



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 17, 2026 – 01:26 PM UTC

PDB ID : 6OSI / pdb_00006osi
Title : Unmodified tRNA(Pro) bound to Thermus thermophilus 70S (near cognate)
Authors : Hoffer, E.D.; Subaramanian, S.; Hong, S.; Maehigashi, T.; Dunham, C.M.
Deposited on : 2019-05-01
Resolution : 4.14 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ 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
Percentile statistics : 20231227.v01 (using entries in the PDB archive December 27th 2023)
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) : 2.48.1

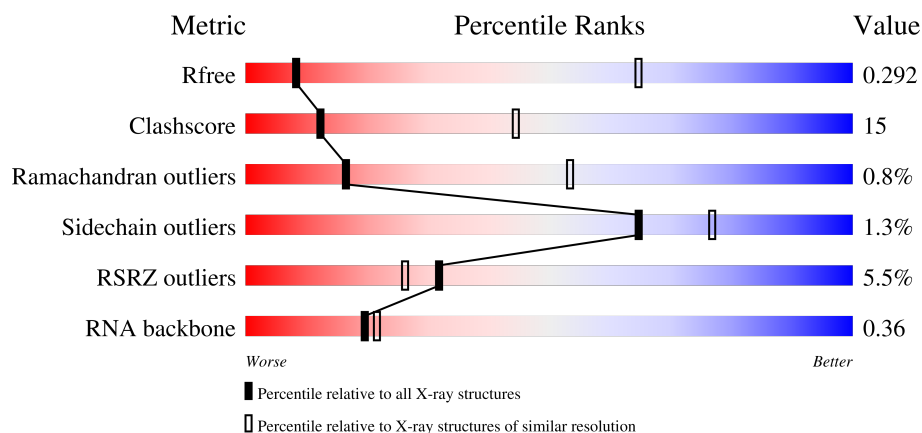
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 4.14 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	1166 (4.48-3.80)
Clashscore	180529	1233 (4.48-3.80)
Ramachandran outliers	177936	1158 (4.48-3.80)
Sidechain outliers	177891	1145 (4.48-3.80)
RSRZ outliers	164620	1164 (4.48-3.80)
RNA backbone	3690	1145 (5.04-3.00)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 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	1521	28% 52% 18% .
1	XA	1521	32% 47% 17% .
2	QB	256	4% 61% 30% 8% .
2	XB	256	7% 67% 24% 8% .

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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	19	
23	XX	19	
24	R0	85	
24	Y0	85	
25	R1	98	
25	Y1	98	
26	R2	72	
26	Y2	72	
27	R3	60	
27	Y3	60	

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Mol	Chain	Length	Quality of chain
28	R4	71	
28	Y4	71	
29	R5	60	
29	Y5	60	
30	R6	54	
30	Y6	54	
31	R7	49	
31	Y7	49	
32	R8	65	
32	Y8	65	
33	R9	37	
33	Y9	37	
34	RA	2905	
34	YA	2905	
35	RB	122	
35	YB	122	
36	RD	276	
36	YD	276	
37	RE	206	
37	YE	206	
38	RF	210	
38	YF	210	
39	RG	182	
39	YG	182	
40	RH	180	

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Mol	Chain	Length	Quality of chain
40	YH	180	
41	RI	148	
41	YI	148	
42	RN	140	
42	YN	140	
43	RO	122	
43	YO	122	
44	RP	150	
44	YP	150	
45	RQ	141	
45	YQ	141	
46	RR	118	
46	YR	118	
47	RS	112	
47	YS	112	
48	RT	146	
48	YT	146	
49	RU	118	
49	YU	118	
50	RV	101	
50	YV	101	
51	RW	113	
51	YW	113	
52	RX	96	
52	YX	96	

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Mol	Chain	Length	Quality of chain
53	RY	110	
53	YY	110	
54	RZ	206	
54	YZ	206	

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
55	MG	QA	1610	-	-	-	X
55	MG	QA	1622	-	-	-	X
55	MG	QE	201	-	-	-	X
55	MG	RA	2912	-	-	-	X
55	MG	RA	2921	-	-	-	X
55	MG	RA	2954	-	-	-	X
55	MG	RA	2970	-	-	-	X
55	MG	RA	2975	-	-	-	X
55	MG	RA	2976	-	-	-	X
55	MG	RA	2999	-	-	-	X
55	MG	RA	3013	-	-	-	X
55	MG	RA	3051	-	-	-	X
55	MG	RA	3057	-	-	-	X
55	MG	RA	3064	-	-	-	X
55	MG	RA	3071	-	-	-	X
55	MG	RA	3075	-	-	-	X
55	MG	RA	3078	-	-	-	X
55	MG	RA	3083	-	-	-	X
55	MG	RA	3101	-	-	-	X
55	MG	RA	3103	-	-	-	X
55	MG	RA	3133	-	-	-	X
55	MG	RA	3139	-	-	-	X
55	MG	RA	3144	-	-	-	X
55	MG	RA	3147	-	-	-	X
55	MG	RA	3152	-	-	-	X
55	MG	RA	3162	-	-	-	X
55	MG	RA	3220	-	-	-	X
55	MG	RA	3221	-	-	-	X
55	MG	RA	3223	-	-	-	X
55	MG	RA	3260	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	RA	3286	-	-	-	X
55	MG	RA	3307	-	-	-	X
55	MG	RA	3310	-	-	-	X
55	MG	RA	3318	-	-	-	X
55	MG	RE	304	-	-	-	X
55	MG	XA	1605	-	-	-	X
55	MG	XA	1610	-	-	-	X
55	MG	XA	1612	-	-	-	X
55	MG	XA	1613	-	-	-	X
55	MG	XA	1621	-	-	-	X
55	MG	XA	1657	-	-	-	X
55	MG	XA	1665	-	-	-	X
55	MG	XA	1688	-	-	X	-
55	MG	Y8	101	-	-	-	X
55	MG	YA	2904	-	-	-	X
55	MG	YA	2905	-	-	-	X
55	MG	YA	2907	-	-	-	X
55	MG	YA	2930	-	-	-	X
55	MG	YA	2932	-	-	-	X
55	MG	YA	2933	-	-	-	X
55	MG	YA	2934	-	-	-	X
55	MG	YA	2936	-	-	-	X
55	MG	YA	2952	-	-	-	X
55	MG	YA	2953	-	-	-	X
55	MG	YA	2955	-	-	-	X
55	MG	YA	2962	-	-	-	X
55	MG	YA	2974	-	-	-	X
55	MG	YA	2983	-	-	-	X
55	MG	YA	2984	-	-	-	X
55	MG	YA	2985	-	-	-	X
55	MG	YA	3004	-	-	-	X
55	MG	YA	3010	-	-	-	X
55	MG	YA	3017	-	-	-	X
55	MG	YA	3018	-	-	-	X
55	MG	YA	3031	-	-	-	X
55	MG	YA	3087	-	-	-	X
55	MG	YA	3097	-	-	-	X
55	MG	YA	3101	-	-	-	X
55	MG	YA	3117	-	-	-	X
55	MG	YA	3120	-	-	-	X
55	MG	YA	3122	-	-	-	X
55	MG	YA	3126	-	-	-	X

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Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	YA	3153	-	-	-	X
55	MG	YA	3168	-	-	-	X
55	MG	YA	3175	-	-	-	X
55	MG	YA	3192	-	-	X	-
55	MG	YA	3194	-	-	-	X
55	MG	YA	3202	-	-	-	X
55	MG	YA	3205	-	-	-	X
55	MG	YA	3211	-	-	-	X
55	MG	YA	3237	-	-	-	X
55	MG	YA	3239	-	-	-	X
55	MG	YA	3245	-	-	-	X
55	MG	YA	3262	-	-	-	X
55	MG	YA	3263	-	-	-	X
55	MG	YA	3276	-	-	-	X
55	MG	YA	3281	-	-	-	X
55	MG	YA	3288	-	-	-	X
55	MG	YA	3290	-	-	-	X
56	SF4	QD	301	-	-	X	-

2 Entry composition

There are 57 unique types of molecules in this entry. The entry contains 291185 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	1511	Total	C	N	O	P	0	0	0
			32469	14453	6011	10495	1510			
1	XA	1515	Total	C	N	O	P	0	0	0
			32551	14490	6022	10525	1514			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	QB	235	Total	C	N	O	S	0	0	0
			1907	1217	342	343	5			
2	XB	236	Total	C	N	O	S	0	0	0
			1915	1223	343	344	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	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			
8	XH	137	Total	C	N	O	S	0	0	0
			1108	700	214	192	2			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	QI	105	Total	C	N	O		0	0	0
			816	519	152	145				
9	XI	107	Total	C	N	O		0	0	0
			834	530	157	147				

- 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	96	Total	C	N	O	S	0	0	0
			777	487	153	136	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	116	Total	C	N	O	S	0	0	0
			864	537	164	160	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	122	Total	C	N	O	S	0	0	0
			956	603	193	159	1			

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	QM	115	Total	C	N	O	S	0	0	0
			921	569	190	160	2			
13	XM	114	Total	C	N	O	S	0	0	0
			914	565	189	158	2			

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
15	QO	88	Total	C	N	O	S	0	0	0
			734	459	147	126	2			
15	XO	87	Total	C	N	O	S	0	0	0
			729	457	146	124	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	83	Total	C	N	O	S	0	0	0
			665	424	124	115	2			
19	XS	84	Total	C	N	O	S	0	0	0
			674	430	126	116	2			

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

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

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

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

- Molecule 22 is a RNA chain called tRNA(Pro).

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	QV	68	Total	C	N	O	P	0	0	0
			1452	647	260	477	68			
22	XV	68	Total	C	N	O	P	0	0	0
			1452	647	260	477	68			

- Molecule 23 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	QX	19	Total	C	N	O	P	0	0	0
			409	184	81	126	18			
23	XX	19	Total	C	N	O	P	0	0	0
			409	184	81	126	18			

- Molecule 24 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	R0	81	Total	C	N	O	S	0	0	0
			643	398	137	107	1			
24	Y0	82	Total	C	N	O	S	0	0	0
			648	401	138	108	1			

- Molecule 25 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	R1	95	Total	C	N	O	S	0	0	0
			746	469	148	128	1			
25	Y1	93	Total	C	N	O	S	0	0	0
			729	457	145	126	1			

- Molecule 26 is a protein called 50S ribosomal protein L29.

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

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	Y2	68	Total	C	N	O	S	0	0	0
			575	355	117	102	1			

- Molecule 27 is a protein called 50S ribosomal protein L30.

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

- Molecule 28 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
28	R4	45	Total	C	N	O	S	0	0	0
			348	224	57	62	5			
28	Y4	46	Total	C	N	O	S	0	0	0
			357	229	59	64	5			

- Molecule 29 is a protein called 50S ribosomal protein L32.

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

- Molecule 30 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	R6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			
30	Y6	53	Total	C	N	O	S	0	0	0
			453	281	91	77	4			

- Molecule 31 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	R7	47	Total	C	N	O	S	0	0	0
			409	251	102	54	2			
31	Y7	48	Total	C	N	O	S	0	0	0
			418	257	104	55	2			

- Molecule 32 is a protein called 50S ribosomal protein L35.

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

- Molecule 33 is a protein called 50S ribosomal protein L36.

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

- Molecule 34 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	RA	2882	Total	C	N	O	P	0	0	0
			62070	27627	11611	19951	2881			
34	YA	2883	Total	C	N	O	P	0	0	0
			62091	27636	11613	19960	2882			

- Molecule 35 is a RNA chain called 5S rRNA.

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

- Molecule 36 is a protein called 50S ribosomal protein L2.

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

- Molecule 37 is a protein called 50S ribosomal protein L3.

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

- Molecule 38 is a protein called 50S ribosomal protein L4.

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

- Molecule 39 is a protein called 50S ribosomal protein L5.

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

- Molecule 40 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	RH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			
40	YH	174	Total	C	N	O	S	0	0	0
			1336	848	251	236	1			

- Molecule 41 is a protein called 50S ribosomal protein L9.

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

- Molecule 42 is a protein called 50S ribosomal protein L13.

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

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

- Molecule 43 is a protein called 50S ribosomal protein L14.

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

- Molecule 44 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	RP	150	Total	C	N	O	S	0	0	0
			1145	712	232	198	3			
44	YP	147	Total	C	N	O	S	0	0	0
			1122	698	229	192	3			

- Molecule 45 is a protein called 50S ribosomal protein L16.

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

- Molecule 46 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
46	RR	117	Total	C	N	O	0	0	0
			960	599	202	159			
46	YR	117	Total	C	N	O	0	0	0
			960	599	202	159			

- Molecule 47 is a protein called 50S ribosomal protein L18.

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

- Molecule 48 is a protein called 50S ribosomal protein L19.

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

- Molecule 49 is a protein called 50S ribosomal protein L20.

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

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

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

- Molecule 51 is a protein called 50S ribosomal protein L22.

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

- Molecule 52 is a protein called 50S ribosomal protein L23.

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

- Molecule 53 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	RY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			
53	YY	107	Total	C	N	O	S	0	0	0
			818	525	155	132	6			

- Molecule 54 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	RZ	183	Total	C	N	O	S	0	0	0
			1461	933	260	265	3			
54	YZ	193	Total	C	N	O	S	0	0	0
			1529	973	270	283	3			

- Molecule 55 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

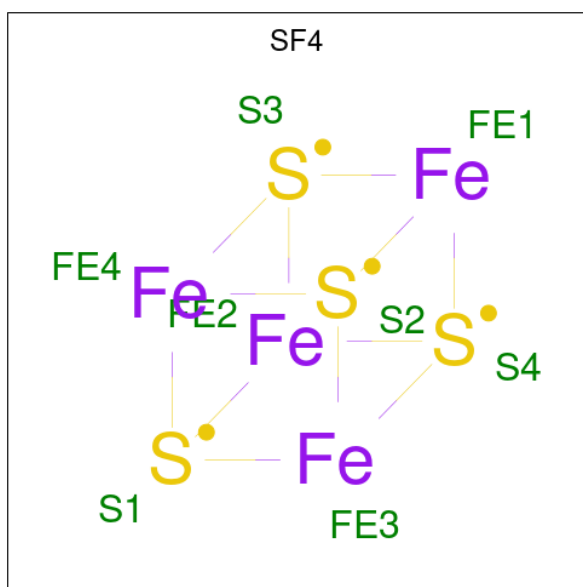
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	QA	70	Total	Mg	0	0
			70	70		
55	QE	1	Total	Mg	0	0
			1	1		
55	QF	1	Total	Mg	0	0
			1	1		
55	QH	2	Total	Mg	0	0
			2	2		
55	QL	2	Total	Mg	0	0
			2	2		
55	R0	2	Total	Mg	0	0
			2	2		
55	R3	1	Total	Mg	0	0
			1	1		
55	R8	2	Total	Mg	0	0
			2	2		
55	RA	432	Total	Mg	0	0
			432	432		
55	RD	1	Total	Mg	0	0
			1	1		
55	RE	4	Total	Mg	0	0
			4	4		
55	RF	2	Total	Mg	0	0
			2	2		
55	RN	1	Total	Mg	0	0
			1	1		
55	RO	1	Total	Mg	0	0
			1	1		

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Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	XA	88	Total 88	Mg 88	0	0
55	XE	1	Total 1	Mg 1	0	0
55	XO	1	Total 1	Mg 1	0	0
55	Y1	1	Total 1	Mg 1	0	0
55	Y2	1	Total 1	Mg 1	0	0
55	Y5	1	Total 1	Mg 1	0	0
55	Y7	1	Total 1	Mg 1	0	0
55	Y8	2	Total 2	Mg 2	0	0
55	YA	394	Total 394	Mg 394	0	0
55	YB	1	Total 1	Mg 1	0	0
55	YD	2	Total 2	Mg 2	0	0
55	YE	4	Total 4	Mg 4	0	0
55	YF	1	Total 1	Mg 1	0	0
55	YP	1	Total 1	Mg 1	0	0
55	YQ	1	Total 1	Mg 1	0	0
55	YR	2	Total 2	Mg 2	0	0
55	YU	1	Total 1	Mg 1	0	0
55	YX	1	Total 1	Mg 1	0	0

- Molecule 56 is IRON/SULFUR CLUSTER (CCD ID: SF4) (formula: Fe₄S₄).



Mol	Chain	Residues	Atoms			ZeroOcc	AltConf
56	QD	1	Total	Fe	S	0	0
			8	4	4		
56	XD	1	Total	Fe	S	0	0
			8	4	4		

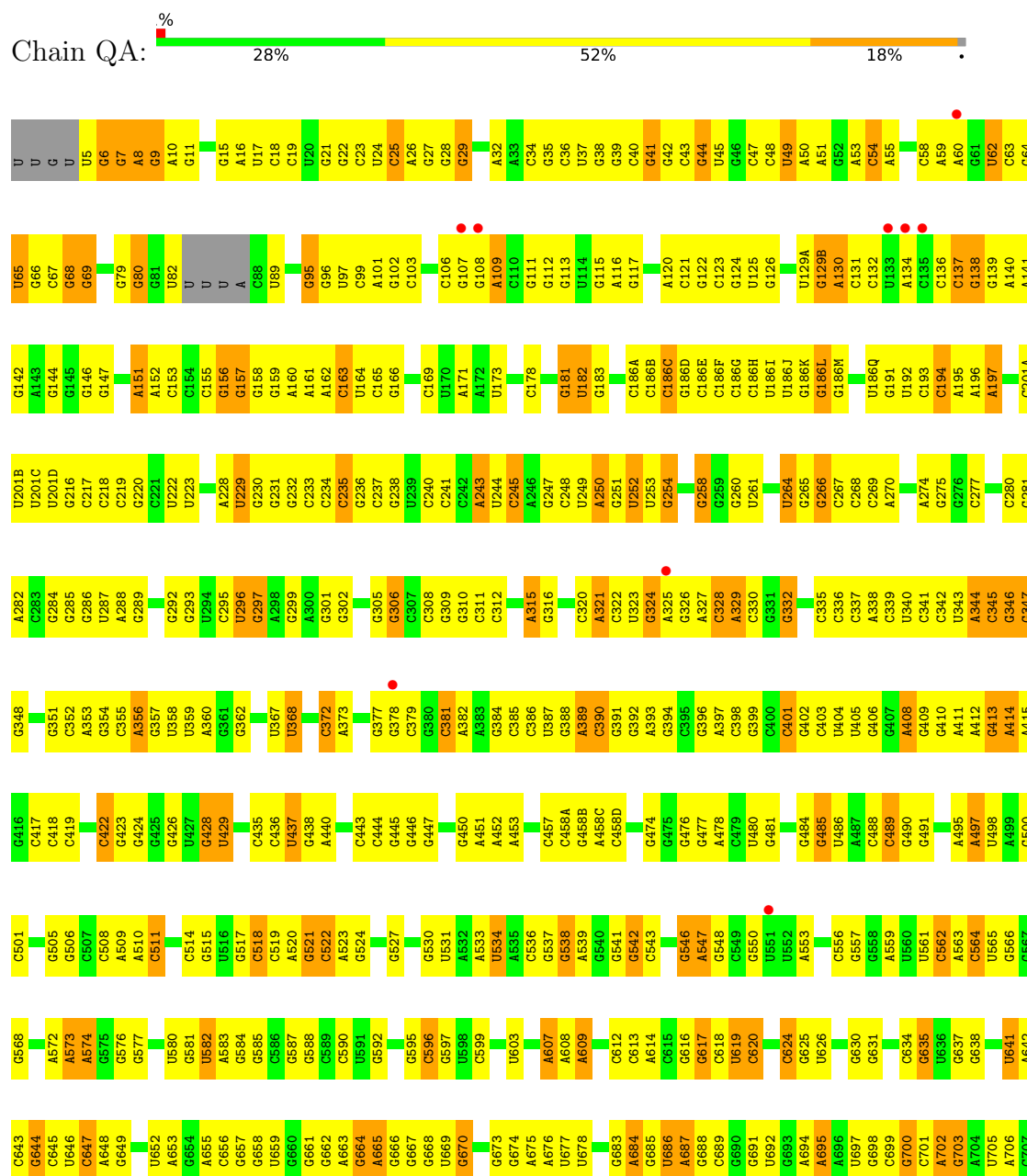
- Molecule 57 is ZINC ION (CCD ID: ZN) (formula: Zn).

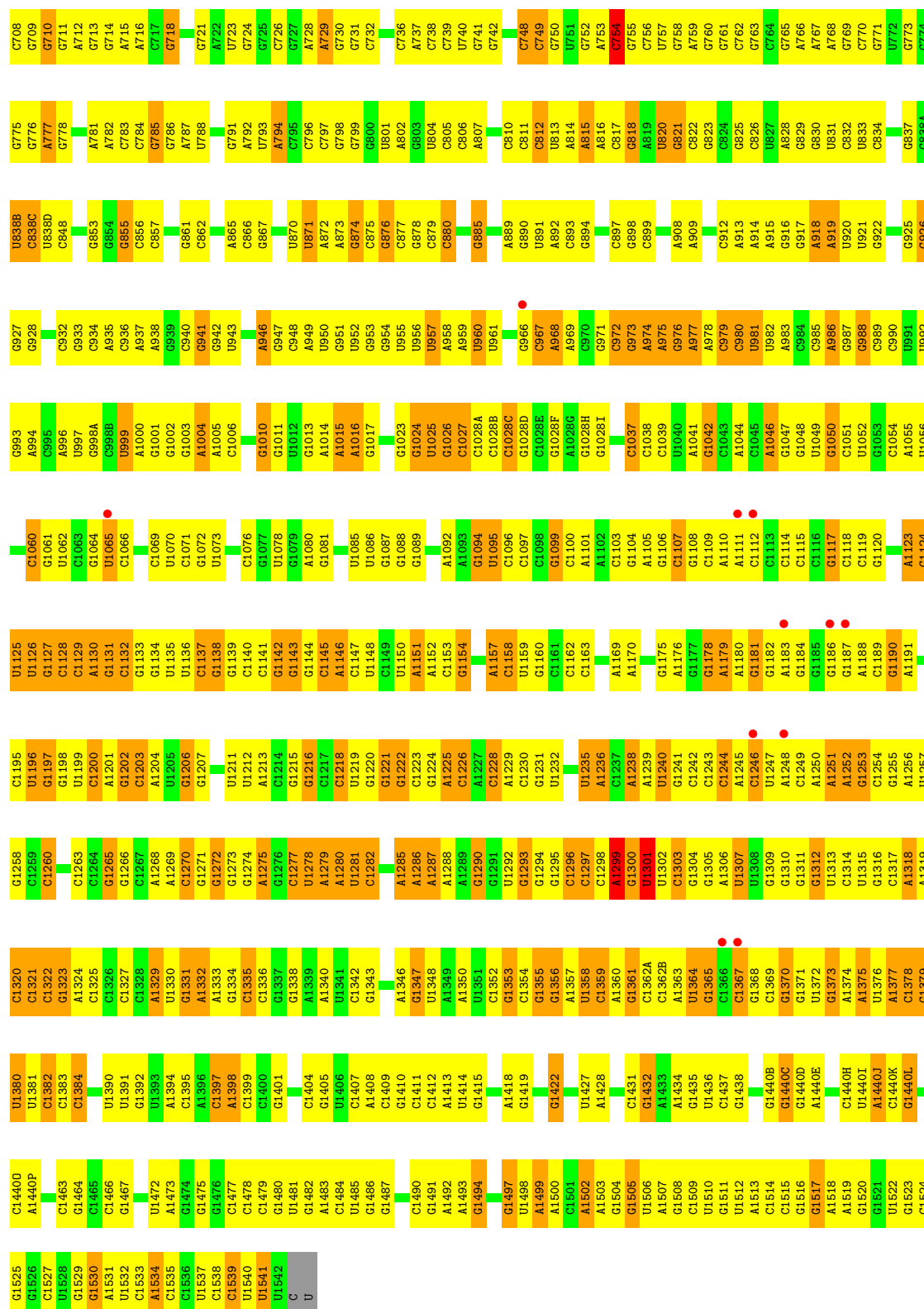
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	QN	1	Total	Zn	0	0
			1	1		
57	R5	1	Total	Zn	0	0
			1	1		
57	R6	1	Total	Zn	0	0
			1	1		
57	R9	1	Total	Zn	0	0
			1	1		
57	RY	1	Total	Zn	0	0
			1	1		
57	XN	1	Total	Zn	0	0
			1	1		
57	Y5	1	Total	Zn	0	0
			1	1		
57	Y6	1	Total	Zn	0	0
			1	1		
57	Y9	1	Total	Zn	0	0
			1	1		
57	YY	1	Total	Zn	0	0
			1	1		

3 Residue-property plots

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

• Molecule 1: 16S rRNA

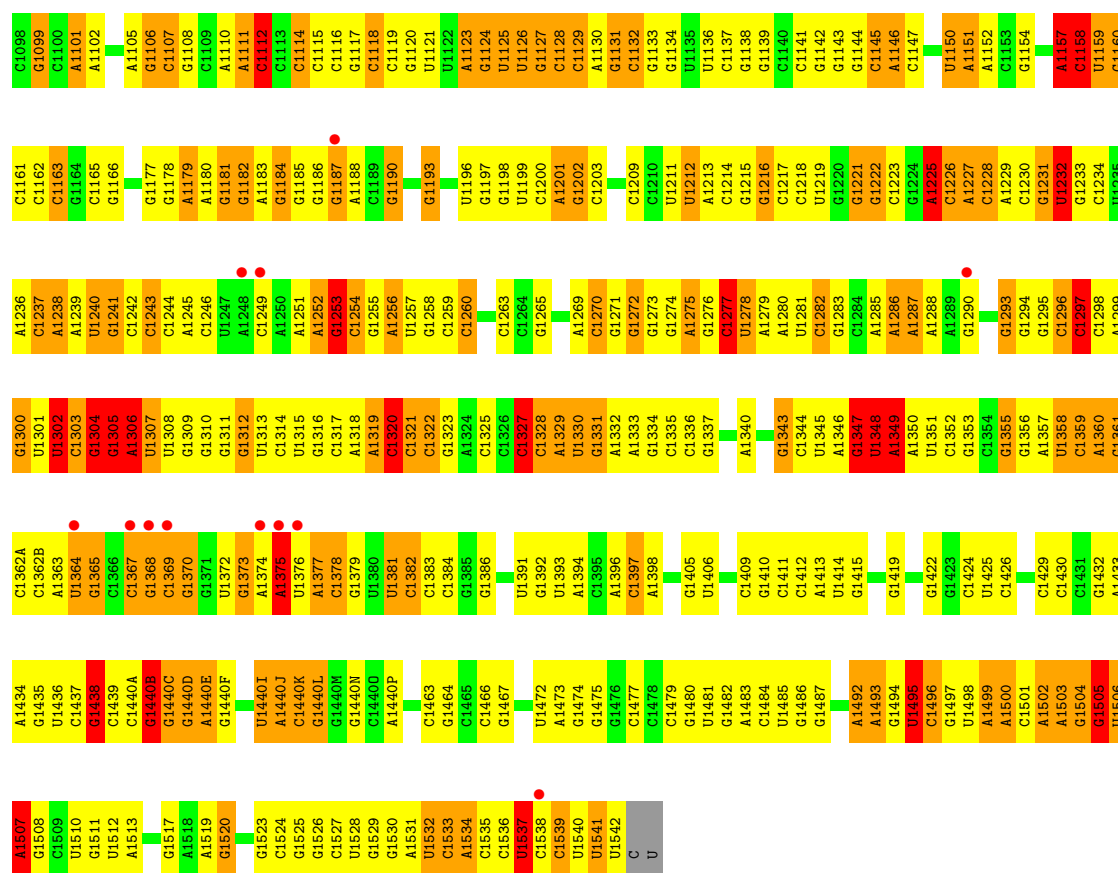




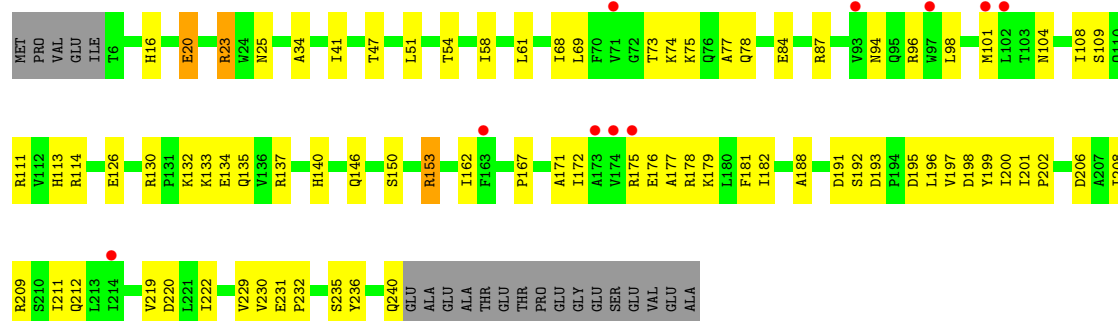
● Molecule 1: 16S rRNA



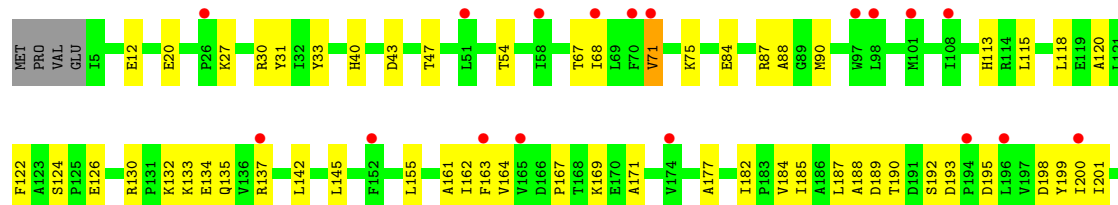


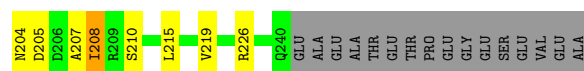


• Molecule 2: 30S ribosomal protein S2

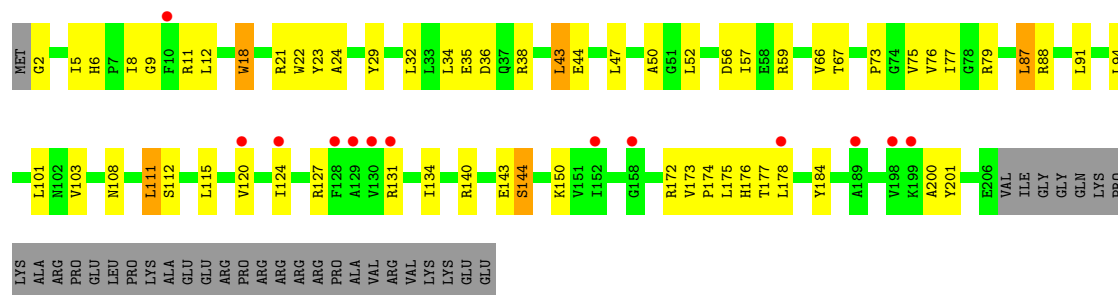


• Molecule 2: 30S ribosomal protein S2

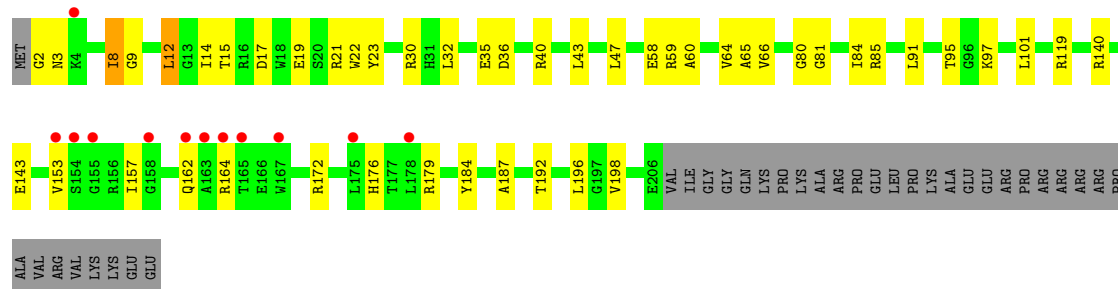




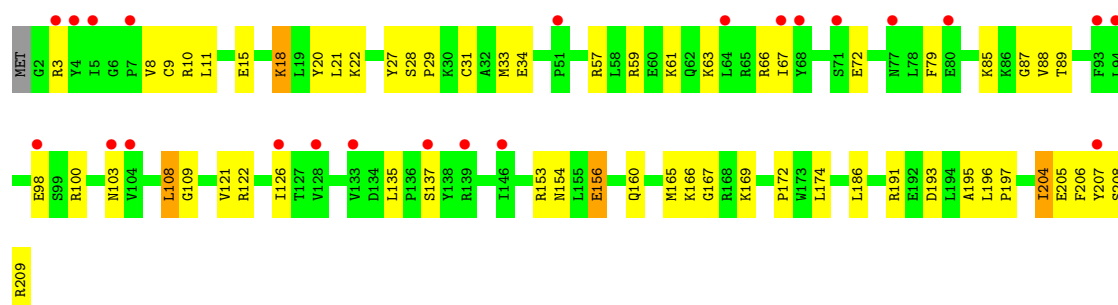
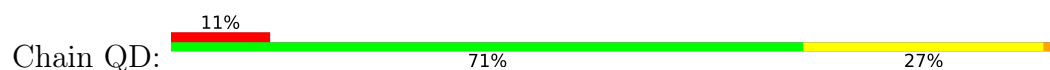
• Molecule 3: 30S ribosomal protein S3



• Molecule 3: 30S ribosomal protein S3

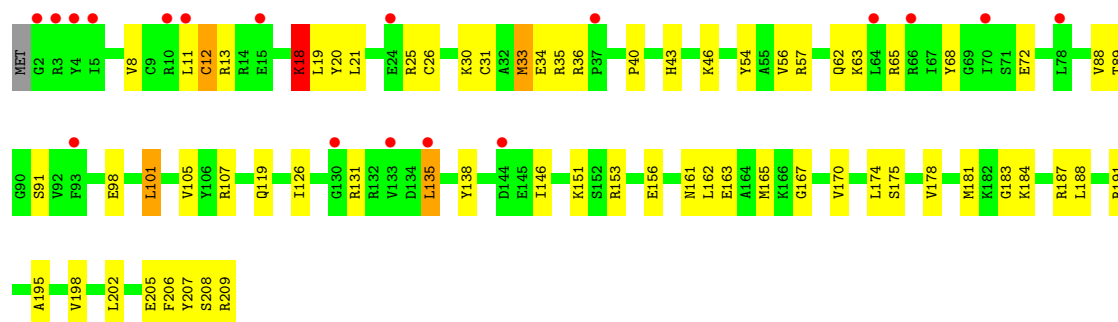


• Molecule 4: 30S ribosomal protein S4

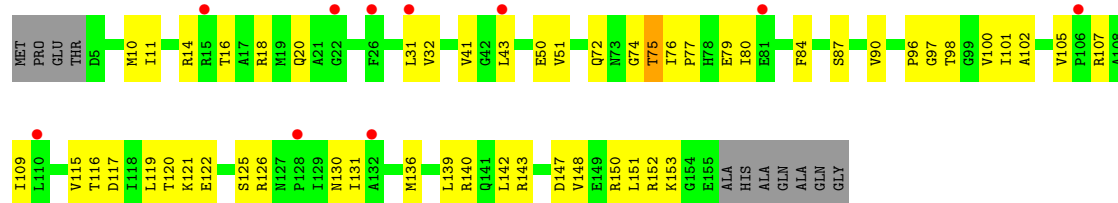


• Molecule 4: 30S ribosomal protein S4

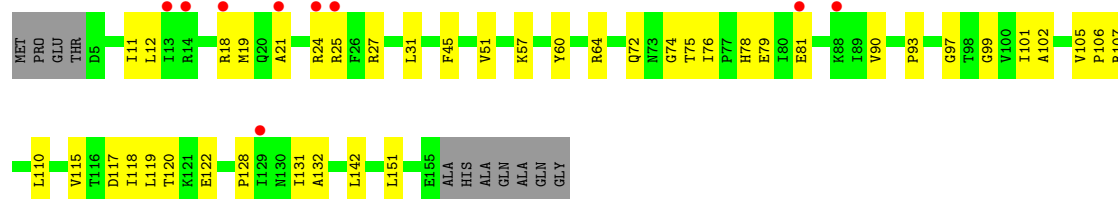




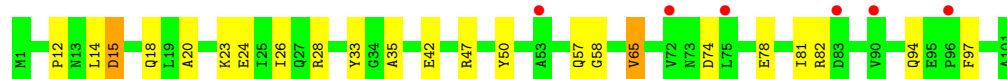
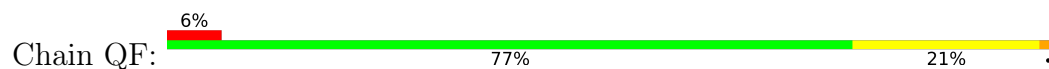
• Molecule 5: 30S ribosomal protein S5



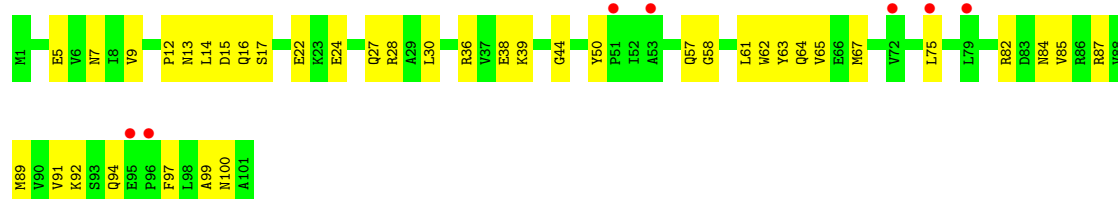
• Molecule 5: 30S ribosomal protein S5



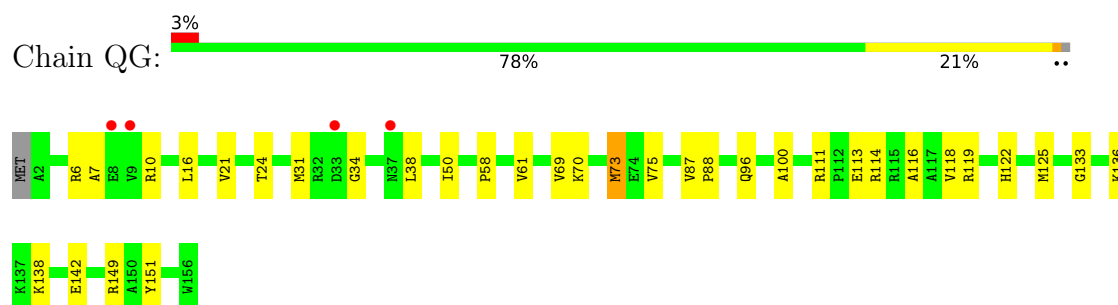
• Molecule 6: 30S ribosomal protein S6



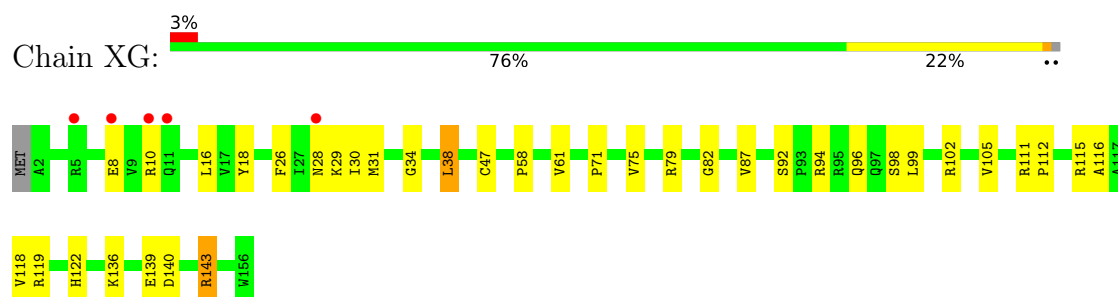
• Molecule 6: 30S ribosomal protein S6



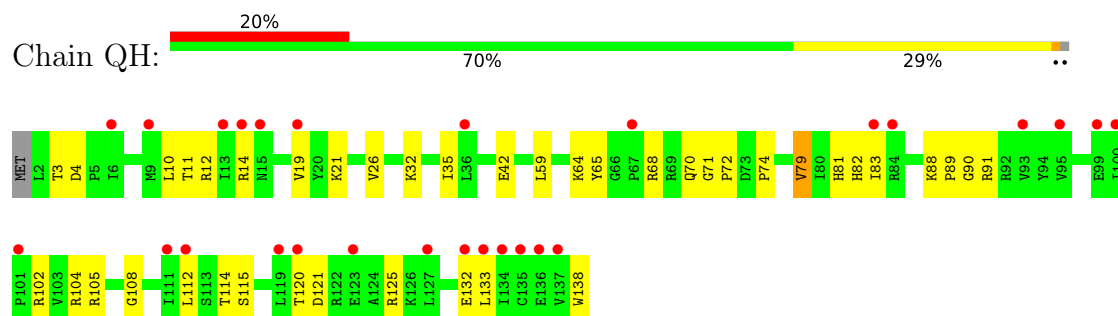
- Molecule 7: 30S ribosomal protein S7



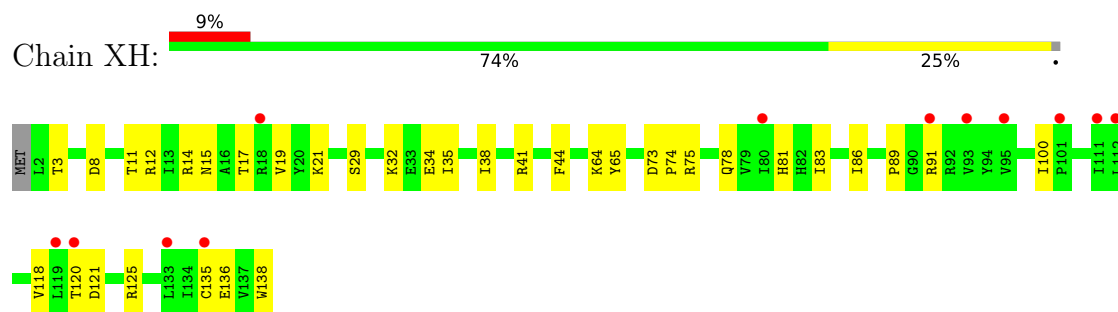
- Molecule 7: 30S ribosomal protein S7



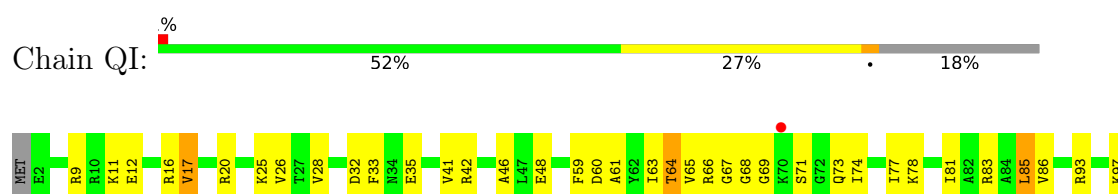
- Molecule 8: 30S ribosomal protein S8

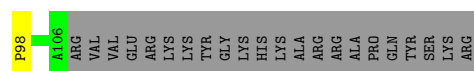


- Molecule 8: 30S ribosomal protein S8

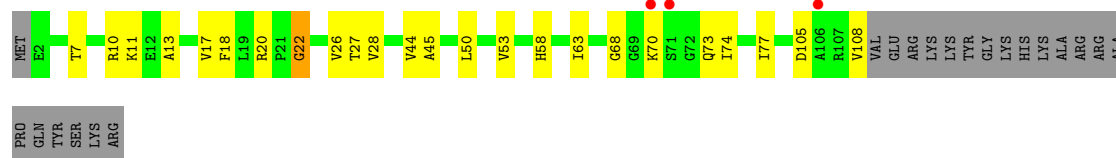


- Molecule 9: 30S ribosomal protein S9

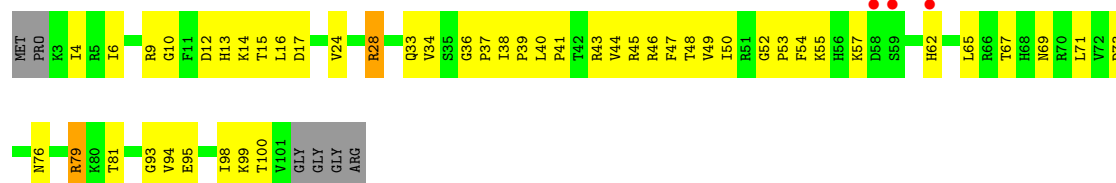




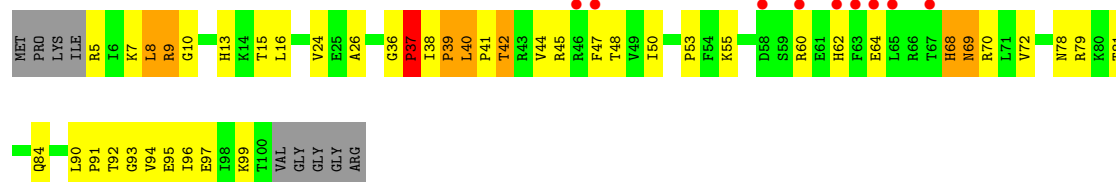
- Molecule 9: 30S ribosomal protein S9



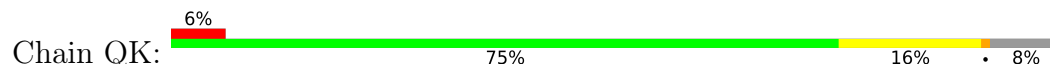
- Molecule 10: 30S ribosomal protein S10



- Molecule 10: 30S ribosomal protein S10

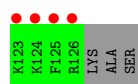


- Molecule 11: 30S ribosomal protein S11

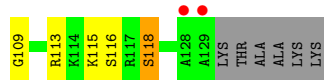
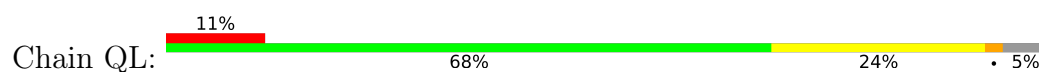


- Molecule 11: 30S ribosomal protein S11

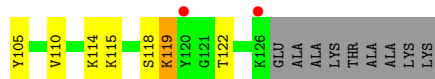
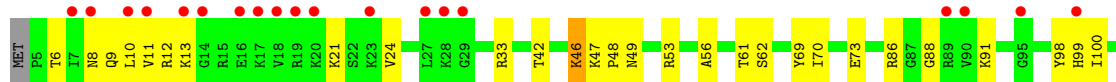




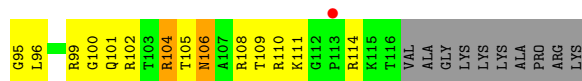
- Molecule 12: 30S ribosomal protein S12



- Molecule 12: 30S ribosomal protein S12



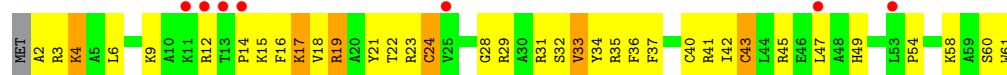
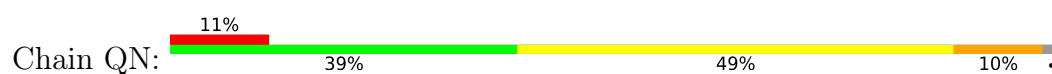
- Molecule 13: 30S ribosomal protein S13



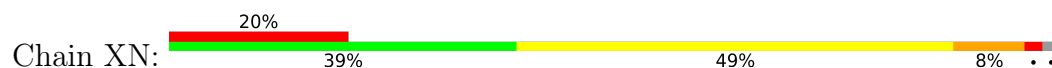
- Molecule 13: 30S ribosomal protein S13



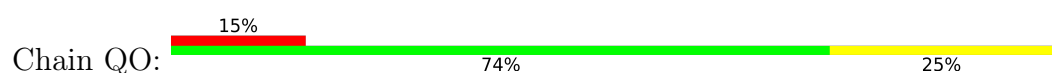
- Molecule 14: 30S ribosomal protein S14 type Z



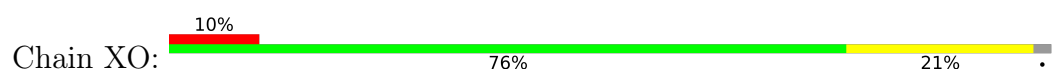
- Molecule 14: 30S ribosomal protein S14 type Z



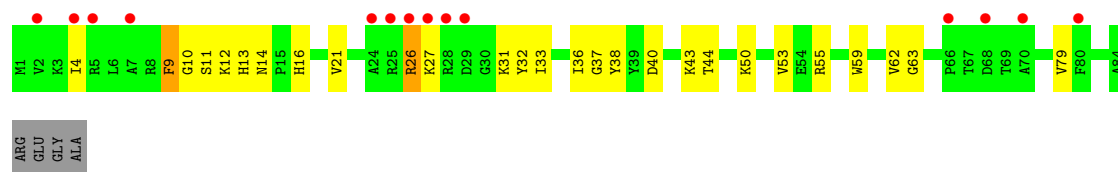
- Molecule 15: 30S ribosomal protein S15



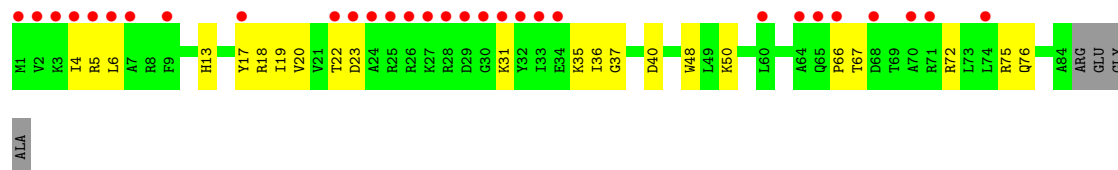
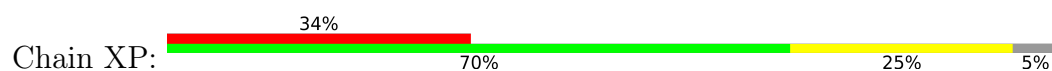
- Molecule 15: 30S ribosomal protein S15



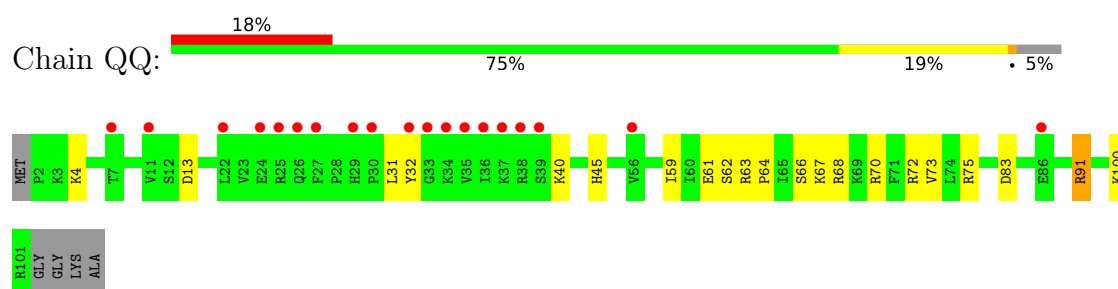
- Molecule 16: 30S ribosomal protein S16



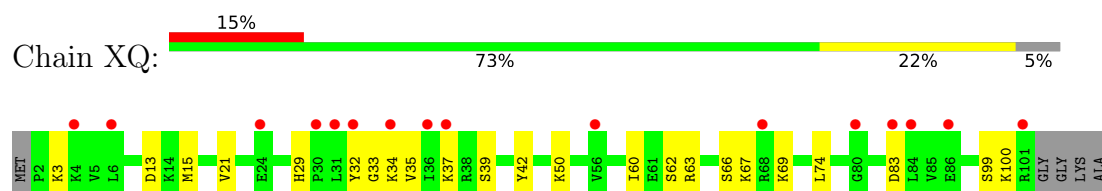
- Molecule 16: 30S ribosomal protein S16



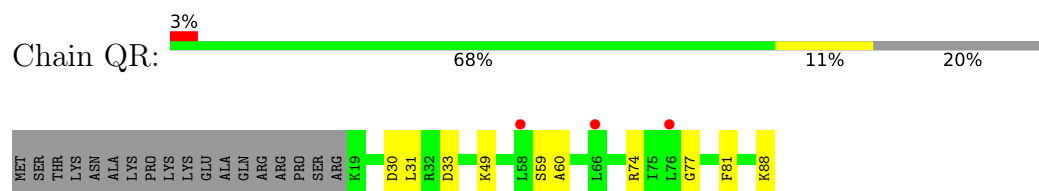
- Molecule 17: 30S ribosomal protein S17



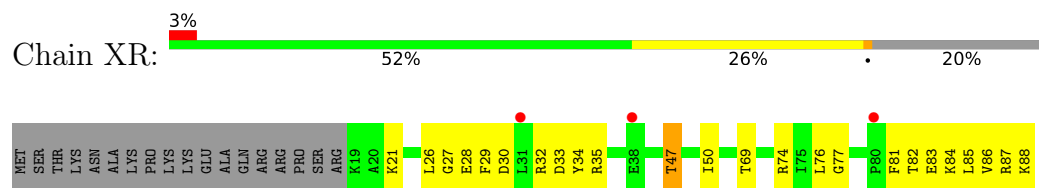
- Molecule 17: 30S ribosomal protein S17



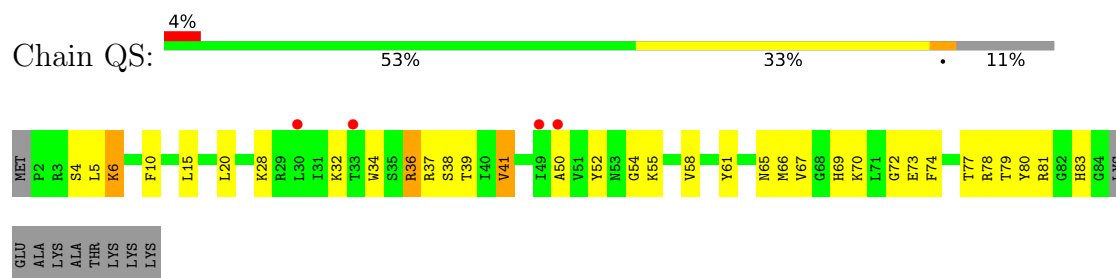
- Molecule 18: 30S ribosomal protein S18



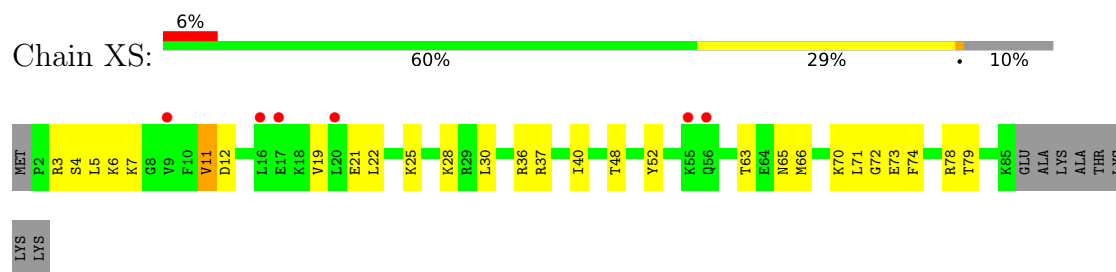
- Molecule 18: 30S ribosomal protein S18



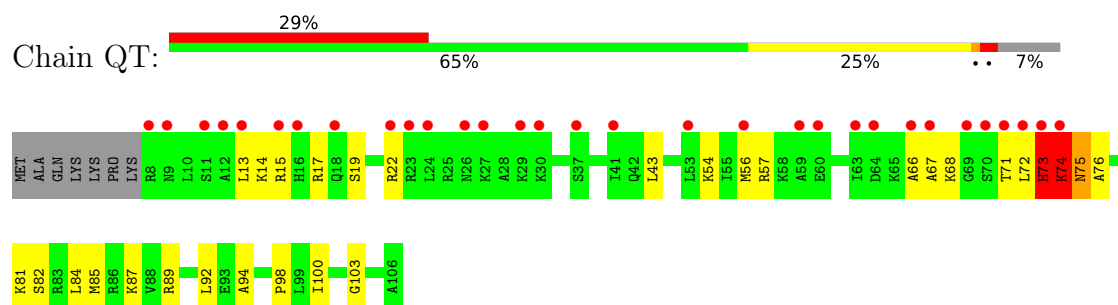
- Molecule 19: 30S ribosomal protein S19



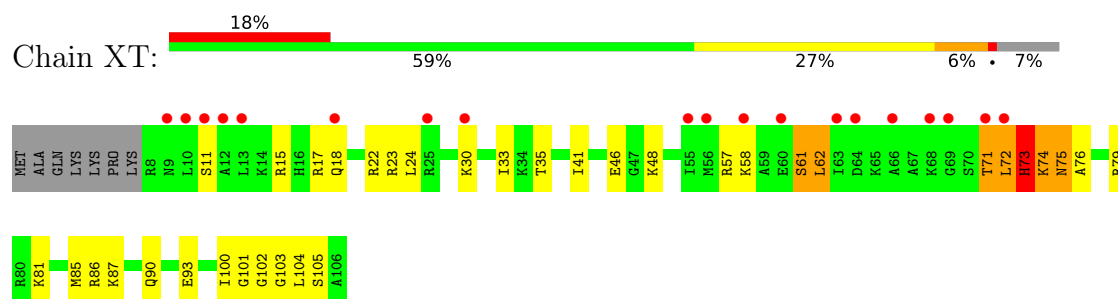
- Molecule 19: 30S ribosomal protein S19



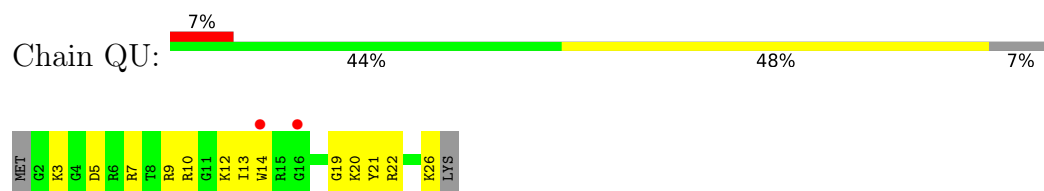
- Molecule 20: 30S ribosomal protein S20



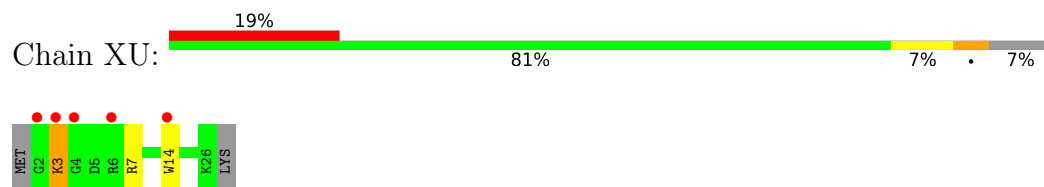
- Molecule 20: 30S ribosomal protein S20



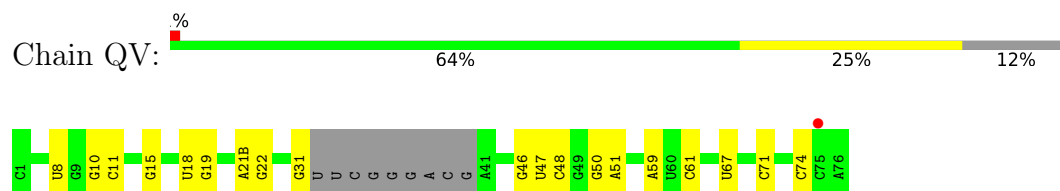
- Molecule 21: 30S ribosomal protein Thx



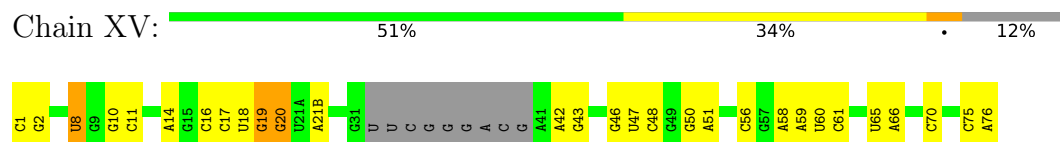
- Molecule 21: 30S ribosomal protein Thx



- Molecule 22: tRNA(Pro)



- Molecule 22: tRNA(Pro)



- Molecule 23: mRNA

Chain QX:  42% 53% 5%



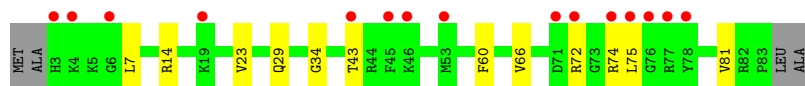
- Molecule 23: mRNA

Chain XX:  47% 26% 26%



- Molecule 24: 50S ribosomal protein L27

Chain R0:  18% 81% 14% 5%



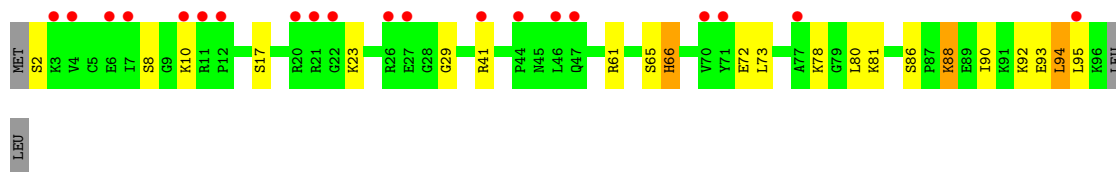
- Molecule 24: 50S ribosomal protein L27

Chain Y0:  7% 81% 15% .



- Molecule 25: 50S ribosomal protein L28

Chain R1:  20% 74% 19% . .



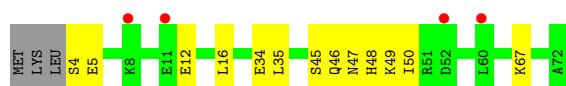
- Molecule 25: 50S ribosomal protein L28

Chain Y1:  15% 78% 17% 5%

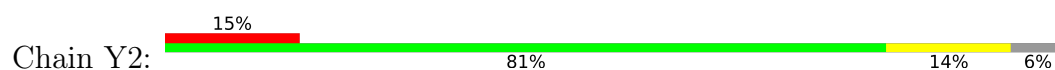


- Molecule 26: 50S ribosomal protein L29

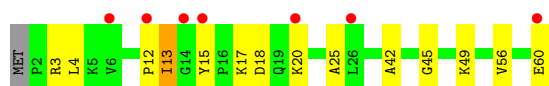
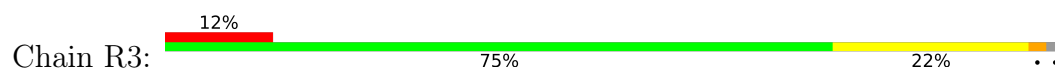
Chain R2:  6% 78% 18% .



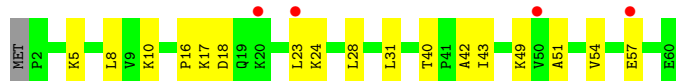
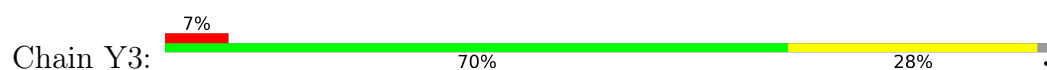
- Molecule 26: 50S ribosomal protein L29



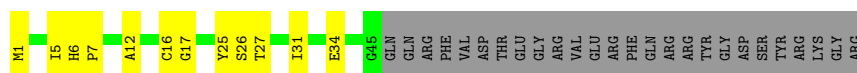
- Molecule 27: 50S ribosomal protein L30



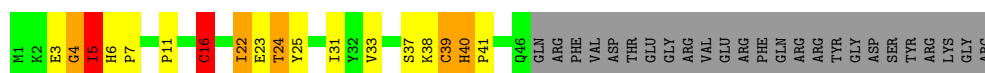
- Molecule 27: 50S ribosomal protein L30



- Molecule 28: 50S ribosomal protein L31



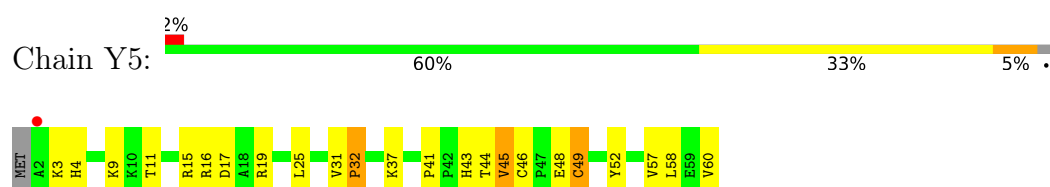
- Molecule 28: 50S ribosomal protein L31



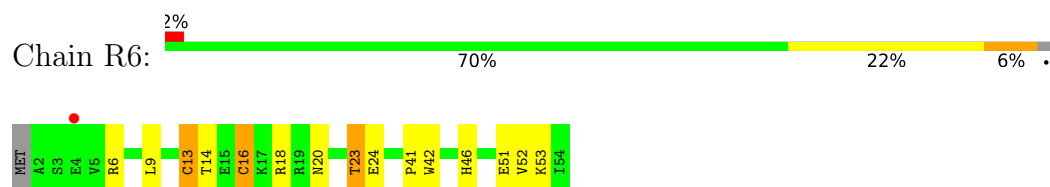
- Molecule 29: 50S ribosomal protein L32



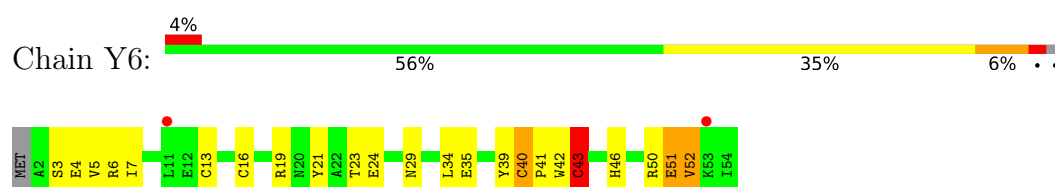
- Molecule 29: 50S ribosomal protein L32



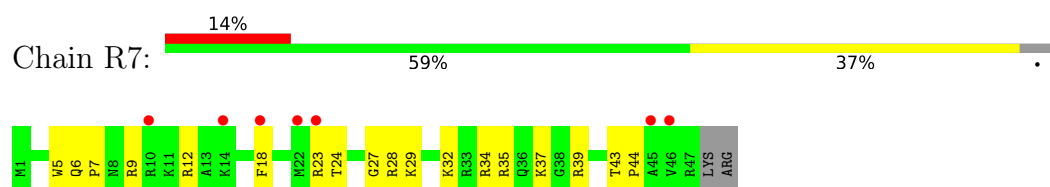
- Molecule 30: 50S ribosomal protein L33



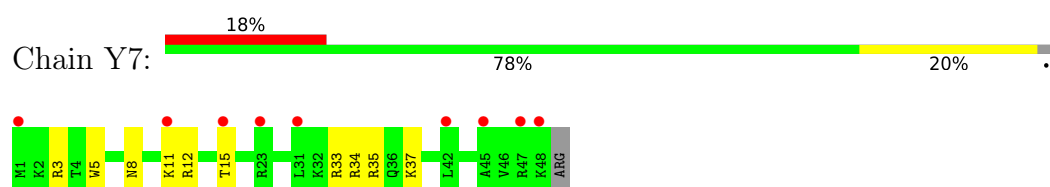
- Molecule 30: 50S ribosomal protein L33



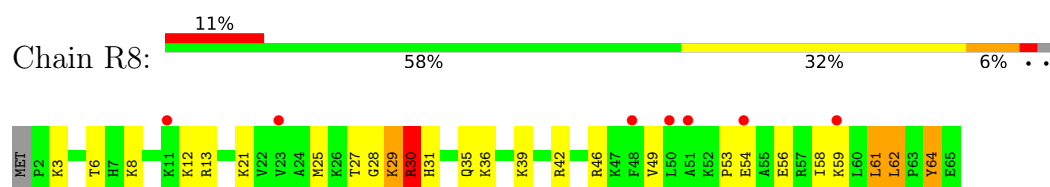
- Molecule 31: 50S ribosomal protein L34



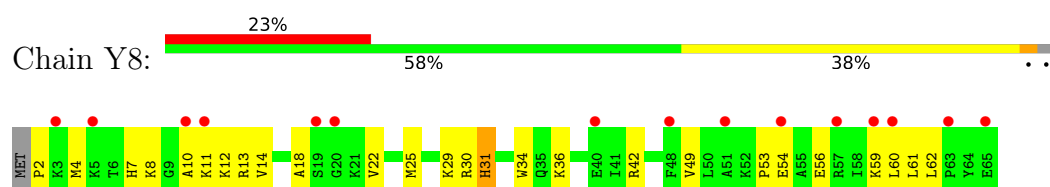
- Molecule 31: 50S ribosomal protein L34



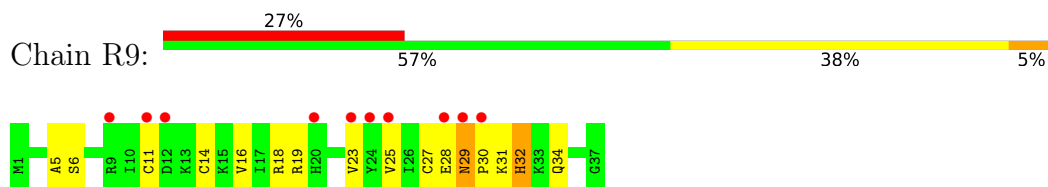
- Molecule 32: 50S ribosomal protein L35



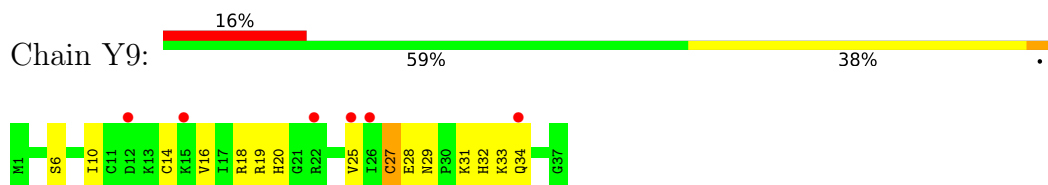
- Molecule 32: 50S ribosomal protein L35



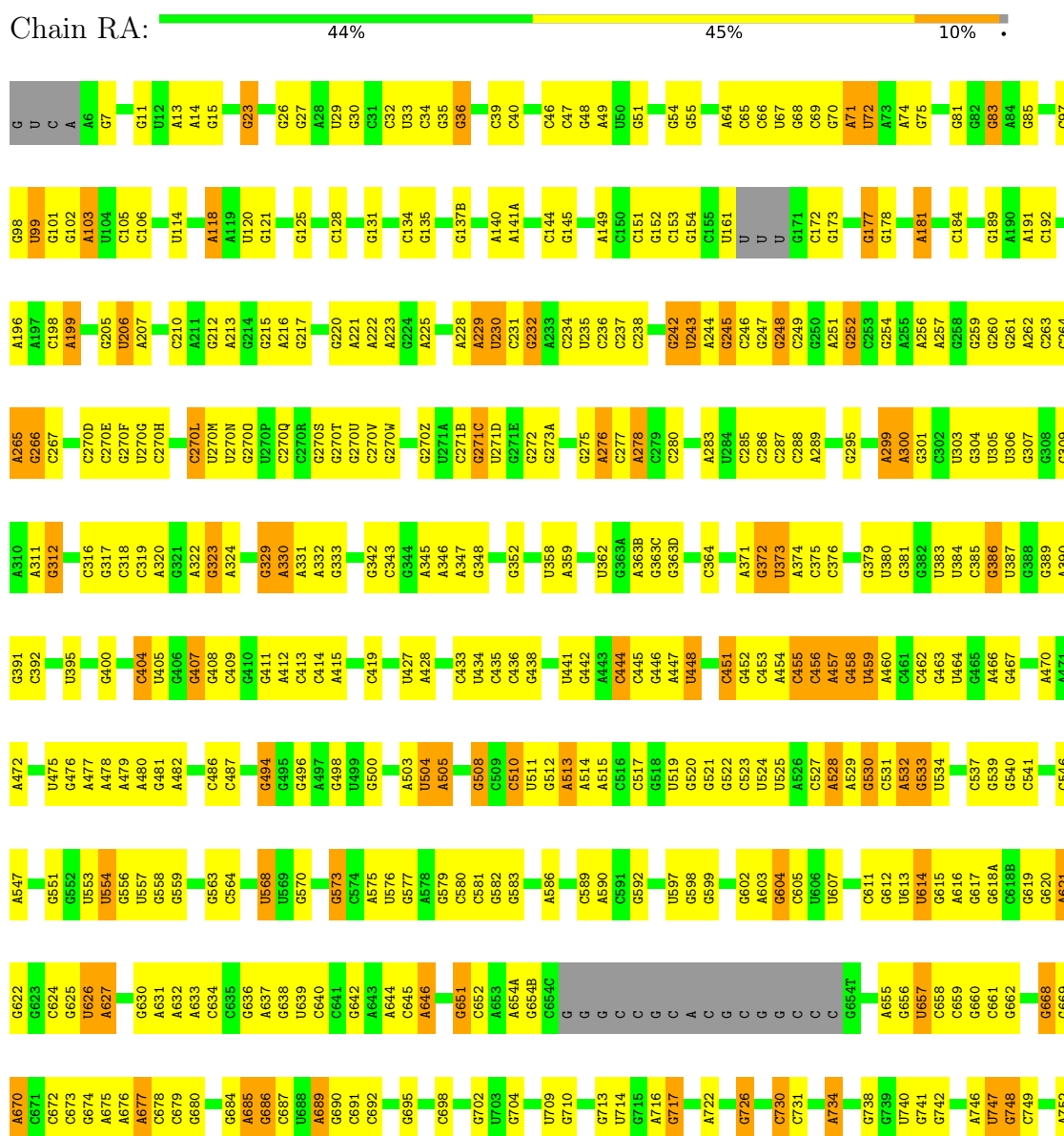
- Molecule 33: 50S ribosomal protein L36



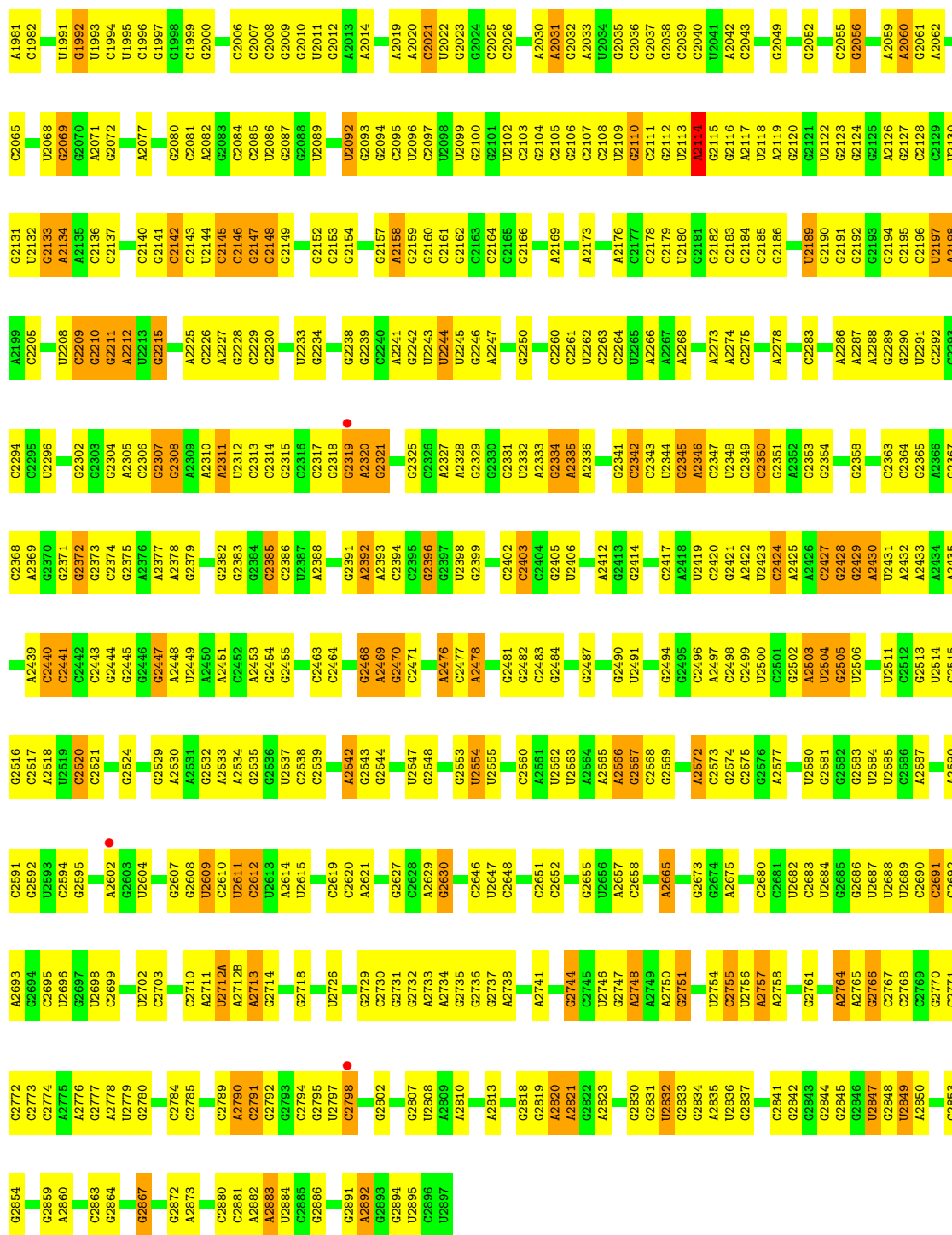
- Molecule 33: 50S ribosomal protein L36



- Molecule 34: 23S rRNA

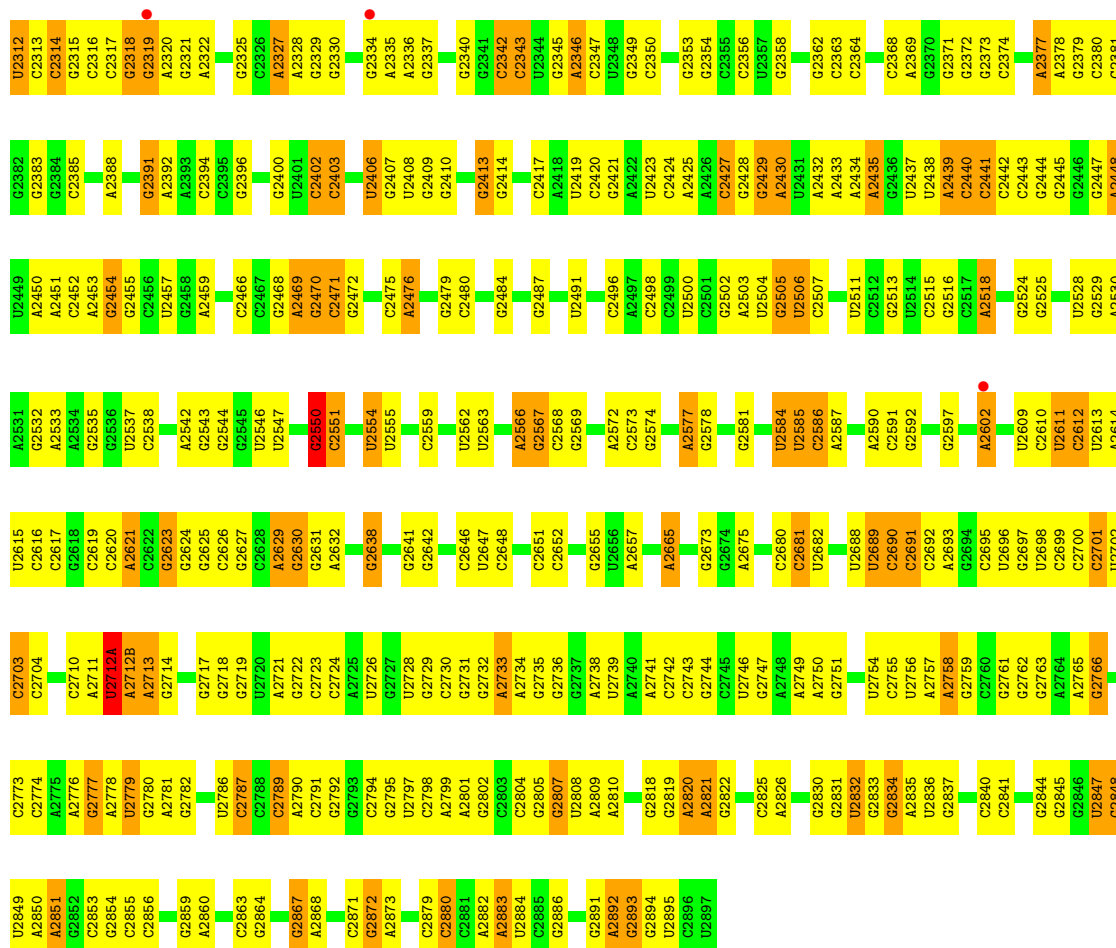


WORLDWIDE
PDB
PROTEIN DATA BANK



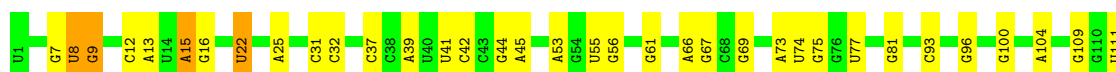
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A1095	G1030	A953	A879	G808	G738	C	G609B	A532	A460	C461	A311	C270D	A199	G99
U1096	U1033	G956	G880	U811	G739	G	G654U	G533	C461	G382	G312	C270E	G204	G101
A1097	G1034	A957	G881	C812	U740	C	C654V	U534	A466	U384	C316	U270F	A205	G102
A1098	U1035	U958	C882	U813	G741	C	A654W	C535	G467	U385	C317	U270G	G205	A103
G1099	G1036	A958	G883	C814	G742	C	A654W	A536	A468	U386	C318	C270H	C208	C106
	U1037	U959	C884	C815	G743	C	G654W	C537	G469	U387	C319	C270I	C209	C107
	G1038	C886	C816	G615	G745	C	G615	G539	A466	U388	C318	C270J	C210	
C1102	A1039	A960	C817	G616	U746	C	G617	G540	G468	U389	C319	C270K		A118
A1103	G1040	G961	C818	G617	U747	C	G618	C544	G469	U390	G321	U270M	G215	A119
C1104	C1041	U963	C819	G618	G748	C	G619	G545	A470	A390	A322	U270N	A216	U120
	G1042		A820	G619	G749	C	G620	C546	A471	A391	G323	G270O	G217	
	C1043	C971	A821	G620		C	A621	A547	A472	C392				G125
A1111	G1044	G972	A822	G621	A752	C	G622	U553	G473	G399	G329	C270Q	G220	
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U1113	A1046	G974A	G824	G623	G754	C	G624	G554	A479	C404	A331	C270S	A222	C129
G1114	A1047	C974B	G825	G624	C755	C	G625	G555	A480	U405	A332	C270T	A223	C130
G1115	G1048	G975	G826	G625	C756	C	G626	U557	A481	G406		C270U	G226	G131
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C1118	A1050	A984	G831	G628	G759	C	G629	G563	C486	C409	G338	G270X	A229	
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G1120	A1054	C986	C834	A632	A764	C	A633	U568	G491	C411	G341	G270Z	G231	G137B
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G1122	U1056	A988	U839	C635	C766	C	C636		G493	C413	G343	U271D	A233	G139
C1123	A1057	G989	U840	G636		C	G637	G573	G494	C414	G344	G271E	A234	A140
G1125	G1058	A910	C840	G637	G770	C	G638	C574	G495	C415	G345	C273E	C236	C141B
A1126	U1060	A911	C841	G638	C771	C	G639	C575	G496	C416	G346	U273F	C237	G142
C1127	U1061		C842	G639	U772	C	U839	A576	A497	C417	G347	C273G	C238	C143
A1128	G993		C843	U639	G773	C	C840	U577	G498		G348	G274	A241	G144
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G1131	C997		C847	G644	U777	C	C644	C581	G506	C278	A357	C278	G245	
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C1133	A1000		C849	A646	U779	C	A646	G583	A508	A428	U359	C280	G247	U161
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C1136			C851	G648	C781	C	C648	G585	C510	G361	U362	U284	C249	U
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G1151	A1081		C863	G	A793	C	C	G598	G521	U524	G371	G299	A265	A190
C1152	U1082		C864	G	C794	C	C	G599	G522	U525	A372	A300	G267	C192
G1153	A1083		C865	G	C795	C	C	G600	U526	A453	U373	A301	C268	A195
C1154	U1084		C866	G	C796	C	C	G601	A527	A454	A374	U303	U269	G196
A1155	A1085		A866	G	G797	C	A	G602	A528	C455	C375	U304	A196	
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C1159	U1025		A801	G	A801	C	G							
G1160	A1026		A871	G	A871	C	G							
	U1027		A872	G	A872	C	G							

U2233	G2090	U1939	A1848	G1764	A1654	G1560	G1484	C1403				A1237	C1161
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G2141	C2081	G2012	A1928	C1836	G1753	G1645	C1547					U1312	
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C2143	G2083	C1837	U1930	C1838	A1755	G1648						G1316	
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C2145	C2085	A2016	A1932									G1318	
G2146	U2086	A2019	A1936	C1843	G1762	G1651						G1319	
C2147	G2087	A2020	A1937	C1844	A1762	A1652						G1401	
G2148	C2088	C2021	A1937	C1844	A1762	A1652						G1402	
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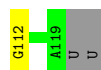
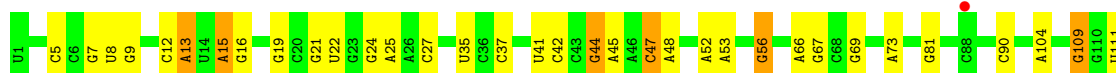
• Molecule 35: 5S rRNA

Chain RB: 68% 27% . .



