A
25	RA	568	U
25	RA	571	A
25	RA	573	G
25	RA	574	C
25	RA	575	A
25	RA	587	C
25	RA	588	U
25	RA	595	C

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Mol	Chain	Res	Type
25	RA	598	G
25	RA	599	G
25	RA	603	A
25	RA	604	G
25	RA	607	U
25	RA	609(A)	G
25	RA	614	U
25	RA	615	G
25	RA	617	G
25	RA	620	G
25	RA	621	A
25	RA	624	C
25	RA	627	A
25	RA	629	G
25	RA	631	A
25	RA	637	A
25	RA	638	G
25	RA	645	C
25	RA	646	A
25	RA	647	G
25	RA	651	G
25	RA	652	C
25	RA	654	A
25	RA	654(B)	C
25	RA	654(V)	A
25	RA	657	U
25	RA	664	C
25	RA	668	G
25	RA	669	G
25	RA	676	A
25	RA	686	G
25	RA	690	G
25	RA	696	G
25	RA	698	C
25	RA	702	G
25	RA	704	G
25	RA	705	A
25	RA	714	U
25	RA	717	G
25	RA	722	A
25	RA	728	G
25	RA	730	C

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Mol	Chain	Res	Type
25	RA	747	U
25	RA	751	A
25	RA	752	A
25	RA	753	C
25	RA	758	C
25	RA	765	G
25	RA	775	G
25	RA	776	G
25	RA	782	A
25	RA	784	A
25	RA	785	G
25	RA	789	A
25	RA	790	C
25	RA	791	C
25	RA	792	G
25	RA	801	G
25	RA	805	G
25	RA	811	U
25	RA	812	C
25	RA	818	G
25	RA	819	A
25	RA	822	U
25	RA	825	C
25	RA	827	U
25	RA	828	U
25	RA	831	G
25	RA	846	C
25	RA	847	U
25	RA	856	C
25	RA	857	C
25	RA	859	G
25	RA	860	U
25	RA	861	A
25	RA	865	C
25	RA	869	G
25	RA	872	A
25	RA	875	G
25	RA	877	U
25	RA	881	G
25	RA	882	G
25	RA	884	C
25	RA	885	C

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Mol	Chain	Res	Type
25	RA	886	C
25	RA	888	C
25	RA	889	C
25	RA	893	C
25	RA	896	A
25	RA	897	C
25	RA	899	A
25	RA	900	A
25	RA	901	A
25	RA	904	C
25	RA	907	U
25	RA	909	A
25	RA	910	A
25	RA	914	C
25	RA	915	C
25	RA	916	G
25	RA	917	A
25	RA	932	G
25	RA	941	A
25	RA	942	G
25	RA	944	G
25	RA	945	A
25	RA	946	G
25	RA	957	A
25	RA	959	A
25	RA	961	C
25	RA	969	U
25	RA	972	G
25	RA	973	A
25	RA	974	G
25	RA	974(A)	C
25	RA	975	G
25	RA	983	A
25	RA	989	G
25	RA	990	A
25	RA	991	C
25	RA	996	A
25	RA	1003	G
25	RA	1005	C
25	RA	1008	C
25	RA	1010	A
25	RA	1011	G

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Mol	Chain	Res	Type
25	RA	1012	U
25	RA	1013	C
25	RA	1015	G
25	RA	1020	A
25	RA	1022	G
25	RA	1023	U
25	RA	1025	G
25	RA	1026	U
25	RA	1027	A
25	RA	1033	U
25	RA	1037	G
25	RA	1038	C
25	RA	1044	G
25	RA	1045	A
25	RA	1046	A
25	RA	1049	C
25	RA	1050	A
25	RA	1055	G
25	RA	1057	A
25	RA	1059	G
25	RA	1060	U
25	RA	1061	U
25	RA	1065	U
25	RA	1066	U
25	RA	1067	A
25	RA	1068	G
25	RA	1069	A
25	RA	1070	A
25	RA	1071	G
25	RA	1076	C
25	RA	1077	A
25	RA	1078	U
25	RA	1079	C
25	RA	1082	U
25	RA	1083	U
25	RA	1084	A
25	RA	1085	A
25	RA	1086	A
25	RA	1087	G
25	RA	1088	A
25	RA	1090	U
25	RA	1091	G

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Mol	Chain	Res	Type
25	RA	1093	G
25	RA	1095	A
25	RA	1096	A
25	RA	1099	G
25	RA	1104	C
25	RA	1105	U
25	RA	1110	G
25	RA	1111	A
25	RA	1112	G
25	RA	1115	G
25	RA	1126	A
25	RA	1128	A
25	RA	1130	U
25	RA	1131	G
25	RA	1135	C
25	RA	1136	G
25	RA	1142	U
25	RA	1142(A)	A
25	RA	1143	A
25	RA	1151	G
25	RA	1155	A
25	RA	1169	G
25	RA	1173	G
25	RA	1174	A
25	RA	1175	U
25	RA	1176	G
25	RA	1178	C
25	RA	1179	C
25	RA	1180	C
25	RA	1183	G
25	RA	1186	G
25	RA	1195	G
25	RA	1197	G
25	RA	1204	A
25	RA	1205	U
25	RA	1206	G
25	RA	1210	A
25	RA	1211	U
25	RA	1212	G
25	RA	1220	A
25	RA	1238	G
25	RA	1247	A

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Mol	Chain	Res	Type
25	RA	1248	G
25	RA	1249	U
25	RA	1251	C
25	RA	1253	A
25	RA	1255	U
25	RA	1256	G
25	RA	1265	A
25	RA	1271	G
25	RA	1272	A
25	RA	1273	U
25	RA	1274	A
25	RA	1275	A
25	RA	1287	A
25	RA	1288	U
25	RA	1292	U
25	RA	1300	U
25	RA	1301	A
25	RA	1302	A
25	RA	1306	C
25	RA	1308	A
25	RA	1312	U
25	RA	1313	U
25	RA	1314	C
25	RA	1316	U
25	RA	1319	G
25	RA	1320	C
25	RA	1321	A
25	RA	1329	U
25	RA	1331	A
25	RA	1332	G
25	RA	1342	A
25	RA	1349	A
25	RA	1351	C
25	RA	1356	G
25	RA	1365	A
25	RA	1368	G
25	RA	1374	G
25	RA	1379	A
25	RA	1380	G
25	RA	1384	A
25	RA	1385	G
25	RA	1386	C

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Mol	Chain	Res	Type
25	RA	1391	U
25	RA	1393	A
25	RA	1406	U
25	RA	1407	C
25	RA	1408	C
25	RA	1410	G
25	RA	1411	C
25	RA	1416	G
25	RA	1419	A
25	RA	1420	U
25	RA	1421	G
25	RA	1427	A
25	RA	1428	C
25	RA	1429	G
25	RA	1433	U
25	RA	1444(A)	A
25	RA	1445	C
25	RA	1448	G
25	RA	1449	A
25	RA	1449(A)	G
25	RA	1455	G
25	RA	1458	C
25	RA	1459	G
25	RA	1460	A
25	RA	1461	G
25	RA	1467	C
25	RA	1471	A
25	RA	1479	G
25	RA	1482	U
25	RA	1483	G
25	RA	1485	G
25	RA	1486	A
25	RA	1493	C
25	RA	1497	U
25	RA	1502	C
25	RA	1503	U
25	RA	1504	C
25	RA	1506	C
25	RA	1507	A
25	RA	1508	A
25	RA	1510	A
25	RA	1514	U

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Mol	Chain	Res	Type
25	RA	1515	C
25	RA	1520	U
25	RA	1522	G
25	RA	1526	G
25	RA	1529	A
25	RA	1534	G
25	RA	1535	U
25	RA	1536	A
25	RA	1537	C
25	RA	1541	U
25	RA	1543	A
25	RA	1544	C
25	RA	1545	A
25	RA	1547	C
25	RA	1554	A
25	RA	1558	A
25	RA	1559	G
25	RA	1560	G
25	RA	1568	G
25	RA	1569	A
25	RA	1578	U
25	RA	1579	A
25	RA	1580	A
25	RA	1581	G
25	RA	1582	C
25	RA	1585	C
25	RA	1586	A
25	RA	1587	A
25	RA	1592	C
25	RA	1593	G
25	RA	1595	G
25	RA	1597	A
25	RA	1602	U
25	RA	1608	A
25	RA	1609	A
25	RA	1616	A
25	RA	1617	C
25	RA	1618	A
25	RA	1639	U
25	RA	1648	C
25	RA	1653	G
25	RA	1654	A

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Mol	Chain	Res	Type
25	RA	1667	G
25	RA	1674	G
25	RA	1681	G
25	RA	1694	C
25	RA	1695	G
25	RA	1699	G
25	RA	1701	A
25	RA	1704	G
25	RA	1725	G
25	RA	1728	G
25	RA	1729	A
25	RA	1730	U
25	RA	1731	G
25	RA	1733	G
25	RA	1741	C
25	RA	1742	C
25	RA	1743	G
25	RA	1749	A
25	RA	1752	C
25	RA	1754	C
25	RA	1756	G
25	RA	1763	G
25	RA	1764	G
25	RA	1766	U
25	RA	1773	A
25	RA	1776	G
25	RA	1779	U
25	RA	1780	A
25	RA	1791	A
25	RA	1799	G
25	RA	1800	C
25	RA	1801	G
25	RA	1811	G
25	RA	1815	A
25	RA	1816	G
25	RA	1817	G
25	RA	1819	A
25	RA	1820	U
25	RA	1829	A
25	RA	1830	C
25	RA	1835	G
25	RA	1839	G

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Mol	Chain	Res	Type
25	RA	1843	C
25	RA	1845	G
25	RA	1847	A
25	RA	1848	A
25	RA	1850	G
25	RA	1858	G
25	RA	1869	G
25	RA	1870	C
25	RA	1872	A
25	RA	1878	G
25	RA	1882	C
25	RA	1887	C
25	RA	1888	G
25	RA	1889	A
25	RA	1896	G
25	RA	1903	G
25	RA	1906	G
25	RA	1913	A
25	RA	1918	A
25	RA	1927	A
25	RA	1930	G
25	RA	1931	U
25	RA	1934	C
25	RA	1936	A
25	RA	1937	A
25	RA	1938	A
25	RA	1939	U
25	RA	1941	C
25	RA	1947	C
25	RA	1955	U
25	RA	1963	U
25	RA	1964	G
25	RA	1966	A
25	RA	1967	C
25	RA	1968	G
25	RA	1969	A
25	RA	1970	A
25	RA	1971	A
25	RA	1972	A
25	RA	1981	A
25	RA	1982	C
25	RA	1991	U

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Mol	Chain	Res	Type
25	RA	1992	G
25	RA	1993	U
25	RA	2000	G
25	RA	2004	G
25	RA	2023	G
25	RA	2031	A
25	RA	2032	G
25	RA	2033	A
25	RA	2039	C
25	RA	2043	C
25	RA	2049	G
25	RA	2055	C
25	RA	2056	G
25	RA	2058	A
25	RA	2059	A
25	RA	2060	A
25	RA	2061	G
25	RA	2062	A
25	RA	2069	G
25	RA	2076	U
25	RA	2086	U
25	RA	2089	U
25	RA	2093	G
25	RA	2097	C
25	RA	2099	U
25	RA	2100	G
25	RA	2107	C
25	RA	2108	C
25	RA	2111	C
25	RA	2113	U
25	RA	2114	A
25	RA	2115	G
25	RA	2116	G
25	RA	2117	A
25	RA	2119	A
25	RA	2120	G
25	RA	2126	A
25	RA	2127	G
25	RA	2128	C
25	RA	2129	C
25	RA	2131	G
25	RA	2132	U

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Mol	Chain	Res	Type
25	RA	2133	G
25	RA	2135	A
25	RA	2136	C
25	RA	2146	C
25	RA	2148	G
25	RA	2157	G
25	RA	2158	A
25	RA	2161	C
25	RA	2166	G
25	RA	2167	U
25	RA	2168	G
25	RA	2169	A
25	RA	2173	A
25	RA	2176	A
25	RA	2190	G
25	RA	2192	G
25	RA	2198	A
25	RA	2199	A
25	RA	2205	C
25	RA	2208	U
25	RA	2210	G
25	RA	2211	G
25	RA	2212	A
25	RA	2215	G
25	RA	2225	A
25	RA	2226	C
25	RA	2238	G
25	RA	2239	G
25	RA	2248	C
25	RA	2251	G
25	RA	2257	U
25	RA	2268	A
25	RA	2273	A
25	RA	2275	C
25	RA	2280	G
25	RA	2283	C
25	RA	2286	A
25	RA	2287	A
25	RA	2288	A
25	RA	2294	C
25	RA	2299	G
25	RA	2303	G

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Mol	Chain	Res	Type
25	RA	2305	A
25	RA	2307	G
25	RA	2308	G
25	RA	2310	A
25	RA	2311	A
25	RA	2319	G
25	RA	2320	A
25	RA	2322	A
25	RA	2325	G
25	RA	2326	C
25	RA	2328	A
25	RA	2334	G
25	RA	2336	A
25	RA	2345	G
25	RA	2346	A
25	RA	2347	C
25	RA	2350	C
25	RA	2354	G
25	RA	2362	G
25	RA	2372	G
25	RA	2376	A
25	RA	2382	G
25	RA	2383	G
25	RA	2384	G
25	RA	2385	C
25	RA	2388	A
25	RA	2392	A
25	RA	2394	C
25	RA	2397	G
25	RA	2399	G
25	RA	2402	C
25	RA	2403	C
25	RA	2406	U
25	RA	2423	U
25	RA	2424	C
25	RA	2425	A
25	RA	2426	A
25	RA	2429	G
25	RA	2430	A
25	RA	2435	A
25	RA	2439	A
25	RA	2440	C

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Mol	Chain	Res	Type
25	RA	2441	C
25	RA	2445	G
25	RA	2446	G
25	RA	2448	A
25	RA	2450	A
25	RA	2452	C
25	RA	2468	G
25	RA	2469	A
25	RA	2474	C
25	RA	2475	C
25	RA	2476	A
25	RA	2482	G
25	RA	2483	C
25	RA	2484	G
25	RA	2494	G
25	RA	2497	A
25	RA	2498	C
25	RA	2502	G
25	RA	2505	G
25	RA	2506	U
25	RA	2507	C
25	RA	2519	U
25	RA	2525	G
25	RA	2529	G
25	RA	2538	C
25	RA	2539	C
25	RA	2542	A
25	RA	2543	G
25	RA	2544	G
25	RA	2551	C
25	RA	2554	U
25	RA	2557	G
25	RA	2559	C
25	RA	2563	U
25	RA	2567	G
25	RA	2568	C
25	RA	2569	G
25	RA	2572	A
25	RA	2573	C
25	RA	2574	G
25	RA	2582	G
25	RA	2586	C

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Mol	Chain	Res	Type
25	RA	2591	C
25	RA	2596	U
25	RA	2602	A
25	RA	2605	U
25	RA	2609	U
25	RA	2610	C
25	RA	2611	U
25	RA	2612	C
25	RA	2614	A
25	RA	2621	A
25	RA	2623	G
25	RA	2629	A
25	RA	2630	G
25	RA	2636	U
25	RA	2638	G
25	RA	2646	C
25	RA	2655	G
25	RA	2656	U
25	RA	2665	A
25	RA	2666	C
25	RA	2667	C
25	RA	2669	G
25	RA	2673	G
25	RA	2675	A
25	RA	2682	U
25	RA	2689	U
25	RA	2690	C
25	RA	2693	A
25	RA	2698	U
25	RA	2702	U
25	RA	2703	C
25	RA	2707	G
25	RA	2712	U
25	RA	2712(A)	A
25	RA	2713	A
25	RA	2714	G
25	RA	2724	C
25	RA	2726	U
25	RA	2733	A
25	RA	2734	A
25	RA	2744	G
25	RA	2748	A

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Mol	Chain	Res	Type
25	RA	2750	A
25	RA	2751	G
25	RA	2752	C
25	RA	2757	A
25	RA	2761	G
25	RA	2764	A
25	RA	2765	A
25	RA	2766	G
25	RA	2770	G
25	RA	2771	C
25	RA	2777	G
25	RA	2778	A
25	RA	2779	U
25	RA	2780	G
25	RA	2790	A
25	RA	2791	C
25	RA	2797	U
25	RA	2807	G
25	RA	2810	A
25	RA	2812	G
25	RA	2818	G
25	RA	2820	A
25	RA	2821	A
25	RA	2825	C
25	RA	2833	G
25	RA	2834	G
25	RA	2835	A
25	RA	2838	G
25	RA	2839	G
25	RA	2844	G
25	RA	2846	G
25	RA	2849	U
25	RA	2853	C
25	RA	2866	U
25	RA	2867	G
25	RA	2868	A
25	RA	2872	G
25	RA	2878	U
25	RA	2880	C
25	RA	2886	G
25	RA	2891	G
25	RA	2892	A

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Mol	Chain	Res	Type
25	RA	2893	G
25	RA	2894	G
26	RB	8	U
26	RB	11	C
26	RB	12	C
26	RB	13	A
26	RB	15	A
26	RB	19	G
26	RB	21	G
26	RB	24	G
26	RB	25	A
26	RB	26	A
26	RB	27	C
26	RB	28	C
26	RB	32	C
26	RB	33	G
26	RB	41	U
26	RB	42	C
26	RB	44	G
26	RB	45	A
26	RB	52	A
26	RB	53	A
26	RB	56	G
26	RB	59	A
26	RB	67	G
26	RB	73	A
26	RB	81	G
26	RB	82	G
26	RB	89	G
26	RB	90	C
26	RB	96	G
26	RB	101	A
26	RB	109	G
26	RB	112	G
1	XA	6	G
1	XA	19	C
1	XA	22	G
1	XA	32	A
1	XA	39	G
1	XA	48	C
1	XA	51	A
1	XA	54	C

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Mol	Chain	Res	Type
1	XA	60	A
1	XA	61	G
1	XA	64	G
1	XA	65	U
1	XA	66	G
1	XA	78	G
1	XA	79	G
1	XA	81	G
1	XA	89	U
1	XA	90	C
1	XA	91	C
1	XA	92	G
1	XA	95	G
1	XA	101	A
1	XA	108	G
1	XA	112	G
1	XA	115	G
1	XA	116	A
1	XA	120	A
1	XA	121	C
1	XA	122	G
1	XA	129(A)	G
1	XA	130	A
1	XA	138	G
1	XA	144	G
1	XA	147	G
1	XA	150	C
1	XA	163	C
1	XA	172	A
1	XA	173	U
1	XA	174	C
1	XA	182	U
1	XA	190	G
1	XA	191(A)	G
1	XA	195	A
1	XA	197	A
1	XA	201	C
1	XA	209	U
1	XA	216	G
1	XA	218	C
1	XA	222	U
1	XA	226	G

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Mol	Chain	Res	Type
1	XA	243	A
1	XA	244	U
1	XA	245	C
1	XA	247	G
1	XA	250	A
1	XA	251	G
1	XA	267	C
1	XA	270	A
1	XA	280	C
1	XA	281	G
1	XA	282	A
1	XA	289	G
1	XA	306	G
1	XA	310	G
1	XA	315	A
1	XA	316	G
1	XA	318	G
1	XA	321	A
1	XA	328	C
1	XA	329	A
1	XA	332	G
1	XA	342	C
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	361	G
1	XA	367	U
1	XA	373	A
1	XA	375	U
1	XA	384	G
1	XA	388	G
1	XA	389	A
1	XA	390	C
1	XA	397	A
1	XA	406	G
1	XA	410	G
1	XA	411	A

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Mol	Chain	Res	Type
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	421	U
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	429	U
1	XA	430	A
1	XA	435	C
1	XA	440	A
1	XA	442	C
1	XA	452	A
1	XA	466	C
1	XA	467	G
1	XA	475	G
1	XA	482	A
1	XA	485	G
1	XA	486	U
1	XA	487	A
1	XA	496	A
1	XA	497	U
1	XA	500	G
1	XA	505	G
1	XA	509	A
1	XA	510	A
1	XA	511	C
1	XA	513	C
1	XA	518	C
1	XA	527	G
1	XA	530	G
1	XA	531	U
1	XA	532	A
1	XA	533	A
1	XA	536	C
1	XA	539	A
1	XA	542	G
1	XA	545	C
1	XA	547	A
1	XA	548	G
1	XA	559	A
1	XA	561	U

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Mol	Chain	Res	Type
1	XA	562	C
1	XA	563	A
1	XA	564	C
1	XA	565	U
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	579	G
1	XA	581	G
1	XA	582	U
1	XA	595	G
1	XA	596	C
1	XA	614	A
1	XA	616	G
1	XA	618	C
1	XA	630	G
1	XA	631	G
1	XA	633	G
1	XA	652	U
1	XA	653	A
1	XA	659	U
1	XA	665	A
1	XA	672	U
1	XA	688	G
1	XA	701	C
1	XA	702	A
1	XA	704	A
1	XA	718	G
1	XA	728	A
1	XA	731	G
1	XA	742	G
1	XA	748	C
1	XA	749	C
1	XA	752	G
1	XA	753	A
1	XA	754	C
1	XA	755	G
1	XA	764	C
1	XA	774	G
1	XA	775	G
1	XA	777	A

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Mol	Chain	Res	Type
1	XA	786	G
1	XA	787	A
1	XA	792	A
1	XA	793	U
1	XA	794	A
1	XA	796	C
1	XA	800	G
1	XA	801	U
1	XA	810	C
1	XA	812	C
1	XA	813	U
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	819	A
1	XA	821	G
1	XA	828	A
1	XA	836	G
1	XA	841	U
1	XA	843	U
1	XA	848	C
1	XA	859	A
1	XA	870	U
1	XA	871	U
1	XA	872	A
1	XA	873	A
1	XA	875	C
1	XA	885	G
1	XA	902	G
1	XA	914	A
1	XA	917	G
1	XA	920	U
1	XA	922	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	942	G
1	XA	945	G
1	XA	950	U
1	XA	954	G
1	XA	960	U

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Mol	Chain	Res	Type
1	XA	961	U
1	XA	966	G
1	XA	967	C
1	XA	968	A
1	XA	969	A
1	XA	972	C
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	981	U
1	XA	982	U
1	XA	983	A
1	XA	991	U
1	XA	992	U
1	XA	993	G
1	XA	994	A
1	XA	995	C
1	XA	1001	G
1	XA	1004	A
1	XA	1005	A
1	XA	1006	C
1	XA	1008	C
1	XA	1021	G
1	XA	1024	G
1	XA	1025	U
1	XA	1028	C
1	XA	1029	G
1	XA	1032(A)	G
1	XA	1036	G
1	XA	1039	C
1	XA	1040	U
1	XA	1047	G
1	XA	1053	G
1	XA	1054	C
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1074	G
1	XA	1085	U
1	XA	1094	G
1	XA	1095	U

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Mol	Chain	Res	Type
1	XA	1096	C
1	XA	1101	A
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G
1	XA	1130	A
1	XA	1131	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1146	A
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1160	G
1	XA	1162	C
1	XA	1169	A
1	XA	1171	G
1	XA	1176	A
1	XA	1177	G
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1186	G
1	XA	1189	C
1	XA	1190	G
1	XA	1193	G
1	XA	1194	U
1	XA	1196	U
1	XA	1198	G
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1225	A
1	XA	1236	A
1	XA	1237	C
1	XA	1238	A

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Mol	Chain	Res	Type
1	XA	1240	U
1	XA	1241	G
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1264	C
1	XA	1270	C
1	XA	1272	G
1	XA	1273	G
1	XA	1277	C
1	XA	1279	A
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1286	A
1	XA	1287	A
1	XA	1290	G
1	XA	1296	C
1	XA	1298	C
1	XA	1299	A
1	XA	1300	G
1	XA	1301	U
1	XA	1302	U
1	XA	1303	C
1	XA	1305	G
1	XA	1317	C
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1324	A
1	XA	1331	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1338	G
1	XA	1347	G
1	XA	1348	U
1	XA	1353	G
1	XA	1355	G
1	XA	1356	G
1	XA	1362(A)	C