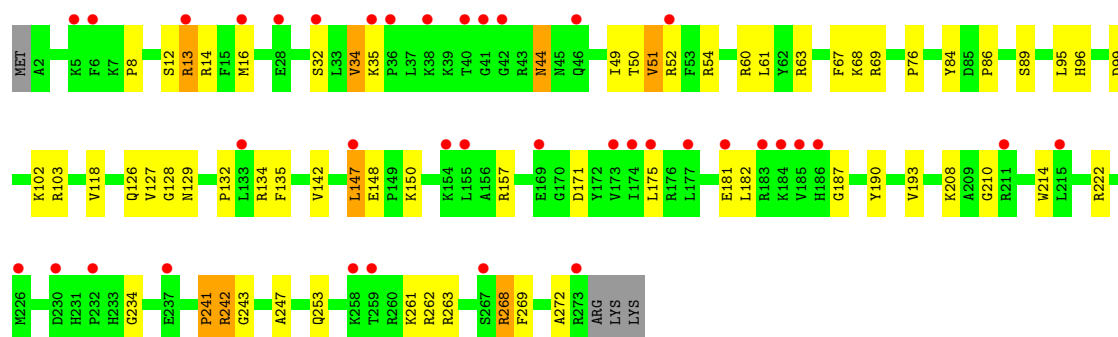
• Molecule 35: 5S rRNA

Chain YB: 70% 24% 5% .



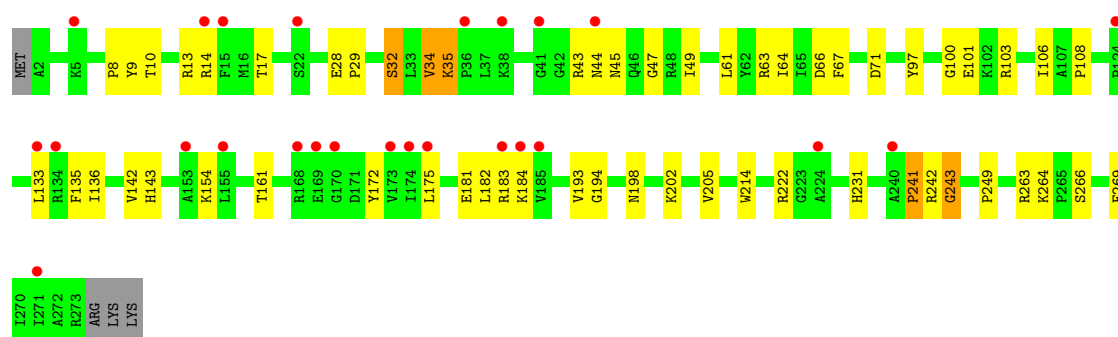
• Molecule 36: 50S ribosomal protein L2

Chain RD: 



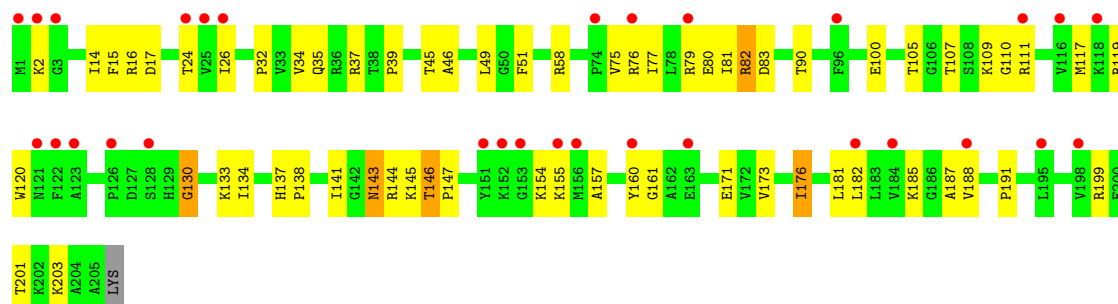
• Molecule 36: 50S ribosomal protein L2

Chain YD: 



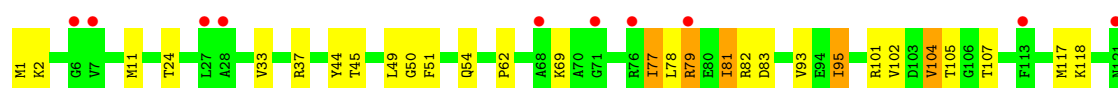
• Molecule 37: 50S ribosomal protein L3

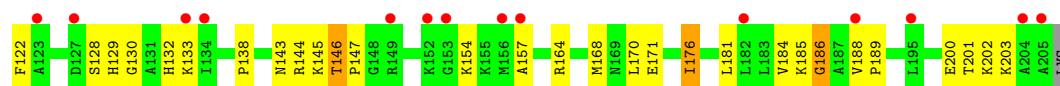
Chain RE: 



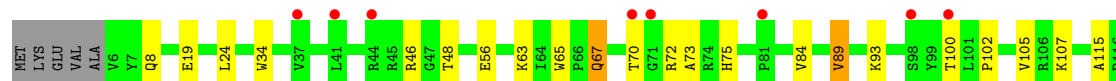
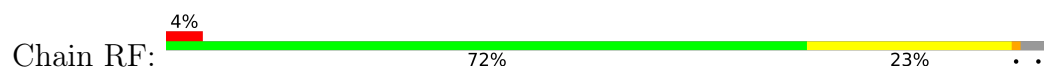
• Molecule 37: 50S ribosomal protein L3

Chain YE: 

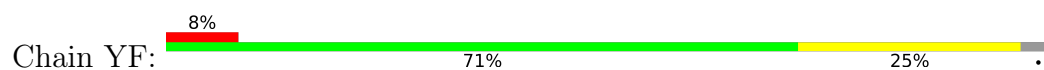




- Molecule 38: 50S ribosomal protein L4



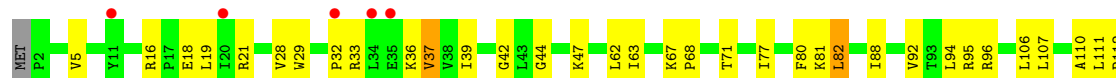
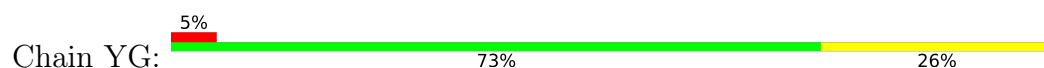
- Molecule 38: 50S ribosomal protein L4



- Molecule 39: 50S ribosomal protein L5

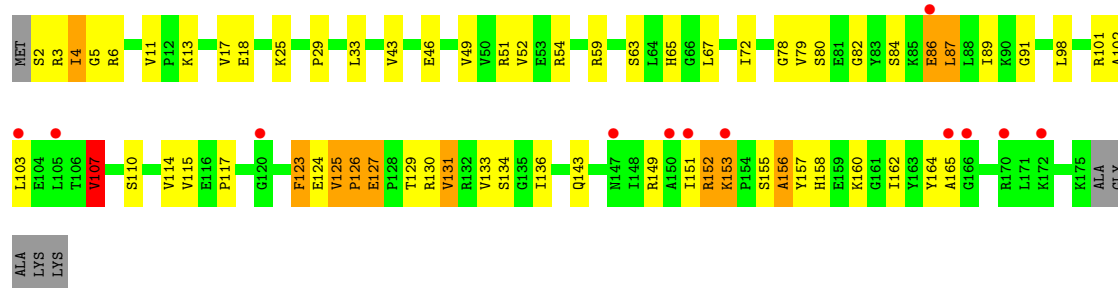


- Molecule 39: 50S ribosomal protein L5

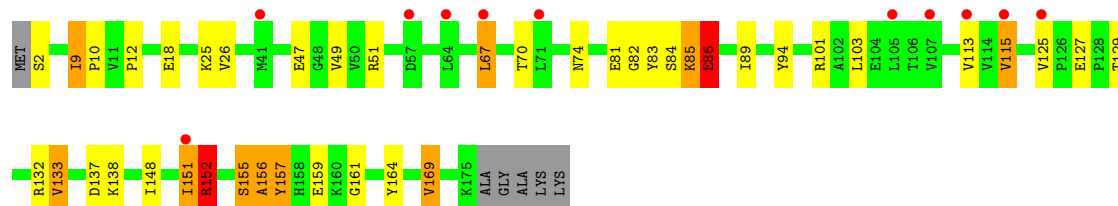
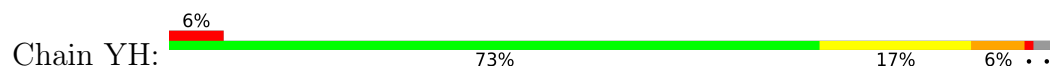


- Molecule 40: 50S ribosomal protein L6

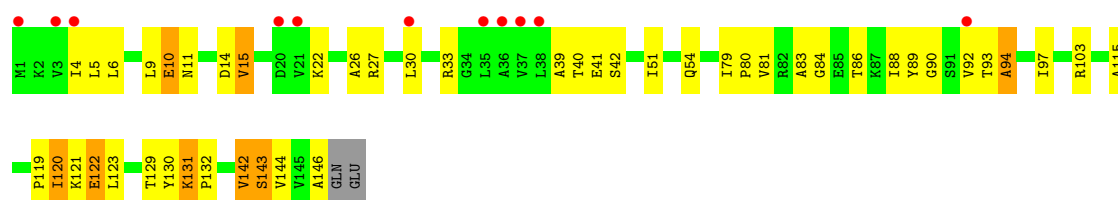




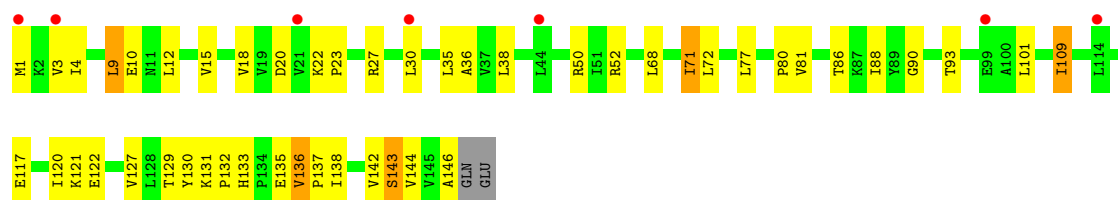
- Molecule 40: 50S ribosomal protein L6



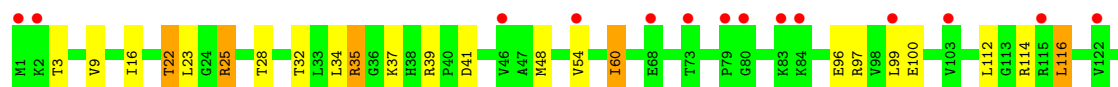
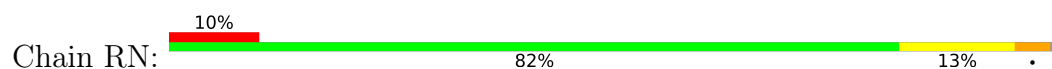
- Molecule 41: 50S ribosomal protein L9



- Molecule 41: 50S ribosomal protein L9

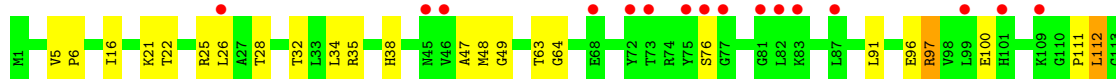
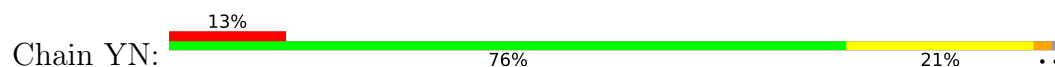


- Molecule 42: 50S ribosomal protein L13

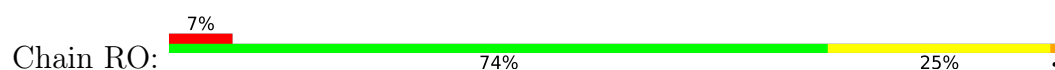




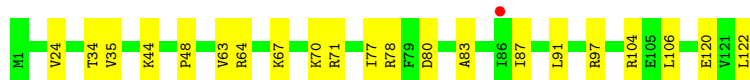
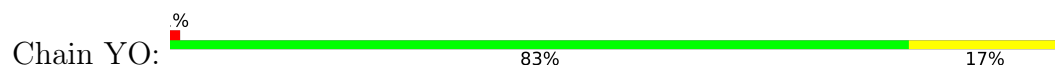
- Molecule 42: 50S ribosomal protein L13



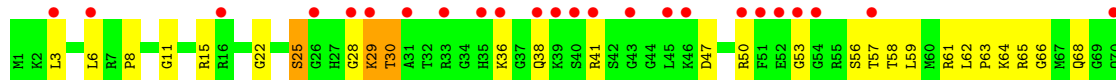
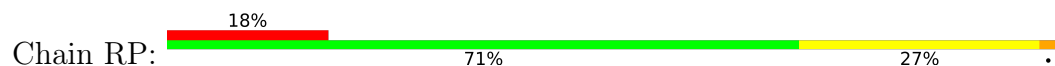
- Molecule 43: 50S ribosomal protein L14



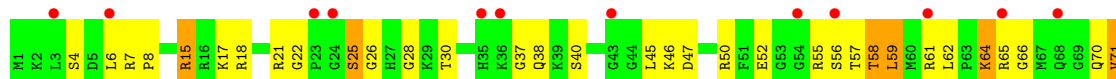
- Molecule 43: 50S ribosomal protein L14

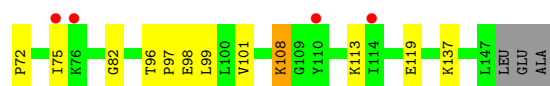


- Molecule 44: 50S ribosomal protein L15

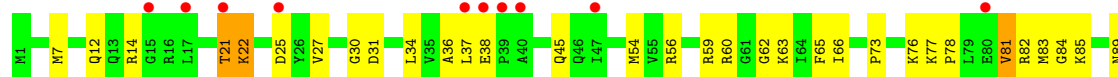


- Molecule 44: 50S ribosomal protein L15

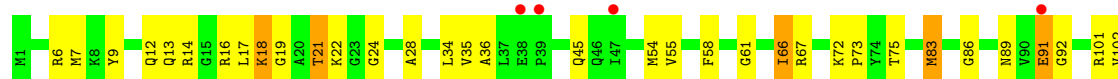
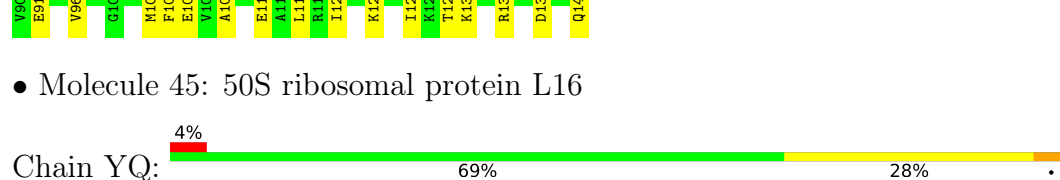




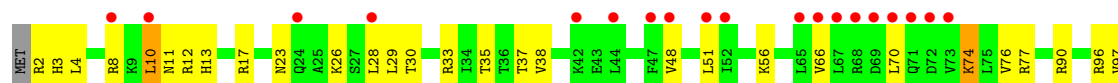
- Molecule 45: 50S ribosomal protein L16



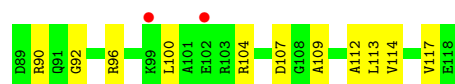
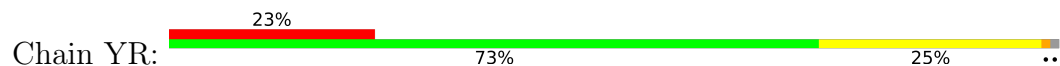
- Molecule 45: 50S ribosomal protein L16



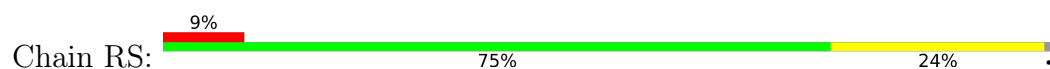
- Molecule 46: 50S ribosomal protein L17



- Molecule 46: 50S ribosomal protein L17

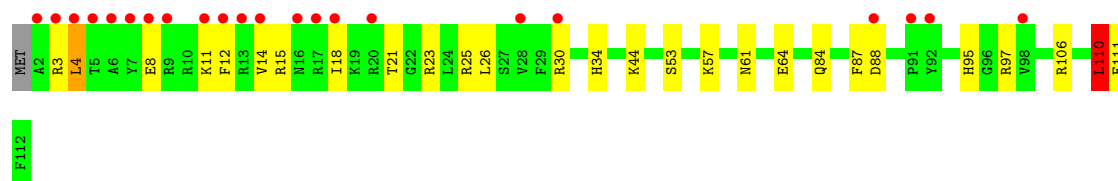
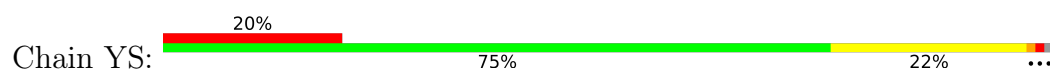


- Molecule 47: 50S ribosomal protein L18

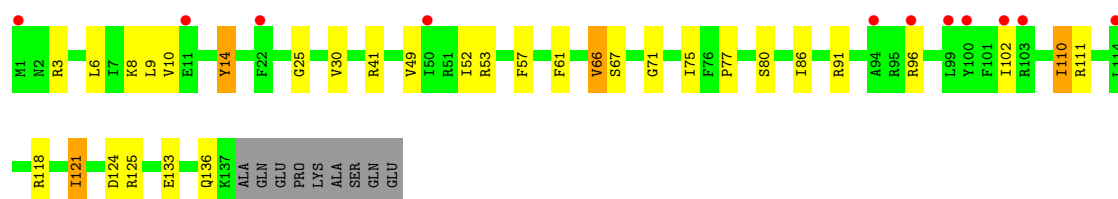
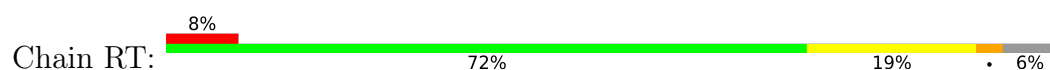




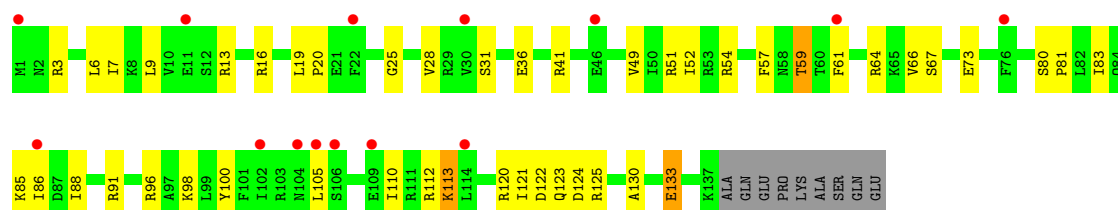
- Molecule 47: 50S ribosomal protein L18



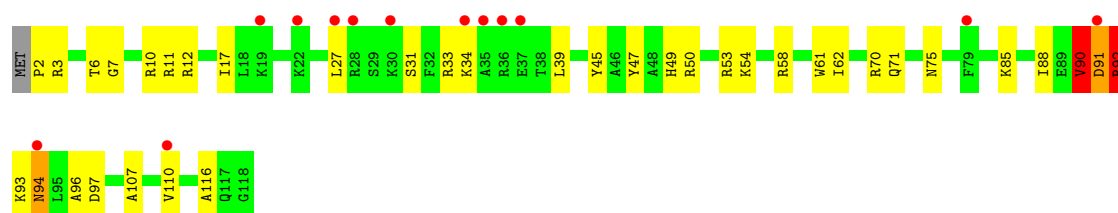
- Molecule 48: 50S ribosomal protein L19



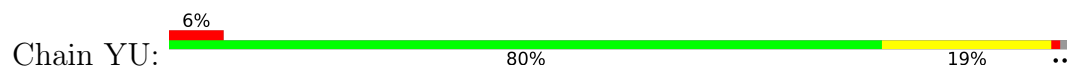
- Molecule 48: 50S ribosomal protein L19

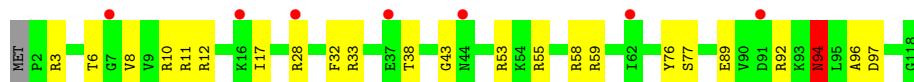


- Molecule 49: 50S ribosomal protein L20

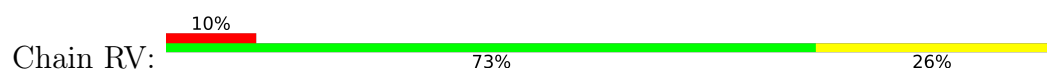


- Molecule 49: 50S ribosomal protein L20

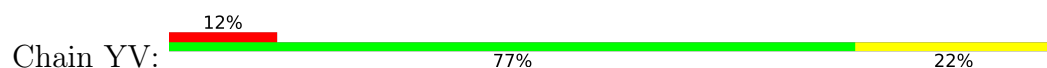




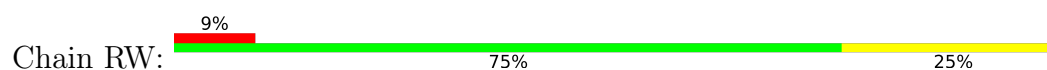
- Molecule 50: 50S ribosomal protein L21



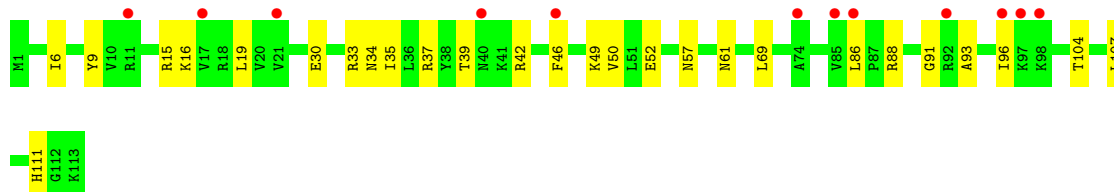
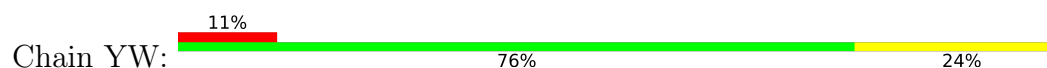
- Molecule 50: 50S ribosomal protein L21



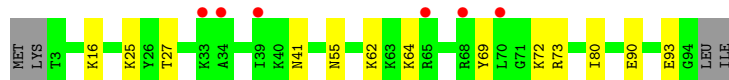
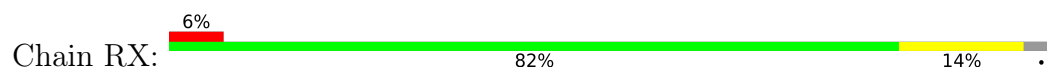
- Molecule 51: 50S ribosomal protein L22



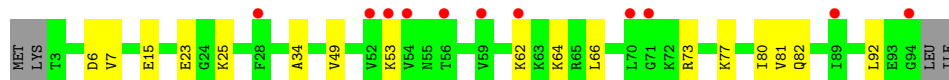
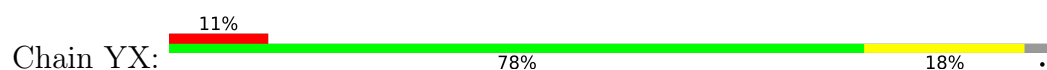
- Molecule 51: 50S ribosomal protein L22



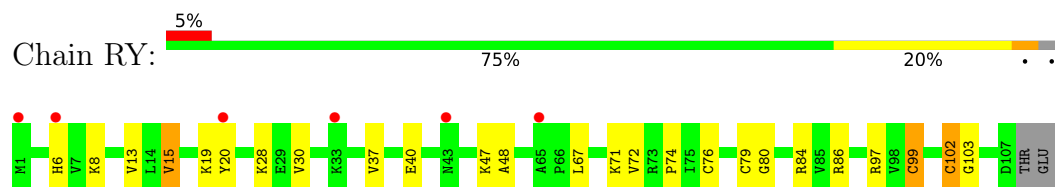
- Molecule 52: 50S ribosomal protein L23



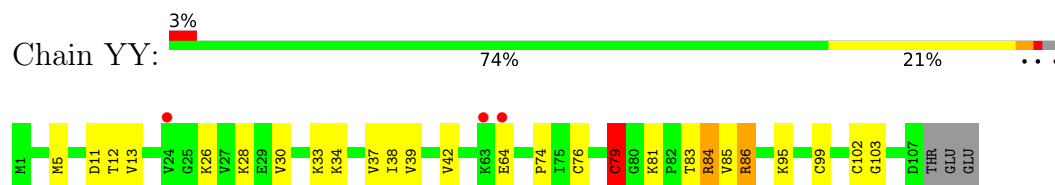
- Molecule 52: 50S ribosomal protein L23



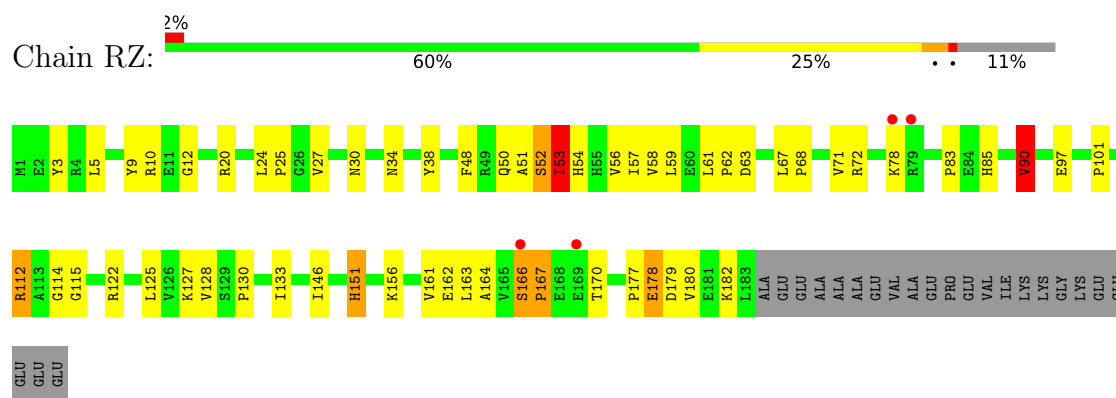
• Molecule 53: 50S ribosomal protein L24



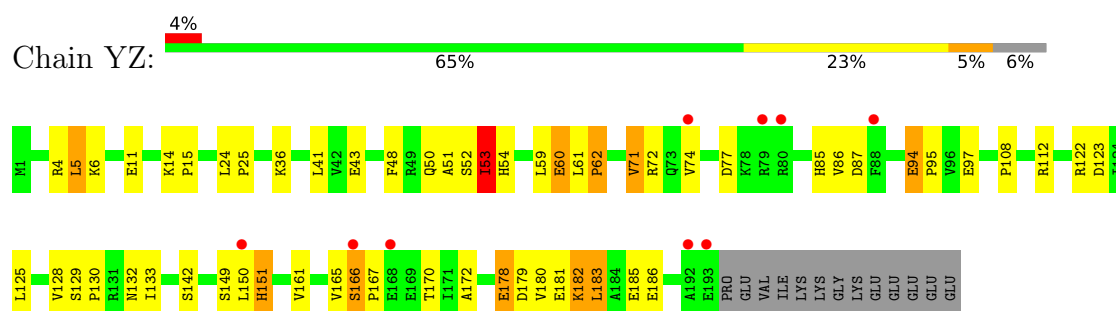
• Molecule 53: 50S ribosomal protein L24



• Molecule 54: 50S ribosomal protein L25



• Molecule 54: 50S ribosomal protein L25



4 Data and refinement statistics

Property	Value	Source
Space group	P 21 21 21	Depositor
Cell constants a, b, c, α , β , γ	210.09Å 450.32Å 622.89Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	49.85 – 4.14 49.85 – 4.14	Depositor EDS
% Data completeness (in resolution range)	98.5 (49.85-4.14) 98.4 (49.85-4.14)	Depositor EDS
R_{merge}	0.24	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.35 (at 4.14Å)	Xtriage
Refinement program	PHENIX 1.15.2_3472	Depositor
R, R_{free}	0.248 , 0.294 0.246 , 0.292	Depositor DCC
R_{free} test set	19049 reflections (4.27%)	wwPDB-VP
Wilson B-factor (Å ²)	171.1	Xtriage
Anisotropy	0.389	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.19 , 97.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.39$, $\langle L^2 \rangle = 0.22$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.92	EDS
Total number of atoms	291185	wwPDB-VP
Average B, all atoms (Å ²)	247.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.91% 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: MG, ZN, SF4

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	0.30	0/36343	0.61	8/56720 (0.0%)
1	XA	0.41	19/36435 (0.1%)	0.77	138/56865 (0.2%)
2	QB	0.33	0/1942	0.98	12/2619 (0.5%)
2	XB	0.33	0/1950	0.93	6/2630 (0.2%)
3	QC	0.32	0/1629	0.94	7/2195 (0.3%)
3	XC	0.32	0/1629	0.86	3/2195 (0.1%)
4	QD	0.39	0/1733	0.98	6/2318 (0.3%)
4	XD	0.43	1/1733 (0.1%)	0.96	6/2318 (0.3%)
5	QE	0.35	0/1171	0.96	11/1576 (0.7%)
5	XE	0.43	1/1171 (0.1%)	0.84	4/1576 (0.3%)
6	QF	0.34	0/856	0.94	6/1154 (0.5%)
6	XF	0.36	0/856	0.81	2/1154 (0.2%)
7	QG	0.32	0/1276	0.93	2/1709 (0.1%)
7	XG	0.32	0/1276	0.83	3/1709 (0.2%)
8	QH	0.37	0/1128	0.90	2/1517 (0.1%)
8	XH	0.40	0/1128	0.93	2/1517 (0.1%)
9	QI	0.44	1/831 (0.1%)	1.10	9/1120 (0.8%)
9	XI	0.34	0/849	1.02	5/1144 (0.4%)
10	QJ	0.34	0/814	1.01	4/1095 (0.4%)
10	XJ	0.98	2/790 (0.3%)	1.29	3/1063 (0.3%)
11	QK	0.34	0/900	0.81	0/1213
11	XK	0.36	0/879	0.84	4/1187 (0.3%)
12	QL	0.39	0/991	1.00	5/1327 (0.4%)
12	XL	0.43	0/972	1.08	6/1301 (0.5%)
13	QM	0.33	0/931	1.06	7/1248 (0.6%)
13	XM	0.32	0/924	0.98	2/1238 (0.2%)
14	QN	0.55	1/501 (0.2%)	1.14	7/664 (1.1%)
14	XN	0.58	1/501 (0.2%)	1.22	5/664 (0.8%)
15	QO	0.35	0/745	0.77	0/992
15	XO	0.37	0/740	0.75	0/987
16	QP	0.38	0/721	0.92	4/970 (0.4%)
16	XP	0.34	0/721	0.92	1/970 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.33	0/847	0.87	3/1131 (0.3%)
17	XQ	0.46	0/847	0.93	3/1131 (0.3%)
18	QR	0.36	0/579	0.81	0/768
18	XR	0.36	0/579	0.78	1/768 (0.1%)
19	QS	0.32	0/680	1.05	6/915 (0.7%)
19	XS	0.34	0/689	1.00	3/926 (0.3%)
20	QT	1.05	3/765 (0.4%)	1.53	12/1007 (1.2%)
20	XT	0.37	0/765	1.14	10/1007 (1.0%)
21	QU	0.28	0/221	0.75	0/288
21	XU	0.75	0/221	0.99	0/288
22	QV	0.19	0/1621	0.37	0/2523
22	XV	0.22	0/1621	0.41	0/2523
23	QX	0.21	0/459	0.44	0/715
23	XX	0.33	0/459	0.53	0/715
24	R0	0.38	0/652	0.83	0/867
24	Y0	0.58	0/657	0.86	0/874
25	R1	0.58	0/753	0.99	6/1000 (0.6%)
25	Y1	0.61	1/736 (0.1%)	1.07	3/978 (0.3%)
26	R2	0.35	0/583	0.94	2/771 (0.3%)
26	Y2	0.48	0/577	0.89	1/764 (0.1%)
27	R3	0.38	0/474	0.93	0/635
27	Y3	0.65	1/474 (0.2%)	0.86	1/635 (0.2%)
28	R4	0.25	0/357	0.85	0/483
28	Y4	2.19	2/366 (0.5%)	2.01	17/495 (3.4%)
29	R5	0.87	2/473 (0.4%)	1.26	7/639 (1.1%)
29	Y5	1.10	2/473 (0.4%)	1.33	4/639 (0.6%)
30	R6	0.69	2/460 (0.4%)	0.97	2/613 (0.3%)
30	Y6	1.20	7/460 (1.5%)	1.54	9/613 (1.5%)
31	R7	0.55	0/417	0.89	1/550 (0.2%)
31	Y7	0.64	0/426	0.83	0/561
32	R8	0.47	0/525	1.19	8/691 (1.2%)
32	Y8	0.61	0/525	1.19	5/691 (0.7%)
33	R9	0.86	1/310 (0.3%)	1.33	3/407 (0.7%)
33	Y9	0.63	0/310	1.00	1/407 (0.2%)
34	RA	0.25	0/69520	0.53	16/108527 (0.0%)
34	YA	0.27	1/69543 (0.0%)	0.57	26/108563 (0.0%)
35	RB	0.24	0/2878	0.40	0/4490
35	YB	0.31	0/2878	0.46	0/4490
36	RD	0.52	0/2165	0.99	9/2919 (0.3%)
36	YD	0.64	0/2165	1.03	11/2919 (0.4%)
37	RE	0.51	0/1601	1.44	13/2160 (0.6%)
37	YE	0.63	0/1601	1.50	16/2160 (0.7%)
38	RF	0.45	0/1620	1.00	10/2194 (0.5%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YF	0.62	0/1620	0.96	8/2194 (0.4%)
39	RG	0.36	0/1499	1.01	9/2016 (0.4%)
39	YG	0.42	0/1499	0.97	7/2016 (0.3%)
40	RH	0.41	0/1362	1.19	15/1841 (0.8%)
40	YH	0.68	1/1362 (0.1%)	1.25	21/1841 (1.1%)
41	RI	0.52	1/1151 (0.1%)	1.18	16/1558 (1.0%)
41	YI	0.48	1/1151 (0.1%)	1.10	10/1558 (0.6%)
42	RN	0.44	0/1131	0.99	5/1525 (0.3%)
42	YN	0.62	0/1131	1.05	7/1525 (0.5%)
43	RO	0.46	0/943	0.87	1/1269 (0.1%)
43	YO	0.59	0/943	0.86	0/1269
44	RP	0.47	0/1162	1.05	6/1544 (0.4%)
44	YP	0.59	0/1139	1.19	12/1514 (0.8%)
45	RQ	0.42	0/1143	1.00	9/1527 (0.6%)
45	YQ	0.57	0/1143	1.10	10/1527 (0.7%)
46	RR	0.49	0/974	1.00	6/1302 (0.5%)
46	YR	0.59	0/974	1.01	3/1302 (0.2%)
47	RS	0.37	0/892	0.94	1/1187 (0.1%)
47	YS	0.50	0/892	0.98	4/1187 (0.3%)
48	RT	0.41	0/1155	1.09	8/1542 (0.5%)
48	YT	0.51	0/1155	1.06	9/1542 (0.6%)
49	RU	0.45	0/982	0.99	6/1306 (0.5%)
49	YU	0.65	0/982	0.95	6/1306 (0.5%)
50	RV	0.44	0/790	1.08	8/1057 (0.8%)
50	YV	0.61	0/790	1.01	4/1057 (0.4%)
51	RW	0.50	0/911	0.88	1/1220 (0.1%)
51	YW	0.64	0/911	0.88	2/1220 (0.2%)
52	RX	0.48	0/739	0.84	1/993 (0.1%)
52	YX	0.61	0/739	0.95	2/993 (0.2%)
53	RY	0.51	1/831 (0.1%)	0.93	1/1108 (0.1%)
53	YY	0.61	1/831 (0.1%)	0.99	6/1108 (0.5%)
54	RZ	0.42	0/1493	1.55	19/2026 (0.9%)
54	YZ	0.50	0/1561	1.46	14/2119 (0.7%)
All	All	0.38	53/315379 (0.0%)	0.74	726/471694 (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
1	XA	1	16

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Mol	Chain	#Chirality outliers	#Planarity outliers
28	Y4	1	1
34	RA	0	1
34	YA	0	6
37	RE	0	1
37	YE	0	1
50	RV	0	2
54	RZ	0	1
54	YZ	0	1
All	All	2	30

All (53) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	Y4	5	ILE	CA-CB	-36.28	1.05	1.54
20	QT	73	HIS	N-CA	-19.12	1.21	1.46
28	Y4	4	GLY	N-CA	-18.89	1.18	1.45
20	QT	74	LYS	CA-CB	-17.55	1.23	1.53
29	Y5	32	PRO	N-CA	17.49	1.69	1.47
30	Y6	40	CYS	C-N	14.30	1.50	1.33
40	YH	12	PRO	N-CD	-13.01	1.29	1.47
33	R9	29	ASN	C-N	12.71	1.50	1.33
1	XA	617	G	C1'-N9	12.58	1.66	1.48
41	RI	94	ALA	C-N	11.82	1.50	1.34
1	XA	309	G	C3'-C2'	-11.54	1.35	1.52
29	R5	34	PRO	N-CD	10.55	1.62	1.47
1	XA	309	G	C4'-O4'	-8.64	1.32	1.45
41	YI	109	ILE	C-N	8.63	1.46	1.33
20	QT	74	LYS	CA-C	8.27	1.63	1.52
1	XA	608	A	C1'-N9	-7.99	1.34	1.47
30	R6	16	CYS	CB-SG	7.62	2.06	1.81
30	R6	41	PRO	N-CD	7.51	1.58	1.47
29	R5	33	CYS	C-N	7.43	1.51	1.33
1	XA	309	G	C4'-C3'	7.30	1.63	1.52
30	Y6	41	PRO	N-CD	7.12	1.57	1.47
30	Y6	16	CYS	CB-SG	-6.94	1.58	1.81
1	XA	1160	G	C1'-N9	6.72	1.58	1.48
1	XA	1320	C	C1'-N1	6.53	1.58	1.48
30	Y6	13	CYS	CB-SG	-6.38	1.60	1.81
1	XA	1349	A	C1'-N9	6.30	1.57	1.48
1	XA	1158	C	C1'-N1	6.23	1.57	1.48
1	XA	1358	U	O5'-C5'	6.21	1.51	1.42
14	QN	43	CYS	CB-SG	6.05	2.01	1.81

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
10	XJ	9	ARG	C-O	6.00	1.30	1.23
14	XN	43	CYS	CB-SG	5.96	2.00	1.81
4	XD	12	CYS	CB-SG	5.95	2.00	1.81
1	XA	309	G	O4'-C1'	-5.90	1.32	1.41
1	XA	1320	C	C2'-C1'	5.84	1.62	1.53
30	Y6	43	CYS	CA-CB	5.82	1.63	1.53
1	XA	116	A	P-O5'	5.79	1.68	1.59
30	Y6	42	TRP	C-N	-5.79	1.25	1.33
34	YA	745	G	O3'-P	-5.75	1.52	1.61
10	XJ	39	PRO	N-CD	-5.71	1.39	1.47
1	XA	617	G	O4'-C1'	5.70	1.50	1.41
1	XA	1358	U	P-O5'	5.66	1.68	1.59
25	Y1	67	ILE	C-N	5.45	1.39	1.34
1	XA	608	A	C2'-C1'	5.40	1.61	1.53
53	RY	102	CYS	CB-SG	-5.32	1.63	1.81
5	XE	51	VAL	C-N	5.21	1.40	1.34
30	Y6	43	CYS	CA-C	5.19	1.59	1.52
1	XA	116	A	O5'-C5'	5.18	1.50	1.42
27	Y3	10	LYS	C-N	-5.14	1.25	1.33
1	XA	677	U	C1'-N1	5.07	1.56	1.48
1	XA	1157	A	C1'-N9	5.07	1.55	1.48
9	QI	48	GLU	C-N	5.06	1.40	1.34
53	YY	79	CYS	CB-SG	-5.02	1.64	1.81
29	Y5	31	VAL	C-N	5.02	1.45	1.33

All (726) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
37	YE	146	THR	CA-C-N	33.70	161.97	119.84
37	YE	146	THR	C-N-CA	33.70	161.97	119.84
54	RZ	166	SER	CA-C-N	32.45	160.40	119.84
54	RZ	166	SER	C-N-CA	32.45	160.40	119.84
54	YZ	166	SER	CA-C-N	30.23	157.62	119.84
54	YZ	166	SER	C-N-CA	30.23	157.62	119.84
37	RE	146	THR	CA-C-N	30.09	157.45	119.84
37	RE	146	THR	C-N-CA	30.09	157.45	119.84
20	QT	74	LYS	N-CA-CB	22.69	148.84	110.49
28	Y4	5	ILE	CB-CA-C	21.09	145.87	111.29
1	XA	617	G	C4-N9-C1'	16.88	177.13	126.50
1	XA	617	G	C8-N9-C1'	-16.85	76.44	127.00
20	QT	73	HIS	N-CA-C	16.82	135.53	110.30
29	Y5	31	VAL	CA-C-N	15.60	139.34	119.84

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	Y5	31	VAL	C-N-CA	15.60	139.34	119.84
40	RH	86	GLU	CB-CA-C	-15.31	84.74	110.16
1	XA	1320	C	N1-C1'-C2'	15.01	134.51	112.00
40	YH	151	ILE	N-CA-C	-14.70	89.43	108.84
30	Y6	40	CYS	CA-C-N	14.07	133.91	119.56
30	Y6	40	CYS	C-N-CA	14.07	133.91	119.56
1	XA	617	G	C3'-C2'-O2'	13.43	130.85	110.70
36	YD	34	VAL	N-CA-C	-13.16	88.97	108.45
33	R9	29	ASN	CA-C-N	13.13	133.73	119.28
33	R9	29	ASN	C-N-CA	13.13	133.73	119.28
1	XA	1505	G	C8-N9-C1'	-12.08	90.77	127.00
1	XA	625	G	C8-N9-C1'	-12.06	90.82	127.00
1	XA	1505	G	C4-N9-C1'	11.98	162.44	126.50
1	XA	635	G	P-O3'-C3'	11.97	138.15	120.20
29	R5	33	CYS	CA-C-N	11.90	134.72	119.84
29	R5	33	CYS	C-N-CA	11.90	134.72	119.84
1	XA	617	G	C1'-C2'-O2'	11.79	126.08	108.40
28	Y4	39	CYS	N-CA-C	-11.59	96.04	110.88
36	RD	34	VAL	N-CA-C	-11.51	91.04	108.99
20	QT	74	LYS	N-CA-C	-11.42	86.47	110.80
42	YN	114	ARG	N-CA-C	-11.04	92.77	110.32
1	XA	608	A	N9-C1'-C2'	11.03	130.55	114.00
30	Y6	5	VAL	N-CA-C	-10.83	102.92	113.53
40	RH	155	SER	N-CA-C	10.80	124.65	109.31
48	RT	125	ARG	N-CA-C	-10.79	99.84	113.43
30	Y6	43	CYS	N-CA-CB	-10.73	92.90	110.40
40	YH	26	VAL	N-CA-C	10.57	120.65	111.56
25	R1	88	LYS	N-CA-C	-10.44	101.30	114.56
46	RR	76	VAL	N-CA-C	-10.23	100.74	111.58
1	XA	608	A	C8-N9-C1'	-10.15	97.25	127.70
38	RF	197	ASP	N-CA-C	-10.10	94.24	110.20
1	XA	309	G	C4-N9-C1'	-9.98	96.57	126.50
37	YE	186	GLY	N-CA-C	9.96	127.19	114.25
1	XA	1347	G	C5'-C4'-C3'	9.95	130.12	115.20
38	RF	134	GLY	N-CA-C	9.94	122.99	111.36
1	XA	309	G	C8-N9-C1'	9.90	156.70	127.00
54	YZ	151	HIS	N-CA-C	9.77	125.21	112.12
1	XA	1358	U	O5'-C5'-C4'	9.75	126.13	111.50
20	QT	73	HIS	CB-CA-C	-9.74	96.52	110.06
28	Y4	5	ILE	N-CA-C	-9.72	89.11	109.34
42	RN	114	ARG	N-CA-C	-9.69	93.68	109.96
44	YP	59	LEU	N-CA-C	-9.65	101.05	112.92

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	860	A	C8-N9-C1'	-9.60	98.92	127.70
40	YH	127	GLU	N-CA-C	-9.56	97.55	110.36
20	QT	74	LYS	CA-C-O	9.53	134.14	120.51
1	XA	877	C	C6-N1-C1'	-9.49	92.33	120.80
38	RF	199	TRP	N-CA-C	-9.40	101.37	113.12
20	QT	73	HIS	CA-CB-CG	9.33	123.13	113.80
37	RE	146	THR	C-N-CD	-9.27	86.99	125.00
4	XD	54	TYR	N-CA-C	-9.26	101.77	113.43
19	QS	41	VAL	N-CA-C	9.24	128.85	108.88
1	XA	877	C	C2-N1-C1'	9.17	146.31	118.80
48	RT	110	ILE	N-CA-C	-9.15	101.03	111.00
1	XA	860	A	C4-N9-C1'	9.14	153.71	126.30
1	XA	1348	U	C6-N1-C1'	-9.12	93.84	121.20
1	XA	1440(B)	G	C8-N9-C1'	-9.11	99.66	127.00
28	Y4	39	CYS	CA-C-N	9.06	143.91	121.80
28	Y4	39	CYS	C-N-CA	9.06	143.91	121.80
20	QT	73	HIS	N-CA-CB	9.05	124.13	109.28
46	YR	76	VAL	N-CA-C	-9.02	101.17	111.00
41	YI	9	LEU	N-CA-C	9.01	121.25	110.44
48	YT	125	ARG	N-CA-C	-9.00	102.08	113.43
41	RI	131	LYS	N-CA-C	8.96	129.60	109.81
1	XA	309	G	O4'-C1'-N9	-8.90	95.16	108.50
1	XA	1440(B)	G	C4-N9-C1'	8.87	153.12	126.50
2	QB	230	VAL	CA-C-N	8.84	133.47	120.83
2	QB	230	VAL	C-N-CA	8.84	133.47	120.83
40	YH	161	GLY	N-CA-C	8.79	123.38	110.63
26	R2	47	ASN	N-CA-C	8.73	121.95	111.82
1	XA	1305	G	C1'-C2'-O2'	-8.70	95.34	108.40
54	RZ	166	SER	C-N-CD	-8.66	89.51	125.00
19	XS	25	LYS	N-CA-C	-8.65	99.60	111.28
37	YE	146	THR	C-N-CD	-8.65	89.53	125.00
1	XA	877	C	O4'-C1'-N1	8.63	121.44	108.50
5	QE	153	LYS	N-CA-C	-8.62	101.83	111.14
37	RE	58	ARG	N-CA-C	-8.59	101.79	113.30
42	YN	116	LEU	N-CA-C	-8.53	103.05	113.97
54	RZ	62	PRO	CA-C-N	8.52	137.81	121.54
54	RZ	62	PRO	C-N-CA	8.52	137.81	121.54
48	YT	13	ARG	N-CA-C	-8.51	102.20	112.59
1	XA	754	C	N1-C1'-C2'	8.50	124.75	112.00
1	XA	1381	U	C2'-C3'-O3'	8.43	126.35	113.70
1	XA	309	G	C2'-C3'-O3'	-8.40	101.10	113.70
1	XA	617	G	O4'-C1'-C2'	-8.38	99.22	107.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
29	Y5	32	PRO	CA-N-CD	-8.38	100.27	112.00
45	YQ	92	GLY	N-CA-C	8.36	119.91	111.21
48	RT	136	GLN	N-CA-C	-8.36	103.10	113.38
10	QJ	79	ARG	N-CA-C	8.34	121.42	111.33
12	QL	104	VAL	CA-C-N	8.33	137.45	121.54
12	QL	104	VAL	C-N-CA	8.33	137.45	121.54
30	Y6	43	CYS	CB-CA-C	8.30	127.34	109.99
10	QJ	81	THR	N-CA-C	-8.28	102.20	111.14
39	YG	82	LEU	N-CA-C	8.20	121.26	111.02
40	RH	152	ARG	CA-C-N	8.17	141.73	121.80
40	RH	152	ARG	C-N-CA	8.17	141.73	121.80
28	Y4	5	ILE	N-CA-CB	8.15	124.68	111.23
1	XA	1234	C	C2-N1-C1'	8.15	143.24	118.80
40	YH	12	PRO	CA-N-CD	8.14	123.40	112.00
1	XA	1234	C	C6-N1-C1'	-8.13	96.41	120.80
41	RI	143	SER	N-CA-C	8.07	119.21	108.07
1	XA	1505	G	N9-C1'-C2'	8.07	126.11	114.00
40	RH	72	ILE	N-CA-C	-8.06	104.90	112.96
41	RI	10	GLU	CA-C-N	8.06	136.94	121.54
41	RI	10	GLU	C-N-CA	8.06	136.94	121.54
49	YU	96	ALA	N-CA-C	-8.05	103.54	112.72
1	XA	308	C	P-O3'-C3'	-8.04	108.14	120.20
4	XD	33	MET	N-CA-C	-8.00	103.73	113.97
1	XA	309	G	P-O5'-C5'	7.96	132.84	120.90
34	YA	2111	C	C6-N1-C1'	-7.95	96.95	120.80
49	YU	89	GLU	N-CA-C	-7.95	101.18	113.02
49	YU	97	ASP	N-CA-C	-7.94	101.93	111.69
1	XA	618	C	C6-N1-C1'	-7.92	97.06	120.80
1	XA	1358	U	O5'-P-OP1	7.90	131.70	108.00
41	YI	143	SER	N-CA-C	7.86	118.33	108.19
11	XK	34	ASP	N-CA-C	-7.84	99.48	110.29
28	Y4	3	GLU	CA-C-N	-7.83	106.06	121.41
28	Y4	3	GLU	C-N-CA	-7.83	106.06	121.41
1	XA	309	G	C5'-C4'-O4'	-7.83	98.06	109.80
1	XA	1112	C	C6-N1-C1'	-7.82	97.33	120.80
42	YN	97	ARG	N-CA-C	-7.82	103.73	113.28
14	XN	58	LYS	N-CA-C	-7.82	96.52	108.96
54	YZ	166	SER	C-N-CD	-7.82	92.94	125.00
12	XL	62	SER	N-CA-C	-7.79	103.84	112.72
41	YI	117	GLU	N-CA-C	-7.77	99.02	110.52
2	QB	16	HIS	N-CA-C	7.76	121.56	112.72
41	RI	142	VAL	N-CA-C	-7.71	98.73	109.21

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	RH	87	LEU	N-CA-CB	-7.69	98.34	110.87
13	QM	106	ASN	N-CA-C	7.65	119.94	107.32
31	R7	37	LYS	N-CA-C	-7.63	103.99	113.38
12	XL	47	LYS	N-CA-C	7.61	126.64	109.81
1	XA	625	G	C4-N9-C1'	7.61	149.32	126.50
4	QD	153	ARG	N-CA-C	-7.59	103.48	112.89
40	YH	101	ARG	N-CA-C	-7.58	104.53	114.31
1	XA	132	C	OP1-P-O3'	7.57	130.72	108.00
42	RN	35	ARG	N-CA-C	-7.55	98.26	109.81
36	YD	35	LYS	CA-CB-CG	7.52	129.14	114.10
12	XL	119	LYS	N-CA-C	-7.52	98.32	110.20
1	XA	309	G	C5'-C4'-C3'	7.50	127.25	116.00
1	QA	1301	U	C3'-C2'-O2'	7.46	121.89	110.70
51	RW	53	SER	N-CA-C	-7.46	104.31	113.41
34	YA	2550	G	N9-C1'-C2'	7.45	123.17	112.00
36	YD	241	PRO	CA-C-N	7.44	135.76	121.54
36	YD	241	PRO	C-N-CA	7.44	135.76	121.54
34	YA	2111	C	C2-N1-C1'	7.35	140.86	118.80
40	RH	4	ILE	N-CA-CB	7.34	119.34	110.31
1	XA	1347	G	C2'-C3'-O3'	-7.34	98.49	109.50
54	YZ	62	PRO	CA-C-N	7.33	135.54	121.54
54	YZ	62	PRO	C-N-CA	7.33	135.54	121.54
40	RH	153	LYS	N-CA-C	7.29	125.92	109.81
52	YX	7	VAL	N-CA-C	-7.28	103.75	110.82
9	QI	86	VAL	N-CA-C	-7.25	102.36	113.16
44	YP	25	SER	N-CA-C	-7.24	104.48	113.38
1	XA	972	C	C6-N1-C1'	-7.23	99.10	120.80
7	QG	73	MET	N-CA-CB	-7.22	99.50	111.20
50	RV	48	GLY	N-CA-C	7.22	119.81	111.36
16	QP	36	ILE	N-CA-C	-7.20	106.06	111.90
20	QT	13	LEU	N-CA-C	-7.19	104.50	113.28
1	XA	608	A	C5'-C4'-C3'	7.19	125.99	115.20
37	RE	51	PHE	N-CA-C	7.19	121.75	112.12
1	XA	1358	U	P-O5'-C5'	7.18	131.67	120.90
48	YT	113	LYS	N-CA-C	-7.16	103.66	113.18
25	R1	72	GLU	N-CA-C	-7.15	104.70	113.50
37	YE	93	VAL	N-CA-C	-7.15	105.75	112.83
1	XA	878	G	C8-N9-C1'	-7.14	105.57	127.00
25	Y1	49	VAL	N-CA-C	7.12	118.39	107.78
1	XA	957	U	C6-N1-C1'	-7.12	99.83	121.20
45	YQ	66	ILE	N-CA-C	7.12	118.74	110.62
19	QS	6	LYS	N-CA-C	-7.10	104.08	112.89

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	186(B)	C	C6-N1-C1'	-7.10	99.49	120.80
26	Y2	47	ASN	N-CA-C	7.07	122.19	113.50
37	YE	51	PHE	N-CA-C	7.07	121.59	112.12
4	XD	34	GLU	N-CA-C	-7.06	104.13	112.89
39	RG	79	ASN	N-CA-C	-7.03	103.37	112.23
51	YW	111	HIS	N-CA-C	7.02	118.62	110.97
17	QQ	13	ASP	N-CA-C	-7.02	102.99	112.26
1	XA	625	G	O4'-C1'-N9	7.00	119.00	108.50
11	XK	33	THR	N-CA-C	7.00	120.05	109.41
1	XA	1358	U	OP1-P-OP2	-7.00	98.61	119.60
36	YD	13	ARG	N-CA-C	-6.97	102.88	113.89
20	XT	24	LEU	N-CA-C	-6.97	103.76	111.36
48	YT	122	ASP	N-CA-C	-6.97	103.74	111.82
34	YA	271(C)	G	P-O3'-C3'	6.97	128.06	119.70
54	YZ	77	ASP	N-CA-C	-6.97	98.68	109.76
44	RP	59	LEU	N-CA-C	-6.96	104.70	112.57
2	QB	200	ILE	N-CA-C	6.96	118.62	108.53
1	XA	635	G	N9-C1'-C2'	-6.96	101.56	112.00
48	RT	57	PHE	N-CA-C	-6.96	100.16	110.46
4	QD	67	ILE	N-CA-C	-6.95	104.00	110.53
30	R6	16	CYS	CA-CB-SG	6.94	130.37	114.40
28	Y4	5	ILE	CA-CB-CG1	6.91	122.15	110.40
40	YH	155	SER	N-CA-C	6.91	125.53	110.80
54	RZ	178	GLU	CA-C-N	6.90	134.72	121.54
54	RZ	178	GLU	C-N-CA	6.90	134.72	121.54
42	YN	119	ARG	N-CA-C	-6.90	104.44	112.92
1	XA	972	C	N1-C1'-C2'	6.88	122.33	112.00
9	XI	53	VAL	N-CA-C	-6.88	106.02	112.83
14	XN	28	GLY	N-CA-C	6.88	129.49	113.18
48	YT	121	ILE	N-CA-C	-6.87	102.67	112.35
40	YH	12	PRO	N-CA-CB	-6.87	96.04	103.25
49	RU	94	ASN	N-CA-C	-6.86	104.38	112.89
18	XR	47	THR	N-CA-C	-6.85	104.73	113.23
1	XA	186(B)	C	C2-N1-C1'	6.85	139.35	118.80
45	RQ	89	ASN	N-CA-C	-6.85	102.02	110.65
38	RF	133	ASN	N-CA-C	-6.84	102.50	111.74
1	XA	1349	A	O4'-C1'-N9	6.82	118.73	108.50
48	RT	121	ILE	N-CA-C	-6.82	103.57	111.00
36	RD	241	PRO	CA-C-N	6.81	134.55	121.54
36	RD	241	PRO	C-N-CA	6.81	134.55	121.54
1	XA	115	G	P-O3'-C3'	6.80	130.41	120.20
40	YH	152	ARG	CA-C-N	6.80	138.39	121.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
40	YH	152	ARG	C-N-CA	6.80	138.39	121.80
1	XA	1343	G	N9-C1'-C2'	-6.80	101.81	112.00
1	XA	980	C	O3'-P-O5'	6.78	114.17	104.00
37	YE	81	ILE	N-CA-C	6.78	119.56	111.09
2	QB	235	SER	N-CA-C	6.77	121.53	111.04
1	XA	1297	C	N1-C1'-C2'	6.77	122.16	112.00
1	XA	1253	G	P-O3'-C3'	-6.76	110.05	120.20
48	RT	111	ARG	N-CA-C	-6.76	101.81	110.53
1	XA	1507	A	C4-N9-C1'	-6.75	106.03	126.30
38	YF	199	TRP	N-CA-C	-6.74	103.73	112.23
46	RR	74	LYS	N-CA-C	-6.74	100.50	110.48
1	XA	608	A	C4'-C3'-O3'	6.74	119.51	109.40
49	YU	94	ASN	N-CA-C	-6.73	105.69	114.04
37	RE	146	THR	N-CA-C	6.72	124.66	109.81
1	XA	1112	C	C2-N1-C1'	6.71	138.93	118.80
48	RT	133	GLU	N-CA-C	-6.71	103.78	112.23
1	XA	1347	G	C4'-C3'-O3'	6.70	119.45	109.40
26	R2	12	GLU	N-CA-C	-6.68	104.94	113.23
30	Y6	7	ILE	N-CA-C	6.68	118.68	109.46
50	RV	79	VAL	N-CA-C	-6.67	107.38	113.71
6	QF	65	VAL	N-CA-C	6.66	117.15	108.35
1	XA	607	A	C4-N9-C1'	6.66	146.29	126.30
1	XA	6	G	C1'-C2'-O2'	6.66	118.39	108.40
32	R8	62	LEU	N-CA-C	6.66	124.52	109.81
28	Y4	5	ILE	CA-CB-CG2	-6.66	99.19	110.50
25	Y1	65	SER	N-CA-C	-6.65	103.28	111.40
1	XA	607	A	C8-N9-C1'	-6.65	107.76	127.70
48	YT	133	GLU	N-CA-C	-6.64	104.99	113.23
1	XA	618	C	C2-N1-C1'	6.64	138.72	118.80
40	YH	9	ILE	N-CA-C	6.64	115.13	107.89
1	XA	957	U	C2-N1-C1'	6.63	137.59	117.70
1	XA	972	C	C2-N1-C1'	6.63	138.68	118.80
1	XA	309	G	O5'-P-OP1	6.62	127.87	108.00
1	XA	617	G	C4'-C3'-O3'	6.62	122.93	113.00
40	YH	82	GLY	N-CA-C	6.62	128.86	113.18
40	YH	155	SER	CA-C-N	6.62	134.18	121.54
40	YH	155	SER	C-N-CA	6.62	134.18	121.54
45	YQ	17	LEU	CB-CA-C	-6.60	100.10	111.45
27	Y3	16	PRO	N-CA-C	6.59	120.75	111.33
1	XA	1507	A	N9-C1'-C2'	6.59	121.89	112.00
29	R5	15	ARG	N-CA-C	-6.58	103.94	112.23
34	RA	271(C)	G	P-O3'-C3'	6.57	127.59	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2014	A	O5'-P-OP2	-6.56	88.31	108.00
50	RV	49	THR	N-CA-C	6.56	124.31	109.81
50	RV	49	THR	CA-C-N	6.55	128.02	119.84
50	RV	49	THR	C-N-CA	6.55	128.02	119.84
45	RQ	103	MET	CA-C-N	6.54	134.04	121.54
45	RQ	103	MET	C-N-CA	6.54	134.04	121.54
40	RH	151	ILE	N-CA-C	-6.54	101.14	109.58
1	XA	1348	U	O5'-C5'-C4'	6.54	121.51	111.70
32	R8	54	GLU	N-CA-C	-6.53	104.79	112.89
4	QD	108	LEU	N-CA-C	-6.52	105.14	113.23
39	RG	48	GLU	N-CA-C	-6.51	105.25	113.72
45	YQ	21	THR	N-CA-C	6.51	121.05	112.13
1	XA	1347	G	O5'-C5'-C4'	6.50	121.44	111.70
49	YU	6	THR	N-CA-C	-6.50	100.97	111.04
53	YY	34	LYS	N-CA-C	-6.49	105.10	114.12
44	RP	25	SER	N-CA-C	-6.48	105.30	113.72
39	YG	115	ARG	CA-C-N	6.48	133.91	121.54
39	YG	115	ARG	C-N-CA	6.48	133.91	121.54
29	R5	16	ARG	N-CA-C	6.47	118.42	111.36
1	XA	1304	G	C2'-C3'-O3'	-6.46	104.02	113.70
2	QB	126	GLU	N-CA-C	-6.44	104.04	112.41
14	QN	43	CYS	CB-CA-C	6.42	121.76	110.85
40	YH	164	TYR	N-CA-C	-6.42	101.02	110.52
45	YQ	83	MET	N-CA-C	6.40	118.87	108.63
3	QC	94	LEU	N-CA-C	-6.39	103.61	111.40
10	XJ	39	PRO	N-CA-CB	-6.37	97.64	103.31
54	RZ	9	TYR	N-CA-C	6.37	118.54	110.33
38	YF	133	ASN	N-CA-C	-6.37	97.24	110.80
54	RZ	53	ILE	N-CA-C	6.35	122.55	109.34
1	XA	1507	A	C8-N9-C1'	6.35	146.74	127.70
54	YZ	178	GLU	CA-C-N	6.34	133.65	121.54
54	YZ	178	GLU	C-N-CA	6.34	133.65	121.54
32	Y8	54	GLU	N-CA-C	-6.33	104.46	111.36
2	QB	23	ARG	N-CA-C	-6.32	102.79	110.88
34	RA	2712(A)	U	P-O3'-C3'	6.32	127.28	119.70
1	XA	1375	A	C4-N9-C1'	6.32	145.25	126.30
53	YY	85	VAL	N-CA-C	6.31	118.12	108.71
1	XA	1375	A	C8-N9-C1'	-6.31	108.77	127.70
40	RH	107	VAL	N-CA-C	-6.29	106.20	112.17
54	YZ	178	GLU	N-CA-C	6.28	118.23	109.31
33	R9	32	HIS	CB-CA-C	6.24	121.11	110.56
14	XN	38	GLY	N-CA-C	-6.24	104.14	114.76

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
41	YI	142	VAL	N-CA-C	-6.24	99.26	109.12
28	Y4	40	HIS	N-CA-C	6.24	123.59	109.81
1	XA	310	G	O5'-P-OP1	-6.23	89.31	108.00
47	YS	44	LYS	N-CA-C	-6.22	106.32	114.04
44	YP	71	VAL	N-CA-C	6.22	121.62	112.61
37	YE	69	LYS	N-CA-C	-6.21	104.40	112.23
52	YX	23	GLU	N-CA-C	-6.20	101.60	110.59
38	RF	135	LYS	N-CA-C	-6.18	100.35	109.81
1	XA	1343	G	C3'-C2'-O2'	6.18	119.97	110.70
28	Y4	16	CYS	N-CA-C	6.17	116.15	108.19
1	XA	1158	C	N1-C1'-C2'	6.17	121.25	112.00
45	YQ	89	ASN	N-CA-C	-6.15	103.25	112.54
1	XA	1111	A	C4-N9-C1'	6.14	144.71	126.30
32	R8	58	ILE	N-CA-C	-6.13	104.31	111.00
3	XC	30	ARG	N-CA-C	6.12	117.62	111.07
53	YY	84	ARG	N-CA-C	-6.12	101.14	110.14
13	QM	4	ILE	N-CA-C	6.10	116.29	110.74
1	XA	1111	A	C8-N9-C1'	-6.10	109.41	127.70
41	RI	130	TYR	CA-C-N	6.10	136.67	121.80
41	RI	130	TYR	C-N-CA	6.10	136.67	121.80
42	RN	116	LEU	N-CA-C	-6.09	105.98	113.41
14	XN	56	VAL	CA-C-N	6.09	133.17	121.54
14	XN	56	VAL	C-N-CA	6.09	133.17	121.54
5	XE	72	GLN	CA-C-N	6.09	133.17	121.54
5	XE	72	GLN	C-N-CA	6.09	133.17	121.54
1	XA	674	G	C8-N9-C1'	-6.08	108.77	127.00
39	RG	157	ILE	N-CA-C	-6.06	103.44	110.05
1	XA	878	G	C4-N9-C1'	6.06	144.68	126.50
10	XJ	39	PRO	CA-N-CD	6.04	120.46	112.00
1	XA	674	G	C4-N9-C1'	6.03	144.60	126.50
50	RV	51	VAL	N-CA-C	-6.03	103.48	110.05
36	YD	32	SER	CA-C-N	6.03	133.06	121.54
36	YD	32	SER	C-N-CA	6.03	133.06	121.54
14	QN	19	ARG	N-CA-C	-6.03	105.69	113.16
45	YQ	19	GLY	N-CA-C	-6.02	98.91	113.18
54	RZ	151	HIS	N-CA-C	6.02	123.62	110.80
34	YA	2712(A)	U	P-O3'-C3'	6.01	126.91	119.70
1	XA	1347	G	P-O3'-C3'	6.00	129.20	120.20
49	RU	97	ASP	N-CA-C	-5.99	104.83	111.71
1	XA	636	U	P-O5'-C5'	5.97	129.86	120.90
1	XA	948	C	C5'-C4'-O4'	-5.95	100.87	109.80
1	XA	1343	G	C3'-C2'-C1'	5.95	107.25	101.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
20	QT	92	LEU	N-CA-C	-5.95	105.94	112.72
1	XA	635	G	C4'-C3'-C2'	-5.95	96.65	102.60
54	YZ	53	ILE	N-CA-C	5.94	121.70	109.34
1	XA	1125	U	C4'-C3'-O3'	5.94	121.91	113.00
2	XB	12	GLU	N-CA-C	-5.94	106.19	113.50
19	QS	36	ARG	N-CA-C	-5.94	105.86	112.57
20	XT	61	SER	N-CA-C	-5.94	104.44	111.03
19	QS	38	SER	N-CA-C	5.93	116.11	108.34
30	Y6	39	TYR	N-CA-C	5.93	118.31	109.59
44	YP	28	GLY	CA-C-N	5.93	132.87	121.54
44	YP	28	GLY	C-N-CA	5.93	132.87	121.54
29	R5	34	PRO	CA-N-CD	-5.92	103.71	112.00
54	YZ	50	GLN	N-CA-C	-5.92	106.22	113.50
37	RE	49	LEU	N-CA-C	5.92	120.05	112.12
42	YN	35	ARG	N-CA-C	-5.92	99.64	109.46
5	QE	50	GLU	CA-C-N	5.91	126.11	120.43
5	QE	50	GLU	C-N-CA	5.91	126.11	120.43
54	YZ	112	ARG	N-CA-C	-5.91	98.20	110.80
1	QA	754	C	N1-C1'-C2'	5.91	120.86	112.00
37	YE	77	ILE	N-CA-C	-5.91	106.98	112.83
3	QC	127	ARG	N-CA-C	5.91	117.82	110.91
4	XD	18	LYS	CD-CE-NZ	5.90	130.79	111.90
14	QN	47	LEU	N-CA-C	5.90	117.38	111.07
9	QI	85	LEU	N-CA-C	-5.89	106.09	113.28
2	QB	20	GLU	N-CA-C	5.89	117.66	110.41
2	XB	113	HIS	N-CA-C	-5.88	104.45	111.69
29	R5	34	PRO	N-CA-CB	5.88	109.42	103.25
3	QC	87	LEU	N-CA-C	5.88	117.36	111.07
36	RD	234	GLY	N-CA-C	5.88	118.24	111.36
1	XA	1348	U	C2-N1-C1'	5.87	135.32	117.70
39	RG	115	ARG	CA-C-N	5.86	132.74	121.54
39	RG	115	ARG	C-N-CA	5.86	132.74	121.54
20	XT	73	HIS	CA-C-N	5.86	132.73	121.54
20	XT	73	HIS	C-N-CA	5.86	132.73	121.54
36	RD	67	PHE	N-CA-C	-5.86	105.98	114.12
9	XI	22	GLY	N-CA-C	5.85	118.48	110.58
37	YE	203	LYS	N-CA-C	-5.85	104.49	111.69
1	XA	1025	U	C4'-C3'-O3'	5.85	121.77	113.00
14	QN	4	LYS	N-CA-C	-5.84	105.81	113.12
2	QB	153	ARG	N-CA-C	-5.83	105.82	113.17
1	XA	618	C	O4'-C1'-N1	5.83	117.25	108.50
5	XE	78	HIS	N-CA-C	5.82	117.81	109.14

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
38	YF	85	GLY	N-CA-C	-5.82	106.98	113.79
36	YD	198	ASN	N-CA-C	-5.81	103.39	111.52
32	Y8	62	LEU	N-CA-C	5.81	122.65	109.81
9	QI	32	ASP	N-CA-C	5.81	119.42	110.42
14	QN	24	CYS	CA-CB-SG	5.80	127.75	114.40
1	XA	309	G	C3'-C2'-C1'	-5.80	95.50	101.30
28	Y4	22	ILE	CA-C-N	5.80	132.61	121.54
28	Y4	22	ILE	C-N-CA	5.80	132.61	121.54
1	XA	1320	C	C6-N1-C1'	-5.79	103.42	120.80
39	YG	80	PHE	N-CA-C	-5.79	101.35	109.69
39	RG	136	ARG	N-CA-C	5.79	117.39	111.14
14	QN	15	LYS	N-CA-C	-5.79	104.14	110.91
25	Y1	50	ARG	N-CA-C	5.78	118.17	107.99
1	XA	1306	A	N9-C1'-C2'	5.77	120.66	112.00
49	RU	92	ARG	CA-C-N	5.77	132.56	121.54
49	RU	92	ARG	C-N-CA	5.77	132.56	121.54
34	YA	1061	U	C4'-C3'-O3'	5.76	121.64	113.00
16	XP	76	GLN	N-CA-C	-5.75	104.98	112.23
38	RF	133	ASN	CA-C-N	5.75	125.44	119.92
38	RF	133	ASN	C-N-CA	5.75	125.44	119.92
1	XA	116	A	OP1-P-OP2	-5.75	102.34	119.60
1	XA	1225	A	C5'-C4'-O4'	5.75	117.72	109.10
34	YA	746	A	O5'-C5'-C4'	5.74	120.31	111.70
34	RA	1509	C	O3'-P-O5'	5.74	112.61	104.00
32	R8	30	ARG	N-CA-C	5.74	123.02	110.80
9	XI	50	LEU	N-CA-C	-5.74	105.00	112.23
34	YA	271(C)	G	OP2-P-O3'	5.73	117.81	105.20
34	RA	2114	A	C4'-C3'-O3'	5.73	121.59	113.00
34	RA	2832	U	P-O3'-C3'	5.72	128.78	120.20
9	QI	93	ARG	N-CA-C	-5.71	105.58	113.18
51	YW	93	ALA	N-CA-C	5.70	118.14	111.02
1	XA	1349	A	N9-C1'-C2'	5.69	120.54	112.00
1	XA	980	C	C6-N1-C1'	-5.69	103.73	120.80
19	QS	28	LYS	N-CA-C	5.69	119.19	111.17
1	XA	980	C	C2-N1-C1'	5.69	135.86	118.80
44	RP	30	THR	N-CA-C	-5.68	106.00	114.64
3	QC	144	SER	N-CA-C	-5.68	105.85	112.89
3	XC	143	GLU	N-CA-C	-5.68	105.08	112.23
17	XQ	62	SER	N-CA-C	5.67	115.78	108.34
8	QH	19	VAL	N-CA-C	-5.67	107.22	112.83
47	RS	20	ARG	N-CA-C	-5.67	105.67	112.58
39	YG	145	THR	N-CA-C	5.67	119.78	112.41