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Mol	Chain	Res	Type
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1368	G
1	XA	1370	G
1	XA	1372	U
1	XA	1381	U
1	XA	1397	C
1	XA	1398	A
1	XA	1399	C
1	XA	1401	G
1	XA	1419	G
1	XA	1429	C
1	XA	1442	G
1	XA	1443	G
1	XA	1446	A
1	XA	1447	G
1	XA	1450	U
1	XA	1452	C
1	XA	1453	G
1	XA	1454	G
1	XA	1487	G
1	XA	1492	A
1	XA	1494	G
1	XA	1497	G
1	XA	1499	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1517	G
1	XA	1519	A
1	XA	1520	G
1	XA	1529	G
1	XA	1530	G
22	XV	3	C
22	XV	4	G
22	XV	5	G
22	XV	7	G
22	XV	8	U
22	XV	14	A
22	XV	16	C

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Mol	Chain	Res	Type
22	XV	17	C
22	XV	17(A)	U
22	XV	18	G
22	XV	19	G
22	XV	21	A
22	XV	22	G
22	XV	25	C
22	XV	31	G
22	XV	37	A
22	XV	42	G
22	XV	47	U
22	XV	48	C
22	XV	49	G
22	XV	50	U
22	XV	51	C
22	XV	52	G
22	XV	54	U
22	XV	59	A
22	XV	63	G
22	XV	67	C
22	XV	72	A
22	XV	75	C
22	XV	76	A
23	XX	3	G
23	XX	4	C
23	XX	5	C
24	XY	31	G
24	XY	33	U
24	XY	36	G
24	XY	39	C
24	XY	40	G
25	YA	9	U
25	YA	14	A
25	YA	15	G
25	YA	26	G
25	YA	34	C
25	YA	35	G
25	YA	40	C
25	YA	46	C
25	YA	50	U
25	YA	51	G
25	YA	55	G

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Mol	Chain	Res	Type
25	YA	61	G
25	YA	63	U
25	YA	71	A
25	YA	72	U
25	YA	73	A
25	YA	74	A
25	YA	75	G
25	YA	77	C
25	YA	79	G
25	YA	84	A
25	YA	97	C
25	YA	99	U
25	YA	101	G
25	YA	102	G
25	YA	103	A
25	YA	106	C
25	YA	110	G
25	YA	113	G
25	YA	114	U
25	YA	117	G
25	YA	118	A
25	YA	120	U
25	YA	125	G
25	YA	131	G
25	YA	141(A)	C
25	YA	149	A
25	YA	155	C
25	YA	161	U
25	YA	162	U
25	YA	173	G
25	YA	177	G
25	YA	178	G
25	YA	181	A
25	YA	188	G
25	YA	196	A
25	YA	197	A
25	YA	199	A
25	YA	202	U
25	YA	204	A
25	YA	206	U
25	YA	213	A
25	YA	214	G

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Mol	Chain	Res	Type
25	YA	216	A
25	YA	221	A
25	YA	222	A
25	YA	223	A
25	YA	224	G
25	YA	228	A
25	YA	229	A
25	YA	230	U
25	YA	232	G
25	YA	233	A
25	YA	241	A
25	YA	242	G
25	YA	243	U
25	YA	245	G
25	YA	248	G
25	YA	249	C
25	YA	252	G
25	YA	265	A
25	YA	266	G
25	YA	269	U
25	YA	270(L)	U
25	YA	270(M)	U
25	YA	270(N)	G
25	YA	270(O)	U
25	YA	270(P)	C
25	YA	270(W)	G
25	YA	271(A)	C
25	YA	271(B)	G
25	YA	271(C)	U
25	YA	271	G
25	YA	274	G
25	YA	275	G
25	YA	276	A
25	YA	278	A
25	YA	279	C
25	YA	284	U
25	YA	285	C
25	YA	287	C
25	YA	288	C
25	YA	294	A
25	YA	299	A
25	YA	305	U

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Mol	Chain	Res	Type
25	YA	311	A
25	YA	316	C
25	YA	322	A
25	YA	323	G
25	YA	324	A
25	YA	329	G
25	YA	330	A
25	YA	331	A
25	YA	332	A
25	YA	334	C
25	YA	338	G
25	YA	342	G
25	YA	343	C
25	YA	345	A
25	YA	349	G
25	YA	352	G
25	YA	353	G
25	YA	363(E)	U
25	YA	364	C
25	YA	365	C
25	YA	366	C
25	YA	371	A
25	YA	372	G
25	YA	373	U
25	YA	374	A
25	YA	383	U
25	YA	386	G
25	YA	387	U
25	YA	388	G
25	YA	395	U
25	YA	396	G
25	YA	405	U
25	YA	406	G
25	YA	411	G
25	YA	426	C
25	YA	428	A
25	YA	441	U
25	YA	444	C
25	YA	447	A
25	YA	448	U
25	YA	454	A
25	YA	457	A

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Mol	Chain	Res	Type
25	YA	470	A
25	YA	473	G
25	YA	478	A
25	YA	479	A
25	YA	480	A
25	YA	481	G
25	YA	483	A
25	YA	503	A
25	YA	504	U
25	YA	505	A
25	YA	508	G
25	YA	509	C
25	YA	510	C
25	YA	518	G
25	YA	531	C
25	YA	532	A
25	YA	533	G
25	YA	536	A
25	YA	537	C
25	YA	539	G
25	YA	540	G
25	YA	546	C
25	YA	547	A
25	YA	549	G
25	YA	556	G
25	YA	558	G
25	YA	562	U
25	YA	563	G
25	YA	571	A
25	YA	572	A
25	YA	573	G
25	YA	574	C
25	YA	575	A
25	YA	584	C
25	YA	586	A
25	YA	587	C
25	YA	588	U
25	YA	603	A
25	YA	607	U
25	YA	609(A)	G
25	YA	613	U
25	YA	614	U

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Mol	Chain	Res	Type
25	YA	615	G
25	YA	617	G
25	YA	618	G
25	YA	618(A)	C
25	YA	620	G
25	YA	621	A
25	YA	622	G
25	YA	624	C
25	YA	626	U
25	YA	627	A
25	YA	629	G
25	YA	630	G
25	YA	631	A
25	YA	634	C
25	YA	637	A
25	YA	638	G
25	YA	645	C
25	YA	646	A
25	YA	651	G
25	YA	654	A
25	YA	654(A)	G
25	YA	654(B)	C
25	YA	654(T)	C
25	YA	654(V)	A
25	YA	657	U
25	YA	662	G
25	YA	664	C
25	YA	668	G
25	YA	669	G
25	YA	670	A
25	YA	682	G
25	YA	686	G
25	YA	695	G
25	YA	702	G
25	YA	705	A
25	YA	715	G
25	YA	717	G
25	YA	722	A
25	YA	724	U
25	YA	730	C
25	YA	740	U
25	YA	741	G

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Mol	Chain	Res	Type
25	YA	745	G
25	YA	747	U
25	YA	752	A
25	YA	753	C
25	YA	765	G
25	YA	771	G
25	YA	773	U
25	YA	776	G
25	YA	782	A
25	YA	784	A
25	YA	785	G
25	YA	790	C
25	YA	792	G
25	YA	794	G
25	YA	797	C
25	YA	805	G
25	YA	812	C
25	YA	819	A
25	YA	825	C
25	YA	827	U
25	YA	828	U
25	YA	831	G
25	YA	836	G
25	YA	845	G
25	YA	846	C
25	YA	847	U
25	YA	853	G
25	YA	856	C
25	YA	857	C
25	YA	859	G
25	YA	860	U
25	YA	871	U
25	YA	872	A
25	YA	881	G
25	YA	882	G
25	YA	884	C
25	YA	885	C
25	YA	886	C
25	YA	888	C
25	YA	889	C
25	YA	890	A
25	YA	896	A

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Mol	Chain	Res	Type
25	YA	897	C
25	YA	899	A
25	YA	900	A
25	YA	901	A
25	YA	905	U
25	YA	907	U
25	YA	910	A
25	YA	916	G
25	YA	917	A
25	YA	920	G
25	YA	928	G
25	YA	932	G
25	YA	941	A
25	YA	945	A
25	YA	946	G
25	YA	948	G
25	YA	959	A
25	YA	961	C
25	YA	973	A
25	YA	974	G
25	YA	974(A)	C
25	YA	975	G
25	YA	978	G
25	YA	980	A
25	YA	983	A
25	YA	989	G
25	YA	990	A
25	YA	996	A
25	YA	997	G
25	YA	1003	G
25	YA	1004	C
25	YA	1005	C
25	YA	1011	G
25	YA	1012	U
25	YA	1013	C
25	YA	1020	A
25	YA	1022	G
25	YA	1023	U
25	YA	1024	G
25	YA	1025	G
25	YA	1026	U
25	YA	1027	A

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Mol	Chain	Res	Type
25	YA	1033	U
25	YA	1045	A
25	YA	1046	A
25	YA	1047	G
25	YA	1050	A
25	YA	1054	A
25	YA	1055	G
25	YA	1057	A
25	YA	1059	G
25	YA	1060	U
25	YA	1061	U
25	YA	1066	U
25	YA	1067	A
25	YA	1068	G
25	YA	1069	A
25	YA	1070	A
25	YA	1071	G
25	YA	1076	C
25	YA	1077	A
25	YA	1078	U
25	YA	1079	C
25	YA	1080	C
25	YA	1082	U
25	YA	1083	U
25	YA	1084	A
25	YA	1085	A
25	YA	1086	A
25	YA	1087	G
25	YA	1088	A
25	YA	1090	U
25	YA	1093	G
25	YA	1095	A
25	YA	1096	A
25	YA	1097	U
25	YA	1099	G
25	YA	1103	A
25	YA	1104	C
25	YA	1105	U
25	YA	1110	G
25	YA	1111	A
25	YA	1112	G
25	YA	1126	A

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Mol	Chain	Res	Type
25	YA	1127	A
25	YA	1128	A
25	YA	1129	A
25	YA	1130	U
25	YA	1131	G
25	YA	1135	C
25	YA	1136	G
25	YA	1142	U
25	YA	1142(A)	A
25	YA	1143	A
25	YA	1148	A
25	YA	1151	G
25	YA	1160	G
25	YA	1173	G
25	YA	1174	A
25	YA	1175	U
25	YA	1176	G
25	YA	1178	C
25	YA	1179	C
25	YA	1180	C
25	YA	1195	G
25	YA	1204	A
25	YA	1205	U
25	YA	1210	A
25	YA	1211	U
25	YA	1214	A
25	YA	1218	C
25	YA	1219	G
25	YA	1220	A
25	YA	1221	C
25	YA	1225	C
25	YA	1228	G
25	YA	1234	U
25	YA	1236	G
25	YA	1238	G
25	YA	1242	A
25	YA	1244	G
25	YA	1246	A
25	YA	1247	A
25	YA	1248	G
25	YA	1250	G
25	YA	1253	A

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Mol	Chain	Res	Type
25	YA	1256	G
25	YA	1257	C
25	YA	1259	G
25	YA	1264	G
25	YA	1265	A
25	YA	1267	U
25	YA	1271	G
25	YA	1272	A
25	YA	1273	U
25	YA	1275	A
25	YA	1281	G
25	YA	1289	C
25	YA	1299	G
25	YA	1300	U
25	YA	1301	A
25	YA	1302	A
25	YA	1305	C
25	YA	1309	G
25	YA	1311	G
25	YA	1312	U
25	YA	1313	U
25	YA	1316	U
25	YA	1317	A
25	YA	1318	C
25	YA	1319	G
25	YA	1321	A
25	YA	1329	U
25	YA	1338	G
25	YA	1342	A
25	YA	1348	G
25	YA	1349	A
25	YA	1358	G
25	YA	1365	A
25	YA	1368	G
25	YA	1379	A
25	YA	1380	G
25	YA	1384	A
25	YA	1385	G
25	YA	1386	C
25	YA	1388	G
25	YA	1390	U
25	YA	1391	U

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Mol	Chain	Res	Type
25	YA	1393	A
25	YA	1395	A
25	YA	1396	U
25	YA	1398	C
25	YA	1402	C
25	YA	1403	C
25	YA	1407	C
25	YA	1408	C
25	YA	1411	C
25	YA	1412	A
25	YA	1415	U
25	YA	1416	G
25	YA	1417	C
25	YA	1419	A
25	YA	1420	U
25	YA	1421	G
25	YA	1428	C
25	YA	1429	G
25	YA	1433	U
25	YA	1444(A)	A
25	YA	1445	C
25	YA	1447	G
25	YA	1448	G
25	YA	1449	A
25	YA	1449(A)	G
25	YA	1451	C
25	YA	1455	G
25	YA	1458	C
25	YA	1459	G
25	YA	1460	A
25	YA	1461	G
25	YA	1467	C
25	YA	1471	A
25	YA	1477	A
25	YA	1480	G
25	YA	1482	U
25	YA	1483	G
25	YA	1484	G
25	YA	1485	G
25	YA	1490	A
25	YA	1493	C
25	YA	1494	A

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Mol	Chain	Res	Type
25	YA	1495	A
25	YA	1497	U
25	YA	1505	C
25	YA	1506	C
25	YA	1507	A
25	YA	1508	A
25	YA	1510	A
25	YA	1511	A
25	YA	1513	C
25	YA	1514	U
25	YA	1522	G
25	YA	1527	G
25	YA	1533	C
25	YA	1534	G
25	YA	1535	U
25	YA	1536	A
25	YA	1537	C
25	YA	1543	A
25	YA	1544	C
25	YA	1545	A
25	YA	1546	C
25	YA	1547	C
25	YA	1549	C
25	YA	1558	A
25	YA	1559	G
25	YA	1569	A
25	YA	1570	A
25	YA	1578	U
25	YA	1579	A
25	YA	1581	G
25	YA	1585	C
25	YA	1586	A
25	YA	1587	A
25	YA	1589	C
25	YA	1590	U
25	YA	1592	C
25	YA	1595	G
25	YA	1602	U
25	YA	1606	G
25	YA	1608	A
25	YA	1609	A
25	YA	1612	C

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Mol	Chain	Res	Type
25	YA	1613	G
25	YA	1617	C
25	YA	1618	A
25	YA	1626	G
25	YA	1630(A)	C
25	YA	1640	C
25	YA	1646	C
25	YA	1648	C
25	YA	1653	G
25	YA	1654	A
25	YA	1660	C
25	YA	1667	G
25	YA	1668	A
25	YA	1669	A
25	YA	1674	G
25	YA	1678	G
25	YA	1681	G
25	YA	1682	G
25	YA	1685	C
25	YA	1686	C
25	YA	1695	G
25	YA	1698	A
25	YA	1699	G
25	YA	1700	A
25	YA	1701	A
25	YA	1718	G
25	YA	1725	G
25	YA	1728	G
25	YA	1729	A
25	YA	1730	U
25	YA	1731	G
25	YA	1732	A
25	YA	1733	G
25	YA	1734	C
25	YA	1742	C
25	YA	1750	G
25	YA	1754	C
25	YA	1755	A
25	YA	1756	G
25	YA	1762	A
25	YA	1763	G
25	YA	1764	G

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Mol	Chain	Res	Type
25	YA	1772	G
25	YA	1773	A
25	YA	1779	U
25	YA	1780	A
25	YA	1781	C
25	YA	1791	A
25	YA	1799	G
25	YA	1800	C
25	YA	1801	G
25	YA	1815	A
25	YA	1816	G
25	YA	1819	A
25	YA	1820	U
25	YA	1829	A
25	YA	1834	U
25	YA	1835	G
25	YA	1839	G
25	YA	1847	A
25	YA	1848	A
25	YA	1850	G
25	YA	1851	U
25	YA	1858	G
25	YA	1860	G
25	YA	1864	U
25	YA	1869	G
25	YA	1871	A
25	YA	1872	A
25	YA	1878	G
25	YA	1882	C
25	YA	1888	G
25	YA	1889	A
25	YA	1896	G
25	YA	1899	G
25	YA	1900	A
25	YA	1903	G
25	YA	1906	G
25	YA	1913	A
25	YA	1914	C
25	YA	1923	U
25	YA	1926	U
25	YA	1930	G
25	YA	1931	U

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Mol	Chain	Res	Type
25	YA	1934	C
25	YA	1936	A
25	YA	1937	A
25	YA	1938	A
25	YA	1939	U
25	YA	1940	U
25	YA	1943	U
25	YA	1944	U
25	YA	1955	U
25	YA	1956	U
25	YA	1960	A
25	YA	1963	U
25	YA	1964	G
25	YA	1967	C
25	YA	1968	G
25	YA	1969	A
25	YA	1970	A
25	YA	1971	A
25	YA	1972	A
25	YA	1981	A
25	YA	1982	C
25	YA	1991	U
25	YA	1993	U
25	YA	2010	G
25	YA	2013	A
25	YA	2020	A
25	YA	2023	G
25	YA	2031	A
25	YA	2033	A
25	YA	2043	C
25	YA	2055	C
25	YA	2056	G
25	YA	2059	A
25	YA	2060	A
25	YA	2061	G
25	YA	2062	A
25	YA	2063	C
25	YA	2069	G
25	YA	2071	A
25	YA	2078	C
25	YA	2092	U
25	YA	2093	G

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Mol	Chain	Res	Type
25	YA	2096	U
25	YA	2100	G
25	YA	2111	C
25	YA	2113	U
25	YA	2114	A
25	YA	2115	G
25	YA	2116	G
25	YA	2117	A
25	YA	2118	U
25	YA	2119	A
25	YA	2120	G
25	YA	2126	A
25	YA	2127	G
25	YA	2128	C
25	YA	2131	G
25	YA	2132	U
25	YA	2133	G
25	YA	2136	C
25	YA	2146	C
25	YA	2147	G
25	YA	2148	G
25	YA	2158	A
25	YA	2166	G
25	YA	2167	U
25	YA	2168	G
25	YA	2169	A
25	YA	2171	A
25	YA	2173	A
25	YA	2176	A
25	YA	2178	C
25	YA	2190	G
25	YA	2191	G
25	YA	2192	G
25	YA	2198	A
25	YA	2199	A
25	YA	2209	C
25	YA	2210	G
25	YA	2211	G
25	YA	2212	A
25	YA	2215	G
25	YA	2225	A
25	YA	2228	G

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Mol	Chain	Res	Type
25	YA	2234	G
25	YA	2238	G
25	YA	2239	G
25	YA	2242	G
25	YA	2243	U
25	YA	2251	G
25	YA	2264	C
25	YA	2273	A
25	YA	2274	A
25	YA	2275	C
25	YA	2278	A
25	YA	2280	G
25	YA	2283	C
25	YA	2287	A
25	YA	2288	A
25	YA	2294	C
25	YA	2298	A
25	YA	2299	G
25	YA	2307	G
25	YA	2308	G
25	YA	2310	A
25	YA	2311	A
25	YA	2315	G
25	YA	2319	G
25	YA	2320	A
25	YA	2324	C
25	YA	2325	G
25	YA	2334	G
25	YA	2335	A
25	YA	2336	A
25	YA	2340	G
25	YA	2342	C
25	YA	2343	C
25	YA	2345	G
25	YA	2346	A
25	YA	2347	C
25	YA	2350	C
25	YA	2352	A
25	YA	2355	C
25	YA	2376	A
25	YA	2379	G
25	YA	2382	G

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Mol	Chain	Res	Type
25	YA	2383	G
25	YA	2385	C
25	YA	2386	C
25	YA	2387	U
25	YA	2389	G
25	YA	2390	U
25	YA	2392	A
25	YA	2396	G
25	YA	2400	G
25	YA	2402	C
25	YA	2403	C
25	YA	2406	U
25	YA	2410	G
25	YA	2413	G
25	YA	2421	G
25	YA	2422	A
25	YA	2423	U
25	YA	2424	C
25	YA	2425	A
25	YA	2426	A
25	YA	2428	G
25	YA	2429	G
25	YA	2430	A
25	YA	2432	A
25	YA	2434	A
25	YA	2435	A
25	YA	2439	A
25	YA	2440	C
25	YA	2441	C
25	YA	2446	G
25	YA	2448	A
25	YA	2450	A
25	YA	2455	G
25	YA	2460	U
25	YA	2464	C
25	YA	2468	G
25	YA	2469	A
25	YA	2475	C
25	YA	2476	A
25	YA	2477	C
25	YA	2480	C
25	YA	2481	G

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Mol	Chain	Res	Type
25	YA	2482	G
25	YA	2494	G
25	YA	2499	C
25	YA	2502	G
25	YA	2505	G
25	YA	2506	U
25	YA	2507	C
25	YA	2519	U
25	YA	2520	C
25	YA	2529	G
25	YA	2542	A
25	YA	2543	G
25	YA	2551	C
25	YA	2554	U
25	YA	2559	C
25	YA	2566	A
25	YA	2567	G
25	YA	2573	C
25	YA	2574	G
25	YA	2582	G
25	YA	2586	C
25	YA	2590	A
25	YA	2599	G
25	YA	2601	C
25	YA	2602	A
25	YA	2609	U
25	YA	2611	U
25	YA	2612	C
25	YA	2621	A
25	YA	2623	G
25	YA	2629	A
25	YA	2632	A
25	YA	2633	G
25	YA	2645	G
25	YA	2655	G
25	YA	2656	U
25	YA	2657	A
25	YA	2665	A
25	YA	2666	C
25	YA	2673	G
25	YA	2675	A
25	YA	2682	U

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Mol	Chain	Res	Type
25	YA	2683	C
25	YA	2689	U
25	YA	2690	C
25	YA	2693	A
25	YA	2701	C
25	YA	2702	U
25	YA	2703	C
25	YA	2707	G
25	YA	2712	U
25	YA	2712(A)	A
25	YA	2713	A
25	YA	2714	G
25	YA	2720	U
25	YA	2724	C
25	YA	2726	U
25	YA	2733	A
25	YA	2734	A
25	YA	2739	U
25	YA	2741	A
25	YA	2744	G
25	YA	2749	A
25	YA	2750	A
25	YA	2752	C
25	YA	2755	C
25	YA	2757	A
25	YA	2758	A
25	YA	2759	G
25	YA	2761	G
25	YA	2762	G
25	YA	2765	A
25	YA	2766	G
25	YA	2770	G
25	YA	2777	G
25	YA	2778	A
25	YA	2779	U
25	YA	2789	C
25	YA	2790	A
25	YA	2791	C
25	YA	2794	C
25	YA	2797	U
25	YA	2807	G
25	YA	2808	U

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Mol	Chain	Res	Type
25	YA	2818	G
25	YA	2820	A
25	YA	2821	A
25	YA	2830	G
25	YA	2831	G
25	YA	2833	G
25	YA	2834	G
25	YA	2835	A
25	YA	2846	G
25	YA	2849	U
25	YA	2865	U
25	YA	2866	U
25	YA	2867	G
25	YA	2868	A
25	YA	2871	C
25	YA	2872	G
25	YA	2873	A
25	YA	2874	C
25	YA	2891	G
25	YA	2892	A
25	YA	2894	G
25	YA	2897	U
26	YB	2	C
26	YB	7	G
26	YB	8	U
26	YB	10	C
26	YB	12	C
26	YB	15	A
26	YB	16	G
26	YB	19	G
26	YB	21	G
26	YB	22	U
26	YB	24	G
26	YB	25	A
26	YB	26	A
26	YB	32	C
26	YB	34	U
26	YB	35	U
26	YB	39	A
26	YB	41	U
26	YB	42	C
26	YB	43	C

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Mol	Chain	Res	Type
26	YB	44	G
26	YB	45	A
26	YB	47	C
26	YB	52	A
26	YB	53	A
26	YB	56	G
26	YB	64	C
26	YB	67	G
26	YB	72	G
26	YB	73	A
26	YB	75	G
26	YB	82	G
26	YB	87	G
26	YB	88	C
26	YB	89	G
26	YB	90	C
26	YB	96	G
26	YB	101	A
26	YB	105	G
26	YB	106	G
26	YB	109	G
26	YB	115	G