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1160	G	O4'-C1'-C2'	-5.66	101.94	107.60
41	RI	6	LEU	N-CA-C	-5.66	106.18	114.39
38	YF	197	ASP	N-CA-C	-5.65	102.92	110.55
17	XQ	15	MET	N-CA-C	5.65	119.02	109.76
9	XI	53	VAL	CA-C-N	5.65	132.32	121.54
9	XI	53	VAL	C-N-CA	5.65	132.32	121.54
41	YI	120	ILE	CA-C-N	5.64	132.32	121.54
41	YI	120	ILE	C-N-CA	5.64	132.32	121.54
37	RE	16	ARG	N-CA-C	-5.64	100.51	109.59
32	R8	61	LEU	CA-C-N	5.63	135.55	121.80
32	R8	61	LEU	C-N-CA	5.63	135.55	121.80
37	RE	79	ARG	N-CA-C	5.63	117.50	110.91
12	XL	118	SER	N-CA-C	-5.63	105.06	111.14
44	RP	99	LEU	N-CA-C	-5.62	105.70	113.18
1	XA	946	A	C2'-C3'-O3'	-5.61	105.28	113.70
10	XJ	37	PRO	CB-CA-C	-5.61	102.30	111.56
37	RE	81	ILE	N-CA-C	5.61	116.39	110.72
38	YF	127	GLU	CA-C-N	5.61	132.26	121.54
38	YF	127	GLU	C-N-CA	5.61	132.26	121.54
40	YH	157	TYR	N-CA-C	5.61	122.75	110.80
13	QM	105	THR	N-CA-C	5.61	120.64	113.18
40	RH	155	SER	CA-C-N	5.61	132.25	121.54
40	RH	155	SER	C-N-CA	5.61	132.25	121.54
2	QB	236	TYR	N-CA-C	5.60	117.59	108.63
12	QL	62	SER	N-CA-C	-5.60	105.65	112.88
12	XL	46	LYS	CA-C-N	-5.60	108.14	121.80
12	XL	46	LYS	C-N-CA	-5.60	108.14	121.80
17	XQ	13	ASP	N-CA-C	-5.60	104.21	111.71
42	YN	112	LEU	N-CA-C	-5.60	107.00	113.88
3	QC	43	LEU	N-CA-C	-5.59	105.18	112.23
34	RA	1558	A	P-O3'-C3'	5.59	128.59	120.20
17	QQ	91	ARG	N-CA-C	-5.59	105.34	111.82
53	RY	99	CYS	CB-CA-C	-5.59	100.10	109.65
1	QA	1299	A	N9-C1'-C2'	5.58	120.37	112.00
38	YF	154	VAL	N-CA-C	5.58	115.92	108.11
32	Y8	29	LYS	CA-C-N	5.57	132.18	121.54
32	Y8	29	LYS	C-N-CA	5.57	132.18	121.54
29	R5	17	ASP	N-CA-C	5.57	119.79	112.89
13	XM	84	ILE	N-CA-C	-5.56	104.87	113.16
7	XG	98	SER	N-CA-C	5.55	117.33	111.28
53	YY	79	CYS	N-CA-CB	5.55	119.95	110.51
4	QD	204	ILE	N-CA-C	-5.55	105.44	110.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
45	RQ	21	THR	N-CA-C	5.55	121.32	110.56
41	YI	71	ILE	N-CA-C	-5.55	105.47	113.07
5	QE	115	VAL	N-CA-C	-5.55	104.00	110.05
28	Y4	4	GLY	N-CA-C	5.55	126.33	113.18
45	YQ	18	LYS	N-CA-C	5.55	119.22	112.23
9	QI	17	VAL	N-CA-C	5.54	115.93	108.17
46	RR	117	VAL	N-CA-C	5.54	117.44	109.51
6	QF	94	GLN	N-CA-C	5.54	117.27	108.79
4	QD	186	LEU	N-CA-C	5.54	117.12	111.14
40	RH	156	ALA	CA-C-N	5.54	132.12	121.54
40	RH	156	ALA	C-N-CA	5.54	132.12	121.54
19	XS	21	GLU	N-CA-C	-5.54	105.25	112.23
40	YH	86	GLU	N-CA-C	5.54	122.59	110.80
42	YN	38	HIS	N-CA-C	-5.54	105.74	112.88
50	RV	48	GLY	CA-C-N	5.53	135.30	121.80
50	RV	48	GLY	C-N-CA	5.53	135.30	121.80
12	QL	118	SER	N-CA-C	-5.53	105.33	111.36
28	Y4	24	THR	N-CA-C	5.53	122.58	110.80
1	XA	323	U	N1-C1'-C2'	5.52	120.28	112.00
1	XA	308	C	C4'-C3'-O3'	5.52	121.28	113.00
3	XC	8	ILE	N-CA-C	-5.52	105.47	110.82
34	YA	1558	A	P-O3'-C3'	5.51	128.47	120.20
1	XA	986	A	C4-N9-C1'	5.51	142.82	126.30
28	Y4	5	ILE	CA-C-O	-5.51	113.89	120.78
36	RD	147	LEU	N-CA-C	-5.50	106.70	113.41
36	RD	127	VAL	N-CA-C	5.50	120.77	109.34
41	YI	12	LEU	N-CA-C	-5.50	101.08	109.65
37	YE	79	ARG	N-CA-C	5.49	117.34	110.91
34	YA	745	G	P-O3'-C3'	-5.49	111.97	120.20
54	YZ	5	LEU	N-CA-C	5.49	115.27	108.19
20	XT	72	LEU	N-CA-C	-5.48	99.35	108.34
53	YY	86	ARG	N-CA-C	-5.48	102.08	110.14
34	RA	1510	A	P-O5'-C5'	5.48	129.12	120.90
1	XA	1495	U	N1-C1'-C2'	-5.48	103.78	112.00
46	YR	74	LYS	N-CA-C	-5.48	102.37	110.48
41	RI	42	SER	N-CA-C	-5.47	105.71	112.72
20	XT	46	GLU	N-CA-C	-5.47	105.23	111.14
1	XA	608	A	O4'-C1'-N9	5.47	116.40	108.20
1	XA	986	A	C8-N9-C1'	-5.47	111.29	127.70
1	XA	992	U	C4'-C3'-O3'	5.47	117.60	109.40
11	XK	36	ASP	N-CA-C	-5.47	106.65	113.38
2	XB	122	PHE	N-CA-C	-5.47	105.48	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	194	C	C2-N1-C1'	5.45	135.16	118.80
10	QJ	81	THR	N-CA-CB	5.45	117.97	110.07
1	XA	1507	A	O4'-C1'-N9	5.45	116.67	108.50
1	XA	1232	U	O5'-P-OP1	5.44	124.33	108.00
37	YE	168	MET	N-CA-C	5.44	118.58	110.14
1	QA	194	C	C6-N1-C1'	-5.44	104.48	120.80
46	RR	37	THR	N-CA-C	-5.44	102.70	110.59
1	XA	309	G	OP2-P-O3'	5.44	124.31	108.00
48	RT	14	TYR	N-CA-C	-5.43	105.09	112.26
2	QB	25	ASN	N-CA-C	-5.43	102.81	109.65
36	YD	193	VAL	N-CA-C	5.43	116.70	109.37
41	RI	129	THR	N-CA-C	5.43	118.36	110.17
1	XA	1369	C	O5'-P-OP1	-5.42	91.73	108.00
7	QG	73	MET	N-CA-C	5.42	118.42	109.85
39	RG	37	VAL	N-CA-C	-5.42	100.67	108.53
34	YA	2610	C	O3'-P-O5'	5.42	112.13	104.00
1	XA	1277	C	P-O3'-C3'	5.42	128.32	120.20
29	Y5	19	ARG	N-CA-C	-5.41	105.54	111.82
36	YD	243	GLY	N-CA-C	5.41	126.00	113.18
49	YU	94	ASN	CA-CB-CG	5.40	118.00	112.60
25	R1	66	HIS	CA-C-N	5.40	123.64	120.24
25	R1	66	HIS	C-N-CA	5.40	123.64	120.24
44	YP	64	LYS	N-CA-C	-5.40	106.19	112.89
19	XS	28	LYS	N-CA-C	5.40	117.77	111.02
36	RD	89	SER	N-CA-C	-5.39	105.43	112.23
3	QC	77	ILE	N-CA-C	-5.39	106.44	111.45
43	RO	40	VAL	N-CA-C	-5.39	100.62	108.97
54	RZ	12	GLY	N-CA-C	-5.39	100.41	113.18
39	YG	139	LEU	CA-C-N	5.39	127.84	120.46
39	YG	139	LEU	C-N-CA	5.39	127.84	120.46
16	QP	9	PHE	CA-C-N	-5.39	117.08	122.63
16	QP	9	PHE	C-N-CA	-5.39	117.08	122.63
34	YA	2394	C	OP1-P-OP2	-5.38	103.46	119.60
54	RZ	90	VAL	N-CA-C	-5.38	102.12	109.55
32	R8	28	GLY	N-CA-C	5.38	125.92	113.18
54	RZ	58	VAL	CA-C-N	5.38	131.81	121.54
54	RZ	58	VAL	C-N-CA	5.38	131.81	121.54
1	XA	1253	G	C5'-C4'-O4'	-5.36	101.76	109.80
7	XG	143	ARG	N-CA-C	-5.36	106.24	112.89
40	YH	83	TYR	N-CA-C	5.36	122.22	110.80
6	QF	26	ILE	N-CA-C	-5.36	105.31	110.72
34	YA	1022	G	P-O3'-C3'	5.35	128.23	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
4	XD	101	LEU	N-CA-C	5.35	117.11	111.28
44	YP	26	GLY	N-CA-C	-5.34	102.63	112.62
48	YT	110	ILE	N-CA-C	-5.34	104.41	111.09
38	RF	162	LEU	N-CA-C	5.34	116.79	110.97
34	RA	856	C	C2'-C3'-O3'	5.34	121.71	113.70
40	YH	81	GLU	N-CA-C	-5.34	104.67	110.91
1	QA	748	C	P-O3'-C3'	5.32	128.18	120.20
41	YI	10	GLU	CA-C-N	5.32	131.70	121.54
41	YI	10	GLU	C-N-CA	5.32	131.70	121.54
34	YA	1045	A	P-O3'-C3'	5.31	128.17	120.20
44	YP	15	ARG	N-CA-C	-5.31	106.47	113.17
34	RA	846	C	P-O3'-C3'	5.31	128.16	120.20
1	XA	1327	C	C4'-C3'-O3'	5.31	120.96	113.00
11	XK	75	TYR	N-CA-C	-5.31	105.54	112.23
25	R1	94	LEU	N-CA-C	5.31	122.11	110.80
34	YA	846	C	P-O3'-C3'	5.31	128.16	120.20
13	QM	12	ASN	N-CA-C	5.30	122.09	110.80
34	RA	2114	A	C4-N9-C1'	5.30	142.20	126.30
4	XD	151	LYS	N-CA-C	-5.29	105.68	111.82
39	RG	128	ARG	N-CA-C	-5.29	105.53	113.89
39	RG	15	VAL	N-CA-C	5.29	115.55	110.74
13	QM	17	VAL	N-CA-C	-5.28	105.29	113.16
14	QN	24	CYS	N-CA-C	-5.28	103.42	110.55
1	XA	1112	C	O4'-C1'-N1	5.28	116.42	108.50
54	RZ	112	ARG	N-CA-C	-5.27	101.78	109.63
7	XG	136	LYS	N-CA-C	-5.27	105.61	111.36
8	XH	120	THR	N-CA-C	-5.26	101.95	110.32
45	RQ	22	LYS	N-CA-C	5.26	117.61	110.35
45	RQ	129	THR	N-CA-C	5.25	117.66	109.52
5	QE	75	THR	N-CA-C	5.25	115.17	108.24
17	QQ	61	GLU	N-CA-C	-5.25	102.71	110.48
9	QI	35	GLU	N-CA-C	-5.25	107.43	113.88
32	Y8	31	HIS	N-CA-C	5.24	120.15	113.18
5	QE	51	VAL	CB-CA-C	-5.24	108.72	113.70
1	XA	1348	U	C5'-C4'-C3'	5.24	123.06	115.20
34	RA	2114	A	C8-N9-C1'	-5.23	112.00	127.70
8	XH	44	PHE	N-CA-C	-5.23	106.94	113.38
38	YF	186	ILE	N-CA-C	-5.23	105.74	110.82
2	XB	20	GLU	N-CA-C	5.23	118.26	110.52
42	RN	99	LEU	N-CA-C	-5.23	106.41	112.89
34	RA	1022	G	P-O3'-C3'	5.22	128.03	120.20
1	XA	322	C	C4'-C3'-O3'	5.22	120.83	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
9	QI	33	PHE	N-CA-C	5.22	117.39	111.02
41	RI	9	LEU	N-CA-C	5.22	120.30	113.30
38	RF	127	GLU	CA-C-N	5.22	131.51	121.54
38	RF	127	GLU	C-N-CA	5.22	131.51	121.54
34	YA	503	A	P-O3'-C3'	5.22	128.03	120.20
20	XT	62	LEU	N-CA-C	5.21	117.64	111.33
40	RH	110	SER	N-CA-C	-5.21	106.70	113.16
44	YP	30	THR	N-CA-C	-5.21	108.18	114.75
1	XA	1347	G	N9-C1'-C2'	-5.20	106.20	114.00
1	XA	1440(B)	G	P-O5'-C5'	5.20	128.70	120.90
8	QH	79	VAL	N-CA-C	-5.20	105.42	113.16
41	RI	120	ILE	CA-C-N	5.20	131.46	121.54
41	RI	120	ILE	C-N-CA	5.20	131.46	121.54
36	YD	10	THR	N-CA-C	-5.20	100.44	108.55
30	R6	13	CYS	CA-CB-SG	-5.19	102.46	114.40
34	YA	944	G	N9-C1'-C2'	5.19	119.79	112.00
20	XT	48	LYS	CA-C-N	5.18	131.44	121.54
20	XT	48	LYS	C-N-CA	5.18	131.44	121.54
37	YE	130	GLY	CA-C-N	5.18	131.44	121.54
37	YE	130	GLY	C-N-CA	5.18	131.44	121.54
19	QS	20	LEU	N-CA-C	-5.18	106.46	112.89
34	RA	270(L)	C	N1-C1'-C2'	5.18	119.77	112.00
13	QM	56	LEU	N-CA-C	-5.18	105.72	111.36
34	YA	2013	A	O3'-P-O5'	5.18	111.77	104.00
48	YT	57	PHE	N-CA-C	-5.17	103.57	110.55
54	RZ	50	GLN	N-CA-C	-5.17	107.35	113.97
5	QE	51	VAL	N-CA-C	5.17	119.13	112.67
6	QF	82	ARG	N-CA-C	5.16	116.95	110.24
4	QD	154	ASN	N-CA-C	-5.16	101.98	109.31
20	QT	75	ASN	N-CA-C	5.16	121.78	110.80
47	YS	21	THR	N-CA-C	-5.15	106.92	114.39
34	YA	1061	U	C2'-C3'-O3'	5.15	121.42	113.70
1	QA	328	C	P-O3'-C3'	5.15	127.92	120.20
32	R8	64	TYR	N-CA-C	5.15	118.34	111.24
52	RX	16	LYS	N-CA-C	-5.14	105.75	112.23
1	XA	1320	C	O4'-C4'-C3'	-5.14	98.86	104.00
34	YA	859	G	P-O3'-C3'	5.14	127.91	120.20
34	YA	404	C	P-O3'-C3'	5.14	127.91	120.20
1	XA	1302	U	C6-N1-C1'	-5.13	105.80	121.20
34	YA	1653	G	P-O3'-C3'	5.13	127.90	120.20
47	YS	53	SER	N-CA-C	-5.13	105.32	112.45
1	XA	1302	U	C2-N1-C1'	5.12	133.07	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	YV	43	GLU	CA-C-N	5.12	131.33	121.54
50	YV	43	GLU	C-N-CA	5.12	131.33	121.54
30	Y6	52	VAL	N-CA-C	-5.12	98.69	109.34
36	RD	13	ARG	N-CA-C	-5.12	107.71	114.31
37	RE	82	ARG	CA-C-N	5.12	131.31	121.54
37	RE	82	ARG	C-N-CA	5.12	131.31	121.54
13	XM	7	VAL	N-CA-C	5.12	119.98	109.34
20	QT	94	ALA	N-CA-C	-5.11	103.65	110.55
47	YS	57	LYS	N-CA-C	5.11	116.89	110.91
34	RA	1130	U	P-O3'-C3'	5.11	127.86	120.20
45	RQ	66	ILE	N-CA-C	5.11	116.44	110.62
34	RA	404	C	P-O3'-C3'	5.11	127.86	120.20
1	XA	186(B)	C	N1-C1'-C2'	5.10	119.65	112.00
1	XA	677	U	N1-C1'-C2'	5.10	119.65	112.00
1	XA	133	U	P-O5'-C5'	5.10	128.54	120.90
20	QT	43	LEU	N-CA-C	-5.09	107.06	113.28
1	XA	309	G	C4'-C3'-O3'	5.09	120.64	113.00
2	XB	71	VAL	N-CA-C	5.09	115.46	108.12
44	RP	107	LYS	CA-C-N	5.09	131.27	121.54
44	RP	107	LYS	C-N-CA	5.09	131.27	121.54
49	RU	96	ALA	N-CA-C	-5.09	107.02	113.18
33	Y9	18	ARG	N-CA-C	-5.09	101.86	109.95
37	RE	15	PHE	N-CA-C	5.09	117.90	107.37
44	YP	108	LYS	N-CA-C	5.09	121.64	110.80
41	RI	121	LYS	CA-C-N	5.08	131.25	121.54
41	RI	121	LYS	C-N-CA	5.08	131.25	121.54
45	RQ	81	VAL	N-CA-C	5.08	119.91	109.34
34	YA	887	A	O5'-P-OP2	-5.08	92.76	108.00
37	YE	118	LYS	N-CA-C	-5.08	106.42	113.18
3	QC	18	TRP	N-CA-C	5.08	117.97	110.46
30	Y6	51	GLU	N-CA-C	5.08	118.23	110.36
34	YA	1085	A	C2'-C3'-O3'	5.08	117.11	109.50
37	YE	95	ILE	N-CA-C	-5.07	105.76	110.53
5	QE	72	GLN	CA-C-N	5.07	131.22	121.54
5	QE	72	GLN	C-N-CA	5.07	131.22	121.54
6	QF	15	ASP	CA-C-N	5.07	127.32	120.38
6	QF	15	ASP	C-N-CA	5.07	127.32	120.38
45	RQ	25	ASP	CA-CB-CG	5.06	117.66	112.60
6	XF	65	VAL	N-CA-C	5.06	116.15	108.96
53	YY	79	CYS	CB-CA-C	-5.06	101.15	109.65
20	XT	93	GLU	N-CA-C	-5.06	106.37	112.54
54	RZ	164	ALA	N-CA-C	5.05	118.48	111.71

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
50	YV	49	THR	CA-C-N	5.05	126.16	119.84
50	YV	49	THR	C-N-CA	5.05	126.16	119.84
40	YH	85	LYS	CA-C-N	5.05	131.18	121.54
40	YH	85	LYS	C-N-CA	5.05	131.18	121.54
1	XA	1367	C	C3'-C2'-O2'	5.05	118.27	110.70
46	RR	74	LYS	CA-C-N	5.05	131.18	121.54
46	RR	74	LYS	C-N-CA	5.05	131.18	121.54
1	XA	1158	C	C5'-C4'-C3'	5.04	123.57	116.00
1	XA	1231	G	OP1-P-O3'	-5.04	92.87	108.00
1	XA	1243	C	N1-C1'-C2'	5.04	119.56	112.00
9	QI	59	PHE	N-CA-C	5.04	116.79	108.13
5	XE	51	VAL	N-CA-C	5.04	119.76	108.88
6	XF	44	GLY	N-CA-C	5.04	121.39	112.02
1	XA	1438	G	O5'-P-OP1	5.03	123.10	108.00
48	YT	59	THR	N-CA-C	-5.03	102.83	110.28
16	QP	26	ARG	N-CA-C	-5.03	103.76	110.55
5	QE	148	VAL	N-CA-C	-5.03	105.67	113.16
45	YQ	91	GLU	CA-C-N	-5.03	117.45	122.63
45	YQ	91	GLU	C-N-CA	-5.03	117.45	122.63
9	QI	41	VAL	N-CA-C	5.03	118.91	113.43
54	RZ	180	VAL	N-CA-C	-5.03	98.89	109.34
49	RU	71	GLN	N-CA-C	-5.02	105.99	111.82
1	XA	1537	U	P-O3'-C3'	5.02	127.73	120.20
25	R1	93	GLU	N-CA-C	5.02	119.60	111.37
34	RA	1653	G	P-O3'-C3'	5.02	127.72	120.20
2	XB	208	ILE	N-CA-C	5.01	119.77	109.34
46	YR	54	LEU	N-CA-C	-5.01	106.00	111.82
41	RI	103	ARG	N-CA-C	-5.01	107.85	114.31
1	QA	1297	C	N1-C1'-C2'	5.01	119.51	112.00
2	QB	206	ASP	N-CA-C	-5.01	102.17	109.63
13	QM	104	ARG	N-CA-C	-5.01	106.01	111.82
54	RZ	56	VAL	N-CA-C	5.01	115.69	108.48
44	YP	58	THR	CA-C-N	5.01	130.66	122.65
44	YP	58	THR	C-N-CA	5.01	130.66	122.65
10	QJ	28	ARG	N-CA-C	-5.01	106.68	112.89
42	RN	25	ARG	N-CA-C	-5.00	106.68	112.89
5	QE	105	VAL	N-CA-C	5.00	119.69	108.88
12	QL	104	VAL	N-CA-C	5.00	115.52	106.61
1	XA	980	C	OP2-P-O3'	-5.00	92.99	108.00
34	YA	2681	C	P-O3'-C3'	5.00	127.71	120.20

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	XA	617	G	C2'
28	Y4	5	ILE	CA

All (30) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
34	RA	1649	G	Sidechain
37	RE	146	THR	Peptide
50	RV	49	THR	Mainchain,Peptide
54	RZ	166	SER	Peptide
1	XA	1112	C	Sidechain
1	XA	1225	A	Sidechain
1	XA	1320	C	Sidechain
1	XA	1348	U	Sidechain
1	XA	1507	A	Sidechain
1	XA	308	C	Sidechain
1	XA	564	C	Sidechain
1	XA	608	A	Sidechain
1	XA	618	C	Sidechain
1	XA	625	G	Sidechain
1	XA	635	G	Sidechain
1	XA	860	A	Sidechain
1	XA	878	G	Sidechain
1	XA	957	U	Sidechain
1	XA	964	A	Sidechain
1	XA	972	C	Sidechain
28	Y4	5	ILE	Mainchain
34	YA	2060	A	Sidechain
34	YA	2098	U	Sidechain
34	YA	2111	C	Sidechain
34	YA	2454	G	Sidechain
34	YA	2459	A	Sidechain
34	YA	2550	G	Sidechain
37	YE	146	THR	Peptide
54	YZ	166	SER	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	32469	0	16385	1581	0
1	XA	32551	0	16418	1289	0
2	QB	1907	0	1958	101	0
2	XB	1915	0	1966	41	0
3	QC	1605	0	1667	136	0
3	XC	1605	0	1668	96	18
4	QD	1703	0	1762	107	0
4	XD	1703	0	1763	59	7
5	QE	1155	0	1213	79	0
5	XE	1155	0	1213	33	0
6	QF	843	0	857	10	5
6	XF	843	0	855	92	0
7	QG	1257	0	1296	57	18
7	XG	1257	0	1295	62	0
8	QH	1108	0	1165	53	0
8	XH	1108	0	1165	26	0
9	QI	816	0	822	52	6
9	XI	834	0	847	23	0
10	QJ	801	0	843	199	0
10	XJ	777	0	816	117	6
11	QK	885	0	904	35	0
11	XK	864	0	880	74	0
12	QL	975	0	1062	46	0
12	XL	956	0	1046	30	0
13	QM	921	0	974	138	0
13	XM	914	0	966	128	0
14	QN	492	0	528	285	0
14	XN	492	0	521	172	0
15	QO	734	0	770	57	0
15	XO	729	0	767	46	0
16	QP	705	0	725	71	0
16	XP	705	0	725	16	0
17	QQ	834	0	904	43	0
17	XQ	834	0	902	23	0
18	QR	574	0	644	8	0
18	XR	574	0	643	105	0
19	QS	665	0	678	227	0
19	XS	674	0	695	112	0
20	QT	763	0	861	27	0
20	XT	763	0	861	40	0
21	QU	217	0	223	45	0
21	XU	217	0	234	10	0
22	QV	1452	0	736	3	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
22	XV	1452	0	736	16	0
23	QX	409	0	209	5	0
23	XX	409	0	209	23	0
24	R0	643	0	667	12	0
24	Y0	648	0	672	11	0
25	R1	746	0	826	26	0
25	Y1	729	0	802	11	0
26	R2	581	0	629	5	1
26	Y2	575	0	624	6	0
27	R3	469	0	518	13	2
27	Y3	469	0	518	12	0
28	R4	348	0	354	26	0
28	Y4	357	0	362	10	0
29	R5	459	0	477	20	0
29	Y5	459	0	476	25	1
30	R6	453	0	474	11	0
30	Y6	453	0	473	13	0
31	R7	409	0	454	12	0
31	Y7	418	0	467	19	0
32	R8	517	0	582	31	0
32	Y8	517	0	582	27	0
33	R9	307	0	335	24	0
33	Y9	307	0	336	19	0
34	RA	62070	0	31282	996	0
34	YA	62091	0	31289	1257	1
35	RB	2573	0	1306	22	0
35	YB	2573	0	1306	14	0
36	RD	2115	0	2195	53	2
36	YD	2115	0	2195	65	0
37	RE	1568	0	1634	36	0
37	YE	1568	0	1633	33	0
38	RF	1585	0	1632	33	0
38	YF	1585	0	1632	31	0
39	RG	1474	0	1535	50	0
39	YG	1474	0	1535	27	0
40	RH	1336	0	1418	80	0
40	YH	1336	0	1418	25	0
41	RI	1136	0	1223	42	0
41	YI	1136	0	1223	30	0
42	RN	1104	0	1180	13	0
42	YN	1104	0	1180	18	0
43	RO	933	0	996	23	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
43	YO	933	0	996	19	0
44	RP	1145	0	1228	39	0
44	YP	1122	0	1206	45	2
45	RQ	1122	0	1179	42	0
45	YQ	1122	0	1179	35	0
46	RR	960	0	1021	22	0
46	YR	960	0	1021	24	0
47	RS	882	0	943	19	0
47	YS	882	0	943	17	0
48	RT	1141	0	1202	19	0
48	YT	1141	0	1202	30	0
49	RU	964	0	1022	39	0
49	YU	964	0	1022	22	0
50	RV	779	0	852	16	0
50	YV	779	0	852	12	1
51	RW	900	0	964	21	0
51	YW	900	0	964	19	0
52	RX	725	0	778	11	0
52	YX	725	0	778	9	0
53	RY	818	0	911	26	0
53	YY	818	0	910	20	0
54	RZ	1461	0	1493	37	0
54	YZ	1529	0	1551	33	0
55	QA	70	0	0	0	0
55	QE	1	0	0	0	0
55	QF	1	0	0	0	0
55	QH	2	0	0	0	0
55	QL	2	0	0	0	0
55	R0	2	0	0	0	0
55	R3	1	0	0	0	0
55	R8	2	0	0	0	0
55	RA	432	0	0	0	0
55	RD	1	0	0	0	0
55	RE	4	0	0	0	0
55	RF	2	0	0	0	0
55	RN	1	0	0	0	0
55	RO	1	0	0	0	0
55	XA	88	0	0	2	0
55	XE	1	0	0	0	0
55	XO	1	0	0	0	0
55	Y1	1	0	0	0	0
55	Y2	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
55	Y5	1	0	0	0	0
55	Y7	1	0	0	0	0
55	Y8	2	0	0	0	0
55	YA	394	0	0	3	0
55	YB	1	0	0	0	0
55	YD	2	0	0	0	0
55	YE	4	0	0	0	0
55	YF	1	0	0	0	0
55	YP	1	0	0	0	0
55	YQ	1	0	0	0	0
55	YR	2	0	0	0	0
55	YU	1	0	0	0	0
55	YX	1	0	0	0	0
56	QD	8	0	0	2	0
56	XD	8	0	0	0	0
57	QN	1	0	0	0	0
57	R5	1	0	0	0	0
57	R6	1	0	0	0	0
57	R9	1	0	0	0	0
57	RY	1	0	0	0	0
57	XN	1	0	0	0	0
57	Y5	1	0	0	0	0
57	Y6	1	0	0	0	0
57	Y9	1	0	0	0	0
57	YY	1	0	0	1	0
All	All	291185	0	197034	7054	35

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 15.

All (7054) 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)
10:QJ:47:PHE:CZ	14:QN:36:PHE:HB3	1.21	1.72
14:QN:24:CYS:SG	14:QN:40:CYS:HB2	1.24	1.68
1:QA:980:C:C1'	14:QN:19:ARG:HG2	1.23	1.68
1:QA:1049:U:C5	14:QN:3:ARG:HB3	1.26	1.66
1:XA:1190:G:H5'	3:XC:176:HIS:CE1	1.30	1.64
34:YA:1127:A:C2	34:YA:2518:A:C5	1.83	1.64
1:QA:1360:A:C1'	14:QN:17:LYS:HE3	1.23	1.62
1:XA:1318:A:C5	14:XN:16:PHE:CE1	1.79	1.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:16:LEU:CD2	9:QI:42:ARG:HG2	1.27	1.59
1:QA:1106:G:C4'	3:QC:172:ARG:HG3	1.25	1.59
1:QA:1106:G:C1'	3:QC:172:ARG:HE	1.06	1.58
1:QA:1106:G:H4'	3:QC:172:ARG:CG	1.21	1.57
34:YA:919:G:C6	34:YA:2268:A:N1	1.69	1.57
10:QJ:47:PHE:HZ	14:QN:36:PHE:CB	1.17	1.56
7:QG:16:LEU:HD21	9:QI:42:ARG:CG	1.21	1.55
1:XA:1240:U:C1'	7:XG:38:LEU:HD11	1.16	1.55
1:XA:1190:G:C5'	3:XC:176:HIS:HE1	1.13	1.54
1:XA:1318:A:C2'	19:XS:11:VAL:HG21	1.37	1.53
1:QA:1221:G:C4'	19:QS:36:ARG:NH2	1.68	1.53
1:XA:1318:A:N6	14:XN:16:PHE:CG	1.76	1.52
34:YA:2070:G:N2	34:YA:2442:C:C2	1.77	1.51
6:XF:100:ASN:HD22	18:XR:27:GLY:CA	1.17	1.51
1:XA:1190:G:C5'	3:XC:176:HIS:CE1	1.88	1.49
1:QA:980:C:H1'	14:QN:19:ARG:CG	1.05	1.49
1:QA:1302:U:C1'	13:QM:27:LYS:HE3	1.02	1.49
1:QA:1236:A:C4'	21:QU:10:ARG:NH1	1.70	1.48
1:XA:1228:C:C5	13:XM:104:ARG:HA	1.45	1.48
1:XA:1240:U:H1'	7:XG:38:LEU:CD1	1.40	1.48
1:QA:1360:A:H1'	14:QN:17:LYS:CE	1.44	1.47
11:XK:91:ARG:NE	18:XR:88:LYS:NZ	1.61	1.46
1:XA:1320:C:N4	19:XS:37:ARG:HB3	1.27	1.46
1:QA:1123:A:H4'	10:QJ:37:PRO:CD	1.44	1.45
40:RH:98:LEU:CD2	40:RH:125:VAL:HG11	1.44	1.45
34:YA:2090:G:N1	34:YA:2230:G:C6	1.84	1.44
34:RA:2751:G:C4	40:RH:3:ARG:HB3	1.52	1.44
29:Y5:32:PRO:N	29:Y5:32:PRO:CA	1.69	1.44
30:R6:16:CYS:SG	30:R6:16:CYS:CB	2.06	1.43
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	1.30	1.43
4:QD:57:ARG:NH2	5:QE:107:ARG:HD3	1.17	1.43
1:QA:1100:C:N4	2:QB:96:ARG:HH22	1.14	1.42
1:QA:1221:G:O2'	19:QS:77:THR:CG2	1.65	1.42
1:QA:974:A:C8	14:QN:31:ARG:NH1	1.81	1.42
1:XA:1318:A:O2'	19:XS:11:VAL:CG2	1.65	1.42
3:QC:23:TYR:CD2	10:QJ:95:GLU:HB2	1.55	1.41
34:YA:1127:A:N3	34:YA:2518:A:N7	1.67	1.41
1:XA:1318:A:C6	14:XN:16:PHE:CD1	2.08	1.41
1:QA:1179:A:C5'	9:QI:83:ARG:HH22	1.32	1.41
1:QA:1188:A:H4'	14:QN:58:LYS:NZ	1.30	1.41
1:QA:657:G:O2'	15:QO:28:GLN:CG	1.68	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:981:U:C4'	14:QN:21:TYR:OH	1.66	1.40
1:QA:1236:A:H4'	21:QU:10:ARG:NH1	1.10	1.40
1:XA:1187:G:C1'	14:XN:61:TRP:O	1.68	1.40
1:XA:1318:A:C3'	19:XS:11:VAL:HG21	1.50	1.40
34:YA:919:G:C6	34:YA:2268:A:C6	2.09	1.40
6:XF:100:ASN:ND2	18:XR:27:GLY:HA2	1.15	1.39
1:QA:1309:G:H5''	13:QM:77:ASN:ND2	1.38	1.38
34:YA:2082:A:H62	34:YA:2237:G:N2	1.20	1.38
1:QA:980:C:C2	14:QN:19:ARG:O	1.76	1.37
10:QJ:50:ILE:CG1	14:QN:41:ARG:CD	2.01	1.37
1:QA:1106:G:C1'	3:QC:172:ARG:NE	1.84	1.37
4:QD:197:PRO:CD	6:XF:16:GLN:CB	1.94	1.36
1:XA:675:A:C2	11:XK:118:GLY:HA2	1.60	1.36
1:XA:1542:U:O3'	2:XB:169:LYS:NZ	1.58	1.36
13:QM:84:ILE:O	19:QS:74:PHE:CE2	1.76	1.35
1:QA:1360:A:C1'	14:QN:17:LYS:CE	2.01	1.35
14:QN:24:CYS:SG	14:QN:40:CYS:CB	2.14	1.35
1:QA:948:C:H5''	13:QM:101:GLN:CG	1.55	1.35
1:QA:1313:U:H3'	19:QS:6:LYS:NZ	1.04	1.34
7:QG:16:LEU:CD2	9:QI:42:ARG:CG	1.87	1.34
1:QA:980:C:C1'	14:QN:19:ARG:CG	1.85	1.34
1:XA:1316:G:H4'	14:XN:17:LYS:CG	1.49	1.34
6:XF:100:ASN:HD22	18:XR:27:GLY:C	1.35	1.34
1:QA:957:U:C4'	19:QS:79:THR:O	1.74	1.34
1:QA:1253:G:P	10:QJ:44:VAL:HB	1.67	1.34
1:XA:1318:A:C5	14:XN:16:PHE:CD1	2.15	1.33
10:QJ:50:ILE:CG1	14:QN:41:ARG:HD3	1.58	1.33
34:YA:919:G:N1	34:YA:2268:A:C6	1.96	1.33
1:QA:1372:U:OP1	9:QI:68:GLY:CA	1.74	1.32
1:QA:1378:C:OP2	7:QG:7:ALA:CB	1.75	1.32
1:XA:675:A:C2	11:XK:118:GLY:CA	2.10	1.32
1:QA:1187:G:N3	14:QN:60:SER:OG	1.61	1.32
1:XA:1360:A:C8	14:XN:17:LYS:O	1.82	1.32
1:QA:1179:A:H5''	9:QI:83:ARG:NH2	1.41	1.31
4:QD:197:PRO:HD3	6:XF:16:GLN:CB	1.05	1.31
10:QJ:50:ILE:HG12	14:QN:41:ARG:CD	1.59	1.31
1:QA:1320:C:N4	19:QS:37:ARG:HG2	1.42	1.31
1:XA:1305:G:C5	1:XA:1331:G:C6	2.18	1.31
1:QA:1330:U:O4	21:QU:7:ARG:NH1	1.60	1.31
1:QA:1376:U:O4	7:QG:10:ARG:NH2	1.61	1.30
1:QA:957:U:H4'	19:QS:79:THR:C	1.56	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1187:G:C2'	14:XN:61:TRP:O	1.71	1.30
1:QA:1313:U:C3'	19:QS:6:LYS:NZ	1.95	1.30
34:RA:2751:G:N3	40:RH:3:ARG:HG2	1.44	1.30
1:QA:972:C:P	10:QJ:57:LYS:HD2	1.70	1.29
1:QA:310:G:P	16:QP:27:LYS:HD3	1.72	1.29
1:XA:1320:C:C1'	19:XS:70:LYS:CD	2.04	1.29
1:QA:979:C:N3	14:QN:19:ARG:HD2	1.47	1.29
4:QD:205:GLU:OE2	5:QE:100:VAL:HG12	1.24	1.29
1:QA:979:C:N4	14:QN:19:ARG:HB2	1.46	1.29
1:QA:1378:C:OP2	7:QG:7:ALA:HB1	1.16	1.29
1:XA:1318:A:H4'	19:XS:11:VAL:CG2	1.63	1.29
1:XA:675:A:H2	11:XK:118:GLY:CA	1.44	1.29
1:XA:1320:C:C1'	19:XS:70:LYS:HD2	1.59	1.29
21:XU:3:LYS:HD3	21:XU:14:TRP:CE3	1.67	1.29
1:QA:986:A:H1'	19:QS:54:GLY:O	1.33	1.28
1:XA:1318:A:C4'	19:XS:11:VAL:CG2	2.12	1.28
34:YA:1127:A:C2	34:YA:2518:A:N7	1.95	1.28
1:XA:1228:C:N4	13:XM:104:ARG:HG2	1.49	1.28
1:QA:1223:C:P	19:QS:78:ARG:NH2	2.07	1.28
1:XA:1226:C:H2'	13:XM:103:THR:OG1	1.12	1.28
1:QA:974:A:P	14:QN:29:ARG:NE	2.06	1.28
34:YA:1566:A:C2	36:YD:214:TRP:CD2	2.21	1.28
34:YA:2052:G:N2	34:YA:2617:C:O2	1.61	1.28
6:XF:94:GLN:OE1	18:XR:32:ARG:CD	1.81	1.27
1:XA:1316:G:C4'	14:XN:17:LYS:HG2	1.60	1.27
1:QA:1106:G:H1'	3:QC:172:ARG:NE	1.45	1.27
1:XA:1229:A:N6	13:XM:104:ARG:HE	1.32	1.27
34:YA:2046:G:C2	34:YA:2623:G:C2	2.22	1.27
3:QC:23:TYR:HB2	10:QJ:93:GLY:C	1.59	1.27
1:QA:1307:U:P	13:QM:99:ARG:HG3	1.75	1.26
1:QA:974:A:C5	14:QN:31:ARG:NH1	2.02	1.26
34:RA:2751:G:C5	40:RH:3:ARG:HB3	1.67	1.26
1:XA:1318:A:C6	14:XN:16:PHE:CG	2.18	1.26
1:QA:1221:G:H4'	19:QS:36:ARG:NH2	0.93	1.26
1:QA:1317:C:OP1	14:QN:16:PHE:HD2	1.13	1.26
1:XA:1228:C:C4	13:XM:104:ARG:HG2	1.69	1.26
1:QA:986:A:O2'	19:QS:55:LYS:O	1.52	1.26
1:QA:1320:C:H42	19:QS:37:ARG:CG	1.46	1.26
6:XF:50:TYR:CE1	18:XR:77:GLY:O	1.90	1.25
34:YA:2070:G:C2	34:YA:2442:C:C2	2.23	1.25
1:QA:1100:C:H41	2:QB:96:ARG:NH2	1.32	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1106:G:O2'	3:QC:172:ARG:CD	1.85	1.25
1:XA:1230:C:H41	13:XM:105:THR:CB	1.47	1.25
6:XF:94:GLN:OE1	18:XR:32:ARG:HD3	1.08	1.25
1:QA:978:A:N6	14:QN:18:VAL:HG21	1.52	1.25
1:QA:1309:G:C5'	13:QM:77:ASN:ND2	1.98	1.25
34:YA:2090:G:C2	34:YA:2230:G:C6	2.23	1.25
1:QA:980:C:O2	14:QN:19:ARG:O	1.52	1.24
1:XA:1320:C:C5	19:XS:37:ARG:HA	1.71	1.24
13:QM:86:CYS:SG	19:QS:73:GLU:OE2	1.95	1.24
34:YA:2049:G:N2	34:YA:2620:C:C2	2.05	1.24
1:XA:1374:A:O2'	7:XG:31:MET:HE2	1.35	1.24
1:QA:607:A:C2	16:QP:31:LYS:HA	1.73	1.24
1:QA:972:C:OP1	10:QJ:57:LYS:CD	1.85	1.24
1:QA:1317:C:OP1	14:QN:16:PHE:CD2	1.91	1.24
40:RH:98:LEU:HD21	40:RH:125:VAL:CG1	1.66	1.24
12:QL:104:VAL:O	12:QL:105:TYR:CD2	1.90	1.23
3:QC:23:TYR:HB2	10:QJ:93:GLY:O	1.39	1.23
1:XA:1318:A:C4	14:XN:16:PHE:CE1	2.27	1.23
40:RH:103:LEU:HD11	40:RH:123:PHE:CZ	1.72	1.23
1:XA:1312:G:C3'	19:XS:6:LYS:NZ	1.98	1.23
6:XF:99:ALA:O	18:XR:28:GLU:HA	1.10	1.23
34:YA:919:G:O6	34:YA:2268:A:N1	1.59	1.22
1:QA:669:U:H1'	15:QO:46:HIS:CE1	1.73	1.22
1:QA:1240:U:C6	7:QG:38:LEU:HD13	1.71	1.22
1:QA:1347:G:O6	9:QI:11:LYS:HD3	1.35	1.21
1:XA:1240:U:C1'	7:XG:38:LEU:CD1	2.06	1.21
12:QL:7:ILE:CD1	17:QQ:32:TYR:CD1	2.22	1.21
1:XA:1318:A:C4'	19:XS:11:VAL:HG21	1.68	1.21
1:XA:1377:A:N6	7:XG:10:ARG:CG	2.03	1.21
3:QC:23:TYR:CE2	10:QJ:95:GLU:HB2	1.74	1.21
1:XA:1305:G:O2'	1:XA:1332:A:N6	1.72	1.21
4:QD:57:ARG:CZ	5:QE:107:ARG:HD3	1.70	1.21
34:RA:2751:G:N7	40:RH:2:SER:O	1.73	1.21
1:XA:1190:G:H5'	3:XC:176:HIS:ND1	1.56	1.21
1:QA:959:A:N6	19:QS:79:THR:N	1.89	1.20
1:QA:973:G:O3'	14:QN:29:ARG:NH2	1.75	1.20
1:QA:1049:U:C5	14:QN:3:ARG:CB	2.23	1.20
1:XA:376:G:OP1	16:XP:67:THR:HG21	1.39	1.20
31:Y7:37:LYS:NZ	34:YA:469:G:O6	1.72	1.20
34:YA:1566:A:C2	36:YD:214:TRP:CE2	2.30	1.20
34:YA:270(P):U:O4	41:YI:52:ARG:NE	1.74	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1377:A:N6	7:XG:10:ARG:HG2	1.56	1.20
1:XA:1230:C:H41	13:XM:105:THR:CG2	1.53	1.20
1:QA:974:A:N7	14:QN:31:ARG:NH1	1.87	1.19
1:QA:1108:G:OP1	3:QC:175:LEU:N	1.74	1.19
1:XA:1320:C:C4	19:XS:37:ARG:CA	2.24	1.19
34:YA:2090:G:N1	34:YA:2230:G:O6	1.70	1.19
4:QD:197:PRO:CD	6:XF:16:GLN:HB2	1.63	1.19
34:YA:2081:C:O2	34:YA:2239:G:N2	1.75	1.19
1:XA:421:U:O4'	3:XC:192:THR:HG21	1.38	1.19
1:XA:1059:C:OP2	3:XC:2:GLY:CA	1.91	1.19
1:XA:1320:C:C4	19:XS:37:ARG:HA	1.77	1.18
34:YA:2045:C:C2	34:YA:2624:G:N2	2.11	1.18
1:QA:959:A:H61	19:QS:78:ARG:HA	1.03	1.18
1:QA:1106:G:O2'	3:QC:172:ARG:HD2	1.05	1.18
1:QA:1179:A:C5'	9:QI:83:ARG:NH2	1.97	1.18
1:XA:1318:A:C6	14:XN:16:PHE:CE1	2.27	1.18
1:XA:1312:G:H3'	19:XS:6:LYS:NZ	1.19	1.17
1:XA:1305:G:C6	1:XA:1331:G:C6	2.31	1.17
1:QA:1123:A:C4'	10:QJ:37:PRO:CD	2.23	1.17
34:YA:2082:A:N6	34:YA:2237:G:N3	1.93	1.17
10:QJ:50:ILE:HG12	14:QN:41:ARG:NE	1.60	1.16
1:XA:1226:C:C2'	13:XM:103:THR:OG1	1.91	1.16
4:QD:88:VAL:HG22	5:QE:96:PRO:O	1.45	1.16
34:YA:1127:A:H2	34:YA:2518:A:C5	1.37	1.16
1:QA:979:C:C4	14:QN:19:ARG:HD2	1.81	1.16
1:QA:1152:A:OP1	10:QJ:13:HIS:NE2	1.76	1.16
1:XA:1305:G:C6	1:XA:1331:G:O6	1.99	1.16
34:YA:919:G:N1	34:YA:2268:A:N1	1.87	1.16
1:XA:1230:C:H41	13:XM:105:THR:HB	1.07	1.15
1:XA:1230:C:N4	13:XM:105:THR:CG2	2.07	1.15
1:XA:1312:G:C3'	19:XS:6:LYS:HZ2	1.55	1.15
1:XA:1320:C:N3	19:XS:36:ARG:HG3	1.59	1.15
1:QA:956:U:O3'	19:QS:80:TYR:O	1.65	1.15
1:QA:1320:C:N3	19:QS:37:ARG:HA	1.59	1.15
4:QD:205:GLU:OE2	5:QE:100:VAL:CG1	1.95	1.15
1:QA:669:U:C1'	15:QO:46:HIS:HE1	1.58	1.14
1:QA:1186:G:N2	14:QN:61:TRP:O	1.79	1.14
1:XA:107:G:O6	20:XT:15:ARG:NE	1.80	1.14
1:XA:1229:A:OP2	13:XM:105:THR:HA	1.47	1.14
1:QA:959:A:N6	19:QS:79:THR:H	1.42	1.14
1:QA:1541:U:P	2:QB:23:ARG:HH21	1.70	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1228:C:C6	13:XM:104:ARG:HA	1.81	1.14
34:YA:1050:A:C8	34:YA:2751:G:C4	2.34	1.14
1:QA:974:A:C4	14:QN:31:ARG:NH1	2.13	1.14
4:QD:57:ARG:NH2	5:QE:107:ARG:CD	2.10	1.14
34:YA:1456:G:H1	34:YA:2703:C:N4	1.46	1.14
34:YA:2048:G:C2	34:YA:2621:A:C2	2.37	1.14
1:QA:1229:A:H61	13:QM:104:ARG:CZ	1.60	1.13
1:QA:1188:A:C4'	14:QN:58:LYS:NZ	2.10	1.13
1:QA:959:A:H61	19:QS:78:ARG:CA	1.59	1.13
1:XA:1318:A:N1	14:YN:16:PHE:CE2	2.16	1.13
1:XA:1359:C:P	14:YN:22:THR:OG1	2.06	1.13
1:XA:1229:A:N6	13:XM:104:ARG:NE	1.94	1.12
1:XA:1230:C:H42	13:XM:102:ARG:NH1	1.43	1.13
34:YA:2090:G:N2	34:YA:2230:G:C5	2.15	1.13
1:QA:624:C:O3'	16:QP:10:GLY:HA2	1.44	1.12
1:QA:1367:C:C4'	10:QJ:48:THR:HG21	1.79	1.12
11:QK:71:LYS:NZ	34:RA:2146:C:H41	1.46	1.12
1:XA:1377:A:N6	7:YG:10:ARG:CD	1.97	1.12
4:QD:89:THR:OG1	5:QE:97:GLY:O	1.67	1.12
1:XA:1359:C:OP1	14:YN:22:THR:OG1	1.66	1.12
1:XA:1440(N):G:OP1	20:XT:35:THR:HG21	1.50	1.12
1:QA:974:A:C5'	14:QN:31:ARG:HB3	1.79	1.12
1:QA:1240:U:H2'	7:QG:38:LEU:HD11	1.28	1.12
1:XA:1318:A:N6	14:YN:16:PHE:CD1	2.12	1.12
34:YA:1127:A:C2	34:YA:2518:A:C6	2.36	1.12
1:QA:972:C:OP1	10:QJ:57:LYS:HD2	0.94	1.12
6:XF:100:ASN:ND2	18:XR:27:GLY:CA	1.83	1.12
1:QA:954:G:C2	19:QS:83:HIS:HE1	1.67	1.11
1:QA:1229:A:OP1	13:QM:108:ARG:NH2	1.80	1.11
1:QA:1360:A:N7	14:QN:18:VAL:HA	1.49	1.11
3:QC:79:ARG:NE	11:XK:104:GLN:HG3	1.65	1.11
1:XA:974:A:P	14:YN:31:ARG:HB2	1.90	1.11
13:XM:84:ILE:HD11	19:XS:65:ASN:CG	1.73	1.11
3:QC:79:ARG:NH2	11:XK:104:GLN:HA	1.64	1.11
34:RA:2751:G:C4	40:RH:3:ARG:CB	2.32	1.11
1:XA:1187:G:H1'	14:YN:61:TRP:O	1.33	1.11
1:XA:1318:A:O2'	19:XS:11:VAL:HG21	1.33	1.11
1:QA:1123:A:C4'	10:QJ:37:PRO:HD3	1.81	1.11
34:YA:2082:A:N6	34:YA:2237:G:H21	1.48	1.11
1:QA:957:U:H4'	19:QS:79:THR:O	1.41	1.10
1:QA:1320:C:C4	19:QS:37:ARG:HA	1.85	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1320:C:N4	19:XS:37:ARG:CB	2.14	1.10
1:QA:538:G:H3'	12:QL:115:LYS:HZ2	1.12	1.10
1:QA:1253:G:OP1	10:QJ:44:VAL:CB	1.98	1.10
1:QA:980:C:C6	14:QN:19:ARG:HG3	1.85	1.10
25:R1:90:ILE:HG22	25:R1:94:LEU:HD11	1.19	1.10
7:QG:16:LEU:CD2	9:QI:42:ARG:HG3	1.80	1.10
1:XA:1188:A:H1'	14:XN:60:SER:HA	1.26	1.10
1:QA:981:U:C5'	14:QN:21:TYR:OH	1.98	1.09
45:RQ:59:ARG:HA	54:RZ:179:ASP:OD2	1.51	1.09
1:XA:1228:C:C5	13:XM:104:ARG:CA	2.35	1.09
1:XA:1318:A:C4	14:XN:16:PHE:CZ	2.39	1.09
34:YA:2080:G:C2	34:YA:2241:A:C2	2.39	1.09
3:QC:23:TYR:N	10:QJ:93:GLY:HA2	1.65	1.09
34:YA:2046:G:C4	34:YA:2623:G:N2	2.20	1.09
1:XA:1320:C:C1'	19:XS:70:LYS:HD3	1.83	1.09
1:QA:949:A:OP1	13:QM:101:GLN:HA	1.52	1.09
12:QL:7:ILE:HD11	17:QQ:32:TYR:HB3	1.28	1.09
14:XN:56:VAL:HG13	14:XN:57:ARG:H	1.01	1.09
34:YA:919:G:C5	34:YA:2268:A:N6	2.20	1.09
1:QA:974:A:N9	14:QN:31:ARG:NH1	2.01	1.08
1:QA:983:A:H5'	14:QN:2:ALA:HB2	1.15	1.08
1:QA:1150:U:H1'	10:QJ:39:PRO:HG2	1.10	1.08
34:RA:2751:G:N3	40:RH:3:ARG:CG	2.16	1.08
1:XA:1112:C:O4'	3:XC:179:ARG:NH2	1.86	1.08
1:XA:1377:A:P	7:XG:94:ARG:NH2	2.25	1.08
34:YA:2043:C:N4	34:YA:2777:G:N1	2.01	1.08
34:YA:2090:G:C6	34:YA:2230:G:O6	2.05	1.08
1:QA:948:C:H5''	13:QM:101:GLN:HG3	1.14	1.08
3:QC:23:TYR:H	10:QJ:93:GLY:HA2	1.03	1.08
12:QL:7:ILE:HD11	17:QQ:32:TYR:CB	1.83	1.08
1:QA:1219:U:O2'	19:QS:34:TRP:CE3	2.04	1.08
11:XK:91:ARG:HH21	18:XR:88:LYS:HD2	1.13	1.08
3:QC:23:TYR:CE2	10:QJ:95:GLU:CB	2.35	1.08
10:QJ:50:ILE:HD11	14:QN:41:ARG:HD2	1.31	1.08
1:XA:1318:A:N6	14:XN:16:PHE:CB	2.17	1.08
1:XA:1318:A:C2	14:XN:16:PHE:CZ	2.42	1.08
1:XA:1320:C:H1'	19:XS:70:LYS:HD2	1.26	1.08
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.84	1.08
1:XA:186(B):C:O2	20:XT:105:SER:HB2	1.49	1.08
10:XJ:40:LEU:HB3	10:XJ:41:PRO:CD	1.84	1.08
10:QJ:50:ILE:HD11	14:QN:41:ARG:NH1	1.67	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1320:C:O2	19:QS:36:ARG:O	1.71	1.07
1:QA:1358:U:O3'	14:QN:22:THR:HG21	1.53	1.07
6:XF:99:ALA:O	18:XR:28:GLU:CA	2.02	1.07
34:YA:918:A:N7	34:YA:2268:A:N6	2.01	1.07
34:YA:2048:G:N1	34:YA:2621:A:C2	2.20	1.07
1:QA:1100:C:C5	2:QB:96:ARG:NH2	2.21	1.07
1:QA:974:A:O5'	14:QN:31:ARG:HB2	1.53	1.07
1:QA:978:A:H62	14:QN:18:VAL:CG2	1.66	1.07
1:XA:702:A:N6	34:YA:1848:A:C2	2.22	1.07
1:QA:1240:U:N3	7:QG:38:LEU:HB3	1.40	1.07
1:XA:1318:A:C6	14:XN:16:PHE:CD2	2.43	1.07
34:YA:945:A:N6	34:YA:2448:A:N6	1.61	1.07
34:YA:1127:A:H2	34:YA:2518:A:C4	1.72	1.07
1:QA:972:C:P	10:QJ:57:LYS:CD	2.42	1.06
1:XA:741:G:P	15:XO:35:ARG:NH2	2.26	1.06
1:XA:1377:A:C6	7:XG:10:ARG:CG	2.38	1.06
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.26	1.06
1:QA:1280:A:H5''	10:QJ:40:LEU:HD23	1.30	1.06
14:XN:27:CYS:SG	14:XN:28:GLY:N	2.28	1.06
1:QA:1253:G:P	10:QJ:44:VAL:CB	2.43	1.06
1:QA:1253:G:OP1	10:QJ:44:VAL:HB	1.54	1.06
1:QA:1318:A:N3	19:QS:37:ARG:CZ	2.17	1.06
4:QD:197:PRO:HD3	6:XF:16:GLN:HB3	1.06	1.06
34:YA:2046:G:C6	34:YA:2623:G:N1	2.24	1.06
1:QA:657:G:O2'	15:QO:28:GLN:HG2	0.88	1.06
1:QA:1160:G:O4'	2:QB:132:LYS:HE3	1.54	1.06
1:QA:1229:A:N6	13:QM:104:ARG:HG3	1.69	1.06
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.06	1.06
1:XA:1318:A:C4'	19:XS:11:VAL:HG23	1.82	1.06
1:QA:1152:A:OP1	10:QJ:13:HIS:CE1	2.09	1.06
34:YA:2044:C:C4	34:YA:2625:G:N2	2.23	1.06
1:QA:538:G:H3'	12:QL:115:LYS:NZ	1.71	1.05
10:QJ:45:ARG:HG2	14:QN:36:PHE:CZ	1.69	1.05
1:XA:1317:C:C5	14:XN:16:PHE:CD1	2.27	1.05
10:XJ:10:GLY:HA3	10:XJ:16:LEU:HD21	1.36	1.05
10:QJ:50:ILE:HG13	14:QN:41:ARG:HD3	1.34	1.05
1:XA:737:A:OP1	6:XF:92:LYS:NZ	1.87	1.05
1:QA:1253:G:O5'	10:QJ:44:VAL:HB	1.57	1.05
12:QL:7:ILE:HD11	17:QQ:32:TYR:CG	1.90	1.05
1:XA:1319:A:OP2	19:XS:3:ARG:NE	1.88	1.05
1:QA:974:A:H5'	14:QN:31:ARG:HB3	1.33	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1179:A:H5'	9:QI:83:ARG:HH22	1.17	1.05
40:RH:87:LEU:O	40:RH:131:VAL:HG23	1.54	1.05
1:XA:1304:G:H5''	1:XA:1304:G:H8	1.16	1.05
34:YA:2070:G:N2	34:YA:2442:C:N1	2.04	1.05
1:QA:1320:C:C2	19:QS:36:ARG:O	2.10	1.05
2:QB:196:LEU:HA	8:QH:74:PRO:HG3	1.37	1.05
1:XA:1309:G:C4'	13:XM:77:ASN:ND2	2.20	1.05
10:XJ:16:LEU:HB3	10:XJ:70:ARG:NH1	1.71	1.05
34:YA:1392:A:N6	52:YX:15:GLU:OE2	1.89	1.05
1:QA:669:U:H1'	15:QO:46:HIS:HE1	0.89	1.04
1:QA:876:G:H1'	8:QH:11:THR:HG21	1.40	1.04
1:QA:1221:G:C5'	19:QS:36:ARG:NH2	2.19	1.04
1:QA:607:A:N1	16:QP:31:LYS:HA	1.72	1.04
1:QA:1186:G:H21	14:QN:61:TRP:C	1.65	1.04
1:QA:1320:C:N4	19:QS:37:ARG:CG	2.12	1.04
1:QA:1357:A:C5'	10:QJ:45:ARG:HH22	1.70	1.04
6:XF:50:TYR:CE1	18:XR:77:GLY:C	2.22	1.04
34:YA:1566:A:N1	36:YD:214:TRP:CE2	2.26	1.04
34:YA:2099:U:O2	34:YA:2190:G:N2	1.91	1.04
1:XA:280:C:N3	17:XQ:39:SER:N	2.03	1.04
1:XA:1320:C:H1'	19:XS:70:LYS:CD	1.77	1.04
1:QA:973:G:O3'	14:QN:29:ARG:CZ	2.05	1.04
1:XA:974:A:O5'	14:XN:31:ARG:HB3	1.55	1.04
34:YA:2108:C:H42	34:YA:2182:G:N2	1.55	1.04
1:QA:948:C:H5''	13:QM:101:GLN:HG2	1.40	1.03
1:QA:972:C:OP2	10:QJ:57:LYS:HG3	1.58	1.03
1:QA:1357:A:H5'	10:QJ:45:ARG:NH2	1.73	1.03
1:XA:191:G:O2'	20:XT:101:GLY:O	1.74	1.03
1:XA:1190:G:H5''	3:XC:176:HIS:HE1	0.88	1.03
1:XA:1318:A:H4'	19:XS:11:VAL:HG23	1.08	1.03
1:XA:1225:A:H1'	19:XS:78:ARG:HE	1.18	1.03
6:XF:91:VAL:HG21	18:XR:34:TYR:CE1	1.92	1.03
1:QA:981:U:H4'	14:QN:21:TYR:OH	1.22	1.03
1:XA:1227:A:OP1	13:XM:96:LEU:HD21	1.59	1.03
1:XA:1318:A:C2	14:XN:16:PHE:CE2	2.46	1.03
11:XK:91:ARG:HE	18:XR:88:LYS:NZ	1.31	1.03
34:YA:2082:A:N6	34:YA:2237:G:N2	2.03	1.03
1:QA:1313:U:C5	19:QS:6:LYS:HE2	1.92	1.03
1:XA:186(B):C:O2	20:XT:105:SER:CB	2.07	1.03
3:XC:23:TYR:CE2	10:XJ:95:GLU:HB2	1.94	1.03
13:XM:84:ILE:HG13	19:XS:65:ASN:O	1.58	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1127:A:N3	34:YA:2518:A:C8	2.27	1.03
1:QA:979:C:C2	14:QN:19:ARG:HD2	1.93	1.02
1:QA:1106:G:O4'	3:QC:172:ARG:NE	1.92	1.02
1:QA:1226:C:OP1	13:QM:87:TYR:OH	1.75	1.02
3:QC:23:TYR:CD2	10:QJ:95:GLU:CB	2.42	1.02
1:XA:1372:U:OP1	9:XI:68:GLY:HA2	1.58	1.02
1:QA:1100:C:N4	2:QB:96:ARG:NH2	1.97	1.02
1:XA:1318:A:N7	14:YN:16:PHE:CE1	2.27	1.02
1:QA:1240:U:C6	7:QG:38:LEU:CD1	2.42	1.02
1:QA:1280:A:H5''	10:QJ:40:LEU:CD2	1.90	1.02
1:XA:1309:G:C5'	13:XM:77:ASN:ND2	2.23	1.02
1:XA:1318:A:C5	14:YN:16:PHE:CZ	2.46	1.02
1:XA:1318:A:O2'	19:XS:11:VAL:HG22	1.58	1.02
13:XM:84:ILE:HG22	19:XS:74:PHE:CZ	1.94	1.02
1:QA:309:G:H5''	16:QP:27:LYS:HE2	1.41	1.02
7:QG:16:LEU:HD22	9:QI:42:ARG:CG	1.90	1.02
1:QA:657:G:C2'	15:QO:28:GLN:HG2	1.86	1.01
1:QA:668:G:H4'	15:QO:48:LYS:O	1.58	1.01
1:XA:1305:G:H2'	1:XA:1331:G:N2	1.74	1.01
34:YA:197:A:C4	34:YA:2430:A:C2	2.47	1.01
1:QA:953:G:C5	13:QM:104:ARG:NH2	2.27	1.01
34:YA:2051:A:C2	34:YA:2614:A:C2	2.47	1.01
1:XA:1377:A:OP1	7:YG:94:ARG:NH2	1.93	1.01
6:XF:99:ALA:HB3	18:XR:29:PHE:CD1	1.96	1.01
34:YA:2056:G:C6	34:YA:2577:A:C4	2.48	1.01
34:YA:2082:A:N6	34:YA:2237:G:C2	2.26	1.01
11:QK:71:LYS:HZ2	34:RA:2146:C:H41	1.04	1.01
1:XA:412:A:C2	4:XD:35:ARG:HD3	1.96	1.01
1:XA:974:A:C5'	14:YN:31:ARG:HB3	1.89	1.01
34:YA:2070:G:N1	34:YA:2442:C:N3	2.09	1.01
1:QA:974:A:P	14:QN:29:ARG:CZ	2.48	1.01
1:QA:1360:A:O4'	14:QN:17:LYS:CE	2.06	1.01
13:QM:84:ILE:HG21	19:QS:69:HIS:CE1	1.95	1.01
1:XA:974:A:C8	14:YN:31:ARG:CD	2.44	1.01
1:XA:1360:A:C8	14:YN:17:LYS:C	2.35	1.00
34:YA:1050:A:C8	34:YA:2751:G:C5	2.49	1.00
34:YA:2046:G:N3	34:YA:2623:G:C2	2.29	1.00
34:YA:2311:A:H1'	39:YG:88:ILE:HD12	1.41	1.00
1:QA:980:C:H1'	14:QN:19:ARG:CD	1.90	1.00
1:QA:1123:A:C4'	10:QJ:37:PRO:HD2	1.91	1.00
10:QJ:47:PHE:CZ	14:QN:36:PHE:CB	2.06	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:719:C:O2	18:XR:50:ILE:HD12	1.60	1.00
1:QA:986:A:C1'	19:QS:55:LYS:HA	1.91	1.00
3:QC:23:TYR:CE1	10:QJ:9:ARG:O	2.14	1.00
26:R2:48:HIS:NE2	26:R2:49:LYS:HE2	1.74	1.00
1:QA:1367:C:H4'	10:QJ:48:THR:CG2	1.92	1.00
1:XA:1301:U:O2'	13:XM:17:VAL:HG21	1.60	1.00
1:XA:1318:A:C3'	19:XS:11:VAL:CG2	2.36	1.00
22:XV:8:U:H3	22:XV:14:A:H62	1.01	1.00
34:YA:2046:G:N3	34:YA:2623:G:N2	2.10	1.00
1:QA:740:U:H4'	15:QO:39:LEU:HG	1.44	1.00
1:QA:1229:A:N6	13:QM:104:ARG:CG	2.25	1.00
13:QM:84:ILE:O	19:QS:74:PHE:CZ	2.15	0.99
1:XA:1160:G:O4'	2:XB:132:LYS:HE3	1.62	0.99
1:QA:980:C:C1'	14:QN:19:ARG:HG3	1.89	0.99
1:QA:1360:A:N7	14:QN:18:VAL:CA	2.12	0.99
34:YA:2090:G:C2	34:YA:2230:G:C5	2.51	0.99
1:XA:1059:C:OP2	3:XC:2:GLY:HA2	1.60	0.99
1:QA:959:A:H62	19:QS:79:THR:N	1.53	0.99
1:QA:1221:G:OP1	19:QS:36:ARG:CZ	2.10	0.99
1:XA:728:A:N7	15:XO:54:ARG:CZ	2.26	0.99
6:XF:91:VAL:HG21	18:XR:34:TYR:CZ	1.97	0.99
1:QA:974:A:OP2	14:QN:29:ARG:NE	1.96	0.99
1:XA:185:A:O2'	20:XT:81:LYS:NZ	1.96	0.99
34:YA:2051:A:H2	34:YA:2614:A:C2	1.78	0.99
1:XA:1305:G:C5	1:XA:1331:G:O6	2.13	0.99
34:YA:919:G:C6	34:YA:2268:A:N6	2.29	0.99
34:YA:1782:C:N4	34:YA:2587:A:C2	2.31	0.99
34:YA:2059:A:N1	34:YA:2503:A:C6	2.31	0.99
1:QA:1158:C:C4'	2:QB:133:LYS:NZ	2.25	0.99
10:QJ:50:ILE:CD1	14:QN:41:ARG:CD	2.41	0.99
10:QJ:50:ILE:CD1	14:QN:41:ARG:HD2	1.92	0.99
1:QA:1313:U:H3'	19:QS:6:LYS:HZ3	1.20	0.98
1:XA:1228:C:O5'	13:XM:108:ARG:NH2	1.95	0.98
1:XA:1230:C:N4	13:XM:102:ARG:HH12	1.60	0.98
1:QA:1302:U:H1'	13:QM:27:LYS:HE3	1.38	0.98
1:XA:1320:C:C4	19:XS:37:ARG:CB	2.44	0.98
1:QA:667:G:H4'	15:QO:51:HIS:CE1	1.96	0.98
34:YA:2051:A:N1	34:YA:2614:A:C4	2.31	0.98
28:R4:7:PRO:HG3	39:RG:61:ALA:HB1	1.45	0.98
1:XA:1533:C:N4	23:XX:12:A:C2	2.32	0.98
6:XF:100:ASN:HB2	18:XR:27:GLY:C	1.89	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:199:A:N6	34:YA:2434:A:C6	2.31	0.98
34:YA:1566:A:N1	36:YD:214:TRP:CZ2	2.31	0.98
1:QA:1221:G:OP1	19:QS:36:ARG:NH1	1.96	0.98
1:QA:1229:A:N6	13:QM:104:ARG:NE	2.10	0.98
1:QA:1318:A:N3	19:QS:37:ARG:NH1	2.10	0.98
3:QC:23:TYR:H	10:QJ:93:GLY:CA	1.75	0.98
34:YA:197:A:C5	34:YA:2430:A:C2	2.52	0.98
34:YA:2108:C:H42	34:YA:2182:G:H22	1.09	0.98
1:XA:1226:C:H2'	13:XM:103:THR:HG1	1.24	0.98
1:XA:1318:A:N3	19:XS:37:ARG:NH1	2.11	0.98
1:QA:1372:U:OP1	9:QL:68:GLY:HA2	0.80	0.98
10:QJ:50:ILE:HG12	14:QN:41:ARG:HD3	1.23	0.98
34:YA:197:A:C4	34:YA:2430:A:H2	1.82	0.98
1:QA:1240:U:C5	7:QG:38:LEU:HD13	1.99	0.97
3:QC:23:TYR:CB	10:QJ:93:GLY:O	2.11	0.97
1:XA:1309:G:C4'	13:XM:77:ASN:HD21	1.77	0.97
1:QA:1226:C:C5'	13:QM:91:ARG:HH12	1.76	0.97
4:QD:204:ILE:CG2	5:QE:98:THR:O	2.12	0.97
34:YA:2048:G:C2	34:YA:2621:A:N3	2.32	0.97
1:XA:1304:G:H5''	1:XA:1304:G:C8	1.99	0.97
1:QA:956:U:C2'	19:QS:80:TYR:O	2.11	0.97
25:R1:95:LEU:O	25:R1:95:LEU:HD23	1.64	0.97
29:R5:3:LYS:NZ	34:RA:2611:U:O4	1.96	0.97
34:YA:2059:A:C2	34:YA:2503:A:N6	2.33	0.97
1:QA:974:A:OP2	14:QN:29:ARG:CG	2.12	0.97
1:QA:1188:A:C4'	14:QN:58:LYS:HZ1	1.75	0.97
1:QA:1150:U:C1'	10:QJ:39:PRO:HG2	1.95	0.97
1:QA:1158:C:C4'	2:QB:133:LYS:HZ2	1.78	0.97
1:QA:1226:C:H5'	13:QM:91:ARG:HH12	1.26	0.96
1:XA:1228:C:H5	13:XM:104:ARG:HA	1.23	0.96
1:XA:1112:C:H1'	3:XC:179:ARG:NE	1.80	0.96
11:XK:110:ASP:HB3	18:XR:85:LEU:O	1.65	0.96
1:QA:1152:A:P	10:QJ:13:HIS:CE1	2.51	0.96
33:R9:19:ARG:NE	34:RA:2756:U:OP2	1.97	0.96
1:XA:1124:G:H4'	10:XJ:36:GLY:H	1.30	0.96
11:XK:116:HIS:NE2	18:XR:82:THR:HB	1.80	0.96
34:YA:1174:A:N6	55:YA:3192:MG:MG	1.21	0.96
1:QA:957:U:O2'	19:QS:79:THR:O	1.83	0.96
30:R6:13:CYS:SG	30:R6:14:THR:N	2.39	0.96
1:XA:1305:G:O2'	1:XA:1332:A:C6	2.18	0.96
1:XA:1318:A:O2'	19:XS:11:VAL:CG1	2.14	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:Y5:43:HIS:CD2	34:YA:2884:U:H5	1.83	0.96
34:YA:747:U:O4	34:YA:2613:U:N3	1.98	0.96
34:YA:2054:A:H62	34:YA:2577:A:H61	1.06	0.96
1:QA:761:G:H5'	17:QQ:100:LYS:NZ	1.81	0.96
1:QA:1099:G:OP2	2:QB:96:ARG:CD	2.13	0.96
1:XA:974:A:O5'	14:XN:31:ARG:CB	2.13	0.96
1:XA:974:A:C1'	14:XN:31:ARG:HH11	1.77	0.96
11:XK:108:ILE:O	18:XR:87:ARG:HD2	1.66	0.96
1:QA:742:G:H5''	15:QO:58:MET:SD	2.06	0.96
1:QA:1049:U:C4	14:QN:3:ARG:HB3	2.00	0.95
1:XA:675:A:C2	11:XK:118:GLY:HA3	1.98	0.95
6:XF:87:ARG:NH1	18:XR:76:LEU:O	1.99	0.95
6:XF:100:ASN:ND2	18:XR:27:GLY:C	2.14	0.95
34:YA:1252:G:N3	49:YU:33:ARG:NH1	2.13	0.95
1:QA:675:A:H2	11:QK:118:GLY:HA2	1.29	0.95
1:QA:880:C:H5''	12:QL:12:ARG:NH2	1.80	0.95
13:QM:86:CYS:HB2	19:QS:69:HIS:CE1	1.99	0.95
1:XA:1318:A:C6	14:XN:16:PHE:CZ	2.52	0.95
34:YA:2044:C:N3	34:YA:2625:G:C2	2.33	0.95
1:QA:657:G:HO2'	15:QO:28:GLN:HG2	1.14	0.95
1:QA:1221:G:O2'	19:QS:77:THR:HG21	0.78	0.95
1:QA:982:U:O5'	14:QN:6:LEU:HD21	1.67	0.95
1:XA:974:A:C4	14:XN:31:ARG:NH1	2.35	0.95
1:QA:957:U:C2'	19:QS:79:THR:O	2.15	0.95
1:QA:982:U:H5''	14:QN:6:LEU:CG	1.96	0.95
1:QA:1347:G:O6	9:QI:11:LYS:CD	2.15	0.95
1:QA:1099:G:P	2:QB:96:ARG:HD2	2.05	0.95
1:XA:1318:A:N6	14:XN:16:PHE:HB3	1.80	0.95
10:XJ:37:PRO:HB3	10:XJ:72:VAL:HG22	1.46	0.95
34:YA:1050:A:H8	34:YA:2751:G:C4	1.84	0.95
1:QA:1360:A:O4'	14:QN:17:LYS:NZ	2.00	0.94
1:XA:1230:C:H42	13:XM:102:ARG:HH12	1.00	0.94
1:QA:974:A:C5'	14:QN:31:ARG:CB	2.44	0.94
1:QA:986:A:C1'	19:QS:54:GLY:O	2.15	0.94
6:XF:50:TYR:HE1	18:XR:77:GLY:C	1.73	0.94
34:YA:2046:G:C6	34:YA:2623:G:C6	2.55	0.94
1:XA:1320:C:C5	19:XS:37:ARG:CA	2.44	0.94
1:XA:1320:C:C4	19:XS:37:ARG:HB3	2.00	0.94
1:QA:986:A:H1'	19:QS:55:LYS:HA	1.46	0.94
1:QA:1160:G:H5'	2:QB:132:LYS:HE2	1.48	0.94
1:QA:1223:C:OP1	19:QS:78:ARG:NH2	1.98	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1112:C:C1'	3:XC:179:ARG:HH21	1.80	0.94
1:QA:1160:G:O4'	2:QB:132:LYS:CE	2.15	0.94
1:XA:1059:C:OP2	3:XC:2:GLY:C	2.10	0.94
34:YA:1566:A:C2	36:YD:214:TRP:CG	2.54	0.94
34:YA:2071:A:H2	34:YA:2441:C:N3	1.65	0.94
1:QA:186(K):G:N7	17:QQ:63:ARG:NH2	2.14	0.94
1:XA:1188:A:C1'	14:XN:60:SER:HA	1.98	0.94
1:XA:1230:C:N4	13:XM:105:THR:HB	1.82	0.94
1:XA:1318:A:N1	14:XN:16:PHE:CD2	2.36	0.94
1:XA:1377:A:C6	7:XG:10:ARG:HG2	2.02	0.94
34:YA:2046:G:N1	34:YA:2623:G:C6	2.35	0.94
1:XA:1228:C:N4	13:XM:104:ARG:CG	2.29	0.94
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	1.49	0.94
1:QA:626:U:H4'	16:QP:38:TYR:CD2	2.02	0.94
1:QA:1099:G:OP2	2:QB:96:ARG:HD2	1.68	0.94
1:QA:1150:U:O2	10:QJ:39:PRO:HG3	1.68	0.94
10:QJ:50:ILE:CD1	14:QN:41:ARG:CZ	2.45	0.94
7:XG:16:LEU:CD2	9:XI:44:VAL:HG23	1.98	0.94
1:QA:1229:A:C6	13:QM:104:ARG:NE	2.35	0.94
1:QA:1229:A:H62	13:QM:104:ARG:HG3	1.28	0.94
28:R4:26:SER:OG	39:RG:143:GLU:OE2	1.84	0.94
22:XV:8:U:H3	22:XV:14:A:N6	1.65	0.94
1:QA:1236:A:C5'	21:QU:10:ARG:NH1	2.30	0.94
4:QD:197:PRO:CD	6:XF:16:GLN:HB3	1.78	0.94
34:RA:2680:C:OP2	37:RE:111:ARG:NH2	2.01	0.94
1:QA:1313:U:O4	19:QS:4:SER:HB2	1.68	0.93
6:XF:89:MET:HE3	18:XR:76:LEU:HD13	1.47	0.93
34:YA:2087:G:O6	34:YA:2233:U:C4	2.21	0.93
3:XC:60:ALA:HB1	10:XJ:91:PRO:HD2	1.50	0.93
1:QA:1229:A:N6	13:QM:104:ARG:CZ	2.31	0.93
1:XA:1360:A:H1'	14:XN:17:LYS:HD2	1.50	0.93
1:QA:1229:A:P	13:QM:108:ARG:NH2	2.40	0.93
1:XA:1309:G:H5'	13:XM:77:ASN:HD22	1.33	0.93
1:QA:1313:U:C3'	19:QS:6:LYS:HZ2	1.69	0.93
1:XA:974:A:O4'	14:XN:31:ARG:HD3	1.69	0.93
1:QA:1158:C:H4'	2:QB:133:LYS:HZ1	1.22	0.93
34:RA:2751:G:C2	40:RH:3:ARG:HG2	2.04	0.93
1:XA:974:A:C4	14:XN:31:ARG:CZ	2.52	0.93
1:QA:956:U:O2'	19:QS:80:TYR:O	1.87	0.93
10:QJ:50:ILE:HD11	14:QN:41:ARG:HH11	1.23	0.93
34:YA:919:G:N1	34:YA:2268:A:C2	2.35	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1493:C:N4	34:YA:2210:G:C8	2.37	0.93
1:QA:958:A:N6	19:QS:77:THR:O	2.01	0.93
1:QA:1014:A:O4'	19:QS:34:TRP:CD1	2.22	0.93
1:QA:1360:A:O4'	14:QN:17:LYS:HE3	1.66	0.93
33:R9:31:LYS:HE2	34:RA:2478:A:H5'	1.47	0.93
4:QD:205:GLU:HG2	5:QE:100:VAL:O	1.68	0.92
1:XA:1217:C:OP1	14:XN:5:ALA:HB1	1.68	0.92
34:YA:2070:G:C2	34:YA:2442:C:O2	2.20	0.92
1:QA:957:U:O4'	19:QS:79:THR:O	1.85	0.92
1:XA:253:U:OP1	17:XQ:67:LYS:HD3	1.69	0.92
6:XF:94:GLN:CD	18:XR:32:ARG:HD3	1.95	0.92
1:QA:1378:C:P	7:QG:7:ALA:HB1	2.07	0.92
1:QA:948:C:C5'	13:QM:101:GLN:CG	2.47	0.92
1:QA:959:A:N6	19:QS:78:ARG:HA	1.83	0.92
10:QJ:50:ILE:CD1	14:QN:41:ARG:NH1	2.31	0.92
34:YA:2054:A:H62	34:YA:2577:A:N6	1.67	0.92
1:QA:1309:G:C5'	13:QM:77:ASN:HD21	1.74	0.92
1:XA:1123:A:O2'	10:XJ:38:ILE:HG23	1.69	0.92
1:QA:946:A:OP1	13:QM:114:ARG:NH2	2.02	0.92
1:QA:1188:A:H4'	14:QN:58:LYS:HZ3	1.10	0.92
11:XK:91:ARG:CD	18:XR:88:LYS:NZ	2.33	0.92
1:QA:979:C:H2'	14:QN:19:ARG:CZ	1.99	0.92
1:QA:980:C:O4'	14:QN:19:ARG:NE	2.01	0.92
1:QA:1221:G:H4'	19:QS:36:ARG:HH21	1.29	0.92
1:QA:1541:U:P	2:QB:23:ARG:NH2	2.43	0.91
1:XA:974:A:C8	14:XN:31:ARG:HD3	2.05	0.91
1:QA:137:C:H1'	16:QP:63:GLY:HA3	1.50	0.91
1:QA:1357:A:H5'	10:QJ:45:ARG:CZ	1.99	0.91
3:QC:23:TYR:N	10:QJ:93:GLY:CA	2.32	0.91
34:YA:2069:G:N2	34:YA:2443:C:C2	2.38	0.91
1:QA:954:G:C2	19:QS:83:HIS:CE1	2.58	0.91
1:QA:954:G:N2	19:QS:83:HIS:CE1	2.38	0.91
34:YA:491:G:O6	51:YW:49:LYS:NZ	2.02	0.91
1:QA:983:A:C5'	14:QN:2:ALA:HB2	1.99	0.91
1:QA:975:A:N6	10:QJ:48:THR:OG1	2.02	0.91
10:QJ:50:ILE:HD11	14:QN:41:ARG:CD	2.01	0.91
1:XA:1309:G:H4'	13:XM:77:ASN:HD21	1.35	0.91
34:YA:2045:C:C2	34:YA:2624:G:C2	2.58	0.91
1:QA:1313:U:C6	19:QS:6:LYS:HE2	2.05	0.91
4:QD:196:LEU:O	6:XF:16:GLN:NE2	1.81	0.91
41:RI:83:ALA:C	41:RI:89:TYR:CE2	2.49	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:56:VAL:HG13	14:YN:57:ARG:N	1.85	0.91
1:XA:675:A:N3	11:XK:118:GLY:CA	2.33	0.91
1:XA:1309:G:H5'	13:XM:77:ASN:ND2	1.86	0.91
11:XK:109:VAL:HG22	18:XR:86:VAL:HG23	1.52	0.91
1:QA:1150:U:O2'	10:QJ:39:PRO:HB2	1.70	0.91
1:XA:51:A:C4	1:XA:353:A:C6	2.59	0.91
34:YA:2056:G:C5	34:YA:2577:A:C5	2.58	0.91
1:QA:538:G:H5''	12:QL:115:LYS:HG2	1.53	0.90
1:QA:609:A:H5'	16:QP:9:PHE:CE1	2.06	0.90
1:QA:1100:C:C4	2:QB:96:ARG:NH2	2.39	0.90
1:XA:974:A:P	14:YN:31:ARG:CB	2.59	0.90
34:YA:2059:A:C2	34:YA:2503:A:C6	2.59	0.90
34:YA:2081:C:N3	34:YA:2239:G:N1	2.19	0.90
1:QA:1014:A:P	19:QS:32:LYS:HE2	2.11	0.90
34:YA:1456:G:H1	34:YA:2703:C:H42	0.98	0.90
34:YA:2093:G:H21	34:YA:2198:A:N6	1.68	0.90
1:QA:972:C:P	10:QJ:57:LYS:CG	2.58	0.90
1:QA:1235:U:O3'	21:QU:10:ARG:HD2	1.70	0.90
1:XA:528:C:N4	12:XL:49:ASN:OD1	2.05	0.90
1:QA:1188:A:C3'	14:QN:58:LYS:HZ1	1.83	0.90
4:QD:57:ARG:HH22	5:QE:107:ARG:CD	1.79	0.90
33:R9:23:VAL:HG11	34:RA:1032:A:H4'	1.51	0.90
1:XA:978:A:N7	14:YN:18:VAL:HG21	1.85	0.90
1:QA:959:A:H61	19:QS:78:ARG:C	1.80	0.90
1:QA:1372:U:P	9:QL:68:GLY:HA2	2.11	0.90
25:R1:90:ILE:HA	25:R1:94:LEU:CD1	2.00	0.90
1:XA:1230:C:N4	13:XM:105:THR:HG22	1.87	0.90
34:YA:2046:G:N1	34:YA:2623:G:N1	2.20	0.90
34:YA:2043:C:N4	34:YA:2777:G:C2	2.25	0.90
1:QA:583:A:H4'	17:QQ:91:ARG:CG	2.01	0.90
1:XA:1305:G:N1	1:XA:1331:G:N7	2.19	0.90
1:XA:1318:A:N7	14:YN:16:PHE:CD1	2.40	0.90
34:YA:919:G:C2	34:YA:2268:A:C6	2.59	0.90
1:QA:1111:A:N1	3:QC:177:THR:HA	1.87	0.90
1:QA:1160:G:H5'	2:QB:132:LYS:CE	2.01	0.90
1:QA:1253:G:P	10:QJ:44:VAL:CG2	2.60	0.90
34:YA:2045:C:N3	34:YA:2624:G:C2	2.39	0.90
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB2	1.52	0.89
1:XA:675:A:N3	11:XK:118:GLY:HA3	1.87	0.89
1:XA:1318:A:C6	14:YN:16:PHE:CE2	2.60	0.89
1:QA:1320:C:N3	19:QS:36:ARG:O	2.05	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:R9:23:VAL:HG21	34:RA:1032:A:H1'	1.51	0.89
1:XA:708:C:OP1	11:XK:85:ARG:NH1	2.03	0.89
1:XA:1123:A:O3'	10:XJ:36:GLY:HA3	1.71	0.89
1:XA:1320:C:C5	19:XS:37:ARG:CB	2.55	0.89
1:XA:403:C:N4	55:XA:1688:MG:MG	1.30	0.89
1:QA:1357:A:H5'	10:QJ:45:ARG:HH22	1.31	0.89
7:QG:16:LEU:HD22	9:QI:42:ARG:HG3	1.45	0.89
1:QA:676:A:H4'	11:QK:115:PRO:HB3	1.53	0.89
1:QA:960:U:O4	19:QS:78:ARG:HB3	1.71	0.89
1:QA:1123:A:H4'	10:QJ:37:PRO:HD3	0.90	0.89
1:QA:1358:U:H5''	14:QN:35:ARG:N	1.86	0.89
1:QA:253:U:OP1	17:QQ:67:LYS:NZ	2.06	0.89
1:QA:979:C:N3	14:QN:19:ARG:CD	2.33	0.89
1:XA:1225:A:H1'	19:XS:78:ARG:NE	1.87	0.89
28:R4:34:GLU:OE1	39:RG:113:ARG:CZ	2.21	0.89
41:RI:83:ALA:O	41:RI:89:TYR:CZ	2.26	0.89
1:XA:1188:A:H1'	14:XN:60:SER:CA	2.01	0.89
25:R1:90:ILE:CG2	25:R1:94:LEU:HD11	2.03	0.89
27:R3:42:ALA:O	34:RA:851:U:O2'	1.90	0.89
1:QA:1100:C:H5	2:QB:96:ARG:NH2	1.67	0.89
1:XA:675:A:H2	11:XK:118:GLY:C	1.80	0.89
1:XA:1112:C:C1'	3:XC:179:ARG:NH2	2.35	0.89
1:XA:1190:G:H5''	3:XC:176:HIS:CE1	1.76	0.89
43:YO:34:THR:HG22	43:YO:35:VAL:H	1.33	0.89
1:QA:982:U:H5''	14:QN:6:LEU:HG	1.55	0.88
1:XA:728:A:H62	15:XO:54:ARG:HD3	1.34	0.88
1:QA:668:G:C4'	15:QO:48:LYS:O	2.20	0.88
1:QA:1253:G:OP1	10:QJ:44:VAL:CG2	2.20	0.88
1:QA:1280:A:C4	10:QJ:41:PRO:HD3	2.08	0.88
1:QA:1359:C:OP1	14:QN:22:THR:HG22	1.73	0.88
1:QA:1360:A:C1'	14:QN:17:LYS:NZ	2.37	0.88
1:QA:1357:A:H5'	10:QJ:45:ARG:NH1	1.89	0.88
2:QB:197:VAL:O	8:QH:68:ARG:NH2	2.06	0.88
3:QC:23:TYR:CB	10:QJ:93:GLY:C	2.46	0.88
3:XC:21:ARG:HG3	10:XJ:92:THR:O	1.74	0.88
1:XA:1254:C:OP1	10:XJ:45:ARG:HD3	1.73	0.88
1:XA:1318:A:C1'	19:XS:11:VAL:HG21	2.04	0.88
10:XJ:47:PHE:HZ	14:XN:36:PHE:CD2	1.90	0.88
1:XA:1228:C:OP1	13:XM:108:ARG:CZ	2.22	0.88
1:QA:1309:G:H5''	13:QM:77:ASN:HD21	1.20	0.88
4:QD:88:VAL:HG13	5:QE:97:GLY:CA	2.03	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:728:A:N7	15:XO:54:ARG:NH1	2.22	0.88
34:YA:2085:C:C2	34:YA:2235:G:N2	2.42	0.88
1:QA:625:G:H4'	16:QP:16:HIS:HB2	1.55	0.87
4:QD:205:GLU:CD	5:QE:100:VAL:HG13	1.99	0.87
10:QJ:50:ILE:CG1	14:QN:41:ARG:NE	2.31	0.87
11:XK:116:HIS:CE1	18:XR:82:THR:HB	2.08	0.87
1:QA:741:G:P	15:QO:39:LEU:HD12	2.13	0.87
1:QA:956:U:C3'	19:QS:80:TYR:O	2.21	0.87
1:QA:980:C:H4'	14:QN:19:ARG:HH21	1.38	0.87
1:QA:986:A:H4'	19:QS:55:LYS:HG3	1.56	0.87
34:YA:2099:U:O4	34:YA:2190:G:O6	1.92	0.87
1:QA:975:A:C3'	14:QN:32:SER:HA	2.03	0.87
34:YA:2090:G:C6	34:YA:2230:G:C6	2.57	0.87
1:QA:948:C:C5'	13:QM:101:GLN:HG2	2.04	0.87
1:QA:1131:G:H1	1:QA:1143:G:H21	1.22	0.87
4:QD:204:ILE:HG21	5:QE:98:THR:C	2.00	0.87
1:XA:1318:A:C2'	19:XS:11:VAL:CG2	2.28	0.87
1:QA:310:G:OP1	16:QP:27:LYS:HD3	1.74	0.87
1:QA:957:U:C1'	19:QS:79:THR:O	2.22	0.87
1:QA:980:C:N1	14:QN:19:ARG:CG	2.36	0.87
34:YA:2053:G:N2	34:YA:2617:C:C2	2.43	0.87
34:YA:2126:A:H61	34:YA:2163:C:H1'	1.37	0.87
1:QA:1307:U:P	13:QM:99:ARG:CG	2.63	0.87
1:QA:1309:G:H5'	13:QM:77:ASN:ND2	1.87	0.87
1:XA:539:A:OP1	12:XL:114:LYS:HD2	1.75	0.87
11:XK:91:ARG:NH2	18:XR:88:LYS:HD2	1.88	0.87
1:QA:958:A:OP1	19:QS:79:THR:CG2	2.18	0.87
1:QA:1374:A:O2'	7:QG:31:MET:SD	2.31	0.87
1:XA:1228:C:H3'	13:XM:104:ARG:O	1.74	0.87
34:YA:389:G:N1	44:YP:71:VAL:HG12	1.90	0.87
1:QA:1358:U:C5'	14:QN:35:ARG:N	2.37	0.86
3:QC:79:ARG:CZ	11:XK:104:GLN:HA	2.04	0.86
1:XA:881:G:OP2	12:XL:9:GLN:NE2	2.08	0.86
21:XU:3:LYS:CD	21:XU:14:TRP:CE3	2.57	0.86
1:QA:880:C:H5''	12:QL:12:ARG:HH21	1.35	0.86
7:XG:16:LEU:HD23	9:XI:44:VAL:CG2	2.05	0.86
1:QA:676:A:H1'	11:QK:118:GLY:HA3	1.55	0.86
10:QJ:49:VAL:HG23	14:QN:41:ARG:HB2	1.55	0.86
34:RA:1411:C:H42	34:RA:1591:G:H1	1.20	0.86
1:XA:1131:G:H1	1:XA:1143:G:H21	1.22	0.86
34:YA:2043:C:N4	34:YA:2777:G:C6	2.43	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1106:G:O3'	3:QC:172:ARG:HB3	1.75	0.86
3:QC:79:ARG:HE	11:XK:104:GLN:HG3	1.39	0.86
1:QA:44:G:P	16:QP:12:LYS:HD3	2.15	0.86
1:QA:974:A:O5'	14:QN:31:ARG:CB	2.24	0.86
15:QO:89:GLY:OXT	34:RA:716:A:OP1	1.92	0.86
34:YA:918:A:N6	34:YA:2268:A:H62	1.71	0.86
14:XN:56:VAL:CG1	14:XN:57:ARG:H	1.85	0.86
34:YA:1493:C:C4	34:YA:2210:G:C8	2.64	0.86
1:QA:1150:U:O2	10:QJ:39:PRO:CG	2.23	0.86
1:QA:1220:G:H21	19:QS:54:GLY:CA	1.87	0.86
1:QA:1313:U:C3'	19:QS:6:LYS:HZ3	1.74	0.86
1:XA:1187:G:H2'	14:XN:61:TRP:O	1.75	0.86
12:QL:7:ILE:HD11	17:QQ:32:TYR:CD1	1.98	0.86
1:XA:1309:G:H4'	13:XM:77:ASN:ND2	1.87	0.86
1:XA:1312:G:C3'	19:XS:6:LYS:HZ3	1.72	0.86
1:XA:1360:A:C4	14:XN:17:LYS:HG3	2.11	0.85
28:R4:5:ILE:HB	39:RG:67:LYS:HD2	1.59	0.85
40:RH:103:LEU:HD11	40:RH:123:PHE:CE1	2.09	0.85
1:XA:1230:C:N4	13:XM:102:ARG:NH1	2.21	0.85
1:QA:1160:G:C5'	2:QB:132:LYS:CE	2.53	0.85
1:QA:1229:A:N1	13:QM:104:ARG:NH2	2.23	0.85
1:QA:1313:U:H3'	19:QS:6:LYS:HZ1	1.35	0.85
1:QA:1541:U:OP2	2:QB:23:ARG:NE	2.10	0.85
1:QA:954:G:N2	19:QS:83:HIS:HE1	1.72	0.85
1:QA:1307:U:OP2	13:QM:99:ARG:HG3	1.76	0.85
10:QJ:45:ARG:CG	14:QN:36:PHE:CZ	2.55	0.85
1:QA:1230:C:N4	13:QM:104:ARG:HD3	1.90	0.85
1:XA:1374:A:O2'	7:XG:31:MET:CE	2.23	0.85
1:QA:625:G:H4'	16:QP:16:HIS:CB	2.06	0.85
4:QD:20:TYR:OH	6:XF:14:LEU:CA	2.25	0.85
4:QD:61:LYS:HE2	4:QD:206:PHE:CE2	2.11	0.85
34:YA:443:A:N7	38:YF:45:ARG:HD3	1.90	0.85
1:QA:617:G:O2'	16:QP:44:THR:HG21	1.77	0.85
1:QA:975:A:C2	14:QN:34:TYR:CD1	2.64	0.85
1:XA:309:G:O2'	1:XA:607:A:N1	2.10	0.85
34:YA:389:G:N2	44:YP:71:VAL:HG12	1.90	0.85
1:QA:1081:G:H5''	5:QE:18:ARG:HD2	1.59	0.85
1:QA:1179:A:H5'	9:QI:83:ARG:NH2	1.79	0.85
1:QA:1360:A:H1'	14:QN:17:LYS:HE3	0.85	0.85
1:XA:393:A:OP1	16:XP:13:HIS:NE2	2.08	0.85
1:XA:1228:C:C5	13:XM:104:ARG:HG2	2.12	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:199:A:N6	34:YA:2434:A:C5	2.45	0.84
16:QP:37:GLY:HA3	16:QP:50:LYS:O	1.77	0.84
1:XA:1317:C:H5	14:XN:16:PHE:CD1	1.91	0.84
1:QA:656:C:H4'	15:QO:62:GLN:NE2	1.90	0.84
1:QA:979:C:H42	14:QN:19:ARG:HB2	1.42	0.84
1:QA:1235:U:O2'	21:QU:3:LYS:HG3	1.77	0.84
1:QA:1307:U:O5'	13:QM:99:ARG:HG3	1.77	0.84
4:XD:205:GLU:OE1	5:XE:107:ARG:NH1	2.09	0.84
32:Y8:12:LYS:NZ	34:YA:247:G:O6	2.10	0.84
1:QA:972:C:P	10:QJ:57:LYS:HG3	2.17	0.84
4:QD:205:GLU:CD	5:QE:100:VAL:CG1	2.50	0.84
6:XF:100:ASN:CG	18:XR:27:GLY:HA2	2.01	0.84
11:XK:91:ARG:HE	18:XR:88:LYS:CE	1.89	0.84
34:YA:2048:G:N2	34:YA:2621:A:N3	2.26	0.84
1:QA:1106:G:C2'	3:QC:172:ARG:HE	1.89	0.84
34:RA:2751:G:C2	40:RH:3:ARG:CB	2.59	0.84
1:XA:1377:A:OP2	7:XG:94:ARG:NH2	2.09	0.84
1:XA:1305:G:C6	1:XA:1331:G:C5	2.65	0.84
11:QK:13:GLN:HG3	34:RA:2141:G:H5''	1.60	0.84
1:XA:974:A:C1'	14:XN:31:ARG:NH1	2.41	0.84
1:XA:1230:C:N4	13:XM:105:THR:HG21	1.93	0.84
1:QA:1150:U:H1'	10:QJ:39:PRO:CG	2.02	0.84
5:QE:77:PRO:O	8:QH:105:ARG:HD3	1.77	0.84
40:RH:103:LEU:CD1	40:RH:123:PHE:CZ	2.61	0.84
34:YA:2690:C:OP1	46:YR:17:ARG:NH2	2.09	0.84
4:QD:197:PRO:HD3	6:XF:16:GLN:HB2	0.84	0.84
34:RA:534:U:HO2'	49:RU:49:HIS:HD1	1.25	0.84
34:YA:2046:G:C2	34:YA:2623:G:N3	2.46	0.84
40:YH:9:ILE:HG21	40:YH:49:VAL:HB	1.56	0.84
1:QA:958:A:OP1	19:QS:79:THR:HG21	1.76	0.84
1:QA:1307:U:C5'	13:QM:99:ARG:HG3	2.08	0.84
3:QC:22:TRP:HA	10:QJ:93:GLY:CA	2.07	0.84
28:R4:31:ILE:HG21	39:RG:142:PRO:HB2	1.58	0.84
1:XA:186(A):C:O2'	20:XT:85:MET:SD	2.35	0.84
1:XA:1217:C:P	14:XN:5:ALA:HB1	2.18	0.84
34:YA:2082:A:H62	34:YA:2237:G:H21	0.86	0.84
1:QA:718:G:O5'	11:QK:117:ASN:OD1	1.96	0.83
34:YA:389:G:H1	44:YP:71:VAL:HG12	1.42	0.83
1:QA:974:A:OP2	14:QN:29:ARG:CD	2.25	0.83
1:XA:1376:U:C4	7:XG:10:ARG:NE	2.46	0.83
34:YA:1127:A:C2	34:YA:2518:A:C8	2.65	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:39:PRO:HA	10:XJ:70:ARG:HG2	1.57	0.83
34:YA:747:U:C5	34:YA:2613:U:C4	2.65	0.83
34:YA:1127:A:N1	34:YA:2518:A:C6	2.45	0.83
34:YA:1456:G:N2	34:YA:2703:C:N3	2.24	0.83
1:QA:1358:U:H5'	14:QN:35:ARG:H	1.41	0.83
1:XA:1318:A:N3	14:XN:16:PHE:CZ	2.46	0.83
1:QA:1309:G:H5'	13:QM:77:ASN:CG	2.02	0.83
21:XU:3:LYS:HD3	21:XU:14:TRP:CZ3	2.14	0.83
34:YA:2049:G:C2	34:YA:2620:C:C2	2.66	0.83
1:QA:675:A:C2	11:QK:118:GLY:HA2	2.12	0.83
1:XA:1377:A:N7	7:XG:10:ARG:HD2	1.92	0.83
1:QA:626:U:H4'	16:QP:38:TYR:CE2	2.12	0.83
1:QA:1123:A:O4'	10:QJ:37:PRO:HD2	1.78	0.83
1:XA:107:G:N7	20:XT:15:ARG:NH2	2.27	0.83
1:XA:618:C:H5'	1:XA:619:U:H5''	1.58	0.83
10:XJ:53:PRO:HB3	14:XN:42:ILE:HG12	1.58	0.83
34:YA:747:U:C5	34:YA:2613:U:O4	2.32	0.83
34:YA:2044:C:C4	34:YA:2625:G:C2	2.66	0.83
34:YA:2048:G:C6	34:YA:2621:A:N1	2.46	0.83
1:QA:948:C:P	13:QM:106:ASN:O	2.36	0.83
1:QA:1106:G:H1'	3:QC:172:ARG:HE	0.68	0.83
1:QA:1108:G:P	3:QC:174:PRO:HA	2.19	0.83
1:QA:1253:G:OP1	10:QJ:44:VAL:HG21	1.79	0.83
1:QA:520:A:O2'	12:QL:73:GLU:OE2	1.97	0.83
1:QA:669:U:C1'	15:QO:46:HIS:CE1	2.45	0.83
1:QA:1248:A:H62	21:QU:26:LYS:HD2	1.44	0.83
34:RA:1971:A:C8	36:RD:241:PRO:HB3	2.14	0.83
1:XA:1254:C:P	10:XJ:45:ARG:HD3	2.18	0.83
34:RA:956:G:OP2	45:RQ:14:ARG:NH2	2.11	0.82
34:RA:2312:U:O2	39:RG:40:ASN:ND2	2.12	0.82
34:YA:2094:G:P	41:YI:22:LYS:HD2	2.18	0.82
1:QA:309:G:H5''	16:QP:27:LYS:CE	2.09	0.82
1:QA:980:C:H4'	14:QN:19:ARG:NH2	1.94	0.82
1:QA:1243:C:H5''	21:QU:9:ARG:HG3	1.59	0.82
34:YA:2045:C:N3	34:YA:2624:G:N2	2.26	0.82
34:YA:2078:C:N4	34:YA:2238:G:O6	2.11	0.82
1:QA:1187:G:C2	14:QN:60:SER:OG	2.32	0.82
12:QL:7:ILE:HD12	17:QQ:32:TYR:CD1	2.11	0.82
1:XA:974:A:N9	14:XN:31:ARG:HD3	1.92	0.82
1:XA:1377:A:P	7:XG:94:ARG:HH22	1.97	0.82
1:QA:44:G:OP2	16:QP:12:LYS:NZ	2.13	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:986:A:H4'	19:QS:55:LYS:CG	2.10	0.82
34:RA:2094:G:OP1	41:RI:22:LYS:HE3	1.78	0.82
1:XA:1305:G:N1	1:XA:1331:G:C5	2.47	0.82
1:QA:980:C:N1	14:QN:19:ARG:HG2	1.94	0.82
1:QA:1114:C:H1'	14:QN:60:SER:O	1.78	0.82
1:QA:1307:U:C5'	13:QM:99:ARG:CG	2.57	0.82
34:YA:2046:G:C4	34:YA:2623:G:C2	2.65	0.82
34:YA:2070:G:C2	34:YA:2442:C:N3	2.46	0.82
34:YA:2097:C:N3	34:YA:2192:G:O6	2.11	0.82
1:QA:980:C:C4'	14:QN:19:ARG:HE	1.93	0.82
1:XA:619:U:H5'	4:XD:131:ARG:HH21	1.44	0.82
4:QD:57:ARG:HH22	5:QE:107:ARG:HD3	1.01	0.82
1:QA:1049:U:H5	14:QN:3:ARG:CB	1.71	0.82
1:QA:1223:C:OP2	19:QS:78:ARG:NH2	2.12	0.82
1:QA:1313:U:C4	19:QS:4:SER:HB2	2.15	0.82
10:QJ:47:PHE:CE2	14:QN:37:PHE:HD2	1.98	0.82
1:QA:310:G:OP2	16:QP:27:LYS:HD3	1.78	0.82
1:QA:1221:G:C4'	19:QS:36:ARG:HH21	1.87	0.82
1:XA:986:A:H1'	19:XS:52:TYR:OH	1.80	0.81
1:QA:49:U:H3	1:QA:362:G:H1'	1.44	0.81
4:QD:204:ILE:HG21	5:QE:98:THR:O	1.80	0.81
11:QK:71:LYS:NZ	34:RA:2146:C:N4	2.28	0.81
34:RA:2751:G:C8	40:RH:2:SER:O	2.33	0.81
1:XA:1305:G:C2	1:XA:1331:G:C5	2.68	0.81
3:XC:23:TYR:HE2	10:XJ:95:GLU:HB2	1.45	0.81
34:YA:918:A:C5	34:YA:2268:A:N6	2.47	0.81
1:QA:9:G:H5''	5:QE:122:GLU:OE2	1.81	0.81
29:R5:9:LYS:NZ	34:RA:2019:A:N7	2.29	0.81
34:YA:2090:G:N2	34:YA:2230:G:C4	2.48	0.81
1:XA:1320:C:C6	19:XS:37:ARG:HA	2.16	0.81
1:QA:1243:C:C5'	21:QU:9:ARG:HG3	2.09	0.81
34:YA:389:G:C2	44:YP:71:VAL:HG12	2.15	0.81
3:QC:23:TYR:CE2	10:QJ:95:GLU:HB3	2.15	0.81
34:RA:1294:U:O2'	46:RR:23:ASN:OD1	1.98	0.81
34:YA:199:A:C6	34:YA:2434:A:N1	2.49	0.81
34:YA:919:G:C2	34:YA:2268:A:C5	2.69	0.81
1:XA:6:G:N2	5:XE:119:LEU:HD11	1.96	0.81
40:YH:9:ILE:CG2	40:YH:49:VAL:HB	2.11	0.81
25:R1:90:ILE:HG22	25:R1:94:LEU:CD1	2.06	0.81
1:XA:1112:C:H1'	3:XC:179:ARG:HE	1.45	0.81
29:Y5:45:VAL:HG21	29:Y5:58:LEU:HD21	1.63	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1493:C:C5	34:YA:2210:G:C5	2.69	0.81
1:QA:676:A:C4'	11:QK:115:PRO:HB3	2.11	0.80
1:QA:1358:U:O3'	14:QN:22:THR:CG2	2.27	0.80
4:QD:204:ILE:HG22	5:QE:98:THR:O	1.81	0.80
1:QA:957:U:H5'	19:QS:81:ARG:HG3	1.60	0.80
1:QA:1188:A:O3'	14:QN:58:LYS:NZ	2.13	0.80
1:QA:1248:A:H62	21:QU:26:LYS:CD	1.94	0.80
4:QD:61:LYS:HE2	4:QD:206:PHE:HE2	1.45	0.80
40:RH:98:LEU:HD21	40:RH:125:VAL:HG11	0.81	0.80
15:XO:88:ARG:NH1	34:YA:713:G:OP2	2.13	0.80
34:YA:389:G:H22	44:YP:71:VAL:HG12	1.44	0.80
1:QA:277:C:OP1	17:QQ:68:ARG:NH2	2.15	0.80
1:QA:1106:G:C5'	3:QC:172:ARG:HG3	2.11	0.80
34:YA:814:C:H41	44:YP:25:SER:HA	1.46	0.80
1:QA:1160:G:C5'	2:QB:132:LYS:HE2	2.10	0.80
19:QS:65:ASN:O	19:QS:66:MET:HE2	1.80	0.80
1:XA:1318:A:O2'	19:XS:11:VAL:CB	2.30	0.80
34:YA:2090:G:C2	34:YA:2230:G:N1	2.48	0.80
1:XA:1315:U:O3'	14:XN:17:LYS:CE	2.28	0.80
13:XM:84:ILE:HG22	19:XS:74:PHE:CE1	2.14	0.80
1:QA:1357:A:H5''	10:QJ:45:ARG:HH22	1.45	0.80
1:QA:1360:A:C8	14:QN:18:VAL:HA	2.16	0.80
34:YA:2044:C:N3	34:YA:2625:G:N2	2.30	0.80
34:YA:2048:G:C6	34:YA:2621:A:C2	2.69	0.80
40:RH:89:ILE:CD1	40:RH:131:VAL:HG22	2.12	0.80
41:RI:84:GLY:HA3	41:RI:89:TYR:OH	1.82	0.80
34:YA:2051:A:C2	34:YA:2614:A:N1	2.50	0.80
1:QA:1307:U:H5''	13:QM:99:ARG:CG	2.11	0.80
34:YA:1614:A:N6	51:YW:91:GLY:HA2	1.97	0.80
34:YA:2051:A:C2	34:YA:2614:A:C6	2.70	0.80
1:QA:656:C:H4'	15:QO:62:GLN:HE22	1.45	0.80
1:QA:981:U:C5'	14:QN:6:LEU:CD2	2.60	0.80
1:QA:1179:A:H5''	9:QI:83:ARG:HH22	1.06	0.80
10:QJ:50:ILE:CD1	14:QN:41:ARG:NE	2.44	0.80
34:YA:2087:G:C6	34:YA:2233:U:C2	2.70	0.80
1:QA:1320:C:C4'	19:QS:70:LYS:HG3	2.13	0.79
13:QM:84:ILE:CG2	19:QS:69:HIS:CE1	2.65	0.79
1:QA:959:A:N6	19:QS:78:ARG:C	2.38	0.79
34:RA:2751:G:C5	40:RH:3:ARG:CB	2.56	0.79
1:XA:609:A:OP1	16:XP:18:ARG:NH2	2.16	0.79
1:XA:1320:C:H41	19:XS:37:ARG:HB3	0.94	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:617:G:H4'	16:QP:44:THR:HB	1.64	0.79
1:QA:958:A:N9	19:QS:55:LYS:HD2	1.97	0.79
1:QA:986:A:O2'	19:QS:55:LYS:C	2.25	0.79
1:QA:1106:G:H4'	3:QC:172:ARG:CD	2.13	0.79
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.13	0.79
1:QA:1321:C:N3	19:QS:36:ARG:NH1	2.30	0.79
1:XA:1188:A:O2'	14:XN:58:LYS:HE3	1.82	0.79
1:XA:1240:U:C2'	7:XG:38:LEU:HD11	2.12	0.79
6:XF:100:ASN:ND2	18:XR:27:GLY:O	2.15	0.79
34:YA:1782:C:N4	34:YA:2587:A:H2	1.80	0.79
1:QA:974:A:P	14:QN:29:ARG:CD	2.70	0.79
3:QC:23:TYR:HD2	10:QJ:95:GLU:HB2	1.43	0.79
13:XM:84:ILE:HD11	19:XS:65:ASN:OD1	1.83	0.79
1:QA:1280:A:C4	10:QJ:41:PRO:CD	2.65	0.79
4:QD:208:SER:HB2	5:QE:101:ILE:HD12	1.65	0.79
34:RA:1754:C:H5	48:RT:96:ARG:HH22	1.28	0.79
1:XA:339:C:OP2	43:YO:97:ARG:NH1	2.15	0.79
1:QA:986:A:N3	19:QS:52:TYR:OH	2.15	0.79
29:R5:9:LYS:NZ	34:RA:2019:A:C8	2.49	0.79
35:RB:75:G:HO2'	54:RZ:85:HIS:HE2	1.28	0.79
11:XK:91:ARG:CZ	18:XR:88:LYS:NZ	2.46	0.79
34:YA:2071:A:C2	34:YA:2441:C:N3	2.51	0.79
1:QA:981:U:H5'	14:QN:21:TYR:OH	1.80	0.79
1:QA:1221:G:C2'	19:QS:77:THR:HG21	2.10	0.79
1:QA:1223:C:P	19:QS:78:ARG:HH21	1.91	0.79
3:QC:22:TRP:HA	10:QJ:93:GLY:HA2	1.65	0.79
32:R8:25:MET:HE2	44:RP:64:LYS:HD2	1.65	0.79
34:RA:508:G:O6	51:RW:9:TYR:CE1	2.35	0.79
1:XA:1318:A:O3'	19:XS:11:VAL:CB	2.31	0.79
1:QA:742:G:C5'	15:QO:58:MET:SD	2.71	0.79
1:QA:1355:G:H1	1:QA:1367:C:H5	1.29	0.79
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.16	0.79
4:QD:18:LYS:NZ	56:QD:301:SF4:S4	2.55	0.79
34:RA:2751:G:N3	40:RH:3:ARG:CB	2.42	0.79
1:XA:1124:G:H4'	10:XJ:36:GLY:N	1.97	0.79
34:YA:2088:G:N1	34:YA:2232:U:O2	2.15	0.79
1:QA:875:C:O2'	8:QH:14:ARG:NH1	2.15	0.79
1:XA:1254:C:H5''	10:XJ:45:ARG:CZ	2.13	0.79
6:XF:100:ASN:HB2	18:XR:28:GLU:N	1.97	0.79
22:XV:19:G:N7	34:YA:2112:G:N7	2.31	0.79
29:Y5:9:LYS:NZ	34:YA:2019:A:OP2	2.15	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:957:U:C3'	19:QS:79:THR:O	2.31	0.78
4:QD:57:ARG:CZ	5:QE:107:ARG:CD	2.55	0.78
10:QJ:49:VAL:HG23	14:QN:41:ARG:CB	2.14	0.78
1:XA:1313:U:C4	19:XS:4:SER:OG	2.36	0.78
1:XA:1320:C:N1	19:XS:70:LYS:HD3	1.99	0.78
11:XK:108:ILE:O	18:XR:87:ARG:N	2.15	0.78
34:YA:1818:U:O4	36:YD:154:LYS:NZ	2.14	0.78
1:QA:668:G:H4'	15:QO:48:LYS:HB3	1.63	0.78
1:QA:972:C:OP2	10:QJ:57:LYS:CG	2.30	0.78
1:QA:978:A:N6	14:QN:18:VAL:CG2	2.37	0.78
34:YA:199:A:C6	34:YA:2434:A:C6	2.71	0.78
13:QM:84:ILE:HG13	19:QS:74:PHE:HZ	1.49	0.78
1:XA:1377:A:P	7:XG:94:ARG:HH21	2.03	0.78
1:QA:624:C:C3'	16:QP:10:GLY:HA2	2.13	0.78
19:QS:61:TYR:CE1	34:RA:888:C:OP2	2.36	0.78
34:RA:2250:G:C4	45:RQ:82:ARG:HG3	2.17	0.78
1:XA:1237:C:O2'	1:XA:1300:G:N2	2.16	0.78
1:XA:1318:A:N1	14:XN:16:PHE:CZ	2.50	0.78
1:XA:1377:A:C6	7:XG:10:ARG:CD	2.65	0.78
13:XM:84:ILE:CG2	19:XS:74:PHE:CZ	2.66	0.78
34:YA:747:U:C4	34:YA:2613:U:N3	2.52	0.78
1:QA:1109:C:P	3:QC:176:HIS:CD2	2.77	0.78
34:RA:675:A:O2'	38:RF:67:GLN:NE2	2.16	0.78
40:RH:98:LEU:CG	40:RH:125:VAL:HG11	2.13	0.78
1:XA:520:A:O2'	12:XL:73:GLU:OE1	2.02	0.78
34:YA:1566:A:C6	36:YD:214:TRP:CH2	2.72	0.78
34:YA:2108:C:N4	34:YA:2182:G:N2	2.29	0.78
1:QA:1124:G:O5'	10:QJ:36:GLY:N	2.16	0.78
28:R4:5:ILE:O	39:RG:67:LYS:HG3	1.83	0.78
1:XA:728:A:N6	15:XO:54:ARG:CD	2.47	0.78
34:YA:1050:A:N7	34:YA:2751:G:C2	2.52	0.78
1:QA:1109:C:P	3:QC:176:HIS:HD2	2.07	0.78
1:XA:675:A:N3	11:XK:118:GLY:HA2	1.98	0.78
1:XA:1321:C:H5'	1:XA:1322:C:H5''	1.66	0.78
1:QA:957:U:H5'	19:QS:81:ARG:CG	2.14	0.78
40:RH:98:LEU:CD2	40:RH:125:VAL:CG1	2.41	0.78
1:XA:1229:A:H62	13:XM:104:ARG:HE	1.32	0.78
1:QA:1179:A:H5'	9:QI:83:ARG:HH12	1.49	0.78
1:QA:1236:A:H4'	21:QU:10:ARG:CZ	2.09	0.78
1:QA:1360:A:C4'	14:QN:17:LYS:HZ2	1.97	0.78
19:QS:61:TYR:CZ	34:RA:888:C:OP2	2.37	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:R5:3:LYS:HG2	34:RA:2611:U:C4	2.19	0.78
1:XA:728:A:C8	15:XO:54:ARG:CZ	2.67	0.78
1:XA:1112:C:H1'	3:XC:179:ARG:CZ	2.13	0.78
1:QA:608:A:H1'	16:QP:32:TYR:HE1	1.48	0.78
10:QJ:50:ILE:HD13	14:QN:41:ARG:CZ	2.13	0.78
1:XA:8:A:C6	4:XD:209:ARG:HA	2.19	0.78
1:XA:740:U:OP2	15:XO:2:PRO:HB3	1.83	0.78
1:QA:979:C:H2'	14:QN:19:ARG:NH2	1.98	0.77
1:QA:1226:C:H5'	13:QM:91:ARG:NH1	1.98	0.77
27:R3:25:ALA:HB2	34:RA:849:A:C2	2.19	0.77
28:R4:34:GLU:OE1	39:RG:113:ARG:NH1	2.17	0.77
1:XA:1253:G:C2	1:XA:1254:C:C5	2.72	0.77
3:XC:23:TYR:CD2	10:XJ:95:GLU:HB2	2.19	0.77
1:QA:9:G:OP2	5:QE:122:GLU:HG2	1.84	0.77
3:XC:60:ALA:HB1	10:XJ:91:PRO:CD	2.13	0.77
1:QA:958:A:C1'	19:QS:55:LYS:CD	2.61	0.77
11:XK:91:ARG:HG2	18:XR:88:LYS:HZ1	1.47	0.77
34:YA:1493:C:C5	34:YA:2210:G:N7	2.52	0.77
40:RH:87:LEU:O	40:RH:131:VAL:CG2	2.32	0.77
1:QA:44:G:OP1	16:QP:12:LYS:HD3	1.84	0.77
1:QA:752:G:H4'	15:QO:69:TYR:OH	1.84	0.77
1:QA:958:A:C8	19:QS:55:LYS:HD2	2.20	0.77
1:QA:1240:U:C2'	7:QG:38:LEU:HD11	2.14	0.77
3:QC:23:TYR:HB2	10:QJ:94:VAL:N	1.98	0.77
34:RA:99:U:O4	53:RY:8:LYS:NZ	2.16	0.77
1:XA:1152:A:H5''	10:XJ:13:HIS:CD2	2.19	0.77
34:YA:1566:A:H2	36:YD:214:TRP:CD1	2.02	0.77
1:QA:979:C:C4	14:QN:19:ARG:CD	2.67	0.77
1:QA:1236:A:O5'	21:QU:10:ARG:NH1	2.11	0.77
1:QA:1253:G:H5'	10:QJ:44:VAL:H	1.50	0.77
1:QA:1302:U:OP2	13:QM:27:LYS:HE2	1.85	0.77
28:R4:31:ILE:HG23	39:RG:142:PRO:O	1.85	0.77
34:RA:1534:G:H2'	34:RA:1535:U:H4'	1.66	0.77
1:XA:948:C:OP2	13:XM:106:ASN:CG	2.28	0.77
1:QA:740:U:C4'	15:QO:39:LEU:HG	2.15	0.77
1:QA:1331:G:N1	21:QU:5:ASP:OD1	2.18	0.77
1:XA:957:U:H4'	19:XS:79:THR:OG1	1.85	0.77
34:YA:270(P):U:C4	41:YI:52:ARG:NH2	2.52	0.77
34:YA:919:G:N1	34:YA:2268:A:C5	2.53	0.77
12:QL:7:ILE:CD1	17:QQ:32:TYR:CG	2.59	0.77
13:QM:84:ILE:HG13	19:QS:74:PHE:CZ	2.19	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:367:U:H5'	1:XA:394:G:H21	1.50	0.77
1:XA:1152:A:H5''	10:XJ:13:HIS:NE2	2.00	0.77
1:QA:1125:U:N3	10:QJ:73:ASP:OD1	2.18	0.77
1:QA:1305:G:H4'	1:QA:1332:A:H62	1.50	0.77
1:QA:1313:U:C6	19:QS:6:LYS:CE	2.68	0.77
34:RA:586:A:H5'	38:RF:89:VAL:HG21	1.67	0.77
34:RA:2294:C:OP2	47:RS:13:ARG:NH2	2.17	0.77
1:XA:1357:A:OP1	14:XN:35:ARG:NH1	2.08	0.77
1:XA:1377:A:C5	7:XG:10:ARG:HD2	2.20	0.77
29:Y5:43:HIS:CD2	34:YA:2884:U:C5	2.72	0.77
1:QA:978:A:H62	14:QN:18:VAL:HG21	0.72	0.77
1:QA:1378:C:OP2	7:QG:7:ALA:HB2	1.80	0.77
1:XA:1058:G:O5'	3:XC:2:GLY:N	2.18	0.77
1:QA:974:A:OP1	14:QN:29:ARG:CZ	2.34	0.76
1:QA:980:C:C1'	14:QN:19:ARG:NE	2.46	0.76
1:QA:1188:A:C3'	14:QN:58:LYS:NZ	2.44	0.76
1:QA:1330:U:C4	21:QU:7:ARG:NH1	2.53	0.76
3:QC:79:ARG:NH2	11:XK:105:VAL:H	1.82	0.76
10:QJ:50:ILE:CG1	14:QN:41:ARG:HD2	2.04	0.76
34:RA:1789:A:OP1	36:RD:222:ARG:HG3	1.84	0.76
1:XA:1318:A:O3'	19:XS:11:VAL:HB	1.84	0.76
34:RA:2483:C:O2	45:RQ:124:LYS:NZ	2.14	0.76
1:XA:1305:G:C4	1:XA:1331:G:C6	2.72	0.76
1:XA:1375:A:H4'	7:XG:28:ASN:CG	2.09	0.76
1:QA:1240:U:H3	7:QG:38:LEU:HB3	1.49	0.76
1:QA:1360:A:N6	14:QN:18:VAL:CG2	2.29	0.76
50:RV:45:THR:O	50:RV:45:THR:HG22	1.83	0.76
34:YA:442:G:H1'	38:YF:48:THR:HG21	1.67	0.76
34:YA:2095:C:O2	34:YA:2194:G:N2	2.15	0.76
1:QA:1236:A:O4'	21:QU:10:ARG:NH1	2.17	0.76
41:RI:92:VAL:O	41:RI:120:ILE:HB	1.85	0.76
1:XA:634:C:H2'	1:XA:635:G:H8	1.50	0.76
34:YA:2069:G:C2	34:YA:2443:C:C2	2.73	0.76
54:YZ:183:LEU:HD23	54:YZ:183:LEU:O	1.85	0.76
25:R1:90:ILE:HA	25:R1:94:LEU:HD12	1.67	0.76
1:QA:761:G:H5'	17:QQ:100:LYS:HZ3	1.49	0.76
1:QA:1240:U:N3	7:QG:38:LEU:CB	2.30	0.76
1:QA:1358:U:H4'	14:QN:33:VAL:O	1.86	0.76
1:XA:1503:A:O2'	23:XX:15:A:N6	2.19	0.76
11:XK:91:ARG:CG	18:XR:88:LYS:NZ	2.48	0.76
1:QA:1152:A:OP1	10:QJ:13:HIS:CD2	2.38	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2751:G:C2	40:RH:3:ARG:CG	2.66	0.76
1:XA:1240:U:C2'	7:XG:38:LEU:CD1	2.63	0.76
34:YA:2070:G:N2	34:YA:2442:C:O2	2.19	0.76
1:QA:974:A:C4	14:QN:31:ARG:CZ	2.68	0.76
1:QA:1179:A:H5'	9:QI:83:ARG:NH1	2.01	0.76
1:QA:1320:C:O4'	19:QS:70:LYS:HG3	1.84	0.76
2:QB:178:ARG:O	8:QH:72:PRO:HD3	1.86	0.76
1:QA:624:C:O3'	16:QP:10:GLY:CA	2.30	0.76
1:QA:624:C:H4'	16:QP:10:GLY:C	2.11	0.76
29:R5:15:ARG:NH2	34:RA:2022:U:OP2	2.17	0.76
7:XG:16:LEU:HD23	9:XI:44:VAL:HG22	1.68	0.76
1:QA:642:A:H1'	8:QH:114:THR:C	2.11	0.75
1:XA:1160:G:C1'	2:XB:132:LYS:HE3	2.15	0.75
1:XA:1230:C:N4	13:XM:105:THR:CB	2.33	0.75
13:XM:84:ILE:CG1	19:XS:65:ASN:O	2.32	0.75
43:YO:34:THR:HG22	43:YO:35:VAL:N	1.99	0.75
4:QD:208:SER:CB	5:QE:101:ILE:HD12	2.16	0.75
1:XA:421:U:C4'	3:XC:192:THR:HG21	2.15	0.75
34:YA:2054:A:C2	34:YA:2616:C:N3	2.54	0.75
34:YA:2088:G:C2	34:YA:2232:U:O2	2.39	0.75
34:RA:1049:C:N3	40:RH:2:SER:HB3	2.01	0.75
1:QA:1203:C:H5'	14:QN:3:ARG:NH1	2.01	0.75
10:QJ:79:ARG:NH1	10:QJ:79:ARG:O	2.20	0.75
34:RA:2751:G:C4	40:RH:3:ARG:CG	2.68	0.75
1:XA:1318:A:N6	14:YN:16:PHE:CD2	2.48	0.75
1:XA:1320:C:C4	19:XS:37:ARG:N	2.55	0.75
1:QA:739:C:O2'	15:QO:42:HIS:CG	2.40	0.75
10:QJ:50:ILE:HD11	14:QN:41:ARG:CZ	2.12	0.75
41:RI:92:VAL:HB	41:RI:120:ILE:CG2	2.16	0.75