All (294) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	31	G
1	QA	115	G
1	QA	173	U
1	QA	181	G
1	QA	190	G
1	QA	243	A
1	QA	250	A
1	QA	251	G
1	QA	266	G
1	QA	328	C
1	QA	410	G
1	QA	412	A
1	QA	429	U
1	QA	481	G
1	QA	484	G
1	QA	509	A

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Mol	Chain	Res	Type
1	QA	533	A
1	QA	560	U
1	QA	595	G
1	QA	687	A
1	QA	701	C
1	QA	753	A
1	QA	792	A
1	QA	812	C
1	QA	884	U
1	QA	913	A
1	QA	934	C
1	QA	960	U
1	QA	971	G
1	QA	972	C
1	QA	992	U
1	QA	1025	U
1	QA	1027	C
1	QA	1064	G
1	QA	1065	U
1	QA	1200	C
1	QA	1201	A
1	QA	1280	A
1	QA	1285	A
1	QA	1297	C
1	QA	1298	C
1	QA	1305	G
1	QA	1336	C
1	QA	1346	A
1	QA	1347	G
1	QA	1446	A
1	QA	1498	U
1	QA	1503	A
1	QA	1528	U
22	QV	53	G
23	QX	6	C
24	QY	39	C
25	RA	74	A
25	RA	83	G
25	RA	99	U
25	RA	102	G
25	RA	196	A
25	RA	221	A

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Mol	Chain	Res	Type
25	RA	222	A
25	RA	227	A
25	RA	229	A
25	RA	242	G
25	RA	271(B)	G
25	RA	271(C)	U
25	RA	277	C
25	RA	345	A
25	RA	370	G
25	RA	372	G
25	RA	503	A
25	RA	508	G
25	RA	512	G
25	RA	562	U
25	RA	587	C
25	RA	620	G
25	RA	627	A
25	RA	637	A
25	RA	704	G
25	RA	746	A
25	RA	752	A
25	RA	762	U
25	RA	774	A
25	RA	846	C
25	RA	856	C
25	RA	859	G
25	RA	974(A)	C
25	RA	1022	G
25	RA	1026	U
25	RA	1045	A
25	RA	1078	U
25	RA	1085	A
25	RA	1130	U
25	RA	1141	U
25	RA	1178	C
25	RA	1204	A
25	RA	1210	A
25	RA	1220	A
25	RA	1247	A
25	RA	1265	A
25	RA	1301	A
25	RA	1312	U

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Mol	Chain	Res	Type
25	RA	1405	U
25	RA	1427	A
25	RA	1460	A
25	RA	1558	A
25	RA	1608	A
25	RA	1653	G
25	RA	1694	C
25	RA	1698	A
25	RA	1799	G
25	RA	1801	G
25	RA	1819	A
25	RA	1929	G
25	RA	1930	G
25	RA	1992	G
25	RA	2031	A
25	RA	2060	A
25	RA	2126	A
25	RA	2238	G
25	RA	2282	G
25	RA	2311	A
25	RA	2335	A
25	RA	2405	G
25	RA	2439	A
25	RA	2481	G
25	RA	2506	U
25	RA	2518	A
25	RA	2581	G
25	RA	2610	C
25	RA	2689	U
25	RA	2712	U
25	RA	2776	A
25	RA	2832	U
25	RA	2848	G
25	RA	2867	G
26	RB	24	G
26	RB	66	A
26	RB	108	C
1	XA	31	G
1	XA	60	A
1	XA	64	G
1	XA	78	G
1	XA	89	U

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Mol	Chain	Res	Type
1	XA	115	G
1	XA	181	G
1	XA	243	A
1	XA	244	U
1	XA	250	A
1	XA	266	G
1	XA	281	G
1	XA	328	C
1	XA	345	C
1	XA	372	C
1	XA	388	G
1	XA	410	G
1	XA	412	A
1	XA	429	U
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	509	A
1	XA	530	G
1	XA	531	U
1	XA	532	A
1	XA	560	U
1	XA	595	G
1	XA	687	A
1	XA	701	C
1	XA	703	G
1	XA	752	G
1	XA	753	A
1	XA	793	U
1	XA	812	C
1	XA	815	A
1	XA	819	A
1	XA	913	A
1	XA	934	C
1	XA	960	U
1	XA	974	A
1	XA	992	U
1	XA	1027	C
1	XA	1054	C
1	XA	1065	U
1	XA	1094	G
1	XA	1182	G

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Mol	Chain	Res	Type
1	XA	1200	C
1	XA	1201	A
1	XA	1279	A
1	XA	1285	A
1	XA	1297	C
1	XA	1301	U
1	XA	1305	G
1	XA	1336	C
1	XA	1347	G
1	XA	1364	U
1	XA	1446	A
1	XA	1498	U
1	XA	1503	A
22	XV	53	G
24	XY	39	C
25	YA	74	A
25	YA	83	G
25	YA	99	U
25	YA	102	G
25	YA	196	A
25	YA	205	G
25	YA	221	A
25	YA	222	A
25	YA	226	G
25	YA	227	A
25	YA	229	A
25	YA	242	G
25	YA	271(B)	G
25	YA	278	A
25	YA	332	A
25	YA	372	G
25	YA	404	C
25	YA	503	A
25	YA	562	U
25	YA	574	C
25	YA	587	C
25	YA	620	G
25	YA	637	A
25	YA	645	C
25	YA	653	A
25	YA	669	G
25	YA	704	G

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Mol	Chain	Res	Type
25	YA	752	A
25	YA	846	C
25	YA	856	C
25	YA	858	U
25	YA	859	G
25	YA	961	C
25	YA	973	A
25	YA	974	G
25	YA	974(A)	C
25	YA	1012	U
25	YA	1022	G
25	YA	1026	U
25	YA	1045	A
25	YA	1078	U
25	YA	1085	A
25	YA	1109	C
25	YA	1128	A
25	YA	1130	U
25	YA	1175	U
25	YA	1178	C
25	YA	1204	A
25	YA	1210	A
25	YA	1220	A
25	YA	1379	A
25	YA	1416	G
25	YA	1460	A
25	YA	1558	A
25	YA	1608	A
25	YA	1653	G
25	YA	1667	G
25	YA	1694	C
25	YA	1698	A
25	YA	1799	G
25	YA	1819	A
25	YA	1899	G
25	YA	1929	G
25	YA	1930	G
25	YA	1943	U
25	YA	1955	U
25	YA	1992	G
25	YA	2035	G
25	YA	2060	A

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Mol	Chain	Res	Type
25	YA	2092	U
25	YA	2126	A
25	YA	2211	G
25	YA	2238	G
25	YA	2318	G
25	YA	2335	A
25	YA	2351	G
25	YA	2405	G
25	YA	2439	A
25	YA	2481	G
25	YA	2506	U
25	YA	2518	A
25	YA	2566	A
25	YA	2610	C
25	YA	2655	G
25	YA	2681	C
25	YA	2689	U
25	YA	2712	U
25	YA	2751	G
25	YA	2756	U
25	YA	2776	A
25	YA	2832	U
25	YA	2867	G
25	YA	2873	A
26	YB	24	G
26	YB	66	A

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

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

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
56	PPU	Z8	76	56,25	37,40,41	2.57	8 (21%)	47,57,60	2.56	15 (31%)
56	PPU	Z6	76	56,25	37,40,41	2.58	8 (21%)	47,57,60	2.57	15 (31%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
24	1MG	QY	37	24	23,26,27	2.64	4 (17%)	33,39,42	2.01	8 (24%)
24	1MG	XY	37	24	23,26,27	2.64	4 (17%)	33,39,42	2.03	9 (27%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	PPU	Z8	76	56,25	-	2/25/43/44	0/4/4/4
56	PPU	Z6	76	56,25	-	2/25/43/44	0/4/4/4
24	1MG	QY	37	24	-	0/7/25/26	0/3/3/3
24	1MG	XY	37	24	-	0/7/25/26	0/3/3/3

All (24) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	Z6	76	PPU	O-C	9.58	1.41	1.23
56	Z8	76	PPU	O-C	9.54	1.41	1.23
24	XY	37	1MG	C2-N2	8.11	1.48	1.34
24	QY	37	1MG	C2-N2	8.06	1.48	1.34
24	XY	37	1MG	C4-N3	6.58	1.49	1.34
24	QY	37	1MG	C4-N3	6.57	1.49	1.34
56	Z6	76	PPU	C9-N6	-6.16	1.32	1.45
56	Z8	76	PPU	C9-N6	-6.14	1.32	1.45
56	Z6	76	PPU	C-N3'	5.94	1.46	1.34
56	Z8	76	PPU	C10-N6	-5.88	1.32	1.45
56	Z6	76	PPU	C10-N6	-5.88	1.32	1.45
24	QY	37	1MG	C2-N1	5.86	1.47	1.37
56	Z8	76	PPU	C-N3'	5.82	1.46	1.34
24	XY	37	1MG	C2-N1	5.76	1.47	1.37
56	Z6	76	PPU	C5-N7	-3.57	1.32	1.39
56	Z8	76	PPU	C5-N7	-3.53	1.32	1.39
56	Z6	76	PPU	C8-N9	-3.27	1.32	1.37
56	Z8	76	PPU	C8-N9	-3.19	1.32	1.37
56	Z8	76	PPU	C1'-N9	2.78	1.54	1.46
56	Z6	76	PPU	C1'-N9	2.71	1.53	1.46
24	QY	37	1MG	C5-N7	-2.69	1.33	1.39
24	XY	37	1MG	C5-N7	-2.64	1.33	1.39
56	Z8	76	PPU	C4-N9	-2.14	1.33	1.37
56	Z6	76	PPU	C4-N9	-2.13	1.33	1.37

All (47) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
56	Z6	76	PPU	C3'-N3'-C	-8.57	110.17	123.20
56	Z8	76	PPU	C3'-N3'-C	-8.55	110.20	123.20
24	QY	37	1MG	N2-C2-N1	6.16	123.73	118.79
24	XY	37	1MG	N2-C2-N1	6.16	123.73	118.79
56	Z8	76	PPU	C2'-C1'-N9	-6.00	98.40	113.30
56	Z6	76	PPU	C2'-C1'-N9	-5.94	98.53	113.30
56	Z6	76	PPU	C5-C4-N3	-5.05	119.76	126.72
56	Z8	76	PPU	C5-C4-N3	-4.97	119.87	126.72
56	Z8	76	PPU	N3-C2-N1	-4.76	121.38	128.58
56	Z6	76	PPU	N3-C2-N1	-4.75	121.39	128.58
56	Z6	76	PPU	C2-N1-C6	4.08	121.80	111.83
56	Z6	76	PPU	CA-C-N3'	4.08	121.73	116.21
56	Z8	76	PPU	CA-C-N3'	4.04	121.68	116.21
56	Z8	76	PPU	C2-N1-C6	4.04	121.69	111.83
56	Z6	76	PPU	C4-C5-N7	-4.04	105.97	110.58
56	Z8	76	PPU	C4-C5-N7	-4.00	106.01	110.58
24	XY	37	1MG	C5-C4-N3	-3.89	122.19	128.39
24	QY	37	1MG	C5-C4-N3	-3.83	122.29	128.39
24	QY	37	1MG	C8-N7-C5	3.74	110.91	104.26
24	XY	37	1MG	C8-N7-C5	3.73	110.90	104.26
56	Z8	76	PPU	C2-N3-C4	3.70	120.86	111.83
56	Z6	76	PPU	C2-N3-C4	3.69	120.83	111.83
24	XY	37	1MG	C2-N1-C6	3.61	124.00	120.99
24	QY	37	1MG	C2-N1-C6	3.57	123.97	120.99
56	Z8	76	PPU	C5-N7-C8	3.55	109.03	103.45
56	Z6	76	PPU	C5-N7-C8	3.55	109.02	103.45
56	Z6	76	PPU	CM-OC-CZ	-3.43	110.14	117.50
56	Z8	76	PPU	CM-OC-CZ	-3.39	110.22	117.50
56	Z8	76	PPU	N9-C8-N7	-3.39	109.13	113.94
24	XY	37	1MG	N9-C4-N3	3.37	132.68	125.95
56	Z6	76	PPU	N9-C8-N7	-3.31	109.24	113.94
24	QY	37	1MG	N9-C4-N3	3.28	132.52	125.95
24	XY	37	1MG	N9-C8-N7	-3.20	107.46	113.40
24	QY	37	1MG	N9-C8-N7	-3.18	107.51	113.40
56	Z6	76	PPU	O4'-C1'-N9	-3.04	102.25	108.09
56	Z8	76	PPU	O4'-C1'-N9	-3.03	102.28	108.09
56	Z6	76	PPU	N3-C4-N9	2.93	132.14	127.17
56	Z8	76	PPU	N3-C4-N9	2.85	132.02	127.17
24	XY	37	1MG	C2-N3-C4	2.68	118.00	111.98
24	QY	37	1MG	C2-N3-C4	2.67	117.98	111.98
24	XY	37	1MG	C4-C5-N7	-2.51	106.69	110.67
56	Z6	76	PPU	C4-C5-C6	2.48	118.48	115.91

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
24	QY	37	1MG	C4-C5-N7	-2.48	106.74	110.67
56	Z8	76	PPU	C4-C5-C6	2.41	118.40	115.91
56	Z8	76	PPU	C5-C4-N9	2.11	108.11	105.81
56	Z6	76	PPU	C5-C4-N9	2.10	108.09	105.81
24	XY	37	1MG	C8-N9-C4	2.02	109.81	106.03

There are no chirality outliers.

All (4) torsion outliers are listed below:

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

There are no ring outliers.

4 monomers are involved in 19 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	Z8	76	PPU	10	0
56	Z6	76	PPU	7	0
24	QY	37	1MG	1	0
24	XY	37	1MG	1	0

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 681 ligands modelled in this entry, 680 are monoatomic - leaving 1 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
59	AMP	XX	101	-	21,24,25	1.11	3 (14%)	30,35,38	0.78	1 (3%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	AMP	XX	101	-	-	1/7/25/26	0/3/3/3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	XX	101	AMP	C1'-N9	3.52	1.56	1.46
59	XX	101	AMP	C5-C6	2.15	1.47	1.41
59	XX	101	AMP	C6-N6	2.11	1.39	1.34

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
59	XX	101	AMP	C4'-N9-C1'	2.42	132.29	126.63

There are no chirality outliers.

All (1) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	XX	101	AMP	C4'-C5'-O5'-P

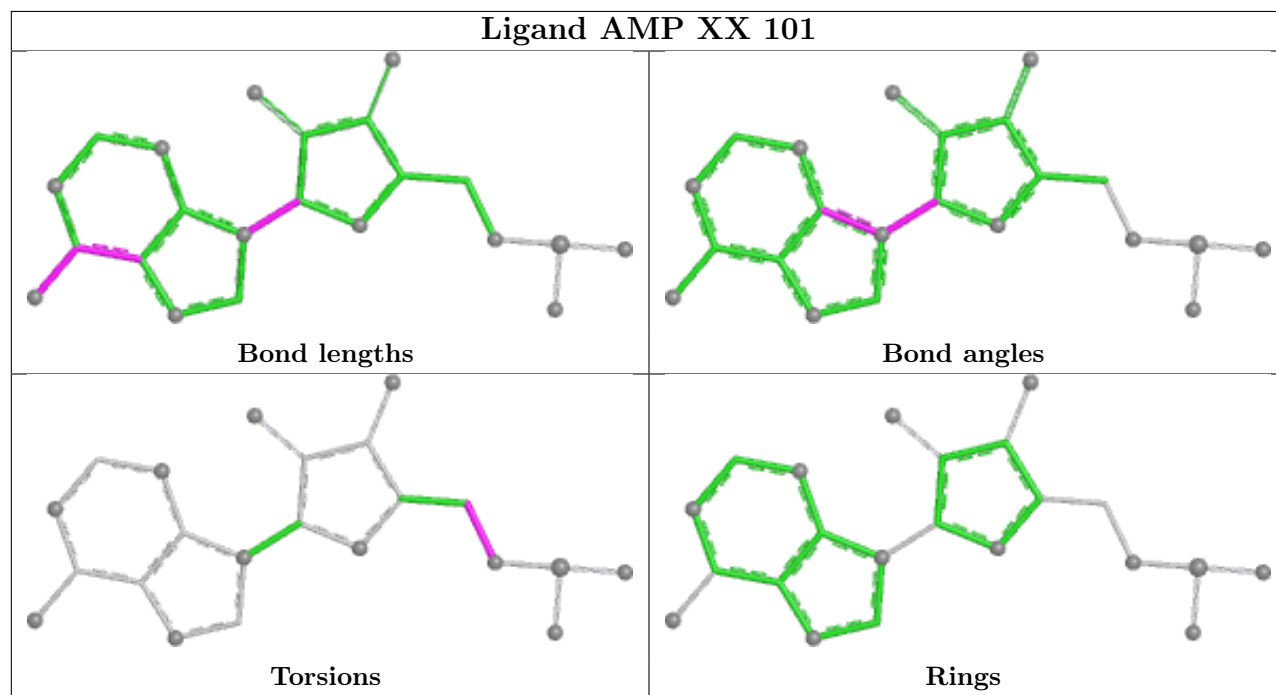
There are no ring outliers.

1 monomer is involved in 1 short contact:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	XX	101	AMP	1	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less than 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring

in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

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, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q < 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ > 2			OWAB(Å ²)	Q < 0.9
1	QA	1500/1522 (98%)	0.20	61 (4%)	41	31	3, 59, 153, 236	0
1	XA	1500/1522 (98%)	0.19	68 (4%)	38	29	1, 53, 148, 240	0
2	QB	237/256 (92%)	0.85	29 (12%)	8	11	41, 113, 151, 177	0
2	XB	237/256 (92%)	0.46	12 (5%)	33	26	21, 96, 142, 157	0
3	QC	205/239 (85%)	0.74	21 (10%)	12	14	22, 104, 139, 161	0
3	XC	205/239 (85%)	0.29	12 (5%)	28	24	22, 79, 122, 161	0
4	QD	208/209 (99%)	0.68	18 (8%)	16	16	8, 69, 116, 153	0
4	XD	208/209 (99%)	0.64	22 (10%)	11	13	16, 74, 114, 158	0
5	QE	151/162 (93%)	1.36	43 (28%)	1	3	32, 95, 133, 161	0
5	XE	151/162 (93%)	0.57	16 (10%)	11	13	20, 63, 108, 140	0
6	QF	101/101 (100%)	0.50	6 (5%)	28	24	15, 68, 105, 139	0
6	XF	101/101 (100%)	0.49	3 (2%)	52	37	4, 66, 107, 134	0
7	QG	155/156 (99%)	0.58	10 (6%)	25	21	26, 89, 133, 154	0
7	XG	155/156 (99%)	0.47	12 (7%)	19	18	28, 83, 124, 148	0
8	QH	138/138 (100%)	0.77	14 (10%)	12	14	21, 79, 122, 132	0
8	XH	138/138 (100%)	0.69	14 (10%)	12	14	14, 68, 108, 133	0
9	QI	127/128 (99%)	0.79	10 (7%)	18	18	49, 102, 138, 161	0
9	XI	127/128 (99%)	0.79	14 (11%)	10	13	13, 91, 134, 162	0
10	QJ	99/105 (94%)	1.29	22 (22%)	2	4	57, 108, 148, 192	0
10	XJ	99/105 (94%)	0.96	15 (15%)	5	8	40, 94, 140, 165	0
11	QK	119/129 (92%)	0.70	12 (10%)	12	14	25, 72, 127, 150	0
11	XK	119/129 (92%)	0.43	5 (4%)	40	30	4, 59, 109, 129	0
12	QL	125/132 (94%)	0.99	19 (15%)	5	8	15, 64, 124, 159	0
12	XL	125/132 (94%)	0.57	8 (6%)	25	22	6, 48, 102, 157	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	121/126 (96%)	0.84	18 (14%) 5 8	48, 101, 151, 159	0
13	XM	121/126 (96%)	0.66	12 (9%) 13 14	38, 85, 119, 158	0
14	QN	60/61 (98%)	1.05	11 (18%) 3 6	52, 108, 148, 159	0
14	XN	60/61 (98%)	0.65	5 (8%) 17 17	33, 72, 116, 130	0
15	QO	88/89 (98%)	0.45	5 (5%) 29 24	17, 71, 119, 151	0
15	XO	88/89 (98%)	0.31	2 (2%) 61 43	7, 59, 102, 127	0
16	QP	84/88 (95%)	0.91	13 (15%) 5 8	14, 59, 114, 134	0
16	XP	84/88 (95%)	0.75	9 (10%) 11 13	28, 68, 122, 176	0
17	QQ	100/105 (95%)	1.07	16 (16%) 5 8	30, 70, 116, 148	0
17	XQ	100/105 (95%)	0.93	14 (14%) 6 9	19, 71, 106, 144	0
18	QR	70/88 (79%)	0.47	4 (5%) 29 24	22, 70, 125, 150	0
18	XR	70/88 (79%)	0.59	8 (11%) 10 12	9, 65, 106, 140	0
19	QS	84/93 (90%)	0.87	13 (15%) 5 8	69, 116, 148, 161	0
19	XS	84/93 (90%)	0.58	5 (5%) 27 23	48, 87, 132, 145	0
20	QT	99/106 (93%)	0.93	16 (16%) 4 7	16, 73, 113, 135	0
20	XT	99/106 (93%)	1.04	16 (16%) 4 7	23, 77, 124, 157	0
21	QU	25/27 (92%)	1.86	12 (48%) 0 1	31, 92, 141, 158	0
21	XU	25/27 (92%)	1.44	9 (36%) 1 2	32, 83, 121, 143	0
22	QV	77/77 (100%)	0.78	4 (5%) 33 26	21, 85, 147, 180	0
22	XV	77/77 (100%)	0.52	5 (6%) 25 21	6, 64, 119, 169	0
23	QX	8/25 (32%)	1.28	3 (37%) 1 2	50, 74, 138, 138	0
23	XX	7/25 (28%)	0.96	0 100 100	18, 51, 81, 90	0
24	QY	13/18 (72%)	1.60	4 (30%) 1 3	106, 175, 223, 238	0
24	XY	13/18 (72%)	1.39	3 (23%) 2 4	55, 149, 189, 217	0
25	RA	2882/2916 (98%)	-0.03	100 (3%) 47 33	0, 30, 174, 252	0
25	YA	2883/2916 (98%)	-0.05	101 (3%) 47 33	0, 20, 159, 242	0
26	RB	120/122 (98%)	0.30	3 (2%) 58 41	39, 82, 133, 170	0
26	YB	120/122 (98%)	0.18	4 (3%) 49 34	16, 68, 104, 146	0
27	RD	272/276 (98%)	0.67	37 (13%) 7 10	0, 34, 82, 147	0
27	YD	272/276 (98%)	0.45	17 (6%) 26 22	0, 18, 64, 125	0
28	RE	205/206 (99%)	0.68	18 (8%) 15 16	1, 49, 112, 170	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
28	YE	205/206 (99%)	0.61	17 (8%) 17 17	0, 47, 104, 155	0
29	RF	202/210 (96%)	0.69	19 (9%) 14 16	0, 55, 108, 143	0
29	YF	202/210 (96%)	0.44	12 (5%) 28 24	0, 32, 96, 124	0
30	RG	181/182 (99%)	1.43	49 (27%) 1 3	39, 113, 160, 177	0
30	YG	181/182 (99%)	1.15	33 (18%) 3 6	18, 92, 131, 177	0
31	RH	170/180 (94%)	0.87	16 (9%) 14 16	45, 112, 156, 177	0
31	YH	170/180 (94%)	0.53	13 (7%) 20 18	11, 66, 116, 131	0
32	RI	146/148 (98%)	0.20	6 (4%) 41 31	3, 77, 124, 177	0
32	YI	146/148 (98%)	0.13	6 (4%) 41 31	3, 64, 125, 140	0
33	RN	138/140 (98%)	0.41	5 (3%) 46 33	6, 61, 118, 144	0
33	YN	138/140 (98%)	0.51	10 (7%) 21 19	4, 45, 98, 131	0
34	RO	122/122 (100%)	0.51	8 (6%) 24 21	2, 42, 80, 107	0
34	YO	122/122 (100%)	0.56	9 (7%) 20 19	2, 41, 82, 126	0
35	RP	150/150 (100%)	0.85	23 (15%) 5 8	1, 58, 130, 158	0
35	YP	150/150 (100%)	0.79	20 (13%) 7 10	1, 46, 101, 160	0
36	RQ	141/141 (100%)	0.93	22 (15%) 5 8	3, 58, 103, 133	0
36	YQ	141/141 (100%)	0.79	21 (14%) 5 8	0, 47, 97, 115	0
37	RR	118/118 (100%)	0.73	11 (9%) 14 16	1, 34, 87, 136	0
37	YR	118/118 (100%)	0.61	14 (11%) 9 11	2, 38, 98, 136	0
38	RS	111/112 (99%)	0.53	7 (6%) 26 22	23, 83, 117, 138	0
38	YS	111/112 (99%)	0.67	15 (13%) 7 10	13, 73, 115, 168	0
39	RT	137/146 (93%)	0.78	13 (9%) 14 15	8, 58, 130, 152	0
39	YT	137/146 (93%)	0.69	10 (7%) 21 19	9, 56, 122, 170	0
40	RU	117/118 (99%)	0.81	15 (12%) 7 10	1, 49, 113, 166	0
40	YU	117/118 (99%)	0.35	3 (2%) 57 40	1, 31, 97, 145	0
41	RV	101/101 (100%)	0.44	3 (2%) 52 37	1, 68, 120, 193	0
41	YV	101/101 (100%)	0.22	4 (3%) 42 31	1, 45, 97, 171	0
42	RW	113/113 (100%)	0.40	4 (3%) 47 33	2, 34, 95, 131	0
42	YW	113/113 (100%)	0.12	4 (3%) 47 33	1, 24, 84, 155	0
43	RX	92/96 (95%)	0.32	2 (2%) 62 44	4, 44, 91, 131	0
43	YX	92/96 (95%)	0.53	7 (7%) 20 18	1, 25, 64, 106	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	RY	102/110 (92%)	1.37	25 (24%) 2 4	10, 84, 138, 174	0
44	YY	102/110 (92%)	0.73	11 (10%) 11 13	2, 50, 106, 160	0
45	RZ	183/206 (88%)	0.44	10 (5%) 30 25	20, 88, 136, 160	0
45	YZ	183/206 (88%)	0.39	9 (4%) 35 27	20, 78, 137, 167	0
46	R0	82/85 (96%)	0.21	3 (3%) 45 32	6, 44, 83, 137	0
46	Y0	82/85 (96%)	0.29	5 (6%) 27 23	2, 32, 70, 88	0
47	R1	97/98 (98%)	0.90	15 (15%) 5 8	2, 47, 126, 202	0
47	Y1	97/98 (98%)	0.50	8 (8%) 17 18	0, 32, 114, 142	0
48	R2	69/72 (95%)	0.71	5 (7%) 21 19	8, 72, 116, 128	0
48	Y2	69/72 (95%)	0.59	5 (7%) 21 19	0, 39, 97, 137	0
49	R3	59/60 (98%)	0.47	2 (3%) 48 34	7, 60, 126, 152	0
49	Y3	59/60 (98%)	0.32	3 (5%) 33 26	3, 40, 87, 128	0
50	R4	71/71 (100%)	1.36	12 (16%) 4 7	78, 145, 193, 235	0
50	Y4	71/71 (100%)	0.82	7 (9%) 13 14	69, 122, 166, 194	0
51	R5	59/60 (98%)	1.22	12 (20%) 3 5	4, 39, 139, 166	0
51	Y5	59/60 (98%)	0.74	6 (10%) 12 14	1, 40, 132, 156	0
52	R6	49/54 (90%)	1.85	17 (34%) 1 2	48, 122, 152, 191	0
52	Y6	49/54 (90%)	1.26	12 (24%) 2 4	47, 108, 148, 175	0
53	R7	49/49 (100%)	0.65	5 (10%) 12 14	1, 27, 75, 161	0
53	Y7	49/49 (100%)	0.88	6 (12%) 8 11	1, 15, 84, 140	0
54	R8	64/65 (98%)	1.08	9 (14%) 6 9	4, 41, 94, 153	0
54	Y8	64/65 (98%)	0.71	5 (7%) 19 18	2, 34, 85, 138	0
55	R9	37/37 (100%)	2.18	17 (45%) 0 1	53, 103, 154, 162	0
55	Y9	37/37 (100%)	2.37	20 (54%) 0 1	60, 98, 136, 154	0
56	Z6	2/3 (66%)	0.16	0 100 100	17, 17, 17, 30	0
56	Z8	2/3 (66%)	1.07	0 100 100	19, 19, 19, 22	0
All	All	20870/21494 (97%)	0.41	1583 (7%) 20 18	0, 55, 139, 252	0