1:XA:728:A:N6	15:XO:54:ARG:HD3	2.00	0.75
3:XC:23:TYR:CD2	10:XJ:95:GLU:HG3	2.22	0.75
34:YA:2053:G:O6	34:YA:2614:A:C2	2.40	0.75
34:YA:2131:G:H4'	34:YA:2132:U:H4'	1.69	0.75
34:RA:2471:C:N4	34:RA:2476:A:O2'	2.20	0.75
1:XA:1360:A:H1'	14:YN:17:LYS:CD	2.16	0.75
33:Y9:27:CYS:SG	33:Y9:29:ASN:N	2.58	0.75
33:Y9:29:ASN:ND2	33:Y9:32:HIS:NE2	2.35	0.75
32:R8:35:GLN:NE2	32:R8:36:LYS:HE2	2.02	0.75
1:XA:1312:G:C2'	19:XS:6:LYS:HZ2	1.98	0.75
34:YA:919:G:C6	34:YA:2268:A:C2	2.69	0.75
34:YA:2087:G:O6	34:YA:2233:U:N3	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:205:GLU:OE1	5:QE:107:ARG:NH1	2.20	0.75
11:QK:71:LYS:HZ2	34:RA:2146:C:N4	1.81	0.75
1:XA:501:C:H1'	1:XA:549:C:H1'	1.69	0.75
1:XA:974:A:OP2	14:YN:29:ARG:NE	2.20	0.75
34:YA:831:G:O2'	44:YP:38:GLN:OE1	2.04	0.74
34:YA:918:A:N6	34:YA:2268:A:N6	2.33	0.74
1:QA:9:G:P	5:QE:122:GLU:HG2	2.26	0.74
1:QA:1186:G:N2	14:QN:61:TRP:C	2.35	0.74
34:YA:727:A:H2	36:YD:9:TYR:CD2	2.05	0.74
1:QA:981:U:H5'	14:QN:6:LEU:CD2	2.16	0.74
1:QA:1222:G:H5'	19:QS:77:THR:OG1	1.86	0.74
1:QA:1229:A:N1	13:QM:104:ARG:NE	2.34	0.74
1:QA:1357:A:H5'	10:QJ:45:ARG:HH12	1.51	0.74
1:QA:1360:A:N9	14:QN:17:LYS:HE3	2.01	0.74
2:QB:178:ARG:HB3	8:QH:71:GLY:C	2.13	0.74
1:XA:1330:U:H5''	13:XM:24:GLY:C	2.11	0.74
31:Y7:37:LYS:NZ	34:YA:469:G:C6	2.55	0.74
34:YA:2584:U:H2'	34:YA:2585:U:H2'	1.70	0.74
1:QA:564:C:H5'	17:QQ:32:TYR:HE1	1.50	0.74
1:QA:608:A:H1'	16:QP:32:TYR:CE1	2.22	0.74
1:XA:1226:C:C3'	13:XM:103:THR:OG1	2.36	0.74
1:QA:1179:A:C5'	9:QL:83:ARG:CZ	2.64	0.74
34:RA:1566:A:C2	36:RD:214:TRP:CD2	2.75	0.74
1:XA:538:G:OP1	12:XL:115:LYS:HB2	1.86	0.74
1:XA:754:C:H6	15:XO:69:TYR:CE2	2.05	0.74
1:QA:1158:C:H4'	2:QB:133:LYS:HZ2	0.92	0.74
1:QA:954:G:N3	19:QS:83:HIS:HE1	1.84	0.74
1:QA:1229:A:H62	13:QM:104:ARG:CG	1.96	0.74
1:QA:1357:A:C5'	10:QJ:45:ARG:NH2	2.39	0.74
4:QD:88:VAL:HG13	5:QE:97:GLY:HA3	1.70	0.74
11:QK:71:LYS:HZ3	34:RA:2146:C:H41	1.35	0.74
1:XA:8:A:C5	4:XD:209:ARG:HA	2.23	0.74
1:XA:1240:U:H1'	7:XG:38:LEU:HD11	0.74	0.74
1:XA:1377:A:N6	7:XG:10:ARG:HD2	2.03	0.74
34:YA:1338:G:N7	52:YX:62:LYS:NZ	2.35	0.74
1:QA:642:A:C8	8:QH:115:SER:HA	2.21	0.74
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.70	0.74
10:QJ:45:ARG:HG2	14:QN:36:PHE:CE2	2.21	0.74
1:XA:1252:A:H2	1:XA:1355:G:H1'	1.53	0.74
1:XA:1318:A:C5	14:YN:16:PHE:HE1	1.95	0.74
34:YA:2056:G:C5	34:YA:2577:A:C6	2.76	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:609:A:H5''	16:QP:9:PHE:CD1	2.23	0.74
11:XK:91:ARG:HG2	18:XR:88:LYS:NZ	2.03	0.74
28:R4:26:SER:HG	39:RG:143:GLU:CD	1.92	0.74
1:XA:8:A:H62	4:XD:209:ARG:N	1.86	0.74
11:XK:110:ASP:N	18:XR:85:LEU:O	2.20	0.74
1:QA:959:A:N6	19:QS:78:ARG:CA	2.45	0.73
1:QA:980:C:N1	14:QN:19:ARG:HG3	1.99	0.73
1:QA:982:U:O5'	14:QN:6:LEU:CD2	2.30	0.73
1:QA:981:U:O3'	14:QN:23:ARG:NH2	2.21	0.73
1:QA:1376:U:C4	7:QG:10:ARG:NH2	2.34	0.73
11:XK:109:VAL:HG22	18:XR:86:VAL:CG2	2.18	0.73
1:QA:862:C:H1'	1:QA:874:G:H5''	1.68	0.73
4:QD:20:TYR:OH	6:XF:14:LEU:HA	1.87	0.73
1:XA:595:G:H1'	1:XA:596:C:H5	1.52	0.73
10:XJ:47:PHE:CZ	14:YN:36:PHE:CD2	2.75	0.73
34:YA:2046:G:C5	34:YA:2623:G:N1	2.55	0.73
1:QA:979:C:C4	14:QN:19:ARG:HB2	2.22	0.73
1:QA:1179:A:H5'	9:QI:83:ARG:CZ	2.18	0.73
28:R4:27:THR:HG21	39:RG:62:LEU:O	1.88	0.73
1:XA:1440(N):G:OP1	20:XT:35:THR:CG2	2.35	0.73
1:QA:982:U:C5'	14:QN:6:LEU:CG	2.62	0.73
1:QA:1219:U:O2'	19:QS:34:TRP:HE3	1.62	0.73
1:XA:1537:U:H3	23:XX:9:G:H1	1.37	0.73
7:XG:16:LEU:HD21	9:XI:44:VAL:HG23	1.69	0.73
34:YA:34:C:H41	34:YA:447:A:H61	1.37	0.73
34:YA:1061:U:H6	34:YA:1062:G:H5''	1.54	0.73
1:QA:609:A:C5'	16:QP:9:PHE:CE1	2.72	0.73
1:QA:642:A:H1'	8:QH:114:THR:O	1.88	0.73
1:QA:979:C:C2	14:QN:19:ARG:CD	2.70	0.73
11:XK:110:ASP:CB	18:XR:85:LEU:O	2.34	0.73
34:YA:919:G:O6	34:YA:2268:A:C2	2.41	0.73
34:YA:1456:G:N2	34:YA:2704:C:C2	2.55	0.73
1:QA:1106:G:C2'	3:QC:172:ARG:NE	2.48	0.73
3:XC:14:ILE:HD11	14:YN:57:ARG:NH2	2.02	0.73
13:XM:86:CYS:HB2	19:XS:73:GLU:OE1	1.89	0.73
1:QA:959:A:H62	19:QS:79:THR:H	1.17	0.73
1:QA:986:A:C4'	19:QS:55:LYS:HG3	2.18	0.73
1:QA:1106:G:H1'	3:QC:172:ARG:CZ	2.18	0.73
34:RA:1510:A:O2'	34:RA:1511:A:N7	2.22	0.73
34:RA:2751:G:C2	40:RH:3:ARG:HB2	2.24	0.73
32:Y8:8:LYS:NZ	34:YA:243:U:OP1	2.22	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:959:A:H62	19:QS:79:THR:HG23	1.53	0.73
1:QA:1360:A:H1'	14:QN:17:LYS:HE2	1.65	0.73
34:RA:1049:C:N3	40:RH:2:SER:CB	2.52	0.73
1:XA:1217:C:H5''	14:YN:12:ARG:HH12	1.53	0.73
1:XA:1315:U:O3'	14:YN:17:LYS:NZ	2.21	0.73
34:YA:2053:G:O6	34:YA:2614:A:H2	1.71	0.73
1:QA:975:A:C2'	14:QN:32:SER:HA	2.19	0.72
1:QA:1106:G:C2'	3:QC:172:ARG:CD	2.67	0.72
6:XF:99:ALA:C	18:XR:28:GLU:HA	2.10	0.72
34:YA:2046:G:C2	34:YA:2623:G:N1	2.57	0.72
12:XL:11:VAL:HG23	17:XQ:29:HIS:CD2	2.24	0.72
1:QA:948:C:C5'	13:QM:101:GLN:HG3	2.07	0.72
1:QA:958:A:C1'	19:QS:55:LYS:HD2	2.19	0.72
2:QB:172:ILE:O	2:QB:176:GLU:HB2	1.88	0.72
1:XA:1238:A:H2'	1:XA:1239:A:H8	1.55	0.72
1:XA:1305:G:O6	1:XA:1331:G:O6	2.05	0.72
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD3	1.71	0.72
27:R3:25:ALA:HB2	34:RA:849:A:H2	1.55	0.72
34:RA:2483:C:C2	45:RQ:124:LYS:NZ	2.57	0.72
1:XA:1318:A:O2'	19:XS:11:VAL:HG11	1.90	0.72
1:QA:1049:U:H5	14:QN:3:ARG:HB3	0.92	0.72
1:QA:1307:U:O5'	13:QM:99:ARG:NH1	2.21	0.72
3:QC:79:ARG:NH2	11:XK:104:GLN:CA	2.48	0.72
13:XM:84:ILE:CD1	19:XS:65:ASN:OD1	2.37	0.72
1:QA:657:G:O2'	15:QO:28:GLN:HG3	1.86	0.72
1:QA:667:G:C4'	15:QO:51:HIS:CE1	2.72	0.72
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.66	0.72
12:QL:7:ILE:CD1	17:QQ:32:TYR:HD1	1.93	0.72
1:XA:1107:C:OP1	3:XC:172:ARG:NE	2.22	0.72
1:XA:1226:C:O2'	1:XA:1227:A:N7	2.23	0.72
4:XD:89:THR:OG1	5:XE:97:GLY:O	2.03	0.72
34:YA:2048:G:N1	34:YA:2621:A:N1	2.38	0.72
4:QD:197:PRO:CG	6:XF:16:GLN:HB2	2.18	0.72
30:R6:23:THR:HG21	34:RA:2286:A:H61	1.55	0.72
1:XA:1187:G:N2	14:YN:60:SER:CB	2.52	0.72
34:YA:919:G:C4	34:YA:2268:A:N6	2.58	0.72
1:QA:959:A:C6	19:QS:77:THR:O	2.42	0.72
1:QA:1235:U:O3'	21:QU:10:ARG:CD	2.38	0.72
34:RA:11:G:H22	34:RA:2627:G:H5''	1.53	0.72
1:XA:1228:C:H41	13:XM:104:ARG:CG	2.02	0.72
1:XA:1320:C:H41	19:XS:37:ARG:CB	1.87	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Y7:37:LYS:HE2	34:YA:458:G:C8	2.25	0.72
31:Y7:37:LYS:HE2	34:YA:458:G:N9	2.05	0.72
34:YA:2056:G:O6	34:YA:2577:A:N9	2.22	0.72
1:QA:761:G:C5'	17:QQ:100:LYS:NZ	2.52	0.72
1:QA:955:U:O2'	19:QS:83:HIS:CB	2.38	0.72
35:YB:48:A:OP2	47:YS:30:ARG:NH2	2.23	0.72
1:QA:974:A:OP2	14:QN:29:ARG:HG2	1.90	0.71
3:QC:23:TYR:HE2	10:QJ:95:GLU:OE1	1.73	0.71
1:XA:981:U:H5''	1:XA:982:U:H2'	1.71	0.71
1:QA:1329:A:N7	21:QU:7:ARG:NH2	2.39	0.71
34:RA:2751:G:C5	40:RH:2:SER:O	2.42	0.71
1:XA:1360:A:H8	14:XN:17:LYS:O	1.63	0.71
6:XF:94:GLN:CD	18:XR:32:ARG:HH11	1.99	0.71
1:QA:405:U:H5''	1:QA:495:A:H2	1.56	0.71
1:QA:1240:U:C4	7:QG:38:LEU:HB3	2.24	0.71
36:RD:96:HIS:CE1	36:RD:102:LYS:HE2	2.24	0.71
1:XA:322:C:H4'	20:XT:23:ARG:HG2	1.72	0.71
1:XA:1228:C:C4	13:XM:104:ARG:CG	2.63	0.71
3:XC:14:ILE:HD11	14:XN:57:ARG:HH22	1.52	0.71
1:QA:1128:C:O2'	1:QA:1146:A:N6	2.23	0.71
1:XA:1228:C:C5	13:XM:104:ARG:CG	2.73	0.71
1:QA:617:G:H4'	16:QP:44:THR:CB	2.20	0.71
1:QA:983:A:H5'	14:QN:2:ALA:CB	2.10	0.71
28:R4:6:HIS:CE1	39:RG:66:GLN:OE1	2.43	0.71
1:XA:1229:A:H61	13:XM:104:ARG:NE	1.87	0.71
1:QA:642:A:N9	8:QH:115:SER:HA	2.05	0.71
1:QA:1329:A:H62	21:QU:7:ARG:NH2	1.88	0.71
13:QM:86:CYS:CB	19:QS:69:HIS:CE1	2.72	0.71
1:XA:1228:C:H41	13:XM:104:ARG:HG2	1.51	0.71
34:YA:2080:G:N2	34:YA:2241:A:N3	2.39	0.71
34:YA:2717:G:O2'	48:YT:96:ARG:NH2	2.23	0.71
1:QA:583:A:H4'	17:QQ:91:ARG:HG2	1.72	0.71
1:QA:980:C:C1'	14:QN:19:ARG:CD	2.61	0.71
1:XA:1375:A:H4'	7:XG:28:ASN:OD1	1.90	0.71
34:YA:911:A:C2	45:YQ:9:TYR:CG	2.79	0.71
34:YA:2054:A:H2	34:YA:2616:C:C2	2.07	0.71
34:YA:2056:G:C6	34:YA:2577:A:C5	2.79	0.71
1:QA:948:C:OP1	13:QM:101:GLN:HB3	1.88	0.71
1:QA:975:A:O2'	14:QN:32:SER:HA	1.91	0.71
1:QA:1280:A:N3	10:QJ:41:PRO:HD3	2.06	0.71
45:RQ:65:PHE:HB2	45:RQ:105:GLU:HB2	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:974:A:C1'	14:XN:31:ARG:HD3	2.19	0.71
1:XA:1229:A:H62	13:XM:104:ARG:NE	1.88	0.71
6:XF:97:PHE:O	18:XR:30:ASP:HA	1.91	0.71
34:YA:2620:C:O2'	37:YE:157:ALA:O	2.08	0.71
1:QA:978:A:H61	1:QA:1316:G:H1'	1.54	0.71
1:QA:1313:U:C5	19:QS:4:SER:HB2	2.26	0.71
9:QI:16:ARG:HB3	9:QI:64:THR:HG23	1.73	0.71
1:XA:1111:A:H2'	3:XC:179:ARG:NH2	2.06	0.71
3:XC:22:TRP:HA	10:XJ:93:GLY:HA2	1.71	0.71
1:QA:186(K):G:N1	1:QA:264:U:H5'	2.05	0.70
1:QA:980:C:C1'	14:QN:19:ARG:HE	2.04	0.70
34:RA:614:U:O4	38:RF:175:THR:OG1	2.08	0.70
1:XA:1535:C:H41	23:XX:10:G:N2	1.88	0.70
34:YA:2043:C:C4	34:YA:2777:G:N3	2.39	0.70
1:QA:761:G:H5'	17:QQ:100:LYS:HZ1	1.55	0.70
1:QA:974:A:P	14:QN:29:ARG:HE	2.07	0.70
1:QA:1307:U:OP2	13:QM:99:ARG:CG	2.38	0.70
1:QA:1320:C:N4	19:QS:37:ARG:HA	2.04	0.70
1:XA:974:A:H1'	14:XN:31:ARG:NH1	2.04	0.70
1:XA:974:A:N3	14:XN:31:ARG:NH1	2.39	0.70
1:XA:1377:A:C6	7:XG:10:ARG:HG3	2.25	0.70
3:XC:23:TYR:HD2	10:XJ:95:GLU:HG3	1.56	0.70
1:QA:583:A:H4'	17:QQ:91:ARG:HD3	1.73	0.70
1:QA:666:G:H21	15:QO:51:HIS:HB2	1.56	0.70
34:RA:839:U:H1'	34:RA:1191:G:H1'	1.73	0.70
1:XA:403:C:H42	55:XA:1688:MG:MG	0.96	0.70
1:XA:974:A:N9	14:XN:31:ARG:NH1	2.39	0.70
1:XA:1059:C:OP2	3:XC:2:GLY:N	2.24	0.70
34:YA:2087:G:C6	34:YA:2233:U:N3	2.59	0.70
1:QA:956:U:C4'	19:QS:83:HIS:HA	2.20	0.70
1:QA:974:A:C4'	14:QN:31:ARG:HB3	2.22	0.70
10:QJ:47:PHE:HE2	14:QN:34:TYR:HB3	1.55	0.70
12:QL:7:ILE:HD13	17:QQ:32:TYR:CD1	2.22	0.70
34:YA:508:G:O6	51:YW:9:TYR:CD1	2.45	0.70
1:QA:186(K):G:N7	17:QQ:63:ARG:CZ	2.54	0.70
41:RI:83:ALA:O	41:RI:89:TYR:CE1	2.45	0.70
2:XB:120:ALA:O	2:XB:124:SER:HB2	1.92	0.70
10:XJ:37:PRO:HB3	10:XJ:72:VAL:CG2	2.21	0.70
1:QA:1253:G:H4'	10:QJ:44:VAL:O	1.89	0.70
1:QA:1290:G:O6	21:QU:26:LYS:HE3	1.91	0.70
34:RA:998:C:OP2	49:RU:58:ARG:NH1	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	1.72	0.70
31:Y7:33:ARG:NH1	34:YA:467:G:OP1	2.24	0.70
1:QA:813:U:H2'	1:QA:814:A:H8	1.57	0.70
1:QA:1080:A:OP1	5:QE:14:ARG:NH2	2.24	0.70
1:QA:1106:G:C4'	3:QC:172:ARG:CD	2.68	0.70
1:QA:1106:G:C1'	3:QC:172:ARG:CZ	2.67	0.70
34:YA:2056:G:C8	34:YA:2577:A:N6	2.60	0.70
34:YA:2440:C:H5''	34:YA:2587:A:H4'	1.73	0.70
3:QC:22:TRP:CA	10:QJ:93:GLY:HA2	2.22	0.70
1:XA:910:C:OP2	12:XL:21:LYS:NZ	2.20	0.70
1:XA:1111:A:H2'	3:XC:179:ARG:HH22	1.56	0.70
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.74	0.70
30:Y6:6:ARG:NH1	34:YA:2285:C:OP2	2.24	0.70
1:QA:186(K):G:H1	1:QA:264:U:H5''	1.56	0.70
1:QA:949:A:OP1	13:QM:101:GLN:CA	2.37	0.70
1:QA:975:A:H2	14:QN:34:TYR:CD1	2.08	0.70
1:QA:1309:G:H5''	13:QM:77:ASN:HD22	1.51	0.70
34:RA:1140:C:O3'	42:RN:25:ARG:NH2	2.24	0.70
6:XF:91:VAL:CG2	18:XR:34:TYR:OH	2.40	0.70
34:YA:685:A:H5''	34:YA:788:A:H62	1.56	0.70
34:YA:2045:C:N3	34:YA:2624:G:N1	2.39	0.70
1:QA:1106:G:O4'	3:QC:172:ARG:CZ	2.40	0.69
1:QA:1307:U:H5''	13:QM:99:ARG:HG2	1.74	0.69
1:QA:1360:A:N6	14:QN:18:VAL:HG21	2.07	0.69
34:RA:685:A:H5''	34:RA:788:A:H62	1.56	0.69
1:XA:1059:C:O2'	10:XJ:53:PRO:HD3	1.91	0.69
3:XC:23:TYR:CD2	10:XJ:95:GLU:CB	2.75	0.69
3:XC:23:TYR:N	10:XJ:93:GLY:HA2	2.06	0.69
34:YA:2046:G:N2	34:YA:2623:G:C4	2.60	0.69
1:QA:583:A:H4'	17:QQ:91:ARG:CD	2.22	0.69
1:QA:1320:C:N3	19:QS:37:ARG:CA	2.48	0.69
35:RB:37:C:O2	47:RS:95:HIS:NE2	2.25	0.69
1:QA:1320:C:H42	19:QS:37:ARG:HG2	0.62	0.69
1:QA:1376:U:C5	7:QG:10:ARG:NH1	2.61	0.69
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.74	0.69
4:QD:57:ARG:NH2	5:QE:107:ARG:HH11	1.91	0.69
4:QD:195:ALA:O	6:XF:17:SER:HA	1.93	0.69
1:XA:991:U:H3'	1:XA:1212:U:H3	1.58	0.69
1:XA:1059:C:C5	3:XC:2:GLY:CA	2.75	0.69
1:XA:1318:A:C8	14:XN:16:PHE:CE1	2.79	0.69
34:YA:2080:G:N2	34:YA:2241:A:C4	2.61	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:107:G:H3'	1:QA:108:G:H21	1.57	0.69
1:QA:186(B):C:O2'	20:QT:89:ARG:HG3	1.92	0.69
1:XA:1318:A:H61	14:XN:16:PHE:HB3	1.57	0.69
1:QA:664:G:H22	1:QA:741:G:H1	1.38	0.69
1:QA:1152:A:H1'	10:QJ:17:ASP:OD2	1.92	0.69
27:R3:42:ALA:HB1	34:RA:851:U:O2	1.92	0.69
1:XA:8:A:N1	4:XD:209:ARG:NH1	2.40	0.69
3:XC:22:TRP:CA	10:XJ:93:GLY:HA2	2.23	0.69
4:XD:12:CYS:SG	4:XD:19:LEU:HB2	2.33	0.69
6:XF:100:ASN:CB	18:XR:27:GLY:C	2.64	0.69
1:QA:936:C:O2'	1:QA:1382:C:N4	2.25	0.69
1:QA:1106:G:O2'	3:QC:172:ARG:NE	2.26	0.69
32:R8:8:LYS:NZ	34:RA:243:U:OP1	2.26	0.69
40:RH:103:LEU:CD1	40:RH:123:PHE:CE1	2.75	0.69
34:YA:1566:A:C2	36:YD:214:TRP:CD1	2.78	0.69
1:QA:413:G:H21	1:QA:428:G:H1'	1.57	0.69
1:QA:1014:A:OP1	19:QS:32:LYS:HE2	1.92	0.69
1:QA:1229:A:N1	13:QM:104:ARG:CZ	2.55	0.69
12:QL:104:VAL:O	12:QL:105:TYR:HD2	1.68	0.69
24:R0:74:ARG:NH2	34:RA:2334:G:O6	2.26	0.69
1:QA:186(B):C:N1	20:QT:85:MET:HE2	2.08	0.69
1:QA:838(B):U:H4'	1:QA:838(C):C:C5	2.28	0.69
1:QA:956:U:O2'	19:QS:80:TYR:CD1	2.46	0.69
1:QA:1160:G:C4'	2:QB:132:LYS:HE2	2.22	0.69
1:QA:1313:U:C6	19:QS:6:LYS:NZ	2.60	0.69
1:QA:1329:A:N6	21:QU:7:ARG:NH2	2.41	0.69
4:QD:61:LYS:CE	4:QD:206:PHE:CE2	2.75	0.69
10:QJ:50:ILE:HG13	14:QN:41:ARG:CD	1.97	0.69
13:QM:86:CYS:HB2	19:QS:69:HIS:ND1	2.07	0.69
1:XA:51:A:C6	1:XA:353:A:C2	2.81	0.69
1:XA:1152:A:C5'	10:XJ:13:HIS:CD2	2.76	0.69
34:YA:747:U:O4	34:YA:2613:U:C2	2.46	0.69
1:QA:186(K):G:N7	17:QQ:63:ARG:NH1	2.41	0.69
1:QA:972:C:O5'	10:QJ:57:LYS:HB2	1.92	0.69
1:QA:1229:A:P	13:QM:108:ARG:HH22	2.10	0.69
34:RA:2453:A:H2'	34:RA:2454:G:H8	1.57	0.69
34:YA:2098:U:H1'	34:YA:2192:G:N2	2.08	0.69
36:YD:35:LYS:HB2	36:YD:63:ARG:HA	1.76	0.69
1:QA:1188:A:H4'	14:QN:58:LYS:HZ2	1.49	0.68
1:QA:1236:A:C5'	21:QU:10:ARG:HH11	2.03	0.68
4:QD:196:LEU:HA	6:XF:16:GLN:HB3	1.73	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:QJ:47:PHE:CE2	14:QN:37:PHE:CD2	2.82	0.68
36:RD:8:PRO:HB3	36:RD:14:ARG:HB3	1.75	0.68
1:XA:1228:C:C6	13:XM:104:ARG:CA	2.71	0.68
34:RA:859:G:H21	34:RA:2268:A:H2	1.41	0.68
3:XC:43:LEU:O	3:XC:47:LEU:HB2	1.94	0.68
6:XF:99:ALA:O	18:XR:28:GLU:HG2	1.93	0.68
34:YA:1456:G:N2	34:YA:2704:C:N3	2.41	0.68
3:QC:23:TYR:CE1	10:QJ:10:GLY:HA2	2.28	0.68
1:XA:815:A:H1'	1:XA:1527:C:H1'	1.74	0.68
1:XA:1302:U:H4'	13:XM:27:LYS:HB2	1.75	0.68
34:YA:506:G:H5''	34:YA:509:C:H1'	1.76	0.68
13:QM:83:ASP:O	19:QS:66:MET:HE3	1.93	0.68
53:RY:99:CYS:HB2	53:RY:103:GLY:H	1.58	0.68
1:XA:664:G:H22	1:XA:741:G:H1	1.38	0.68
1:XA:1318:A:H61	14:XM:16:PHE:CB	2.00	0.68
34:YA:2046:G:N2	34:YA:2623:G:N3	2.41	0.68
1:QA:986:A:H1'	19:QS:54:GLY:C	2.17	0.68
42:RN:16:ILE:HB	42:RN:54:VAL:HG12	1.75	0.68
1:QA:754:C:OP1	15:QO:72:ARG:NH2	2.23	0.68
1:QA:959:A:N6	19:QS:79:THR:HG23	2.07	0.68
10:QJ:47:PHE:CE1	14:QN:37:PHE:HE2	2.12	0.68
1:XA:421:U:C4'	3:XC:192:THR:CG2	2.72	0.68
13:XM:84:ILE:O	19:XS:74:PHE:HE1	1.77	0.68
34:YA:1252:G:H21	49:YU:33:ARG:HH11	1.40	0.68
1:QA:950:U:H3	1:QA:1231:G:H1	1.40	0.68
1:QA:956:U:O4'	19:QS:83:HIS:HA	1.92	0.68
4:QD:57:ARG:HH21	5:QE:107:ARG:HH11	1.40	0.68
6:XF:94:GLN:OE1	18:XR:32:ARG:HD2	1.90	0.68
1:QA:1359:C:C5	14:QN:35:ARG:NE	2.61	0.68
45:RQ:38:GLU:HG2	45:RQ:127:ILE:HG23	1.74	0.68
1:QA:975:A:H3'	14:QN:32:SER:HA	1.76	0.68
1:QA:976:G:P	14:QN:32:SER:H	2.17	0.68
1:QA:1359:C:P	14:QN:22:THR:CG2	2.82	0.68
10:QJ:47:PHE:CZ	14:QN:36:PHE:HB2	2.24	0.68
6:XF:62:TRP:NE1	18:XR:35:ARG:HH22	1.91	0.68
34:YA:1204:A:H2	34:YA:1241:A:H61	1.42	0.68
1:QA:958:A:H1'	19:QS:55:LYS:CD	2.10	0.68
7:QG:16:LEU:HD23	9:QI:42:ARG:HG2	1.66	0.68
34:YA:2097:C:O2	34:YA:2192:G:N1	2.24	0.68
34:YA:2229:C:H2'	34:YA:2230:G:H8	1.58	0.68
1:QA:947:G:OP1	13:QM:108:ARG:HB2	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1359:C:C5	14:QN:35:ARG:CZ	2.77	0.67
38:RF:154:VAL:HG12	38:RF:191:ARG:HB2	1.77	0.67
1:XA:62:U:H1'	1:XA:379:C:H1'	1.76	0.67
1:XA:254:G:H5'	17:XQ:66:SER:OG	1.94	0.67
1:XA:539:A:P	12:XL:114:LYS:HD2	2.34	0.67
1:XA:1316:G:O4'	14:XN:17:LYS:NZ	2.20	0.67
1:XA:1358:U:O3'	14:XN:22:THR:OG1	2.12	0.67
34:YA:860:U:H2'	34:YA:861:A:H8	1.58	0.67
15:QO:89:GLY:C	34:RA:716:A:OP1	2.36	0.67
1:XA:1128:C:O2'	1:XA:1146:A:N6	2.27	0.67
32:R8:31:HIS:CE1	34:RA:2421:G:N7	2.63	0.67
1:XA:754:C:H6	15:XO:69:TYR:CZ	2.12	0.67
1:XA:979:C:N4	14:XN:18:VAL:HG23	2.08	0.67
34:YA:270(P):U:O4	41:YI:52:ARG:CZ	2.42	0.67
34:YA:1566:A:N3	36:YD:214:TRP:CD2	2.60	0.67
1:QA:675:A:O2'	11:QK:116:HIS:N	2.27	0.67
1:QA:1253:G:OP2	10:QJ:44:VAL:HG23	1.94	0.67
10:QJ:47:PHE:CE2	14:QN:34:TYR:HB3	2.29	0.67
12:QL:7:ILE:HD13	17:QQ:32:TYR:HD1	1.59	0.67
1:XA:107:G:H3'	1:XA:108:G:H21	1.59	0.67
1:XA:1318:A:C8	14:XN:16:PHE:HE1	2.11	0.67
31:Y7:37:LYS:HE2	34:YA:458:G:C4	2.28	0.67
1:QA:1203:C:OP2	14:QN:3:ARG:CD	2.42	0.67
1:QA:1253:G:OP1	10:QJ:44:VAL:CG1	2.42	0.67
4:QD:3:ARG:HH22	4:QD:100:ARG:HH22	1.42	0.67
34:RA:1614:A:N6	51:RW:91:GLY:HA2	2.09	0.67
34:RA:1700:A:H3'	34:RA:1701:A:H8	1.60	0.67
10:XJ:50:ILE:HD11	14:XN:41:ARG:CZ	2.24	0.67
21:XU:3:LYS:HG2	21:XU:14:TRP:HB2	1.76	0.67
42:YN:131:GLN:OE1	42:YN:134:ARG:NH2	2.27	0.67
34:RA:1649:G:O2'	46:RR:107:ASP:OD1	2.04	0.67
1:XA:974:A:H5'	14:XN:31:ARG:HB3	1.73	0.67
1:XA:1059:C:C5	3:XC:2:GLY:HA3	2.30	0.67
1:XA:1255:G:H1	1:XA:1282:C:H42	1.43	0.67
1:QA:186(K):G:C8	17:QQ:63:ARG:NH2	2.57	0.67
1:QA:1314:C:H5	19:QS:6:LYS:HE3	1.58	0.67
2:QB:178:ARG:O	8:QH:71:GLY:HA2	1.95	0.67
3:QC:23:TYR:CA	10:QJ:93:GLY:O	2.43	0.67
5:QE:139:LEU:HA	5:QE:142:LEU:HD12	1.77	0.67
10:QJ:47:PHE:CZ	14:QN:37:PHE:CD2	2.82	0.67
41:RI:92:VAL:HB	41:RI:120:ILE:HG21	1.74	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:RZ:52:SER:O	54:RZ:54:HIS:N	2.28	0.67
1:XA:373:A:O2'	1:XA:451:A:N6	2.26	0.67
1:XA:936:C:H2'	1:XA:937:A:H8	1.59	0.67
1:XA:1319:A:OP2	19:XS:3:ARG:CZ	2.42	0.67
6:XF:99:ALA:H	18:XR:29:PHE:H	1.41	0.67
34:YA:2623:G:HO2'	34:YA:2825:C:HO2'	1.42	0.67
45:YQ:16:ARG:HH21	45:YQ:18:LYS:HD3	1.59	0.67
1:QA:1014:A:C8	19:QS:34:TRP:NE1	2.62	0.67
1:QA:1106:G:HO2'	3:QC:172:ARG:HD2	1.51	0.67
1:QA:1376:U:H2'	1:QA:1377:A:H8	1.59	0.67
34:YA:1493:C:C4	34:YA:2210:G:N9	2.63	0.67
34:YA:2107:C:O5'	34:YA:2107:C:H6	1.78	0.67
34:YA:2315:G:OP1	39:YG:36:LYS:NZ	2.25	0.67
1:QA:957:U:C4'	19:QS:79:THR:C	2.39	0.67
1:QA:974:A:OP1	14:QN:29:ARG:HD2	1.95	0.67
1:QA:1230:C:H42	13:QM:104:ARG:HD3	1.55	0.67
1:QA:1541:U:OP2	2:QB:23:ARG:NH2	2.28	0.67
40:RH:101:ARG:HH12	40:RH:123:PHE:H	1.43	0.67
1:XA:1360:A:H1'	14:YN:17:LYS:CG	2.25	0.67
34:YA:1248:G:C2	49:YU:3:ARG:HD2	2.30	0.67
1:QA:1377:A:O2'	1:QA:1379:G:O6	2.12	0.67
1:XA:421:U:O4'	3:XC:192:THR:CG2	2.30	0.67
1:XA:974:A:OP1	14:YN:31:ARG:HD2	1.95	0.67
1:XA:1160:G:O4'	2:XB:132:LYS:CE	2.41	0.67
7:XG:16:LEU:HD22	9:XI:45:ALA:HB2	1.75	0.67
34:YA:1024:G:HO2'	34:YA:1144:G:HO2'	1.43	0.67
1:QA:1106:G:C4'	3:QC:172:ARG:NE	2.57	0.66
1:QA:1158:C:C4'	2:QB:133:LYS:HZ1	1.98	0.66
1:QA:1373:G:P	9:QI:11:LYS:NZ	2.68	0.66
4:QD:31:CYS:SG	4:QD:33:MET:HB2	2.35	0.66
14:QN:24:CYS:SG	14:QN:40:CYS:CA	2.81	0.66
1:XA:1320:C:H1'	19:XS:70:LYS:HD3	1.60	0.66
28:Y4:7:PRO:HG3	39:YG:62:LEU:HA	1.77	0.66
34:YA:94:G:O6	55:YA:3185:MG:MG	1.37	0.66
53:YY:79:CYS:SG	57:YY:201:ZN:ZN	1.84	0.66
1:QA:1160:G:C4'	2:QB:132:LYS:CE	2.72	0.66
32:R8:39:LYS:NZ	34:RA:2365:G:O6	2.20	0.66
10:XJ:50:ILE:HD11	14:YN:41:ARG:NH1	2.10	0.66
34:YA:410:G:N2	34:YA:2407:G:C5	2.63	0.66
1:QA:625:G:O2'	16:QP:16:HIS:ND1	2.27	0.66
1:QA:981:U:H5''	14:QN:6:LEU:HD21	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1373:G:O5'	9:QI:11:LYS:NZ	2.28	0.66
34:RA:955:C:OP2	45:RQ:14:ARG:NH1	2.27	0.66
54:RZ:112:ARG:HG3	54:RZ:114:GLY:H	1.59	0.66
1:XA:728:A:N6	15:XO:54:ARG:HD2	2.10	0.66
1:QA:59:A:H5''	1:QA:387:U:H5''	1.78	0.66
1:QA:959:A:N1	19:QS:77:THR:O	2.29	0.66
34:RA:515:A:H1'	34:RA:581:C:H1'	1.76	0.66
1:XA:186(B):C:C2	20:XT:105:SER:HB2	2.30	0.66
1:XA:664:G:N2	1:XA:726:C:O2'	2.25	0.66
24:Y0:33:ALA:O	34:YA:2353:G:O2'	2.12	0.66
1:QA:1360:A:C4'	14:QN:17:LYS:NZ	2.56	0.66
34:RA:379:G:H1	34:RA:395:U:H3	1.44	0.66
34:RA:2440:C:H5''	34:RA:2587:A:H4'	1.77	0.66
35:RB:116:G:H4'	47:RS:54:LEU:HD22	1.76	0.66
1:XA:1059:C:H5	3:XC:2:GLY:CA	2.08	0.66
10:XJ:37:PRO:HG2	10:XJ:37:PRO:O	1.96	0.66
34:YA:1044:G:O2'	34:YA:1047:G:O2'	2.13	0.66
1:XA:1190:G:H5'	3:XC:176:HIS:HD1	1.58	0.66
1:XA:1253:G:C6	1:XA:1254:C:N4	2.64	0.66
3:XC:60:ALA:HB1	10:XJ:91:PRO:HG2	1.78	0.66
1:QA:310:G:P	16:QP:27:LYS:CD	2.67	0.66
1:QA:972:C:OP2	10:QJ:57:LYS:CD	2.44	0.66
1:QA:980:C:C6	14:QN:19:ARG:CG	2.68	0.66
1:XA:702:A:C6	34:YA:1848:A:C2	2.83	0.66
1:XA:749:C:H2'	1:XA:750:G:H8	1.59	0.66
1:XA:1301:U:O3'	13:XM:17:VAL:HG23	1.96	0.66
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.78	0.66
9:XI:18:PHE:HB3	9:XI:20:ARG:HH12	1.60	0.66
10:XJ:16:LEU:HB3	10:XJ:70:ARG:HH12	1.60	0.66
32:Y8:42:ARG:NH1	34:YA:2349:G:OP2	2.28	0.66
34:YA:886:C:O2'	34:YA:889:C:N4	2.26	0.66
1:QA:1010:G:H2'	1:QA:1011:G:H8	1.59	0.66
1:XA:1059:C:C5	3:XC:2:GLY:HA2	2.31	0.66
3:XC:23:TYR:CE2	10:XJ:95:GLU:CB	2.77	0.66
34:YA:2056:G:O6	34:YA:2577:A:C8	2.49	0.66
34:YA:2343:C:O2'	34:YA:2373:G:O2'	2.14	0.66
1:QA:1240:U:O2	7:QG:38:LEU:HA	1.95	0.66
34:RA:248:G:C4	34:RA:2431:U:H4'	2.31	0.66
1:QA:980:C:C2	14:QN:19:ARG:C	2.70	0.66
13:QM:14:ARG:HG2	13:QM:44:ARG:HD3	1.78	0.66
40:RH:18:GLU:HB2	40:RH:25:LYS:HB2	1.78	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:51:A:N3	1:XA:353:A:C6	2.64	0.66
1:XA:974:A:C8	14:YN:31:ARG:HD2	2.30	0.66
34:YA:199:A:C6	34:YA:2434:A:C2	2.83	0.66
34:YA:2051:A:C2	34:YA:2614:A:C4	2.84	0.66
40:YH:84:SER:HB2	40:YH:132:ARG:HD2	1.78	0.66
1:QA:1060:C:H4'	10:QJ:52:GLY:HA2	1.77	0.65
1:QA:1099:G:OP2	2:QB:96:ARG:HD3	1.93	0.65
1:QA:1317:C:OP1	14:QN:16:PHE:CE2	2.47	0.65
1:QA:1541:U:OP2	2:QB:23:ARG:CZ	2.44	0.65
2:QB:167:PRO:O	2:QB:171:ALA:HB2	1.96	0.65
2:QB:181:PHE:CD2	8:QH:70:GLN:HG2	2.31	0.65
34:RA:1333:C:H2'	34:RA:1334:G:H8	1.61	0.65
51:RW:88:ARG:HB2	51:RW:92:ARG:HB3	1.77	0.65
1:XA:6:G:H4'	1:XA:298:A:H4'	1.78	0.65
1:XA:186(B):C:O2	20:XT:105:SER:N	2.29	0.65
1:XA:1227:A:OP1	13:XM:96:LEU:CD2	2.40	0.65
3:XC:60:ALA:CB	10:XJ:91:PRO:HD2	2.26	0.65
1:QA:1307:U:C5'	13:QM:99:ARG:HG2	2.26	0.65
41:RI:83:ALA:O	41:RI:89:TYR:CE2	2.48	0.65
1:XA:658:G:H1'	15:XO:22:THR:CG2	2.26	0.65
34:YA:184:C:H1'	34:YA:217:G:H1'	1.78	0.65
1:QA:192:U:H2'	1:QA:193:C:H6	1.62	0.65
1:QA:740:U:O3'	15:QO:39:LEU:HD12	1.96	0.65
4:QD:57:ARG:NH1	5:QE:107:ARG:HD3	2.11	0.65
7:QG:16:LEU:CD2	9:QI:42:ARG:HA	2.26	0.65
1:XA:528:C:H41	12:XL:49:ASN:CG	2.04	0.65
13:XM:84:ILE:HG21	19:XS:66:MET:HB3	1.77	0.65
14:YN:3:ARG:HB3	14:YN:3:ARG:CZ	2.26	0.65
34:YA:1216:G:OP1	49:YU:11:ARG:NH2	2.26	0.65
34:YA:2150:U:H2'	34:YA:2151:G:C8	2.31	0.65
3:XC:23:TYR:HB2	10:XJ:93:GLY:O	1.97	0.65
35:YB:90:C:OP2	45:YQ:16:ARG:NH1	2.30	0.65
1:QA:607:A:N1	16:QP:31:LYS:CA	2.54	0.65
29:R5:3:LYS:O	34:RA:2056:G:N2	2.19	0.65
38:RF:147:GLY:O	38:RF:191:ARG:NH1	2.29	0.65
1:XA:1305:G:H21	1:XA:1331:G:H3'	1.59	0.65
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.45	0.65
1:XA:1375:A:H3'	1:XA:1376:U:H6	1.60	0.65
1:XA:1422:G:H5'	43:YO:48:PRO:HG3	1.78	0.65
10:XJ:62:HIS:CD2	14:YN:59:ALA:HB1	2.31	0.65
34:YA:1088:A:H4'	34:YA:1089:G:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:445:C:OP1	49:RU:2:PRO:HA	1.96	0.65
34:RA:1044:G:O2'	34:RA:1047:G:O2'	2.15	0.65
34:RA:2429:G:N7	44:RP:56:SER:OG	2.27	0.65
34:RA:2483:C:N3	45:RQ:124:LYS:NZ	2.44	0.65
40:RH:89:ILE:HD11	40:RH:131:VAL:HG22	1.76	0.65
1:XA:1202:G:O2'	14:XN:28:GLY:O	2.14	0.65
1:XA:1278:U:H4'	1:XA:1279:A:C5	2.32	0.65
8:XH:14:ARG:HB3	8:XH:83:ILE:HD11	1.78	0.65
20:XT:86:ARG:O	20:XT:90:GLN:NE2	2.30	0.65
34:YA:1457:A:C2	34:YA:2703:C:C4	2.85	0.65
1:QA:634:C:H2'	1:QA:635:G:C8	2.32	0.65
1:QA:1314:C:OP2	19:QS:6:LYS:NZ	2.24	0.65
1:QA:1318:A:N6	14:QN:16:PHE:HB3	2.11	0.65
34:RA:1152:C:H2'	34:RA:1153:C:H6	1.61	0.65
50:RV:62:LEU:HD11	50:RV:95:LEU:HB2	1.77	0.65
1:XA:636:U:H3'	1:XA:637:G:H8	1.62	0.65
1:XA:1238:A:H2'	1:XA:1239:A:C8	2.32	0.65
1:XA:1463:C:H4'	48:YT:112:ARG:HH21	1.62	0.65
29:Y5:52:TYR:OH	34:YA:2883:A:OP1	2.06	0.65
34:YA:2080:G:C2	34:YA:2241:A:N3	2.64	0.65
1:QA:1014:A:C8	19:QS:34:TRP:CE2	2.76	0.65
1:QA:1220:G:H21	19:QS:54:GLY:HA3	1.61	0.65
1:XA:376:G:H4'	16:XP:5:ARG:HH11	1.61	0.65
1:XA:1150:U:H2'	1:XA:1151:A:C8	2.32	0.65
1:XA:1377:A:C6	7:XG:10:ARG:HD2	2.32	0.65
34:YA:2238:G:OP1	34:YA:2238:G:N2	2.30	0.65
47:YS:106:ARG:HB2	47:YS:110:LEU:HD23	1.78	0.65
1:QA:1307:U:H3'	13:QM:99:ARG:NH2	2.11	0.65
3:QC:79:ARG:HH21	11:XK:105:VAL:H	1.44	0.65
54:RZ:10:ARG:HD2	54:RZ:38:TYR:HB3	1.79	0.65
1:XA:1253:G:C2	1:XA:1254:C:C4	2.85	0.65
1:XA:1253:G:N1	1:XA:1254:C:C4	2.65	0.65
6:XF:99:ALA:CB	18:XR:29:PHE:CD1	2.75	0.65
10:XJ:62:HIS:HD2	14:XN:59:ALA:HB1	1.62	0.65
11:XK:91:ARG:CG	18:XR:88:LYS:HZ1	2.09	0.65
34:YA:2049:G:N2	34:YA:2620:C:N3	2.44	0.65
1:QA:876:G:C1'	8:QH:11:THR:HG21	2.24	0.65
1:QA:1221:G:H5'	19:QS:36:ARG:NH2	2.08	0.65
1:QA:1299:A:H2'	1:QA:1301:U:H1'	1.79	0.65
1:QA:1541:U:OP1	2:QB:23:ARG:NH2	2.29	0.65
4:QD:121:VAL:HG22	4:QD:126:ILE:HG13	1.79	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:RE:75:VAL:HG23	37:RE:76:ARG:HG2	1.79	0.65
1:XA:1123:A:H4'	10:XJ:37:PRO:HD2	1.79	0.65
34:YA:1566:A:C2	36:YD:214:TRP:NE1	2.65	0.65
1:QA:981:U:H5''	1:QA:982:U:H2'	1.77	0.64
1:QA:1203:C:OP2	14:QN:3:ARG:HD2	1.96	0.64
2:QB:177:ALA:HB1	2:QB:182:ILE:HB	1.78	0.64
2:QB:197:VAL:C	8:QH:68:ARG:HH22	2.03	0.64
7:QG:16:LEU:HD22	9:QI:42:ARG:HA	1.78	0.64
1:XA:412:A:N3	4:XD:35:ARG:HD3	2.11	0.64
1:XA:1124:G:C4'	10:XJ:36:GLY:H	2.05	0.64
4:XD:20:TYR:HA	4:XD:26:CYS:SG	2.37	0.64
6:XF:62:TRP:CD1	18:XR:35:ARG:HH12	2.14	0.64
11:XK:108:ILE:H	18:XR:87:ARG:CD	2.10	0.64
34:YA:805:G:H22	34:YA:828:U:H5''	1.61	0.64
1:QA:980:C:OP1	14:QN:19:ARG:NH2	2.30	0.64
31:R7:5:TRP:CZ3	34:RA:686:G:N7	2.65	0.64
29:Y5:16:ARG:NH1	29:Y5:17:ASP:OD1	2.30	0.64
25:Y1:87:PRO:HA	25:Y1:90:ILE:HG22	1.80	0.64
34:YA:1789:A:OP2	36:YD:222:ARG:NH1	2.30	0.64
1:QA:973:G:O3'	14:QN:29:ARG:NE	2.23	0.64
1:QA:1484:C:HO2'	34:RA:1960:A:HO2'	1.45	0.64
1:XA:107:G:O6	20:XT:15:ARG:CZ	2.43	0.64
1:XA:685:G:HO2'	11:XK:42:TRP:CD1	2.16	0.64
1:XA:1359:C:H5	14:XN:35:ARG:HD3	1.62	0.64
1:XA:1541:U:C2	23:XX:5:A:C2	2.85	0.64
34:YA:2048:G:N2	34:YA:2621:A:C4	2.65	0.64
1:QA:495:A:H1'	1:QA:497:A:H2'	1.78	0.64
1:QA:1123:A:O2'	10:QJ:36:GLY:C	2.41	0.64
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.78	0.64
34:RA:299:A:N1	34:RA:322:A:O2'	2.29	0.64
34:RA:414:C:H1'	34:RA:1864:U:H1'	1.78	0.64
35:RB:55:U:O2'	39:RG:27:ASN:ND2	2.31	0.64
1:XA:585:G:OP1	17:XQ:37:LYS:HE2	1.98	0.64
1:XA:1286:A:N6	1:XA:1355:G:OP1	2.30	0.64
1:XA:1319:A:OP2	19:XS:3:ARG:CD	2.46	0.64
34:YA:788:A:OP1	34:YA:791:C:N4	2.28	0.64
34:YA:2402:C:H1'	34:YA:2403:C:H5	1.63	0.64
1:QA:237:C:H2'	1:QA:238:G:H8	1.62	0.64
1:QA:979:C:O2	14:QN:19:ARG:NH1	2.30	0.64
1:QA:1378:C:P	7:QG:7:ALA:CB	2.75	0.64
2:QB:178:ARG:O	8:QH:71:GLY:CA	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:16:LEU:CD2	9:QI:42:ARG:CB	2.75	0.64
28:R4:1:MET:HE1	39:RG:66:GLN:HE22	1.63	0.64
41:RI:92:VAL:HB	41:RI:120:ILE:HB	1.80	0.64
1:XA:406:G:H2'	1:XA:407:G:H8	1.63	0.64
1:XA:1059:C:OP2	3:XC:3:ASN:N	2.29	0.64
1:XA:1239:A:N1	1:XA:1297:C:H1'	2.12	0.64
1:XA:1359:C:C5	14:XN:35:ARG:HD3	2.33	0.64
9:XI:17:VAL:HG12	9:XI:63:ILE:HD12	1.80	0.64
34:YA:1448:G:O2'	34:YA:1528:A:N6	2.31	0.64
1:QA:1249:C:N4	1:QA:1288:A:OP2	2.30	0.64
1:QA:1368:G:O3'	10:QJ:46:ARG:NH2	2.30	0.64
6:XF:89:MET:CE	18:XR:76:LEU:HD13	2.25	0.64
6:XF:91:VAL:HG21	18:XR:34:TYR:OH	1.97	0.64
10:XJ:50:ILE:HA	10:XJ:60:ARG:HB2	1.78	0.64
29:Y5:3:LYS:HB2	34:YA:2577:A:O4'	1.97	0.64
1:QA:975:A:N6	10:QJ:48:THR:HG1	1.92	0.64
1:QA:1203:C:P	14:QN:3:ARG:HD2	2.37	0.64
3:QC:23:TYR:N	10:QJ:93:GLY:C	2.55	0.64
1:XA:657:G:H21	15:XO:22:THR:HG23	1.63	0.64
7:XG:16:LEU:CD2	9:XI:44:VAL:CG2	2.65	0.64
34:YA:2291:U:H1'	34:YA:2374:C:H1'	1.80	0.64
1:QA:1048:G:OP1	14:QN:4:LYS:HE3	1.98	0.64
1:QA:1221:G:O2'	19:QS:77:THR:CB	2.44	0.64
1:QA:1229:A:N6	13:QM:104:ARG:CD	2.61	0.64
4:QD:20:TYR:CG	6:XF:15:ASP:HB3	2.33	0.64
10:XJ:62:HIS:CE1	14:XN:61:TRP:HE3	2.16	0.64
22:XV:8:U:O4	22:XV:14:A:N7	2.31	0.64
22:XV:65:U:H2'	22:XV:66:A:H8	1.62	0.64
1:QA:666:G:H5'	1:QA:726:C:H1'	1.80	0.64
1:QA:1236:A:P	21:QU:10:ARG:HH11	2.20	0.64
1:QA:1320:C:N4	19:QS:37:ARG:CB	2.61	0.64
1:QA:1320:C:C5'	19:QS:70:LYS:HG3	2.27	0.64
1:XA:824:C:H2'	1:XA:825:G:C8	2.33	0.64
34:YA:1226:G:OP1	50:YV:69:LYS:NZ	2.26	0.64
34:YA:2377:A:O2'	47:YS:111:GLU:O	2.14	0.64
1:QA:1125:U:C4	10:QJ:73:ASP:OD1	2.51	0.63
4:QD:18:LYS:HG3	4:QD:33:MET:HG3	1.78	0.63
13:QM:86:CYS:HB2	19:QS:69:HIS:HE1	1.61	0.63
34:RA:2789:C:H1'	34:RA:2892:A:C2	2.33	0.63
36:RD:60:ARG:HD3	36:RD:86:PRO:HB2	1.80	0.63
40:RH:6:ARG:HH22	40:RH:54:ARG:HD3	1.62	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1320:C:C5	19:XS:37:ARG:HB2	2.32	0.63
6:XF:50:TYR:CD1	18:XR:77:GLY:O	2.48	0.63
28:Y4:22:ILE:HG22	28:Y4:23:GLU:HG3	1.80	0.63
34:YA:1493:C:C5	34:YA:2210:G:C8	2.85	0.63
1:QA:186(B):C:C1'	20:QT:85:MET:HE2	2.29	0.63
1:QA:675:A:H1'	11:QK:116:HIS:HB2	1.80	0.63
1:QA:1141:C:H2'	1:QA:1142:G:H8	1.63	0.63
1:QA:1229:A:C6	13:QM:104:ARG:CZ	2.79	0.63
1:QA:1251:A:O2'	1:QA:1369:C:O3'	2.16	0.63
1:QA:1342:C:H2'	1:QA:1343:G:H8	1.63	0.63
33:R9:23:VAL:HG21	34:RA:1032:A:C1'	2.24	0.63
34:RA:2250:G:C6	45:RQ:82:ARG:HD2	2.32	0.63
40:RH:78:GLY:HA2	40:RH:82:GLY:HA3	1.79	0.63
41:RI:84:GLY:HA3	41:RI:89:TYR:CZ	2.33	0.63
45:RQ:81:VAL:HG12	45:RQ:82:ARG:HG2	1.80	0.63
1:XA:718:G:O4'	11:XK:117:ASN:HB2	1.98	0.63
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.81	0.63
3:XC:60:ALA:HB1	10:XJ:91:PRO:CG	2.29	0.63
11:XK:109:VAL:CG2	18:XR:86:VAL:HG23	2.27	0.63
32:Y8:12:LYS:NZ	34:YA:249:C:O2	2.31	0.63
34:YA:1447:G:H1'	34:YA:1545(B):A:H1'	1.81	0.63
1:QA:564:C:H5'	17:QQ:32:TYR:CE1	2.33	0.63
1:QA:975:A:H3'	14:QN:32:SER:CA	2.28	0.63
32:R8:35:GLN:HE22	32:R8:36:LYS:HE2	1.62	0.63
54:RZ:52:SER:O	54:RZ:54:HIS:ND1	2.32	0.63
1:XA:1228:C:P	13:XM:108:ARG:NH2	2.72	0.63
1:XA:1532:U:H2'	1:XA:1534:A:H2	1.64	0.63
6:XF:91:VAL:HG11	18:XR:34:TYR:HE1	1.63	0.63
34:YA:2250:G:O2'	34:YA:2496:C:OP1	2.16	0.63
1:QA:1005:A:H4'	1:QA:1037:C:H1'	1.79	0.63
5:QE:140:ARG:O	5:QE:143:ARG:NH1	2.32	0.63
34:RA:23:G:N2	51:RW:77:ASP:OD1	2.30	0.63
34:RA:1566:A:C2	36:RD:214:TRP:CE2	2.86	0.63
1:XA:8:A:N1	4:XD:209:ARG:CZ	2.61	0.63
1:XA:662:G:H2'	1:XA:663:A:C8	2.33	0.63
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.34	0.63
1:XA:1004:A:N1	1:XA:1025:U:H4'	2.12	0.63
1:XA:1318:A:H62	14:XN:16:PHE:HB3	1.62	0.63
32:Y8:22:VAL:HB	32:Y8:53:PRO:HB3	1.80	0.63
34:YA:784:A:N6	34:YA:2072:G:O2'	2.32	0.63
34:YA:1853:A:N3	34:YA:2233:U:O2'	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:109:A:H62	1:QA:324:G:H21	1.45	0.63
1:QA:741:G:O5'	15:QO:39:LEU:CD1	2.46	0.63
1:QA:766:A:H61	1:QA:1511:G:H1'	1.62	0.63
1:QA:948:C:OP1	13:QM:106:ASN:O	2.15	0.63
1:QA:974:A:OP1	14:QN:29:ARG:NE	2.30	0.63
21:QU:12:LYS:HB3	21:QU:22:ARG:HD2	1.81	0.63
1:XA:1005:A:H4'	1:XA:1037:C:H1'	1.81	0.63
17:XQ:29:HIS:HB3	17:XQ:33:GLY:H	1.64	0.63
44:YP:4:SER:O	44:YP:7:ARG:NH2	2.32	0.63
1:QA:1373:G:P	9:QL:11:LYS:HZ2	2.22	0.63
34:RA:508:G:O6	51:RW:9:TYR:CD1	2.52	0.63
34:RA:581:C:H2'	34:RA:582:G:C8	2.34	0.63
1:XA:865:A:N3	1:XA:918:A:O2'	2.30	0.63
1:XA:1071:C:OP1	5:XE:27:ARG:NH2	2.31	0.63
1:XA:1106:G:H4'	3:XC:172:ARG:HG2	1.80	0.63
1:XA:1240:U:H1'	7:XG:38:LEU:CG	2.22	0.63
34:YA:1030:G:OP2	45:YQ:128:LYS:NZ	2.27	0.63
1:QA:54:C:H42	1:QA:357:G:H1	1.46	0.63
1:QA:948:C:OP2	13:QM:106:ASN:HB2	1.98	0.63
1:QA:1313:U:H3'	19:QS:6:LYS:HZ2	0.80	0.63
3:QC:79:ARG:NH2	11:XK:105:VAL:N	2.46	0.63
33:R9:18:ARG:CZ	34:RA:1034:G:O4'	2.47	0.63
41:RI:83:ALA:HB1	41:RI:88:ILE:HA	1.81	0.63
1:XA:1329:A:H4'	13:XM:29:ARG:NH2	2.13	0.63
34:YA:392:C:H5''	34:YA:409:C:H5''	1.80	0.63
1:QA:1186:G:N2	14:QN:61:TRP:HA	2.13	0.63
1:QA:1318:A:C6	14:QN:16:PHE:CD1	2.87	0.63
3:QC:23:TYR:HB2	10:QJ:94:VAL:CA	2.28	0.63
37:RE:109:LYS:HE3	37:RE:191:PRO:HA	1.79	0.63
11:XK:110:ASP:CA	18:XR:85:LEU:O	2.46	0.63
34:YA:197:A:N9	34:YA:2430:A:H2	1.96	0.63
1:QA:194:C:H4'	20:QT:68:LYS:HE2	1.79	0.63
1:QA:953:G:O6	13:QM:104:ARG:NH1	2.32	0.63
1:QA:1126:U:O2	10:QJ:38:ILE:HD12	1.98	0.63
34:RA:2250:G:N3	45:RQ:82:ARG:HG3	2.14	0.63
1:XA:373:A:O2'	1:XA:451:A:N7	2.32	0.63
1:XA:1226:C:OP1	13:XM:91:ARG:NH1	2.31	0.63
34:YA:2099:U:N3	34:YA:2190:G:N1	1.97	0.63
34:YA:2118:U:H3	34:YA:2148:G:H4'	1.64	0.63
1:QA:186(B):C:H5'	20:QT:82:SER:HA	1.81	0.62
1:QA:667:G:N3	15:QO:49:ASP:OD1	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:677:U:H3	1:QA:713:G:H1	1.47	0.62
1:QA:953:G:C6	13:QM:104:ARG:NH1	2.67	0.62
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.32	0.62
3:QC:22:TRP:C	10:QJ:93:GLY:HA2	2.23	0.62
34:RA:137(B):G:N3	52:RX:41:ASN:ND2	2.47	0.62
1:XA:1198:G:H2'	1:XA:1199:U:C6	2.34	0.62
1:XA:1305:G:C2	1:XA:1331:G:N7	2.67	0.62
4:XD:8:VAL:HA	4:XD:11:LEU:HD13	1.81	0.62
34:YA:2054:A:N6	34:YA:2577:A:H61	1.87	0.62
1:QA:9:G:C5'	5:QE:122:GLU:OE2	2.47	0.62
1:QA:62:U:H1'	1:QA:379:C:H1'	1.80	0.62
1:QA:1229:A:P	13:QM:108:ARG:HH21	2.21	0.62
1:QA:1320:C:H5'	19:QS:70:LYS:HG3	1.80	0.62
10:QJ:53:PRO:HA	14:QN:42:ILE:HD11	1.81	0.62
1:XA:51:A:N3	1:XA:353:A:N6	2.48	0.62
34:YA:67:U:H3	34:YA:74:A:H2	1.46	0.62
1:QA:740:U:O3'	15:QO:39:LEU:CD1	2.46	0.62
34:RA:229:A:H4'	34:RA:230:U:H5'	1.81	0.62
37:RE:119:ARG:HG3	37:RE:160:TYR:CD1	2.34	0.62
45:RQ:37:LEU:HD11	45:RQ:130:LYS:HG2	1.81	0.62
1:XA:346:G:OP1	48:YT:41:ARG:NH2	2.31	0.62
1:XA:1229:A:N6	13:XM:104:ARG:CD	2.62	0.62
6:XF:99:ALA:N	18:XR:29:PHE:O	2.32	0.62
1:QA:1246:C:N4	21:QU:26:LYS:HB2	2.12	0.62
1:QA:1313:U:C5	19:QS:4:SER:CB	2.81	0.62
1:XA:740:U:OP1	15:XO:2:PRO:HA	2.00	0.62
11:XK:116:HIS:CD2	18:XR:81:PHE:HB3	2.34	0.62
24:Y0:72:ARG:HE	24:Y0:75:LEU:HD12	1.64	0.62
54:YZ:52:SER:O	54:YZ:54:HIS:N	2.32	0.62
3:QC:79:ARG:HH21	11:XK:105:VAL:N	1.98	0.62
29:R5:51:TYR:CE1	29:R5:56:LYS:HB3	2.35	0.62
1:XA:1240:U:H1'	7:XG:38:LEU:HD12	1.67	0.62
25:Y1:45:ASN:HA	34:YA:2230:G:H1'	1.80	0.62
1:QA:359:U:H2'	1:QA:360:A:H8	1.64	0.62
53:RY:99:CYS:CB	53:RY:103:GLY:H	2.12	0.62
1:XA:619:U:C5'	4:XD:131:ARG:HH21	2.12	0.62
1:XA:979:C:N3	14:XM:19:ARG:NE	2.26	0.62
1:XA:1124:G:O5'	10:XJ:36:GLY:N	2.33	0.62
34:YA:2072:G:C2	34:YA:2438:U:O2	2.53	0.62
34:YA:2787:C:H1'	37:YE:62:PRO:HG3	1.80	0.62
34:YA:2848:G:O2'	34:YA:2867:G:N2	2.32	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YI:80:PRO:HB2	41:YI:146:ALA:HB2	1.81	0.62
25:R1:95:LEU:O	25:R1:95:LEU:CD2	2.45	0.62
34:RA:475:U:H4'	34:RA:510:C:H5'	1.80	0.62
1:XA:1372:U:OP1	9:XI:68:GLY:CA	2.43	0.62
10:XJ:62:HIS:CE1	14:XN:61:TRP:CE3	2.87	0.62
34:YA:629:G:N3	34:YA:639:U:O2'	2.30	0.62
34:YA:2051:A:C2	34:YA:2614:A:C5	2.88	0.62
1:QA:658:G:H2'	1:QA:659:U:C6	2.35	0.62
1:QA:989:C:H2'	1:QA:990:C:C6	2.35	0.62
1:QA:1114:C:O2	14:QN:60:SER:O	2.18	0.62
1:QA:1364:U:O4'	21:QU:14:TRP:HZ2	1.83	0.62
34:RA:71:A:H5''	34:RA:72:U:H3'	1.81	0.62
1:XA:1228:C:OP1	13:XM:108:ARG:NH1	2.32	0.62
32:Y8:11:LYS:HB3	32:Y8:60:LEU:HD11	1.81	0.62
32:R8:42:ARG:HD2	34:RA:2350:C:O5'	2.00	0.62
34:RA:820:A:H1'	34:RA:943:U:H1'	1.81	0.62
1:XA:855:G:N2	1:XA:1539:C:OP1	2.33	0.62
1:XA:1320:C:N3	19:XS:36:ARG:C	2.58	0.62
3:XC:22:TRP:C	10:XJ:93:GLY:HA2	2.25	0.62
10:XJ:39:PRO:CA	10:XJ:70:ARG:HG2	2.28	0.62
1:QA:838(B):U:H4'	1:QA:838(C):C:C6	2.34	0.62
34:RA:2630:G:H21	34:RA:2892:A:H1'	1.65	0.62
34:RA:2751:G:N1	40:RH:3:ARG:HB2	2.15	0.62
32:Y8:25:MET:HG2	44:YP:65:ARG:HH12	1.64	0.62
34:YA:2054:A:H2	34:YA:2616:C:O2	1.82	0.62
36:YD:264:LYS:HG2	36:YD:266:SER:H	1.64	0.62
34:RA:749:C:H5'	34:RA:1271:G:H1'	1.81	0.61
47:RS:83:LYS:HG3	47:RS:84:GLN:HG3	1.81	0.61
54:RZ:72:ARG:NH2	54:RZ:97:GLU:O	2.33	0.61
6:XF:99:ALA:CB	18:XR:29:PHE:CE1	2.83	0.61
1:QA:625:G:O2'	16:QP:16:HIS:CG	2.53	0.61
25:R1:78:LYS:HZ3	34:RA:270(T):G:H1'	1.64	0.61
28:R4:16:CYS:SG	28:R4:17:GLY:N	2.73	0.61
33:R9:16:VAL:HG11	34:RA:1033:U:OP1	2.00	0.61
34:RA:1828:G:O6	36:RD:222:ARG:HD3	1.99	0.61
8:XH:17:THR:O	8:XH:78:GLN:NE2	2.32	0.61
10:XJ:53:PRO:C	14:XN:41:ARG:HH21	2.08	0.61
34:YA:2053:G:C2	34:YA:2617:C:C2	2.88	0.61
47:YS:23:ARG:NH2	47:YS:84:GLN:OE1	2.33	0.61
1:QA:973:G:H4'	14:QN:29:ARG:HH21	1.65	0.61
1:QA:1221:G:H5'	19:QS:36:ARG:NH1	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:53:VAL:HG12	16:QP:79:VAL:HG12	1.82	0.61
27:R3:12:PRO:HB2	27:R3:20:LYS:HD3	1.82	0.61
37:RE:141:ILE:O	37:RE:154:LYS:NZ	2.33	0.61
11:XK:110:ASP:O	18:XR:84:LYS:HB2	2.01	0.61
34:YA:300:A:OP1	53:YY:86:ARG:NH2	2.33	0.61
34:YA:2056:G:N7	34:YA:2577:A:C5	2.67	0.61
38:YF:160:ASN:HB3	38:YF:163:VAL:HG12	1.81	0.61
1:QA:69:G:H1'	1:QA:152:A:H2	1.66	0.61
1:QA:976:G:H21	1:QA:1362(B):C:H2'	1.66	0.61
34:RA:1041:C:H2'	34:RA:1042:G:H8	1.64	0.61
44:RP:47:ASP:OD2	44:RP:50:ARG:NH2	2.33	0.61
1:XA:1187:G:N2	14:XN:60:SER:OG	2.33	0.61
21:XU:3:LYS:HG2	21:XU:14:TRP:CG	2.36	0.61
34:YA:17:G:H21	34:YA:554:U:H5'	1.64	0.61
34:YA:2822:G:O2'	34:YA:2825:C:N4	2.34	0.61
50:YV:72:VAL:HB	50:YV:85:LYS:HB3	1.82	0.61
1:QA:538:G:C5'	12:QL:115:LYS:HG2	2.27	0.61
1:QA:856:C:H2'	1:QA:857:C:H6	1.64	0.61
7:QG:118:VAL:O	7:QG:122:HIS:ND1	2.32	0.61
10:QJ:47:PHE:CE1	14:QN:37:PHE:CE2	2.88	0.61
34:RA:2751:G:C6	40:RH:3:ARG:CB	2.83	0.61
1:XA:675:A:O2'	11:XK:115:PRO:HA	2.00	0.61
1:XA:745:C:H2'	1:XA:746:A:H8	1.63	0.61
34:YA:2059:A:H2	34:YA:2503:A:N6	1.95	0.61
1:QA:264:U:O2'	17:QQ:64:PRO:HD2	2.01	0.61
1:QA:1198:G:H1'	10:QJ:54:PHE:CZ	2.35	0.61
34:RA:2490:G:N2	34:RA:2490:G:OP2	2.32	0.61
1:XA:355:C:O5'	1:XA:355:C:H6	1.84	0.61
10:XJ:7:LYS:HE2	10:XJ:9:ARG:HG3	1.83	0.61
16:XP:6:LEU:HB2	16:XP:17:TYR:HB3	1.82	0.61
34:YA:2820:A:H1'	46:YR:3:HIS:ND1	2.15	0.61
1:QA:311:C:OP1	16:QP:26:ARG:NH1	2.33	0.61
1:QA:609:A:H5'	16:QP:9:PHE:HE1	1.64	0.61
10:QJ:49:VAL:HA	14:QN:34:TYR:OH	2.01	0.61
34:RA:2313:C:H5''	39:RG:91:ARG:HH21	1.65	0.61
36:RD:96:HIS:HE1	36:RD:102:LYS:HE2	1.64	0.61
1:XA:666:G:H5'	1:XA:726:C:H1'	1.82	0.61
1:XA:1302:U:C2	13:XM:27:LYS:HE2	2.36	0.61
25:Y1:43:TYR:HD2	34:YA:2230:G:H5''	1.66	0.61
29:Y5:48:GLU:CD	51:YW:37:ARG:HH12	2.09	0.61
34:YA:199:A:N1	34:YA:2434:A:C2	2.68	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:335:C:OP2	53:YY:84:ARG:NH2	2.33	0.61
34:YA:383:U:H2'	34:YA:385:C:H5	1.65	0.61
34:YA:1333:C:H2'	34:YA:1334:G:H8	1.65	0.61
42:YN:112:LEU:O	42:YN:116:LEU:HB2	1.99	0.61
1:QA:953:G:C4	13:QM:104:ARG:NH2	2.69	0.61
1:XA:413:G:H1'	1:XA:428:G:H21	1.66	0.61
1:XA:702:A:H3'	1:XA:703:G:H8	1.66	0.61
1:XA:1124:G:C5'	10:XJ:36:GLY:H	2.14	0.61
1:XA:1330:U:H5''	13:XM:24:GLY:HA2	1.81	0.61
1:XA:1358:U:H5	14:XN:35:ARG:HE	1.48	0.61
34:YA:554:U:H2'	34:YA:556:G:C8	2.36	0.61
34:YA:2046:G:C2	34:YA:2623:G:C4	2.89	0.61
34:YA:2471:C:N4	34:YA:2476:A:O2'	2.34	0.61
41:YI:30:LEU:HB3	41:YI:36:ALA:HB3	1.80	0.61
54:YZ:181:GLU:O	54:YZ:182:LYS:O	2.19	0.61
1:QA:1358:U:C3'	14:QN:22:THR:HG21	2.30	0.61
1:QA:1491:G:H5''	12:QL:46:LYS:HG2	1.82	0.61
13:QM:57:ARG:O	13:QM:61:GLU:HB2	2.01	0.61
34:RA:1490:A:O2'	36:RD:99:ASP:OD1	2.19	0.61
53:RY:76:CYS:SG	53:RY:80:GLY:N	2.74	0.61
54:RZ:3:TYR:HB2	54:RZ:57:ILE:HG22	1.81	0.61
1:XA:263:A:P	20:XT:79:ARG:HE	2.24	0.61
10:XJ:10:GLY:HA3	10:XJ:16:LEU:CD2	2.22	0.61
1:QA:948:C:OP2	13:QM:106:ASN:CB	2.49	0.60
1:QA:1107:C:H5''	3:QC:173:VAL:H	1.65	0.60
1:QA:1150:U:O2	10:QJ:39:PRO:HG2	2.00	0.60
1:QA:1321:C:C4	19:QS:36:ARG:NH1	2.69	0.60
34:RA:626:U:H5'	34:RA:627:A:H5''	1.81	0.60
34:RA:1019:U:H2'	34:RA:1020:A:H8	1.66	0.60
35:RB:22:U:H3	35:RB:61:G:H1	1.49	0.60
1:XA:728:A:N7	15:XO:54:ARG:NE	2.49	0.60
34:YA:2046:G:N1	34:YA:2623:G:C2	2.62	0.60
1:QA:667:G:N2	15:QO:49:ASP:OD1	2.34	0.60
1:QA:1318:A:C6	14:QN:16:PHE:CG	2.89	0.60
3:QC:23:TYR:H	10:QJ:93:GLY:C	2.09	0.60
34:RA:2296:U:OP2	47:RS:9:ARG:NH1	2.34	0.60
39:RG:72:ARG:HA	39:RG:87:PRO:HA	1.82	0.60
46:RR:74:LYS:HD3	46:RR:77:ARG:HH21	1.66	0.60
48:RT:77:PRO:HG2	48:RT:80:SER:HB3	1.82	0.60
1:XA:538:G:P	12:XL:115:LYS:HB2	2.41	0.60
1:XA:901:A:O5'	1:XA:901:A:H8	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1320:C:C6	19:XS:70:LYS:HD3	2.35	0.60
11:XK:109:VAL:HA	18:XR:86:VAL:HG23	1.83	0.60
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.36	0.60
1:QA:595:G:H1'	1:QA:596:C:H5	1.65	0.60
1:QA:1320:C:H5'	19:QS:70:LYS:HE3	1.83	0.60
1:QA:1359:C:H5	14:QN:35:ARG:CZ	2.14	0.60
1:QA:1376:U:C4	7:QG:10:ARG:NH1	2.68	0.60
5:QE:80:ILE:CD1	8:QH:104:ARG:HH12	2.14	0.60
33:R9:18:ARG:HD2	34:RA:1034:G:H5'	1.83	0.60
34:RA:1700:A:H3'	34:RA:1701:A:C8	2.36	0.60
34:RA:2144:U:H4'	34:RA:2145:C:H5	1.66	0.60
1:XA:975:A:C2	14:XN:34:TYR:HE1	2.19	0.60
1:XA:1059:C:H5	3:XC:2:GLY:HA3	1.64	0.60
34:YA:508:G:O6	51:YW:9:TYR:CE1	2.55	0.60
34:YA:2069:G:C2	34:YA:2443:C:N3	2.69	0.60
39:YG:16:ARG:NH2	39:YG:28:VAL:O	2.35	0.60
1:QA:740:U:C3'	15:QO:39:LEU:HG	2.32	0.60
1:QA:1221:G:H5'	19:QS:36:ARG:HH12	1.65	0.60
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.02	0.60
34:RA:642:G:H4'	34:RA:2349:G:H4'	1.83	0.60
34:RA:1604:C:H2'	34:RA:1605:C:H6	1.66	0.60
3:XC:23:TYR:CD2	10:XJ:95:GLU:CG	2.84	0.60
11:XK:17:GLY:HA2	11:XK:35:PRO:HD3	1.83	0.60
34:YA:1252:G:N2	49:YU:33:ARG:HH11	1.99	0.60
1:QA:667:G:H4'	15:QO:51:HIS:HE1	1.62	0.60
1:QA:982:U:C5'	14:QN:6:LEU:HD21	2.31	0.60
1:QA:1110:A:N1	3:QC:177:THR:HG22	2.16	0.60
34:RA:331:A:N6	34:RA:1210:A:OP2	2.34	0.60
34:RA:758:C:H2'	34:RA:759:G:H8	1.65	0.60
41:RI:92:VAL:HB	41:RI:120:ILE:CB	2.30	0.60
4:XD:25:ARG:NE	4:XD:30:LYS:O	2.33	0.60
37:YE:1:MET:HG3	37:YE:200:GLU:HG2	1.82	0.60
44:YP:58:THR:O	44:YP:61:ARG:NH2	2.34	0.60
1:QA:662:G:H2'	1:QA:663:A:C8	2.37	0.60
1:QA:810:C:H1'	1:QA:899:C:H41	1.66	0.60
1:XA:595:G:H1	1:XA:641:U:HO2'	1.49	0.60
34:YA:458:G:N2	34:YA:470:A:OP2	2.34	0.60
34:YA:2051:A:N1	34:YA:2614:A:C5	2.69	0.60
51:YW:6:ILE:HG12	51:YW:104:THR:HG23	1.83	0.60
7:QG:138:LYS:HE2	7:QG:142:GLU:HG3	1.83	0.60
34:RA:1295:C:H2'	34:RA:1296:G:H8	1.67	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1999:C:H2'	34:RA:2000:G:H8	1.67	0.60
1:XA:1360:A:N9	14:XN:17:LYS:HG3	2.17	0.60
3:XC:9:GLY:HA2	3:XC:12:LEU:HD13	1.83	0.60
34:YA:690:G:O2'	36:YD:43:ARG:NH1	2.30	0.60
34:YA:1094:U:H1'	34:YA:1097:U:H5	1.67	0.60
34:YA:2140:C:H2'	34:YA:2141:G:H8	1.66	0.60
51:YW:30:GLU:O	51:YW:34:ASN:ND2	2.35	0.60
1:QA:7:G:O2'	5:QE:121:LYS:HB2	2.01	0.60
1:QA:980:C:C4'	14:QN:19:ARG:NE	2.62	0.60
1:QA:1312:G:OP1	19:QS:5:LEU:O	2.20	0.60
1:QA:1329:A:N6	21:QU:7:ARG:HH22	1.99	0.60
2:XB:126:GLU:OE2	2:XB:130:ARG:NH1	2.34	0.60
4:XD:13:ARG:HG3	4:XD:40:PRO:HD3	1.84	0.60
34:YA:2080:G:N3	34:YA:2241:A:C2	2.69	0.60
34:YA:2515:C:H2'	34:YA:2516:G:H8	1.66	0.60
1:QA:609:A:C5'	16:QP:9:PHE:CD1	2.85	0.60
1:QA:1359:C:P	14:QN:22:THR:HG22	2.42	0.60
1:QA:1359:C:H5	14:QN:35:ARG:NE	1.98	0.60
41:RI:83:ALA:CB	41:RI:88:ILE:HA	2.31	0.60
46:RR:97:VAL:HG22	46:RR:114:VAL:HG12	1.84	0.60
1:XA:68(Q):C:H2'	1:XA:68(R):U:C6	2.37	0.60
1:XA:983:A:H5'	14:XN:2:ALA:HB3	1.84	0.60
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.84	0.60
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.01	0.60
34:YA:662:G:OP1	44:YP:15:ARG:NH1	2.34	0.60
47:YS:4:LEU:HD11	47:YS:12:PHE:HE2	1.67	0.60
4:QD:88:VAL:CG2	5:QE:96:PRO:O	2.35	0.60
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG22	1.84	0.60
28:R4:5:ILE:O	39:RG:67:LYS:CG	2.50	0.60
34:RA:2094:G:H1'	34:RA:2198:A:H61	1.67	0.60
45:RQ:21:THR:HB	54:RZ:78:LYS:HE3	1.83	0.60
1:XA:757:U:H1'	1:XA:879:C:H1'	1.83	0.60
1:XA:900:A:O5'	1:XA:900:A:H8	1.85	0.60
34:YA:2090:G:O6	34:YA:2230:G:O6	2.20	0.60
38:YF:11:VAL:HG22	38:YF:125:LEU:HB2	1.84	0.60
40:YH:89:ILE:O	40:YH:129:THR:OG1	2.19	0.60
1:QA:676:A:N3	11:QK:119:CYS:SG	2.72	0.59
1:QA:947:G:OP2	13:QM:106:ASN:OD1	2.19	0.59
1:QA:980:C:H5''	1:QA:981:U:H5	1.67	0.59
1:QA:1307:U:OP2	13:QM:99:ARG:CB	2.50	0.59
7:QG:133:GLY:HA2	7:QG:136:LYS:HE2	1.83	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:R8:31:HIS:HD2	34:RA:2422:A:N6	2.00	0.59
41:RI:88:ILE:HG22	41:RI:90:GLY:H	1.66	0.59
10:XJ:16:LEU:HB3	10:XJ:70:ARG:HH11	1.64	0.59
10:XJ:47:PHE:HZ	14:XN:36:PHE:CG	2.20	0.59
30:Y6:6:ARG:HH21	30:Y6:24:GLU:HG3	1.65	0.59
34:YA:1566:A:C6	36:YD:214:TRP:CZ2	2.90	0.59
51:YW:33:ARG:NH2	51:YW:52:GLU:OE1	2.34	0.59
1:QA:1103:C:O2'	2:QB:111:ARG:NE	2.30	0.59
1:QA:1372:U:H5''	9:QI:69:GLY:HA3	1.84	0.59
34:RA:698:C:O2'	34:RA:734:A:N6	2.33	0.59
34:RA:2751:G:C6	40:RH:3:ARG:HB3	2.31	0.59
34:YA:1151:G:O2'	49:YU:77:SER:O	2.21	0.59
34:YA:2069:G:N1	34:YA:2443:C:N3	2.51	0.59
1:QA:126:G:H4'	1:QA:634:C:H1'	1.84	0.59
1:QA:677:U:C2	11:QK:119:CYS:SG	2.95	0.59
34:RA:206:U:H2'	34:RA:207:A:H8	1.68	0.59
34:RA:1076:C:OP1	45:RQ:60:ARG:NH2	2.35	0.59
1:XA:972:C:O2'	10:XJ:55:LYS:HB2	2.02	0.59
1:XA:979:C:H42	14:XN:18:VAL:HG23	1.66	0.59
1:XA:983:A:H5'	14:XN:2:ALA:CB	2.31	0.59
34:YA:1152:C:H2'	34:YA:1153:C:H6	1.67	0.59
53:YY:79:CYS:HB2	53:YY:81:LYS:HG2	1.82	0.59
1:QA:564:C:C6	17:QQ:31:LEU:HD21	2.37	0.59
1:QA:1106:G:C3'	3:QC:172:ARG:HG3	2.24	0.59
1:QA:1220:G:H21	19:QS:54:GLY:HA2	1.66	0.59
3:QC:91:LEU:HD12	3:QC:101:LEU:HD11	1.85	0.59
32:R8:56:GLU:HA	32:R8:59:LYS:HE2	1.83	0.59
34:RA:788:A:OP1	34:RA:791:C:N4	2.34	0.59
34:RA:955:C:OP1	45:RQ:85:LYS:NZ	2.32	0.59
34:RA:1141:U:P	42:RN:25:ARG:HH21	2.25	0.59
37:RE:201:THR:HG22	37:RE:203:LYS:H	1.66	0.59
41:RI:83:ALA:HA	41:RI:89:TYR:H	1.67	0.59
1:XA:974:A:OP1	14:XN:31:ARG:HB2	2.02	0.59
1:XA:1068:G:H22	1:XA:1108:G:H1'	1.68	0.59
1:XA:1117:G:N2	1:XA:1180:A:N3	2.50	0.59
5:XE:79:GLU:HG3	5:XE:93:PRO:HD2	1.84	0.59
34:YA:1546:C:H5'	34:YA:1547:C:H5'	1.85	0.59
34:YA:2063:C:O2	34:YA:2450:A:N1	2.35	0.59
1:QA:1118:C:C5'	9:QI:9:ARG:NH1	2.66	0.59
1:QA:1187:G:O2'	14:QN:60:SER:HA	2.03	0.59
40:RH:89:ILE:HD11	40:RH:131:VAL:CG2	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:51:A:C2	1:XA:353:A:N1	2.70	0.59
1:XA:398:C:H2'	1:XA:399:G:H8	1.67	0.59
1:XA:662:G:H2'	1:XA:663:A:H8	1.66	0.59
13:XM:3:ARG:O	13:XM:57:ARG:NH2	2.35	0.59
34:YA:2712(A):U:H2'	34:YA:2712(B):A:H2'	1.83	0.59
37:YE:143:ASN:OD1	37:YE:143:ASN:N	2.35	0.59
1:QA:1170:A:H5'	2:QB:140:HIS:CE1	2.37	0.59
29:R5:33:CYS:CB	29:R5:46:CYS:SG	2.90	0.59
34:RA:2086:U:OP2	36:RD:263:ARG:NH1	2.36	0.59
40:RH:107:VAL:O	40:RH:152:ARG:NH2	2.35	0.59
1:XA:1305:G:C5	1:XA:1331:G:N1	2.69	0.59
1:XA:1319:A:P	19:XS:3:ARG:CZ	2.91	0.59
8:XH:100:ILE:HD11	8:XH:125:ARG:HB3	1.84	0.59
34:YA:2080:G:N1	34:YA:2241:A:N1	2.50	0.59
1:QA:68:G:H22	1:QA:101:A:H2	1.49	0.59
1:QA:643:C:H2'	1:QA:644:G:C8	2.38	0.59
10:QJ:45:ARG:HB3	10:QJ:65:LEU:HB3	1.85	0.59
10:QJ:47:PHE:CZ	14:QN:36:PHE:CG	2.90	0.59
34:RA:184:C:H1'	34:RA:217:G:H1'	1.84	0.59
34:RA:2744:G:N2	40:RH:143:GLN:OE1	2.36	0.59
1:XA:165:C:H2'	1:XA:166:G:C8	2.38	0.59
1:XA:838(B):U:H4'	1:XA:838(C):C:C6	2.37	0.59
1:XA:1305:G:H2'	1:XA:1331:G:C2	2.36	0.59
1:XA:1318:A:C2	19:XS:37:ARG:NH1	2.71	0.59
32:Y8:31:HIS:CD2	34:YA:2421:G:O6	2.56	0.59
34:YA:956:G:H2'	34:YA:957:A:H2'	1.82	0.59
34:YA:2647:U:H2'	34:YA:2648:C:H6	1.67	0.59
36:YD:61:LEU:O	36:YD:63:ARG:NH1	2.36	0.59
41:YI:9:LEU:HD21	41:YI:35:LEU:HD12	1.84	0.59
1:QA:974:A:OP1	14:QN:29:ARG:CD	2.51	0.59
1:QA:1248:A:N6	21:QU:26:LYS:HD2	2.17	0.59
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.37	0.59
1:QA:1304:G:H1'	1:QA:1334:G:H1	1.67	0.59
1:QA:1318:A:N6	14:QN:16:PHE:CB	2.65	0.59
4:QD:98:GLU:OE1	4:QD:103:ASN:ND2	2.36	0.59
34:RA:674:G:O2'	38:RF:67:GLN:OE1	2.18	0.59
34:RA:1996:C:H5	43:RO:32:TYR:HH	1.50	0.59
41:RI:93:THR:O	41:RI:97:ILE:HG13	2.03	0.59
46:RR:51:LEU:HG	46:RR:66:VAL:HG23	1.85	0.59
32:Y8:2:PRO:HA	34:YA:591:C:H1'	1.84	0.59
54:YZ:151:HIS:HB3	54:YZ:170:THR:HA	1.85	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:986:A:H1'	19:QS:55:LYS:CA	2.27	0.59
1:QA:1097:C:H5'	2:QB:140:HIS:NE2	2.18	0.59
1:QA:1186:G:N2	14:QN:61:TRP:CA	2.66	0.59
1:QA:1228:C:C5'	13:QM:111:LYS:NZ	2.42	0.59
1:QA:1320:C:H41	19:QS:37:ARG:HD2	1.68	0.59
28:R4:27:THR:CG2	39:RG:62:LEU:O	2.51	0.59
34:RA:746:A:O2'	34:RA:2611:U:O2'	2.18	0.59
34:RA:2250:G:C5	45:RQ:82:ARG:HD2	2.37	0.59
43:RO:88:ASN:ND2	43:RO:90:GLN:OE1	2.36	0.59
33:Y9:14:CYS:HA	33:Y9:27:CYS:HB2	1.84	0.59
34:YA:727:A:C2	36:YD:9:TYR:CD2	2.89	0.59
1:QA:740:U:O3'	15:QO:39:LEU:HG	2.03	0.59
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.38	0.59
4:QD:88:VAL:HG13	5:QE:97:GLY:HA2	1.85	0.59
1:XA:960:U:H5	19:XS:78:ARG:HG2	1.67	0.59
1:XA:979:C:OP1	1:XA:1223:C:N4	2.35	0.59
38:YF:168:ARG:HG2	38:YF:175:THR:HG21	1.84	0.59
1:QA:642:A:C1'	8:QH:115:SER:HA	2.33	0.58
1:QA:730:G:C5	1:QA:731:G:H1'	2.38	0.58
1:QA:1305:G:O2'	1:QA:1332:A:N7	2.36	0.58
1:XA:571:U:H5''	1:XA:819:A:C4	2.38	0.58
1:XA:702:A:N1	34:YA:1848:A:C6	2.71	0.58
1:XA:1004:A:N6	1:XA:1025:U:O3'	2.36	0.58
1:XA:1318:A:H62	14:XN:16:PHE:CB	2.09	0.58
1:XA:1440(K):C:O2'	1:XA:1440(L):G:N2	2.33	0.58
1:XA:1541:U:N3	23:XX:5:A:C2	2.71	0.58
25:Y1:2:SER:N	34:YA:1364:G:N7	2.50	0.58
31:Y7:34:ARG:NH1	34:YA:466:A:OP1	2.36	0.58
34:YA:1582:C:H2'	34:YA:1583:A:H8	1.68	0.58
34:YA:2275:C:O2	45:YQ:83:MET:HG2	2.02	0.58
1:QA:123:C:H2'	1:QA:124:G:H8	1.67	0.58
1:QA:280:C:O2	17:QQ:40:LYS:NZ	2.30	0.58
1:QA:1306:A:OP2	21:QU:5:ASP:HA	2.03	0.58
10:QJ:47:PHE:CE1	14:QN:36:PHE:CB	2.81	0.58
34:RA:1996:C:H5	43:RO:32:TYR:OH	1.86	0.58
40:RH:152:ARG:HG2	40:RH:153:LYS:HG2	1.84	0.58
1:XA:1345:U:C4	1:XA:1377:A:H1'	2.38	0.58
1:QA:107:G:OP1	1:QA:325:A:N6	2.36	0.58
1:QA:936:C:H2'	1:QA:937:A:C8	2.39	0.58
2:QB:181:PHE:CE2	8:QH:70:GLN:HG2	2.38	0.58
4:QD:20:TYR:CZ	6:XF:14:LEU:HA	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:59:A:H3'	1:XA:331:G:H22	1.67	0.58
1:XA:974:A:C8	14:YN:31:ARG:NE	2.71	0.58
1:XA:1105:A:H2'	1:XA:1106:G:C8	2.37	0.58
3:XC:23:TYR:HB2	10:XJ:93:GLY:C	2.27	0.58
1:QA:44:G:OP2	16:QP:12:LYS:CE	2.52	0.58
1:QA:954:G:N3	19:QS:83:HIS:CE1	2.67	0.58
3:QC:108:ASN:ND2	3:QC:144:SER:OG	2.36	0.58
7:QG:16:LEU:HD22	9:QI:42:ARG:CA	2.33	0.58
10:QJ:53:PRO:CA	14:QN:42:ILE:HD11	2.33	0.58
13:QM:86:CYS:CB	19:QS:69:HIS:HE1	2.14	0.58
27:R3:17:LYS:HG3	34:RA:969:U:OP1	2.02	0.58
1:XA:379:C:H2'	1:XA:380:G:H8	1.69	0.58
1:XA:974:A:H1'	14:YN:31:ARG:HH11	1.59	0.58
1:XA:1193:G:O2'	5:XE:21:ALA:O	2.21	0.58
32:Y8:56:GLU:OE1	32:Y8:59:LYS:NZ	2.36	0.58
34:YA:747:U:C4	34:YA:2613:U:C4	2.92	0.58
34:YA:1418:G:H2'	34:YA:1579:A:H61	1.66	0.58
37:YE:128:SER:OG	37:YE:129:HIS:N	2.35	0.58
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.30	0.58
1:QA:974:A:H5'	14:QN:31:ARG:CB	2.15	0.58
1:QA:1253:G:O5'	10:QJ:44:VAL:CB	2.42	0.58
1:QA:1353:G:OP1	21:QU:13:ILE:HG21	2.03	0.58
2:QB:78:GLN:O	2:QB:94:ASN:ND2	2.37	0.58
3:QC:23:TYR:CE1	10:QJ:9:ARG:C	2.82	0.58
7:QG:16:LEU:HD21	9:QI:42:ARG:CD	2.23	0.58
34:RA:191:A:H1'	34:RA:679:C:H1'	1.86	0.58
34:RA:987:G:O2'	34:RA:1000:A:N3	2.33	0.58
34:RA:1024:G:O2'	34:RA:1144:G:O2'	2.22	0.58
34:RA:1076:C:H2'	34:RA:1077:A:H4'	1.86	0.58
38:RF:148:LEU:HD13	38:RF:191:ARG:HH11	1.68	0.58
1:XA:1318:A:C1'	19:XS:11:VAL:CG2	2.71	0.58
1:XA:1535:C:N4	23:XX:10:G:C2	2.69	0.58
5:XE:18:ARG:NH1	5:XE:25:ARG:O	2.36	0.58
34:YA:1061:U:C6	34:YA:1062:G:H5''	2.35	0.58
34:YA:2867:G:HO2'	34:YA:2868:A:H8	1.52	0.58
36:YD:35:LYS:H	36:YD:64:ILE:HG12	1.68	0.58
1:QA:980:C:C2'	14:QN:19:ARG:HG2	2.23	0.58
1:QA:1097:C:O2'	1:QA:1169:A:N3	2.34	0.58
4:QD:34:GLU:OE1	6:XF:57:GLN:NE2	2.36	0.58
4:QD:59:ARG:HH12	4:QD:66:ARG:HH22	1.51	0.58
34:RA:1297:C:H2'	34:RA:1298:C:H6	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1566:A:C2	36:RD:214:TRP:CG	2.92	0.58
1:XA:1000:A:H2'	1:XA:1001:G:C8	2.38	0.58
3:XC:36:ASP:OD1	3:XC:59:ARG:NH2	2.34	0.58
34:YA:1457:A:C2	34:YA:2703:C:N4	2.71	0.58
1:QA:1278:U:H5''	1:QA:1279:A:C8	2.38	0.58
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.35	0.58
34:RA:2684:U:O2'	43:RO:68:GLU:OE2	2.17	0.58
50:RV:24:LYS:HA	50:RV:92:THR:HG23	1.85	0.58
52:RX:25:LYS:HD3	52:RX:80:ILE:HD11	1.86	0.58
53:RY:19:LYS:NZ	53:RY:20:TYR:CE2	2.71	0.58
1:XA:501:C:H2'	1:XA:502:G:H8	1.68	0.58
1:XA:781:A:H3'	1:XA:782:A:H8	1.68	0.58
34:YA:530:G:C5	34:YA:2022:U:H5''	2.38	0.58
34:YA:581:C:H2'	34:YA:582:G:C8	2.38	0.58
34:YA:863:A:H2'	34:YA:864:G:C8	2.39	0.58
37:YE:50:GLY:HA2	37:YE:77:ILE:HA	1.85	0.58
1:QA:974:A:N9	14:QN:31:ARG:CZ	2.67	0.58
1:QA:1186:G:H22	14:QN:61:TRP:HA	1.69	0.58
1:QA:1238:A:H2'	1:QA:1239:A:C8	2.38	0.58
1:QA:1484:C:O2'	34:RA:1960:A:O2'	2.20	0.58
4:QD:205:GLU:HG2	5:QE:100:VAL:C	2.27	0.58
34:RA:605:C:H1'	34:RA:657:U:H1'	1.85	0.58