All (1583) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
47	R1	98	LEU	10.7
37	RR	7	GLY	9.8

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Mol	Chain	Res	Type	RSRZ
50	R4	69	LYS	9.5
36	RQ	25	ASP	9.1
52	R6	42	TRP	9.0
3	QC	155	GLY	8.7
50	R4	68	ARG	8.5
53	Y7	48	LYS	8.3
36	YQ	80	GLU	8.2
31	RH	43	VAL	8.1
7	QG	82	GLY	8.1
17	XQ	101	ARG	7.9
27	RD	34	VAL	7.6
25	YA	1061	U	7.5
25	YA	1536	A	7.4
46	R0	2	ALA	7.2
13	QM	121	LYS	7.2
3	QC	196	LEU	7.0
53	R7	48	LYS	6.7
40	RU	90	VAL	6.6
24	QY	32	U	6.6
35	RP	88	LEU	6.6
55	R9	37	GLY	6.5
28	YE	193	GLY	6.5
12	QL	19	ARG	6.5
36	YQ	25	ASP	6.4
30	YG	39	ILE	6.4
13	QM	122	LYS	6.4
31	RH	141	VAL	6.3
55	Y9	21	GLY	6.3
25	RA	1536	A	6.3
5	XE	83	GLU	6.2
52	R6	40	CYS	6.2
4	QD	7	PRO	6.2
5	QE	124	GLY	6.2
51	R5	54	GLY	6.1
7	QG	81	GLY	6.1
20	XT	25	ARG	6.0
7	QG	32	ARG	6.0
37	RR	8	ARG	6.0
11	XK	129	SER	5.9
29	RF	178	PRO	5.9
10	QJ	5	ARG	5.9
5	QE	129	ILE	5.9

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Mol	Chain	Res	Type	RSRZ
10	XJ	5	ARG	5.9
13	QM	102	ARG	5.8
16	QP	18	ARG	5.8
51	R5	2	ALA	5.8
44	YY	63	LYS	5.7
1	XA	380	G	5.7
25	RA	2174	C	5.7
9	QI	127	LYS	5.7
37	YR	1	MET	5.6
30	RG	155	MET	5.6
4	QD	32	ALA	5.6
51	Y5	57	VAL	5.6
8	XH	18	ARG	5.6
13	QM	101	GLN	5.6
25	RA	2173	A	5.5
25	RA	1059	G	5.5
7	QG	4	ARG	5.5
25	RA	2801	A	5.5
17	XQ	37	LYS	5.5
52	R6	22	ALA	5.4
20	XT	9	ASN	5.4
36	YQ	83	MET	5.4
14	XN	2	ALA	5.4
12	QL	31	PRO	5.4
27	RD	188	GLU	5.4
44	RY	102	CYS	5.3
17	QQ	101	ARG	5.3
1	XA	314	C	5.2
20	XT	60	GLU	5.2
55	Y9	22	ARG	5.2
24	XY	32	U	5.2
26	YB	1	U	5.2
27	RD	33	LEU	5.2
50	Y4	68	ARG	5.1
55	R9	25	VAL	5.1
1	XA	313	A	5.1
13	QM	75	ALA	5.1
17	QQ	24	GLU	5.1
35	RP	16	ARG	5.0
53	R7	49	ARG	5.0
30	YG	109	VAL	5.0
30	RG	100	TRP	5.0

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Mol	Chain	Res	Type	RSRZ
20	XT	22	ARG	5.0
29	RF	180	GLY	5.0
44	YY	91	GLU	4.9
10	QJ	6	ILE	4.9
1	XA	631	G	4.9
13	QM	120	LYS	4.9
29	RF	56	GLU	4.9
44	YY	64	GLU	4.8
12	QL	32	PHE	4.8
44	RY	22	GLY	4.8
5	QE	12	LEU	4.8
29	RF	181	LEU	4.8
8	XH	1	MET	4.8
1	XA	610	G	4.8
25	RA	1058	G	4.8
3	XC	195	VAL	4.8
12	QL	13	LYS	4.7
52	Y6	42	TRP	4.7
35	YP	13	ASN	4.7
25	YA	1060	U	4.7
3	XC	190	ARG	4.7
52	R6	23	THR	4.7
30	YG	142	PRO	4.7
29	RF	157	VAL	4.7
34	YO	1	MET	4.7
25	YA	2801	A	4.7
3	QC	153	VAL	4.7
20	XT	12	ALA	4.6
12	QL	23	LYS	4.6
25	YA	2452	C	4.6
47	R1	95	LEU	4.6
25	RA	1094	U	4.6
40	RU	117	GLN	4.6
1	QA	1020	U	4.6
5	QE	130	ASN	4.6
25	RA	2798	C	4.6
8	XH	55	GLY	4.6
28	YE	204	ALA	4.5
55	R9	18	ARG	4.5
45	RZ	78	LYS	4.5
25	RA	1060	U	4.5
3	QC	154	SER	4.5

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Mol	Chain	Res	Type	RSRZ
25	RA	1057	A	4.5
52	R6	41	PRO	4.5
7	XG	5	ARG	4.5
17	XQ	93	GLN	4.5
5	QE	85	GLY	4.5
30	YG	157	ILE	4.4
46	Y0	7	LEU	4.4
9	XI	8	GLY	4.4
39	RT	106	SER	4.4
25	RA	2799	A	4.4
52	R6	24	GLU	4.4
11	XK	117	ASN	4.4
5	QE	106	PRO	4.4
27	RD	48	ARG	4.4
25	YA	1096	A	4.4
55	Y9	26	ILE	4.4
20	XT	24	LEU	4.3
44	YY	2	ARG	4.3
7	XG	84	ASN	4.3
40	RU	118	GLY	4.3
37	YR	2	ARG	4.3
5	QE	123	LEU	4.3
48	Y2	66	GLU	4.3
35	RP	13	ASN	4.3
1	QA	1033	G	4.3
10	QJ	4	ILE	4.3
55	Y9	37	GLY	4.3
16	QP	7	ALA	4.3
1	QA	1032(B)	G	4.3
25	RA	2125	G	4.3
5	XE	81	GLU	4.3
25	RA	11	G	4.2
20	QT	9	ASN	4.2
36	RQ	141	GLN	4.2
21	QU	9	ARG	4.2
30	RG	108	ASN	4.2
36	RQ	102	VAL	4.2
5	QE	109	ILE	4.2
31	YH	3	ARG	4.2
29	RF	196	LEU	4.2
4	QD	8	VAL	4.2
25	RA	1093	G	4.2

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Mol	Chain	Res	Type	RSRZ
17	QQ	32	TYR	4.2
5	QE	80	ILE	4.2
4	QD	6	GLY	4.1
5	QE	14	ARG	4.1
18	XR	88	LYS	4.1
33	YN	29	LYS	4.1
53	Y7	49	ARG	4.1
5	QE	20	GLN	4.1
2	QB	214	ILE	4.1
30	YG	40	ASN	4.1
25	RA	1095	A	4.1
25	YA	529	A	4.1
5	QE	127	ASN	4.1
4	QD	84	LYS	4.1
11	QK	129	SER	4.1
21	QU	26	LYS	4.1
25	RA	2545	G	4.1
27	RD	35	LYS	4.1
14	XN	41	ARG	4.1
19	QS	40	ILE	4.1
36	RQ	80	GLU	4.1
25	YA	889	C	4.1
25	YA	1550	C	4.1
52	R6	39	TYR	4.1
35	RP	71	VAL	4.1
4	XD	135	LEU	4.1
4	XD	122	ARG	4.1
31	YH	155	SER	4.1
55	R9	20	HIS	4.1
5	XE	129	ILE	4.1
1	QA	82	U	4.0
2	QB	31	TYR	4.0
30	YG	25	TYR	4.0
1	XA	306	G	4.0
3	QC	160	ALA	4.0
45	RZ	175	VAL	4.0
4	XD	154	ASN	4.0
29	RF	176	LEU	4.0
44	RY	86	ARG	4.0
9	XI	105	ASP	4.0
17	XQ	99	SER	4.0
1	QA	744	C	4.0

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Mol	Chain	Res	Type	RSRZ
1	QA	915	A	4.0
1	XA	220	G	4.0
10	XJ	6	ILE	4.0
17	XQ	96	GLU	4.0
34	YO	68	GLU	4.0
30	RG	75	LYS	3.9
50	Y4	66	SER	3.9
39	YT	44	ASP	3.9
30	RG	84	LYS	3.9
5	QE	82	VAL	3.9
16	QP	9	PHE	3.9
39	RT	37	GLY	3.9
36	YQ	135	ASP	3.9
25	RA	2811	G	3.9
12	QL	21	LYS	3.9
12	XL	28	LYS	3.9
53	Y7	36	GLN	3.9
44	RY	68	HIS	3.9
35	YP	36	LYS	3.9
40	RU	80	ILE	3.9
44	RY	82	PRO	3.9
25	YA	2112	G	3.9
50	Y4	69	LYS	3.9
37	YR	38	VAL	3.9
25	RA	654	A	3.9
25	YA	2117	A	3.9
1	QA	1234	C	3.9
29	YF	137	LYS	3.9
8	QH	30	ARG	3.8
39	RT	39	ARG	3.8
25	YA	2118	U	3.8
55	R9	21	GLY	3.8
55	Y9	17	ILE	3.8
25	YA	1654	A	3.8
25	RA	12	U	3.8
6	QF	79	LEU	3.8
30	RG	96	ARG	3.8
52	Y6	49	HIS	3.8
32	YI	107	VAL	3.8
54	R8	59	LYS	3.8
12	QL	129	ALA	3.8
27	YD	40	THR	3.8

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Mol	Chain	Res	Type	RSRZ
1	QA	1115	C	3.8
49	R3	48	GLU	3.8
25	RA	614	U	3.8
2	QB	136	VAL	3.8
3	QC	165	THR	3.8
39	YT	45	PHE	3.8
1	QA	1236	A	3.8
25	YA	568	U	3.8
29	RF	179	GLU	3.8
13	XM	88	ARG	3.7
27	RD	262	ARG	3.7
29	RF	131	GLY	3.7
3	QC	124	ILE	3.7
17	QQ	28	PRO	3.7
45	RZ	118	GLN	3.7
20	QT	75	ASN	3.7
5	QE	22	GLY	3.7
27	YD	235	GLY	3.7
37	RR	42	LYS	3.7
55	Y9	15	LYS	3.7
10	QJ	88	LEU	3.7
9	XI	75	ASP	3.7
31	RH	18	GLU	3.7
30	RG	158	ALA	3.7
37	RR	9	LYS	3.7
37	YR	7	GLY	3.7
1	XA	1452	C	3.7
32	RI	10	GLU	3.7
11	QK	89	ALA	3.7
52	Y6	23	THR	3.7
25	YA	2799	A	3.7
21	XU	10	ARG	3.7
1	QA	1235	U	3.7
25	YA	614	U	3.7
34	RO	1	MET	3.7
5	XE	88	LYS	3.7
54	Y8	65	GLU	3.7
45	RZ	183	LEU	3.7
27	YD	236	GLY	3.6
27	RD	51	VAL	3.6
30	RG	91	ARG	3.6
32	YI	113	ARG	3.6

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Mol	Chain	Res	Type	RSRZ
20	XT	34	LYS	3.6
39	YT	84	GLN	3.6
1	QA	307	C	3.6
1	XA	1325	C	3.6
25	RA	1644	C	3.6
25	YA	2606	C	3.6
36	RQ	63	LYS	3.6
10	XJ	59	SER	3.6
1	XA	611	A	3.6
8	QH	57	PRO	3.6
5	QE	81	GLU	3.6
29	RF	82	ILE	3.6
29	YF	131	GLY	3.6
35	RP	135	LEU	3.6
25	YA	2125	G	3.6
30	RG	39	ILE	3.6
5	QE	121	LYS	3.6
2	XB	107	THR	3.6
13	XM	102	ARG	3.6
16	XP	71	ARG	3.6
17	QQ	7	THR	3.6
53	Y7	3	ARG	3.6
1	QA	88	C	3.6
55	Y9	2	LYS	3.6
14	QN	38	GLY	3.6
42	YW	63	ASP	3.6
1	XA	31	G	3.6
1	XA	64	G	3.6
10	XJ	98	ILE	3.6
30	YG	87	PRO	3.6
3	XC	193	TYR	3.6
5	QE	122	GLU	3.6
17	XQ	4	LYS	3.6
30	YG	54	GLU	3.6
14	XN	3	ARG	3.6
30	YG	126	ASP	3.6
34	RO	74	GLY	3.5
1	QA	693	G	3.5
30	RG	132	ASN	3.5
45	YZ	155	LEU	3.5
14	QN	31	ARG	3.5
45	YZ	49	ARG	3.5

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Mol	Chain	Res	Type	RSRZ
54	R8	64	TYR	3.5
20	QT	44	ALA	3.5
37	YR	48	VAL	3.5
25	YA	1771	C	3.5
20	QT	65	LYS	3.5
37	RR	105	ARG	3.5
40	RU	11	ARG	3.5
25	YA	2126	A	3.5
1	QA	306	G	3.5
25	RA	1089	G	3.5
52	R6	43	CYS	3.5
52	Y6	13	CYS	3.5
28	RE	132	HIS	3.5
31	RH	71	LEU	3.5
9	QI	15	ALA	3.5
27	RD	153	ALA	3.5
47	Y1	27	GLU	3.5
43	YX	89	ILE	3.5
55	R9	2	LYS	3.5
1	XA	5	U	3.5
40	YU	117	GLN	3.5
14	QN	29	ARG	3.5
25	RA	2112	G	3.5
25	YA	338	G	3.5
17	XQ	24	GLU	3.5
14	QN	25	VAL	3.5
30	RG	135	LEU	3.5
28	YE	56	PRO	3.5
36	RQ	140	ALA	3.4
51	R5	52	TYR	3.4
10	QJ	83	GLU	3.4
25	YA	2135	A	3.4
47	R1	94	LEU	3.4
14	QN	26	ARG	3.4
25	YA	2121	G	3.4
7	QG	83	ALA	3.4
10	QJ	85	LEU	3.4
30	RG	85	GLY	3.4
30	YG	124	SER	3.4
25	YA	1075	C	3.4
17	XQ	63	ARG	3.4
55	R9	17	ILE	3.4

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Mol	Chain	Res	Type	RSRZ
55	Y9	20	HIS	3.4
28	RE	104	VAL	3.4
12	XL	16	GLU	3.4
16	QP	29	ASP	3.4
30	YG	108	ASN	3.4
16	QP	42	ARG	3.4
55	Y9	19	ARG	3.4
16	QP	19	ILE	3.4
48	R2	43	GLN	3.4
2	QB	101	MET	3.4
27	RD	149	PRO	3.4
30	YG	143	GLU	3.4
35	RP	87	ASP	3.4
55	R9	34	GLN	3.4
39	YT	1	MET	3.4
1	QA	1194	U	3.4
25	YA	1130	U	3.4
2	QB	144	ARG	3.4
48	Y2	69	ARG	3.4
9	QI	110	GLU	3.3
33	RN	116	LEU	3.3
31	RH	52	VAL	3.3
11	QK	90	GLY	3.3
12	QL	52	LEU	3.3
1	XA	189	U	3.3
25	RA	1064	C	3.3
45	RZ	117	LEU	3.3
51	R5	18	ALA	3.3
44	RY	24	VAL	3.3
37	RR	104	ARG	3.3
30	RG	142	PRO	3.3
5	QE	126	ARG	3.3
25	RA	1083	U	3.3
44	RY	30	VAL	3.3
10	XJ	88	LEU	3.3
55	R9	14	CYS	3.3
30	RG	131	TYR	3.3
16	XP	1	MET	3.3
2	XB	188	ALA	3.3
12	QL	5	PRO	3.3
28	RE	205	ALA	3.3
51	R5	53	ALA	3.3

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Mol	Chain	Res	Type	RSRZ
2	QB	15	VAL	3.3
20	QT	25	ARG	3.3
21	QU	13	ILE	3.3
35	YP	26	GLY	3.3
54	Y8	64	TYR	3.3
1	XA	1126	U	3.3
1	QA	1124	G	3.3
5	QE	31	LEU	3.3
8	QH	112	LEU	3.3
27	YD	48	ARG	3.3
28	YE	76	ARG	3.3
30	YG	135	LEU	3.3
37	YR	47	PHE	3.3
27	RD	236	GLY	3.3
54	Y8	38	GLY	3.3
8	XH	3	THR	3.3
19	QS	75	ALA	3.2
21	XU	6	ARG	3.2
44	RY	50	ARG	3.2
27	RD	36	PRO	3.2
41	YV	26	ASP	3.2
19	QS	39	THR	3.2
25	RA	1185	C	3.2
25	YA	2073	C	3.2
1	QA	631	G	3.2
25	RA	10	G	3.2
25	YA	785	G	3.2
27	YD	237	GLU	3.2
4	XD	158	ILE	3.2
9	QI	117	HIS	3.2
9	XI	66	ARG	3.2
36	YQ	10	ARG	3.2
5	QE	90	VAL	3.2
31	YH	144	VAL	3.2
13	QM	100	GLY	3.2
12	QL	10	LEU	3.2
20	XT	17	ARG	3.2
25	RA	1061	U	3.2
1	QA	914	A	3.2
34	YO	67	LYS	3.2
1	QA	450	G	3.2
22	QV	18	G	3.2

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Mol	Chain	Res	Type	RSRZ
36	YQ	21	THR	3.2
5	QE	21	ALA	3.2
31	YH	169	VAL	3.2
45	YZ	166	SER	3.2
50	R4	66	SER	3.2
5	QE	92	LYS	3.2
38	RS	33	LYS	3.2
25	YA	1026	U	3.2
10	QJ	10	GLY	3.2
28	YE	192	ASN	3.2
28	YE	127	ASP	3.2
7	QG	35	LYS	3.2
30	YG	70	VAL	3.2
55	Y9	25	VAL	3.2
5	QE	119	LEU	3.2
43	RX	92	LEU	3.2
25	YA	1087	G	3.2
20	QT	103	GLY	3.2
21	QU	15	ARG	3.2
27	RD	52	ARG	3.2
3	QC	193	TYR	3.2
21	QU	21	TYR	3.2
25	RA	2797	U	3.2
51	R5	3	LYS	3.2
4	XD	7	PRO	3.2
27	RD	220	HIS	3.2
35	RP	35	HIS	3.2
17	QQ	71	PHE	3.1
1	XA	312	C	3.1
25	RA	1096	A	3.1
25	YA	1902	C	3.1
50	R4	45	GLY	3.1
32	YI	25	TYR	3.1
1	QA	64	G	3.1
16	QP	15	PRO	3.1
52	Y6	18	ARG	3.1
30	RG	29	TRP	3.1
12	QL	16	GLU	3.1
36	YQ	140	ALA	3.1
1	QA	1183	A	3.1
21	QU	10	ARG	3.1
28	YE	111	ARG	3.1