34:RA:1930:G:H2'	34:RA:1968:G:H1	1.68	0.58
1:XA:15:G:H1	1:XA:920:U:H3	1.50	0.58
1:XA:412:A:C2	4:XD:35:ARG:CD	2.81	0.58
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.85	0.58
1:XA:1296:C:C5'	13:XM:14:ARG:NH2	2.63	0.58
1:XA:1330:U:H5''	13:XM:24:GLY:CA	2.33	0.58
11:XK:15:ALA:HA	11:XK:77:MET:HA	1.86	0.58
1:QA:6:G:C2	5:QE:119:LEU:HD11	2.39	0.58
1:QA:974:A:C8	14:QN:31:ARG:HD2	2.35	0.58
1:QA:1313:U:H5	19:QS:4:SER:CB	2.17	0.58
1:XA:1270:C:H2'	1:XA:1271:G:C8	2.39	0.58
1:XA:1318:A:O3'	19:XS:11:VAL:HG21	2.00	0.58
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.39	0.58
1:XA:1376:U:O4	7:XG:10:ARG:NE	2.37	0.58
19:XS:63:THR:OG1	19:XS:65:ASN:OD1	2.21	0.58
34:YA:577:G:O2'	34:YA:1254:A:OP1	2.21	0.58
34:YA:727:A:C2	36:YD:9:TYR:CE2	2.92	0.58
1:QA:19:C:OP1	5:QE:130:ASN:ND2	2.36	0.58
1:QA:25:C:H5'	1:QA:524:G:H1'	1.86	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:689:C:OP2	11:QK:55:LYS:NZ	2.35	0.58
1:QA:741:G:P	15:QO:39:LEU:CD1	2.90	0.58
1:QA:1028(B):C:H2'	1:QA:1028(C):C:H5	1.69	0.58
1:QA:1371:G:OP1	9:QI:12:GLU:HG2	2.04	0.58
10:QJ:40:LEU:HD11	10:QJ:71:LEU:HB2	1.86	0.58
30:R6:16:CYS:SG	30:R6:42:TRP:HB2	2.44	0.58
34:RA:259:G:H21	34:RA:621:A:H8	1.52	0.58
41:RI:83:ALA:CA	41:RI:89:TYR:CD2	2.86	0.58
43:RO:1:MET:HB2	43:RO:32:TYR:HB3	1.84	0.58
53:RY:99:CYS:HB2	53:RY:103:GLY:N	2.18	0.58
1:XA:1306:A:H1'	1:XA:1332:A:C6	2.39	0.58
1:XA:1375:A:H3'	1:XA:1376:U:C6	2.37	0.58
20:XT:71:THR:OG1	20:XT:72:LEU:N	2.36	0.58
39:YG:29:TRP:O	39:YG:33:ARG:NH1	2.37	0.58
1:QA:1080:A:H4'	5:QE:16:THR:HG21	1.86	0.57
1:QA:1110:A:N6	3:QC:176:HIS:HB2	2.19	0.57
6:QF:23:LYS:NZ	6:QF:42:GLU:OE1	2.36	0.57
7:QG:50:ILE:HG12	7:QG:61:VAL:HG11	1.86	0.57
34:RA:992:C:OP1	49:RU:47:TYR:OH	2.18	0.57
39:RG:15:VAL:HG22	39:RG:175:LEU:HD22	1.86	0.57
41:RI:115:ALA:HB2	41:RI:131:LYS:HE3	1.85	0.57
54:RZ:30:ASN:HB3	54:RZ:90:VAL:HG22	1.86	0.57
1:XA:719:C:O2	18:XR:50:ILE:CD1	2.45	0.57
40:YH:9:ILE:HD12	40:YH:51:ARG:HG2	1.85	0.57
41:YI:3:VAL:HG12	41:YI:38:LEU:HA	1.85	0.57
34:RA:1689:A:OP2	34:RA:1698:A:N6	2.37	0.57
37:RE:26:ILE:HG23	37:RE:182:LEU:HB3	1.86	0.57
1:XA:766:A:H61	1:XA:1511:G:H1'	1.67	0.57
8:XH:11:THR:O	8:XH:15:ASN:ND2	2.38	0.57
20:XT:30:LYS:HA	20:XT:33:ILE:HD12	1.86	0.57
27:Y3:42:ALA:O	34:YA:851:U:O2'	2.20	0.57
34:YA:656:G:H2'	34:YA:657:U:C6	2.40	0.57
34:YA:2710:C:H2'	34:YA:2711:A:C8	2.38	0.57
46:YR:56:LYS:O	46:YR:88:ARG:NH2	2.36	0.57
48:YT:36:GLU:OE1	48:YT:41:ARG:NH1	2.37	0.57
1:QA:608:A:H3'	1:QA:609:A:H8	1.69	0.57
1:QA:937:A:H2'	1:QA:1379:G:H21	1.68	0.57
1:QA:1108:G:O3'	3:QC:176:HIS:HD2	1.87	0.57
1:QA:1114:C:C1'	14:QN:60:SER:O	2.51	0.57
1:QA:1364:U:O4'	21:QU:14:TRP:CZ2	2.57	0.57
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:61:TYR:OH	34:RA:888:C:OP2	2.21	0.57
33:R9:6:SER:HA	34:RA:1031:G:H4'	1.86	0.57
34:RA:1247:A:OP2	44:RP:15:ARG:NH2	2.38	0.57
49:RU:6:THR:OG1	49:RU:7:GLY:N	2.37	0.57
1:XA:1112:C:C1'	3:XC:179:ARG:CZ	2.79	0.57
1:XA:1313:U:O4	19:XS:4:SER:OG	2.22	0.57
1:XA:1539:C:H2'	1:XA:1540:U:C6	2.39	0.57
34:YA:307:G:H21	34:YA:330:A:H62	1.51	0.57
34:YA:664:C:OP1	44:YP:18:ARG:NH1	2.37	0.57
34:YA:1728:G:H8	34:YA:1732:A:H62	1.50	0.57
1:QA:968:A:N7	1:QA:1062:U:O2'	2.31	0.57
1:QA:1158:C:C5'	2:QB:133:LYS:HZ1	2.17	0.57
1:QA:1176:A:OP1	9:QI:97:LYS:HE2	2.04	0.57
1:QA:1320:C:N4	19:QS:37:ARG:CA	2.68	0.57
3:QC:23:TYR:CG	10:QJ:95:GLU:N	2.72	0.57
33:R9:19:ARG:NH2	34:RA:2754:U:O3'	2.36	0.57
34:RA:511:U:H4'	34:RA:1235:G:H4'	1.86	0.57
34:RA:1216:G:OP1	49:RU:11:ARG:NH2	2.31	0.57
34:RA:2394:C:OP1	44:RP:63:PRO:HD2	2.03	0.57
40:RH:149:ARG:HA	40:RH:162:ILE:HD11	1.85	0.57
1:XA:111:G:H8	1:XA:111:G:O5'	1.87	0.57
5:XE:11:ILE:HG21	5:XE:105:VAL:HG22	1.86	0.57
13:XM:3:ARG:HH12	13:XM:11:ARG:HH21	1.51	0.57
29:Y5:43:HIS:N	34:YA:2884:U:O4	2.32	0.57
34:YA:911:A:C2	45:YQ:9:TYR:CD2	2.92	0.57
34:YA:996:A:O3'	49:YU:92:ARG:NH2	2.37	0.57
36:YD:28:GLU:HG2	36:YD:29:PRO:HD3	1.86	0.57
1:QA:1219:U:C2'	19:QS:34:TRP:CE3	2.87	0.57
1:QA:1242:C:H4'	1:QA:1303:C:H4'	1.86	0.57
10:QJ:47:PHE:CZ	14:QN:37:PHE:HD2	2.21	0.57
32:R8:46:ARG:NH1	34:RA:630:G:OP1	2.37	0.57
34:RA:2006:C:O2'	34:RA:2823:A:N3	2.35	0.57
34:RA:2419:U:H2'	34:RA:2420:C:H6	1.69	0.57
1:XA:6:G:N3	1:XA:6:G:H2'	2.20	0.57
1:XA:375:U:H5''	1:XA:375:U:H6	1.68	0.57
1:XA:669:U:C1'	15:XO:46:HIS:HE1	2.18	0.57
1:XA:730:G:C5	1:XA:731:G:H1'	2.40	0.57
3:XC:17:ASP:OD1	3:XC:21:ARG:NH2	2.37	0.57
6:XF:62:TRP:CD1	18:XR:35:ARG:NH1	2.72	0.57
34:YA:2044:C:N4	34:YA:2625:G:N1	2.51	0.57
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1300:G:H1'	1:QA:1303:C:H42	1.70	0.57
1:QA:1320:C:N4	19:QS:37:ARG:CD	2.66	0.57
3:QC:23:TYR:HE1	10:QJ:10:GLY:HA2	1.66	0.57
13:QM:91:ARG:HD2	13:QM:96:LEU:HD22	1.87	0.57
34:RA:662:G:OP1	44:RP:15:ARG:NH1	2.37	0.57
34:RA:1204:A:H1'	34:RA:1206:G:C8	2.39	0.57
45:RQ:12:GLN:HB2	45:RQ:73:PRO:HD2	1.87	0.57
1:XA:401:C:H2'	1:XA:402:G:C8	2.40	0.57
1:XA:1320:C:C2	19:XS:36:ARG:O	2.57	0.57
1:XA:1320:C:C2'	19:XS:70:LYS:HD2	2.33	0.57
8:XH:8:ASP:OD2	8:XH:12:ARG:NH2	2.37	0.57
9:XI:10:ARG:HG3	9:XI:11:LYS:HG2	1.86	0.57
34:YA:184:C:O2'	34:YA:217:G:N3	2.35	0.57
34:YA:828:U:H4'	34:YA:831:G:N1	2.20	0.57
34:YA:1566:A:C2	36:YD:214:TRP:CE3	2.88	0.57
34:YA:2051:A:N1	34:YA:2614:A:N3	2.52	0.57
34:YA:2070:G:N2	34:YA:2442:C:N3	2.40	0.57
34:YA:2085:C:C2	34:YA:2235:G:C2	2.91	0.57
1:QA:1160:G:C4'	2:QB:132:LYS:HE3	2.35	0.57
3:QC:5:ILE:HG21	14:QN:45:ARG:NH2	2.19	0.57
4:QD:167:GLY:O	4:QD:169:LYS:NZ	2.36	0.57
4:QD:193:ASP:HA	6:XF:24:GLU:OE1	2.05	0.57
34:RA:1216:G:OP2	49:RU:12:ARG:NH2	2.36	0.57
34:RA:1854:A:H62	34:RA:1888:G:H8	1.51	0.57
1:XA:292:G:C5	1:XA:293:G:H1'	2.40	0.57
1:XA:590:C:OP1	8:XH:29:SER:HA	2.03	0.57
1:XA:728:A:H62	15:XO:54:ARG:CD	2.05	0.57
1:XA:741:G:OP1	15:XO:35:ARG:NE	2.38	0.57
1:XA:1251:A:O2'	1:XA:1369:C:O3'	2.21	0.57
1:XA:1296:C:H5'	13:XM:14:ARG:NH2	2.20	0.57
1:XA:1318:A:O3'	19:XS:11:VAL:CG2	2.50	0.57
2:XB:115:LEU:HD12	2:XB:145:LEU:HB3	1.86	0.57
34:YA:86:C:OP1	53:YY:33:LYS:NZ	2.37	0.57
34:YA:270(P):U:C4	41:YI:52:ARG:NE	2.69	0.57
34:YA:617:G:OP2	38:YF:43:LYS:NZ	2.31	0.57
34:YA:639:U:H2'	34:YA:640:C:C6	2.40	0.57
34:YA:2049:G:N2	34:YA:2620:C:O2	2.36	0.57
1:QA:1306:A:OP2	21:QU:5:ASP:CA	2.53	0.57
2:QB:74:LYS:HG3	2:QB:77:ALA:HB3	1.87	0.57
2:QB:219:VAL:HA	2:QB:222:ILE:HD12	1.84	0.57
4:QD:9:CYS:SG	4:QD:22:LYS:NZ	2.71	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1889:A:N1	34:RA:2234:G:H1'	2.19	0.57
34:RA:2094:G:P	41:RI:22:LYS:HE3	2.44	0.57
34:RA:2848:G:HO2'	34:RA:2867:G:H22	1.53	0.57
39:RG:144:ILE:HG22	39:RG:146:TYR:H	1.69	0.57
1:XA:486:U:H2'	1:XA:487:A:H8	1.69	0.57
1:XA:922:G:H1'	5:XE:19:MET:HB2	1.85	0.57
1:XA:1318:A:O4'	19:XS:11:VAL:CG2	2.53	0.57
30:Y6:19:ARG:HH21	30:Y6:52:VAL:HG21	1.68	0.57
39:YG:37:VAL:HG13	39:YG:94:LEU:HB2	1.85	0.57
46:YR:57:ARG:NH1	46:YR:59:ASP:OD2	2.38	0.57
53:YY:30:VAL:HG22	53:YY:37:VAL:HG12	1.87	0.57
1:QA:248:C:H2'	1:QA:249:U:C6	2.40	0.57
1:QA:1226:C:C5'	13:QM:91:ARG:NH1	2.59	0.57
1:QA:1253:G:OP1	10:QJ:44:VAL:HG11	2.05	0.57
34:RA:2130:U:O2'	34:RA:2133:G:O2'	2.22	0.57
34:RA:2291:U:H2'	34:RA:2292:C:C6	2.40	0.57
1:XA:269:C:H2'	1:XA:270:A:C8	2.40	0.57
1:XA:401:C:H2'	1:XA:402:G:H8	1.69	0.57
12:XL:11:VAL:HG23	17:XQ:29:HIS:NE2	2.19	0.57
13:XM:11:ARG:O	13:XM:13:LYS:NZ	2.35	0.57
34:YA:1566:A:N3	36:YD:214:TRP:CG	2.73	0.57
36:YD:184:LYS:HB3	36:YD:269:PHE:HB3	1.86	0.57
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.69	0.57
1:QA:1253:G:O2'	1:QA:1356:G:O2'	2.20	0.57
4:QD:166:LYS:O	36:YD:135:PHE:CE1	2.58	0.57
34:RA:2039:C:H2'	34:RA:2040:C:H6	1.70	0.57
1:XA:1300:G:C2	1:XA:1334:G:C6	2.93	0.57
17:XQ:3:LYS:HB2	17:XQ:60:ILE:HD11	1.86	0.57
34:YA:2049:G:C2	34:YA:2620:C:O2	2.57	0.57
34:YA:2054:A:C2	34:YA:2616:C:C2	2.90	0.57
40:YH:155:SER:OG	40:YH:156:ALA:N	2.36	0.57
1:QA:69:G:H1'	1:QA:152:A:C2	2.40	0.56
1:QA:1414:U:H2'	1:QA:1415:G:C8	2.40	0.56
2:QB:87:ARG:NH1	2:QB:220:ASP:OD2	2.38	0.56
4:QD:166:LYS:O	36:YD:135:PHE:HE1	1.87	0.56
10:QJ:47:PHE:CD1	14:QN:37:PHE:HE2	2.22	0.56
31:R7:9:ARG:NE	34:RA:1310:G:OP2	2.38	0.56
34:RA:2751:G:N7	40:RH:2:SER:OG	2.37	0.56
40:RH:29:PRO:HD2	40:RH:79:VAL:HB	1.86	0.56
44:RP:58:THR:O	44:RP:61:ARG:NH2	2.38	0.56
54:RZ:127:LYS:HB3	54:RZ:162:GLU:HB2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:978:A:C5	14:XN:18:VAL:HG21	2.40	0.56
1:XA:1123:A:H1'	10:XJ:38:ILE:CG2	2.35	0.56
1:XA:1278:U:H5''	1:XA:1279:A:C8	2.39	0.56
1:XA:1537:U:O2	23:XX:9:G:N2	2.38	0.56
34:YA:1088:A:H4'	34:YA:1089:G:C8	2.40	0.56
34:YA:2056:G:C8	34:YA:2577:A:C6	2.93	0.56
1:QA:689:C:H4'	1:QA:705:U:H1'	1.86	0.56
1:QA:1243:C:H5'	21:QU:9:ARG:HG3	1.87	0.56
9:QI:67:GLY:O	9:QI:73:GLN:NE2	2.38	0.56
33:R9:19:ARG:NH2	34:RA:2754:U:O2'	2.33	0.56
34:RA:1338:G:O6	52:RX:62:LYS:NZ	2.36	0.56
1:XA:51:A:O4'	1:XA:353:A:N7	2.38	0.56
1:XA:1228:C:H5	13:XM:103:THR:O	1.87	0.56
34:YA:917:A:H3'	34:YA:918:A:H8	1.70	0.56
1:QA:975:A:C2	14:QN:34:TYR:CE1	2.93	0.56
1:QA:1014:A:O4'	19:QS:34:TRP:CG	2.58	0.56
1:QA:1041:A:H2'	1:QA:1042:G:C8	2.40	0.56
1:QA:1280:A:N3	10:QJ:41:PRO:CD	2.68	0.56
1:QA:1331:G:O6	21:QU:7:ARG:HB2	2.05	0.56
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.39	0.56
9:QI:64:THR:OG1	9:QI:66:ARG:NH1	2.37	0.56
34:RA:602:G:O2'	34:RA:604:G:O2'	2.22	0.56
34:RA:644:A:H2	34:RA:2369:A:H1'	1.71	0.56
34:RA:824:A:H1'	34:RA:2358:G:N7	2.20	0.56
34:RA:1248:G:C2	49:RU:3:ARG:HD2	2.40	0.56
53:RY:30:VAL:HG12	53:RY:37:VAL:HG23	1.87	0.56
1:XA:8:A:H62	4:XD:208:SER:C	2.13	0.56
1:XA:899:C:O2	1:XA:899:C:H2'	2.05	0.56
1:XA:1028(H):G:H2'	1:XA:1028(I):G:C8	2.39	0.56
1:XA:1105:A:H2'	1:XA:1106:G:H8	1.71	0.56
1:XA:1126:U:H3'	1:XA:1127:G:H8	1.69	0.56
1:XA:1184:G:H2'	1:XA:1185:G:H8	1.70	0.56
8:XH:73:ASP:OD1	8:XH:75:ARG:NH1	2.38	0.56
13:XM:84:ILE:HG23	19:XS:66:MET:HE2	1.86	0.56
29:Y5:57:VAL:O	46:YR:33:ARG:NH2	2.30	0.56
30:Y6:3:SER:OG	30:Y6:4:GLU:N	2.37	0.56
30:Y6:46:HIS:ND1	34:YA:2371:G:O2'	2.37	0.56
32:Y8:31:HIS:HD2	34:YA:2421:G:O6	1.88	0.56
34:YA:270(C):A:H61	34:YA:270(Z):G:H1'	1.69	0.56
34:YA:1566:A:C6	36:YD:214:TRP:CZ3	2.92	0.56
34:YA:2096:U:H3	34:YA:2193:G:H22	1.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2511:U:O2'	37:YE:138:PRO:O	2.22	0.56
34:YA:2647:U:H2'	34:YA:2648:C:C6	2.39	0.56
37:YE:49:LEU:HD22	37:YE:81:ILE:HD11	1.85	0.56
45:YQ:24:GLY:H	45:YQ:101:ARG:HD2	1.70	0.56
46:YR:14:SER:OG	46:YR:15:SER:N	2.38	0.56
53:YY:76:CYS:HB3	53:YY:79:CYS:SG	2.45	0.56
33:R9:23:VAL:HG11	34:RA:1032:A:C4'	2.31	0.56
34:RA:383:U:H2'	34:RA:385:C:H5	1.71	0.56
34:RA:887:A:H1'	34:RA:889:C:C5	2.40	0.56
41:RI:83:ALA:C	41:RI:89:TYR:CD2	2.83	0.56
45:RQ:138:ASP:O	45:RQ:141:GLN:NE2	2.39	0.56
1:XA:962:C:H2'	1:XA:963:G:H8	1.71	0.56
1:XA:1028(H):G:H2'	1:XA:1028(I):G:H8	1.70	0.56
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.37	0.56
11:XK:91:ARG:HH21	18:XR:88:LYS:CD	2.03	0.56
34:YA:515:A:H1'	34:YA:581:C:H1'	1.88	0.56
1:QA:1189:C:O2'	3:QC:176:HIS:ND1	2.39	0.56
5:QE:41:VAL:HG13	5:QE:136:MET:HE1	1.87	0.56
30:R6:52:VAL:HG22	30:R6:53:LYS:H	1.70	0.56
34:RA:2114:A:H3'	34:RA:2114:A:N3	2.20	0.56
34:RA:2140:C:H2'	34:RA:2141:G:H8	1.70	0.56
37:RE:39:PRO:HD3	37:RE:45:THR:HG22	1.87	0.56
1:XA:674:G:H2'	1:XA:675:A:C8	2.40	0.56
8:XH:32:LYS:HA	8:XH:35:ILE:HD12	1.86	0.56
34:YA:1802:A:H2'	34:YA:1803:A:C8	2.41	0.56
34:YA:2049:G:C2	34:YA:2620:C:N3	2.72	0.56
34:YA:2250:G:H21	34:YA:2250:G:P	2.27	0.56
1:QA:788:U:H3	1:QA:792:A:H2'	1.68	0.56
1:QA:865:A:N3	1:QA:918:A:O2'	2.35	0.56
1:QA:1358:U:H5'	14:QN:35:ARG:N	2.06	0.56
10:QJ:47:PHE:CE1	14:QN:36:PHE:HB3	2.19	0.56
31:R7:29:LYS:HA	31:R7:32:LYS:HG3	1.88	0.56
34:RA:83:G:N2	34:RA:103:A:OP2	2.39	0.56
37:RE:34:VAL:HG21	37:RE:77:ILE:HD11	1.88	0.56
1:XA:323:U:H3'	1:XA:324:G:C8	2.40	0.56
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.71	0.56
1:XA:1305:G:C5	1:XA:1331:G:C5	2.92	0.56
34:YA:554:U:H2'	34:YA:556:G:H8	1.71	0.56
34:YA:958:U:OP2	45:YQ:14:ARG:NH1	2.39	0.56
33:R9:23:VAL:CG2	34:RA:1032:A:O2'	2.54	0.56
34:RA:1565:C:H1'	34:RA:1566:A:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RF:117:ARG:NH1	38:RF:120:GLU:OE2	2.38	0.56
38:RF:195:ASP:N	38:RF:195:ASP:OD1	2.37	0.56
1:XA:114:U:H1'	1:XA:353:A:H1'	1.86	0.56
1:XA:1270:C:O2'	1:XA:1314:C:OP1	2.24	0.56
13:XM:84:ILE:CG2	19:XS:66:MET:HE2	2.36	0.56
34:YA:1204:A:H1'	34:YA:1206:G:C8	2.40	0.56
1:QA:1440(B):G:H4'	1:QA:1440(C):G:C4	2.40	0.56
10:QJ:47:PHE:HE2	14:QN:34:TYR:CB	2.17	0.56
34:RA:1576:U:H2'	34:RA:1577:C:H6	1.71	0.56
41:RI:26:ALA:HA	41:RI:30:LEU:HB2	1.88	0.56
49:RU:50:ARG:O	49:RU:54:LYS:NZ	2.39	0.56
1:XA:728:A:C6	15:XO:54:ARG:CD	2.88	0.56
1:XA:1123:A:O3'	10:XJ:36:GLY:CA	2.49	0.56
13:XM:84:ILE:CD1	19:XS:65:ASN:CG	2.61	0.56
34:YA:1493:C:C6	34:YA:2210:G:C5	2.94	0.56
34:YA:2097:C:C2	34:YA:2193:G:N2	2.73	0.56
34:YA:2134:A:H3'	34:YA:2135:A:H8	1.71	0.56
42:YN:63:THR:OG1	42:YN:64:GLY:N	2.39	0.56
54:YZ:52:SER:O	54:YZ:54:HIS:ND1	2.38	0.56
1:QA:377:G:H2'	1:QA:378:G:C8	2.41	0.56
1:QA:1313:U:C1'	19:QS:6:LYS:HZ3	2.18	0.56
32:R8:25:MET:HG3	44:RP:64:LYS:HB3	1.87	0.56
1:XA:501:C:H2'	1:XA:502:G:C8	2.41	0.56
1:XA:943:U:O2'	1:XA:1232:U:OP2	2.23	0.56
1:XA:989:C:H2'	1:XA:990:C:C6	2.40	0.56
1:XA:1312:G:H3'	19:XS:6:LYS:HZ3	0.75	0.56
1:XA:1377:A:C2	7:XG:8:GLU:O	2.59	0.56
1:XA:1503:A:N6	1:XA:1532:U:H1'	2.21	0.56
31:Y7:8:ASN:ND2	34:YA:770:G:OP1	2.38	0.56
34:YA:2051:A:C2	34:YA:2614:A:N3	2.73	0.56
43:YO:34:THR:CG2	43:YO:35:VAL:H	2.12	0.56
7:QG:16:LEU:HD11	9:QI:42:ARG:HH11	1.69	0.56
8:QH:12:ARG:HD2	8:QH:26:VAL:HG12	1.88	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.87	0.56
12:QL:71:PRO:O	12:QL:102:ARG:NH1	2.39	0.56
13:QM:85:GLY:O	19:QS:74:PHE:HD2	1.89	0.56
25:R1:90:ILE:CA	25:R1:94:LEU:HD12	2.34	0.56
34:RA:659:C:H2'	34:RA:660:G:C8	2.41	0.56
34:RA:1834:U:H1'	34:RA:1969:A:H2'	1.87	0.56
1:XA:12:U:H4'	1:XA:526:C:H4'	1.87	0.56
1:XA:458(B):G:H1'	1:XA:458(F):A:H61	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1049:U:HO2'	14:YN:2:ALA:N	2.04	0.56
24:Y0:19:LYS:NZ	34:YA:2261:C:OP1	2.31	0.56
28:Y4:6:HIS:CE1	39:YG:67:LYS:H	2.24	0.56
1:QA:129(B):G:H4'	1:QA:130:A:H5''	1.88	0.55
1:QA:1086:U:H2'	1:QA:1087:G:H8	1.71	0.55
1:QA:1369:C:H2'	1:QA:1370:G:C8	2.42	0.55
3:QC:5:ILE:HD12	14:QN:49:HIS:NE2	2.21	0.55
3:QC:22:TRP:HA	10:QJ:93:GLY:HA3	1.84	0.55
23:QX:8:A:H2'	23:QX:9:G:H8	1.71	0.55
34:RA:319:C:H2'	34:RA:320:A:C8	2.42	0.55
34:RA:2108:C:O2'	34:RA:2142:C:O2'	2.16	0.55
34:RA:2328:A:H2'	34:RA:2329:G:C8	2.41	0.55
42:RN:22:THR:OG1	42:RN:23:LEU:N	2.39	0.55
29:Y5:48:GLU:OE2	51:YW:37:ARG:NH1	2.24	0.55
34:YA:597:U:H2'	34:YA:598:G:C8	2.41	0.55
34:YA:2059:A:N1	34:YA:2503:A:C5	2.74	0.55
1:QA:265:G:H5'	17:QQ:64:PRO:O	2.06	0.55
1:QA:741:G:O5'	15:QO:39:LEU:HD11	2.06	0.55
34:RA:1380:G:O2'	34:RA:1569:A:N6	2.39	0.55
34:RA:2747:G:O6	34:RA:2755:C:H5''	2.06	0.55
43:RO:14:THR:HG21	43:RO:86:ILE:HD12	1.87	0.55
43:RO:106:LEU:HB3	43:RO:111:PHE:HB2	1.87	0.55
44:RP:90:ARG:HG3	44:RP:91:PHE:HD1	1.71	0.55
53:RY:47:LYS:NZ	53:RY:48:ALA:O	2.37	0.55
1:XA:107:G:H4'	1:XA:378:G:H5''	1.88	0.55
1:XA:192:U:H4'	20:XT:57:ARG:HD3	1.87	0.55
1:XA:686:U:O2'	1:XA:703:G:N2	2.40	0.55
1:XA:1228:C:C5	13:XM:103:THR:O	2.59	0.55
1:XA:1228:C:H5	13:XM:104:ARG:CA	1.98	0.55
1:XA:1318:A:H1'	19:XS:37:ARG:NH2	2.21	0.55
34:YA:2108:C:N4	34:YA:2182:G:H22	1.91	0.55
34:YA:2882:A:OP1	46:YR:96:ARG:NH1	2.39	0.55
1:QA:66:G:P	1:QA:66:G:H8	2.29	0.55
1:QA:310:G:OP2	16:QP:27:LYS:CD	2.52	0.55
4:QD:11:LEU:HD13	4:QD:66:ARG:HD2	1.88	0.55
34:RA:746:A:HO2'	34:RA:2611:U:HO2'	1.52	0.55
34:RA:1380:G:H1'	34:RA:1569:A:H61	1.71	0.55
1:XA:8:A:N6	4:XD:209:ARG:HA	2.21	0.55
1:XA:261:U:C5	20:XT:79:ARG:CZ	2.88	0.55
1:XA:1358:U:O5'	1:XA:1358:U:H6	1.89	0.55
2:XB:43:ASP:O	2:XB:47:THR:OG1	2.23	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Y7:5:TRP:CZ3	34:YA:686:G:N7	2.74	0.55
39:YG:77:ILE:HG22	39:YG:82:LEU:HB2	1.88	0.55
41:YI:131:LYS:HG2	41:YI:135:GLU:HG3	1.87	0.55
48:YT:51:ARG:HD2	48:YT:100:TYR:HE1	1.72	0.55
1:QA:1160:G:C5'	2:QB:132:LYS:HE3	2.33	0.55
1:QA:1280:A:C4	10:QJ:41:PRO:HD2	2.40	0.55
26:R2:4:SER:OG	26:R2:5:GLU:N	2.37	0.55
33:R9:5:ALA:O	34:RA:1031:G:H1'	2.06	0.55
34:RA:784:A:N6	34:RA:2072:G:O2'	2.35	0.55
34:RA:2105:C:H2'	34:RA:2106:G:C8	2.42	0.55
35:RB:74:U:H1'	54:RZ:34:ASN:HD21	1.71	0.55
40:RH:33:LEU:HD11	40:RH:136:ILE:HG13	1.87	0.55
41:RI:86:THR:O	41:RI:122:GLU:HG2	2.05	0.55
1:XA:974:A:N9	14:YN:31:ARG:CZ	2.70	0.55
1:XA:1048:G:H2'	1:XA:1050:G:C8	2.42	0.55
1:XA:1305:G:C2	1:XA:1331:G:C8	2.95	0.55
24:Y0:16:SER:HB3	34:YA:2262:U:H5	1.70	0.55
34:YA:192:C:H1'	34:YA:800:A:H62	1.71	0.55
34:YA:468:G:H5''	38:YF:60:SER:HB2	1.88	0.55
1:QA:546:G:H4'	1:QA:548:G:H4'	1.89	0.55
1:QA:791:G:N1	1:QA:1498:U:OP1	2.38	0.55
1:QA:925:G:H1'	1:QA:1502:A:C4	2.42	0.55
1:QA:1124:G:C5'	10:QJ:36:GLY:H	2.20	0.55
4:QD:57:ARG:NH1	5:QE:107:ARG:CD	2.70	0.55
13:QM:11:ARG:HG3	13:QM:12:ASN:H	1.71	0.55
33:R9:14:CYS:HA	33:R9:27:CYS:HB2	1.88	0.55
34:RA:81:G:O2'	34:RA:295:G:O2'	2.23	0.55
34:RA:1571:A:H2'	34:RA:1572:A:C8	2.42	0.55
39:RG:126:ASP:OD2	39:RG:130:ASN:ND2	2.36	0.55
47:RS:25:ARG:HH21	47:RS:40:ILE:HG13	1.70	0.55
1:XA:1301:U:H4'	13:XM:17:VAL:CG2	2.36	0.55
1:XA:1316:G:C4'	14:YN:17:LYS:CG	2.31	0.55
1:XA:1473:A:H2'	1:XA:1474:G:C8	2.42	0.55
1:XA:1485:U:H2'	1:XA:1486:G:C8	2.41	0.55
3:XC:23:TYR:HD2	10:XJ:95:GLU:CB	2.19	0.55
34:YA:270(P):U:C4	41:YI:52:ARG:CZ	2.90	0.55
34:YA:746:A:H3'	34:YA:2612:C:H5	1.71	0.55
34:YA:828:U:O2'	34:YA:831:G:O6	2.17	0.55
34:YA:1791:A:N6	34:YA:1828:G:O2'	2.36	0.55
42:YN:129:PRO:O	42:YN:134:ARG:NH1	2.33	0.55
43:YO:87:ILE:HD12	43:YO:91:LEU:HA	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YT:3:ARG:HG3	48:YT:6:LEU:HB2	1.89	0.55
1:QA:1000:A:H2'	1:QA:1001:G:C8	2.41	0.55
1:QA:1204:A:P	14:QN:3:ARG:NH2	2.79	0.55
1:QA:1239:A:H2	1:QA:1296:C:H5	1.53	0.55
13:QM:67:GLU:OE1	13:QM:71:ARG:NH1	2.40	0.55
26:R2:35:LEU:HD23	26:R2:50:ILE:HG12	1.88	0.55
31:R7:23:ARG:O	31:R7:28:ARG:NH1	2.40	0.55
43:RO:112:MET:HA	43:RO:115:VAL:HG22	1.87	0.55
47:RS:106:ARG:HA	47:RS:110:LEU:HD21	1.87	0.55
1:XA:1123:A:H2'	1:XA:1124:G:C4	2.41	0.55
10:XJ:47:PHE:CE2	14:XN:37:PHE:CZ	2.94	0.55
10:XJ:68:HIS:CD2	10:XJ:68:HIS:N	2.75	0.55
34:YA:34:C:N4	34:YA:454:A:O2'	2.38	0.55
34:YA:1566:A:H2	36:YD:214:TRP:NE1	2.03	0.55
34:YA:2377:A:H2'	34:YA:2378:A:C8	2.42	0.55
41:YI:130:TYR:HB3	41:YI:136:VAL:HG13	1.86	0.55
1:QA:1014:A:C1'	19:QS:34:TRP:CD2	2.90	0.55
1:QA:1218:C:H2'	1:QA:1219:U:H6	1.72	0.55
34:RA:318:C:H2'	34:RA:319:C:H6	1.71	0.55
38:RF:117:ARG:NH2	38:RF:189:THR:O	2.40	0.55
1:XA:68(Q):C:H2'	1:XA:68(R):U:H6	1.72	0.55
1:XA:186(L):G:H2'	1:XA:186(M):G:C8	2.42	0.55
1:XA:288:A:H2'	1:XA:289:G:H4'	1.87	0.55
1:XA:1162:C:H2'	1:XA:1163:C:C6	2.41	0.55
1:XA:1228:C:C5	13:XM:104:ARG:CB	2.89	0.55
34:YA:2229:C:H2'	34:YA:2230:G:C8	2.41	0.55
1:QA:1320:C:H42	19:QS:37:ARG:CB	2.18	0.55
1:QA:1376:U:C4	7:QG:10:ARG:CZ	2.90	0.55
4:QD:20:TYR:CZ	6:XF:14:LEU:CA	2.90	0.55
34:RA:644:A:C2	34:RA:2369:A:H1'	2.42	0.55
34:RA:1462:C:H4'	34:RA:2703:C:H5'	1.89	0.55
40:RH:86:GLU:HG3	40:RH:165:ALA:HB3	1.89	0.55
43:RO:19:ILE:HG22	43:RO:43:VAL:HG12	1.88	0.55
1:XA:405:U:H5''	1:XA:495:A:H2	1.71	0.55
1:XA:481:G:O2'	1:XA:483:C:N4	2.40	0.55
1:XA:1300:G:H1'	1:XA:1301:U:C6	2.42	0.55
1:XA:1359:C:N4	14:XN:35:ARG:NE	2.54	0.55
4:XD:153:ARG:HA	4:XD:181:MET:HE1	1.89	0.55
7:XG:29:LYS:HE2	7:XG:102:ARG:HB3	1.89	0.55
34:YA:236:C:H2'	34:YA:237:C:C6	2.42	0.55
34:YA:1872:A:C5	34:YA:1878:G:H1'	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2056:G:C6	34:YA:2577:A:N9	2.75	0.55
34:YA:2692:C:H2'	34:YA:2693:A:H8	1.72	0.55
1:QA:856:C:H2'	1:QA:857:C:C6	2.42	0.55
1:QA:1049:U:C4	14:QN:3:ARG:CB	2.77	0.55
1:QA:1221:G:H5'	19:QS:36:ARG:CZ	2.37	0.55
1:QA:1314:C:C5	19:QS:6:LYS:HE3	2.39	0.55
34:RA:1528:A:H2'	34:RA:1529:A:C8	2.42	0.55
1:XA:1229:A:H62	13:XM:104:ARG:CD	2.20	0.55
1:XA:1347:G:C8	9:XI:108:VAL:C	2.85	0.55
21:XU:3:LYS:HG2	21:XU:14:TRP:CB	2.36	0.55
43:YO:104:ARG:NH2	48:YT:36:GLU:OE2	2.36	0.55
1:QA:625:G:H5'	16:QP:10:GLY:N	2.21	0.55
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.80	0.55
34:RA:831:G:N2	44:RP:53:GLY:O	2.40	0.55
34:RA:1299:G:H22	34:RA:1640:C:H5'	1.71	0.55
34:RA:1826:G:H4'	36:RD:242:ARG:HH21	1.72	0.55
34:RA:2476:A:H2'	34:RA:2477:C:C6	2.42	0.55
53:RY:6:HIS:O	53:RY:97:ARG:NH2	2.39	0.55
1:XA:1440(K):C:HO2'	1:XA:1440(L):G:H21	1.54	0.55
10:XJ:69:ASN:N	10:XJ:69:ASN:OD1	2.39	0.55
11:XK:91:ARG:CD	18:XR:88:LYS:HZ1	2.15	0.55
34:YA:2080:G:N1	34:YA:2241:A:C2	2.74	0.55
34:YA:2134:A:H1'	34:YA:2158:A:N3	2.22	0.55
34:YA:2506:U:H2'	34:YA:2507:C:H6	1.72	0.55
38:YF:56:GLU:OE2	38:YF:93:LYS:NZ	2.36	0.55
53:YY:83:THR:HG21	53:YY:99:CYS:SG	2.48	0.55
1:QA:677:U:H2'	1:QA:678:U:C6	2.43	0.54
1:QA:947:G:H5'	13:QM:109:THR:HG23	1.90	0.54
1:QA:1253:G:P	10:QJ:44:VAL:HG23	2.46	0.54
2:QB:130:ARG:O	2:QB:135:GLN:NE2	2.37	0.54
34:RA:459:U:H2'	34:RA:460:A:H8	1.72	0.54
34:RA:1999:C:H1'	34:RA:2687:U:H1'	1.89	0.54
43:RO:104:ARG:NH2	43:RO:121:VAL:O	2.40	0.54
45:RQ:45:GLN:NE2	45:RQ:91:GLU:O	2.40	0.54
45:RQ:62:GLY:O	54:RZ:178:GLU:OE1	2.25	0.54
1:XA:745:C:H5''	1:XA:851:G:H1'	1.87	0.54
1:XA:941:G:O2'	1:XA:1350:A:OP1	2.24	0.54
1:XA:1541:U:O2	23:XX:5:A:C2	2.60	0.54
17:XQ:99:SER:OG	17:XQ:100:LYS:N	2.37	0.54
30:Y6:40:CYS:HB3	30:Y6:43:CYS:HB3	1.88	0.54
34:YA:482:A:H1'	34:YA:498:G:N2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1456:G:N1	34:YA:2703:C:N4	2.18	0.54
34:YA:1493:C:C4	34:YA:2210:G:C4	2.95	0.54
34:YA:2056:G:C4	34:YA:2577:A:C6	2.95	0.54
41:YI:129:THR:HA	41:YI:137:PRO:HA	1.89	0.54
45:YQ:134:ARG:NH2	54:YZ:122:ARG:HD2	2.21	0.54
1:QA:954:G:H21	19:QS:83:HIS:CE1	2.23	0.54
1:QA:1221:G:P	19:QS:36:ARG:CZ	2.95	0.54
3:QC:5:ILE:HD12	14:QN:49:HIS:CD2	2.42	0.54
8:QH:64:LYS:HG2	8:QH:79:VAL:HG11	1.90	0.54
34:RA:504:U:H5'	34:RA:505:A:H5'	1.88	0.54
34:RA:747:U:H3'	34:RA:2612:C:H41	1.71	0.54
47:RS:34:HIS:ND1	47:RS:53:SER:OG	2.40	0.54
1:XA:1505:G:H5'	1:XA:1506:U:C6	2.43	0.54
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.90	0.54
6:XF:100:ASN:CG	18:XR:27:GLY:CA	2.73	0.54
14:YN:23:ARG:NH1	14:YN:24:CYS:O	2.40	0.54
34:YA:390:A:N1	44:YP:71:VAL:HG21	2.22	0.54
1:QA:309:G:C5'	16:QP:27:LYS:HE2	2.27	0.54
1:QA:974:A:OP2	14:QN:29:ARG:HG3	2.03	0.54
3:QC:21:ARG:NH2	10:QJ:15:THR:HG21	2.22	0.54
34:RA:2312:U:O2'	39:RG:40:ASN:OD1	2.20	0.54
34:RA:2789:C:H1'	34:RA:2892:A:H2	1.72	0.54
43:RO:22:ILE:HB	43:RO:40:VAL:HG13	1.89	0.54
45:RQ:138:ASP:HB2	54:RZ:122:ARG:NH2	2.23	0.54
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.07	0.54
33:Y9:16:VAL:HG12	33:Y9:25:VAL:HG12	1.88	0.54
34:YA:1275:A:O2'	34:YA:1645:G:N3	2.41	0.54
34:YA:1826:G:H4'	36:YD:242:ARG:NH2	2.22	0.54
34:YA:2275:C:O2	45:YQ:83:MET:CG	2.55	0.54
1:QA:625:G:C5'	16:QP:9:PHE:HB3	2.36	0.54
1:QA:957:U:H5'	19:QS:81:ARG:CB	2.37	0.54
1:QA:1004:A:H2	1:QA:1024:G:H2'	1.71	0.54
1:QA:1060:C:C5	3:QC:2:GLY:HA3	2.42	0.54
5:QE:80:ILE:HD13	8:QH:104:ARG:HH12	1.73	0.54
12:QL:53:ARG:HB3	12:QL:69:TYR:HE1	1.73	0.54
19:QS:65:ASN:C	19:QS:66:MET:HE2	2.33	0.54
34:RA:372:G:HO2'	34:RA:400:G:H1	1.56	0.54
1:XA:335:C:H2'	1:XA:336:C:C6	2.41	0.54
1:XA:379:C:H2'	1:XA:380:G:C8	2.43	0.54
1:XA:1112:C:C1'	3:XC:179:ARG:HE	2.18	0.54
1:XA:1396:A:H2	5:XE:19:MET:HG3	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:XC:23:TYR:HD2	10:XJ:95:GLU:CG	2.19	0.54
22:XV:19:G:C5	34:YA:2112:G:N7	2.75	0.54
34:YA:2836:U:H2'	34:YA:2837:G:C8	2.43	0.54
54:YZ:97:GLU:HB3	54:YZ:125:LEU:HD11	1.90	0.54
1:QA:624:C:H4'	16:QP:10:GLY:O	2.07	0.54
1:QA:981:U:H5''	14:QN:6:LEU:CD2	2.35	0.54
1:QA:1229:A:H61	13:QM:104:ARG:NH1	2.02	0.54
1:QA:1279:A:OP2	10:QJ:9:ARG:NH1	2.37	0.54
6:QF:97:PHE:CD2	18:QR:31:LEU:HD13	2.43	0.54
10:QJ:40:LEU:HD13	10:QJ:69:ASN:HB3	1.90	0.54
34:RA:1225:C:O2'	50:RV:86:GLY:N	2.34	0.54
34:RA:1445:C:H2'	34:RA:1446:C:H6	1.72	0.54
34:RA:2185:C:H2'	34:RA:2186:G:C8	2.42	0.54
34:RA:2312:U:H2'	34:RA:2313:C:H6	1.72	0.54
34:RA:2520:C:H2'	34:RA:2521:C:H6	1.72	0.54
37:RE:2:LYS:NZ	37:RE:100:GLU:OE2	2.40	0.54
51:RW:67:ASP:N	51:RW:67:ASP:OD1	2.39	0.54
54:RZ:128:VAL:HG23	54:RZ:161:VAL:HG12	1.88	0.54
1:XA:123:C:H2'	1:XA:124:G:C8	2.43	0.54
1:XA:981:U:H3'	1:XA:982:U:C6	2.43	0.54
1:XA:1226:C:H3'	13:XM:103:THR:OG1	2.07	0.54
4:XD:57:ARG:HH12	5:XE:107:ARG:NH1	2.06	0.54
8:XH:86:ILE:HD11	8:XH:136:GLU:HG2	1.89	0.54
34:YA:319:C:H2'	34:YA:320:A:C8	2.43	0.54
39:YG:19:LEU:HD23	39:YG:32:PRO:HD2	1.89	0.54
54:YZ:149:SER:OG	54:YZ:150:LEU:N	2.40	0.54
1:QA:980:C:C4'	14:QN:19:ARG:HH21	2.16	0.54
1:QA:1014:A:OP1	19:QS:32:LYS:CE	2.56	0.54
1:QA:1414:U:H2'	1:QA:1415:G:H8	1.71	0.54
9:QI:46:ALA:HA	9:QI:78:LYS:HB3	1.88	0.54
28:R4:34:GLU:OE1	39:RG:113:ARG:NE	2.40	0.54
34:RA:1638:C:H1'	34:RA:2698:U:H1'	1.90	0.54
34:RA:2212:A:H1'	34:RA:2215:G:C4	2.43	0.54
50:RV:62:LEU:HB2	50:RV:93:GLU:HG3	1.88	0.54
1:XA:421:U:H4'	3:XC:192:THR:HG22	1.88	0.54
1:XA:1315:U:O3'	14:YN:17:LYS:HE2	1.68	0.54
3:XC:14:ILE:HG22	3:XC:15:THR:HG23	1.88	0.54
3:XC:22:TRP:HA	10:XJ:93:GLY:CA	2.38	0.54
34:YA:2108:C:C4	34:YA:2182:G:N2	2.76	0.54
51:YW:69:LEU:HD13	51:YW:107:LEU:HD23	1.89	0.54
1:QA:1198:G:H2'	1:QA:1199:U:C6	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1434:A:H61	1:QA:1467:G:H1'	1.72	0.54
34:RA:1221:C:H2'	34:RA:1222:C:C6	2.43	0.54
34:RA:2030:A:H4'	34:RA:2031:A:H8	1.71	0.54
38:RF:63:LYS:NZ	38:RF:75:HIS:O	2.33	0.54
49:RU:90:VAL:O	49:RU:92:ARG:N	2.35	0.54
1:XA:1041:A:H2'	1:XA:1042:G:C8	2.43	0.54
34:YA:1050:A:H8	34:YA:2751:G:N9	2.06	0.54
34:YA:2045:C:O2	34:YA:2624:G:C2	2.59	0.54
46:YR:104:ARG:NH1	46:YR:107:ASP:OD1	2.40	0.54
54:YZ:53:ILE:HG22	54:YZ:71:VAL:HG13	1.90	0.54
1:QA:243:A:H2	1:QA:282:A:H62	1.56	0.54
1:QA:413:G:H1'	1:QA:428:G:H21	1.72	0.54
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.89	0.54
1:QA:979:C:OP1	1:QA:1223:C:N4	2.41	0.54
4:QD:20:TYR:CZ	6:XF:14:LEU:C	2.85	0.54
30:R6:46:HIS:ND1	34:RA:2371:G:O2'	2.28	0.54
33:R9:25:VAL:HB	33:R9:34:GLN:HB2	1.90	0.54
42:RN:28:THR:O	42:RN:32:THR:OG1	2.24	0.54
46:RR:33:ARG:NH2	46:RR:115:GLU:OE1	2.41	0.54
1:XA:151:A:H3'	1:XA:152:A:H8	1.73	0.54
1:XA:571:U:H4'	1:XA:819:A:C6	2.42	0.54
1:XA:736:C:H2'	1:XA:737:A:C8	2.43	0.54
1:XA:994:A:H1'	1:XA:1216:G:H4'	1.88	0.54
11:XK:107:SER:HA	18:XR:87:ARG:NH1	2.23	0.54
27:Y3:8:LEU:HD13	27:Y3:23:LEU:HD11	1.90	0.54
34:YA:2646:C:OP2	34:YA:2732:G:O2'	2.24	0.54
54:YZ:11:GLU:O	54:YZ:36:LYS:NZ	2.36	0.54
1:QA:1004:A:C6	1:QA:1025:U:H4'	2.43	0.54
3:QC:108:ASN:HD22	3:QC:111:LEU:HD23	1.72	0.54
27:R3:13:ILE:HG21	34:RA:988:A:N6	2.23	0.54
34:RA:30:G:O2'	34:RA:1214:A:N3	2.38	0.54
34:RA:1397:U:OP2	34:RA:1398:C:N4	2.37	0.54
34:RA:2210:G:OP1	36:RD:68:LYS:NZ	2.41	0.54
1:XA:1181:G:C2	1:XA:1182:G:H1'	2.43	0.54
22:XV:75:C:OP1	25:Y1:30:VAL:HG22	2.08	0.54
34:YA:358:U:H2'	34:YA:359:A:H8	1.72	0.54
34:YA:451:C:N4	34:YA:454:A:OP2	2.35	0.54
34:YA:2240:C:H2'	34:YA:2241:A:C8	2.43	0.54
45:YQ:45:GLN:NE2	45:YQ:91:GLU:O	2.40	0.54
1:QA:1360:A:C1'	14:QN:17:LYS:HZ1	2.19	0.54
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:247:G:H4'	34:RA:386:G:C4	2.43	0.54
34:RA:1275:A:O2'	34:RA:1645:G:N3	2.41	0.54
34:RA:1936:A:OP2	34:RA:1961:C:N4	2.41	0.54
1:XA:702:A:C6	34:YA:1848:A:C4	2.96	0.54
1:XA:1253:G:N3	1:XA:1254:C:C5	2.76	0.54
34:YA:197:A:C5	34:YA:2430:A:H2	2.09	0.54
34:YA:1086:A:O2'	34:YA:1103:A:N6	2.36	0.54
34:YA:1363:C:H2'	34:YA:1364:G:H8	1.73	0.54
34:YA:2479:G:OP1	34:YA:2537:U:O2'	2.25	0.54
34:YA:2692:C:O2	34:YA:2847:U:O2'	2.26	0.54
54:YZ:108:PRO:HA	54:YZ:142:SER:HA	1.88	0.54
1:QA:1010:G:H2'	1:QA:1011:G:C8	2.42	0.53
1:QA:1280:A:N9	10:QJ:41:PRO:HD2	2.22	0.53
1:QA:1286:A:N6	1:QA:1355:G:OP1	2.41	0.53
9:QL:71:SER:HA	9:QL:74:ILE:HG12	1.90	0.53
34:RA:685:A:C2	34:RA:787:U:H1'	2.43	0.53
34:RA:2750:A:P	40:RH:59:ARG:HH12	2.31	0.53
41:RI:83:ALA:HA	41:RI:89:TYR:CD2	2.43	0.53
1:XA:51:A:C4	1:XA:353:A:C5	2.96	0.53
1:XA:1230:C:N3	13:XM:102:ARG:NH1	2.55	0.53
1:XA:1304:G:H8	1:XA:1304:G:C5'	2.06	0.53
1:XA:1320:C:N3	19:XS:37:ARG:N	2.56	0.53
34:YA:911:A:C2	45:YQ:9:TYR:CD1	2.96	0.53
1:QA:137:C:H1'	16:QP:63:GLY:CA	2.29	0.53
1:QA:445:G:H2'	1:QA:446:G:H8	1.74	0.53
1:QA:699:C:H2'	1:QA:700:G:C8	2.43	0.53
1:QA:1080:A:P	5:QE:14:ARG:HH22	2.31	0.53
1:QA:1126:U:H5	1:QA:1148:U:H3	1.56	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.72	0.53
3:QC:23:TYR:CZ	10:QJ:9:ARG:O	2.61	0.53
4:QD:98:GLU:HA	4:QD:103:ASN:HD22	1.73	0.53
27:R3:49:LYS:NZ	34:RA:851:U:OP1	2.38	0.53
34:RA:863:A:O3'	35:RB:100:G:N2	2.39	0.53
1:XA:68(B):G:H1	1:XA:68(Z):C:H42	1.56	0.53
1:XA:130:A:H4'	1:XA:186(K):G:C4	2.42	0.53
1:XA:592:G:H2'	1:XA:593:G:H8	1.73	0.53
1:XA:1502:A:H5'	1:XA:1504:G:N7	2.24	0.53
23:XX:6:G:H2'	23:XX:7:G:C8	2.44	0.53
34:YA:345:A:O2'	34:YA:347:A:N6	2.40	0.53
34:YA:746:A:O2'	34:YA:2611:U:O2'	2.18	0.53
34:YA:998:C:OP2	49:YU:58:ARG:NH1	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2074:U:HO2'	34:YA:2597:G:HO2'	1.55	0.53
34:YA:2319:G:O6	47:YS:3:ARG:O	2.25	0.53
34:YA:2391:G:H1'	34:YA:2429:G:H21	1.72	0.53
1:QA:111:G:HO2'	1:QA:389:A:HO2'	1.51	0.53
1:QA:237:C:H2'	1:QA:238:G:C8	2.43	0.53
1:QA:372:C:N4	1:QA:389:A:N7	2.56	0.53
1:QA:1048:G:OP1	14:QN:4:LYS:HB3	2.07	0.53
1:QA:1293:G:H2'	1:QA:1294:G:C8	2.43	0.53
28:R4:1:MET:N	35:RB:39:A:N1	2.57	0.53
29:R5:36:CYS:SG	29:R5:49:CYS:HB3	2.49	0.53
34:RA:551:G:H5'	34:RA:1220:A:H1'	1.90	0.53
36:RD:44:ASN:OD1	36:RD:44:ASN:N	2.41	0.53
47:RS:18:ILE:HD13	47:RS:88:ASP:HA	1.90	0.53
51:RW:1:MET:HE3	51:RW:62:HIS:HB3	1.90	0.53
1:XA:8:A:N6	4:XD:209:ARG:CA	2.72	0.53
1:XA:34:C:H2'	1:XA:35:G:C8	2.43	0.53
1:XA:107:G:O6	20:XT:15:ARG:NH2	2.41	0.53
1:XA:232:G:H1'	1:XA:262:A:N1	2.24	0.53
1:XA:948:C:P	13:XM:106:ASN:HB3	2.48	0.53
1:XA:1360:A:H1'	14:XN:17:LYS:HG3	1.89	0.53
4:XD:57:ARG:NH2	5:XE:107:ARG:HD3	2.23	0.53
6:XF:99:ALA:O	18:XR:28:GLU:CG	2.56	0.53
30:Y6:35:GLU:OE2	30:Y6:50:ARG:NH1	2.42	0.53
34:YA:820:A:H1'	34:YA:943:U:H1'	1.90	0.53
34:YA:2092:U:O4	34:YA:2228:G:O6	2.26	0.53
3:QC:23:TYR:CD1	10:QJ:9:ARG:O	2.60	0.53
3:QC:88:ARG:HG2	3:QC:101:LEU:HD13	1.90	0.53
4:QD:196:LEU:CA	6:XF:16:GLN:HG2	2.27	0.53
27:R3:45:GLY:HA3	34:RA:852:G:H5'	1.89	0.53
34:RA:631:A:H5'	44:RP:65:ARG:HG2	1.90	0.53
34:RA:668:G:H2'	34:RA:670:A:H62	1.74	0.53
1:XA:261:U:C5	20:XT:79:ARG:NH2	2.76	0.53
1:XA:652:U:O4	1:XA:752:G:O2'	2.26	0.53
1:XA:796:C:H2'	1:XA:797:C:H6	1.73	0.53
7:XG:71:PRO:O	7:XG:96:GLN:NE2	2.41	0.53
16:XP:37:GLY:HA3	16:XP:50:LYS:O	2.08	0.53
33:Y9:6:SER:HB3	34:YA:2466:C:H5''	1.89	0.53
33:Y9:29:ASN:ND2	33:Y9:32:HIS:CD2	2.77	0.53
34:YA:2228:G:OP1	36:YD:263:ARG:NH2	2.41	0.53
45:YQ:28:ALA:N	45:YQ:105:GLU:OE2	2.41	0.53
1:QA:691:G:O6	11:QK:52:GLY:HA2	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:986:A:O4'	19:QS:55:LYS:HA	2.08	0.53
1:QA:1302:U:C1'	13:QM:27:LYS:CE	1.95	0.53
1:QA:1306:A:OP2	21:QU:5:ASP:HB2	2.08	0.53
4:QD:20:TYR:CE2	6:XF:14:LEU:HA	2.43	0.53
34:RA:1226:G:OP1	50:RV:69:LYS:NZ	2.24	0.53
46:RR:56:LYS:NZ	46:RR:90:ARG:O	2.41	0.53
51:RW:14:PRO:HG2	51:RW:78:GLU:HG3	1.90	0.53
1:XA:901:A:C5	1:XA:902:G:H1'	2.44	0.53
1:XA:976:G:H21	1:XA:1362(B):C:H2'	1.73	0.53
1:XA:1305:G:N7	1:XA:1331:G:O6	2.41	0.53
34:YA:685:A:H5''	34:YA:788:A:N6	2.23	0.53
47:YS:4:LEU:HD22	47:YS:8:GLU:CD	2.34	0.53
47:YS:26:LEU:HB3	47:YS:87:PHE:HA	1.90	0.53
1:QA:740:U:O3'	15:QO:39:LEU:CG	2.56	0.53
1:QA:1187:G:N2	14:QN:60:SER:OG	2.42	0.53
3:QC:29:TYR:CE1	14:QN:54:PRO:HG2	2.39	0.53
14:QN:6:LEU:HB3	14:QN:23:ARG:HH12	1.72	0.53
34:RA:1782:C:H1'	34:RA:2609:U:H5''	1.91	0.53
34:RA:2849:U:C2	34:RA:2867:G:H1'	2.44	0.53
38:RF:107:LYS:HE3	38:RF:207:GLY:H	1.73	0.53
38:RF:185:ASP:OD1	38:RF:188:ARG:NH1	2.42	0.53
45:RQ:81:VAL:O	45:RQ:82:ARG:NE	2.34	0.53
34:YA:389:G:H1	44:YP:71:VAL:H	1.57	0.53
34:YA:749:C:H4'	34:YA:1271:G:N3	2.23	0.53
34:YA:1457:A:N1	34:YA:2703:C:N4	2.57	0.53
34:YA:2071:A:H2'	34:YA:2072:G:C8	2.44	0.53
41:YI:68:LEU:HA	41:YI:71:ILE:HG22	1.90	0.53
1:QA:539:A:OP2	12:QL:115:LYS:HD3	2.08	0.53
1:QA:878:G:H5''	8:QH:90:GLY:N	2.23	0.53
1:QA:973:G:C4'	14:QN:29:ARG:NH2	2.53	0.53
1:QA:1048:G:OP1	14:QN:4:LYS:CE	2.56	0.53
4:QD:205:GLU:CG	5:QE:100:VAL:O	2.48	0.53
27:R3:12:PRO:HA	27:R3:15:TYR:HD2	1.73	0.53
30:R6:9:LEU:HD13	30:R6:51:GLU:HB2	1.90	0.53
34:RA:642:G:H21	34:RA:646:A:H2	1.56	0.53
34:RA:1815:A:OP2	36:RD:54:ARG:NH2	2.42	0.53
34:RA:2345:G:H1'	34:RA:2382:G:H5'	1.91	0.53
1:XA:481:G:N3	1:XA:482:A:N6	2.56	0.53
1:XA:539:A:OP1	12:XL:114:LYS:CD	2.52	0.53
1:XA:1106:G:H5'	3:XC:172:ARG:CG	2.38	0.53
31:Y7:37:LYS:HE3	34:YA:458:G:C5	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:288:C:H2'	34:YA:289:A:H8	1.73	0.53
34:YA:882:G:H2'	34:YA:883:G:H8	1.74	0.53
34:YA:1061:U:H4'	34:YA:1070:A:H1'	1.90	0.53
40:YH:103:LEU:HB3	40:YH:115:VAL:HG22	1.91	0.53
1:QA:797:C:H2'	1:QA:798:G:H8	1.74	0.53
1:QA:1318:A:H62	14:QN:16:PHE:HB3	1.74	0.53
7:QG:114:ARG:O	7:QG:119:ARG:NH2	2.42	0.53
14:QN:24:CYS:HB2	14:QN:28:GLY:H	1.73	0.53
25:R1:41:ARG:NH2	34:RA:1365:A:O4'	2.40	0.53
34:RA:2107:C:H2'	34:RA:2108:C:C6	2.44	0.53
34:RA:2698:U:H2'	34:RA:2699:C:C6	2.43	0.53
37:RE:171:GLU:HB3	37:RE:185:LYS:HE2	1.90	0.53
46:RR:26:LYS:O	46:RR:30:THR:OG1	2.24	0.53
1:XA:745:C:H2'	1:XA:746:A:C8	2.43	0.53
2:XB:132:LYS:HA	2:XB:135:GLN:HB2	1.89	0.53
10:XJ:37:PRO:O	10:XJ:37:PRO:CG	2.52	0.53
34:YA:191:A:H2'	34:YA:192:C:C6	2.44	0.53
34:YA:2680:C:H5'	37:YE:189:PRO:HA	1.90	0.53
49:YU:28:ARG:NH1	49:YU:38:THR:OG1	2.41	0.53
54:YZ:129:SER:OG	54:YZ:132:ASN:OD1	2.24	0.53
1:QA:229:U:H2'	1:QA:230:G:C8	2.44	0.53
1:QA:980:C:O2	14:QN:21:TYR:CE1	2.62	0.53
2:QB:109:SER:O	2:QB:113:HIS:ND1	2.41	0.53
3:QC:108:ASN:HB3	3:QC:111:LEU:HB2	1.89	0.53
29:R5:49:CYS:SG	29:R5:50:GLY:N	2.82	0.53
34:RA:392:C:H5''	34:RA:409:C:H5''	1.91	0.53
35:RB:7:G:H21	47:RS:38:GLN:HE22	1.57	0.53
1:XA:996:A:N1	1:XA:1046:A:H1'	2.24	0.53
1:XA:1260:C:O2'	1:XA:1283:G:O2'	2.23	0.53
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.42	0.53
34:YA:699:A:O3'	34:YA:1554:A:N6	2.42	0.53
34:YA:793:A:OP2	34:YA:2071:A:O2'	2.27	0.53
34:YA:1050:A:C8	34:YA:2751:G:N3	2.76	0.53
34:YA:1266:G:C8	51:YW:15:ARG:NH2	2.76	0.53
34:YA:1999:C:H2'	34:YA:2000:G:H8	1.74	0.53
34:YA:2317:C:H3'	34:YA:2318:G:H21	1.74	0.53
1:QA:160:A:H1'	1:QA:344:A:C5	2.45	0.53
1:QA:861:G:HO2'	1:QA:874:G:HO2'	1.57	0.53
1:QA:1314:C:C5	19:QS:6:LYS:CE	2.92	0.53
1:QA:1331:G:P	13:QM:24:GLY:H	2.32	0.53
7:QG:16:LEU:CD2	9:QI:42:ARG:CA	2.87	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:477:A:N6	34:RA:500:G:O2'	2.42	0.53
34:RA:828:U:H4'	34:RA:831:G:N1	2.24	0.53
34:RA:1935:G:H1'	34:RA:1964:G:N2	2.24	0.53
34:RA:2094:G:OP1	41:RI:22:LYS:CE	2.54	0.53
42:RN:39:ARG:NH1	42:RN:48:MET:SD	2.82	0.53
26:Y2:29:LYS:NZ	52:YX:6:ASP:OD2	2.32	0.53
28:Y4:11:PRO:HA	28:Y4:25:TYR:HA	1.90	0.53
34:YA:758:C:H2'	34:YA:759:G:H8	1.73	0.53
34:YA:1958:C:H2'	34:YA:1959:G:H8	1.74	0.53
34:YA:2630:G:N3	34:YA:2892:A:O2'	2.42	0.53
43:YO:120:GLU:OE1	48:YT:67:SER:OG	2.28	0.53
1:QA:643:C:O2'	8:QH:132:GLU:OE1	2.24	0.52
1:QA:675:A:O2'	11:QK:115:PRO:HA	2.09	0.52
1:QA:1124:G:HO2'	1:QA:1126:U:H3	1.55	0.52
1:QA:1223:C:P	19:QS:78:ARG:CZ	2.93	0.52
34:RA:589:C:H2'	34:RA:590:A:C8	2.44	0.52
34:RA:1028:A:H2'	34:RA:1029:A:C8	2.44	0.52
34:RA:1668:A:H2	34:RA:1675:C:H41	1.56	0.52
34:RA:2133:G:N2	34:RA:2157:G:H2'	2.24	0.52
34:RA:2291:U:H1'	34:RA:2374:C:H1'	1.91	0.52
46:RR:103:ARG:NH1	46:RR:108:GLY:O	2.40	0.52
50:RV:76:LYS:HB2	50:RV:81:TYR:HB3	1.90	0.52
1:XA:1282:C:H2'	1:XA:1283:G:O4'	2.09	0.52
1:XA:1378:C:O2	1:XA:1378:C:H2'	2.09	0.52
1:XA:1505:G:H5'	1:XA:1506:U:H6	1.74	0.52
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.44	0.52
10:XJ:64:GLU:O	14:XN:56:VAL:CG2	2.57	0.52
34:YA:1500:G:O2'	36:YD:100:GLY:O	2.27	0.52
34:YA:2453:A:H2'	34:YA:2454:G:H8	1.73	0.52
34:YA:2626:C:H2'	34:YA:2627:G:C8	2.44	0.52
36:YD:17:THR:HB	36:YD:205:VAL:H	1.74	0.52
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.49	0.52
1:QA:762:C:H2'	1:QA:763:G:H8	1.75	0.52
1:QA:985:C:H2'	1:QA:986:A:C8	2.44	0.52
1:QA:1305:G:H2'	1:QA:1331:G:C2	2.43	0.52
10:QJ:33:GLN:O	10:QJ:76:ASN:ND2	2.43	0.52
34:RA:390:A:H1'	34:RA:391:G:C8	2.44	0.52
34:RA:2006:C:H2'	34:RA:2007:C:C6	2.44	0.52
34:RA:2377:A:H2'	34:RA:2378:A:C8	2.44	0.52
34:RA:2729:G:H1'	37:RE:187:ALA:HB2	1.91	0.52
1:XA:129(B):G:H1'	1:XA:186(J):U:H2'	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:422:C:H1'	1:XA:423:G:N1	2.25	0.52
1:XA:520:A:C2	1:XA:536:C:H1'	2.44	0.52
1:XA:1216:G:C5'	14:YN:5:ALA:HB2	2.40	0.52
1:XA:1440(F):G:N2	1:XA:1440(P):A:H1'	2.24	0.52
31:Y7:37:LYS:CG	34:YA:458:G:C8	2.93	0.52
34:YA:1094:U:H1'	34:YA:1097:U:C5	2.44	0.52
34:YA:1728:G:H2'	34:YA:1731:G:O6	2.09	0.52
1:QA:217:C:H2'	1:QA:218:C:C6	2.45	0.52
1:QA:825:G:H2'	1:QA:826:C:C6	2.45	0.52
1:QA:855:G:H21	1:QA:1539:C:H5''	1.74	0.52
1:QA:1028(H):G:H2'	1:QA:1028(I):G:C8	2.45	0.52
1:QA:1048:G:OP1	14:QN:4:LYS:CB	2.56	0.52
2:QB:209:ARG:NH1	2:QB:240:GLN:OE1	2.43	0.52
29:R5:46:CYS:HB3	29:R5:49:CYS:SG	2.50	0.52
34:RA:1252:G:H21	49:RU:33:ARG:CZ	2.22	0.52
34:RA:1252:G:H21	49:RU:33:ARG:NH2	2.07	0.52
34:RA:2245:U:H5'	34:RA:2246:G:H5'	1.91	0.52
34:RA:2695:C:H2'	34:RA:2696:U:H6	1.74	0.52
40:RH:125:VAL:HG22	40:RH:125:VAL:O	2.08	0.52
54:RZ:27:VAL:HG22	54:RZ:85:HIS:HE1	1.74	0.52
1:XA:608:A:C3'	1:XA:609:A:H8	2.22	0.52
1:XA:686:U:O4	1:XA:703:G:O2'	2.20	0.52
1:XA:860:A:H3'	1:XA:861:G:H8	1.74	0.52
1:XA:974:A:OP2	14:YN:31:ARG:HB2	2.08	0.52
1:XA:1500:A:H5''	1:XA:1508:G:H5'	1.92	0.52
3:XC:32:LEU:O	3:XC:59:ARG:NH2	2.42	0.52
34:YA:691:C:H4'	36:YD:43:ARG:HD3	1.91	0.52
36:YD:67:PHE:HE1	36:YD:106:ILE:HD11	1.75	0.52
39:YG:170:ARG:NH1	39:YG:174:GLU:OE1	2.43	0.52
1:QA:561:U:H5''	1:QA:563:A:N7	2.25	0.52
1:QA:981:U:C5'	14:QN:6:LEU:HD22	2.37	0.52
1:QA:1320:C:N3	19:QS:36:ARG:C	2.67	0.52
5:QE:79:GLU:CD	8:QH:102:ARG:HH12	2.18	0.52
13:QM:84:ILE:CG1	19:QS:74:PHE:HZ	2.20	0.52
34:RA:2619:C:H2'	34:RA:2620:C:H6	1.73	0.52
39:RG:166:ASP:OD2	39:RG:166:ASP:N	2.42	0.52
44:RP:29:LYS:HD3	44:RP:30:THR:HG23	1.92	0.52
1:XA:960:U:C5	19:XS:78:ARG:HG2	2.45	0.52
11:XK:83:ILE:HD13	11:XK:109:VAL:HB	1.90	0.52
11:XK:91:ARG:NH2	18:XR:88:LYS:CD	2.69	0.52
18:XR:47:THR:HG22	18:XR:85:LEU:HD13	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2789:C:H1'	34:YA:2892:A:H2	1.75	0.52
37:YE:176:ILE:HG13	37:YE:181:LEU:HB2	1.92	0.52
1:QA:1218:C:H2'	1:QA:1219:U:C6	2.45	0.52
1:QA:1327:C:OP1	21:QU:19:GLY:HA2	2.09	0.52
24:R0:7:LEU:HD12	45:RQ:83:MET:SD	2.50	0.52
34:RA:137(B):G:H21	52:RX:41:ASN:HD21	1.57	0.52
34:RA:787:U:H5''	34:RA:788:A:H5'	1.91	0.52
34:RA:1567:A:C8	36:RD:84:TYR:HE2	2.27	0.52
1:XA:861:G:HO2'	1:XA:874:G:HO2'	1.52	0.52
1:XA:908:A:H2'	1:XA:909:A:C8	2.45	0.52
1:XA:1300:G:N1	1:XA:1334:G:C5	2.78	0.52
2:XB:192:SER:OG	2:XB:193:ASP:N	2.40	0.52
34:YA:2757:A:N1	40:YH:67:LEU:HD13	2.24	0.52
1:QA:28:G:N3	1:QA:296:U:H4'	2.24	0.52
1:QA:186(Q):U:H2'	1:QA:191:G:C8	2.45	0.52
1:QA:543:C:OP2	4:QD:10:ARG:NH2	2.41	0.52
1:QA:637:G:H2'	1:QA:638:G:C8	2.44	0.52
1:QA:983:A:O4'	14:QN:2:ALA:HB3	2.10	0.52
29:R5:33:CYS:N	29:R5:38:ALA:O	2.28	0.52
34:RA:309:G:N3	34:RA:329:G:O2'	2.42	0.52
34:RA:996:A:H2'	34:RA:997:G:H8	1.75	0.52
39:RG:41:GLN:HB2	39:RG:90:LEU:HB2	1.92	0.52
43:RO:24:VAL:HG13	43:RO:33:ALA:HB2	1.91	0.52
54:RZ:24:LEU:HD11	54:RZ:83:PRO:HB2	1.90	0.52
1:XA:21:G:H2'	1:XA:22:G:C8	2.45	0.52
1:XA:608:A:H3'	1:XA:609:A:H8	1.75	0.52
1:XA:975:A:C2	14:XN:34:TYR:CE1	2.97	0.52
1:XA:1540:U:C2	23:XX:6:G:N2	2.78	0.52
7:XG:18:TYR:OH	7:XG:47:CYS:SG	2.64	0.52
34:YA:2085:C:N3	34:YA:2235:G:C2	2.78	0.52
47:YS:61:ASN:ND2	47:YS:64:GLU:OE1	2.42	0.52
1:QA:123:C:H2'	1:QA:124:G:C8	2.44	0.52
1:QA:718:G:C5'	11:QK:117:ASN:OD1	2.58	0.52
1:QA:956:U:O2'	19:QS:80:TYR:C	2.52	0.52
1:QA:973:G:H4'	14:QN:29:ARG:NH2	2.22	0.52
7:QG:111:ARG:HH11	7:QG:119:ARG:HA	1.73	0.52
12:QL:85:ILE:HD11	12:QL:98:TYR:HB3	1.92	0.52
34:RA:144:C:H2'	34:RA:145:G:C8	2.45	0.52
34:RA:225:A:N6	34:RA:419:C:O2'	2.43	0.52
48:RT:30:VAL:HG12	48:RT:86:ILE:HG23	1.92	0.52
1:XA:1253:G:O3'	10:XJ:45:ARG:CD	2.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:XE:76:ILE:HB	5:XE:142:LEU:HD21	1.92	0.52
22:XV:1:C:H2'	22:XV:2:G:H8	1.75	0.52
26:Y2:48:HIS:CG	34:YA:96:G:H4'	2.45	0.52
34:YA:410:G:C2	34:YA:2407:G:N7	2.78	0.52
34:YA:2168:G:N2	34:YA:2170:A:H62	2.07	0.52
34:YA:2311:A:N7	39:YG:44:GLY:HA3	2.25	0.52
1:QA:310:G:OP1	16:QP:27:LYS:CD	2.52	0.52
1:QA:377:G:H2'	1:QA:378:G:H8	1.75	0.52
1:QA:797:C:H2'	1:QA:798:G:C8	2.45	0.52
1:QA:946:A:P	13:QM:114:ARG:HH21	2.30	0.52
1:QA:994:A:C8	1:QA:1216:G:H1'	2.45	0.52
1:QA:1108:G:O3'	3:QC:176:HIS:CD2	2.63	0.52
1:QA:1162:C:H2'	1:QA:1163:C:C6	2.44	0.52
1:QA:1279:A:H2	10:QJ:43:ARG:HH12	1.57	0.52
1:QA:1304:G:H5''	21:QU:10:ARG:NH2	2.24	0.52
10:QJ:47:PHE:HD2	14:QN:34:TYR:CD2	2.28	0.52
34:RA:323:G:C2	34:RA:333:G:H1'	2.45	0.52
34:RA:1752:C:H2'	34:RA:1753:G:C8	2.45	0.52
34:RA:1938:A:C6	34:RA:2590:A:H1'	2.45	0.52
34:RA:2730:C:H2'	34:RA:2731:G:C8	2.44	0.52
35:RB:55:U:O3'	39:RG:27:ASN:ND2	2.42	0.52
38:RF:65:TRP:NE1	38:RF:73:ALA:O	2.42	0.52
48:RT:6:LEU:HA	48:RT:9:LEU:HB2	1.91	0.52
1:XA:770:C:H2'	1:XA:771:G:H8	1.75	0.52
1:XA:899:C:P	1:XA:899:C:C6	3.03	0.52
1:XA:974:A:P	14:XN:29:ARG:CZ	2.98	0.52
1:XA:1124:G:P	10:XJ:36:GLY:HA3	2.50	0.52
5:XE:110:LEU:HD13	5:XE:118:ILE:HG21	1.90	0.52
7:XG:92:SER:O	7:XG:96:GLN:HB2	2.10	0.52
34:YA:28:A:N6	34:YA:512:G:H1'	2.25	0.52
34:YA:586:A:H5'	38:YF:89:VAL:HG21	1.91	0.52
34:YA:1608:A:O2'	34:YA:1611:C:N4	2.43	0.52
34:YA:2054:A:C2	34:YA:2616:C:O2	2.62	0.52
34:YA:2185:C:H2'	34:YA:2186:G:C8	2.45	0.52
34:YA:2577:A:H2'	34:YA:2614:A:H62	1.75	0.52
1:QA:675:A:H61	1:QA:715:A:H61	1.57	0.52
1:QA:1251:A:N1	1:QA:1354:C:O2'	2.35	0.52
1:QA:1357:A:C5'	10:QJ:45:ARG:HH12	2.22	0.52
4:QD:122:ARG:NH1	4:QD:122:ARG:O	2.43	0.52
28:R4:7:PRO:CG	39:RG:61:ALA:HB1	2.30	0.52
34:RA:1567:A:C8	36:RD:84:TYR:CE2	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2306:C:H2'	34:RA:2307:G:N2	2.25	0.52
35:RB:104:A:OP1	54:RZ:72:ARG:NH1	2.43	0.52
1:XA:191:G:O2'	20:XT:103:GLY:N	2.43	0.52
1:XA:1440(K):C:HO2'	1:XA:1440(L):G:N2	2.07	0.52
1:XA:1440(N):G:P	20:XT:35:THR:HG21	2.46	0.52
4:XD:187:ARG:NH1	4:XD:188:LEU:O	2.43	0.52
32:Y8:49:VAL:HG23	32:Y8:53:PRO:HD3	1.91	0.52
34:YA:10:G:N2	34:YA:2629:A:C2	2.78	0.52
34:YA:1801:G:OP1	34:YA:1801:G:N2	2.32	0.52
1:QA:520:A:C2'	12:QL:73:GLU:OE2	2.57	0.52
1:QA:959:A:H62	19:QS:79:THR:CG2	2.23	0.52
1:QA:986:A:O2'	19:QS:55:LYS:HA	2.10	0.52
1:QA:1160:G:H5'	2:QB:132:LYS:NZ	2.25	0.52
1:QA:1203:C:H5'	14:QN:3:ARG:HH11	1.74	0.52
2:QB:61:LEU:HD21	2:QB:68:ILE:HD11	1.91	0.52
24:R0:66:VAL:O	24:R0:81:VAL:HA	2.10	0.52
35:RB:116:G:H4'	47:RS:54:LEU:CD2	2.39	0.52
44:RP:84:ASN:ND2	44:RP:117:GLU:OE2	2.43	0.52
1:XA:718:G:C1'	11:XK:117:ASN:HB2	2.40	0.52
1:XA:1033:G:H2'	1:XA:1034:G:C8	2.44	0.52
1:XA:1123:A:H1'	10:XJ:38:ILE:HG22	1.92	0.52
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.45	0.52
34:YA:197:A:C8	34:YA:2430:A:H2	2.27	0.52
34:YA:389:G:H22	44:YP:72:PRO:HD3	1.75	0.52
41:YI:20:ASP:OD2	41:YI:20:ASP:N	2.43	0.52
45:YQ:21:THR:OG1	45:YQ:22:LYS:N	2.42	0.52
1:QA:164:U:H2'	1:QA:165:C:C6	2.45	0.51
1:QA:186(C):C:H1'	20:QT:89:ARG:HH22	1.75	0.51
1:QA:1240:U:H2'	7:QG:38:LEU:CD1	2.16	0.51
1:QA:1304:G:H1'	1:QA:1334:G:N1	2.25	0.51
33:R9:27:CYS:SG	33:R9:28:GLU:N	2.83	0.51
34:RA:990:A:H1'	34:RA:1156:A:N3	2.25	0.51
34:RA:1326:U:HO2'	34:RA:2010:G:HO2'	1.57	0.51
34:RA:2102:U:H2'	34:RA:2103:C:H6	1.75	0.51
34:RA:2836:U:H2'	34:RA:2837:G:C8	2.44	0.51
42:RN:35:ARG:HG3	42:RN:37:LYS:HG2	1.91	0.51
50:RV:8:GLY:O	50:RV:10:LYS:NZ	2.42	0.51
1:XA:322:C:H5''	20:XT:23:ARG:HE	1.75	0.51
1:XA:741:G:O5'	15:XO:59:MET:HE1	2.10	0.51
1:XA:974:A:N9	14:XN:31:ARG:CD	2.63	0.51
1:XA:1382:C:O5'	1:XA:1382:C:H6	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:16:LEU:HD21	9:XI:44:VAL:C	2.34	0.51
8:XH:121:ASP:OD1	8:XH:121:ASP:N	2.42	0.51
34:YA:199:A:C5	34:YA:2434:A:N1	2.77	0.51
34:YA:564:C:N4	34:YA:573:G:OP1	2.37	0.51
34:YA:1849:G:H2'	34:YA:1850:G:H8	1.75	0.51
34:YA:2070:G:H2'	34:YA:2071:A:C8	2.44	0.51
34:YA:2417:C:OP1	44:YP:64:LYS:NZ	2.43	0.51
1:QA:749:C:H2'	1:QA:750:G:H8	1.74	0.51
1:QA:960:U:O4	19:QS:78:ARG:CB	2.52	0.51
1:QA:974:A:C4'	14:QN:31:ARG:CB	2.87	0.51
1:QA:1315:U:H2'	1:QA:1316:G:H8	1.75	0.51
1:QA:1360:A:H4'	14:QN:17:LYS:HZ2	1.74	0.51
4:QD:15:GLU:OE2	4:QD:66:ARG:NH2	2.42	0.51
19:QS:4:SER:OG	19:QS:5:LEU:N	2.41	0.51
34:RA:1768:U:H2'	34:RA:1769:G:C8	2.45	0.51
34:RA:1992:G:N2	34:RA:1996:C:O2'	2.43	0.51
34:RA:2086:U:H2'	34:RA:2087:G:C8	2.45	0.51
43:RO:23:ARG:NH2	43:RO:28:SER:O	2.43	0.51
1:XA:186(B):C:O2'	20:XT:104:LEU:HD11	2.09	0.51
1:XA:619:U:O4'	4:XD:131:ARG:NH2	2.42	0.51
1:XA:1252:A:C2	1:XA:1355:G:H1'	2.41	0.51
1:XA:1294:G:H2'	1:XA:1295:G:H8	1.76	0.51
34:YA:414:C:O3'	34:YA:1878:G:N2	2.44	0.51
34:YA:1418:G:H2'	34:YA:1579:A:N6	2.25	0.51
34:YA:1999:C:H2'	34:YA:2000:G:C8	2.45	0.51
34:YA:2044:C:N4	34:YA:2625:G:C2	2.77	0.51
34:YA:2115:G:OP2	34:YA:2166:G:O2'	2.27	0.51
34:YA:2847:U:OP1	48:YT:98:LYS:NZ	2.41	0.51
36:YD:8:PRO:HB3	36:YD:14:ARG:HG2	1.92	0.51
1:QA:617:G:H21	16:QP:14:ASN:ND2	2.08	0.51
1:QA:741:G:O5'	15:QO:39:LEU:HD12	2.07	0.51
3:QC:79:ARG:CD	11:XK:104:GLN:HG3	2.40	0.51
5:QE:116:THR:OG1	5:QE:117:ASP:OD2	2.29	0.51
5:QE:147:ASP:HA	5:QE:150:ARG:HD2	1.92	0.51
7:QG:69:VAL:HG13	7:QG:100:ALA:HB1	1.93	0.51
32:R8:6:THR:HG23	34:RA:242:G:H3'	1.93	0.51
34:RA:1674:G:H1'	34:RA:1676:A:N6	2.26	0.51
37:RE:14:ILE:HB	48:RT:14:TYR:HE2	1.76	0.51
53:RY:76:CYS:HB2	53:RY:99:CYS:SG	2.51	0.51
1:XA:406:G:H2'	1:XA:407:G:C8	2.45	0.51
1:XA:1129:C:H1'	1:XA:1132:C:C5	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1259:C:O2'	1:XA:1283:G:N2	2.42	0.51
10:XJ:64:GLU:O	14:XN:56:VAL:HG22	2.11	0.51
12:XL:10:LEU:HD23	17:XQ:32:TYR:CZ	2.44	0.51
16:XP:4:ILE:HB	16:XP:66:PRO:HB3	1.92	0.51
30:Y6:34:LEU:N	30:Y6:51:GLU:OE1	2.44	0.51
34:YA:1297:C:H2'	34:YA:1298:C:H6	1.74	0.51
34:YA:1971:A:C4	36:YD:241:PRO:HB3	2.45	0.51
34:YA:2049:G:N2	34:YA:2620:C:N1	2.53	0.51
34:YA:2641:G:H5''	42:YN:76:SER:HB3	1.93	0.51
35:YB:104:A:OP1	54:YZ:72:ARG:NH1	2.42	0.51
37:YE:78:LEU:HG	37:YE:79:ARG:HD2	1.91	0.51
45:YQ:67:ARG:O	45:YQ:101:ARG:NH2	2.44	0.51
48:YT:19:LEU:HD22	48:YT:86:ILE:HD12	1.92	0.51
1:QA:45:U:H3	1:QA:396:G:H1	1.58	0.51
1:QA:269:C:H2'	1:QA:270:A:C8	2.45	0.51
1:QA:981:U:H5'	14:QN:6:LEU:HD23	1.92	0.51
1:QA:1137:C:H4'	1:QA:1138:G:C2	2.46	0.51
1:QA:1309:G:H2'	1:QA:1310:G:C8	2.45	0.51
2:QB:84:GLU:OE2	2:QB:87:ARG:NH2	2.43	0.51
18:QR:30:ASP:HB3	18:QR:33:ASP:HB2	1.92	0.51
34:RA:220:G:H22	34:RA:427:U:H2'	1.75	0.51
34:RA:242:G:N2	34:RA:254:G:H2'	2.25	0.51
34:RA:307:G:H21	34:RA:330:A:N6	2.09	0.51
34:RA:633:A:H1'	34:RA:2403:C:H4'	1.91	0.51
34:RA:679:C:H2'	34:RA:680:G:C8	2.46	0.51
34:RA:1546:C:H5'	34:RA:1547:C:H5'	1.91	0.51
34:RA:1660:C:H2'	34:RA:1661:G:H8	1.75	0.51
41:RI:86:THR:HA	41:RI:123:LEU:CB	2.40	0.51
1:XA:375:U:H6	1:XA:375:U:C5'	2.23	0.51
34:YA:414:C:H2'	34:YA:415:A:C8	2.45	0.51
34:YA:882:G:H2'	34:YA:883:G:C8	2.45	0.51
34:YA:1252:G:H21	49:YU:33:ARG:HD3	1.76	0.51
34:YA:2443:C:H2'	34:YA:2444:G:H8	1.76	0.51
34:YA:2690:C:N4	34:YA:2713:A:N3	2.58	0.51
38:YF:198:ALA:HA	38:YF:201:VAL:HG12	1.91	0.51
1:QA:608:A:O2'	16:QP:9:PHE:CE1	2.62	0.51
1:QA:986:A:H2'	1:QA:987:G:C8	2.46	0.51
25:R1:10:LYS:NZ	25:R1:65:SER:OG	2.41	0.51
34:RA:414:C:H2'	34:RA:415:A:H8	1.75	0.51
34:RA:2575:C:H5'	37:RE:144:ARG:HG3	1.91	0.51
34:RA:2647:U:H2'	34:RA:2648:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RH:103:LEU:CG	40:RH:123:PHE:CE1	2.94	0.51
41:RI:86:THR:HA	41:RI:123:LEU:HB2	1.92	0.51
47:RS:26:LEU:O	47:RS:88:ASP:HB3	2.10	0.51
1:XA:123:C:H2'	1:XA:124:G:H8	1.76	0.51
1:XA:784:C:H2'	1:XA:785:G:C8	2.46	0.51
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.92	0.51
34:YA:544:C:H3'	34:YA:545:G:H8	1.75	0.51
34:YA:863:A:H2'	34:YA:864:G:H8	1.75	0.51
34:YA:2105:C:H2'	34:YA:2106:G:C8	2.46	0.51
1:QA:637:G:H2'	1:QA:638:G:H8	1.76	0.51
1:QA:908:A:H2'	1:QA:909:A:C8	2.45	0.51
1:QA:1142:G:C2	1:QA:1143:G:H1'	2.46	0.51
1:QA:1203:C:OP2	14:QN:3:ARG:HD3	2.11	0.51
34:RA:1057:A:H62	34:RA:1087:G:P	2.32	0.51
40:RH:103:LEU:HG	40:RH:123:PHE:CE1	2.46	0.51
41:RI:94:ALA:HA	41:RI:97:ILE:HD12	1.93	0.51
1:XA:1512:U:H2'	1:XA:1513:A:H8	1.76	0.51
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.93	0.51
7:XG:58:PRO:HA	7:XG:61:VAL:HG12	1.92	0.51
34:YA:992:C:H2'	34:YA:993:G:H8	1.76	0.51
34:YA:1576:U:H2'	34:YA:1577:C:H6	1.76	0.51
34:YA:2090:G:C6	34:YA:2230:G:N1	2.78	0.51
38:YF:63:LYS:NZ	38:YF:75:HIS:O	2.33	0.51
40:YH:2:SER:O	40:YH:2:SER:OG	2.24	0.51
53:YY:76:CYS:SG	53:YY:79:CYS:SG	3.08	0.51
1:QA:770:C:H2'	1:QA:771:G:C8	2.46	0.51
1:QA:1112:C:O2	3:QC:178:LEU:HB2	2.10	0.51
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.46	0.51
4:QD:57:ARG:HH22	5:QE:107:ARG:CG	2.23	0.51
5:QE:10:MET:HA	5:QE:32:VAL:HG12	1.93	0.51
30:R6:6:ARG:NH1	30:R6:24:GLU:OE2	2.43	0.51
32:R8:25:MET:CE	44:RP:64:LYS:HD2	2.38	0.51
34:RA:191:A:H2'	34:RA:192:C:C6	2.45	0.51
34:RA:1914:C:H2'	34:RA:1915:U:O4'	2.10	0.51
45:RQ:21:THR:OG1	45:RQ:22:LYS:N	2.43	0.51
53:RY:67:LEU:HD22	53:RY:71:LYS:HD2	1.91	0.51
1:XA:554:C:H2'	1:XA:555:C:C6	2.46	0.51
1:XA:636:U:H3'	1:XA:637:G:C8	2.45	0.51
1:XA:838(B):U:H4'	1:XA:838(C):C:C5	2.45	0.51
1:XA:977:A:O3'	1:XA:980:C:N4	2.41	0.51
1:XA:1305:G:N2	1:XA:1331:G:C8	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1422:G:H4'	43:YO:48:PRO:HB3	1.91	0.51
11:XK:109:VAL:HA	18:XR:86:VAL:HA	1.93	0.51
34:YA:36:G:H4'	34:YA:451:C:C2	2.45	0.51
34:YA:197:A:C5	34:YA:2430:A:N3	2.79	0.51
34:YA:2046:G:O6	34:YA:2623:G:O6	2.29	0.51
36:YD:108:PRO:HB3	36:YD:143:HIS:CE1	2.46	0.51
52:YX:25:LYS:HA	52:YX:81:VAL:O	2.11	0.51
1:QA:186(A):C:H1'	20:QT:81:LYS:HE3	1.92	0.51
1:QA:686:U:O4	1:QA:703:G:O2'	2.27	0.51
1:QA:770:C:H2'	1:QA:771:G:H8	1.76	0.51
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.46	0.51
28:R4:7:PRO:HG3	39:RG:61:ALA:CB	2.27	0.51
34:RA:36:G:H4'	34:RA:451:C:C2	2.45	0.51
34:RA:414:C:H2'	34:RA:415:A:C8	2.46	0.51
34:RA:1019:U:H2'	34:RA:1020:A:C8	2.43	0.51
34:RA:2289:G:H1'	34:RA:2346:A:H2	1.75	0.51
37:RE:110:GLY:HA2	37:RE:161:GLY:HA3	1.93	0.51
47:RS:6:ALA:HA	47:RS:9:ARG:HG2	1.92	0.51
48:RT:3:ARG:HG3	48:RT:6:LEU:HB2	1.92	0.51
1:XA:398:C:H2'	1:XA:399:G:C8	2.45	0.51
1:XA:1303:C:O2	1:XA:1303:C:H2'	2.11	0.51
1:XA:1305:G:N7	1:XA:1331:G:C6	2.75	0.51
1:XA:1313:U:H5	19:XS:6:LYS:HZ1	1.57	0.51
1:XA:1347:G:H22	1:XA:1373:G:H2'	1.76	0.51
8:XH:38:ILE:HD12	8:XH:41:ARG:HH21	1.76	0.51
34:YA:1454:U:H5	46:YR:73:VAL:CG1	2.24	0.51
34:YA:2071:A:H2	34:YA:2441:C:C2	2.28	0.51
34:YA:2085:C:N3	34:YA:2235:G:N2	2.58	0.51
34:YA:2099:U:O4	34:YA:2190:G:C6	2.64	0.51
38:YF:34:TRP:CD2	44:YP:8:PRO:HB3	2.46	0.51
42:YN:97:ARG:HA	42:YN:100:GLU:HB2	1.92	0.51
1:QA:65:U:H2'	1:QA:381:C:C5	2.45	0.51
1:QA:126:G:O2'	1:QA:634:C:O2'	2.21	0.51
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.46	0.51
3:QC:34:LEU:O	3:QC:38:ARG:NE	2.43	0.51
8:QH:32:LYS:HA	8:QH:35:ILE:HD12	1.92	0.51
12:QL:10:LEU:HB3	17:QQ:32:TYR:OH	2.10	0.51
12:QL:46:LYS:HD2	12:QL:47:LYS:HB2	1.93	0.51
34:RA:1794:U:H2'	34:RA:1795:C:C6	2.45	0.51
1:XA:186(K):G:O6	1:XA:264:U:H5''	2.11	0.51
1:XA:401:C:H1'	1:XA:622:A:H1'	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:435:C:H2'	1:XA:436:C:H6	1.76	0.51
1:XA:757:U:O2'	1:XA:879:C:O2	2.27	0.51
1:XA:1190:G:C4'	3:XC:176:HIS:CE1	2.83	0.51
1:XA:1216:G:H5''	14:XN:5:ALA:HB2	1.92	0.51
1:XA:1230:C:C4	13:XM:102:ARG:NH1	2.77	0.51
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.92	0.51
29:Y5:3:LYS:HB2	34:YA:2577:A:C1'	2.40	0.51
34:YA:1416:G:H2'	34:YA:1417:C:C6	2.46	0.51
34:YA:1820:U:C2	36:YD:202:LYS:HB3	2.46	0.51
1:QA:34:C:H2'	1:QA:35:G:C8	2.45	0.51
1:QA:231:G:H2'	1:QA:232:G:H8	1.75	0.51
1:QA:1131:G:H1	1:QA:1143:G:N2	2.01	0.51
1:QA:1203:C:C5'	14:QN:3:ARG:HD2	2.41	0.51
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.93	0.51
28:R4:26:SER:OG	28:R4:27:THR:N	2.43	0.51
32:R8:21:LYS:HE3	34:RA:651:G:OP2	2.11	0.51
42:RN:39:ARG:NH2	42:RN:41:ASP:OD1	2.44	0.51
44:RP:57:THR:OG1	44:RP:58:THR:N	2.44	0.51
1:XA:148:G:H2'	1:XA:149:A:C8	2.45	0.51
1:XA:878:G:H2'	1:XA:879:C:C6	2.46	0.51
10:XJ:26:ALA:O	10:XJ:84:GLN:NE2	2.43	0.51
34:YA:140:A:H1'	34:YA:1409:C:H5'	1.93	0.51
34:YA:291:C:H2'	34:YA:292:C:H6	1.76	0.51
34:YA:389:G:H1	44:YP:71:VAL:CG1	2.16	0.51
34:YA:659:C:H2'	34:YA:660:G:H8	1.76	0.51
34:YA:1700:A:H3'	34:YA:1701:A:H8	1.76	0.51
34:YA:2250:G:OP2	34:YA:2250:G:N2	2.35	0.51
38:YF:154:VAL:HG22	38:YF:191:ARG:HB2	1.93	0.51
41:YI:1:MET:HG2	41:YI:23:PRO:HB3	1.92	0.51
1:QA:447:G:H2'	1:QA:485:G:N2	2.26	0.50
1:QA:617:G:H4'	16:QP:44:THR:OG1	2.11	0.50
1:QA:702:A:H3'	1:QA:703:G:H8	1.75	0.50
1:QA:815:A:H1'	1:QA:1527:C:H1'	1.93	0.50
1:QA:920:U:H2'	1:QA:921:U:C6	2.46	0.50
1:QA:1038:C:H2'	1:QA:1039:C:H6	1.76	0.50
1:QA:1318:A:C4	19:QS:37:ARG:CZ	2.93	0.50
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.58	0.50
34:RA:2853:C:H2'	34:RA:2854:G:C8	2.46	0.50
36:RD:147:LEU:HD12	36:RD:148:GLU:HG3	1.93	0.50
36:RD:175:LEU:O	36:RD:182:LEU:HA	2.12	0.50
39:RG:52:ILE:HG22	39:RG:55:LYS:HD2	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:RS:35:ILE:HD11	47:RS:97:ARG:HD2	1.92	0.50
1:XA:140:A:H2'	1:XA:141:A:C8	2.45	0.50
1:XA:708:C:P	11:XK:85:ARG:HH12	2.28	0.50
1:XA:1068:G:N2	1:XA:1108:G:H1'	2.25	0.50
1:XA:1505:G:H1'	23:XX:15:A:C2	2.46	0.50
9:XI:22:GLY:N	9:XI:58:HIS:O	2.37	0.50
34:YA:86:C:H2'	34:YA:87:C:C6	2.46	0.50
34:YA:137(B):G:H2'	34:YA:139:G:N7	2.26	0.50
34:YA:824:A:O2'	34:YA:2358:G:O6	2.17	0.50
34:YA:1316:U:H2'	34:YA:1317:A:C8	2.46	0.50
34:YA:1999:C:H5''	34:YA:2723:C:O2'	2.11	0.50
34:YA:2071:A:H2'	34:YA:2072:G:H8	1.76	0.50
34:YA:2312:U:H2'	34:YA:2313:C:H6	1.76	0.50
34:YA:2532:G:O2'	34:YA:2657:A:N1	2.36	0.50
1:QA:112:G:H22	1:QA:315:A:H2	1.59	0.50
1:QA:266:G:O2'	1:QA:268:C:OP2	2.24	0.50
2:QB:208:ILE:O	2:QB:212:GLN:HB2	2.12	0.50
20:QT:71:THR:OG1	20:QT:72:LEU:N	2.43	0.50
32:R8:8:LYS:HB3	32:R8:12:LYS:HE3	1.94	0.50
32:R8:30:ARG:O	32:R8:30:ARG:HG2	2.12	0.50
34:RA:65:C:H2'	34:RA:66:C:H6	1.76	0.50
34:RA:380:U:H2'	34:RA:381:G:C8	2.47	0.50
34:RA:639:U:H2'	34:RA:640:C:C6	2.46	0.50
34:RA:1150:C:H2'	34:RA:1151:G:C8	2.46	0.50
1:XA:24:U:H2'	1:XA:25:C:H6	1.76	0.50
1:XA:1533:C:C4	23:XX:13:A:N1	2.79	0.50
2:XB:167:PRO:O	2:XB:171:ALA:HB2	2.11	0.50
4:XD:19:LEU:HB3	4:XD:21:LEU:HD23	1.92	0.50
4:XD:107:ARG:HB3	4:XD:174:LEU:HD11	1.93	0.50
34:YA:659:C:H2'	34:YA:660:G:C8	2.47	0.50
34:YA:1113:U:H5'	40:YH:2:SER:HB3	1.93	0.50
34:YA:1479:G:N7	34:YA:1510:A:N6	2.59	0.50
34:YA:1582:C:H2'	34:YA:1583:A:C8	2.46	0.50
34:YA:2056:G:N7	34:YA:2577:A:C6	2.79	0.50
34:YA:2691:C:H2'	34:YA:2692:C:C6	2.46	0.50
34:YA:2747:G:O6	34:YA:2755:C:H5''	2.12	0.50
1:QA:877:C:H2'	1:QA:878:G:C8	2.47	0.50
1:QA:979:C:N4	14:QN:19:ARG:CB	2.42	0.50
1:QA:1145:C:O2'	1:QA:1146:A:N7	2.43	0.50
7:QG:111:ARG:NH1	7:QG:113:GLU:OE1	2.43	0.50
11:QK:108:ILE:CG2	18:QR:88:LYS:OXT	2.60	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:39:VAL:HG12	12:QL:57:LYS:HG2	1.93	0.50
20:QT:67:ALA:O	20:QT:73:HIS:ND1	2.39	0.50
34:RA:184:C:O2'	34:RA:217:G:N3	2.40	0.50
34:RA:597:U:H2'	34:RA:598:G:C8	2.45	0.50
34:RA:686:G:N2	34:RA:788:A:H61	2.10	0.50
34:RA:997:G:H3'	49:RU:58:ARG:HH12	1.76	0.50
34:RA:1116:C:H2'	34:RA:1117:G:C8	2.46	0.50
39:RG:121:ASN:O	39:RG:131:TYR:OH	2.26	0.50
1:XA:702:A:N1	34:YA:1848:A:C5	2.79	0.50
1:XA:1539:C:C2	23:XX:7:G:N1	2.79	0.50
7:XG:111:ARG:HD3	7:XG:112:PRO:HD2	1.93	0.50
34:YA:389:G:N2	44:YP:71:VAL:CG1	2.69	0.50
34:YA:589:C:H2'	34:YA:590:A:C8	2.46	0.50
34:YA:1093:G:H21	34:YA:1098:A:H62	1.59	0.50
34:YA:1827:C:H5'	34:YA:1971:A:H4'	1.94	0.50
1:QA:10:A:H2'	1:QA:11:G:C8	2.46	0.50
1:QA:107:G:H3'	1:QA:108:G:N2	2.24	0.50
1:QA:757:U:H1'	1:QA:879:C:H1'	1.93	0.50
1:QA:957:U:O2'	19:QS:79:THR:C	2.53	0.50
1:QA:1302:U:P	13:QM:27:LYS:HE2	2.51	0.50
4:QD:205:GLU:HB3	5:QE:107:ARG:HH12	1.77	0.50
32:R8:64:TYR:HB3	34:RA:625:G:P	2.51	0.50
34:RA:1796:U:H2'	34:RA:1797:C:C6	2.47	0.50
34:RA:2144:U:H2'	34:RA:2146:C:C5	2.47	0.50
38:RF:100:THR:O	38:RF:100:THR:OG1	2.30	0.50
49:RU:90:VAL:HG13	50:RV:39:LEU:HD22	1.92	0.50
1:XA:1145:C:O2'	1:XA:1146:A:N7	2.43	0.50
6:XF:91:VAL:CG2	18:XR:34:TYR:CZ	2.82	0.50
18:XR:32:ARG:HA	18:XR:69:THR:HG21	1.92	0.50
28:Y4:16:CYS:HB3	28:Y4:33:VAL:HB	1.93	0.50
34:YA:390:A:H1'	34:YA:391:G:C8	2.47	0.50
34:YA:1853:A:N1	34:YA:2087:G:H1'	2.27	0.50
34:YA:2807:G:H1	34:YA:2892:A:H62	1.60	0.50
40:YH:85:LYS:HB3	40:YH:133:VAL:HG13	1.92	0.50
1:QA:6:G:N3	5:QE:119:LEU:HD11	2.27	0.50
1:QA:37:U:H2'	1:QA:38:G:H8	1.76	0.50
1:QA:760:G:H3'	1:QA:761:G:H8	1.76	0.50
1:QA:1047:G:O2'	1:QA:1215:G:O2'	2.22	0.50
1:QA:1222:G:O3'	19:QS:78:ARG:CZ	2.60	0.50
2:QB:111:ARG:HH11	2:QB:114:ARG:HH12	1.60	0.50
20:QT:66:ALA:O	20:QT:71:THR:OG1	2.28	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:301:G:OP2	53:RY:84:ARG:NH1	2.35	0.50
34:RA:373:U:H2'	34:RA:374:A:H8	1.77	0.50
42:RN:112:LEU:O	42:RN:116:LEU:HB2	2.10	0.50
1:XA:767:A:H2'	1:XA:768:A:C8	2.46	0.50
1:XA:981:U:O5'	1:XA:981:U:H6	1.94	0.50
1:XA:986:A:C1'	19:XS:52:TYR:OH	2.58	0.50
1:XA:1305:G:N2	1:XA:1331:G:H3'	2.26	0.50
1:XA:1305:G:C1'	1:XA:1332:A:H62	2.24	0.50
1:XA:1306:A:OP2	1:XA:1331:G:N2	2.33	0.50
3:XC:157:ILE:HD12	3:XC:164:ARG:HG3	1.93	0.50
10:XJ:42:THR:HG22	10:XJ:44:VAL:HG22	1.92	0.50
19:XS:12:ASP:HB2	19:XS:37:ARG:HE	1.77	0.50
22:XV:19:G:C5	34:YA:2111:C:H4'	2.46	0.50
29:Y5:9:LYS:HE2	34:YA:2019:A:N7	2.26	0.50
30:Y6:21:TYR:OH	32:Y8:36:LYS:O	2.28	0.50
31:Y7:37:LYS:CE	34:YA:458:G:C5	2.95	0.50
34:YA:1295:C:H2'	34:YA:1296:G:H8	1.76	0.50
34:YA:1570:A:H2'	34:YA:1571:A:C8	2.47	0.50
49:YU:43:GLY:HA3	50:YV:73:SER:HB3	1.93	0.50
53:YY:28:LYS:NZ	53:YY:64:GLU:OE2	2.35	0.50
1:QA:22:G:H4'	1:QA:885:G:C8	2.47	0.50
1:QA:1253:G:C4'	10:QJ:44:VAL:O	2.58	0.50
1:QA:1323:G:N2	1:QA:1361:G:O2'	2.39	0.50
3:QC:57:ILE:HG22	3:QC:66:VAL:HG22	1.93	0.50
10:QJ:47:PHE:CE1	14:QN:36:PHE:CG	2.99	0.50
34:RA:990:A:N6	34:RA:1186:G:H1'	2.26	0.50
34:RA:1205:U:C4	38:RF:171:PRO:HA	2.46	0.50
34:RA:2148:G:H2'	34:RA:2149:G:C8	2.47	0.50
34:RA:2159:G:H2'	34:RA:2160:G:C8	2.46	0.50
34:RA:2314:C:H2'	34:RA:2315:G:C8	2.46	0.50
34:RA:2317:C:H3'	34:RA:2318:G:H21	1.75	0.50
1:XA:656:C:O2'	15:XO:28:GLN:NE2	2.45	0.50
1:XA:728:A:C5	15:XO:54:ARG:CD	2.95	0.50
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.26	0.50
20:XT:74:LYS:O	20:XT:76:ALA:N	2.44	0.50
38:YF:10:PRO:HB3	38:YF:17:ARG:HH21	1.76	0.50
40:YH:113:VAL:HG11	40:YH:151:ILE:HD12	1.94	0.50
52:YX:53:LYS:HG2	52:YX:82:GLN:HB3	1.93	0.50
1:QA:17:U:H2'	1:QA:18:C:C6	2.46	0.50
1:QA:356:A:N3	1:QA:368:U:O2'	2.39	0.50
1:QA:1368:G:OP1	10:QJ:62:HIS:CD2	2.64	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1510:U:H3	1:QA:1525:G:H1	1.59	0.50
32:R8:39:LYS:NZ	34:RA:2365:G:C6	2.77	0.50
34:RA:276:A:O2'	34:RA:278:A:OP2	2.28	0.50
34:RA:2025:C:H2'	34:RA:2026:C:C6	2.47	0.50
34:RA:2620:C:O2'	37:RE:157:ALA:O	2.23	0.50
36:RD:69:ARG:NH1	36:RD:128:GLY:O	2.42	0.50
43:RO:71:ARG:NE	43:RO:105:GLU:OE2	2.36	0.50
1:XA:45:U:H3	1:XA:396:G:H1	1.59	0.50
1:XA:754:C:C6	15:XO:69:TYR:CE2	2.95	0.50
3:XC:21:ARG:HH11	10:XJ:15:THR:HG21	1.75	0.50
10:XJ:40:LEU:CB	10:XJ:41:PRO:CD	2.68	0.50
10:XJ:62:HIS:HD2	14:XN:59:ALA:CB	2.24	0.50
13:XM:82:MET:O	13:XM:93:ARG:NH2	2.43	0.50
20:XT:75:ASN:N	20:XT:75:ASN:OD1	2.44	0.50
33:Y9:27:CYS:HB3	33:Y9:32:HIS:HB2	1.94	0.50
34:YA:1041:C:H2'	34:YA:1042:G:H8	1.77	0.50
34:YA:1359:A:N6	34:YA:1372:U:H3	2.10	0.50
34:YA:1604:C:H2'	34:YA:1605:C:H6	1.76	0.50
34:YA:2125:G:N1	34:YA:2172:U:OP1	2.29	0.50
37:YE:101:ARG:NE	37:YE:171:GLU:OE2	2.41	0.50
1:QA:563:A:O2'	1:QA:566:G:O2'	2.29	0.50
1:QA:1170:A:H5'	2:QB:140:HIS:HE1	1.73	0.50
1:QA:1253:G:OP2	10:QJ:44:VAL:CG2	2.58	0.50
1:QA:1315:U:H2'	1:QA:1316:G:C8	2.47	0.50
34:RA:288:C:H2'	34:RA:289:A:H8	1.76	0.50
34:RA:2030:A:H4'	34:RA:2031:A:C8	2.46	0.50
34:RA:2153:G:H2'	34:RA:2154:G:C8	2.46	0.50
36:RD:126:GLN:O	36:RD:129:ASN:ND2	2.41	0.50
1:XA:895:G:O2'	17:XQ:100:LYS:HD2	2.11	0.50
1:XA:979:C:H5''	1:XA:1221:G:C8	2.47	0.50
2:XB:118:LEU:HD23	2:XB:142:LEU:HB2	1.94	0.50
4:XD:88:VAL:HG13	5:XE:97:GLY:HA3	1.94	0.50
29:Y5:32:PRO:N	29:Y5:32:PRO:C	2.61	0.50
34:YA:959:A:N3	34:YA:2457:U:O2'	2.44	0.50
34:YA:1150:C:H2'	34:YA:1151:G:C8	2.47	0.50
34:YA:1176:G:H3'	34:YA:1177:A:C8	2.47	0.50
34:YA:1918:A:O2'	34:YA:1920:C:N4	2.44	0.50
34:YA:2563:U:H1'	34:YA:2566:A:N6	2.27	0.50
51:YW:86:LEU:HD22	51:YW:96:ILE:HD11	1.93	0.50
1:QA:982:U:C5'	14:QN:6:LEU:CD2	2.89	0.50
1:QA:1491:G:C5'	12:QL:46:LYS:HG2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:QB:146:GLN:HG3	2:QB:153:ARG:HH22	1.77	0.50
12:QL:104:VAL:O	12:QL:105:TYR:CG	2.57	0.50
34:RA:828:U:O2'	34:RA:831:G:O6	2.26	0.50
34:RA:1057:A:N6	34:RA:1087:G:OP1	2.45	0.50
34:RA:1408:C:H2'	34:RA:1409:C:C6	2.47	0.50
34:RA:1638:C:O2	34:RA:2698:U:O2'	2.30	0.50
34:RA:1771:C:H2'	34:RA:1772:G:C8	2.47	0.50
34:RA:2695:C:H2'	34:RA:2696:U:C6	2.47	0.50
42:RN:9:VAL:HG11	42:RN:39:ARG:HH12	1.77	0.50
1:XA:879:C:H2'	1:XA:880:C:C6	2.46	0.50
1:XA:1040:U:H2'	1:XA:1041:A:C8	2.47	0.50
1:XA:1358:U:H5'	14:YN:35:ARG:N	2.27	0.50
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.28	0.50
34:YA:69:C:H2'	34:YA:70:G:H8	1.77	0.50
34:YA:2097:C:C2	34:YA:2193:G:C2	3.00	0.50
34:YA:2100:G:C6	34:YA:2190:G:C4	3.00	0.50
34:YA:2124:G:C2	34:YA:2125:G:H1'	2.46	0.50
34:YA:2275:C:O2	45:YQ:83:MET:SD	2.69	0.50
34:YA:2698:U:H2'	34:YA:2699:C:C6	2.47	0.50
43:YO:63:VAL:HG12	43:YO:106:LEU:HD21	1.93	0.50
1:QA:625:G:H4'	16:QP:16:HIS:HB3	1.93	0.49
1:QA:1094:G:H4'	1:QA:1095:U:H5	1.76	0.49
1:QA:1100:C:H5	2:QB:96:ARG:HH21	1.46	0.49
4:QD:57:ARG:NH2	5:QE:107:ARG:NH1	2.59	0.49
24:R0:23:VAL:HG21	34:RA:857:C:H4'	1.93	0.49
24:R0:72:ARG:HE	24:R0:75:LEU:HD12	1.76	0.49
34:RA:659:C:H2'	34:RA:660:G:H8	1.77	0.49
34:RA:1494:A:H2	34:RA:1579:A:H1'	1.76	0.49
34:RA:1818:U:H5	36:RD:157:ARG:HH21	1.60	0.49
34:RA:2273:A:H2'	34:RA:2274:A:C8	2.46	0.49
1:XA:413:G:H1'	1:XA:428:G:N2	2.27	0.49
1:XA:948:C:OP2	13:XM:106:ASN:CB	2.60	0.49
1:XA:1304:G:H2'	1:XA:1333:A:H61	1.78	0.49
2:XB:67:THR:HA	2:XB:90:MET:HE1	1.93	0.49
5:XE:81:GLU:HG2	5:XE:90:VAL:HG23	1.94	0.49
27:Y3:24:LYS:NZ	34:YA:933:A:OP1	2.38	0.49
34:YA:685:A:O2'	34:YA:773:U:O4	2.25	0.49
34:YA:922:U:H2'	34:YA:923:C:C6	2.47	0.49
34:YA:1127:A:N1	34:YA:2518:A:N6	2.60	0.49
34:YA:1870:C:H2'	34:YA:1871:A:O4'	2.12	0.49
1:QA:62:U:H2'	1:QA:63:C:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:248:C:H2'	1:QA:249:U:H6	1.77	0.49
1:QA:584:G:H2'	1:QA:585:G:C8	2.46	0.49
1:QA:980:C:H4'	14:QN:19:ARG:CZ	2.42	0.49
1:QA:1181:G:C2	1:QA:1182:G:H1'	2.47	0.49
1:QA:1221:G:C5'	19:QS:36:ARG:CZ	2.89	0.49
34:RA:345:A:N3	34:RA:346:A:N6	2.61	0.49
34:RA:458:G:H1'	34:RA:459:U:H5	1.77	0.49
1:XA:8:A:N6	4:XD:209:ARG:N	2.57	0.49
1:XA:186(C):C:H2'	1:XA:186(D):G:C8	2.47	0.49
7:XG:16:LEU:HD21	9:XI:45:ALA:N	2.27	0.49
8:XH:19:VAL:HG23	8:XH:21:LYS:HG3	1.95	0.49
27:Y3:42:ALA:HB1	34:YA:851:U:O2	2.13	0.49
34:YA:579:G:O2'	34:YA:2019:A:OP1	2.23	0.49
34:YA:1388:G:O2'	34:YA:1525:G:O2'	2.27	0.49
34:YA:2090:G:C2	34:YA:2230:G:C4	2.97	0.49
54:YZ:6:LYS:NZ	54:YZ:43:GLU:OE1	2.39	0.49
1:QA:538:G:C3'	12:QL:115:LYS:NZ	2.60	0.49
1:QA:608:A:C1'	16:QP:32:TYR:HE1	2.22	0.49
1:QA:958:A:C8	19:QS:79:THR:HG21	2.46	0.49
1:QA:1153:C:H2'	1:QA:1154:G:C8	2.47	0.49
5:QE:77:PRO:O	8:QH:105:ARG:CD	2.56	0.49
34:RA:265:A:H2'	34:RA:266:G:H4'	1.93	0.49
34:RA:358:U:H2'	34:RA:359:A:C8	2.48	0.49
34:RA:380:U:H2'	34:RA:381:G:H8	1.76	0.49
34:RA:1476:C:H2'	34:RA:1477:A:C8	2.47	0.49
34:RA:2006:C:H2'	34:RA:2007:C:H6	1.77	0.49
34:RA:2183:C:H2'	34:RA:2184:G:C8	2.48	0.49
34:RA:2735:G:N2	34:RA:2770:G:H1'	2.28	0.49
1:XA:581:G:N2	1:XA:759:A:OP2	2.38	0.49
1:XA:658:G:H1'	15:XO:22:THR:HG21	1.93	0.49
1:XA:667:G:O2'	15:XO:49:ASP:OD1	2.20	0.49
1:XA:1249:C:N4	1:XA:1288:A:OP2	2.45	0.49
1:XA:1382:C:H2'	1:XA:1383:C:C6	2.47	0.49
1:XA:1481:U:H2'	1:XA:1482:G:C8	2.47	0.49
7:XG:115:ARG:HB2	7:XG:118:VAL:HG12	1.94	0.49
7:XG:140:ASP:OD2	7:XG:143:ARG:NH1	2.45	0.49
13:XM:88:ARG:HD2	13:XM:98:VAL:HB	1.95	0.49
33:Y9:27:CYS:SG	33:Y9:28:GLU:N	2.84	0.49
34:YA:270(P):U:N3	41:YI:52:ARG:NH2	2.60	0.49
34:YA:2261:C:H1'	34:YA:2388:A:H1'	1.94	0.49
35:YB:44:G:O2'	35:YB:47:C:N4	2.44	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:186(E):C:H2'	1:QA:186(F):C:C6	2.46	0.49
1:QA:676:A:H2	1:QA:714:G:H1	1.60	0.49
1:QA:953:G:N7	13:QM:104:ARG:NH2	2.40	0.49
4:QD:61:LYS:HD3	4:QD:206:PHE:CD2	2.46	0.49
4:QD:205:GLU:HB3	5:QE:107:ARG:NH1	2.27	0.49
5:QE:87:SER:OG	5:QE:125:SER:OG	2.27	0.49
19:QS:10:PHE:HZ	19:QS:15:LEU:HD11	1.76	0.49
25:R1:90:ILE:HA	25:R1:94:LEU:CG	2.42	0.49
34:RA:922:U:H2'	34:RA:923:C:C6	2.47	0.49
34:RA:975:G:N2	34:RA:1156:A:O2'	2.45	0.49
40:RH:89:ILE:HD12	40:RH:131:VAL:HG22	1.94	0.49
45:RQ:36:ALA:HB1	45:RQ:127:ILE:HG21	1.94	0.49
1:XA:412:A:C2	4:XD:35:ARG:HB3	2.47	0.49
1:XA:1233:G:H21	1:XA:1364:U:H3	1.60	0.49
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.44	0.49
34:YA:1062:G:N2	34:YA:1077:A:N1	2.61	0.49
34:YA:2008:C:H2'	34:YA:2009:G:C8	2.48	0.49
1:QA:5:U:O4	4:QD:87:GLY:N	2.42	0.49
1:QA:192:U:H2'	1:QA:193:C:C6	2.46	0.49
1:QA:422:C:H1'	1:QA:423:G:N1	2.28	0.49
1:QA:891:U:H2'	1:QA:892:A:H8	1.78	0.49
1:QA:893:C:H2'	1:QA:894:G:C8	2.48	0.49
1:QA:922:G:N3	1:QA:1398:A:H2	2.10	0.49
7:QG:122:HIS:HA	7:QG:125:MET:HE3	1.95	0.49
31:R7:35:ARG:NH1	34:RA:54:G:O2'	2.39	0.49
34:RA:2103:C:H2'	34:RA:2104:G:C8	2.48	0.49
50:RV:45:THR:O	50:RV:45:THR:CG2	2.55	0.49
1:XA:25:C:H41	1:XA:559:A:H61	1.58	0.49
1:XA:407:G:C1'	4:XD:119:GLN:HE22	2.26	0.49
1:XA:692:U:H5'	1:XA:797:C:H5'	1.94	0.49
1:XA:891:U:H2'	1:XA:892:A:H8	1.76	0.49
1:XA:974:A:O5'	14:YN:31:ARG:CD	2.60	0.49
1:XA:974:A:C5	14:YN:31:ARG:CZ	2.95	0.49
6:XF:100:ASN:CG	18:XR:27:GLY:C	2.78	0.49
32:Y8:10:ALA:O	32:Y8:14:VAL:HB	2.13	0.49
34:YA:971:C:O2'	34:YA:983:A:N3	2.38	0.49
34:YA:1566:A:C4	36:YD:214:TRP:CE3	3.00	0.49
34:YA:2090:G:C2	34:YA:2230:G:C2	3.00	0.49
37:YE:1:MET:N	37:YE:83:ASP:O	2.36	0.49
1:QA:137:C:C1'	16:QP:63:GLY:HA3	2.32	0.49
1:QA:959:A:N6	19:QS:77:THR:O	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1255:G:H1	1:QA:1282:C:H42	1.61	0.49
3:QC:35:GLU:HA	3:QC:38:ARG:HH21	1.77	0.49
10:QJ:47:PHE:CZ	14:QN:37:PHE:CE2	3.00	0.49
25:R1:61:ARG:NH2	34:RA:1364:G:OP2	2.41	0.49
29:R5:9:LYS:NZ	34:RA:2019:A:OP2	2.31	0.49
34:RA:444:C:H2'	34:RA:445:C:C6	2.48	0.49
34:RA:1161:C:H2'	34:RA:1162:G:C8	2.47	0.49
34:RA:2085:C:H4'	36:RD:262:ARG:HH21	1.76	0.49
34:RA:2692:C:H2'	34:RA:2693:A:H8	1.77	0.49
39:RG:135:LEU:O	39:RG:154:GLY:HA3	2.13	0.49
51:RW:22:ASP:OD1	51:RW:25:ARG:NH1	2.45	0.49
1:XA:51:A:C5	1:XA:353:A:C2	3.01	0.49
1:XA:60:A:H2	1:XA:378:G:H1'	1.77	0.49
1:XA:178:C:H2'	1:XA:179:A:H8	1.76	0.49
1:XA:536:C:H2'	1:XA:537:G:C8	2.48	0.49
6:XF:91:VAL:HB	18:XR:34:TYR:OH	2.12	0.49
29:Y5:9:LYS:NZ	34:YA:2019:A:N7	2.59	0.49
34:YA:1028:A:H2'	34:YA:1029:A:C8	2.48	0.49
34:YA:1923:U:H2'	34:YA:1924:C:C6	2.48	0.49
34:YA:2081:C:C2	34:YA:2239:G:N2	2.58	0.49
34:YA:2186:G:H2'	34:YA:2187:G:C8	2.47	0.49
34:YA:2751:G:N7	40:YH:2:SER:OG	2.45	0.49
36:YD:97:TYR:HB2	36:YD:101:GLU:O	2.13	0.49
1:QA:162:A:C5	1:QA:163:C:H1'	2.48	0.49
1:QA:165:C:H2'	1:QA:166:G:C8	2.47	0.49
1:QA:986:A:C2	19:QS:52:TYR:HE1	2.31	0.49
1:QA:1096:C:H2'	1:QA:1097:C:C6	2.47	0.49
1:QA:1306:A:OP2	21:QU:5:ASP:CB	2.60	0.49
1:QA:1313:U:C2'	19:QS:6:LYS:NZ	2.74	0.49
5:QE:90:VAL:O	5:QE:120:THR:OG1	2.27	0.49
5:QE:151:LEU:HD12	8:QH:79:VAL:HG12	1.94	0.49
33:R9:11:CYS:SG	33:R9:14:CYS:N	2.85	0.49
34:RA:896:A:H5''	54:RZ:146:ILE:HG22	1.94	0.49
34:RA:1283:G:H1'	34:RA:1329:U:O2	2.13	0.49
1:XA:657:G:O4'	15:XO:28:GLN:NE2	2.45	0.49
1:XA:974:A:O4'	14:XN:31:ARG:CD	2.53	0.49
1:XA:1106:G:H5'	3:XC:172:ARG:HD2	1.95	0.49
1:XA:1305:G:C4	1:XA:1331:G:N1	2.81	0.49
1:XA:1536:C:O2	23:XX:10:G:N2	2.44	0.49
6:XF:61:LEU:HD23	6:XF:63:TYR:HE2	1.77	0.49
19:XS:40:ILE:HD13	19:XS:71:LEU:HD21	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:Y2:16:LEU:O	26:Y2:67:LYS:NZ	2.45	0.49
34:YA:1771:C:H2'	34:YA:1772:G:C8	2.48	0.49
34:YA:2092:U:OP2	41:YI:27:ARG:NH2	2.43	0.49
34:YA:2153:G:H2'	34:YA:2154:G:C8	2.47	0.49
34:YA:2781:A:H5''	34:YA:2782:G:H5'	1.95	0.49
44:YP:52:GLU:OE1	44:YP:55:ARG:NH1	2.45	0.49
1:QA:739:C:O2	15:QO:42:HIS:CE1	2.66	0.49
1:QA:940:C:H2'	1:QA:941:G:C8	2.48	0.49
1:QA:1238:A:H2'	1:QA:1239:A:H8	1.77	0.49
1:QA:1253:G:O5'	10:QJ:44:VAL:O	2.30	0.49
1:QA:1313:U:O4	19:QS:4:SER:CB	2.52	0.49
1:QA:1481:U:H2'	1:QA:1482:G:C8	2.48	0.49
2:QB:178:ARG:NH2	2:QB:198:ASP:OD1	2.39	0.49
11:QK:71:LYS:HZ3	34:RA:2146:C:N4	2.04	0.49
20:QT:56:MET:HG3	20:QT:84:LEU:HD21	1.94	0.49
34:RA:318:C:H2'	34:RA:319:C:C6	2.48	0.49
34:RA:1566:A:N1	36:RD:214:TRP:CE2	2.81	0.49
34:RA:2291:U:O3'	34:RA:2379:G:N2	2.46	0.49
34:RA:2532:G:O2'	34:RA:2657:A:N1	2.44	0.49
34:RA:2572:A:OP1	34:RA:2574:G:O2'	2.31	0.49
34:RA:2581:G:N2	34:RA:2581:G:OP2	2.46	0.49
1:XA:132:C:OP1	20:XT:75:ASN:ND2	2.46	0.49
1:XA:308:C:H2'	1:XA:309:G:H5'	1.94	0.49
1:XA:1187:G:N3	14:XN:61:TRP:O	2.46	0.49
7:XG:118:VAL:HG22	7:XG:122:HIS:CE1	2.48	0.49
13:XM:91:ARG:NE	13:XM:97:PRO:O	2.46	0.49
20:XT:41:ILE:HD13	20:XT:87:LYS:HG2	1.95	0.49
31:Y7:37:LYS:CE	34:YA:458:G:C4	2.95	0.49
34:YA:662:G:H5''	44:YP:17:LYS:HG2	1.93	0.49
34:YA:911:A:N1	45:YQ:9:TYR:CG	2.80	0.49
34:YA:1028:A:N6	34:YA:1125:G:H2'	2.28	0.49
34:YA:2011:U:OP2	51:YW:16:LYS:NZ	2.35	0.49
1:QA:29:G:O2'	1:QA:295:C:O2'	2.22	0.49
1:QA:1292:U:H2'	1:QA:1293:G:H8	1.78	0.49
6:QF:35:ALA:HB1	6:QF:65:VAL:HG21	1.95	0.49
30:R6:18:ARG:O	30:R6:20:ASN:ND2	2.45	0.49
34:RA:270(Z):G:H4'	34:RA:273(A):G:H4'	1.95	0.49
34:RA:839:U:H2'	34:RA:840:C:H6	1.78	0.49
34:RA:1788:C:OP1	36:RD:222:ARG:NH2	2.45	0.49
43:RO:88:ASN:HD21	43:RO:90:GLN:HB2	1.78	0.49
1:XA:131:C:OP2	1:XA:186(K):G:O2'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:669:U:H1'	15:XO:46:HIS:HE1	1.77	0.49
1:XA:1540:U:O2	23:XX:6:G:N2	2.46	0.49
17:XQ:34:LYS:NZ	17:XQ:35:VAL:O	2.46	0.49
24:Y0:11:ARG:O	24:Y0:14:ARG:NH2	2.43	0.49
28:Y4:38:LYS:HE2	39:YG:112:PRO:HG3	1.94	0.49
34:YA:1128:A:H1'	34:YA:1129:A:C4	2.47	0.49
34:YA:1657:C:H2'	34:YA:1658:C:C6	2.47	0.49
34:YA:1794:U:H2'	34:YA:1795:C:C6	2.48	0.49
34:YA:2119:A:H61	34:YA:2168:G:H1	1.61	0.49
34:YA:2391:G:C6	34:YA:2427:C:H1'	2.48	0.49
45:YQ:54:MET:HE1	45:YQ:104:PHE:HB3	1.94	0.49
45:YQ:66:ILE:HA	45:YQ:104:PHE:HA	1.95	0.49
48:YT:28:VAL:HG12	48:YT:88:ILE:HA	1.95	0.49
1:QA:1049:U:H5	14:QN:3:ARG:CG	2.23	0.49
34:RA:500:G:H1'	34:RA:505:A:H61	1.78	0.49
34:RA:534:U:HO2'	49:RU:49:HIS:CG	2.30	0.49
34:RA:1070:A:O2'	34:RA:1097:U:O3'	2.30	0.49
34:RA:1802:A:N1	34:RA:1822:G:H1'	2.28	0.49
34:RA:2563:U:H1'	34:RA:2566:A:N6	2.28	0.49
1:XA:68(J):G:H1	1:XA:68(R):U:H3	1.60	0.49
1:XA:107:G:H3'	1:XA:108:G:N2	2.26	0.49
1:XA:1047:G:O2'	1:XA:1215:G:O2'	2.16	0.49
1:XA:1226:C:H3'	13:XM:103:THR:CB	2.43	0.49
1:XA:1227:A:H5''	13:XM:111:LYS:HE2	1.95	0.49
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.78	0.49
4:XD:56:VAL:HG13	4:XD:57:ARG:HD2	1.94	0.49
6:XF:100:ASN:ND2	18:XR:26:LEU:O	2.44	0.49
34:YA:448:U:C4	34:YA:583:G:H1'	2.48	0.49
34:YA:1174:A:H2'	34:YA:1175:U:H4'	1.95	0.49
34:YA:1221:C:H2'	34:YA:1222:C:H6	1.78	0.49
34:YA:2002:G:H2'	34:YA:2003:G:H8	1.78	0.49
1:QA:1108:G:P	3:QC:175:LEU:H	2.29	0.48
1:QA:1244:C:H2'	1:QA:1245:A:C8	2.48	0.48
1:QA:1248:A:N6	21:QU:26:LYS:CD	2.56	0.48
1:QA:1372:U:H5''	9:QI:69:GLY:CA	2.43	0.48
3:QC:47:LEU:HD11	3:QC:87:LEU:HD21	1.95	0.48
20:QT:54:LYS:HE3	20:QT:100:ILE:HG21	1.95	0.48
34:RA:554:U:H2'	34:RA:556:G:C8	2.47	0.48
53:RY:15:VAL:HA	53:RY:72:VAL:HA	1.94	0.48
54:RZ:163:LEU:HD22	54:RZ:167:PRO:HG3	1.95	0.48
1:XA:518:C:H2'	1:XA:530:G:N3	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.48	0.48
1:XA:1223:C:OP1	19:XS:78:ARG:NH2	2.46	0.48
1:XA:1251:A:H2'	1:XA:1252:A:C8	2.48	0.48
10:XJ:48:THR:O	14:XN:34:TYR:OH	2.29	0.48
32:Y8:2:PRO:N	34:YA:591:C:O2	2.45	0.48
32:Y8:13:ARG:HD2	44:YP:61:ARG:HE	1.78	0.48
33:Y9:14:CYS:HB3	33:Y9:27:CYS:HB2	1.95	0.48
33:Y9:19:ARG:HG3	34:YA:2756:U:H5''	1.94	0.48
34:YA:1141:U:P	42:YN:25:ARG:HH21	2.36	0.48
34:YA:1667:G:O2'	34:YA:1991:U:O4	2.30	0.48
34:YA:2691:C:O3'	34:YA:2871:C:H4'	2.12	0.48
54:YZ:24:LEU:HD23	54:YZ:41:LEU:HG	1.94	0.48
1:QA:447:G:H2'	1:QA:485:G:H22	1.78	0.48
1:QA:936:C:H2'	1:QA:937:A:H8	1.78	0.48
1:QA:973:G:H5''	1:QA:974:A:H3'	1.95	0.48
1:QA:1179:A:C5'	9:QL:83:ARG:NH1	2.72	0.48
1:QA:1219:U:H1'	19:QS:34:TRP:CZ3	2.48	0.48
6:QF:14:LEU:HD12	6:QF:18:GLN:CD	2.38	0.48
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.46	0.48
33:R9:23:VAL:HG21	34:RA:1032:A:O2'	2.13	0.48
34:RA:363(B):A:H2'	34:RA:363(C):G:C8	2.49	0.48
34:RA:441:U:O2	38:RF:46:ARG:NH2	2.46	0.48
34:RA:685:A:H5''	34:RA:788:A:N6	2.25	0.48
34:RA:687:C:N3	34:RA:787:U:H4'	2.28	0.48
34:RA:820:A:N3	34:RA:943:U:O2'	2.42	0.48
34:RA:1394:U:H4'	34:RA:1603:A:H4'	1.93	0.48
34:RA:1482:U:H3	34:RA:1512:G:H1	1.61	0.48
34:RA:1759:A:H1'	34:RA:2711:A:C2	2.47	0.48
43:RO:120:GLU:OE1	48:RT:67:SER:OG	2.24	0.48
1:XA:24:U:H2'	1:XA:25:C:C6	2.49	0.48
1:XA:590:C:OP1	8:XH:29:SER:HB2	2.14	0.48
1:XA:1533:C:H5	23:XX:13:A:H61	1.61	0.48
4:XD:72:GLU:OE2	4:XD:207:TYR:OH	2.19	0.48
6:XF:82:ARG:HB3	6:XF:85:VAL:HG12	1.95	0.48
21:XU:3:LYS:CD	21:XU:14:TRP:CZ3	2.93	0.48
34:YA:236:C:H2'	34:YA:237:C:H6	1.78	0.48
34:YA:910:A:N3	34:YA:2264:C:O2'	2.42	0.48
34:YA:1479:G:H1	34:YA:1514:U:H3	1.61	0.48
34:YA:2832:U:H1'	34:YA:2834:G:C4	2.48	0.48
36:YD:108:PRO:HB3	36:YD:143:HIS:HE1	1.77	0.48
41:YI:129:THR:HG22	41:YI:137:PRO:HB3	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:875:C:O2'	8:QH:14:ARG:HD2	2.13	0.48
1:QA:1014:A:N3	1:QA:1219:U:H1'	2.27	0.48
1:QA:1141:C:H2'	1:QA:1142:G:C8	2.47	0.48
1:QA:1226:C:O5'	13:QM:91:ARG:NH1	2.44	0.48
1:QA:1280:A:C5'	10:QJ:40:LEU:CD2	2.80	0.48
1:QA:1314:C:P	19:QS:6:LYS:HZ2	2.34	0.48
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.94	0.48
5:QE:152:ARG:HG2	8:QH:42:GLU:O	2.14	0.48
24:R0:43:THR:CG2	34:RA:2336:A:H61	2.26	0.48
34:RA:27:G:N2	34:RA:513:A:OP2	2.44	0.48
34:RA:436:C:H2'	34:RA:438:G:C8	2.48	0.48
34:RA:523:C:O2	34:RA:553:U:O2'	2.30	0.48
34:RA:568:U:OP1	44:RP:36:LYS:HD2	2.13	0.48
34:RA:1173:G:O2'	34:RA:1175:U:O4'	2.30	0.48
34:RA:2594:C:H2'	34:RA:2595:G:C8	2.47	0.48
34:RA:2831:G:H1'	34:RA:2883:A:H2'	1.95	0.48
35:RB:15:A:H5'	35:RB:16:G:C8	2.47	0.48
40:RH:3:ARG:HG3	40:RH:3:ARG:O	2.13	0.48
40:RH:3:ARG:HH12	40:RH:5:GLY:HA2	1.77	0.48
1:XA:201(C):U:H4'	1:XA:216:G:N2	2.28	0.48
1:XA:447:G:H2'	1:XA:485:G:N2	2.28	0.48
1:XA:673:G:H2'	1:XA:674:G:C8	2.48	0.48
4:XD:63:LYS:HD2	4:XD:198:VAL:HG12	1.95	0.48
6:XF:94:GLN:NE2	18:XR:32:ARG:HH11	2.11	0.48
15:XO:10:LYS:HA	15:XO:13:GLN:HG2	1.95	0.48
34:YA:2037:G:H2'	34:YA:2038:G:C8	2.49	0.48
34:YA:2140:C:H2'	34:YA:2141:G:C8	2.48	0.48
34:YA:2152:G:H2'	34:YA:2153:G:C8	2.48	0.48
34:YA:2590:A:H2'	34:YA:2591:C:C6	2.48	0.48
35:YB:12:C:O4'	35:YB:15:A:N6	2.46	0.48
48:YT:31:SER:OG	48:YT:85:LYS:NZ	2.44	0.48
1:QA:22:G:H2'	1:QA:23:C:C6	2.48	0.48
1:QA:957:U:H5'	19:QS:81:ARG:HB2	1.93	0.48
1:QA:1187:G:H1'	14:QN:61:TRP:N	2.28	0.48
1:QA:1229:A:OP2	13:QM:108:ARG:NH2	2.40	0.48
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.94	0.48
4:QD:79:PHE:HE1	4:QD:204:ILE:HD13	1.77	0.48
34:RA:29:U:H2'	34:RA:30:G:C8	2.49	0.48
34:RA:118:A:N3	34:RA:178:G:H1'	2.29	0.48
34:RA:243:U:H2'	34:RA:244:A:H8	1.78	0.48
34:RA:270(S):G:H2'	34:RA:270(T):G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:834:C:H2'	34:RA:835:A:H8	1.78	0.48
34:RA:2142:C:H2'	34:RA:2143:C:C6	2.48	0.48
34:RA:2211:G:N2	34:RA:2212:A:H2	2.11	0.48
43:RO:15:GLY:O	43:RO:47:ILE:N	2.45	0.48
53:RY:76:CYS:SG	53:RY:79:CYS:CA	2.94	0.48
1:XA:222:U:H2'	1:XA:223:U:C6	2.49	0.48
1:XA:522:C:H1'	1:XA:536:C:H5''	1.94	0.48
1:XA:689:C:H4'	1:XA:705:U:H1'	1.94	0.48
1:XA:988:G:N2	1:XA:1016:A:O2'	2.47	0.48
5:XE:60:TYR:OH	5:XE:64:ARG:NH2	2.47	0.48
16:XP:40:ASP:HB3	16:XP:48:TRP:HB2	1.94	0.48
34:YA:65:C:H2'	34:YA:66:C:H6	1.78	0.48
34:YA:1010:A:H1'	34:YA:1153:C:H1'	1.95	0.48
41:YI:77:LEU:HD13	41:YI:101:LEU:HB3	1.96	0.48
54:YZ:130:PRO:HA	54:YZ:133:ILE:HD11	1.96	0.48
1:QA:18:C:H4'	1:QA:1078:U:O2	2.14	0.48
1:QA:620:C:H1'	4:QD:135:LEU:HG	1.96	0.48
1:QA:947:G:OP1	13:QM:108:ARG:CB	2.61	0.48
1:QA:974:A:OP1	14:QN:29:ARG:NH1	2.46	0.48
1:QA:1522:U:H2'	1:QA:1523:G:C8	2.48	0.48
5:QE:102:ALA:O	5:QE:107:ARG:NH2	2.45	0.48
34:RA:141(A):A:H8	34:RA:1595:G:H21	1.61	0.48
34:RA:414:C:O2	34:RA:1864:U:O2'	2.21	0.48
34:RA:589:C:H2'	34:RA:590:A:H8	1.79	0.48
34:RA:1266:G:N7	51:RW:15:ARG:NH1	2.62	0.48
1:XA:156:G:H2'	1:XA:157:G:C8	2.48	0.48
1:XA:859:A:H2'	1:XA:860:A:O4'	2.13	0.48
1:XA:1004:A:C2	1:XA:1024:G:H2'	2.49	0.48
1:XA:1310:G:H1	1:XA:1327:C:H5	1.61	0.48
1:XA:1319:A:N6	1:XA:1361:G:H1'	2.29	0.48
1:XA:1472:U:H2'	1:XA:1473:A:C8	2.49	0.48
3:XC:153:VAL:HB	3:XC:196:LEU:HD21	1.95	0.48
4:XD:20:TYR:HD1	4:XD:26:CYS:HB3	1.78	0.48
6:XF:5:GLU:HA	6:XF:63:TYR:O	2.14	0.48
10:XJ:9:ARG:HG2	10:XJ:9:ARG:HH11	1.78	0.48
23:XX:6:G:H2'	23:XX:7:G:H8	1.77	0.48
29:Y5:9:LYS:CE	34:YA:2019:A:N7	2.75	0.48
34:YA:956:G:OP2	45:YQ:14:ARG:NH2	2.46	0.48
34:YA:1657:C:H4'	37:YE:133:LYS:HB3	1.95	0.48
34:YA:2084:C:H2'	34:YA:2085:C:C6	2.48	0.48
34:YA:2094:G:OP1	41:YI:22:LYS:HD2	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YT:52:ILE:HG13	48:YT:61:PHE:HB3	1.96	0.48
1:QA:626:U:O3'	16:QP:38:TYR:CD1	2.66	0.48
1:QA:1151:A:O2'	10:QJ:13:HIS:HB2	2.13	0.48
1:QA:1270:C:O2'	1:QA:1313:U:O3'	2.30	0.48
34:RA:1073:A:H3'	34:RA:1074:G:H8	1.79	0.48
34:RA:1518:C:H2'	34:RA:1519:G:C8	2.49	0.48
38:RF:159:GLY:O	38:RF:164:ARG:NH2	2.41	0.48
44:RP:106:LEU:HD13	44:RP:112:LEU:HD13	1.95	0.48
1:XA:186(Q):U:H2'	1:XA:191:G:C8	2.48	0.48
1:XA:1159:U:C6	1:XA:1182:G:H2'	2.49	0.48
1:XA:1316:G:H4'	14:YN:17:LYS:HG2	0.64	0.48
1:XA:1351:U:H2'	1:XA:1352:C:H6	1.78	0.48
11:XK:54:ARG:O	11:XK:57:THR:OG1	2.31	0.48
17:XQ:66:SER:H	17:XQ:69:LYS:HB3	1.78	0.48
19:XS:36:ARG:HB2	19:XS:72:GLY:HA3	1.94	0.48
34:YA:629:G:H1'	34:YA:639:U:H1'	1.96	0.48
34:YA:2113:U:C5	34:YA:2114:A:H1'	2.48	0.48
1:QA:155:C:H2'	1:QA:156:G:C8	2.48	0.48
1:QA:490:G:H2'	1:QA:491:G:C8	2.48	0.48
1:QA:608:A:O2'	16:QP:9:PHE:HE1	1.95	0.48
1:QA:986:A:O2'	19:QS:55:LYS:CA	2.60	0.48
1:QA:1106:G:O3'	3:QC:172:ARG:CB	2.56	0.48
1:QA:1160:G:H5'	2:QB:132:LYS:HZ1	1.78	0.48
1:QA:1278:U:H4'	1:QA:1279:A:C4	2.49	0.48
1:QA:1318:A:N3	19:QS:37:ARG:NH2	2.59	0.48
34:RA:813:U:C5	44:RP:25:SER:HB3	2.49	0.48
34:RA:851:U:H2'	34:RA:852:G:C8	2.48	0.48
34:RA:1732:A:H3'	34:RA:1733:G:H8	1.77	0.48
34:RA:2751:G:C6	40:RH:3:ARG:HB2	2.47	0.48
45:RQ:54:MET:HE1	45:RQ:104:PHE:HB3	1.95	0.48
53:RY:13:VAL:HA	53:RY:74:PRO:HA	1.96	0.48
54:RZ:61:LEU:HD23	54:RZ:67:LEU:HD23	1.94	0.48
1:XA:68(H):G:C5	1:XA:68(I):G:H1'	2.49	0.48
1:XA:112:G:H22	1:XA:315:A:H2	1.60	0.48
1:XA:186(B):C:H2'	1:XA:186(C):C:C6	2.48	0.48
1:XA:856:C:H2'	1:XA:857:C:C6	2.49	0.48
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.49	0.48
4:XD:91:SER:HB2	4:XD:191:ARG:HD2	1.95	0.48
7:XG:31:MET:HE3	7:XG:34:GLY:HA2	1.96	0.48
13:XM:3:ARG:HD2	13:XM:7:VAL:HG12	1.96	0.48
31:Y7:37:LYS:HG2	34:YA:458:G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:305:U:H2'	34:YA:306:U:C6	2.49	0.48
34:YA:1753:G:H2'	34:YA:1755:A:N7	2.28	0.48
34:YA:2053:G:C2	34:YA:2617:C:N3	2.82	0.48
34:YA:2314:C:H2'	34:YA:2315:G:C8	2.49	0.48
34:YA:2688:U:H1'	34:YA:2721:A:H61	1.78	0.48
46:YR:3:HIS:O	46:YR:5:LYS:N	2.47	0.48
1:QA:308:C:H2'	1:QA:309:G:C8	2.49	0.48
1:QA:624:C:H4'	16:QP:11:SER:HB3	1.96	0.48
1:QA:667:G:H2'	1:QA:668:G:C8	2.49	0.48
1:QA:695:A:OP2	11:QK:53:SER:HB3	2.14	0.48
1:QA:1318:A:C4	19:QS:37:ARG:NH2	2.78	0.48
1:QA:1530:G:H2'	1:QA:1531:A:H8	1.78	0.48
13:QM:26:GLY:O	13:QM:30:ALA:CB	2.62	0.48
25:R1:78:LYS:NZ	34:RA:270(S):G:H21	2.10	0.48
34:RA:985:C:H2'	34:RA:986:C:C6	2.49	0.48
39:RG:126:ASP:OD1	39:RG:130:ASN:N	2.43	0.48
40:RH:43:VAL:HG23	40:RH:52:VAL:HG12	1.95	0.48
40:RH:46:GLU:HB2	40:RH:49:VAL:HG23	1.95	0.48
1:XA:263:A:H2'	1:XA:264:U:C5	2.49	0.48
1:XA:647:C:H2'	1:XA:648:A:C8	2.49	0.48
1:XA:784:C:H2'	1:XA:785:G:H8	1.79	0.48
1:XA:967:C:H5'	1:XA:968:A:H2'	1.96	0.48
1:XA:1312:G:H2'	19:XS:6:LYS:HZ2	1.77	0.48
1:XA:1409:C:H2'	1:XA:1410:G:C8	2.49	0.48
4:XD:57:ARG:HH12	5:XE:107:ARG:CZ	2.27	0.48
13:XM:84:ILE:HD12	19:XS:65:ASN:OD1	2.13	0.48
16:XP:6:LEU:HD13	16:XP:17:TYR:CG	2.49	0.48
17:XQ:83:ASP:N	17:XQ:83:ASP:OD1	2.40	0.48
20:XT:73:HIS:HB3	20:XT:74:LYS:H	1.47	0.48
34:YA:389:G:H22	44:YP:71:VAL:CG1	2.19	0.48
34:YA:860:U:H2'	34:YA:861:A:C8	2.43	0.48
1:QA:43:C:OP1	16:QP:13:HIS:HD2	1.97	0.48
1:QA:643:C:H2'	1:QA:644:G:H8	1.77	0.48
2:QB:47:THR:HG23	2:QB:202:PRO:HG2	1.96	0.48
2:QB:179:LYS:HA	8:QH:72:PRO:HG3	1.96	0.48
2:QB:197:VAL:O	8:QH:68:ARG:CZ	2.60	0.48
10:QJ:4:ILE:HG12	10:QJ:100:THR:HG22	1.95	0.48
34:RA:270(V):C:H2'	34:RA:270(W):G:C8	2.49	0.48
34:RA:558:G:H2'	34:RA:559:G:C8	2.49	0.48
34:RA:1403:C:H5''	34:RA:1471:A:H1'	1.96	0.48
34:RA:1454:U:OP1	46:RR:77:ARG:NH1	2.45	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1607:C:H41	34:RA:1621:U:H3'	1.79	0.48
34:RA:1662:C:H2'	34:RA:1663:C:C6	2.49	0.48
34:RA:2210:G:H5'	34:RA:2211:G:C5	2.49	0.48
34:RA:2241:A:H2'	34:RA:2242:G:C8	2.49	0.48
34:RA:2553:G:C2	34:RA:2583:G:H1'	2.49	0.48
34:RA:2657:A:O3'	40:RH:160:LYS:NZ	2.46	0.48
1:XA:106:C:H2'	1:XA:107:G:C8	2.49	0.48
1:XA:669:U:O4'	15:XO:46:HIS:HE1	1.97	0.48
1:XA:696:A:H61	1:XA:797:C:HO2'	1.62	0.48
1:XA:1229:A:H62	13:XM:104:ARG:HB3	1.79	0.48
1:XA:1397:C:OP2	5:XE:24:ARG:NH2	2.40	0.48
10:XJ:78:ASN:HB2	10:XJ:81:THR:HG23	1.96	0.48
25:Y1:83:GLU:HG3	25:Y1:85:LEU:H	1.78	0.48
34:YA:29:U:H2'	34:YA:30:G:C8	2.49	0.48
34:YA:356:G:H2'	34:YA:357:A:C8	2.49	0.48
34:YA:410:G:N2	34:YA:2407:G:N7	2.62	0.48
34:YA:828:U:H4'	34:YA:831:G:C6	2.49	0.48
34:YA:920:G:H2'	34:YA:921:G:H8	1.78	0.48
34:YA:1162:G:H2'	34:YA:1163:G:H8	1.79	0.48
34:YA:1223:C:H2'	34:YA:1224:G:C8	2.49	0.48
34:YA:1952:A:P	43:YO:44:LYS:HZ3	2.35	0.48
34:YA:2097:C:H2'	34:YA:2098:U:H6	1.79	0.48
37:YE:37:ARG:O	37:YE:45:THR:HA	2.13	0.48
37:YE:117:MET:HA	37:YE:122:PHE:H	1.79	0.48
39:YG:68:PRO:HB3	39:YG:92:VAL:HB	1.95	0.48
45:YQ:35:VAL:HG12	45:YQ:102:VAL:HG22	1.94	0.48
53:YY:11:ASP:OD1	53:YY:11:ASP:N	2.43	0.48
1:QA:625:G:HO2'	16:QP:16:HIS:CE1	2.30	0.48
1:QA:695:A:H61	1:QA:786:G:H21	1.61	0.48
1:QA:986:A:N9	19:QS:54:GLY:O	2.47	0.48
1:QA:1069:C:H1'	1:QA:1191:A:H2	1.77	0.48
1:QA:1318:A:N6	14:QN:16:PHE:CG	2.82	0.48
1:QA:1407:C:H2'	1:QA:1408:A:H8	1.79	0.48
2:QB:98:LEU:H	2:QB:101:MET:HE3	1.79	0.48
18:QR:59:SER:OG	18:QR:60:ALA:N	2.46	0.48
34:RA:153:C:H2'	34:RA:154:G:C8	2.49	0.48
34:RA:433:C:H2'	34:RA:434:U:C6	2.49	0.48
34:RA:1213:A:H1'	34:RA:1238:G:N3	2.28	0.48
34:RA:2343:C:H2'	34:RA:2344:U:C6	2.49	0.48
34:RA:2710:C:H2'	34:RA:2711:A:C8	2.48	0.48
1:XA:62:U:H2'	1:XA:63:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:372:C:O2	1:XA:372:C:O2'	2.23	0.48
1:XA:495:A:H1'	1:XA:497:A:H2'	1.96	0.48
1:XA:1256:A:N7	1:XA:1278:U:H5'	2.29	0.48
1:XA:1434:A:H61	1:XA:1467:G:H1'	1.79	0.48
2:XB:30:ARG:NH1	2:XB:31:TYR:OH	2.46	0.48
9:XI:73:GLN:O	9:XI:77:ILE:HG12	2.14	0.48
34:YA:917:A:H3'	34:YA:918:A:C8	2.49	0.48
34:YA:1050:A:N7	34:YA:2751:G:C4	2.80	0.48
34:YA:2097:C:N3	34:YA:2192:G:C6	2.82	0.48
34:YA:2546:U:H4'	34:YA:2566:A:H2	1.79	0.48
34:YA:2695:C:H2'	34:YA:2696:U:C6	2.49	0.48
40:YH:70:THR:O	40:YH:74:ASN:ND2	2.47	0.48
1:QA:1253:G:C5'	10:QJ:44:VAL:H	2.24	0.47
1:QA:1300:G:H1'	1:QA:1303:C:N4	2.29	0.47
1:QA:1309:G:H4'	13:QM:77:ASN:HD21	1.77	0.47
5:QE:84:PHE:N	5:QE:87:SER:O	2.45	0.47
11:QK:82:VAL:HG13	11:QK:108:ILE:HA	1.95	0.47
25:R1:17:SER:O	25:R1:17:SER:OG	2.29	0.47
31:R7:24:THR:HG23	31:R7:27:GLY:H	1.79	0.47
34:RA:65:C:H2'	34:RA:66:C:C6	2.49	0.47
34:RA:137(B):G:N2	52:RX:41:ASN:HD21	2.12	0.47
34:RA:514:A:H2'	34:RA:515:A:C8	2.48	0.47
34:RA:657:U:H2'	34:RA:658:C:C6	2.48	0.47
34:RA:1367:A:C5	34:RA:1368:G:H1'	2.49	0.47
35:RB:8:U:H3	35:RB:112:G:H1	1.61	0.47
41:RI:51:ILE:HA	41:RI:54:GLN:HG2	1.95	0.47
42:RN:60:ILE:HD12	42:RN:60:ILE:HA	1.81	0.47
1:XA:1106:G:C5'	3:XC:172:ARG:HG2	2.44	0.47
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.48	0.47
13:XM:14:ARG:HG2	13:XM:16:ASP:H	1.79	0.47
20:XT:61:SER:OG	20:XT:62:LEU:N	2.47	0.47
34:YA:1930:G:H2'	34:YA:1968:G:H1	1.78	0.47
34:YA:2199:A:N1	34:YA:2226:C:N4	2.57	0.47
34:YA:2641:G:H2'	34:YA:2642:G:H8	1.79	0.47
1:QA:401:C:H2'	1:QA:402:G:C8	2.50	0.47
1:QA:562:C:H1'	12:QL:15:ARG:HD2	1.95	0.47
1:QA:949:A:OP1	13:QM:100:GLY:O	2.32	0.47
1:QA:953:G:C6	13:QM:104:ARG:CZ	2.97	0.47
1:QA:1129:C:H1'	1:QA:1132:C:C5	2.49	0.47
1:QA:1253:G:C5'	10:QJ:44:VAL:O	2.62	0.47
29:R5:12:SER:O	29:R5:16:ARG:HB2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:558:G:H2'	34:RA:559:G:H8	1.79	0.47
34:RA:1681:G:HO2'	34:RA:1762:A:HO2'	1.57	0.47
34:RA:2197:U:H1'	34:RA:2198:A:C8	2.49	0.47
34:RA:2233:U:H2'	34:RA:2234:G:C8	2.48	0.47
47:RS:26:LEU:HB3	47:RS:87:PHE:HA	1.96	0.47
48:RT:91:ARG:NH2	48:RT:124:ASP:OD2	2.47	0.47
49:RU:17:ILE:HG13	49:RU:39:LEU:HD12	1.95	0.47
1:XA:822:C:H2'	1:XA:823:G:C8	2.49	0.47
1:XA:1187:G:N9	14:YN:61:TRP:O	2.42	0.47
2:XB:71:VAL:HB	2:XB:164:VAL:HG12	1.96	0.47
13:XM:84:ILE:CG2	19:XS:74:PHE:HZ	2.21	0.47
34:YA:270(A):A:C2	34:YA:366:C:H4'	2.50	0.47
34:YA:2115:G:H4'	34:YA:2166:G:H4'	1.96	0.47
34:YA:2150:U:H2'	34:YA:2151:G:H8	1.76	0.47
37:YE:102:VAL:O	37:YE:170:LEU:N	2.45	0.47
39:YG:107:LEU:HA	39:YG:111:LEU:HD12	1.95	0.47
1:QA:186(B):C:H2'	1:QA:186(C):C:O4'	2.15	0.47
1:QA:258:G:OP1	20:QT:87:LYS:NZ	2.48	0.47
1:QA:345:C:H5'	48:RT:41:ARG:NH1	2.29	0.47
1:QA:658:G:H5''	15:QO:31:LEU:CD1	2.44	0.47
1:QA:1534:A:N3	23:QX:12:A:N6	2.55	0.47
4:QD:108:LEU:HD22	4:QD:174:LEU:HD13	1.96	0.47
4:QD:169:LYS:HE2	6:XF:82:ARG:HH22	1.79	0.47
9:QI:20:ARG:HG3	9:QI:60:ASP:HB2	1.96	0.47
34:RA:678:C:H2'	34:RA:679:C:H6	1.79	0.47
34:RA:1568:G:OP1	36:RD:63:ARG:NH1	2.34	0.47
34:RA:2081:C:H2'	34:RA:2082:A:H8	1.80	0.47
34:RA:2373:G:H2'	34:RA:2374:C:C6	2.49	0.47
34:RA:2500:U:O2'	34:RA:2504:U:OP1	2.30	0.47
37:RE:105:THR:OG1	37:RE:199:ARG:NH1	2.47	0.47
1:XA:708:C:H2'	1:XA:709:G:C8	2.49	0.47
1:XA:1319:A:H61	1:XA:1361:G:H1'	1.79	0.47
4:XD:175:SER:O	4:XD:183:GLY:HA2	2.15	0.47
7:XG:99:LEU:HD12	7:XG:102:ARG:HD2	1.96	0.47
25:Y1:39:LYS:NZ	34:YA:205:G:O6	2.44	0.47
34:YA:389:G:N1	44:YP:71:VAL:CG1	2.69	0.47
34:YA:996:A:O4'	50:YV:10:LYS:HG2	2.14	0.47
34:YA:2046:G:N1	34:YA:2623:G:C5	2.80	0.47
34:YA:2110:G:OP1	34:YA:2111:C:N4	2.47	0.47
34:YA:2795:G:O2'	34:YA:2799:A:N6	2.47	0.47
1:QA:233:C:O2'	1:QA:264:U:N3	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1307:U:P	13:QM:99:ARG:CB	3.03	0.47
1:QA:1307:U:H5''	13:QM:99:ARG:NE	2.29	0.47
16:QP:40:ASP:OD1	16:QP:43:LYS:N	2.46	0.47
31:R7:39:ARG:NH1	34:RA:459:U:OP2	2.47	0.47
34:RA:521:G:H2'	34:RA:522:G:C8	2.49	0.47
34:RA:521:G:H2'	34:RA:522:G:H8	1.79	0.47
34:RA:679:C:H2'	34:RA:680:G:H8	1.78	0.47
34:RA:990:A:C6	34:RA:1186:G:H1'	2.50	0.47
34:RA:1022:G:N2	34:RA:1023:U:O4	2.47	0.47
38:RF:102:PRO:HB2	38:RF:105:VAL:HG23	1.95	0.47
1:XA:296:U:H1'	1:XA:556:C:H1'	1.95	0.47
1:XA:372:C:N4	1:XA:389:A:N7	2.61	0.47
1:XA:608:A:C2'	1:XA:609:A:H8	2.27	0.47
1:XA:718:G:H1	18:XR:74:ARG:HH12	1.62	0.47
1:XA:1217:C:H5''	14:XN:12:ARG:NH1	2.26	0.47
1:XA:1253:G:O3'	10:XJ:45:ARG:HD2	2.14	0.47
1:XA:1318:A:O3'	19:XS:11:VAL:CG1	2.62	0.47
3:XC:23:TYR:CD2	10:XJ:95:GLU:N	2.82	0.47
11:XK:109:VAL:CA	18:XR:86:VAL:HG23	2.43	0.47
13:XM:84:ILE:O	19:XS:74:PHE:CE1	2.62	0.47
34:YA:223:A:H1'	34:YA:407:G:H21	1.79	0.47
34:YA:270(Q):C:H1'	41:YI:50:ARG:HH22	1.79	0.47
34:YA:685:A:C2	34:YA:787:U:H1'	2.49	0.47
34:YA:1050:A:H1'	34:YA:2751:G:C8	2.49	0.47
34:YA:1068:G:N2	34:YA:1096:A:O5'	2.42	0.47
34:YA:2054:A:N1	34:YA:2616:C:N3	2.62	0.47
34:YA:2312:U:H4'	39:YG:71:THR:OG1	2.14	0.47
34:YA:2577:A:H2'	34:YA:2614:A:N6	2.30	0.47
50:YV:13:ARG:NH1	50:YV:15:GLU:OE2	2.45	0.47
50:YV:52:VAL:HG21	50:YV:55:ALA:HB3	1.95	0.47
52:YX:64:LYS:HZ2	52:YX:73:ARG:HE	1.60	0.47
1:QA:297:G:H4'	1:QA:557:G:O2'	2.14	0.47
1:QA:985:C:H2'	1:QA:986:A:H8	1.78	0.47
1:QA:1106:G:C3'	3:QC:172:ARG:CG	2.87	0.47
1:QA:1112:C:N3	3:QC:178:LEU:CD1	2.78	0.47
1:QA:1123:A:O2'	10:QJ:37:PRO:N	2.47	0.47
11:QK:17:GLY:HA2	11:QK:35:PRO:HD3	1.97	0.47
13:QM:16:ASP:OD1	13:QM:16:ASP:N	2.44	0.47
32:R8:42:ARG:HD2	34:RA:2350:C:C5'	2.44	0.47
34:RA:1339:G:N2	34:RA:1603:A:N3	2.62	0.47
34:RA:1592:C:H2'	34:RA:1593:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2108:C:HO2'	34:RA:2142:C:HO2'	1.44	0.47
34:RA:2208:U:O2'	36:RD:150:LYS:O	2.32	0.47
53:RY:19:LYS:HZ1	53:RY:20:TYR:HE2	1.56	0.47
1:XA:186(K):G:C6	1:XA:264:U:H5''	2.49	0.47
1:XA:600:C:H2'	1:XA:601:C:C6	2.49	0.47
1:XA:613:C:H2'	1:XA:614:A:C8	2.50	0.47
1:XA:813:U:H2'	1:XA:814:A:H8	1.80	0.47
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.50	0.47
1:XA:1463:C:H2'	1:XA:1464:G:H8	1.79	0.47
2:XB:204:ASN:OD1	2:XB:205:ASP:N	2.48	0.47
27:Y3:18:ASP:OD1	27:Y3:18:ASP:N	2.46	0.47
34:YA:624:C:H2'	34:YA:625:G:H8	1.79	0.47
34:YA:747:U:H5	34:YA:2613:U:C4	2.30	0.47
34:YA:1035:U:H2'	34:YA:1036:G:C8	2.50	0.47
34:YA:1043:C:H2'	34:YA:1044:G:H8	1.79	0.47
34:YA:1445:C:H2'	34:YA:1446:C:C6	2.49	0.47
34:YA:1476:C:H2'	34:YA:1477:A:C8	2.49	0.47
34:YA:2181:G:H2'	34:YA:2182:G:C8	2.49	0.47
34:YA:2722:G:H5''	34:YA:2820:A:N7	2.30	0.47
34:YA:2893:G:O2'	34:YA:2894:G:N2	2.47	0.47
45:YQ:36:ALA:HB2	45:YQ:103:MET:HE2	1.95	0.47
1:QA:9:G:H2'	1:QA:10:A:C8	2.49	0.47
1:QA:711:G:H2'	1:QA:712:A:C8	2.50	0.47
8:QH:120:THR:OG1	8:QH:121:ASP:N	2.47	0.47
12:QL:5:PRO:HG2	12:QL:10:LEU:HD21	1.96	0.47
23:QX:3:C:H2'	23:QX:4:A:C8	2.49	0.47
34:RA:270(D):C:H2'	34:RA:270(E):C:C6	2.50	0.47
34:RA:436:C:H2'	34:RA:438:G:H8	1.79	0.47
34:RA:602:G:H1'	34:RA:656:G:N2	2.30	0.47
34:RA:619:G:H3'	34:RA:620:G:H21	1.79	0.47
34:RA:863:A:H2'	34:RA:864:G:C8	2.49	0.47
34:RA:863:A:H2'	34:RA:864:G:H8	1.80	0.47
1:XA:376:G:H4'	16:XP:5:ARG:NH1	2.28	0.47
1:XA:708:C:H2'	1:XA:709:G:H8	1.80	0.47
1:XA:908:A:H2'	1:XA:909:A:H8	1.80	0.47
1:XA:1112:C:C1'	3:XC:179:ARG:NE	2.67	0.47
1:XA:1112:C:H6	3:XC:179:ARG:HH21	1.51	0.47
1:XA:1143:G:H2'	1:XA:1144:G:C8	2.49	0.47
13:XM:83:ASP:OD2	13:XM:84:ILE:N	2.47	0.47
14:XM:23:ARG:NH1	14:XM:28:GLY:HA2	2.29	0.47
15:XO:39:LEU:HG	15:XO:56:LEU:HD12	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:363(B):A:H2'	34:YA:363(C):G:C8	2.50	0.47
34:YA:1400:G:H2'	34:YA:1401:G:C8	2.49	0.47
34:YA:1947:C:H2'	34:YA:1948:G:H8	1.79	0.47
34:YA:2008:C:H2'	34:YA:2009:G:H8	1.78	0.47
34:YA:2245:U:H5'	34:YA:2246:G:H5''	1.97	0.47
34:YA:2443:C:H2'	34:YA:2444:G:C8	2.49	0.47
36:YD:35:LYS:HG3	36:YD:63:ARG:HG3	1.96	0.47
37:YE:105:THR:HG21	37:YE:164:ARG:HH21	1.78	0.47
47:YS:25:ARG:HG3	47:YS:88:ASP:HB2	1.96	0.47
1:QA:66:G:H1'	1:QA:173:U:H2'	1.97	0.47
1:QA:269:C:H2'	1:QA:270:A:H8	1.80	0.47
1:QA:667:G:C2	15:QO:49:ASP:OD1	2.68	0.47
1:QA:833:U:H2'	1:QA:834:C:C6	2.49	0.47
1:QA:926:G:N2	23:QX:18:C:OP2	2.45	0.47
1:QA:932:C:H2'	1:QA:933:G:C8	2.49	0.47
1:QA:960:U:H2'	1:QA:1225:A:N6	2.30	0.47
1:QA:1253:G:H5'	10:QJ:44:VAL:N	2.23	0.47
1:QA:1278:U:H4'	1:QA:1279:A:C5	2.49	0.47
1:QA:1280:A:C2	10:QJ:41:PRO:HD3	2.49	0.47
1:QA:1397:C:H4'	1:QA:1398:A:C8	2.50	0.47
10:QJ:50:ILE:HD13	14:QN:41:ARG:NH1	2.18	0.47
17:QQ:62:SER:OG	17:QQ:72:ARG:NE	2.47	0.47
17:QQ:83:ASP:N	17:QQ:83:ASP:OD1	2.47	0.47
34:RA:508:G:C6	51:RW:9:TYR:CE1	3.03	0.47
34:RA:2008:C:H2'	34:RA:2009:G:C8	2.49	0.47
34:RA:2102:U:H2'	34:RA:2103:C:C6	2.50	0.47
34:RA:2319:G:N1	34:RA:2334:G:OP2	2.45	0.47
34:RA:2392:A:H2	34:RA:2424:C:H42	1.61	0.47
34:RA:2468:G:OP2	34:RA:2468:G:N2	2.41	0.47
34:RA:2503:A:O2'	34:RA:2505:G:OP2	2.29	0.47
34:RA:2658:C:H5''	40:RH:158:HIS:CD2	2.49	0.47
52:RX:64:LYS:HD2	52:RX:73:ARG:HH12	1.77	0.47
54:RZ:182:LYS:HA	54:RZ:182:LYS:HD2	1.75	0.47
1:XA:413:G:H4'	1:XA:414:A:H5''	1.97	0.47
1:XA:539:A:H2'	1:XA:540:G:H8	1.80	0.47
1:XA:595:G:N1	1:XA:641:U:O2'	2.47	0.47
1:XA:608:A:H2'	1:XA:609:A:O4'	2.15	0.47
1:XA:656:C:H2'	1:XA:657:G:H8	1.79	0.47
1:XA:893:C:H2'	1:XA:894:G:C8	2.50	0.47
1:XA:1084:G:H21	1:XA:1102:A:N6	2.13	0.47
1:XA:1141:C:H2'	1:XA:1142:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.62	0.47
4:XD:175:SER:HB3	4:XD:184:LYS:HB3	1.96	0.47
4:XD:208:SER:OG	5:XE:101:ILE:HD12	2.14	0.47
29:Y5:3:LYS:HD3	34:YA:2577:A:H5'	1.97	0.47
29:Y5:58:LEU:HD23	46:YR:113:LEU:HD11	1.96	0.47
34:YA:151:C:H2'	34:YA:152:G:H8	1.79	0.47
34:YA:320:A:N3	38:YF:169:ASN:ND2	2.62	0.47
34:YA:413:C:H2'	34:YA:414:C:C6	2.49	0.47
34:YA:536:A:OP1	49:YU:53:ARG:NH1	2.47	0.47
34:YA:603:A:H5''	34:YA:655:A:H61	1.80	0.47
34:YA:624:C:H2'	34:YA:625:G:C8	2.50	0.47
34:YA:816:C:H2'	34:YA:817:C:C6	2.50	0.47
34:YA:998:C:H2'	34:YA:999:U:O4'	2.14	0.47
34:YA:1332:G:N2	34:YA:1609:A:O2'	2.48	0.47
34:YA:1529:A:H61	34:YA:1542:G:H1'	1.78	0.47
34:YA:1796:U:H2'	34:YA:1797:C:C6	2.49	0.47
34:YA:2115:G:H22	34:YA:2163:C:H3'	1.78	0.47
34:YA:2316:C:H2'	34:YA:2317:C:H6	1.79	0.47
39:YG:63:ILE:HG22	39:YG:143:GLU:HB2	1.95	0.47
45:YQ:75:THR:HB	45:YQ:86:GLY:HA3	1.96	0.47
1:QA:8:A:C4	4:QD:209:ARG:O	2.68	0.47
1:QA:229:U:H2'	1:QA:230:G:H8	1.78	0.47
1:QA:626:U:O3'	16:QP:38:TYR:CE1	2.68	0.47
1:QA:1099:G:OP2	2:QB:96:ARG:NH1	2.48	0.47
34:RA:251:A:C4	34:RA:252:G:H1'	2.50	0.47
34:RA:730:C:H2'	34:RA:731:C:H6	1.80	0.47
34:RA:1141:U:H1'	34:RA:1142(B):A:C5	2.49	0.47
34:RA:1189:A:C2	34:RA:1190:G:H1'	2.50	0.47
34:RA:1375:C:H2'	34:RA:1376:C:H6	1.78	0.47
34:RA:2084:C:H2'	34:RA:2085:C:H6	1.79	0.47
34:RA:2244:U:H2'	34:RA:2245:U:C6	2.50	0.47
34:RA:2262:U:H2'	34:RA:2263:C:C6	2.50	0.47
40:RH:6:ARG:HE	40:RH:65:HIS:HB3	1.80	0.47
1:XA:106:C:H2'	1:XA:107:G:H8	1.80	0.47
1:XA:702:A:C6	34:YA:1848:A:N3	2.83	0.47
1:XA:789:U:H2'	1:XA:791:G:N7	2.30	0.47
1:XA:826:C:H4'	8:XH:12:ARG:HG3	1.97	0.47
1:XA:961:U:O2	1:XA:1201:A:N6	2.47	0.47
1:XA:986:A:O2'	19:XS:52:TYR:OH	2.32	0.47
1:XA:1187:G:N2	14:YN:60:SER:HB2	2.26	0.47
1:XA:1512:U:H3	1:XA:1523:G:H1	1.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.96	0.47
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.79	0.47
27:Y3:51:ALA:HA	27:Y3:54:VAL:HG12	1.95	0.47
33:Y9:14:CYS:CA	33:Y9:27:CYS:HB2	2.44	0.47
34:YA:671:C:H2'	34:YA:672:C:H6	1.79	0.47
34:YA:749:C:H5'	34:YA:1271:G:H1'	1.96	0.47
34:YA:860:U:C5	34:YA:2268:A:N7	2.83	0.47
34:YA:1838:C:N4	34:YA:1899:G:O4'	2.48	0.47
34:YA:1853:A:H2'	34:YA:1854:A:C8	2.49	0.47
34:YA:2197:U:H1'	34:YA:2198:A:C8	2.50	0.47
35:YB:24:G:O6	35:YB:56:G:O2'	2.26	0.47
40:YH:18:GLU:HB3	40:YH:25:LYS:HG2	1.97	0.47
45:YQ:55:VAL:HG22	54:YZ:178:GLU:HG2	1.97	0.47
47:YS:11:LYS:HG3	47:YS:15:ARG:HE	1.80	0.47
1:QA:106:C:C5	20:QT:15:ARG:NH1	2.83	0.47
1:QA:337:C:H2'	1:QA:338:A:C8	2.50	0.47
1:QA:986:A:C5'	19:QS:55:LYS:HG3	2.44	0.47
1:QA:1065:U:C4	1:QA:1190:G:H1'	2.49	0.47
1:QA:1109:C:H3'	1:QA:1110:A:H8	1.79	0.47
1:QA:1222:G:O3'	19:QS:78:ARG:NH2	2.48	0.47
1:QA:1236:A:P	21:QU:10:ARG:HD3	2.55	0.47
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.49	0.47
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.96	0.47
13:QM:26:GLY:O	13:QM:30:ALA:HB2	2.15	0.47
15:QO:26:GLU:HA	15:QO:29:VAL:HG12	1.97	0.47
34:RA:305:U:H2'	34:RA:306:U:C6	2.50	0.47
34:RA:442:G:H1'	38:RF:48:THR:HG21	1.96	0.47
34:RA:478:A:N6	34:RA:500:G:O2'	2.47	0.47
34:RA:482:A:H1'	34:RA:498:G:N2	2.30	0.47
34:RA:1416:G:H2'	34:RA:1417:C:C6	2.49	0.47
34:RA:1768:U:H2'	34:RA:1769:G:H8	1.79	0.47
34:RA:2152:G:H2'	34:RA:2153:G:C8	2.49	0.47
34:RA:2346:A:H5''	34:RA:2346:A:N3	2.30	0.47
34:RA:2691:C:H2'	34:RA:2692:C:C6	2.50	0.47
49:RU:6:THR:HG21	49:RU:10:ARG:HH12	1.80	0.47
51:RW:68:ARG:NH2	51:RW:109:GLU:OE2	2.48	0.47
1:XA:831:U:H2'	1:XA:832:C:C6	2.50	0.47
1:XA:1096:C:H2'	1:XA:1097:C:C6	2.49	0.47
1:XA:1294:G:H2'	1:XA:1295:G:C8	2.49	0.47
1:XA:1305:G:C4	1:XA:1331:G:C5	3.03	0.47
28:Y4:23:GLU:O	28:Y4:25:TYR:N	2.46	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:619:G:H3'	34:YA:620:G:H21	1.79	0.47
34:YA:1050:A:C8	34:YA:2751:G:C6	3.02	0.47
34:YA:1050:A:N7	34:YA:2751:G:N1	2.63	0.47
34:YA:1417:C:H2'	34:YA:1418:G:O4'	2.15	0.47
34:YA:2047:U:H2'	34:YA:2048:G:C8	2.49	0.47
34:YA:2406:U:C4	44:YP:75:ILE:HD11	2.50	0.47
34:YA:2804:C:H2'	34:YA:2805:G:C8	2.50	0.47
41:YI:88:ILE:HG22	41:YI:90:GLY:H	1.80	0.47
1:QA:115:G:H21	1:QA:117:G:H1	1.62	0.47
1:QA:625:G:H5'	16:QP:9:PHE:HB3	1.97	0.47
1:QA:673:G:H2'	1:QA:674:G:C8	2.49	0.47
1:QA:742:G:H4'	15:QO:58:MET:SD	2.55	0.47
1:QA:830:G:H2'	1:QA:831:U:C6	2.50	0.47
1:QA:1108:G:OP1	3:QC:174:PRO:HA	2.14	0.47
1:QA:1179:A:H2'	1:QA:1180:A:C8	2.50	0.47
1:QA:1352:C:H2'	1:QA:1353:G:C8	2.50	0.47
2:QB:134:GLU:HA	2:QB:137:ARG:HG2	1.96	0.47
4:QD:156:GLU:O	4:QD:160:GLN:N	2.48	0.47
7:QG:73:MET:HE3	7:QG:88:PRO:HB2	1.97	0.47
34:RA:181:A:H1'	34:RA:435:C:H5'	1.96	0.47
34:RA:303:U:H2'	34:RA:304:G:C8	2.50	0.47
34:RA:577:G:O2'	34:RA:1254:A:OP1	2.30	0.47
34:RA:611:C:H2'	34:RA:612:G:H8	1.80	0.47
34:RA:1728:G:H8	34:RA:1732:A:H62	1.61	0.47
34:RA:2036:C:H2'	34:RA:2037:G:H8	1.79	0.47
34:RA:2710:C:H2'	34:RA:2711:A:H8	1.79	0.47
34:RA:2751:G:P	34:RA:2751:G:H8	2.37	0.47
1:XA:34:C:H2'	1:XA:35:G:H8	1.80	0.47
1:XA:444:C:H2'	1:XA:445:G:C8	2.50	0.47
1:XA:649:G:H2'	1:XA:650:G:C8	2.49	0.47
1:XA:657:G:H21	15:XO:22:THR:CG2	2.27	0.47
1:XA:1253:G:N3	1:XA:1355:G:O2'	2.46	0.47
1:XA:1318:A:O2'	19:XS:11:VAL:HG13	2.09	0.47
11:XK:31:THR:HA	11:XK:42:TRP:HA	1.97	0.47
19:XS:4:SER:HB2	19:XS:7:LYS:HG2	1.95	0.47
31:Y7:12:ARG:NH1	34:YA:686:G:O6	2.47	0.47
33:Y9:31:LYS:HE2	34:YA:2528:U:H5'	1.97	0.47
34:YA:1154:G:OP2	49:YU:58:ARG:NH2	2.48	0.47
34:YA:2059:A:C2	34:YA:2503:A:N1	2.83	0.47
34:YA:2738:A:H2	34:YA:2766:G:H22	1.62	0.47
38:YF:157:VAL:HG13	38:YF:194:MET:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:97:U:H2'	1:QA:99:C:C2	2.50	0.46
1:QA:233:C:H2'	1:QA:234:C:H6	1.80	0.46
1:QA:806:C:H2'	1:QA:807:A:C8	2.50	0.46
1:QA:815:A:N6	1:QA:1509:C:H1'	2.30	0.46
1:QA:1195:C:H6	1:QA:1196:U:H4'	1.79	0.46
1:QA:1309:G:C4'	13:QM:77:ASN:HD21	2.24	0.46
1:QA:1422:G:H5'	43:RO:48:PRO:HG3	1.97	0.46
2:QB:197:VAL:C	8:QH:68:ARG:NH2	2.70	0.46
6:QF:24:GLU:OE1	6:QF:28:ARG:NH1	2.48	0.46
8:QH:108:GLY:HA3	8:QH:138:TRP:HB3	1.97	0.46
9:QL:26:VAL:HG12	9:QL:61:ALA:HB3	1.97	0.46
13:QM:108:ARG:HA	13:QM:111:LYS:HB2	1.97	0.46
25:R1:2:SER:O	25:R1:61:ARG:NH1	2.47	0.46
25:R1:90:ILE:HA	25:R1:94:LEU:HD11	1.92	0.46
34:RA:191:A:H2'	34:RA:192:C:H6	1.78	0.46
34:RA:1266:G:H1'	34:RA:1267:U:H5	1.80	0.46
34:RA:1569:A:H5'	36:RD:61:LEU:HD11	1.97	0.46
34:RA:2100:G:H1	34:RA:2189:U:H3	1.64	0.46
34:RA:2198:A:H5'	41:RI:33:ARG:HH12	1.79	0.46
34:RA:2260:C:HO2'	34:RA:2388:A:HO2'	1.58	0.46
34:RA:2308:G:H22	34:RA:2311:A:H2	1.63	0.46
34:RA:2351:G:H1'	34:RA:2367:G:H22	1.80	0.46
34:RA:2393:A:H4'	44:RP:61:ARG:O	2.15	0.46
34:RA:2841:C:H2'	34:RA:2842:G:C8	2.51	0.46
35:RB:93:C:H5''	54:RZ:20:ARG:HH21	1.80	0.46
37:RE:24:THR:HG21	37:RE:188:VAL:HG22	1.97	0.46
40:RH:11:VAL:HG12	40:RH:13:LYS:HG2	1.97	0.46
1:XA:186(B):C:O2	20:XT:105:SER:CA	2.62	0.46
1:XA:421:U:H4'	3:XC:192:THR:CG2	2.43	0.46
1:XA:978:A:H62	14:XN:18:VAL:CG2	2.28	0.46
1:XA:1057:G:H3'	1:XA:1058:G:H8	1.80	0.46
1:XA:1309:G:H2'	1:XA:1310:G:C8	2.50	0.46
2:XB:207:ALA:O	2:XB:210:SER:OG	2.28	0.46
8:XH:91:ARG:HG3	17:XQ:33:GLY:O	2.15	0.46
12:XL:12:ARG:HH21	12:XL:13:LYS:HE3	1.79	0.46
34:YA:144:C:H2'	34:YA:145:G:C8	2.50	0.46
34:YA:504:U:H5''	34:YA:505:A:H5'	1.98	0.46
34:YA:2863:C:H2'	34:YA:2864:G:H8	1.80	0.46
38:YF:12:LEU:HB3	38:YF:126:VAL:HG12	1.96	0.46
49:YU:94:ASN:C	49:YU:94:ASN:HD22	2.22	0.46
1:QA:625:G:H5''	16:QP:9:PHE:HB3	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:705:U:H3'	1:QA:706:A:C8	2.50	0.46
1:QA:757:U:H5''	1:QA:822:C:O2'	2.15	0.46
1:QA:758:G:H8	1:QA:758:G:O5'	1.99	0.46
1:QA:955:U:H2'	1:QA:956:U:O4'	2.15	0.46
1:QA:1313:U:C2'	19:QS:6:LYS:HZ3	2.25	0.46
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.97	0.46
10:QJ:12:ASP:O	10:QJ:16:LEU:HB3	2.16	0.46
34:RA:301:G:P	53:RY:84:ARG:HH22	2.38	0.46
34:RA:358:U:H2'	34:RA:359:A:H8	1.80	0.46
34:RA:1853:A:H2'	34:RA:1854:A:C8	2.49	0.46
34:RA:2417:C:OP1	44:RP:64:LYS:NZ	2.49	0.46
35:RB:74:U:H1'	54:RZ:34:ASN:ND2	2.29	0.46
1:XA:60:A:C2	1:XA:378:G:H1'	2.50	0.46
1:XA:191:G:N2	20:XT:103:GLY:O	2.27	0.46
1:XA:376:G:OP1	16:XP:67:THR:CG2	2.34	0.46
1:XA:1142:G:H3'	1:XA:1143:G:H8	1.80	0.46
1:XA:1303:C:H3'	1:XA:1304:G:C8	2.51	0.46
1:XA:1359:C:H41	14:XN:35:ARG:NE	2.13	0.46
1:XA:1495:U:O2'	1:XA:1496:C:H5'	2.16	0.46
34:YA:380:U:H2'	34:YA:381:G:C8	2.50	0.46
34:YA:475:U:H4'	34:YA:510:C:H5'	1.97	0.46
34:YA:671:C:H2'	34:YA:672:C:C6	2.49	0.46
34:YA:1466:G:H3'	34:YA:1547:C:H41	1.80	0.46
34:YA:2045:C:H2'	34:YA:2046:G:H8	1.81	0.46
34:YA:2142:C:H2'	34:YA:2143:C:C6	2.51	0.46
42:YN:16:ILE:HG21	42:YN:26:LEU:HD11	1.97	0.46
44:YP:98:GLU:HA	44:YP:101:VAL:HG12	1.96	0.46
1:QA:417:C:H2'	1:QA:418:C:C6	2.50	0.46
1:QA:866:C:H4'	1:QA:919:A:H5'	1.97	0.46
1:QA:980:C:H6	14:QN:19:ARG:HG3	1.63	0.46
1:QA:1150:U:C2	10:QJ:39:PRO:HG2	2.50	0.46
1:QA:1203:C:H5'	14:QN:3:ARG:HD2	1.97	0.46
1:QA:1235:U:HO2'	21:QU:3:LYS:HG3	1.79	0.46
1:QA:1373:G:P	9:QI:11:LYS:HZ1	2.37	0.46
1:QA:1524:C:H2'	1:QA:1525:G:C8	2.50	0.46
3:QC:66:VAL:HB	3:QC:101:LEU:HG	1.98	0.46
8:QH:121:ASP:OD2	8:QH:125:ARG:NH1	2.48	0.46
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.96	0.46
32:R8:46:ARG:NH1	34:RA:631:A:OP2	2.48	0.46
34:RA:456:C:C5	52:RX:69:TYR:CZ	3.03	0.46
34:RA:462:C:H2'	34:RA:463:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:464:U:N3	34:RA:684:G:O2'	2.46	0.46
34:RA:1827:C:OP2	36:RD:222:ARG:NH1	2.49	0.46
34:RA:2031:A:N3	34:RA:2455:G:O2'	2.43	0.46
34:RA:2447:G:H1	34:RA:2451:A:H62	1.63	0.46
40:RH:123:PHE:HE2	40:RH:133:VAL:HG22	1.80	0.46
40:RH:126:PRO:HG2	40:RH:130:ARG:HG3	1.96	0.46
46:RR:28:LEU:HD23	46:RR:48:VAL:HG21	1.98	0.46
1:XA:891:U:H2'	1:XA:892:A:C8	2.49	0.46
1:XA:926:G:N2	23:XX:18:C:OP2	2.48	0.46
1:XA:1351:U:H2'	1:XA:1352:C:C6	2.50	0.46
1:XA:1392:G:H2'	1:XA:1393:U:C6	2.50	0.46
12:XL:8:ASN:O	12:XL:12:ARG:HB2	2.15	0.46
16:XP:20:VAL:HG12	16:XP:35:LYS:HA	1.97	0.46
22:XV:56:C:N4	34:YA:2112:G:O6	2.48	0.46
34:YA:192:C:H1'	34:YA:800:A:N6	2.31	0.46
34:YA:383:U:H2'	34:YA:385:C:C5	2.50	0.46
34:YA:553:U:H2'	34:YA:554:U:C6	2.51	0.46
34:YA:920:G:H2'	34:YA:921:G:C8	2.51	0.46
34:YA:2102:U:H2'	34:YA:2103:C:C6	2.49	0.46
34:YA:2688:U:H2'	34:YA:2719:G:N2	2.30	0.46
34:YA:2831:G:H1'	34:YA:2883:A:H2'	1.98	0.46
38:YF:60:SER:OG	38:YF:61:GLY:N	2.49	0.46
1:QA:341:C:H2'	1:QA:342:C:C6	2.50	0.46
1:QA:404:U:H5'	4:QD:122:ARG:HG2	1.97	0.46
1:QA:657:G:H21	15:QO:23:GLY:HA3	1.80	0.46
1:QA:668:G:H1'	15:QO:49:ASP:HB2	1.97	0.46
1:QA:1330:U:H5''	13:QM:24:GLY:HA2	1.97	0.46
2:QB:197:VAL:O	8:QH:68:ARG:NH1	2.49	0.46
8:QH:21:LYS:O	8:QH:65:TYR:OH	2.25	0.46
32:R8:8:LYS:HG3	34:RA:246:C:N4	2.31	0.46
32:R8:13:ARG:HD2	44:RP:61:ARG:HE	1.80	0.46
34:RA:413:C:H2'	34:RA:414:C:C6	2.49	0.46
34:RA:839:U:H2'	34:RA:840:C:C6	2.50	0.46
34:RA:1058:G:H2'	34:RA:1059:G:C8	2.50	0.46
34:RA:1802:A:H2'	34:RA:1803:A:C8	2.50	0.46
34:RA:1940:U:OP1	34:RA:1965:C:N4	2.48	0.46
34:RA:2291:U:H2'	34:RA:2292:C:H6	1.79	0.46
34:RA:2443:C:H2'	34:RA:2444:G:C8	2.50	0.46
34:RA:2647:U:H2'	34:RA:2648:C:C6	2.50	0.46
34:RA:2819:G:H2'	34:RA:2821:A:N7	2.30	0.46
38:RF:24:LEU:HD12	38:RF:115:ALA:HB2	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:RR:35:THR:O	46:RR:35:THR:OG1	2.33	0.46
1:XA:665:A:N3	1:XA:732:C:H2'	2.30	0.46
1:XA:768:A:H1'	1:XA:1512:U:H1'	1.98	0.46
1:XA:951:G:H2'	1:XA:952:U:C6	2.51	0.46
1:XA:1131:G:H2'	1:XA:1132:C:C6	2.49	0.46
1:XA:1330:U:H5''	13:XM:24:GLY:O	2.14	0.46
1:XA:1479:C:H2'	1:XA:1480:G:C8	2.50	0.46
2:XB:188:ALA:HB3	2:XB:200:ILE:HD11	1.97	0.46
6:XF:62:TRP:CD1	18:XR:35:ARG:HH22	2.33	0.46
34:YA:270(E):C:H2'	34:YA:270(F):G:C8	2.51	0.46
34:YA:514:A:H2'	34:YA:515:A:C8	2.50	0.46
34:YA:839:U:H1'	34:YA:1191:G:H1'	1.96	0.46
34:YA:1454:U:H5	46:YR:73:VAL:HG12	1.80	0.46
41:YI:72:LEU:HD12	41:YI:138:ILE:HD12	1.97	0.46
1:QA:44:G:OP2	16:QP:12:LYS:HD3	2.15	0.46
1:QA:186(B):C:N1	20:QT:85:MET:CE	2.76	0.46