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Mol	Chain	Res	Type	RSRZ
4	XD	2	GLY	3.1
21	XU	16	GLY	3.1
36	YQ	87	LYS	3.1
40	YU	93	LYS	3.1
50	R4	70	GLY	3.1
3	QC	198	VAL	3.1
25	RA	1063	G	3.1
25	RA	1949	G	3.1
38	RS	37	ALA	3.1
15	QO	68	ARG	3.1
42	RW	92	ARG	3.1
30	RG	133	LEU	3.1
25	YA	1070	A	3.1
28	YE	7	VAL	3.1
29	RF	81	PRO	3.1
36	RQ	22	LYS	3.1
52	R6	45	LYS	3.1
33	YN	26	LEU	3.1
20	QT	12	ALA	3.1
33	RN	30	ILE	3.1
5	QE	47	LYS	3.1
1	XA	1103	C	3.1
25	RA	34	C	3.1
17	QQ	29	HIS	3.1
36	YQ	27	VAL	3.0
40	RU	88	ILE	3.0
53	R7	46	VAL	3.0
3	QC	163	ALA	3.0
8	QH	116	LYS	3.0
30	RG	8	LYS	3.0
48	R2	8	LYS	3.0
36	RQ	105	GLU	3.0
1	XA	1450	U	3.0
51	R5	19	ARG	3.0
41	YV	36	PRO	3.0
1	XA	69	G	3.0
17	QQ	99	SER	3.0
35	YP	71	VAL	3.0
38	YS	27	SER	3.0
25	YA	1508	A	3.0
3	QC	91	LEU	3.0
11	QK	113	PRO	3.0

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Mol	Chain	Res	Type	RSRZ
4	QD	42	GLN	3.0
20	XT	18	GLN	3.0
1	QA	1125	U	3.0
18	QR	88	LYS	3.0
22	XV	17(A)	U	3.0
25	RA	1078	U	3.0
28	YE	23	VAL	3.0
55	Y9	3	VAL	3.0
11	QK	119	CYS	3.0
1	XA	630	G	3.0
5	QE	23	GLY	3.0
11	XK	81	ASP	3.0
34	YO	81	ASP	3.0
31	RH	24	VAL	3.0
38	YS	2	ALA	3.0
46	Y0	2	ALA	3.0
50	R4	67	TYR	3.0
36	RQ	91	GLU	3.0
1	QA	209	U	3.0
20	XT	27	LYS	3.0
31	RH	85	LYS	3.0
31	YH	148	ILE	3.0
36	RQ	100	GLY	3.0
41	YV	45	THR	3.0
13	QM	74	VAL	3.0
28	RE	198	VAL	3.0
34	YO	122	LEU	3.0
4	QD	36	ARG	3.0
8	QH	18	ARG	3.0
28	RE	76	ARG	3.0
30	RG	72	ARG	3.0
32	YI	65	ALA	3.0
53	Y7	1	MET	3.0
11	QK	25	TYR	3.0
25	YA	783	A	3.0
25	YA	887	A	3.0
47	R1	89	GLU	3.0
13	XM	27	LYS	3.0
22	XV	1	C	3.0
35	RP	44	GLY	3.0
51	R5	57	VAL	3.0
3	XC	179	ARG	3.0

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Mol	Chain	Res	Type	RSRZ
27	YD	262	ARG	3.0
44	RY	2	ARG	3.0
2	QB	108	ILE	2.9
17	XQ	100	LYS	2.9
27	RD	15	PHE	2.9
36	RQ	24	GLY	2.9
8	QH	93	VAL	2.9
17	QQ	35	VAL	2.9
19	QS	79	THR	2.9
25	YA	2119	A	2.9
30	RG	33	ARG	2.9
35	RP	61	ARG	2.9
37	YR	6	SER	2.9
55	R9	6	SER	2.9
25	YA	782	A	2.9
45	YZ	179	ASP	2.9
17	QQ	4	LYS	2.9
28	YE	200	GLU	2.9
48	Y2	11	GLU	2.9
55	R9	28	GLU	2.9
30	YG	90	LEU	2.9
47	R1	97	LEU	2.9
29	YF	54	ARG	2.9
37	RR	91	GLN	2.9
9	XI	106	ALA	2.9
30	RG	105	LYS	2.9
35	RP	108	LYS	2.9
36	YQ	77	LYS	2.9
30	RG	157	ILE	2.9
28	RE	63	LEU	2.9
34	RO	25	LEU	2.9
17	QQ	96	GLU	2.9
20	QT	60	GLU	2.9
25	YA	2450	A	2.9
29	YF	133	ASN	2.9
13	QM	119	GLY	2.9
46	R0	17	GLN	2.9
10	QJ	92	THR	2.9
1	QA	1181	G	2.9
25	YA	780	G	2.9
25	YA	1176	G	2.9
25	YA	1526	G	2.9

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Mol	Chain	Res	Type	RSRZ
25	YA	2116	G	2.9
8	XH	116	LYS	2.9
6	XF	2	ARG	2.9
28	YE	25	VAL	2.9
12	QL	28	LYS	2.9
13	QM	4	ILE	2.9
1	QA	1225	A	2.9
25	RA	890	A	2.9
25	RA	2119	A	2.9
20	QT	104	LEU	2.9
44	YY	102	CYS	2.9
8	QH	9	MET	2.9
30	YG	97	ASP	2.9
37	YR	49	ASP	2.9
1	QA	1202	G	2.9
1	XA	81	G	2.9
6	QF	90	VAL	2.9
8	QH	131	GLY	2.9
25	RA	2894	G	2.9
25	YA	1058	G	2.9
25	YA	1817	G	2.9
40	RU	13	LYS	2.9
55	R9	36	GLN	2.9
30	YG	148	MET	2.9
4	QD	12	CYS	2.9
5	QE	133	TYR	2.9
38	YS	36	TYR	2.9
5	QE	83	GLU	2.9
30	YG	116	ASP	2.8
44	YY	46	LYS	2.9
10	XJ	72	VAL	2.8
30	RG	63	ILE	2.8
28	YE	205	ALA	2.8
30	YG	46	ALA	2.8
32	YI	30	LEU	2.8
45	YZ	88	PHE	2.8
25	RA	2172	U	2.8
28	RE	149	ARG	2.8
43	RX	60	ARG	2.8
1	QA	1182	G	2.8
1	XA	1138	G	2.8
13	XM	113	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
25	YA	775	G	2.8
10	QJ	59	SER	2.8
34	YO	45	GLU	2.8
38	RS	34	HIS	2.8
52	R6	49	HIS	2.8
55	R9	1	MET	2.8
26	RB	59	A	2.8
21	QU	6	ARG	2.8
39	RT	41	ARG	2.8
48	Y2	55	ARG	2.8
49	Y3	49	LYS	2.8
30	RG	12	TYR	2.8
31	YH	35	VAL	2.8
47	R1	27	GLU	2.8
54	R8	61	LEU	2.8
16	XP	13	HIS	2.8
26	RB	1	U	2.8
25	YA	334	C	2.8
25	YA	1735	C	2.8
21	QU	14	TRP	2.8
1	QA	1026	G	2.8
1	XA	105	G	2.8
1	XA	1453	G	2.8
25	YA	333	G	2.8
31	RH	171	LEU	2.8
6	XF	6	VAL	2.8
9	QI	41	VAL	2.8
18	XR	48	GLY	2.8
37	YR	46	GLY	2.8
54	R8	35	GLN	2.8
26	YB	119	A	2.8
30	RG	178	PHE	2.8
28	RE	199	ARG	2.8
22	XV	8	U	2.8
1	QA	449	C	2.8
1	XA	88	C	2.8
1	XA	290	C	2.8
1	XA	612	C	2.8
1	XA	1132	C	2.8
9	XI	17	VAL	2.8
27	RD	248	SER	2.8
29	RF	171	PRO	2.8

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Mol	Chain	Res	Type	RSRZ
25	YA	786	C	2.8
18	XR	82	THR	2.8
29	RF	58	ALA	2.8
39	YT	97	ALA	2.8
1	XA	1182	G	2.8
28	RE	127	ASP	2.8
53	Y7	23	ARG	2.8
30	RG	34	LEU	2.8
17	QQ	65	ILE	2.8
19	XS	76	PRO	2.8
20	QT	11	SER	2.8
20	XT	56	MET	2.8
30	RG	143	GLU	2.8
15	QO	30	ALA	2.8
39	RT	116	ALA	2.8
8	XH	2	LEU	2.7
39	RT	114	LEU	2.7
22	QV	1	C	2.7
2	XB	202	PRO	2.7
3	XC	201	TYR	2.7
5	QE	45	PHE	2.7
20	QT	21	LYS	2.7
13	XM	24	GLY	2.7
30	RG	154	GLY	2.7
2	QB	188	ALA	2.7
1	XA	1124	G	2.7
25	YA	1110	G	2.7
4	QD	35	ARG	2.7
8	QH	119	LEU	2.7
21	XU	15	ARG	2.7
21	XU	24	ARG	2.7
10	QJ	98	ILE	2.7
25	RA	1535	U	2.7
44	RY	79	CYS	2.7
50	R4	39	CYS	2.7
4	XD	32	ALA	2.7
20	QT	66	ALA	2.7
44	RY	58	GLY	2.7
30	RG	64	THR	2.7
30	RG	82	LEU	2.7
1	XA	311	C	2.7
25	YA	687	C	2.7

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Mol	Chain	Res	Type	RSRZ
7	QG	33	ASP	2.7
10	QJ	72	VAL	2.7
12	XL	91	LYS	2.7
33	RN	1	MET	2.7
25	RA	2802	G	2.7
25	YA	919	G	2.7
25	YA	2805	G	2.7
4	XD	16	GLY	2.7
30	RG	58	GLN	2.7
55	R9	11	CYS	2.7
32	RI	65	ALA	2.7
34	RO	30	ALA	2.7
35	YP	15	ARG	2.7
44	RY	48	ALA	2.7
5	QE	120	THR	2.7
19	QS	53	ASN	2.7
25	RA	2076	U	2.7
44	RY	92	ASN	2.7
16	QP	13	HIS	2.7
55	Y9	1	MET	2.7
18	QR	43	PHE	2.7
2	QB	97	TRP	2.7
8	XH	76	PRO	2.7
25	YA	1537	C	2.7
31	YH	171	LEU	2.7
4	XD	76	ARG	2.7
35	RP	68	GLN	2.7
27	RD	156	ALA	2.7
27	YD	42	GLY	2.7
4	QD	158	ILE	2.7
1	XA	250	A	2.7
36	RQ	1	MET	2.7
17	XQ	97	SER	2.7
35	YP	27	HIS	2.7
10	QJ	8	LEU	2.7
30	YG	38	VAL	2.7
26	YB	109	G	2.7
30	YG	43	LEU	2.7
38	RS	32	LEU	2.7
44	RY	45	VAL	2.7
25	RA	1087	G	2.7
25	RA	1216	G	2.7

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Mol	Chain	Res	Type	RSRZ
25	RA	2124	G	2.7
55	Y9	12	ASP	2.7
14	XN	42	ILE	2.7
38	RS	2	ALA	2.7
5	XE	98	THR	2.7
30	RG	35	GLU	2.7
30	YG	155	MET	2.7
25	YA	2174	C	2.7
9	XI	102	LEU	2.7
27	RD	147	LEU	2.7
48	R2	63	VAL	2.6
55	Y9	32	HIS	2.6
27	YD	238	GLY	2.6
25	RA	1084	A	2.6
44	RY	55	TYR	2.6
36	RQ	21	THR	2.6
43	YX	72	LYS	2.6
15	XO	26	GLU	2.6
50	Y4	30	GLU	2.6
51	Y5	59	GLU	2.6
25	RA	1065	U	2.6
47	Y1	98	LEU	2.6
5	XE	82	VAL	2.6
17	QQ	9	VAL	2.6
30	YG	159	VAL	2.6
36	YQ	102	VAL	2.6
55	Y9	7	VAL	2.6
13	QM	104	ARG	2.6
28	YE	135	HIS	2.6
47	Y1	21	ARG	2.6
32	YI	134	PRO	2.6
16	XP	68	ASP	2.6
26	RB	60	C	2.6
4	XD	80	GLU	2.6
44	YY	62	GLU	2.6
13	XM	90	LEU	2.6
16	QP	6	LEU	2.6
44	RY	70	SER	2.6
39	YT	70	VAL	2.6
8	XH	16	ALA	2.6
35	RP	43	GLY	2.6
29	RF	199	TRP	2.6

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Mol	Chain	Res	Type	RSRZ
44	RY	5	MET	2.6
4	XD	120	LEU	2.6
30	RG	116	ASP	2.6
45	YZ	144	LEU	2.6
36	RQ	29	PHE	2.6
36	YQ	104	PHE	2.6
1	QA	630	G	2.6
24	XY	31	G	2.6
25	RA	2121	G	2.6
30	RG	159	VAL	2.6
48	R2	51	ARG	2.6
1	XA	796	C	2.6
25	RA	1417	C	2.6
25	YA	976	C	2.6
16	XP	65	GLN	2.6
3	XC	184	TYR	2.6
25	RA	676	A	2.6
25	YA	300	A	2.6
2	QB	5	ILE	2.6
7	XG	77	SER	2.6
10	XJ	4	ILE	2.6
4	XD	73	ARG	2.6
5	XE	14	ARG	2.6
35	YP	19	VAL	2.6
44	RY	47	LYS	2.6
3	QC	197	GLY	2.6
1	QA	1117	G	2.6
1	XA	1202	G	2.6
4	XD	31	CYS	2.6
25	YA	10	G	2.6
25	YA	2838	G	2.6
31	YH	4	ILE	2.6
4	QD	115	ARG	2.6
38	YS	30	ARG	2.6
40	RU	97	ASP	2.6
4	XD	151	LYS	2.6
35	RP	64	LYS	2.6
41	RV	14	VAL	2.6
55	Y9	9	ARG	2.6
10	XJ	71	LEU	2.6
27	RD	177	LEU	2.6
25	RA	819	A	2.6

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Mol	Chain	Res	Type	RSRZ
27	RD	249	PRO	2.6
45	YZ	167	PRO	2.6
10	XJ	54	PHE	2.6
24	XY	33	U	2.6
33	YN	80	GLY	2.6
4	QD	31	CYS	2.5
4	XD	24	GLU	2.5
5	XE	18	ARG	2.5
5	XE	126	ARG	2.5
10	QJ	66	ARG	2.5
18	XR	83	GLU	2.5
27	RD	181	GLU	2.5
30	YG	13	GLU	2.5
54	R8	65	GLU	2.5
12	QL	96	VAL	2.5
17	XQ	35	VAL	2.5
51	Y5	45	VAL	2.5
52	R6	5	VAL	2.5
38	YS	32	LEU	2.5
44	RY	31	LEU	2.5
1	XA	80	G	2.5
1	XA	1053	G	2.5
28	RE	56	PRO	2.5
30	RG	41	GLN	2.5
11	QK	29	ILE	2.5
25	RA	2175	C	2.5
25	YA	645	C	2.5
12	QL	17	LYS	2.5
35	YP	139	LYS	2.5
3	QC	103	VAL	2.5
5	XE	90	VAL	2.5
45	RZ	169	GLU	2.5
25	RA	1067	A	2.5
25	RA	1103	A	2.5
25	YA	654	A	2.5
28	RE	117	MET	2.5
3	QC	7	PRO	2.5
36	RQ	30	GLY	2.5
28	RE	13	ARG	2.5
12	QL	27	LEU	2.5
30	RG	38	VAL	2.5
36	YQ	81	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
50	Y4	35	VAL	2.5
1	QA	1310	G	2.5
2	QB	163	PHE	2.5
25	RA	1091	G	2.5
36	RQ	65	PHE	2.5
5	QE	17	ALA	2.5
27	YD	149	PRO	2.5
33	YN	108	PRO	2.5
27	RD	154	LYS	2.5
37	RR	5	LYS	2.5
4	XD	125	HIS	2.5
7	XG	85	TYR	2.5
8	QH	133	LEU	2.5
8	XH	20	TYR	2.5
35	YP	106	LEU	2.5
43	YX	92	LEU	2.5
19	QS	41	VAL	2.5
12	XL	114	LYS	2.5
33	RN	84	LYS	2.5
10	QJ	91	PRO	2.5
30	RG	3	LEU	2.5
40	RU	83	LEU	2.5
15	QO	51	HIS	2.5
33	YN	72	TYR	2.5
25	RA	1076	C	2.5
25	RA	2690	C	2.5
1	XA	350	G	2.5
6	QF	38	GLU	2.5
25	RA	275	G	2.5
25	RA	654(A)	G	2.5
25	RA	2409	G	2.5
25	YA	1131	G	2.5
25	YA	1154	G	2.5
1	XA	118	U	2.5
25	RA	2118	U	2.5
5	QE	88	LYS	2.5
8	XH	15	ASN	2.5
21	XU	3	LYS	2.5
35	RP	14	LYS	2.5
44	RY	54	LYS	2.5
3	XC	169	ALA	2.5
13	XM	5	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
17	XQ	36	ILE	2.5
30	RG	77	ILE	2.5
37	RR	110	PRO	2.5
2	QB	193	ASP	2.5
5	QE	110	LEU	2.5
28	YE	136	ARG	2.5
40	RU	91	ASP	2.5
47	R1	28	GLY	2.5
8	QH	1	MET	2.5
13	QM	60	VAL	2.5
54	R8	40	GLU	2.4
7	XG	30	ILE	2.4
28	RE	60	ASN	2.4
4	XD	10	ARG	2.4
31	RH	170	ARG	2.4
5	QE	103	GLY	2.4
25	RA	504	U	2.4
1	QA	171	A	2.4
1	QA	696	A	2.4
1	QA	1003	G	2.4
1	QA	1224	G	2.4
25	RA	2429	G	2.4
12	QL	46	LYS	2.4
18	XR	49	LYS	2.4
27	RD	59	LYS	2.4
33	YN	104	LYS	2.4
35	YP	64	LYS	2.4
36	RQ	104	PHE	2.4
27	RD	237	GLU	2.4
34	RO	9	GLU	2.4
2	QB	146	GLN	2.4
11	QK	128	ALA	2.4
13	QM	2	ALA	2.4
40	RU	86	ALA	2.4
9	QI	10	ARG	2.4
21	XU	9	ARG	2.4
27	YD	13	ARG	2.4
42	YW	37	ARG	2.4
46	Y0	55	ARG	2.4
3	QC	194	GLY	2.4
46	Y0	8	GLY	2.4
10	QJ	7	LYS	2.4

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Mol	Chain	Res	Type	RSRZ
28	YE	109	LYS	2.4
52	Y6	45	LYS	2.4
3	QC	31	HIS	2.4
38	YS	111	GLU	2.4
1	XA	48	C	2.4
1	XA	173	U	2.4
12	XL	89	ARG	2.4
25	RA	1049	C	2.4
25	YA	671	C	2.4
25	YA	679	C	2.4
25	YA	2107	C	2.4
35	YP	16	ARG	2.4
55	Y9	18	ARG	2.4
1	XA	532	A	2.4
41	RV	36	PRO	2.4
50	R4	1	MET	2.4
18	XR	77	GLY	2.4
27	RD	207	GLY	2.4
47	Y1	22	GLY	2.4
1	QA	220	G	2.4
1	XA	117	G	2.4
22	QV	5	G	2.4
25	RA	2116	G	2.4
12	QL	47	LYS	2.4
5	QE	84	PHE	2.4
2	XB	200	ILE	2.4
30	YG	20	ILE	2.4
31	YH	162	ILE	2.4
5	XE	123	LEU	2.4
38	RS	54	LEU	2.4
2	QB	231	GLU	2.4
38	YS	64	GLU	2.4
34	YO	30	ALA	2.4
39	YT	2	ASN	2.4
44	RY	94	LYS	2.4
7	XG	75	VAL	2.4
30	RG	93	THR	2.4
36	RQ	27	VAL	2.4
36	RQ	90	VAL	2.4
1	QA	208	U	2.4
2	XB	5	ILE	2.4
25	YA	1175	U	2.4

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Mol	Chain	Res	Type	RSRZ
25	RA	2752	C	2.4
25	YA	1734	C	2.4
1	XA	134	A	2.4
14	XN	21	TYR	2.4
23	QX	8	A	2.4
2	QB	217	ARG	2.4
27	YD	146	GLU	2.4
2	XB	101	MET	2.4
14	QN	2	ALA	2.4
37	YR	101	ALA	2.4
52	R6	13	CYS	2.4
1	QA	1220	G	2.4
25	RA	274	G	2.4
25	RA	1074	G	2.4
25	YA	1826	G	2.4
25	YA	2141	G	2.4
25	YA	2795	G	2.4
10	QJ	52	GLY	2.4
28	RE	3	GLY	2.4
8	XH	83	ILE	2.4
19	QS	11	VAL	2.4
27	YD	49	ILE	2.4
30	YG	37	VAL	2.4
10	XJ	66	ARG	2.4
30	RG	118	ARG	2.4
31	RH	6	ARG	2.4
50	R4	71	ARG	2.4
3	XC	168	ALA	2.4
9	XI	15	ALA	2.4
12	XL	26	ALA	2.4
28	YE	131	ALA	2.4
1	QA	1450	U	2.3
25	RA	1026	U	2.3
25	RA	2647	U	2.3
25	YA	2506	U	2.3
30	RG	102	PHE	2.3
3	XC	196	LEU	2.3
17	XQ	65	ILE	2.3
25	RA	2126	A	2.3
27	RD	50	THR	2.3
30	RG	28	VAL	2.3
4	QD	13	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
4	XD	209	ARG	2.3
7	XG	78	ARG	2.3
17	QQ	81	ARG	2.3
19	XS	3	ARG	2.3
1	QA	81	G	2.3
21	QU	25	LYS	2.3
25	RA	1681	G	2.3
25	YA	2893	G	2.3
34	YO	56	ASP	2.3
36	YQ	130	LYS	2.3
30	RG	137	GLU	2.3
31	YH	58	GLU	2.3
44	RY	29	GLU	2.3
10	QJ	90	LEU	2.3
10	XJ	53	PRO	2.3
27	RD	231	HIS	2.3
35	YP	22	GLY	2.3
35	YP	118	GLY	2.3
47	R1	17	SER	2.3
54	Y8	33	ASN	2.3
4	XD	133	VAL	2.3
19	QS	67	VAL	2.3
48	R2	62	THR	2.3
1	XA	1281	U	2.3
4	QD	10	ARG	2.3
7	XG	4	ARG	2.3
25	RA	1097	U	2.3
25	RA	2132	U	2.3
25	YA	339	U	2.3
50	Y4	1	MET	2.3
29	YF	52	LYS	2.3
1	QA	532	A	2.3
1	QA	934	C	2.3
25	RA	513	A	2.3
25	RA	1052	C	2.3
25	RA	1077	A	2.3
25	RA	2683	C	2.3
2	XB	152	PHE	2.3
17	QQ	6	LEU	2.3
35	RP	91	PHE	2.3
29	YF	37	VAL	2.3
52	Y6	5	VAL	2.3

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Mol	Chain	Res	Type	RSRZ
16	QP	26	ARG	2.3
46	R0	55	ARG	2.3
24	QY	40	G	2.3
25	YA	11	G	2.3
33	YN	75	TYR	2.3
2	QB	121	LEU	2.3
30	RG	152	LEU	2.3
15	QO	26	GLU	2.3
37	YR	71	GLN	2.3
47	Y1	89	GLU	2.3
13	QM	6	GLY	2.3
29	RF	207	GLY	2.3
7	QG	80	VAL	2.3
29	YF	193	VAL	2.3
34	RO	58	VAL	2.3
9	XI	104	ARG	2.3
11	QK	11	LYS	2.3
21	QU	20	LYS	2.3
25	RA	2725	A	2.3
25	YA	2629	A	2.3
35	RP	76	LYS	2.3
35	YP	77	ARG	2.3
38	RS	62	LYS	2.3
54	R8	29	LYS	2.3
1	QA	1007	C	2.3
23	QX	6	C	2.3
10	XJ	8	LEU	2.3
14	QN	39	LEU	2.3
17	QQ	22	LEU	2.3
19	XS	16	LEU	2.3
2	XB	108	ILE	2.3
47	Y1	77	ALA	2.3
13	XM	32	GLU	2.3
2	QB	233	SER	2.3
5	QE	115	VAL	2.3
6	QF	88	VAL	2.3
9	QI	53	VAL	2.3
19	QS	9	VAL	2.3
29	YF	87	GLY	2.3
33	YN	81	GLY	2.3
20	XT	38	LYS	2.3
55	R9	15	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
2	QB	111	ARG	2.3
7	XG	3	ARG	2.3
9	XI	42	ARG	2.3
15	QO	88	ARG	2.3
1	QA	1272	G	2.3
1	XA	66	G	2.3
1	XA	104	G	2.3
1	XA	1454	G	2.3
25	RA	361	G	2.3
25	RA	1108	U	2.3
2	XB	214	ILE	2.3
5	XE	89	ILE	2.3
9	QI	62	TYR	2.3
30	YG	146	TYR	2.3
1	QA	172	A	2.3
3	QC	19	GLU	2.3
4	QD	15	GLU	2.3
8	XH	34	GLU	2.3
25	RA	1098	A	2.3
1	XA	1459	C	2.3
6	XF	37	VAL	2.3
7	XG	93	PRO	2.3
8	XH	57	PRO	2.3
13	XM	7	VAL	2.3
25	RA	1537	C	2.3
27	RD	235	GLY	2.3
29	YF	81	PRO	2.3
33	YN	109	LYS	2.3
38	YS	33	LYS	2.3
44	YY	66	PRO	2.3
45	RZ	176	PRO	2.3
51	R5	50	GLY	2.3
5	QE	18	ARG	2.3
21	QU	24	ARG	2.3
55	Y9	35	ARG	2.3
9	XI	117	HIS	2.2
35	YP	148	LEU	2.2
8	QH	86	ILE	2.2
10	XJ	26	ALA	2.2
28	RE	48	GLN	2.2
38	YS	68	GLN	2.2
36	RQ	77	LYS	2.2

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Mol	Chain	Res	Type	RSRZ
35	YP	74	GLU	2.2
37	YR	102	GLU	2.2
10	QJ	101	VAL	2.2
18	QR	22	VAL	2.2
1	QA	1453	G	2.2
20	QT	102	GLY	2.2
45	YZ	28	MET	2.2
25	YA	1059	G	2.2
25	YA	1097	U	2.2
19	QS	71	LEU	2.2
31	YH	137	ASP	2.2
2	QB	140	HIS	2.2
40	RU	79	PHE	2.2
1	XA	353	A	2.2
25	RA	2629	A	2.2
26	YB	52	A	2.2
3	XC	149	ALA	2.2
3	XC	200	ALA	2.2
30	RG	69	ALA	2.2
1	QA	48	C	2.2
1	QA	1116	C	2.2
12	XL	47	LYS	2.2
17	XQ	69	LYS	2.2
25	RA	673	C	2.2
25	RA	1080	C	2.2
25	YA	32	C	2.2
25	YA	1638	C	2.2
25	YA	2501	C	2.2
44	RY	101	LYS	2.2
5	QE	24	ARG	2.2
10	XJ	46	ARG	2.2
11	XK	82	VAL	2.2
36	YQ	105	GLU	2.2
49	R3	38	GLU	2.2
16	QP	41	PRO	2.2
27	YD	241	PRO	2.2
30	YG	2	PRO	2.2
30	YG	89	GLY	2.2
36	YQ	84	GLY	2.2
13	XM	4	ILE	2.2
7	XG	43	PHE	2.2
12	XL	32	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
27	RD	67	PHE	2.2
20	QT	73	HIS	2.2
1	XA	210	U	2.2
3	XC	167	TRP	2.2
10	XJ	55	LYS	2.2
34	RO	41	ALA	2.2
36	YQ	28	ALA	2.2
44	RY	57	GLN	2.2
11	XK	25	TYR	2.2
18	XR	32	ARG	2.2
25	RA	1215	G	2.2
25	RA	2141	G	2.2
25	RA	2891	G	2.2
35	RP	18	ARG	2.2
52	Y6	6	ARG	2.2
53	R7	23	ARG	2.2
12	QL	73	GLU	2.2
35	YP	136	GLU	2.2
51	R5	48	GLU	2.2
4	QD	37	PRO	2.2
2	QB	211	ILE	2.2
54	R8	41	ILE	2.2
52	Y6	16	CYS	2.2
1	XA	63	C	2.2
13	XM	106	ASN	2.2
25	RA	2137	C	2.2
39	YT	119	LYS	2.2
45	RZ	148	ASP	2.2
2	XB	140	HIS	2.2
16	QP	16	HIS	2.2
18	XR	60	ALA	2.2
53	R7	1	MET	2.2
35	RP	85	LEU	2.2
36	YQ	26	TYR	2.2
39	RT	3	ARG	2.2
41	YV	94	LEU	2.2
54	Y8	42	ARG	2.2
55	R9	24	TYR	2.2
13	QM	7	VAL	2.2
50	R4	10	VAL	2.2
3	QC	166	GLU	2.2
13	QM	61	GLU	2.2

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Mol	Chain	Res	Type	RSRZ
39	RT	36	GLU	2.2
1	XA	1159	U	2.2
2	QB	27	LYS	2.2
13	XM	122	LYS	2.2
30	YG	132	ASN	2.2
5	QE	30	ALA	2.2
8	QH	4	ASP	2.2
9	XI	45	ALA	2.2
16	XP	29	ASP	2.2
1	XA	351	G	2.2
1	XA	1032(B)	G	2.2
9	XI	79	LEU	2.2
24	QY	31	G	2.2
25	YA	1084	A	2.2
25	YA	1545(A)	A	2.2
25	YA	1825	A	2.2
25	YA	2149	G	2.2
29	RF	155	LEU	2.2
33	RN	138	LEU	2.2
6	QF	72	VAL	2.2
36	RQ	137	TYR	2.2
36	YQ	132	VAL	2.2
1	XA	590	C	2.2
2	QB	39	ILE	2.2
7	QG	93	PRO	2.2
25	RA	409	C	2.2
35	RP	114	ILE	2.2
42	YW	66	GLU	2.2
44	RY	33	LYS	2.2
44	YY	33	LYS	2.2
2	QB	238	LEU	2.2
8	QH	28	ALA	2.1
10	QJ	71	LEU	2.2
15	XO	81	LEU	2.2
20	QT	13	LEU	2.2
27	RD	119	ALA	2.1
2	QB	195	ASP	2.1
4	XD	12	CYS	2.1
34	RO	56	ASP	2.1
25	RA	434	U	2.1
33	YN	69	GLN	2.1
48	Y2	26	ARG	2.1

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Mol	Chain	Res	Type	RSRZ
21	XU	14	TRP	2.1
3	QC	5	ILE	2.1
4	QD	203	VAL	2.1
28	YE	9	VAL	2.1
51	Y5	52	TYR	2.1
52	Y6	39	TYR	2.1
5	XE	45	PHE	2.1
27	RD	30	GLU	2.1
27	RD	38	LYS	2.1
27	YD	38	LYS	2.1
31	YH	29	PRO	2.1
35	RP	74	GLU	2.1
39	RT	33	LYS	2.1
43	YX	36	LYS	2.1
1	QA	994	A	2.1
25	RA	2169	A	2.1
1	QA	916	G	2.1
1	XA	606	G	2.1
2	QB	187	LEU	2.1
22	QV	12	G	2.1
25	RA	2168	G	2.1
25	YA	275	G	2.1
25	YA	929	G	2.1
25	YA	2669	G	2.1
35	YP	3	LEU	2.1
47	Y1	95	LEU	2.1
14	QN	30	ALA	2.1
32	RI	59	ALA	2.1
13	QM	3	ARG	2.1
39	YT	51	ARG	2.1
47	R1	26	ARG	2.1
47	R1	61	ARG	2.1
1	QA	19	C	2.1
1	QA	121	C	2.1
1	XA	985	C	2.1
25	RA	2646	C	2.1
25	YA	2136	C	2.1
46	Y0	56	ASP	2.1
51	R5	45	VAL	2.1
43	YX	28	PHE	2.1
52	R6	27	LYS	2.1
4	QD	2	GLY	2.1

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Mol	Chain	Res	Type	RSRZ
21	QU	2	GLY	2.1
27	YD	41	GLY	2.1
42	YW	91	GLY	2.1
36	YQ	91	GLU	2.1
27	RD	263	ARG	2.1
29	RF	205	ARG	2.1
35	RP	89	ALA	2.1
38	YS	13	ARG	2.1
47	R1	2	SER	2.1
39	RT	102	ILE	2.1
47	R1	13	ILE	2.1
47	R1	37	ILE	2.1
55	Y9	34	GLN	2.1
16	QP	31	LYS	2.1
31	RH	131	VAL	2.1
38	YS	28	VAL	2.1
38	YS	62	LYS	2.1
45	YZ	86	VAL	2.1
51	Y5	23	HIS	2.1
55	Y9	23	VAL	2.1
1	QA	1000	A	2.1
1	XA	185	A	2.1
30	RG	126	ASP	2.1
12	QL	69	TYR	2.1
52	R6	21	TYR	2.1
5	XE	23	GLY	2.1
11	QK	102	GLY	2.1
30	RG	87	PRO	2.1
34	YO	120	GLU	2.1
40	RU	108	GLU	2.1
1	QA	199	G	2.1
1	XA	78	G	2.1
1	XA	1127	G	2.1
29	RF	194	MET	2.1
1	QA	1006	C	2.1
1	QA	1027	C	2.1
1	XA	219	C	2.1
25	YA	1150	C	2.1
4	XD	25	ARG	2.1
27	RD	44	ASN	2.1
27	RD	204	ILE	2.1
5	XE	121	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
20	QT	29	LYS	2.1
20	XT	21	LYS	2.1
29	YF	40	GLN	2.1
52	R6	17	LYS	2.1
22	XV	47	U	2.1
25	RA	2408	U	2.1
49	Y3	50	VAL	2.1
5	QE	91	LEU	2.1
19	QS	16	LEU	2.1
29	YF	207	GLY	2.1
30	YG	133	LEU	2.1
30	YG	176	LEU	2.1
47	R1	36	GLY	2.1
36	YQ	1	MET	2.1
9	XI	103	THR	2.1
35	YP	117	GLU	2.1
43	YX	3	THR	2.1
50	R4	27	THR	2.1
27	RD	183	ARG	2.1
28	RE	37	ARG	2.1
35	RP	15	ARG	2.1
37	RR	2	ARG	2.1
52	R6	18	ARG	2.1
2	XB	68	ILE	2.1
5	QE	89	ILE	2.1
14	QN	10	ALA	2.1
25	YA	685	A	2.1
31	RH	20	ALA	2.1
31	RH	138	LYS	2.1
52	Y6	22	ALA	2.1
2	XB	70	PHE	2.1
3	QC	162	GLN	2.1
11	QK	99	GLN	2.1
27	YD	67	PHE	2.1
31	YH	76	VAL	2.1
32	RI	116	LEU	2.1
38	YS	48	LEU	2.1
1	QA	970	C	2.1
1	XA	1322	C	2.1
5	QE	78	HIS	2.1
52	R6	46	HIS	2.1
1	QA	887	G	2.1

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Mol	Chain	Res	Type	RSRZ
1	XA	113	G	2.1
4	XD	4	TYR	2.1
25	RA	859	G	2.1
25	YA	75	G	2.1
25	YA	270(J)	G	2.1
25	YA	920	G	2.1
25	YA	2162	G	2.1
35	RP	11	GLY	2.1
16	XP	42	ARG	2.1
30	YG	95	ARG	2.1
37	YR	103	ARG	2.1
5	XE	109	ILE	2.1
20	XT	74	LYS	2.1
23	QX	7	U	2.1
25	RA	1090	U	2.1
35	YP	107	LYS	2.1
44	YY	81	LYS	2.1
32	RI	83	ALA	2.1
2	QB	240	GLN	2.1
10	QJ	54	PHE	2.1
2	QB	81	VAL	2.1
18	QR	39	VAL	2.1
20	XT	72	LEU	2.1
39	RT	1	MET	2.1
1	XA	964	A	2.0
11	QK	22	HIS	2.0
25	RA	2171	A	2.0
25	YA	1759	A	2.0
25	YA	1762	A	2.0
27	RD	186	HIS	2.0
38	YS	96	GLY	2.0
54	R8	28	GLY	2.0
32	RI	8	PRO	2.0
19	QS	78	ARG	2.0
19	XS	13	ASP	2.0
40	YU	97	ASP	2.0
14	QN	42	ILE	2.0
21	XU	26	LYS	2.0
38	YS	93	LYS	2.0
42	RW	66	GLU	2.0
5	QE	125	SER	2.0
20	XT	70	SER	2.0

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Mol	Chain	Res	Type	RSRZ
30	RG	57	ALA	2.0
43	YX	47	PHE	2.0
2	QB	221	LEU	2.0
19	QS	56	GLN	2.0
25	RA	2803	C	2.0
28	RE	49	LEU	2.0
30	RG	138	GLN	2.0
47	R1	80	LEU	2.0
42	RW	40	ASN	2.0
1	QA	1190	G	2.0
1	XA	428	G	2.0
25	YA	1985	G	2.0
25	YA	2837	G	2.0
1	QA	560	U	2.0
24	QY	33	U	2.0
8	XH	71	GLY	2.0
47	Y1	36	GLY	2.0
6	QF	39	LYS	2.0
9	QI	95	LYS	2.0
9	QI	128	ARG	2.0
19	XS	69	HIS	2.0
49	Y3	2	PRO	2.0
50	Y4	29	PRO	2.0
51	Y5	51	TYR	2.0
16	XP	19	ILE	2.0
16	XP	27	LYS	2.0
39	RT	115	ARG	2.0
39	RT	125	ARG	2.0
40	RU	59	ARG	2.0
52	Y6	46	HIS	2.0
27	RD	40	THR	2.0
50	R4	44	THR	2.0
10	QJ	64	GLU	2.0
37	RR	43	GLU	2.0
5	QE	94	ALA	2.0
13	QM	5	ALA	2.0
27	YD	33	LEU	2.0
30	RG	62	LEU	2.0
1	XA	787	A	2.0
25	YA	223	A	2.0
28	RE	7	VAL	2.0
29	YF	36	VAL	2.0

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Mol	Chain	Res	Type	RSRZ
31	RH	35	VAL	2.0
31	RH	169	VAL	2.0
41	RV	5	VAL	2.0
51	R5	49	CYS	2.0
2	QB	41	ILE	2.0
3	QC	190	ARG	2.0
29	RF	59	TYR	2.0
31	RH	164	TYR	2.0
37	YR	45	ARG	2.0
42	RW	18	ARG	2.0
44	YY	82	PRO	2.0
45	RZ	83	PRO	2.0
45	RZ	146	ILE	2.0
10	QJ	87	THR	2.0
7	QG	103	TRP	2.0
25	RA	2691	C	2.0
25	YA	1064	C	2.0
14	QN	37	PHE	2.0
39	YT	109	GLU	2.0
40	RU	40	PHE	2.0
1	XA	1212	U	2.0
1	XA	1472	U	2.0
22	XV	20	U	2.0
25	YA	1535	U	2.0
36	RQ	107	ALA	2.0
7	XG	87	VAL	2.0
55	R9	23	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, 95th percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
24	1MG	QY	37	24/25	0.76	0.11	130,130,130,130	0
24	1MG	XY	37	24/25	0.88	0.10	56,56,56,56	0
56	PPU	Z8	76	37/38	0.89	0.19	10,10,10,10	0
56	PPU	Z6	76	37/38	0.94	0.14	14,14,14,14	0

6.3 Carbohydrates ⓘ

There are no oligosaccharides in this entry.

6.4 Ligands ⓘ

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

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3100	1/1	-0.77	0.49	6,6,6,6	0
57	MG	RA	3166	1/1	-0.13	0.40	34,34,34,34	0
57	MG	RA	3122	1/1	0.13	0.42	5,5,5,5	0
57	MG	RA	3070	1/1	0.17	0.52	0,0,0,0	0
57	MG	RA	3049	1/1	0.17	0.64	13,13,13,13	0
57	MG	QA	1618	1/1	0.20	0.40	3,3,3,3	0
57	MG	QA	1629	1/1	0.29	0.35	0,0,0,0	0
57	MG	YA	3167	1/1	0.30	0.47	2,2,2,2	0
57	MG	RA	3121	1/1	0.31	0.50	5,5,5,5	0
57	MG	YA	3041	1/1	0.32	0.56	0,0,0,0	0
57	MG	XA	1624	1/1	0.41	0.45	3,3,3,3	0
57	MG	XA	1618	1/1	0.41	0.52	3,3,3,3	0
57	MG	YA	3068	1/1	0.43	0.48	2,2,2,2	0
57	MG	YA	3214	1/1	0.44	0.47	2,2,2,2	0
57	MG	YA	3006	1/1	0.45	0.59	3,3,3,3	0
57	MG	RA	3022	1/1	0.45	0.41	4,4,4,4	0
57	MG	QA	1612	1/1	0.45	0.44	7,7,7,7	0
57	MG	YA	3001	1/1	0.46	0.86	50,50,50,50	0
57	MG	YA	3121	1/1	0.47	0.45	62,62,62,62	0
57	MG	XA	1631	1/1	0.48	0.17	31,31,31,31	0
57	MG	YA	3078	1/1	0.50	0.43	2,2,2,2	0
57	MG	YB	202	1/1	0.50	0.52	24,24,24,24	0
57	MG	RA	3138	1/1	0.51	0.33	29,29,29,29	0
57	MG	RA	3020	1/1	0.53	0.68	50,50,50,50	0
57	MG	YA	3060	1/1	0.54	0.43	10,10,10,10	0
57	MG	RA	3085	1/1	0.54	0.53	5,5,5,5	0
57	MG	QA	1614	1/1	0.56	0.55	9,9,9,9	0
57	MG	YA	3014	1/1	0.57	1.08	50,50,50,50	0
57	MG	YA	3032	1/1	0.57	0.43	1,1,1,1	0
57	MG	QA	1626	1/1	0.57	0.17	57,57,57,57	0
57	MG	YA	3043	1/1	0.57	0.67	2,2,2,2	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3065	1/1	0.58	0.55	7,7,7,7	0
57	MG	RA	3170	1/1	0.58	0.44	5,5,5,5	0
57	MG	QH	201	1/1	0.58	0.18	47,47,47,47	0
57	MG	YA	3120	1/1	0.58	0.60	8,8,8,8	0
57	MG	RA	3173	1/1	0.59	0.24	48,48,48,48	0
57	MG	YA	3128	1/1	0.60	0.47	12,12,12,12	0
57	MG	YA	3237	1/1	0.60	0.45	7,7,7,7	0
57	MG	RA	3137	1/1	0.60	0.38	10,10,10,10	0
57	MG	RA	3179	1/1	0.61	0.34	4,4,4,4	0
57	MG	YA	3031	1/1	0.61	0.51	0,0,0,0	0
57	MG	QA	1619	1/1	0.61	0.34	4,4,4,4	0
57	MG	RA	3083	1/1	0.61	0.31	6,6,6,6	0
59	AMP	XX	101	22/23	0.61	0.18	91,91,91,91	0
57	MG	RA	3032	1/1	0.62	0.99	50,50,50,50	0
57	MG	YA	3015	1/1	0.62	1.04	50,50,50,50	0
57	MG	YA	3076	1/1	0.62	0.81	50,50,50,50	0
57	MG	YA	3194	1/1	0.62	0.23	0,0,0,0	0
57	MG	RA	3037	1/1	0.63	0.40	5,5,5,5	0
57	MG	RA	3041	1/1	0.63	0.43	4,4,4,4	0
57	MG	QA	1613	1/1	0.63	0.63	15,15,15,15	0
57	MG	RA	3050	1/1	0.63	0.32	11,11,11,11	0
57	MG	RA	3216	1/1	0.63	0.37	7,7,7,7	0
57	MG	RA	3031	1/1	0.64	0.46	5,5,5,5	0
57	MG	XA	1632	1/1	0.64	0.48	14,14,14,14	0
57	MG	XA	1638	1/1	0.64	0.26	20,20,20,20	0
57	MG	YA	3094	1/1	0.64	0.45	11,11,11,11	0
57	MG	YA	3096	1/1	0.64	0.47	3,3,3,3	0
57	MG	YA	3087	1/1	0.65	0.44	11,11,11,11	0
57	MG	YA	3200	1/1	0.65	0.57	4,4,4,4	0
57	MG	YA	3029	1/1	0.66	0.58	10,10,10,10	0
57	MG	YA	3203	1/1	0.66	0.12	53,53,53,53	0
57	MG	YA	3053	1/1	0.66	0.50	4,4,4,4	0
57	MG	QA	1655	1/1	0.66	0.34	20,20,20,20	0
57	MG	RA	3039	1/1	0.66	0.45	10,10,10,10	0
57	MG	RA	3010	1/1	0.66	0.49	14,14,14,14	0
57	MG	RA	3221	1/1	0.67	0.26	22,22,22,22	0
57	MG	RA	3224	1/1	0.67	0.31	5,5,5,5	0
57	MG	YA	3198	1/1	0.67	0.30	51,51,51,51	0
57	MG	RA	3108	1/1	0.67	0.13	0,0,0,0	0
57	MG	RA	3034	1/1	0.67	0.50	9,9,9,9	0
57	MG	RA	3079	1/1	0.67	0.39	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3029	1/1	0.67	0.41	1,1,1,1	0
57	MG	RA	3046	1/1	0.67	0.62	50,50,50,50	0
57	MG	YA	3162	1/1	0.67	0.25	0,0,0,0	0
57	MG	YA	3201	1/1	0.68	0.43	9,9,9,9	0
57	MG	YA	3141	1/1	0.68	0.40	0,0,0,0	0
57	MG	RA	3213	1/1	0.68	0.33	8,8,8,8	0
57	MG	YA	3002	1/1	0.69	0.72	50,50,50,50	0
57	MG	YA	3172	1/1	0.69	0.54	1,1,1,1	0
57	MG	QA	1603	1/1	0.69	0.46	14,14,14,14	0
57	MG	YA	3045	1/1	0.69	0.44	13,13,13,13	0
57	MG	RA	3219	1/1	0.69	0.32	40,40,40,40	0
57	MG	YA	3106	1/1	0.69	0.54	8,8,8,8	0
57	MG	RA	3212	1/1	0.69	0.41	1,1,1,1	0
57	MG	RA	3007	1/1	0.69	0.22	16,16,16,16	0
57	MG	RA	3228	1/1	0.69	0.39	11,11,11,11	0
57	MG	XA	1611	1/1	0.69	0.35	7,7,7,7	0
57	MG	YA	3084	1/1	0.69	0.20	17,17,17,17	0
57	MG	QA	1615	1/1	0.70	0.45	4,4,4,4	0
57	MG	RA	3153	1/1	0.70	0.46	15,15,15,15	0
57	MG	YA	3140	1/1	0.70	0.22	12,12,12,12	0
57	MG	YA	3099	1/1	0.70	0.45	10,10,10,10	0
57	MG	YA	3150	1/1	0.70	0.35	4,4,4,4	0
57	MG	YA	3157	1/1	0.70	0.39	0,0,0,0	0
57	MG	YA	3049	1/1	0.70	0.69	50,50,50,50	0
57	MG	RA	3087	1/1	0.70	0.56	11,11,11,11	0
57	MG	RA	3013	1/1	0.70	0.43	4,4,4,4	0
57	MG	RA	3059	1/1	0.71	0.42	11,11,11,11	0
57	MG	YA	3010	1/1	0.71	0.36	5,5,5,5	0
57	MG	XA	1672	1/1	0.71	0.29	0,0,0,0	0
57	MG	RA	3101	1/1	0.71	0.40	11,11,11,11	0
57	MG	YA	3186	1/1	0.71	0.31	11,11,11,11	0
57	MG	YA	3021	1/1	0.71	0.29	12,12,12,12	0
57	MG	RA	3226	1/1	0.71	0.15	9,9,9,9	0
57	MG	RA	3135	1/1	0.72	0.20	7,7,7,7	0
57	MG	XV	101	1/1	0.72	0.36	14,14,14,14	0
57	MG	RA	3069	1/1	0.72	0.47	4,4,4,4	0
57	MG	XA	1657	1/1	0.72	0.22	8,8,8,8	0
57	MG	YA	3018	1/1	0.72	0.60	3,3,3,3	0
57	MG	RA	3199	1/1	0.73	0.31	6,6,6,6	0
57	MG	RA	3203	1/1	0.73	0.16	24,24,24,24	0
57	MG	QA	1664	1/1	0.73	0.17	54,54,54,54	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	QA	1642	1/1	0.73	0.57	16,16,16,16	0
57	MG	YA	3011	1/1	0.73	0.36	0,0,0,0	0
57	MG	YA	3052	1/1	0.73	0.42	14,14,14,14	0
57	MG	YA	3116	1/1	0.73	0.27	3,3,3,3	0
57	MG	RA	3214	1/1	0.73	0.35	5,5,5,5	0
57	MG	QA	1640	1/1	0.73	0.36	9,9,9,9	0
57	MG	QA	1661	1/1	0.73	0.13	64,64,64,64	0
57	MG	RA	3140	1/1	0.73	0.41	9,9,9,9	0
57	MG	YA	3222	1/1	0.73	0.20	8,8,8,8	0
57	MG	RA	3182	1/1	0.73	0.26	4,4,4,4	0
57	MG	RA	3191	1/1	0.73	0.18	67,67,67,67	0
57	MG	YA	3156	1/1	0.73	0.29	2,2,2,2	0
57	MG	RA	3077	1/1	0.74	0.37	0,0,0,0	0
57	MG	XA	1628	1/1	0.74	0.33	10,10,10,10	0
57	MG	QF	201	1/1	0.74	0.27	36,36,36,36	0
57	MG	YA	3071	1/1	0.74	0.17	28,28,28,28	0
57	MG	YA	3254	1/1	0.74	0.44	2,2,2,2	0
57	MG	RA	3015	1/1	0.74	0.61	5,5,5,5	0
57	MG	YA	3036	1/1	0.74	0.26	2,2,2,2	0
57	MG	RA	3006	1/1	0.75	0.71	50,50,50,50	0
57	MG	YA	3101	1/1	0.75	0.40	2,2,2,2	0
57	MG	RA	3131	1/1	0.75	0.52	9,9,9,9	0
57	MG	YA	3115	1/1	0.75	0.33	4,4,4,4	0
57	MG	RA	3081	1/1	0.75	0.37	1,1,1,1	0
57	MG	YA	3166	1/1	0.75	0.22	4,4,4,4	0
57	MG	RA	3062	1/1	0.75	1.02	50,50,50,50	0
57	MG	YA	3062	1/1	0.75	0.37	6,6,6,6	0
57	MG	YA	3260	1/1	0.75	0.96	50,50,50,50	0
57	MG	RA	3058	1/1	0.75	0.70	3,3,3,3	0
57	MG	YA	3047	1/1	0.75	0.53	3,3,3,3	0
57	MG	RA	3151	1/1	0.76	0.29	9,9,9,9	0
57	MG	RA	3111	1/1	0.76	0.31	11,11,11,11	0
57	MG	RA	3160	1/1	0.76	0.36	4,4,4,4	0
57	MG	QA	1623	1/1	0.76	0.29	14,14,14,14	0
57	MG	YA	3050	1/1	0.76	0.63	50,50,50,50	0
57	MG	YA	3033	1/1	0.76	0.44	4,4,4,4	0
57	MG	RA	3143	1/1	0.76	0.84	7,7,7,7	0
57	MG	RA	3229	1/1	0.76	0.94	50,50,50,50	0
57	MG	RA	3043	1/1	0.77	0.30	10,10,10,10	0
57	MG	RA	3051	1/1	0.77	0.57	7,7,7,7	0
57	MG	YA	3009	1/1	0.77	0.49	8,8,8,8	0
57	MG	RA	3236	1/1	0.77	0.31	0,0,0,0	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3142	1/1	0.77	0.46	19,19,19,19	0
57	MG	XA	1648	1/1	0.77	0.39	3,3,3,3	0
57	MG	RA	3128	1/1	0.77	0.41	7,7,7,7	0
57	MG	YA	3221	1/1	0.77	0.32	18,18,18,18	0
57	MG	RA	3208	1/1	0.77	0.38	15,15,15,15	0
57	MG	YA	3109	1/1	0.77	0.45	2,2,2,2	0
57	MG	YA	3164	1/1	0.77	0.31	8,8,8,8	0
57	MG	RA	3052	1/1	0.77	0.69	50,50,50,50	0
57	MG	YA	3019	1/1	0.77	0.31	5,5,5,5	0
58	ZN	Y9	101	1/1	0.77	0.24	138,138,138,138	0
57	MG	RA	3163	1/1	0.77	0.60	12,12,12,12	0
57	MG	YA	3192	1/1	0.78	0.36	11,11,11,11	0
57	MG	YA	3055	1/1	0.78	0.28	0,0,0,0	0
57	MG	YA	3058	1/1	0.78	0.43	15,15,15,15	0
57	MG	RA	3125	1/1	0.78	0.36	1,1,1,1	0
57	MG	YA	3147	1/1	0.78	0.37	4,4,4,4	0
57	MG	RA	3188	1/1	0.78	0.29	5,5,5,5	0
57	MG	YA	3207	1/1	0.78	0.34	7,7,7,7	0
57	MG	YA	3063	1/1	0.78	0.34	11,11,11,11	0
57	MG	YA	3025	1/1	0.78	0.24	4,4,4,4	0
57	MG	XA	1658	1/1	0.78	0.28	9,9,9,9	0
57	MG	YA	3227	1/1	0.78	0.30	0,0,0,0	0
57	MG	RA	3096	1/1	0.78	0.32	4,4,4,4	0
57	MG	QA	1649	1/1	0.78	0.32	6,6,6,6	0
57	MG	YA	3082	1/1	0.78	0.36	3,3,3,3	0
57	MG	RA	3092	1/1	0.78	0.40	7,7,7,7	0
57	MG	YA	3176	1/1	0.78	0.26	6,6,6,6	0
57	MG	RA	3181	1/1	0.78	0.31	3,3,3,3	0
57	MG	YA	3098	1/1	0.79	0.30	1,1,1,1	0
57	MG	RA	3018	1/1	0.79	0.40	6,6,6,6	0
57	MG	QA	1646	1/1	0.79	0.25	10,10,10,10	0
57	MG	RA	3124	1/1	0.79	0.28	10,10,10,10	0
57	MG	RA	3187	1/1	0.79	0.40	3,3,3,3	0
57	MG	RA	3036	1/1	0.79	0.44	6,6,6,6	0
57	MG	YA	3114	1/1	0.79	0.24	13,13,13,13	0
57	MG	QA	1638	1/1	0.79	0.29	34,34,34,34	0
57	MG	XA	1659	1/1	0.79	0.28	0,0,0,0	0
57	MG	RA	3026	1/1	0.79	0.89	50,50,50,50	0
57	MG	RA	3201	1/1	0.79	0.52	10,10,10,10	0
57	MG	YA	3204	1/1	0.79	0.34	11,11,11,11	0
57	MG	YA	3073	1/1	0.79	0.42	1,1,1,1	0
57	MG	RA	3232	1/1	0.79	0.33	13,13,13,13	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	QA	1604	1/1	0.79	0.30	0,0,0,0	0
57	MG	RA	3207	1/1	0.79	0.15	11,11,11,11	0
57	MG	RA	3169	1/1	0.79	0.23	16,16,16,16	0
57	MG	YA	3232	1/1	0.79	0.47	2,2,2,2	0
57	MG	XA	1621	1/1	0.79	0.33	3,3,3,3	0
57	MG	YA	3088	1/1	0.79	0.64	50,50,50,50	0
57	MG	QA	1602	1/1	0.79	0.52	12,12,12,12	0
57	MG	YA	3159	1/1	0.79	0.18	6,6,6,6	0
57	MG	YA	3095	1/1	0.79	0.35	2,2,2,2	0
57	MG	RA	3082	1/1	0.79	0.28	0,0,0,0	0
57	MG	XA	1617	1/1	0.80	0.28	15,15,15,15	0
57	MG	YA	3080	1/1	0.80	1.03	50,50,50,50	0
57	MG	XA	1630	1/1	0.80	0.31	10,10,10,10	0
57	MG	YA	3179	1/1	0.80	0.18	0,0,0,0	0
57	MG	YA	3004	1/1	0.80	0.32	12,12,12,12	0
57	MG	YA	3086	1/1	0.80	0.34	6,6,6,6	0
57	MG	YA	3067	1/1	0.80	0.34	5,5,5,5	0
57	MG	YA	3243	1/1	0.80	0.21	32,32,32,32	0
57	MG	RA	3068	1/1	0.80	0.27	6,6,6,6	0
57	MG	RA	3159	1/1	0.80	0.31	6,6,6,6	0
57	MG	XA	1616	1/1	0.80	0.24	1,1,1,1	0
57	MG	YA	3075	1/1	0.80	0.37	0,0,0,0	0
57	MG	XA	1647	1/1	0.80	0.26	1,1,1,1	0
57	MG	RP	201	1/1	0.81	0.82	21,21,21,21	0
57	MG	YA	3118	1/1	0.81	0.40	14,14,14,14	0
57	MG	YA	3236	1/1	0.81	0.19	5,5,5,5	0
57	MG	RA	3076	1/1	0.81	0.41	7,7,7,7	0
57	MG	YA	3013	1/1	0.81	0.39	5,5,5,5	0
57	MG	YA	3097	1/1	0.81	0.35	5,5,5,5	0
57	MG	YA	3184	1/1	0.81	0.31	7,7,7,7	0
57	MG	YA	3129	1/1	0.81	0.39	15,15,15,15	0
57	MG	RA	3227	1/1	0.81	0.48	22,22,22,22	0
57	MG	RA	3112	1/1	0.81	0.19	6,6,6,6	0
57	MG	RA	3218	1/1	0.82	0.46	23,23,23,23	0
57	MG	QA	1663	1/1	0.82	0.19	47,47,47,47	0
57	MG	YA	3034	1/1	0.82	0.37	2,2,2,2	0
57	MG	XA	1615	1/1	0.82	0.33	6,6,6,6	0
57	MG	YA	3091	1/1	0.82	0.38	13,13,13,13	0
57	MG	QA	1660	1/1	0.82	0.29	2,2,2,2	0
57	MG	YA	3223	1/1	0.82	0.27	34,34,34,34	0
57	MG	RA	3073	1/1	0.82	0.25	2,2,2,2	0
57	MG	RA	3110	1/1	0.82	0.34	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3019	1/1	0.82	0.38	8,8,8,8	0
57	MG	YA	3135	1/1	0.82	0.28	6,6,6,6	0
57	MG	QA	1641	1/1	0.82	0.27	7,7,7,7	0
57	MG	RA	3089	1/1	0.82	0.32	11,11,11,11	0
57	MG	YA	3259	1/1	0.82	0.54	8,8,8,8	0
57	MG	QA	1662	1/1	0.82	0.11	37,37,37,37	0
57	MG	RA	3234	1/1	0.82	0.32	9,9,9,9	0
57	MG	RA	3197	1/1	0.82	0.26	3,3,3,3	0
57	MG	YA	3107	1/1	0.82	0.30	15,15,15,15	0
57	MG	RA	3238	1/1	0.83	0.39	16,16,16,16	0
57	MG	QA	1644	1/1	0.83	0.26	4,4,4,4	0
57	MG	YA	3035	1/1	0.83	0.33	9,9,9,9	0
57	MG	YA	3012	1/1	0.83	0.86	50,50,50,50	0
57	MG	QA	1622	1/1	0.83	0.24	14,14,14,14	0
57	MG	XA	1670	1/1	0.83	0.15	43,43,43,43	0
57	MG	RA	3093	1/1	0.83	0.54	10,10,10,10	0
57	MG	RA	3205	1/1	0.83	0.32	12,12,12,12	0
57	MG	XA	1636	1/1	0.83	0.32	3,3,3,3	0
57	MG	YA	3242	1/1	0.83	0.48	4,4,4,4	0
57	MG	RA	3094	1/1	0.83	0.41	0,0,0,0	0
57	MG	QA	1620	1/1	0.83	0.16	6,6,6,6	0
57	MG	YA	3104	1/1	0.83	0.35	10,10,10,10	0
57	MG	RA	3161	1/1	0.83	0.25	1,1,1,1	0
57	MG	YA	3083	1/1	0.83	0.29	9,9,9,9	0
57	MG	YA	3008	1/1	0.83	0.38	10,10,10,10	0
57	MG	XA	1653	1/1	0.83	0.20	8,8,8,8	0
57	MG	RA	3028	1/1	0.84	0.37	14,14,14,14	0
57	MG	RA	3114	1/1	0.84	0.24	1,1,1,1	0
57	MG	RA	3192	1/1	0.84	0.11	21,21,21,21	0
57	MG	RA	3088	1/1	0.84	0.56	15,15,15,15	0
57	MG	QA	1643	1/1	0.84	0.18	33,33,33,33	0
57	MG	RA	3055	1/1	0.84	0.53	5,5,5,5	0
57	MG	YA	3217	1/1	0.84	0.35	35,35,35,35	0
57	MG	QA	1632	1/1	0.84	0.14	42,42,42,42	0
57	MG	RA	3231	1/1	0.84	0.16	14,14,14,14	0
57	MG	RA	3126	1/1	0.84	0.30	2,2,2,2	0
57	MG	QA	1645	1/1	0.84	0.14	38,38,38,38	0
57	MG	RA	3033	1/1	0.84	0.72	50,50,50,50	0
57	MG	YA	3234	1/1	0.84	0.57	17,17,17,17	0
57	MG	RA	3209	1/1	0.84	0.27	17,17,17,17	0
57	MG	YA	3171	1/1	0.84	0.22	13,13,13,13	0
57	MG	RA	3063	1/1	0.84	0.78	3,3,3,3	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3105	1/1	0.84	0.32	11,11,11,11	0
57	MG	YA	3245	1/1	0.84	0.10	2,2,2,2	0
57	MG	YA	3250	1/1	0.84	0.58	11,11,11,11	0
57	MG	QA	1659	1/1	0.84	0.28	4,4,4,4	0
57	MG	YA	3256	1/1	0.84	0.24	7,7,7,7	0
57	MG	YA	3054	1/1	0.84	0.22	1,1,1,1	0
57	MG	YA	3126	1/1	0.84	0.23	7,7,7,7	0
57	MG	RA	3067	1/1	0.84	0.28	2,2,2,2	0
57	MG	YA	3024	1/1	0.84	0.78	50,50,50,50	0
57	MG	RA	3016	1/1	0.84	0.24	8,8,8,8	0
57	MG	RA	3145	1/1	0.85	0.29	3,3,3,3	0
57	MG	YA	3122	1/1	0.85	0.28	3,3,3,3	0
57	MG	YA	3125	1/1	0.85	0.59	12,12,12,12	0
57	MG	QA	1625	1/1	0.85	0.29	0,0,0,0	0
57	MG	YA	3127	1/1	0.85	0.24	2,2,2,2	0
57	MG	YA	3077	1/1	0.85	0.34	2,2,2,2	0
57	MG	RA	3123	1/1	0.85	0.24	7,7,7,7	0
57	MG	XA	1663	1/1	0.85	0.25	15,15,15,15	0
57	MG	YA	3190	1/1	0.85	0.12	21,21,21,21	0
57	MG	XA	1664	1/1	0.85	0.29	8,8,8,8	0
57	MG	RA	3014	1/1	0.85	0.24	13,13,13,13	0
57	MG	RA	3194	1/1	0.85	0.30	6,6,6,6	0
57	MG	YA	3085	1/1	0.85	0.37	13,13,13,13	0
57	MG	RA	3211	1/1	0.85	0.24	2,2,2,2	0
57	MG	YA	3257	1/1	0.85	0.17	3,3,3,3	0
57	MG	RA	3195	1/1	0.85	0.08	24,24,24,24	0
57	MG	RA	3091	1/1	0.85	0.27	9,9,9,9	0
57	MG	QA	1636	1/1	0.85	0.13	16,16,16,16	0
57	MG	Y5	101	1/1	0.85	0.34	6,6,6,6	0
57	MG	YA	3022	1/1	0.85	0.30	1,1,1,1	0
57	MG	QA	1637	1/1	0.85	0.18	0,0,0,0	0
57	MG	YA	3188	1/1	0.86	0.36	1,1,1,1	0
57	MG	RA	3047	1/1	0.86	0.40	5,5,5,5	0
57	MG	RE	301	1/1	0.86	0.26	12,12,12,12	0
57	MG	QX	101	1/1	0.86	0.28	4,4,4,4	0
57	MG	YA	3195	1/1	0.86	0.19	9,9,9,9	0
57	MG	XA	1656	1/1	0.86	0.31	10,10,10,10	0
57	MG	RA	3045	1/1	0.86	0.21	1,1,1,1	0
57	MG	RA	3098	1/1	0.86	0.41	14,14,14,14	0
57	MG	RA	3005	1/1	0.86	0.40	12,12,12,12	0
57	MG	YA	3090	1/1	0.86	0.27	1,1,1,1	0
57	MG	RA	3190	1/1	0.86	0.18	16,16,16,16	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3092	1/1	0.86	0.19	12,12,12,12	0
57	MG	YA	3174	1/1	0.86	0.13	40,40,40,40	0
57	MG	YA	3261	1/1	0.86	0.22	4,4,4,4	0
57	MG	RA	3103	1/1	0.86	0.30	9,9,9,9	0
57	MG	YP	201	1/1	0.86	0.16	94,94,94,94	0
57	MG	YA	3059	1/1	0.86	0.34	5,5,5,5	0
57	MG	Y7	101	1/1	0.86	0.48	15,15,15,15	0
57	MG	XA	1665	1/1	0.86	0.26	7,7,7,7	0
57	MG	YA	3149	1/1	0.86	0.18	15,15,15,15	0
57	MG	RE	302	1/1	0.87	0.22	1,1,1,1	0
57	MG	RA	3165	1/1	0.87	0.42	13,13,13,13	0
57	MG	YA	3175	1/1	0.87	0.16	9,9,9,9	0
57	MG	RR	201	1/1	0.87	0.27	13,13,13,13	0
57	MG	RA	3225	1/1	0.87	0.13	10,10,10,10	0
57	MG	YA	3180	1/1	0.87	0.27	38,38,38,38	0
57	MG	XA	1655	1/1	0.87	0.19	9,9,9,9	0
57	MG	RA	3129	1/1	0.87	0.12	31,31,31,31	0
57	MG	RA	3167	1/1	0.87	0.22	3,3,3,3	0
57	MG	YA	3042	1/1	0.87	0.34	2,2,2,2	0
57	MG	RA	3023	1/1	0.87	0.27	16,16,16,16	0
57	MG	RA	3044	1/1	0.87	0.52	10,10,10,10	0
57	MG	RA	3158	1/1	0.87	0.26	15,15,15,15	0
57	MG	RA	3174	1/1	0.87	0.24	4,4,4,4	0
57	MG	XA	1627	1/1	0.87	0.32	14,14,14,14	0
57	MG	QV	101	1/1	0.87	0.25	1,1,1,1	0
57	MG	RA	3017	1/1	0.87	0.31	11,11,11,11	0
57	MG	RA	3115	1/1	0.87	0.33	6,6,6,6	0
57	MG	YA	3205	1/1	0.87	0.12	10,10,10,10	0
57	MG	RA	3239	1/1	0.87	0.31	14,14,14,14	0
57	MG	YA	3027	1/1	0.87	0.19	1,1,1,1	0
57	MG	YA	3028	1/1	0.87	0.41	6,6,6,6	0
57	MG	RA	3008	1/1	0.87	0.26	0,0,0,0	0
57	MG	YA	3051	1/1	0.88	0.27	3,3,3,3	0
57	MG	RA	3171	1/1	0.88	0.13	12,12,12,12	0
57	MG	YA	3218	1/1	0.88	0.19	5,5,5,5	0
57	MG	RA	3196	1/1	0.88	0.19	0,0,0,0	0
57	MG	RA	3109	1/1	0.88	0.28	8,8,8,8	0
57	MG	RA	3080	1/1	0.88	0.23	21,21,21,21	0
57	MG	QA	1633	1/1	0.88	0.47	4,4,4,4	0
57	MG	RA	3027	1/1	0.88	0.39	13,13,13,13	0
57	MG	QA	1648	1/1	0.88	0.22	12,12,12,12	0
57	MG	R5	101	1/1	0.88	0.34	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3206	1/1	0.88	0.09	3,3,3,3	0
57	MG	XA	1650	1/1	0.88	0.16	18,18,18,18	0
57	MG	XA	1612	1/1	0.88	0.24	19,19,19,19	0
57	MG	YA	3139	1/1	0.88	0.35	7,7,7,7	0
57	MG	YA	3189	1/1	0.88	0.33	6,6,6,6	0
57	MG	XA	1654	1/1	0.88	0.13	26,26,26,26	0
57	MG	RA	3003	1/1	0.88	0.36	5,5,5,5	0
57	MG	RA	3147	1/1	0.88	0.25	9,9,9,9	0
57	MG	RA	3150	1/1	0.88	0.55	37,37,37,37	0
57	MG	YA	3102	1/1	0.88	0.40	14,14,14,14	0
57	MG	RA	3168	1/1	0.88	0.19	1,1,1,1	0
57	MG	YA	3264	1/1	0.88	0.27	9,9,9,9	0
57	MG	RA	3119	1/1	0.88	0.29	3,3,3,3	0
57	MG	XA	1662	1/1	0.88	0.50	11,11,11,11	0
57	MG	RA	3025	1/1	0.88	0.15	3,3,3,3	0
57	MG	YA	3160	1/1	0.88	0.25	1,1,1,1	0
57	MG	YA	3020	1/1	0.88	0.50	0,0,0,0	0
57	MG	YA	3209	1/1	0.88	0.30	15,15,15,15	0
57	MG	RA	3142	1/1	0.89	0.43	36,36,36,36	0
57	MG	YA	3170	1/1	0.89	0.18	8,8,8,8	0
57	MG	XA	1671	1/1	0.89	0.15	3,3,3,3	0
57	MG	QA	1650	1/1	0.89	0.38	11,11,11,11	0
57	MG	R0	101	1/1	0.89	0.17	0,0,0,0	0
57	MG	RA	3061	1/1	0.89	0.13	53,53,53,53	0
57	MG	XA	1646	1/1	0.89	0.23	7,7,7,7	0
57	MG	XA	1603	1/1	0.89	0.63	8,8,8,8	0
57	MG	XA	1607	1/1	0.89	0.17	16,16,16,16	0
57	MG	YA	3181	1/1	0.89	0.33	3,3,3,3	0
57	MG	YA	3182	1/1	0.89	0.26	8,8,8,8	0
57	MG	YA	3130	1/1	0.89	0.35	20,20,20,20	0
57	MG	RA	3120	1/1	0.89	0.24	1,1,1,1	0
57	MG	RA	3086	1/1	0.89	0.14	0,0,0,0	0
57	MG	RA	3048	1/1	0.89	0.17	3,3,3,3	0
57	MG	YA	3069	1/1	0.89	0.36	2,2,2,2	0
57	MG	YA	3255	1/1	0.89	0.62	0,0,0,0	0
57	MG	RA	3202	1/1	0.89	0.17	16,16,16,16	0
57	MG	YA	3040	1/1	0.89	0.41	10,10,10,10	0
57	MG	RA	3233	1/1	0.89	0.47	2,2,2,2	0
57	MG	RA	3217	1/1	0.89	0.21	74,74,74,74	0
57	MG	XA	1619	1/1	0.89	0.22	5,5,5,5	0
57	MG	RA	3042	1/1	0.89	0.13	2,2,2,2	0
57	MG	YA	3265	1/1	0.89	0.65	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3268	1/1	0.89	0.18	6,6,6,6	0
57	MG	YA	3046	1/1	0.89	0.40	3,3,3,3	0
57	MG	RA	3155	1/1	0.89	0.40	10,10,10,10	0
57	MG	RA	3072	1/1	0.89	0.25	3,3,3,3	0
57	MG	RA	3222	1/1	0.89	0.38	14,14,14,14	0
57	MG	QA	1624	1/1	0.89	0.21	0,0,0,0	0
57	MG	YA	3212	1/1	0.89	0.15	8,8,8,8	0
57	MG	QA	1611	1/1	0.90	0.28	6,6,6,6	0
57	MG	QA	1631	1/1	0.90	0.14	26,26,26,26	0
57	MG	XA	1652	1/1	0.90	0.10	66,66,66,66	0
57	MG	YA	3030	1/1	0.90	0.44	5,5,5,5	0
57	MG	RA	3040	1/1	0.90	0.26	14,14,14,14	0
57	MG	YA	3089	1/1	0.90	0.32	5,5,5,5	0
57	MG	YA	3124	1/1	0.90	0.30	9,9,9,9	0
57	MG	RA	3078	1/1	0.90	0.25	3,3,3,3	0
57	MG	RA	3148	1/1	0.90	0.30	5,5,5,5	0
57	MG	QA	1628	1/1	0.90	0.15	8,8,8,8	0
57	MG	YA	3093	1/1	0.90	0.22	7,7,7,7	0
57	MG	RA	3056	1/1	0.90	0.19	5,5,5,5	0
57	MG	RA	3133	1/1	0.90	0.21	0,0,0,0	0
57	MG	YA	3131	1/1	0.90	0.15	3,3,3,3	0
57	MG	YA	3247	1/1	0.90	0.46	14,14,14,14	0
57	MG	XA	1602	1/1	0.90	0.22	7,7,7,7	0
57	MG	YA	3252	1/1	0.90	0.36	8,8,8,8	0
57	MG	YA	3138	1/1	0.90	0.16	0,0,0,0	0
57	MG	RA	3090	1/1	0.90	0.24	75,75,75,75	0
57	MG	YA	3070	1/1	0.90	0.26	15,15,15,15	0
57	MG	XA	1605	1/1	0.90	0.40	3,3,3,3	0
57	MG	XA	1635	1/1	0.90	0.29	4,4,4,4	0
57	MG	YA	3146	1/1	0.90	0.28	0,0,0,0	0
57	MG	YA	3196	1/1	0.90	0.42	1,1,1,1	0
57	MG	YA	3044	1/1	0.90	0.48	6,6,6,6	0
57	MG	RA	3136	1/1	0.90	0.28	0,0,0,0	0
57	MG	RA	3106	1/1	0.90	0.35	13,13,13,13	0
57	MG	YB	201	1/1	0.90	0.17	7,7,7,7	0
57	MG	XA	1641	1/1	0.90	0.72	21,21,21,21	0
57	MG	RA	3071	1/1	0.90	0.17	1,1,1,1	0
57	MG	XB	301	1/1	0.90	0.05	2,2,2,2	0
57	MG	YA	3113	1/1	0.90	0.18	1,1,1,1	0
57	MG	YA	3161	1/1	0.90	0.09	1,1,1,1	0
57	MG	RA	3064	1/1	0.90	0.27	5,5,5,5	0
57	MG	YA	3153	1/1	0.91	0.27	20,20,20,20	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3155	1/1	0.91	0.18	7,7,7,7	0
57	MG	RA	3223	1/1	0.91	0.13	47,47,47,47	0
57	MG	YA	3208	1/1	0.91	0.41	15,15,15,15	0
57	MG	YA	3048	1/1	0.91	0.30	4,4,4,4	0
57	MG	YA	3117	1/1	0.91	0.47	6,6,6,6	0
57	MG	YA	3039	1/1	0.91	0.20	6,6,6,6	0
57	MG	QA	1635	1/1	0.91	0.28	13,13,13,13	0
57	MG	YA	3079	1/1	0.91	0.19	4,4,4,4	0
57	MG	RA	3215	1/1	0.91	0.19	27,27,27,27	0
57	MG	YA	3123	1/1	0.91	0.16	18,18,18,18	0
57	MG	YA	3263	1/1	0.91	0.48	4,4,4,4	0
57	MG	YA	3193	1/1	0.91	0.11	3,3,3,3	0
57	MG	XA	1637	1/1	0.91	0.17	25,25,25,25	0
57	MG	YA	3266	1/1	0.91	0.37	2,2,2,2	0
57	MG	YA	3229	1/1	0.91	0.19	3,3,3,3	0
57	MG	RA	3193	1/1	0.91	0.21	22,22,22,22	0
57	MG	XA	1608	1/1	0.91	0.12	37,37,37,37	0
57	MG	YA	3148	1/1	0.91	0.17	7,7,7,7	0
57	MG	XA	1642	1/1	0.91	0.28	5,5,5,5	0
57	MG	YA	3239	1/1	0.91	0.29	5,5,5,5	0
58	ZN	R9	101	1/1	0.91	0.21	145,145,145,145	0
57	MG	RA	3004	1/1	0.91	0.70	10,10,10,10	0
57	MG	YA	3152	1/1	0.91	0.28	5,5,5,5	0
57	MG	RA	3001	1/1	0.92	0.25	3,3,3,3	0
57	MG	YA	3158	1/1	0.92	0.26	6,6,6,6	0
57	MG	QA	1606	1/1	0.92	0.16	16,16,16,16	0
57	MG	RA	3177	1/1	0.92	0.47	7,7,7,7	0
57	MG	RA	3038	1/1	0.92	0.24	8,8,8,8	0
57	MG	YA	3249	1/1	0.92	0.24	10,10,10,10	0
57	MG	YA	3007	1/1	0.92	0.19	7,7,7,7	0
57	MG	RA	3127	1/1	0.92	0.24	0,0,0,0	0
57	MG	YA	3103	1/1	0.92	0.17	5,5,5,5	0
57	MG	YA	3133	1/1	0.92	0.18	1,1,1,1	0
57	MG	RA	3024	1/1	0.92	0.22	16,16,16,16	0
57	MG	XA	1633	1/1	0.92	0.15	3,3,3,3	0
57	MG	XA	1610	1/1	0.92	0.21	3,3,3,3	0
57	MG	RA	3183	1/1	0.92	0.14	57,57,57,57	0
57	MG	RA	3117	1/1	0.92	0.21	25,25,25,25	0
57	MG	YA	3038	1/1	0.92	0.15	7,7,7,7	0
57	MG	YA	3177	1/1	0.92	0.21	3,3,3,3	0
57	MG	QA	1657	1/1	0.92	0.11	7,7,7,7	0
57	MG	YA	3219	1/1	0.92	0.18	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3060	1/1	0.92	0.30	6,6,6,6	0
57	MG	YA	3064	1/1	0.92	0.16	8,8,8,8	0
57	MG	XA	1668	1/1	0.92	0.17	18,18,18,18	0
57	MG	QA	1654	1/1	0.92	0.16	17,17,17,17	0
57	MG	YA	3151	1/1	0.92	0.19	5,5,5,5	0
57	MG	RA	3021	1/1	0.92	0.22	2,2,2,2	0
58	ZN	QN	101	1/1	0.92	0.05	104,104,104,104	0
57	MG	RA	3154	1/1	0.92	0.10	11,11,11,11	0
57	MG	XA	1620	1/1	0.92	0.14	2,2,2,2	0
57	MG	RA	3035	1/1	0.92	0.33	11,11,11,11	0
57	MG	RA	3235	1/1	0.93	0.45	1,1,1,1	0
57	MG	R8	101	1/1	0.93	0.18	0,0,0,0	0
57	MG	XA	1666	1/1	0.93	0.07	50,50,50,50	0
57	MG	YA	3136	1/1	0.93	0.20	21,21,21,21	0
57	MG	YA	3119	1/1	0.93	0.52	8,8,8,8	0
57	MG	RA	3116	1/1	0.93	0.26	9,9,9,9	0
57	MG	RA	3184	1/1	0.93	0.23	8,8,8,8	0
57	MG	YA	3238	1/1	0.93	0.09	11,11,11,11	0
57	MG	YA	3183	1/1	0.93	0.12	16,16,16,16	0
57	MG	YA	3240	1/1	0.93	0.49	72,72,72,72	0
57	MG	RA	3220	1/1	0.93	0.17	26,26,26,26	0
57	MG	QA	1610	1/1	0.93	0.23	7,7,7,7	0
57	MG	YB	203	1/1	0.93	0.09	37,37,37,37	0
57	MG	QA	1601	1/1	0.93	0.23	9,9,9,9	0
57	MG	YQ	201	1/1	0.93	0.09	99,99,99,99	0
57	MG	QA	1616	1/1	0.93	0.11	29,29,29,29	0
57	MG	RA	3053	1/1	0.93	0.18	2,2,2,2	0
57	MG	YA	3111	1/1	0.93	0.20	15,15,15,15	0
57	MG	XA	1660	1/1	0.93	0.11	24,24,24,24	0
57	MG	RR	202	1/1	0.93	0.19	0,0,0,0	0
57	MG	RA	3157	1/1	0.93	0.51	0,0,0,0	0
57	MG	YA	3137	1/1	0.94	0.23	10,10,10,10	0
57	MG	RA	3204	1/1	0.94	0.31	18,18,18,18	0
57	MG	YA	3081	1/1	0.94	0.25	9,9,9,9	0
57	MG	RA	3104	1/1	0.94	0.21	3,3,3,3	0
57	MG	YA	3191	1/1	0.94	0.15	7,7,7,7	0
57	MG	YA	3165	1/1	0.94	0.21	11,11,11,11	0
57	MG	XA	1667	1/1	0.94	0.18	17,17,17,17	0
57	MG	RA	3100	1/1	0.94	0.07	2,2,2,2	0
57	MG	QA	1647	1/1	0.94	0.11	33,33,33,33	0
57	MG	RA	3152	1/1	0.94	0.11	4,4,4,4	0
57	MG	RA	3200	1/1	0.94	0.08	1,1,1,1	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	XA	1604	1/1	0.94	0.49	10,10,10,10	0
57	MG	XM	201	1/1	0.94	0.05	85,85,85,85	0
57	MG	YA	3072	1/1	0.94	0.16	2,2,2,2	0
57	MG	XA	1640	1/1	0.94	0.07	75,75,75,75	0
57	MG	YE	301	1/1	0.94	0.21	0,0,0,0	0
57	MG	RD	301	1/1	0.94	0.08	1,1,1,1	0
57	MG	RA	3144	1/1	0.94	0.18	0,0,0,0	0
57	MG	YA	3244	1/1	0.94	0.33	9,9,9,9	0
57	MG	RA	3230	1/1	0.94	0.54	5,5,5,5	0
57	MG	YA	3134	1/1	0.94	0.32	11,11,11,11	0
57	MG	RA	3130	1/1	0.94	0.44	2,2,2,2	0
57	MG	QA	1605	1/1	0.94	0.63	7,7,7,7	0
57	MG	YA	3215	1/1	0.94	0.14	14,14,14,14	0
57	MG	QA	1621	1/1	0.95	0.10	5,5,5,5	0
57	MG	RA	3132	1/1	0.95	0.10	3,3,3,3	0
57	MG	RA	3057	1/1	0.95	0.26	2,2,2,2	0
57	MG	YA	3112	1/1	0.95	0.08	21,21,21,21	0
57	MG	YA	3185	1/1	0.95	0.18	2,2,2,2	0
57	MG	RA	3134	1/1	0.95	0.21	25,25,25,25	0
57	MG	QA	1607	1/1	0.95	0.14	13,13,13,13	0
57	MG	XA	1661	1/1	0.95	0.06	2,2,2,2	0
57	MG	RA	3084	1/1	0.95	0.23	4,4,4,4	0
57	MG	YA	3016	1/1	0.95	0.14	6,6,6,6	0
57	MG	XA	1601	1/1	0.95	0.47	1,1,1,1	0
57	MG	YA	3154	1/1	0.95	0.14	1,1,1,1	0
57	MG	RA	3102	1/1	0.95	0.09	4,4,4,4	0
57	MG	XA	1634	1/1	0.95	0.28	0,0,0,0	0
57	MG	YA	3251	1/1	0.95	0.07	9,9,9,9	0
57	MG	RA	3186	1/1	0.95	0.25	8,8,8,8	0
57	MG	QA	1658	1/1	0.95	0.15	16,16,16,16	0
57	MG	RA	3139	1/1	0.95	0.16	2,2,2,2	0
57	MG	XA	1669	1/1	0.95	0.07	38,38,38,38	0
57	MG	YA	3026	1/1	0.95	0.73	1,1,1,1	0
57	MG	XA	1606	1/1	0.95	0.36	10,10,10,10	0
57	MG	RA	3210	1/1	0.95	0.12	45,45,45,45	0
57	MG	YA	3206	1/1	0.95	0.40	26,26,26,26	0
57	MG	YA	3262	1/1	0.95	0.48	8,8,8,8	0
57	MG	YA	3061	1/1	0.95	0.18	17,17,17,17	0
57	MG	QA	1630	1/1	0.95	0.14	7,7,7,7	0
57	MG	QA	1609	1/1	0.95	0.38	4,4,4,4	0
57	MG	RA	3074	1/1	0.95	0.08	8,8,8,8	0
57	MG	YA	3267	1/1	0.95	0.45	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RA	3075	1/1	0.95	0.26	3,3,3,3	0
57	MG	YA	3269	1/1	0.95	0.49	1,1,1,1	0
57	MG	QA	1627	1/1	0.95	0.09	10,10,10,10	0
57	MG	YA	3173	1/1	0.95	0.06	35,35,35,35	0
57	MG	QA	1639	1/1	0.95	0.10	3,3,3,3	0
57	MG	RA	3011	1/1	0.95	0.18	6,6,6,6	0
57	MG	YA	3220	1/1	0.95	0.52	33,33,33,33	0
57	MG	YA	3005	1/1	0.95	0.21	3,3,3,3	0
57	MG	RA	3012	1/1	0.95	0.39	4,4,4,4	0
57	MG	YA	3178	1/1	0.95	0.14	2,2,2,2	0
57	MG	RA	3198	1/1	0.95	0.15	12,12,12,12	0
57	MG	YA	3228	1/1	0.95	0.34	17,17,17,17	0
57	MG	RA	3002	1/1	0.95	0.55	6,6,6,6	0
57	MG	YA	3230	1/1	0.95	0.06	8,8,8,8	0
57	MG	YA	3216	1/1	0.96	0.46	19,19,19,19	0
57	MG	RA	3141	1/1	0.96	0.11	2,2,2,2	0
57	MG	YA	3253	1/1	0.96	0.42	6,6,6,6	0
57	MG	RA	3189	1/1	0.96	0.20	4,4,4,4	0
57	MG	RA	3009	1/1	0.96	0.30	10,10,10,10	0
57	MG	XA	1613	1/1	0.96	0.07	0,0,0,0	0
57	MG	RA	3180	1/1	0.96	0.11	6,6,6,6	0
57	MG	RA	3066	1/1	0.96	0.42	6,6,6,6	0
57	MG	XX	102	1/1	0.96	0.04	50,50,50,50	0
57	MG	YA	3226	1/1	0.96	0.24	1,1,1,1	0
57	MG	RA	3237	1/1	0.96	0.48	1,1,1,1	0
57	MG	YA	3023	1/1	0.96	0.17	2,2,2,2	0
57	MG	RA	3054	1/1	0.96	0.18	3,3,3,3	0
57	MG	RA	3030	1/1	0.96	0.21	5,5,5,5	0
57	MG	YA	3143	1/1	0.96	0.13	8,8,8,8	0
57	MG	YA	3233	1/1	0.96	0.33	7,7,7,7	0
57	MG	RA	3146	1/1	0.96	0.11	5,5,5,5	0
57	MG	RA	3185	1/1	0.96	0.08	9,9,9,9	0
57	MG	RA	3164	1/1	0.96	0.15	4,4,4,4	0
57	MG	XA	1643	1/1	0.96	0.11	5,5,5,5	0
57	MG	XA	1626	1/1	0.96	0.12	6,6,6,6	0
57	MG	RF	301	1/1	0.96	0.17	2,2,2,2	0
57	MG	YA	3241	1/1	0.96	0.12	5,5,5,5	0
57	MG	QA	1652	1/1	0.96	0.17	12,12,12,12	0
57	MG	XA	1629	1/1	0.96	0.23	8,8,8,8	0
57	MG	XA	1651	1/1	0.96	0.12	25,25,25,25	0
57	MG	YA	3211	1/1	0.96	0.45	7,7,7,7	0
57	MG	YA	3056	1/1	0.96	0.14	5,5,5,5	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	YA	3057	1/1	0.96	0.61	4,4,4,4	0
57	MG	YA	3105	1/1	0.96	0.12	4,4,4,4	0
57	MG	YA	3108	1/1	0.97	0.35	1,1,1,1	0
57	MG	XA	1609	1/1	0.97	0.52	10,10,10,10	0
57	MG	YA	3145	1/1	0.97	0.11	9,9,9,9	0
57	MG	YA	3037	1/1	0.97	0.17	13,13,13,13	0
57	MG	XV	102	1/1	0.97	0.36	9,9,9,9	0
57	MG	YA	3066	1/1	0.97	0.48	7,7,7,7	0
57	MG	YA	3168	1/1	0.97	0.20	41,41,41,41	0
57	MG	YA	3213	1/1	0.97	0.10	19,19,19,19	0
57	MG	RA	3162	1/1	0.97	0.08	2,2,2,2	0
57	MG	RA	3149	1/1	0.97	0.06	20,20,20,20	0
57	MG	YA	3132	1/1	0.97	0.15	5,5,5,5	0
57	MG	RA	3175	1/1	0.97	0.15	1,1,1,1	0
57	MG	XA	1644	1/1	0.97	0.12	5,5,5,5	0
57	MG	XA	1622	1/1	0.97	0.07	7,7,7,7	0
57	MG	YA	3246	1/1	0.97	0.12	7,7,7,7	0
57	MG	XA	1623	1/1	0.97	0.11	14,14,14,14	0
57	MG	YA	3197	1/1	0.97	0.06	1,1,1,1	0
57	MG	QA	1608	1/1	0.97	0.05	10,10,10,10	0
57	MG	YA	3074	1/1	0.97	0.15	11,11,11,11	0
57	MG	YA	3224	1/1	0.97	0.24	0,0,0,0	0
57	MG	RA	3178	1/1	0.97	0.05	1,1,1,1	0
57	MG	YA	3202	1/1	0.97	0.06	1,1,1,1	0
57	MG	QA	1656	1/1	0.97	0.08	30,30,30,30	0
57	MG	QA	1651	1/1	0.97	0.07	9,9,9,9	0
57	MG	XA	1645	1/1	0.98	0.11	1,1,1,1	0
57	MG	YA	3163	1/1	0.98	0.06	4,4,4,4	0
57	MG	YA	3003	1/1	0.98	0.15	2,2,2,2	0
57	MG	RA	3097	1/1	0.98	0.38	2,2,2,2	0
57	MG	YA	3225	1/1	0.98	0.05	10,10,10,10	0
57	MG	QA	1617	1/1	0.98	0.17	4,4,4,4	0
57	MG	YA	3210	1/1	0.98	0.21	3,3,3,3	0
57	MG	RA	3099	1/1	0.98	0.05	10,10,10,10	0
57	MG	YA	3248	1/1	0.98	0.47	0,0,0,0	0
57	MG	RA	3172	1/1	0.98	0.08	4,4,4,4	0
57	MG	RA	3113	1/1	0.98	0.10	0,0,0,0	0
57	MG	YA	3231	1/1	0.98	0.19	45,45,45,45	0
57	MG	QA	1634	1/1	0.98	0.06	7,7,7,7	0
57	MG	YA	3199	1/1	0.98	0.08	55,55,55,55	0
57	MG	RA	3156	1/1	0.98	0.05	9,9,9,9	0
57	MG	YA	3235	1/1	0.98	0.08	3,3,3,3	0

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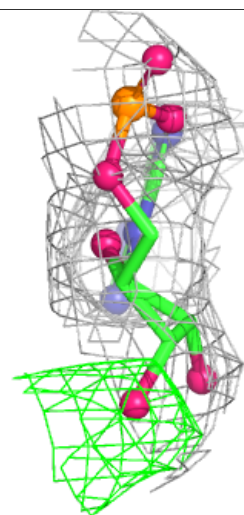
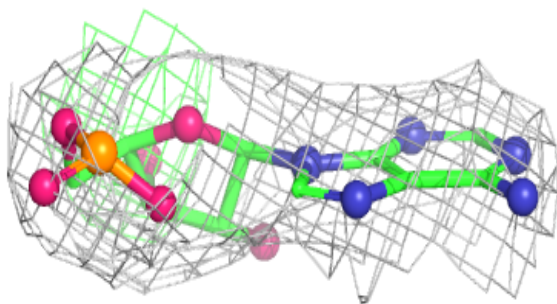
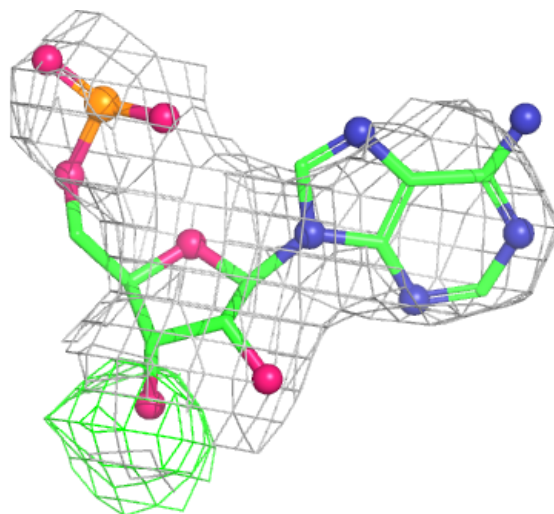
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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
57	MG	RB	201	1/1	0.98	0.10	8,8,8,8	0
57	MG	YA	3187	1/1	0.98	0.09	2,2,2,2	0
57	MG	YA	3258	1/1	0.98	0.38	1,1,1,1	0
57	MG	RB	202	1/1	0.98	0.08	4,4,4,4	0
57	MG	RA	3176	1/1	0.98	0.14	3,3,3,3	0
57	MG	XA	1625	1/1	0.99	0.05	5,5,5,5	0
57	MG	RA	3095	1/1	0.99	0.34	1,1,1,1	0
57	MG	RA	3118	1/1	0.99	0.05	2,2,2,2	0
57	MG	QA	1653	1/1	0.99	0.07	67,67,67,67	0
57	MG	YA	3169	1/1	0.99	0.04	6,6,6,6	0
58	ZN	QD	301	1/1	0.99	0.27	50,50,50,50	0
57	MG	QM	201	1/1	0.99	0.03	44,44,44,44	0
57	MG	XA	1649	1/1	0.99	0.17	0,0,0,0	0
58	ZN	XD	301	1/1	0.99	0.30	50,50,50,50	0
58	ZN	XN	101	1/1	0.99	0.09	84,84,84,84	0
57	MG	YA	3065	1/1	0.99	0.04	5,5,5,5	0
57	MG	XA	1614	1/1	0.99	0.05	26,26,26,26	0
57	MG	RA	3107	1/1	1.00	0.09	10,10,10,10	0
57	MG	XA	1639	1/1	1.00	0.07	5,5,5,5	0
57	MG	YA	3110	1/1	1.00	0.03	2,2,2,2	0
57	MG	YA	3017	1/1	1.00	0.12	1,1,1,1	0
57	MG	YA	3144	1/1	1.00	0.06	4,4,4,4	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 AMP XX 101:

$2mF_o-DF_c$ (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.