1:QA:309:G:C5'	16:QP:27:LYS:HZ3	2.29	0.46
1:QA:617:G:H21	16:QP:14:ASN:HD22	1.63	0.46
1:QA:877:C:H5''	8:QH:88:LYS:CD	2.46	0.46
1:QA:958:A:C4	19:QS:55:LYS:HB2	2.51	0.46
1:QA:958:A:H61	19:QS:77:THR:HB	1.80	0.46
1:QA:986:A:C4	19:QS:54:GLY:O	2.68	0.46
1:QA:1347:G:O2'	1:QA:1373:G:N1	2.44	0.46
1:QA:1514:C:H2'	1:QA:1515:C:C6	2.51	0.46
3:QC:9:GLY:HA3	14:QN:49:HIS:O	2.16	0.46
5:QE:98:THR:N	5:QE:117:ASP:OD1	2.40	0.46
34:RA:85:G:O2'	34:RA:103:A:N1	2.44	0.46
34:RA:532:A:O2'	34:RA:2021:C:N4	2.47	0.46
34:RA:675:A:C2'	38:RF:67:GLN:HE22	2.28	0.46
34:RA:917:A:H3'	34:RA:918:A:H8	1.79	0.46
34:RA:1662:C:H1'	34:RA:2687:U:H5''	1.97	0.46
34:RA:2037:G:H2'	34:RA:2038:G:C8	2.50	0.46
34:RA:2398:U:H2'	34:RA:2399:G:C8	2.51	0.46
34:RA:2844:G:H3'	34:RA:2845:G:H8	1.81	0.46
38:RF:34:TRP:HB2	44:RP:6:LEU:HB3	1.98	0.46
41:RI:88:ILE:HG22	41:RI:90:GLY:N	2.31	0.46
1:XA:115:G:H1'	1:XA:116:A:OP2	2.15	0.46
1:XA:163:C:H2'	1:XA:164:U:C6	2.51	0.46
1:XA:320:C:H2'	1:XA:321:A:C8	2.51	0.46
1:XA:324:G:H2'	1:XA:326:G:N7	2.29	0.46
1:XA:417:C:H2'	1:XA:418:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:754:C:C6	15:XO:69:TYR:CZ	2.98	0.46
1:XA:777:A:H2'	1:XA:778:G:O4'	2.15	0.46
1:XA:1016:A:H1'	1:XA:1218:C:O2	2.16	0.46
1:XA:1301:U:O3'	13:XM:17:VAL:CG2	2.64	0.46
7:XG:75:VAL:HA	7:XG:87:VAL:O	2.16	0.46
31:Y7:3:ARG:NE	34:YA:1613:G:O2'	2.45	0.46
32:Y8:4:MET:HG2	34:YA:592:G:O2'	2.16	0.46
34:YA:247:G:H4'	34:YA:386:G:C4	2.50	0.46
34:YA:2232:U:H2'	34:YA:2233:U:C6	2.50	0.46
34:YA:2855:C:H2'	34:YA:2856:C:H6	1.80	0.46
54:YZ:185:GLU:O	54:YZ:186:GLU:C	2.58	0.46
1:QA:757:U:H2'	1:QA:758:G:O4'	2.16	0.46
1:QA:761:G:C5'	17:QQ:100:LYS:HZ3	2.20	0.46
1:QA:975:A:C2	14:QN:34:TYR:HD1	2.29	0.46
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.50	0.46
1:QA:1372:U:OP1	9:QI:68:GLY:C	2.54	0.46
1:QA:1440(O):C:H2'	1:QA:1440(P):A:C8	2.51	0.46
16:QP:59:TRP:HA	16:QP:62:VAL:HG22	1.97	0.46
33:R9:18:ARG:HD3	34:RA:1034:G:H4'	1.97	0.46
34:RA:910:A:H2'	34:RA:911:A:C8	2.50	0.46
34:RA:1026:U:H1'	34:RA:1027:A:H5''	1.98	0.46
34:RA:1689:A:H62	34:RA:1698:A:H2	1.64	0.46
37:RE:14:ILE:HD11	37:RE:173:VAL:HG11	1.97	0.46
52:RX:72:LYS:NZ	52:RX:73:ARG:O	2.38	0.46
1:XA:59:A:N3	1:XA:59:A:H2'	2.31	0.46
1:XA:113:G:H2'	1:XA:114:U:C6	2.50	0.46
1:XA:578:C:O2'	1:XA:728:A:N3	2.47	0.46
1:XA:713:G:H2'	1:XA:714:G:C8	2.51	0.46
1:XA:1270:C:H4'	1:XA:1314:C:H5'	1.98	0.46
1:XA:1304:G:C8	1:XA:1304:G:C5'	2.85	0.46
1:XA:1327:C:H2'	1:XA:1328:C:C6	2.51	0.46
1:XA:1367:C:H4'	10:XJ:48:THR:HG21	1.98	0.46
1:XA:1375:A:C4'	7:XG:28:ASN:OD1	2.62	0.46
2:XB:118:LEU:HB3	2:XB:142:LEU:HD13	1.98	0.46
34:YA:523:C:O2	34:YA:553:U:O2'	2.34	0.46
34:YA:851:U:H2'	34:YA:852:G:C8	2.50	0.46
34:YA:1454:U:OP1	46:YR:77:ARG:NE	2.35	0.46
34:YA:1566:A:N6	36:YD:214:TRP:CH2	2.83	0.46
34:YA:1772:G:N2	34:YA:1774:C:H5'	2.31	0.46
34:YA:2069:G:C2	34:YA:2443:C:O2	2.68	0.46
34:YA:2439:A:H1'	34:YA:2587:A:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YF:41:LEU:HA	38:YF:44:ARG:HG2	1.98	0.46
40:YH:89:ILE:HD11	40:YH:94:TYR:HB3	1.98	0.46
1:QA:191:G:HO2'	20:QT:103:GLY:H	1.64	0.46
1:QA:955:U:H2'	19:QS:83:HIS:HA	1.97	0.46
1:QA:1004:A:N6	1:QA:1025:U:O3'	2.49	0.46
1:QA:1359:C:OP2	14:QN:35:ARG:NH1	2.49	0.46
10:QJ:50:ILE:HG12	14:QN:41:ARG:HE	1.71	0.46
34:RA:212:G:H2'	34:RA:213:A:C8	2.50	0.46
34:RA:244:A:C2	34:RA:245:G:H1'	2.51	0.46
34:RA:303:U:H2'	34:RA:304:G:H8	1.81	0.46
34:RA:598:G:H5'	44:RP:11:GLY:HA3	1.97	0.46
34:RA:1791:A:N6	34:RA:1828:G:O2'	2.41	0.46
42:RN:3:THR:HG21	49:RU:61:TRP:HE1	1.79	0.46
52:RX:90:GLU:HA	52:RX:93:GLU:HG2	1.97	0.46
54:RZ:67:LEU:HD13	54:RZ:68:PRO:HD2	1.96	0.46
1:XA:160:A:H2'	1:XA:161:A:O4'	2.15	0.46
1:XA:186(O):U:H2'	1:XA:186(P):G:C8	2.51	0.46
1:XA:620:C:C1'	4:XD:135:LEU:HD13	2.46	0.46
1:XA:674:G:H2'	1:XA:675:A:H8	1.81	0.46
1:XA:702:A:H3'	1:XA:703:G:C8	2.48	0.46
1:XA:896:C:H2'	1:XA:897:C:H6	1.81	0.46
1:XA:1124:G:H2'	1:XA:1145:C:N3	2.30	0.46
1:XA:1228:C:OP1	13:XM:108:ARG:NH2	2.49	0.46
4:XD:18:LYS:HZ3	4:XD:33:MET:HG3	1.81	0.46
8:XH:86:ILE:HD12	8:XH:135:CYS:HA	1.97	0.46
10:XJ:40:LEU:HD13	10:XJ:70:ARG:HA	1.98	0.46
26:Y2:28:LYS:HD3	26:Y2:28:LYS:HA	1.77	0.46
34:YA:259:G:H21	34:YA:621:A:H1'	1.81	0.46
34:YA:2064:C:H1'	34:YA:2450:A:C2	2.51	0.46
34:YA:2730:C:H2'	34:YA:2731:G:C8	2.50	0.46
34:YA:2820:A:C6	46:YR:4:LEU:HD11	2.50	0.46
42:YN:47:ALA:HB2	42:YN:112:LEU:HD11	1.98	0.46
43:YO:80:ASP:OD2	48:YT:64:ARG:NH2	2.48	0.46
1:QA:140:A:H2'	1:QA:141:A:C8	2.51	0.46
1:QA:260:G:H2'	1:QA:261:U:C6	2.51	0.46
1:QA:414:A:H3'	1:QA:415:A:H8	1.80	0.46
1:QA:687:A:O2'	1:QA:701:C:N4	2.48	0.46
1:QA:715:A:OP1	1:QA:805:C:O2'	2.31	0.46
1:QA:775:G:N2	1:QA:804:U:O4	2.47	0.46
1:QA:947:G:H2'	1:QA:948:C:C6	2.51	0.46
1:QA:977:A:O2'	1:QA:981:U:O4	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1382:C:H2'	1:QA:1383:C:O4'	2.16	0.46
34:RA:236:C:H2'	34:RA:237:C:C6	2.51	0.46
34:RA:270(G):U:H2'	34:RA:270(H):C:C6	2.51	0.46
34:RA:1147:C:H2'	34:RA:1148:A:C8	2.51	0.46
34:RA:1332:G:N2	34:RA:1609:A:O2'	2.49	0.46
34:RA:1853:A:H2'	34:RA:1854:A:H8	1.81	0.46
34:RA:1927:A:H2'	34:RA:1928:A:C8	2.51	0.46
34:RA:2574:G:H1'	37:RE:143:ASN:HB3	1.97	0.46
38:RF:56:GLU:OE2	38:RF:93:LYS:NZ	2.49	0.46
40:RH:84:SER:HA	40:RH:134:SER:HA	1.97	0.46
1:XA:68(G):C:H2'	1:XA:68(H):G:C8	2.50	0.46
1:XA:370:C:H2'	1:XA:371:G:C8	2.50	0.46
1:XA:445:G:H2'	1:XA:446:G:C8	2.51	0.46
1:XA:718:G:H3'	1:XA:719:C:C6	2.51	0.46
1:XA:728:A:N7	15:XO:54:ARG:CD	2.78	0.46
1:XA:745:C:H1'	1:XA:836:G:H1'	1.98	0.46
1:XA:948:C:OP1	13:XM:106:ASN:HB3	2.16	0.46
11:XK:108:ILE:O	18:XR:87:ARG:CA	2.64	0.46
33:Y9:20:HIS:CE1	34:YA:2756:U:H3'	2.51	0.46
34:YA:842:G:H2'	34:YA:843:G:H8	1.80	0.46
34:YA:1468:C:H2'	34:YA:1469:A:C8	2.51	0.46
34:YA:2096:U:H3	34:YA:2193:G:N2	2.13	0.46
34:YA:2232:U:H2'	34:YA:2233:U:H6	1.81	0.46
34:YA:2533:A:OP1	34:YA:2665:A:O2'	2.33	0.46
1:QA:106:C:H2'	1:QA:107:G:H8	1.81	0.46
1:QA:346:G:OP1	48:RT:41:ARG:NH2	2.48	0.46
1:QA:500:G:H1'	1:QA:547:A:N1	2.31	0.46
1:QA:568:G:N7	12:QL:5:PRO:HD3	2.31	0.46
1:QA:730:G:N3	1:QA:765:G:H4'	2.31	0.46
1:QA:1106:G:C4'	3:QC:172:ARG:CG	2.15	0.46
1:QA:1109:C:H3'	1:QA:1110:A:C8	2.51	0.46
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.81	0.46
1:QA:1307:U:H5''	13:QM:99:ARG:CZ	2.46	0.46
3:QC:22:TRP:CA	10:QJ:93:GLY:CA	2.84	0.46
4:QD:22:LYS:HG3	56:QD:301:SF4:S1	2.56	0.46
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.47	0.46
33:R9:11:CYS:N	33:R9:14:CYS:SG	2.83	0.46
34:RA:1351:C:H2'	34:RA:1352:U:C6	2.51	0.46
34:RA:1657:C:O3'	37:RE:133:LYS:HG2	2.16	0.46
34:RA:1952:A:OP1	43:RO:42:SER:OG	2.32	0.46
34:RA:2036:C:H2'	34:RA:2037:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2260:C:O2'	34:RA:2388:A:O2'	2.28	0.46
34:RA:2757:A:N1	40:RH:67:LEU:HD13	2.31	0.46
35:RB:31:C:H4'	39:RG:29:TRP:CH2	2.51	0.46
51:RW:86:LEU:HD22	51:RW:96:ILE:HD11	1.98	0.46
1:XA:450:G:H5''	1:XA:451:A:H3'	1.98	0.46
1:XA:996:A:H2'	1:XA:997:U:C6	2.51	0.46
1:XA:1157:A:C2	1:XA:1181:G:H1'	2.51	0.46
1:XA:1312:G:C2'	19:XS:6:LYS:NZ	2.68	0.46
5:XE:151:LEU:O	8:XH:64:LYS:NZ	2.49	0.46
13:XM:45:VAL:HG23	13:XM:48:LEU:HD12	1.98	0.46
31:Y7:35:ARG:NH1	34:YA:54:G:O2'	2.38	0.46
34:YA:98:G:H1'	34:YA:103:A:H1'	1.98	0.46
34:YA:442:G:N2	38:YF:48:THR:OG1	2.48	0.46
34:YA:2688:U:H1'	34:YA:2721:A:N6	2.31	0.46
40:YH:137:ASP:OD2	40:YH:138:LYS:N	2.48	0.46
43:YO:64:ARG:HB2	43:YO:83:ALA:HB3	1.98	0.46
48:YT:91:ARG:NH2	48:YT:124:ASP:OD2	2.48	0.46
1:QA:18:C:H42	1:QA:917:G:H1	1.64	0.46
1:QA:521:G:OP1	12:QL:73:GLU:HA	2.16	0.46
1:QA:958:A:N6	19:QS:77:THR:C	2.71	0.46
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.97	0.46
2:QB:178:ARG:HH21	8:QH:70:GLN:HA	1.81	0.46
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.15	0.46
4:QD:57:ARG:HB3	4:QD:206:PHE:HB2	1.97	0.46
4:QD:72:GLU:OE2	4:QD:207:TYR:OH	2.29	0.46
6:QF:33:TYR:OH	6:QF:78:GLU:OE1	2.30	0.46
16:QP:4:ILE:HD13	16:QP:21:VAL:HG12	1.97	0.46
18:QR:74:ARG:HD3	18:QR:81:PHE:HA	1.98	0.46
28:R4:26:SER:OG	39:RG:143:GLU:CD	2.52	0.46
34:RA:1539:G:H2'	34:RA:1540:G:C8	2.51	0.46
34:RA:1689:A:H2'	34:RA:1690:A:C8	2.51	0.46
34:RA:2318:G:OP2	34:RA:2318:G:N2	2.48	0.46
34:RA:2530:A:O2'	34:RA:2534:A:N6	2.48	0.46
34:RA:2554:U:H2'	34:RA:2555:U:C6	2.51	0.46
38:RF:182:ASN:OD1	38:RF:182:ASN:N	2.46	0.46
49:RU:45:TYR:O	49:RU:49:HIS:ND1	2.49	0.46
1:XA:129(B):G:H4'	1:XA:130:A:H5''	1.98	0.46
1:XA:663:A:H2'	1:XA:664:G:C8	2.51	0.46
1:XA:669:U:H1'	15:XO:46:HIS:CE1	2.50	0.46
1:XA:697:U:H1'	1:XA:786:G:H1'	1.97	0.46
1:XA:739:C:P	15:XO:2:PRO:HD3	2.56	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1347:G:H8	9:XI:108:VAL:C	2.24	0.46
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.50	0.46
2:XB:27:LYS:HD2	2:XB:193:ASP:HB2	1.97	0.46
10:XJ:50:ILE:CD1	14:XN:41:ARG:NH1	2.79	0.46
12:XL:53:ARG:HB3	12:XL:69:TYR:HE1	1.79	0.46
22:XV:50:G:H2'	22:XV:51:A:H8	1.81	0.46
32:Y8:34:TRP:HD1	34:YA:2420:C:OP1	1.98	0.46
34:YA:691:C:H2'	34:YA:692:C:C6	2.50	0.46
34:YA:1380:G:O2'	34:YA:1569:A:N6	2.49	0.46
34:YA:1493:C:N4	34:YA:2210:G:N9	2.61	0.46
34:YA:1493:C:C6	34:YA:2210:G:C6	3.04	0.46
34:YA:1645:G:H5''	34:YA:1646:C:H5'	1.98	0.46
34:YA:2043:C:N4	34:YA:2625:G:H1	2.13	0.46
34:YA:2291:U:H2'	34:YA:2292:C:C6	2.51	0.46
34:YA:2801:A:C5	34:YA:2802:G:H1'	2.51	0.46
45:YQ:133:ARG:HG3	45:YQ:134:ARG:H	1.80	0.46
54:YZ:74:VAL:HG22	54:YZ:86:VAL:HG23	1.97	0.46
1:QA:538:G:H2'	1:QA:539:A:C8	2.51	0.45
1:QA:612:C:H2'	1:QA:613:C:C6	2.51	0.45
1:QA:784:C:H2'	1:QA:785:G:C8	2.51	0.45
1:QA:956:U:C5'	19:QS:83:HIS:HA	2.46	0.45
1:QA:1294:G:H2'	1:QA:1295:G:H8	1.81	0.45
1:QA:1359:C:H4'	1:QA:1362(A):C:N4	2.31	0.45
2:QB:73:THR:O	2:QB:75:LYS:NZ	2.50	0.45
3:QC:5:ILE:CG2	14:QN:45:ARG:NH2	2.78	0.45
7:QG:70:LYS:HB2	7:QG:96:GLN:HB3	1.98	0.45
32:R8:13:ARG:HG2	44:RP:63:PRO:HB3	1.98	0.45
32:R8:29:LYS:O	32:R8:31:HIS:N	2.46	0.45
34:RA:689:A:H2'	34:RA:690:G:C8	2.51	0.45
34:RA:748:G:OP1	51:RW:88:ARG:NH2	2.40	0.45
34:RA:956:G:H2'	34:RA:957:A:H2'	1.98	0.45
34:RA:1102:C:H2'	34:RA:1103:A:H8	1.81	0.45
34:RA:2081:C:H2'	34:RA:2082:A:C8	2.51	0.45
37:RE:46:ALA:HB1	37:RE:80:GLU:HG2	1.99	0.45
46:RR:38:VAL:HG12	46:RR:112:ALA:HB2	1.96	0.45
49:RU:27:LEU:HD22	49:RU:31:SER:HB2	1.97	0.45
1:XA:376:G:H1	1:XA:387:U:H3	1.64	0.45
1:XA:445:G:H2'	1:XA:446:G:H8	1.80	0.45
1:XA:858:G:H3'	1:XA:869:G:H1	1.81	0.45
1:XA:974:A:O5'	14:XN:31:ARG:HD3	2.16	0.45
1:XA:983:A:H2	1:XA:984:C:C6	2.33	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1242:C:H4'	1:XA:1303:C:H4'	1.98	0.45
1:XA:1318:A:O3'	19:XS:11:VAL:HG11	2.15	0.45
1:XA:1439:C:H2'	1:XA:1440(A):C:H6	1.81	0.45
6:XF:94:GLN:NE2	18:XR:32:ARG:NH1	2.65	0.45
34:YA:270(G):U:H2'	34:YA:270(H):C:C6	2.51	0.45
34:YA:443:A:C5	38:YF:45:ARG:HD3	2.51	0.45
34:YA:919:G:C5	34:YA:2268:A:C6	2.74	0.45
34:YA:2408:U:H2'	34:YA:2409:G:C8	2.51	0.45
48:YT:16:ARG:HH21	48:YT:81:PRO:HA	1.80	0.45
1:QA:64:G:H1'	1:QA:67:C:H41	1.81	0.45
1:QA:235:C:O2'	17:QQ:4:LYS:HE3	2.17	0.45
1:QA:659:U:OP1	15:QO:8:LYS:HD3	2.16	0.45
1:QA:1065:U:H5''	1:QA:1190:G:H21	1.82	0.45
1:QA:1375:A:H3'	1:QA:1376:U:C6	2.51	0.45
7:QG:31:MET:HE2	7:QG:34:GLY:HA2	1.99	0.45
8:QH:91:ARG:NE	17:QQ:32:TYR:O	2.41	0.45
10:QJ:50:ILE:HD11	14:QN:41:ARG:NE	2.22	0.45
15:QO:39:LEU:HD22	15:QO:56:LEU:HD13	1.97	0.45
34:RA:2320:A:N6	34:RA:2333:A:H2'	2.31	0.45
1:XA:109:A:C8	1:XA:326:G:H2'	2.51	0.45
1:XA:320:C:H2'	1:XA:321:A:H8	1.82	0.45
1:XA:427:U:OP2	4:XD:36:ARG:NH1	2.49	0.45
1:XA:876:G:H1'	8:XH:11:THR:HG21	1.98	0.45
1:XA:1185:G:H2'	1:XA:1186:G:O4'	2.16	0.45
1:XA:1305:G:C2'	1:XA:1331:G:N2	2.64	0.45
6:XF:100:ASN:O	18:XR:28:GLU:HG3	2.15	0.45
9:XI:28:VAL:HG12	9:XI:63:ILE:HB	1.98	0.45
29:Y5:4:HIS:O	34:YA:2056:G:N2	2.50	0.45
34:YA:1461:G:P	34:YA:1461:G:H8	2.39	0.45
34:YA:1925:C:H2'	34:YA:1926:U:C6	2.51	0.45
34:YA:2157:G:O2'	34:YA:2158:A:O4'	2.34	0.45
46:YR:33:ARG:HA	46:YR:114:VAL:O	2.16	0.45
1:QA:345:C:H1'	1:QA:346:G:C2	2.52	0.45
1:QA:1105:A:H2'	1:QA:1106:G:H8	1.82	0.45
1:QA:1157:A:N6	1:QA:1178:G:N3	2.65	0.45
1:QA:1306:A:H1'	1:QA:1332:A:C5	2.52	0.45
13:QM:87:TYR:OH	13:QM:91:ARG:NH2	2.47	0.45
15:QO:89:GLY:OXT	34:RA:716:A:P	2.73	0.45
34:RA:581:C:H2'	34:RA:582:G:H8	1.79	0.45
34:RA:995:C:H5''	49:RU:54:LYS:HG2	1.98	0.45
34:RA:1173:G:H1'	34:RA:1175:U:O2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1278:A:H2'	34:RA:1279:G:C8	2.51	0.45
34:RA:1336:A:H2'	34:RA:1337:G:C8	2.50	0.45
1:XA:528:C:N4	12:XL:49:ASN:CG	2.70	0.45
1:XA:715:A:H2'	1:XA:716:A:C8	2.51	0.45
1:XA:1307:U:H2'	1:XA:1308:U:C6	2.51	0.45
2:XB:68:ILE:HG22	2:XB:161:ALA:HB3	1.98	0.45
4:XD:21:LEU:N	4:XD:26:CYS:SG	2.89	0.45
5:XE:101:ILE:O	5:XE:120:THR:OG1	2.30	0.45
12:XL:46:LYS:HG3	12:XL:48:PRO:HD2	1.98	0.45
20:XT:58:LYS:O	20:XT:61:SER:OG	2.29	0.45
34:YA:191:A:H1'	34:YA:679:C:H1'	1.97	0.45
34:YA:195:A:H2'	34:YA:198:C:H42	1.80	0.45
34:YA:376:C:H2'	34:YA:377:C:C6	2.51	0.45
34:YA:1173:G:H4'	34:YA:1174:A:C8	2.51	0.45
34:YA:1399:C:H2'	34:YA:1400:G:C8	2.52	0.45
34:YA:2010:G:H5''	51:YW:42:ARG:HB2	1.98	0.45
34:YA:2077:A:C5	34:YA:2435:A:C5	3.04	0.45
34:YA:2439:A:N7	34:YA:2586:C:H4'	2.31	0.45
34:YA:2630:G:H2'	34:YA:2631:G:C8	2.52	0.45
34:YA:2773:C:H2'	34:YA:2774:C:H6	1.81	0.45
34:YA:2809:A:H2'	34:YA:2810:A:C8	2.52	0.45
34:YA:2844:G:H3'	34:YA:2845:G:H8	1.81	0.45
44:YP:96:THR:HG22	44:YP:99:LEU:HD22	1.98	0.45
54:YZ:149:SER:OG	54:YZ:172:ALA:O	2.27	0.45
1:QA:730:G:N2	1:QA:765:G:H5''	2.32	0.45
1:QA:967:C:H5'	1:QA:968:A:C4	2.51	0.45
1:QA:1038:C:H2'	1:QA:1039:C:C6	2.52	0.45
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.51	0.45
1:QA:1307:U:OP1	13:QM:99:ARG:HB2	2.16	0.45
1:QA:1359:C:C6	14:QN:35:ARG:CZ	3.00	0.45
2:QB:178:ARG:NH1	2:QB:196:LEU:O	2.49	0.45
4:QD:208:SER:HB2	5:QE:101:ILE:CD1	2.42	0.45
12:QL:7:ILE:CD1	17:QQ:32:TYR:HB3	2.20	0.45
24:R0:34:GLY:HA3	34:RA:2353:G:H1'	1.98	0.45
34:RA:347:A:H2'	34:RA:348:G:C8	2.52	0.45
34:RA:1470:G:O2'	34:RA:1522:G:O6	2.34	0.45
34:RA:2228:G:OP1	36:RD:261:LYS:NZ	2.44	0.45
34:RA:2692:C:O2	34:RA:2847:U:O2'	2.29	0.45
36:RD:247:ALA:HA	36:RD:253:GLN:HA	1.98	0.45
39:RG:68:PRO:HB3	39:RG:92:VAL:HB	1.98	0.45
41:RI:123:LEU:HD12	41:RI:142:VAL:HG13	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RP:28:GLY:C	44:RP:30:THR:H	2.24	0.45
51:RW:76:VAL:HG22	51:RW:103:ILE:HG23	1.98	0.45
53:RY:28:LYS:HG3	53:RY:40:GLU:HG2	1.99	0.45
1:XA:68(I):G:N2	1:XA:68(S):C:N3	2.65	0.45
1:XA:309:G:O4'	1:XA:608:A:C2	2.70	0.45
1:XA:1142:G:C2	1:XA:1143:G:H1'	2.51	0.45
1:XA:1411:C:H2'	1:XA:1412:C:C6	2.52	0.45
7:XG:139:GLU:OE1	7:XG:143:ARG:NH2	2.49	0.45
10:XJ:16:LEU:CB	10:XJ:70:ARG:HH12	2.27	0.45
34:YA:106:C:H2'	34:YA:107:C:C6	2.52	0.45
34:YA:1040:C:H2'	34:YA:1041:C:C6	2.51	0.45
34:YA:1153:C:H5'	49:YU:76:TYR:HE2	1.82	0.45
34:YA:1535:U:N3	34:YA:1537:C:H1'	2.32	0.45
34:YA:2025:C:H2'	34:YA:2026:C:C6	2.51	0.45
34:YA:2044:C:N3	34:YA:2625:G:N3	2.62	0.45
34:YA:2368:C:H2'	34:YA:2369:A:C8	2.52	0.45
34:YA:2641:G:H2'	34:YA:2642:G:C8	2.51	0.45
34:YA:2692:C:H2'	34:YA:2693:A:C8	2.51	0.45
41:YI:4:ILE:HG22	41:YI:18:VAL:HB	1.98	0.45
1:QA:186(A):C:O2'	20:QT:85:MET:SD	2.59	0.45
1:QA:235:C:H2'	1:QA:236:G:C8	2.52	0.45
1:QA:403:C:H4'	4:QD:122:ARG:HD3	1.97	0.45
1:QA:958:A:N7	19:QS:79:THR:CG2	2.80	0.45
4:QD:205:GLU:CD	5:QE:107:ARG:NH1	2.74	0.45
10:QJ:48:THR:HG22	10:QJ:62:HIS:HB3	1.98	0.45
10:QJ:67:THR:O	10:QJ:67:THR:OG1	2.32	0.45
34:RA:1930:G:H2'	34:RA:1968:G:N1	2.30	0.45
34:RA:2071:A:H2'	34:RA:2072:G:H8	1.81	0.45
36:RD:13:ARG:NH1	36:RD:16:MET:SD	2.90	0.45
40:RH:98:LEU:CG	40:RH:125:VAL:CG1	2.91	0.45
40:RH:124:GLU:HG3	40:RH:124:GLU:O	2.17	0.45
43:RO:63:VAL:HB	43:RO:102:VAL:HG13	1.98	0.45
1:XA:68(N):U:H2'	1:XA:68(O):U:O4'	2.16	0.45
1:XA:341:C:H2'	1:XA:342:C:C6	2.52	0.45
1:XA:601:C:H2'	1:XA:602:A:C8	2.52	0.45
1:XA:718:G:H3'	1:XA:719:C:H6	1.81	0.45
1:XA:1028(B):C:H2'	1:XA:1028(C):C:H5	1.81	0.45
1:XA:1081:G:OP1	5:XE:18:ARG:HB3	2.17	0.45
1:XA:1124:G:O5'	10:XJ:36:GLY:CA	2.65	0.45
1:XA:1360:A:C1'	14:XN:17:LYS:HG3	2.46	0.45
1:XA:1405:G:H2'	1:XA:1406:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1505:G:C1'	23:XX:15:A:H2	2.29	0.45
4:XD:162:LEU:HD12	4:XD:178:VAL:HG13	1.98	0.45
6:XF:36:ARG:NH2	6:XF:38:GLU:OE2	2.49	0.45
12:XL:110:VAL:H	12:XL:122:THR:HG22	1.82	0.45
25:Y1:40:ARG:HG2	25:Y1:41:ARG:H	1.81	0.45
34:YA:286:C:H2'	34:YA:287:C:C6	2.52	0.45
34:YA:834:C:H2'	34:YA:835:A:C8	2.51	0.45
34:YA:1165:U:H2'	34:YA:1166:C:C6	2.52	0.45
34:YA:2031:A:N3	34:YA:2455:G:O2'	2.43	0.45
34:YA:2696:U:H2'	34:YA:2697:G:C8	2.51	0.45
36:YD:133:LEU:HD23	36:YD:136:ILE:HD12	1.98	0.45
39:YG:138:GLN:OE1	39:YG:153:ARG:N	2.43	0.45
40:YH:10:PRO:O	40:YH:49:VAL:HA	2.17	0.45
43:YO:104:ARG:N	43:YO:122:LEU:O	2.49	0.45
49:YU:17:ILE:HG13	49:YU:32:PHE:HE1	1.82	0.45
1:QA:194:C:H4'	20:QT:68:LYS:CE	2.47	0.45
1:QA:451:A:N6	1:QA:480:U:H2'	2.32	0.45
1:QA:677:U:N1	11:QK:119:CYS:SG	2.90	0.45
1:QA:684:A:H1'	11:QK:39:PRO:HD2	1.99	0.45
1:QA:950:U:OP2	13:QM:102:ARG:HD2	2.17	0.45
1:QA:1094:G:H4'	1:QA:1095:U:C5	2.51	0.45
1:QA:1331:G:OP2	13:QM:24:GLY:N	2.34	0.45
2:QB:193:ASP:OD2	2:QB:193:ASP:N	2.50	0.45
16:QP:55:ARG:HD2	16:QP:55:ARG:HA	1.79	0.45
25:R1:90:ILE:CA	25:R1:94:LEU:CD1	2.84	0.45
31:R7:18:PHE:HB2	31:R7:43:THR:HG21	1.99	0.45
34:RA:996:A:H2'	34:RA:997:G:C8	2.51	0.45
34:RA:1048:A:H2	34:RA:1112:G:H21	1.63	0.45
34:RA:2071:A:H2'	34:RA:2072:G:C8	2.52	0.45
36:RD:32:SER:C	36:RD:34:VAL:H	2.23	0.45
36:RD:132:PRO:HA	36:RD:190:TYR:HA	1.99	0.45
48:RT:102:ILE:HD12	48:RT:110:ILE:HD12	1.99	0.45
50:RV:68:LYS:HD2	50:RV:68:LYS:HA	1.69	0.45
1:XA:116:A:C8	1:XA:116:A:O5'	2.70	0.45
1:XA:156:G:H2'	1:XA:157:G:H8	1.81	0.45
1:XA:321:A:H4'	1:XA:1436:U:H5'	1.97	0.45
1:XA:634:C:H2'	1:XA:635:G:C8	2.40	0.45
1:XA:722:A:H4'	1:XA:723:U:C4	2.52	0.45
1:XA:730:G:N2	1:XA:765:G:H5''	2.32	0.45
1:XA:1117:G:H21	1:XA:1180:A:H1'	1.81	0.45
4:XD:30:LYS:HB3	4:XD:35:ARG:HH22	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:79:ARG:HH21	7:XG:82:GLY:HA2	1.82	0.45
10:XJ:53:PRO:HB3	14:XN:42:ILE:CG1	2.39	0.45
34:YA:415:A:C2	34:YA:2409:G:C2	3.04	0.45
34:YA:834:C:H2'	34:YA:835:A:H8	1.82	0.45
34:YA:2019:A:H2	34:YA:2035:G:H22	1.65	0.45
34:YA:2044:C:C5	34:YA:2625:G:N2	2.83	0.45
34:YA:2638:G:OP1	37:YE:82:ARG:NH2	2.49	0.45
34:YA:2700:C:H2'	34:YA:2701:C:C6	2.51	0.45
36:YD:71:ASP:HB2	36:YD:103:ARG:HH12	1.82	0.45
51:YW:46:PHE:O	51:YW:50:VAL:HG23	2.16	0.45
1:QA:158:G:H2'	1:QA:159:G:C8	2.52	0.45
1:QA:646:U:H2'	1:QA:647:C:C6	2.52	0.45
1:QA:950:U:H2'	1:QA:951:G:C8	2.51	0.45
1:QA:1110:A:H62	3:QC:176:HIS:HB2	1.81	0.45
10:QJ:99:LYS:HA	10:QJ:99:LYS:HD3	1.79	0.45
13:QM:91:ARG:HD2	13:QM:96:LEU:HB3	1.98	0.45
27:R3:18:ASP:OD1	27:R3:18:ASP:N	2.48	0.45
29:R5:41:PRO:O	29:R5:44:THR:OG1	2.27	0.45
32:R8:31:HIS:CD2	34:RA:2422:A:N6	2.83	0.45
34:RA:64:A:H2'	34:RA:65:C:O4'	2.17	0.45
34:RA:270(E):C:H2'	34:RA:270(F):G:C8	2.52	0.45
34:RA:2795:G:H2'	34:RA:2798:C:H5	1.82	0.45
50:RV:14:VAL:HB	50:RV:96:ILE:HG12	1.98	0.45
1:XA:102:G:N3	1:XA:151:A:H2	2.15	0.45
1:XA:364:A:H2'	1:XA:365:U:C2	2.51	0.45
1:XA:824:C:H2'	1:XA:825:G:H8	1.79	0.45
3:XC:21:ARG:NH1	10:XJ:15:THR:HG21	2.31	0.45
7:XG:26:PHE:O	7:XG:30:ILE:HG12	2.17	0.45
34:YA:321:G:C4	34:YA:341:G:H4'	2.51	0.45
34:YA:839:U:H2'	34:YA:840:C:C6	2.52	0.45
34:YA:1083:U:O2	34:YA:1085:A:H3'	2.16	0.45
34:YA:1221:C:H2'	34:YA:1222:C:C6	2.52	0.45
34:YA:1445:C:H2'	34:YA:1446:C:H6	1.81	0.45
34:YA:2080:G:C6	34:YA:2241:A:N1	2.85	0.45
34:YA:2184:G:H2'	34:YA:2185:C:C6	2.51	0.45
34:YA:2263:C:H2'	34:YA:2264:C:C6	2.52	0.45
34:YA:2345:G:N3	34:YA:2381:C:H2'	2.31	0.45
34:YA:2880:C:H1'	46:YR:92:GLY:O	2.17	0.45
35:YB:90:C:H5'	45:YQ:18:LYS:HA	1.99	0.45
38:YF:155:LEU:HB2	38:YF:189:THR:HG21	1.99	0.45
42:YN:137:LYS:HD3	42:YN:138:LEU:HG	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YT:54:ARG:HA	48:YT:59:THR:HG23	1.99	0.45
1:QA:435:C:H2'	1:QA:436:C:C6	2.51	0.45
1:QA:565:U:H3'	1:QA:566:G:H2'	1.99	0.45
1:QA:762:C:H2'	1:QA:763:G:C8	2.52	0.45
1:QA:987:G:H2'	1:QA:988:G:H8	1.82	0.45
1:QA:996:A:H2'	1:QA:997:U:C6	2.52	0.45
1:QA:1310:G:H2'	1:QA:1311:G:C8	2.51	0.45
3:QC:23:TYR:OH	10:QJ:9:ARG:HB3	2.17	0.45
4:QD:85:LYS:HA	4:QD:85:LYS:HD2	1.73	0.45
10:QJ:47:PHE:CE2	14:QN:34:TYR:CB	2.97	0.45
31:R7:6:GLN:O	34:RA:686:G:H8	2.00	0.45
34:RA:33:U:O4	34:RA:446:G:O2'	2.31	0.45
34:RA:270(T):G:H2'	34:RA:270(U):G:H8	1.82	0.45
34:RA:863:A:OP1	45:RQ:21:THR:OG1	2.14	0.45
34:RA:994:C:OP1	49:RU:53:ARG:NH2	2.50	0.45
34:RA:1463:C:H2'	34:RA:1464:C:H6	1.81	0.45
34:RA:1947:C:H2'	34:RA:1948:G:C8	2.52	0.45
34:RA:2010:G:H5''	51:RW:42:ARG:HB2	1.98	0.45
34:RA:2419:U:H2'	34:RA:2420:C:C6	2.49	0.45
34:RA:2514:U:H2'	34:RA:2515:C:C6	2.52	0.45
36:RD:208:LYS:HG3	36:RD:210:GLY:H	1.82	0.45
37:RE:111:ARG:HD3	37:RE:160:TYR:CE2	2.52	0.45
39:RG:161:THR:HG22	39:RG:163:ALA:H	1.82	0.45
48:RT:118:ARG:HH11	48:RT:121:ILE:HG21	1.81	0.45
1:XA:167:G:H2'	1:XA:168:G:C8	2.52	0.45
1:XA:694:A:H2'	1:XA:695:A:O4'	2.17	0.45
3:XC:60:ALA:CB	10:XJ:91:PRO:HG2	2.45	0.45
4:XD:43:HIS:HB3	4:XD:46:LYS:HD2	1.98	0.45
9:XI:7:THR:O	9:XI:7:THR:OG1	2.31	0.45
10:XJ:47:PHE:CZ	14:XN:36:PHE:HB3	2.51	0.45
33:Y9:25:VAL:HG22	33:Y9:34:GLN:HB3	1.98	0.45
34:YA:574:C:C5	34:YA:2054:A:H4'	2.52	0.45
34:YA:686:G:N2	34:YA:788:A:H61	2.15	0.45
34:YA:987:G:O2'	34:YA:1000:A:N3	2.42	0.45
34:YA:1071:G:H1'	34:YA:1089:G:H3'	1.98	0.45
34:YA:2098:U:O2	34:YA:2191:G:N2	2.49	0.45
34:YA:2581:G:N2	34:YA:2581:G:OP2	2.50	0.45
37:YE:171:GLU:HB2	37:YE:185:LYS:HG3	1.98	0.45
38:YF:54:ARG:HD2	38:YF:81:PRO:HD3	1.98	0.45
1:QA:186(F):C:H2'	1:QA:186(G):C:C6	2.52	0.45
1:QA:647:C:H2'	1:QA:648:A:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:953:G:C5	13:QM:104:ARG:CZ	2.96	0.45
1:QA:1360:A:C2'	14:QN:17:LYS:HZ1	2.30	0.45
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.81	0.45
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.98	0.45
20:QT:54:LYS:HZ3	20:QT:57:ARG:HE	1.65	0.45
22:QV:74:C:H5''	25:R1:23:LYS:HG3	1.98	0.45
34:RA:459:U:H2'	34:RA:460:A:C8	2.50	0.45
34:RA:1056:G:H5''	34:RA:1057:A:O4'	2.17	0.45
34:RA:1525:G:H2'	34:RA:1526:G:C8	2.52	0.45
34:RA:1838:C:N4	34:RA:1899:G:O4'	2.50	0.45
34:RA:2591:C:H2'	34:RA:2592:G:C8	2.52	0.45
34:RA:2688:U:OP1	34:RA:2713:A:N6	2.50	0.45
38:RF:187:VAL:HG23	44:RP:3:LEU:HD22	1.97	0.45
43:RO:106:LEU:HA	43:RO:109:LYS:HB2	1.99	0.45
54:RZ:54:HIS:HB3	54:RZ:101:PRO:HD3	1.99	0.45
1:XA:110:C:O5'	1:XA:110:C:C6	2.70	0.45
1:XA:186(B):C:O2	20:XT:105:SER:OG	2.34	0.45
1:XA:240:C:H2'	1:XA:241:C:H6	1.81	0.45
1:XA:302:G:N3	1:XA:556:C:H4'	2.32	0.45
3:XC:60:ALA:CA	10:XJ:91:PRO:HG2	2.47	0.45
10:XJ:47:PHE:CE1	14:XN:36:PHE:HB3	2.51	0.45
27:Y3:23:LEU:HD12	27:Y3:28:LEU:HB2	1.98	0.45
34:YA:662:G:H2'	34:YA:663:G:C8	2.51	0.45
34:YA:691:C:H2'	34:YA:692:C:H6	1.81	0.45
34:YA:1523:U:H2'	34:YA:1524:G:C8	2.52	0.45
34:YA:1571:A:H2'	34:YA:1572:A:C8	2.52	0.45
34:YA:1812:A:H2'	34:YA:1813:G:H8	1.81	0.45
34:YA:2373:G:H2'	34:YA:2374:C:C6	2.52	0.45
34:YA:2741:A:H61	34:YA:2763:G:H1'	1.82	0.45
34:YA:2849:U:C2	34:YA:2867:G:H1'	2.52	0.45
35:YB:13:A:N1	35:YB:69:G:O2'	2.48	0.45
36:YD:44:ASN:HB3	36:YD:49:ILE:HG22	1.98	0.45
49:YU:8:VAL:HG22	49:YU:12:ARG:HE	1.82	0.45
1:QA:40:C:H2'	1:QA:41:G:C8	2.52	0.45
1:QA:115:G:H1'	1:QA:116:A:N7	2.32	0.45
1:QA:302:G:N3	1:QA:556:C:H4'	2.32	0.45
1:QA:505:G:H2'	1:QA:506:G:C8	2.52	0.45
7:QG:16:LEU:HD21	9:QI:42:ARG:HG2	0.48	0.45
19:QS:79:THR:O	19:QS:79:THR:OG1	2.35	0.45
34:RA:242:G:N2	34:RA:243:U:O4	2.50	0.45
34:RA:363(C):G:H2'	34:RA:363(D):G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1012:U:OP1	49:RU:75:ASN:ND2	2.50	0.45
34:RA:1254:A:H5''	34:RA:1255:U:H5''	1.99	0.45
34:RA:1849:G:H2'	34:RA:1850:G:H8	1.82	0.45
34:RA:1925:C:H2'	34:RA:1926:U:C6	2.52	0.45
34:RA:1939:U:OP1	34:RA:2604:U:O2'	2.35	0.45
34:RA:2250:G:O2'	34:RA:2496:C:OP1	2.23	0.45
40:RH:86:GLU:O	40:RH:164:TYR:HB2	2.17	0.45
40:RH:126:PRO:HG2	40:RH:130:ARG:CG	2.46	0.45
41:RI:79:ILE:HG23	41:RI:142:VAL:HA	1.99	0.45
41:RI:80:PRO:HB2	41:RI:146:ALA:HB2	1.97	0.45
47:RS:23:ARG:NH2	47:RS:111:GLU:OE1	2.49	0.45
49:RU:92:ARG:C	49:RU:94:ASN:H	2.24	0.45
1:XA:539:A:H2'	1:XA:540:G:C8	2.52	0.45
1:XA:718:G:H1'	11:XK:116:HIS:C	2.42	0.45
1:XA:796:C:H2'	1:XA:797:C:C6	2.52	0.45
1:XA:876:G:C1'	8:XH:11:THR:HG21	2.47	0.45
1:XA:1305:G:C2	1:XA:1331:G:C4	3.04	0.45
6:XF:91:VAL:CB	18:XR:34:TYR:OH	2.64	0.45
15:XO:64:ARG:HH12	15:XO:68:ARG:HH22	1.63	0.45
31:Y7:37:LYS:CE	34:YA:458:G:C8	2.99	0.45
33:Y9:27:CYS:SG	33:Y9:29:ASN:HB3	2.57	0.45
34:YA:285:C:H2'	34:YA:286:C:C6	2.52	0.45
34:YA:347:A:H2'	34:YA:348:G:H8	1.82	0.45
34:YA:779:U:H2'	34:YA:780:G:H8	1.81	0.45
34:YA:1458:C:H1'	34:YA:1459:G:C6	2.52	0.45
34:YA:1476:C:H2'	34:YA:1477:A:H8	1.82	0.45
34:YA:2036:C:H2'	34:YA:2037:G:H8	1.82	0.45
34:YA:2306:C:H2'	34:YA:2307:G:N2	2.32	0.45
34:YA:2863:C:H2'	34:YA:2864:G:C8	2.52	0.45
43:YO:78:ARG:NE	48:YT:73:GLU:OE1	2.47	0.45
1:QA:738:C:H2'	1:QA:739:C:C6	2.52	0.44
1:QA:973:G:C2'	14:QN:29:ARG:NH1	2.68	0.44
1:QA:1206:G:H2'	1:QA:1207:G:O4'	2.17	0.44
1:QA:1277:C:H4'	1:QA:1281:U:O4	2.17	0.44
6:QF:12:PRO:HD3	6:QF:58:GLY:HA2	1.99	0.44
8:QH:112:LEU:HD11	8:QH:133:LEU:HD12	1.99	0.44
34:RA:13:A:N1	34:RA:525:U:H2'	2.31	0.44
34:RA:823:G:H2'	34:RA:824:A:H8	1.82	0.44
34:RA:1399:C:H2'	34:RA:1400:G:C8	2.53	0.44
34:RA:1708:C:H2'	34:RA:1709:U:H6	1.82	0.44
34:RA:2229:C:H2'	34:RA:2230:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2511:U:O2'	37:RE:138:PRO:O	2.30	0.44
34:RA:2567:G:H2'	34:RA:2568:C:C6	2.52	0.44
36:RD:61:LEU:HD23	36:RD:61:LEU:HA	1.83	0.44
37:RE:32:PRO:HA	37:RE:90:THR:HA	1.99	0.44
38:RF:48:THR:O	38:RF:48:THR:OG1	2.32	0.44
1:XA:165:C:H2'	1:XA:166:G:H8	1.78	0.44
1:XA:457:C:H2'	1:XA:458(A):C:C6	2.52	0.44
1:XA:897:C:H2'	1:XA:898:G:C8	2.52	0.44
1:XA:899:C:C6	1:XA:899:C:OP1	2.70	0.44
1:XA:1119:C:H2'	1:XA:1120:G:C8	2.52	0.44
1:XA:1126:U:H3'	1:XA:1127:G:C8	2.49	0.44
1:XA:1360:A:N3	14:YN:17:LYS:HG3	2.29	0.44
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.53	0.44
1:XA:1378:C:C5	1:XA:1378:C:OP1	2.70	0.44
8:XH:121:ASP:HB2	8:XH:125:ARG:HH21	1.82	0.44
12:XL:88:GLY:H	12:XL:98:TYR:HA	1.82	0.44
34:YA:318:C:H2'	34:YA:319:C:C6	2.52	0.44
34:YA:459:U:H2'	34:YA:460:A:C8	2.52	0.44
34:YA:1394:U:H4'	34:YA:1603:A:H4'	1.99	0.44
34:YA:1397:U:OP2	34:YA:1398:C:N4	2.40	0.44
34:YA:1408:C:H2'	34:YA:1409:C:C6	2.52	0.44
34:YA:1497:U:H5''	34:YA:1498:C:H5	1.82	0.44
34:YA:2059:A:C6	34:YA:2503:A:C2	3.05	0.44
34:YA:2453:A:H2'	34:YA:2454:G:C8	2.52	0.44
34:YA:2779:U:H5'	34:YA:2779:U:O2	2.16	0.44
1:QA:511:C:C6	1:QA:534:U:H1'	2.52	0.44
1:QA:981:U:C4'	14:QN:6:LEU:HD22	2.48	0.44
1:QA:1190:G:H5'	3:QC:176:HIS:HE1	1.82	0.44
1:QA:1229:A:H2'	1:QA:1230:C:H6	1.82	0.44
1:QA:1320:C:N4	19:QS:37:ARG:HD2	2.27	0.44
28:R4:34:GLU:OE1	39:RG:113:ARG:HD3	2.17	0.44
30:R6:23:THR:HG21	34:RA:2286:A:N6	2.27	0.44
34:RA:676:A:H8	34:RA:2069:G:H21	1.64	0.44
34:RA:709:U:H2'	34:RA:710:G:C8	2.53	0.44
34:RA:845:G:H21	34:RA:933:A:H61	1.65	0.44
36:RD:95:LEU:HB2	36:RD:103:ARG:O	2.17	0.44
48:RT:25:GLY:H	48:RT:49:VAL:HG13	1.82	0.44
53:RY:76:CYS:SG	53:RY:79:CYS:C	3.00	0.44
54:RZ:97:GLU:HB3	54:RZ:125:LEU:HD11	2.00	0.44
1:XA:62:U:H2'	1:XA:63:C:H6	1.82	0.44
1:XA:388:G:C8	1:XA:388:G:O5'	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:765:G:N1	1:XA:812:C:O2'	2.45	0.44
1:XA:899:C:OP1	1:XA:899:C:C5	2.70	0.44
1:XA:932:C:H2'	1:XA:933:G:C8	2.53	0.44
1:XA:947:G:H2'	1:XA:948:C:C6	2.52	0.44
1:XA:975:A:O4'	1:XA:1365:G:N2	2.49	0.44
1:XA:1305:G:H4'	1:XA:1332:A:H61	1.83	0.44
1:XA:1382:C:O5'	1:XA:1382:C:C6	2.70	0.44
1:XA:1483:A:H2'	1:XA:1484:C:O4'	2.17	0.44
12:XL:24:VAL:HG13	12:XL:98:TYR:HE1	1.82	0.44
27:Y3:40:THR:HB	27:Y3:43:ILE:HG12	1.98	0.44
32:Y8:2:PRO:O	34:YA:666:G:N2	2.49	0.44
34:YA:575:A:OP2	34:YA:2055:C:N4	2.40	0.44
34:YA:787:U:H5''	34:YA:788:A:H5'	1.99	0.44
34:YA:1362:C:H2'	34:YA:1363:C:C6	2.53	0.44
42:YN:21:LYS:HD2	42:YN:26:LEU:HD13	1.98	0.44
42:YN:91:LEU:HD23	42:YN:91:LEU:HA	1.81	0.44
45:YQ:58:PHE:HD2	45:YQ:61:GLY:HA3	1.82	0.44
48:YT:25:GLY:N	48:YT:49:VAL:O	2.42	0.44
49:YU:92:ARG:HH11	50:YV:11:GLN:HB2	1.82	0.44
1:QA:186(B):C:OP1	20:QT:82:SER:OG	2.23	0.44
1:QA:489:C:H2'	1:QA:490:G:C8	2.52	0.44
1:QA:877:C:O3'	8:QH:88:LYS:HD2	2.17	0.44
1:QA:1085:U:H3'	1:QA:1086:U:C5	2.53	0.44
1:QA:1100:C:H41	2:QB:96:ARG:HH22	0.52	0.44
3:QC:23:TYR:CD2	10:QJ:95:GLU:N	2.85	0.44
7:QG:21:VAL:O	7:QG:24:THR:OG1	2.32	0.44
13:QM:37:THR:HG1	13:QM:55:ARG:HE	1.62	0.44
13:QM:80:ARG:HD3	19:QS:67:VAL:CG1	2.47	0.44
14:QN:6:LEU:HD23	14:QN:9:LYS:HD3	2.00	0.44
19:QS:50:ALA:HA	19:QS:58:VAL:O	2.17	0.44
34:RA:407:G:H2'	34:RA:408:G:H8	1.82	0.44
34:RA:579:G:O2'	34:RA:2019:A:OP1	2.28	0.44
34:RA:883:G:H2'	34:RA:884:C:H6	1.82	0.44
34:RA:1257:C:O2'	38:RF:84:VAL:HG23	2.17	0.44
34:RA:1728:G:H2'	34:RA:1731:G:O6	2.18	0.44
54:RZ:115:GLY:H	54:RZ:177:PRO:HG3	1.83	0.44
1:XA:728:A:H2'	1:XA:729:A:C8	2.53	0.44
1:XA:729:A:H2'	1:XA:730:G:C8	2.52	0.44
1:XA:899:C:C6	1:XA:899:C:OP2	2.70	0.44
1:XA:940:C:H2'	1:XA:941:G:C8	2.52	0.44
1:XA:1014:A:H1'	1:XA:1219:U:O2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1065:U:O2	1:XA:1067:A:N6	2.51	0.44
1:XA:1378:C:OP1	1:XA:1378:C:C6	2.70	0.44
34:YA:244:A:C2	34:YA:245:G:H1'	2.52	0.44
34:YA:251:A:C4	34:YA:252:G:H1'	2.52	0.44
34:YA:971:C:H2'	34:YA:972:G:O4'	2.17	0.44
34:YA:1149:G:H2'	34:YA:1150:C:C6	2.52	0.44
34:YA:1367:A:C5	34:YA:1368:G:H1'	2.52	0.44
34:YA:2096:U:H3	34:YA:2193:G:H1	1.63	0.44
34:YA:2133:G:H1'	34:YA:2158:A:N6	2.32	0.44
34:YA:2316:C:H2'	34:YA:2317:C:C6	2.52	0.44
34:YA:2546:U:H5''	34:YA:2547:U:H5'	2.00	0.44
45:YQ:12:GLN:HB2	45:YQ:73:PRO:HD2	2.00	0.44
53:YY:13:VAL:HG12	53:YY:74:PRO:HA	1.99	0.44
54:YZ:5:LEU:HB2	54:YZ:59:LEU:HD12	1.98	0.44
1:QA:24:U:O3'	1:QA:524:G:O2'	2.32	0.44
1:QA:335:C:H2'	1:QA:336:C:C6	2.53	0.44
1:QA:767:A:H2'	1:QA:768:A:C8	2.53	0.44
1:QA:1114:C:O2	14:QN:61:TRP:HA	2.18	0.44
1:QA:1318:A:C2	19:QS:37:ARG:NH1	2.84	0.44
1:QA:1331:G:OP1	13:QM:23:TYR:CD2	2.70	0.44
34:RA:312:G:H4'	34:RA:331:A:N3	2.33	0.44
34:RA:632:A:H2'	34:RA:633:A:C8	2.52	0.44
34:RA:685:A:H1'	34:RA:689:A:N6	2.33	0.44
34:RA:1441:G:H2'	34:RA:1442:G:H8	1.83	0.44
34:RA:1570:A:H2'	34:RA:1571:A:C8	2.51	0.44
34:RA:1657:C:H2'	34:RA:1658:C:C6	2.52	0.44
34:RA:1825:A:H2'	34:RA:1826:G:C8	2.52	0.44
34:RA:1972:A:H2'	34:RA:1973:G:H8	1.83	0.44
34:RA:2263:C:H2'	34:RA:2264:C:H6	1.82	0.44
34:RA:2368:C:H2'	34:RA:2369:A:C8	2.53	0.44
34:RA:2730:C:H2'	34:RA:2731:G:H8	1.83	0.44
39:RG:81:LYS:HD2	39:RG:81:LYS:HA	1.74	0.44
39:RG:81:LYS:HB3	39:RG:82:LEU:H	1.59	0.44
41:RI:4:ILE:HG23	41:RI:39:ALA:HB2	2.00	0.44
1:XA:8:A:C2	4:XD:209:ARG:NH1	2.85	0.44
1:XA:592:G:H2'	1:XA:593:G:C8	2.52	0.44
1:XA:1050:G:H2'	1:XA:1051:C:C6	2.52	0.44
1:XA:1092:A:C2	1:XA:1110:A:H5'	2.52	0.44
1:XA:1142:G:H3'	1:XA:1143:G:C8	2.52	0.44
1:XA:1157:A:N3	1:XA:1157:A:H2'	2.32	0.44
1:XA:1309:G:O4'	13:XM:77:ASN:ND2	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1405:G:H2'	1:XA:1406:U:C6	2.52	0.44
1:XA:1541:U:C2	23:XX:5:A:H2	2.34	0.44
4:XD:57:ARG:NH2	4:XD:205:GLU:OE1	2.51	0.44
32:Y8:30:ARG:HE	44:YP:62:LEU:HD12	1.81	0.44
34:YA:222:A:H61	34:YA:232:G:H1'	1.82	0.44
34:YA:1028:A:H61	34:YA:1125:G:H2'	1.83	0.44
34:YA:1129:A:O2'	34:YA:2515:C:O2'	2.29	0.44
34:YA:1139:G:O2'	34:YA:1143:A:N1	2.45	0.44
34:YA:1178:C:H2'	34:YA:1179:C:C6	2.53	0.44
34:YA:2327:A:H2'	34:YA:2328:A:C8	2.52	0.44
38:YF:167:ALA:HB1	38:YF:173:VAL:HG11	1.99	0.44
50:YV:2:PHE:H	50:YV:42:GLY:HA3	1.82	0.44
1:QA:24:U:H2'	1:QA:25:C:C6	2.53	0.44
1:QA:607:A:H3'	1:QA:608:A:H8	1.82	0.44
1:QA:737:A:H2'	1:QA:738:C:C6	2.52	0.44
1:QA:856:C:H4'	23:QX:7:G:H21	1.83	0.44
1:QA:1290:G:O6	21:QU:26:LYS:CE	2.63	0.44
1:QA:1515:C:H2'	1:QA:1516:G:H8	1.82	0.44
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.99	0.44
25:R1:29:GLY:O	34:RA:2396:G:O2'	2.36	0.44
34:RA:807:U:H2'	34:RA:808:G:H8	1.83	0.44
34:RA:883:G:H2'	34:RA:884:C:C6	2.52	0.44
34:RA:894:C:H2'	34:RA:895:U:C6	2.53	0.44
34:RA:1564:C:H2'	34:RA:1565:C:C6	2.52	0.44
34:RA:1660:C:H2'	34:RA:1661:G:C8	2.51	0.44
34:RA:1947:C:H2'	34:RA:1948:G:H8	1.82	0.44
34:RA:1995:U:H3'	34:RA:1996:C:H2'	1.99	0.44
34:RA:1997:G:H5'	37:RE:117:MET:HE3	2.00	0.44
34:RA:2331:G:H2'	34:RA:2332:U:C6	2.52	0.44
34:RA:2692:C:H2'	34:RA:2693:A:C8	2.52	0.44
36:RD:12:SER:HB2	36:RD:208:LYS:HB3	1.99	0.44
51:RW:65:LEU:HD12	51:RW:68:ARG:HH21	1.83	0.44
1:XA:186(F):C:O2	1:XA:186(M):G:N2	2.50	0.44
1:XA:218:C:H2'	1:XA:219:C:C6	2.53	0.44
1:XA:341:C:H2'	1:XA:342:C:H6	1.82	0.44
1:XA:486:U:H2'	1:XA:487:A:C8	2.52	0.44
1:XA:681:C:H2'	1:XA:682:G:C8	2.53	0.44
1:XA:978:A:H62	14:YN:18:VAL:HG21	1.83	0.44
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.49	0.44
26:Y2:58:ALA:O	26:Y2:62:THR:OG1	2.30	0.44
34:YA:303:U:H2'	34:YA:304:G:C8	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:414:C:O2	34:YA:1864:U:O2'	2.33	0.44
34:YA:887:A:N3	34:YA:889:C:H6	2.14	0.44
34:YA:1048:A:OP2	34:YA:1110:G:N2	2.51	0.44
34:YA:1128:A:H1'	34:YA:1129:A:C5	2.53	0.44
34:YA:2108:C:C6	34:YA:2108:C:O5'	2.70	0.44
34:YA:2153:G:H2'	34:YA:2154:G:H8	1.82	0.44
34:YA:2294:C:H2'	34:YA:2295:C:H6	1.83	0.44
34:YA:2691:C:H5''	34:YA:2872:G:H5''	1.98	0.44
45:YQ:13:GLN:O	45:YQ:72:LYS:NZ	2.38	0.44
46:YR:100:LEU:HD11	46:YR:113:LEU:HG	2.00	0.44
1:QA:68:G:H1'	1:QA:151:A:H61	1.81	0.44
1:QA:437:U:H3	1:QA:495:A:H62	1.66	0.44
1:QA:641:U:H4'	8:QH:115:SER:HB2	2.00	0.44
1:QA:713:G:H2'	1:QA:714:G:C8	2.52	0.44
1:QA:956:U:H5'	19:QS:83:HIS:HA	2.00	0.44
1:QA:999:U:H2'	1:QA:1000:A:C8	2.53	0.44
1:QA:1270:C:H2'	1:QA:1271:G:C8	2.53	0.44
1:QA:1383:C:H2'	1:QA:1384:C:C6	2.52	0.44
6:QF:47:ARG:HD2	6:QF:57:GLN:HB3	2.00	0.44
11:QK:70:LYS:NZ	34:RA:2146:C:H3'	2.33	0.44
22:QV:71:C:H5''	34:RA:1892:C:O2'	2.17	0.44
30:R6:46:HIS:CE1	34:RA:2372:G:H1'	2.53	0.44
34:RA:553:U:H2'	34:RA:554:U:C6	2.53	0.44
34:RA:813:U:H2'	34:RA:814:C:C6	2.53	0.44
34:RA:848:G:H2'	34:RA:849:A:C8	2.53	0.44
34:RA:1152:C:H2'	34:RA:1153:C:C6	2.48	0.44
34:RA:1353:A:H2'	34:RA:1354:A:C8	2.53	0.44
34:RA:1380:G:H2'	34:RA:1381:G:H8	1.82	0.44
34:RA:1565:C:O2'	34:RA:1567:A:N7	2.41	0.44
40:RH:4:ILE:HD12	40:RH:6:ARG:HB2	1.99	0.44
1:XA:563:A:O2'	1:XA:566:G:O3'	2.34	0.44
1:XA:657:G:H2'	1:XA:658:G:H8	1.82	0.44
1:XA:896:C:H2'	1:XA:897:C:C6	2.52	0.44
1:XA:936:C:H3'	1:XA:936:C:H6	1.82	0.44
1:XA:951:G:O3'	1:XA:972:C:N4	2.50	0.44
1:XA:1065:U:C5	1:XA:1190:G:H1'	2.53	0.44
1:XA:1279:A:OP2	10:XJ:9:ARG:NH2	2.49	0.44
1:XA:1317:C:H3'	1:XA:1318:A:H8	1.83	0.44
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.99	0.44
11:XK:109:VAL:CB	18:XR:86:VAL:HG23	2.47	0.44
16:XP:19:ILE:HG13	16:XP:36:ILE:HD11	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y3:31:LEU:HD12	34:YA:1157:G:O2'	2.16	0.44
34:YA:807:U:H2'	34:YA:808:G:H8	1.82	0.44
34:YA:887:A:H1'	34:YA:889:C:C6	2.53	0.44
34:YA:1494:A:H2	34:YA:1579:A:H1'	1.83	0.44
34:YA:2108:C:O5'	34:YA:2108:C:H6	1.99	0.44
34:YA:2306:C:H3'	34:YA:2307:G:H5''	2.00	0.44
34:YA:2515:C:H2'	34:YA:2516:G:C8	2.51	0.44
34:YA:2587:A:H8	34:YA:2587:A:O5'	2.00	0.44
53:YY:28:LYS:N	53:YY:38:ILE:O	2.45	0.44
1:QA:403:C:H4'	4:QD:122:ARG:NE	2.33	0.44
1:QA:413:G:H4'	1:QA:414:A:H5''	1.99	0.44
1:QA:669:U:O4'	15:QO:46:HIS:CE1	2.69	0.44
1:QA:1265:G:H2'	1:QA:1266:G:C8	2.53	0.44
1:QA:1307:U:C5'	13:QM:99:ARG:CZ	2.96	0.44
1:QA:1411:C:H2'	1:QA:1412:C:C6	2.52	0.44
8:QH:82:HIS:N	8:QH:138:TRP:OXT	2.41	0.44
34:RA:144:C:H2'	34:RA:145:G:H8	1.83	0.44
34:RA:624:C:H2'	34:RA:625:G:C8	2.53	0.44
34:RA:822:U:C5	34:RA:944:G:H1'	2.52	0.44
34:RA:1251:C:OP2	49:RU:10:ARG:NH1	2.50	0.44
34:RA:1445:C:H2'	34:RA:1446:C:C6	2.51	0.44
34:RA:2290:G:N2	34:RA:2343:C:H1'	2.33	0.44
34:RA:2320:A:H1'	34:RA:2321:G:C6	2.52	0.44
34:RA:2327:A:H2'	34:RA:2328:A:C8	2.53	0.44
34:RA:2351:G:H1'	34:RA:2367:G:N2	2.32	0.44
34:RA:2619:C:H2'	34:RA:2620:C:C6	2.51	0.44
39:RG:135:LEU:HD11	39:RG:140:ILE:HD11	2.00	0.44
1:XA:130:A:H1'	1:XA:263:A:O2'	2.17	0.44
1:XA:193:C:H2'	1:XA:194:C:C6	2.52	0.44
1:XA:833:U:H2'	1:XA:834:C:C6	2.53	0.44
1:XA:907:A:H2'	1:XA:908:A:O4'	2.18	0.44
1:XA:1028(D):G:N2	1:XA:1028(H):G:N7	2.65	0.44
1:XA:1094:G:H4'	1:XA:1095:U:H5	1.83	0.44
1:XA:1240:U:H3	7:XG:38:LEU:HD22	1.60	0.44
1:XA:1318:A:H1'	19:XS:37:ARG:HH22	1.83	0.44
1:XA:1329:A:H4'	13:XM:29:ARG:HH21	1.82	0.44
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.53	0.44
29:Y5:17:ASP:HB3	34:YA:16:G:OP1	2.18	0.44
34:YA:210:C:H4'	34:YA:1367:A:H1'	2.00	0.44
34:YA:524:U:H2'	34:YA:525:U:C6	2.53	0.44
34:YA:1162:G:H2'	34:YA:1163:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1468:C:H2'	34:YA:1469:A:H8	1.82	0.44
34:YA:1574:C:H2'	34:YA:1575:C:C6	2.53	0.44
34:YA:1991:U:H2'	34:YA:1992:G:H5''	2.00	0.44
34:YA:2099:U:C4	34:YA:2190:G:N1	2.82	0.44
34:YA:2124:G:H3'	34:YA:2125:G:H8	1.82	0.44
34:YA:2246:G:H2'	34:YA:2247:A:C8	2.53	0.44
34:YA:2286:A:H1'	34:YA:2287:A:C6	2.52	0.44
34:YA:2342:C:H2'	34:YA:2374:C:H5''	2.00	0.44
38:YF:102:PRO:HB2	38:YF:105:VAL:HG23	1.99	0.44
46:YR:29:LEU:HD13	46:YR:79:LEU:HD22	2.00	0.44
1:QA:191:G:O2'	20:QT:103:GLY:N	2.45	0.44
1:QA:245:C:H1'	1:QA:284:G:C2	2.53	0.44
1:QA:986:A:H4'	19:QS:55:LYS:HG2	1.94	0.44
1:QA:1092:A:C2	1:QA:1110:A:H5'	2.52	0.44
1:QA:1108:G:OP2	3:QC:174:PRO:HA	2.18	0.44
1:QA:1114:C:H2'	1:QA:1115:C:H6	1.83	0.44
1:QA:1332:A:H3'	1:QA:1333:A:H8	1.83	0.44
1:QA:1463:C:H2'	1:QA:1464:G:H8	1.83	0.44
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.82	0.44
1:QA:1515:C:H2'	1:QA:1516:G:C8	2.53	0.44
3:QC:23:TYR:N	10:QJ:93:GLY:O	2.51	0.44
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.82	0.44
31:R7:34:ARG:NH1	34:RA:466:A:OP1	2.50	0.44
34:RA:1104:C:H2'	34:RA:1105:U:H6	1.82	0.44
34:RA:1923:U:H2'	34:RA:1924:C:C6	2.52	0.44
34:RA:2195:C:H2'	34:RA:2196:C:C6	2.53	0.44
51:RW:71:VAL:HA	51:RW:107:LEU:HD23	2.00	0.44
54:RZ:156:LYS:HE3	54:RZ:156:LYS:HB3	1.74	0.44
1:XA:186(L):G:H2'	1:XA:186(M):G:H8	1.82	0.44
1:XA:407:G:H1'	4:XD:119:GLN:HE22	1.82	0.44
1:XA:643:C:H2'	1:XA:644:G:C8	2.52	0.44
1:XA:687:A:O2'	1:XA:701:C:N4	2.50	0.44
1:XA:962:C:H2'	1:XA:963:G:C8	2.51	0.44
1:XA:974:A:P	14:XN:29:ARG:NE	2.90	0.44
1:XA:1240:U:C2'	7:XG:38:LEU:HD12	2.45	0.44
4:XD:68:TYR:OH	4:XD:98:GLU:OE2	2.33	0.44
14:XN:40:CYS:SG	14:XN:41:ARG:N	2.91	0.44
16:XP:22:THR:OG1	16:XP:23:ASP:N	2.50	0.44
18:XR:47:THR:O	18:XR:83:GLU:N	2.51	0.44
25:Y1:2:SER:HB3	34:YA:1366:A:OP1	2.18	0.44
34:YA:417:C:O2	34:YA:2407:G:C6	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:625:G:H2'	34:YA:626:U:C6	2.53	0.44
34:YA:1242:A:H3'	34:YA:1243:G:H8	1.83	0.44
34:YA:1304:C:H2'	34:YA:1305:C:H6	1.83	0.44
34:YA:1353:A:H2'	34:YA:1354:A:C8	2.53	0.44
34:YA:1362:C:H2'	34:YA:1363:C:H6	1.83	0.44
34:YA:1834:U:H1'	34:YA:1969:A:H2'	1.99	0.44
34:YA:2307:G:O6	39:YG:42:GLY:O	2.35	0.44
34:YA:2356:C:H1'	34:YA:2362:G:N2	2.33	0.44
34:YA:2447:G:H1	34:YA:2451:A:N6	2.16	0.44
34:YA:2506:U:H2'	34:YA:2507:C:C6	2.51	0.44
34:YA:2619:C:H2'	34:YA:2620:C:C6	2.53	0.44
34:YA:2747:G:H1	34:YA:2754:U:H2'	1.83	0.44
44:YP:21:ARG:HB3	44:YP:22:GLY:H	1.67	0.44
1:QA:181:G:H4'	1:QA:182:U:H5'	1.99	0.44
1:QA:624:C:C4'	16:QP:11:SER:HB3	2.48	0.44
1:QA:697:U:H3'	1:QA:698:G:H8	1.83	0.44
1:QA:878:G:H5'	8:QH:89:PRO:HG2	1.99	0.44
1:QA:981:U:H5'	14:QN:6:LEU:HD22	1.99	0.44
1:QA:1124:G:H2'	1:QA:1145:C:N3	2.32	0.44
1:QA:1306:A:H1'	1:QA:1332:A:C8	2.53	0.44
1:QA:1358:U:H3'	14:QN:35:ARG:HD2	1.99	0.44
1:QA:1500:A:H5''	1:QA:1508:G:H5''	1.98	0.44
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.53	0.44
34:RA:448:U:C4	34:RA:583:G:H1'	2.52	0.44
34:RA:661:C:H2'	34:RA:662:G:C8	2.53	0.44
34:RA:1316:U:H2'	34:RA:1317:A:C8	2.53	0.44
34:RA:1794:U:H2'	34:RA:1795:C:H6	1.83	0.44
34:RA:2246:G:H2'	34:RA:2247:A:C8	2.53	0.44
36:RD:181:GLU:HA	36:RD:272:ALA:HB3	1.99	0.44
49:RU:91:ASP:O	49:RU:93:LYS:N	2.50	0.44
52:RX:55:ASN:HB2	52:RX:80:ILE:HG23	2.00	0.44
1:XA:150:C:H2'	1:XA:151:A:O4'	2.18	0.44
1:XA:152:A:N6	1:XA:169:C:N3	2.66	0.44
1:XA:385:C:H2'	1:XA:386:C:C6	2.52	0.44
1:XA:817:C:O2'	1:XA:1527:C:O3'	2.35	0.44
1:XA:986:A:H2'	1:XA:987:G:C8	2.53	0.44
1:XA:1106:G:C4'	3:XC:172:ARG:HG2	2.46	0.44
1:XA:1300:G:C6	1:XA:1334:G:N7	2.86	0.44
1:XA:1440(F):G:H22	1:XA:1440(P):A:H1'	1.83	0.44
10:XJ:16:LEU:CB	10:XJ:70:ARG:NH1	2.61	0.44
13:XM:2:ALA:HB3	13:XM:9:ILE:HG21	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:Y0:38:VAL:HG22	24:Y0:59:LEU:HB2	1.98	0.44
32:Y8:7:HIS:HD2	44:YP:50:ARG:HH21	1.64	0.44
34:YA:662:G:H2'	34:YA:663:G:H8	1.81	0.44
34:YA:864:G:H1'	34:YA:914:C:H42	1.82	0.44
34:YA:2090:G:C4	34:YA:2230:G:N1	2.86	0.44
34:YA:2550:G:H2'	34:YA:2551:C:H6	1.83	0.44
34:YA:2630:G:H2'	34:YA:2631:G:H8	1.83	0.44
43:YO:44:LYS:HA	43:YO:44:LYS:HD3	1.72	0.44
51:YW:35:ILE:O	51:YW:39:THR:OG1	2.27	0.44
1:QA:231:G:H2'	1:QA:232:G:C8	2.52	0.43
1:QA:292:G:C5	1:QA:293:G:H1'	2.53	0.43
1:QA:324:G:OP1	20:QT:22:ARG:HD2	2.18	0.43
1:QA:765:G:N1	1:QA:812:C:O2'	2.44	0.43
1:QA:975:A:O4'	1:QA:1365:G:N2	2.51	0.43
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.99	0.43
27:R3:45:GLY:HA3	34:RA:851:U:O3'	2.18	0.43
33:R9:23:VAL:HG22	34:RA:1032:A:O2'	2.17	0.43
34:RA:97:C:H2'	34:RA:98:G:C8	2.53	0.43
34:RA:714:U:H1'	34:RA:717:G:N7	2.33	0.43
34:RA:1400:G:H2'	34:RA:1401:G:C8	2.53	0.43
34:RA:1853:A:N3	34:RA:2233:U:O2'	2.49	0.43
34:RA:2771:C:H2'	34:RA:2772:C:C6	2.52	0.43
34:RA:2810:A:H62	34:RA:2891:G:H21	1.66	0.43
35:RB:9:G:OP1	47:RS:15:ARG:NH1	2.51	0.43
41:RI:79:ILE:HD12	41:RI:80:PRO:HD2	2.00	0.43
1:XA:51:A:N9	1:XA:353:A:C5	2.86	0.43
1:XA:57:G:H2'	1:XA:58:C:C6	2.53	0.43
1:XA:411:A:H2'	1:XA:413:G:C8	2.53	0.43
1:XA:643:C:H2'	1:XA:644:G:H8	1.82	0.43
1:XA:658:G:H1'	15:XO:22:THR:HG23	1.99	0.43
1:XA:878:G:H5'	8:XH:89:PRO:HG2	2.00	0.43
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.53	0.43
1:XA:1230:C:C4	13:XM:105:THR:HB	2.49	0.43
11:XK:110:ASP:O	18:XR:85:LEU:N	2.51	0.43
20:XT:100:ILE:HG23	20:XT:102:GLY:H	1.81	0.43
30:Y6:3:SER:HB3	30:Y6:6:ARG:HB3	2.00	0.43
30:Y6:29:ASN:ND2	34:YA:2286:A:OP1	2.51	0.43
34:YA:274:G:H2'	34:YA:275:G:H8	1.83	0.43
34:YA:519:U:H2'	34:YA:520:G:C8	2.53	0.43
34:YA:1467:C:C5	34:YA:1546:C:H2'	2.53	0.43
34:YA:1710:C:H2'	34:YA:1711:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1908:C:H2'	34:YA:1909:C:H6	1.83	0.43
34:YA:1953:A:C2	34:YA:2550:G:C1'	3.01	0.43
34:YA:2853:C:H2'	34:YA:2854:G:C8	2.53	0.43
35:YB:37:C:N3	35:YB:48:A:O2'	2.50	0.43
36:YD:142:VAL:HA	36:YD:194:GLY:H	1.83	0.43
37:YE:102:VAL:N	37:YE:170:LEU:O	2.46	0.43
1:QA:444:C:H2'	1:QA:445:G:C8	2.53	0.43
1:QA:608:A:C1'	16:QP:32:TYR:CE1	2.99	0.43
1:QA:1327:C:H4'	21:QU:20:LYS:NZ	2.33	0.43
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	2.00	0.43
3:QC:131:ARG:HH11	3:QC:134:ILE:HG21	1.83	0.43
4:QD:61:LYS:HD2	4:QD:207:TYR:CZ	2.52	0.43
25:R1:90:ILE:HA	25:R1:94:LEU:HG	1.99	0.43
28:R4:12:ALA:H	28:R4:25:TYR:HA	1.83	0.43
34:RA:452:G:N2	34:RA:457:A:O2'	2.51	0.43
34:RA:655:A:H8	34:RA:656:G:C8	2.36	0.43
34:RA:1046:A:H5''	34:RA:1046:A:N3	2.34	0.43
34:RA:1295:C:H2'	34:RA:1296:G:C8	2.49	0.43
34:RA:1826:G:H4'	36:RD:242:ARG:NH2	2.32	0.43
34:RA:2092:U:OP2	41:RI:27:ARG:NH2	2.50	0.43
34:RA:2182:G:H2'	34:RA:2183:C:C6	2.53	0.43
34:RA:2463:C:H2'	34:RA:2464:C:H6	1.82	0.43
36:RD:50:THR:OG1	36:RD:51:VAL:N	2.50	0.43
45:RQ:34:LEU:HB2	45:RQ:118:LEU:HD12	2.00	0.43
1:XA:9:G:OP1	5:XE:122:GLU:HB2	2.17	0.43
1:XA:158:G:H2'	1:XA:159:G:C8	2.53	0.43
1:XA:197:A:N1	1:XA:220:G:O2'	2.50	0.43
1:XA:936:C:H3'	1:XA:936:C:C6	2.52	0.43
1:XA:1059:C:C6	3:XC:2:GLY:HA2	2.51	0.43
1:XA:1271:G:H2'	1:XA:1272:G:C8	2.53	0.43
7:XG:116:ALA:HA	7:XG:119:ARG:HE	1.83	0.43
10:XJ:7:LYS:HD2	10:XJ:97:GLU:HB2	1.98	0.43
12:XL:33:ARG:NH2	12:XL:61:THR:OG1	2.51	0.43
34:YA:462:C:H2'	34:YA:463:G:C8	2.52	0.43
34:YA:1326:U:O2'	34:YA:2010:G:O2'	2.34	0.43
34:YA:1509:C:H3'	34:YA:1510:A:H5''	2.01	0.43
34:YA:1927:A:H2'	34:YA:1928:A:C8	2.53	0.43
34:YA:1958:C:H2'	34:YA:1959:G:C8	2.53	0.43
34:YA:2002:G:H2'	34:YA:2003:G:C8	2.54	0.43
34:YA:2131:G:H5''	34:YA:2131:G:H8	1.82	0.43
34:YA:2751:G:O6	40:YH:2:SER:OG	2.35	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:YI:101:LEU:HD11	41:YI:109:ILE:HD13	2.00	0.43
50:YV:8:GLY:O	50:YV:10:LYS:NZ	2.41	0.43
1:QA:222:U:H2'	1:QA:223:U:C6	2.53	0.43
1:QA:311:C:H2'	1:QA:312:C:H6	1.83	0.43
1:QA:435:C:H2'	1:QA:436:C:H6	1.83	0.43
1:QA:718:G:H1'	11:QK:116:HIS:HA	2.00	0.43
1:QA:897:C:H2'	1:QA:898:G:C8	2.53	0.43
3:QC:79:ARG:CZ	11:XK:104:GLN:HG3	2.41	0.43
5:QE:43:LEU:HD13	5:QE:109:ILE:HD11	1.99	0.43
5:QE:100:VAL:O	5:QE:107:ARG:NH1	2.48	0.43
29:R5:12:SER:O	29:R5:16:ARG:CB	2.67	0.43
34:RA:619:G:H3'	34:RA:620:G:N2	2.33	0.43
34:RA:865:C:O2	34:RA:867:C:N4	2.51	0.43
34:RA:971:C:H2'	34:RA:972:G:O4'	2.18	0.43
34:RA:1141:U:H1'	34:RA:1142(B):A:C6	2.53	0.43
34:RA:1211:U:H5''	34:RA:1212:G:N7	2.34	0.43
34:RA:1992:G:H5'	34:RA:1994:C:H41	1.83	0.43
34:RA:2250:G:C2	45:RQ:82:ARG:HB3	2.52	0.43
34:RA:2263:C:H2'	34:RA:2264:C:C6	2.54	0.43
49:RU:92:ARG:HD2	50:RV:11:GLN:HG3	1.99	0.43
1:XA:736:C:H2'	1:XA:737:A:H8	1.83	0.43
1:XA:743:U:H2'	1:XA:744:C:C6	2.53	0.43
1:XA:960:U:H1'	1:XA:1222:G:O2'	2.18	0.43
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.53	0.43
34:YA:143:C:H2'	34:YA:144:C:C6	2.53	0.43
34:YA:242:G:N2	34:YA:254:G:H2'	2.33	0.43
34:YA:1230:C:H2'	34:YA:1231:G:C8	2.53	0.43
34:YA:1311:G:H21	34:YA:1603:A:H62	1.67	0.43
34:YA:1375:C:H2'	34:YA:1376:C:H6	1.83	0.43
34:YA:1504:C:H2'	34:YA:1505:C:C6	2.53	0.43
34:YA:1564:C:H2'	34:YA:1565:C:C6	2.53	0.43
34:YA:1930:G:H2'	34:YA:1968:G:N1	2.34	0.43
34:YA:1992:G:N2	34:YA:1996:C:O2'	2.52	0.43
34:YA:2471:C:H3'	34:YA:2472:G:H8	1.83	0.43
34:YA:2751:G:C5	40:YH:2:SER:O	2.71	0.43
37:YE:11:MET:HE3	37:YE:11:MET:HB2	1.93	0.43
37:YE:37:ARG:NH1	37:YE:44:TYR:OH	2.48	0.43
39:YG:124:SER:O	39:YG:124:SER:OG	2.35	0.43
39:YG:165:THR:OG1	39:YG:166:ASP:N	2.52	0.43
41:YI:81:VAL:HG11	41:YI:88:ILE:HD13	1.99	0.43
1:QA:24:U:H2'	1:QA:25:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:36:C:H2'	1:QA:37:U:O4'	2.18	0.43
1:QA:645:C:H2'	1:QA:646:U:C6	2.53	0.43
1:QA:1109:C:OP2	3:QC:176:HIS:CD2	2.71	0.43
1:QA:1247:U:H2'	1:QA:1248:A:C8	2.53	0.43
1:QA:1357:A:H2	1:QA:1365:G:H22	1.67	0.43
1:QA:1383:C:H2'	1:QA:1384:C:H6	1.82	0.43
3:QC:6:HIS:HE1	3:QC:8:ILE:HD12	1.82	0.43
28:R4:1:MET:HE1	39:RG:66:GLN:NE2	2.33	0.43
34:RA:300:A:OP1	53:RY:86:ARG:NH2	2.47	0.43
34:RA:532:A:H4'	34:RA:533:G:C8	2.52	0.43
34:RA:779:U:H2'	34:RA:780:G:C8	2.53	0.43
34:RA:816:C:H2'	34:RA:817:C:C6	2.54	0.43
34:RA:1130:U:N3	34:RA:2025:C:H5''	2.33	0.43
34:RA:1145:C:H2'	34:RA:1146:C:C6	2.54	0.43
34:RA:1818:U:OP2	36:RD:157:ARG:NH1	2.51	0.43
34:RA:1954:G:O2'	34:RA:1956:U:O4	2.35	0.43
34:RA:2122:U:H2'	34:RA:2123:G:C8	2.53	0.43
34:RA:2341:G:H2'	34:RA:2342:C:C6	2.53	0.43
35:RB:111:U:H2'	35:RB:112:G:H8	1.82	0.43
37:RE:171:GLU:H	37:RE:185:LYS:HB2	1.84	0.43
37:RE:176:ILE:HG13	37:RE:181:LEU:HB2	2.00	0.43
39:RG:43:LEU:HD21	39:RG:153:ARG:HB2	1.99	0.43
41:RI:84:GLY:CA	41:RI:89:TYR:OH	2.61	0.43
43:RO:15:GLY:HA3	43:RO:50:GLY:HA3	1.99	0.43
46:RR:29:LEU:HD12	46:RR:70:LEU:HD21	1.99	0.43
1:XA:355:C:H1'	1:XA:388:G:H1'	2.00	0.43
1:XA:373:A:HO2'	1:XA:451:A:H62	1.61	0.43
1:XA:520:A:N1	1:XA:533:A:N6	2.55	0.43
1:XA:726:C:H2'	1:XA:727:G:C8	2.53	0.43
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.53	0.43
1:XA:1347:G:H4'	1:XA:1348:U:C5	2.53	0.43
22:XV:20:G:N2	22:XV:60:U:H3	2.17	0.43
22:XV:70:C:O2'	34:YA:1893:C:O2'	2.30	0.43
33:Y9:33:LYS:NZ	34:YA:2743:C:OP1	2.43	0.43
34:YA:208:C:H2'	34:YA:209:C:C6	2.53	0.43
34:YA:270(I):C:H2'	34:YA:270(J):G:C8	2.53	0.43
34:YA:270(J):G:H2'	34:YA:270(K):G:C8	2.54	0.43
34:YA:1097:U:H3'	34:YA:1098:A:H8	1.83	0.43
34:YA:1116:C:H2'	34:YA:1117:G:C8	2.54	0.43
34:YA:1539:G:H2'	34:YA:1540:G:H8	1.84	0.43
34:YA:1782:C:H41	34:YA:2587:A:H2	1.62	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2179:C:H2'	34:YA:2180:U:C6	2.53	0.43
36:YD:143:HIS:ND1	36:YD:194:GLY:O	2.40	0.43
39:YG:106:LEU:HD12	39:YG:110:ALA:HB3	1.99	0.43
48:YT:19:LEU:HD21	48:YT:83:ILE:HD11	2.00	0.43
49:YU:55:ARG:O	49:YU:59:ARG:HG2	2.18	0.43
1:QA:218:C:H2'	1:QA:219:C:C6	2.54	0.43
1:QA:378:G:H2'	1:QA:379:C:C6	2.52	0.43
1:QA:702:A:H3'	1:QA:703:G:C8	2.53	0.43
1:QA:831:U:H2'	1:QA:832:C:C6	2.54	0.43
1:QA:956:U:O3'	19:QS:81:ARG:C	2.62	0.43
1:QA:1014:A:H1'	19:QS:34:TRP:CD2	2.54	0.43
1:QA:1112:C:N3	3:QC:178:LEU:HD12	2.33	0.43
1:QA:1255:G:O6	1:QA:1279:A:H2'	2.18	0.43
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.54	0.43
10:QJ:28:ARG:HE	10:QJ:34:VAL:HG12	1.83	0.43
34:RA:32:C:N4	34:RA:447:A:OP2	2.51	0.43
34:RA:873:G:H4'	45:RQ:63:LYS:NZ	2.32	0.43
34:RA:1382:G:H4'	34:RA:1573:G:C2	2.54	0.43
34:RA:1476:C:H2'	34:RA:1477:A:H8	1.83	0.43
34:RA:1796:U:H2'	34:RA:1797:C:H6	1.82	0.43
34:RA:2737:G:H2'	34:RA:2738:A:C8	2.53	0.43
34:RA:2747:G:H21	34:RA:2757:A:H62	1.65	0.43
40:RH:80:SER:O	40:RH:80:SER:OG	2.31	0.43
46:RR:35:THR:HG22	46:RR:113:LEU:HD13	2.01	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.53	0.43
1:XA:559:A:H4'	1:XA:560:U:H5''	1.99	0.43
1:XA:1251:A:N3	1:XA:1369:C:O2'	2.51	0.43
1:XA:1301:U:C3'	13:XM:17:VAL:HG23	2.49	0.43
1:XA:1302:U:H1'	13:XM:27:LYS:HG3	1.83	0.43
1:XA:1320:C:C2	19:XS:36:ARG:C	2.96	0.43
1:XA:1524:C:H2'	1:XA:1525:G:C8	2.53	0.43
5:XE:99:GLY:N	5:XE:117:ASP:OD1	2.47	0.43
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.19	0.43
27:Y3:18:ASP:HB2	27:Y3:49:LYS:HE2	1.99	0.43
28:Y4:37:SER:HA	28:Y4:41:PRO:HD2	1.99	0.43
32:Y8:18:ALA:HB2	34:YA:628:G:H5''	2.01	0.43
34:YA:358:U:H2'	34:YA:359:A:C8	2.51	0.43
34:YA:361:G:H2'	34:YA:362:U:C6	2.54	0.43
34:YA:557:U:H2'	34:YA:558:G:C8	2.53	0.43
34:YA:786:C:H2'	34:YA:787:U:H6	1.83	0.43
34:YA:994:C:OP1	49:YU:53:ARG:NH2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1161:C:H2'	34:YA:1162:G:C8	2.53	0.43
34:YA:1189:A:C2	34:YA:1190:G:H1'	2.54	0.43
34:YA:2046:G:C6	34:YA:2623:G:O6	2.68	0.43
34:YA:2170:A:H2'	34:YA:2171:A:O4'	2.19	0.43
34:YA:2432:A:H2'	34:YA:2433:A:C8	2.53	0.43
34:YA:2758:A:C2	34:YA:2759:G:H1'	2.53	0.43
44:YP:97:PRO:O	44:YP:98:GLU:HG3	2.18	0.43
1:QA:130:A:H4'	1:QA:186(K):G:C4	2.53	0.43
1:QA:1004:A:C2	1:QA:1024:G:H2'	2.51	0.43
1:QA:1440(I):U:H4'	1:QA:1440(J):A:C2	2.53	0.43
1:QA:1497:G:H1'	1:QA:1518:A:C2	2.54	0.43
2:QB:188:ALA:HB1	2:QB:192:SER:HB2	2.01	0.43
3:QC:24:ALA:HB1	3:QC:32:LEU:HD21	1.99	0.43
24:R0:14:ARG:O	34:RA:2278:A:N6	2.52	0.43
29:R5:16:ARG:NH2	34:RA:517:C:OP1	2.51	0.43
34:RA:300:A:OP2	53:RY:84:ARG:NH1	2.52	0.43
34:RA:1310:G:H1'	34:RA:1611:C:H5''	2.00	0.43
34:RA:1732:A:H3'	34:RA:1733:G:C8	2.53	0.43
36:RD:171:ASP:OD1	36:RD:171:ASP:N	2.48	0.43
38:RF:34:TRP:CE3	44:RP:8:PRO:HB3	2.53	0.43
41:RI:83:ALA:C	41:RI:89:TYR:CZ	2.84	0.43
44:RP:96:THR:HA	44:RP:126:VAL:HB	2.01	0.43
48:RT:6:LEU:O	48:RT:10:VAL:HG23	2.19	0.43
1:XA:404:U:H2'	1:XA:405:U:C6	2.53	0.43
1:XA:1440(D):G:H5'	1:XA:1440(E):A:H2	1.83	0.43
1:XA:1463:C:H2'	1:XA:1464:G:C8	2.53	0.43
5:XE:31:LEU:HD13	5:XE:45:PHE:HD1	1.82	0.43
12:XL:86:ARG:HH21	12:XL:99:HIS:CD2	2.37	0.43
22:XV:76:A:C6	34:YA:2421:G:H2'	2.54	0.43
34:YA:273(E):C:H2'	34:YA:273(F):U:C6	2.54	0.43
34:YA:296:C:O3'	53:YY:95:LYS:NZ	2.51	0.43
34:YA:416:C:N3	34:YA:2407:G:O6	2.51	0.43
34:YA:1141:U:H1'	34:YA:1142(B):A:C6	2.54	0.43
34:YA:1339:G:N2	34:YA:1603:A:N3	2.66	0.43
34:YA:1689:A:OP2	34:YA:1698:A:N6	2.52	0.43
34:YA:1796:U:H2'	34:YA:1797:C:H6	1.84	0.43
34:YA:1947:C:H2'	34:YA:1948:G:C8	2.54	0.43
34:YA:2110:G:H3'	34:YA:2111:C:C6	2.53	0.43
44:YP:64:LYS:O	44:YP:66:GLY:N	2.51	0.43
1:QA:25:C:H2'	1:QA:26:A:C8	2.54	0.43
1:QA:60:A:H2	1:QA:378:G:H1'	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:296:U:H2'	1:QA:297:G:C8	2.54	0.43
1:QA:662:G:H2'	1:QA:663:A:H8	1.82	0.43
1:QA:689:C:P	11:QK:55:LYS:NZ	2.92	0.43
1:QA:740:U:O2'	15:QO:39:LEU:HD11	2.18	0.43
1:QA:918:A:H2'	1:QA:919:A:C8	2.54	0.43
1:QA:948:C:OP2	13:QM:106:ASN:O	2.36	0.43
1:QA:986:A:C2'	19:QS:55:LYS:HA	2.46	0.43
1:QA:1190:G:H4'	3:QC:176:HIS:CE1	2.54	0.43
2:QB:54:THR:O	2:QB:58:ILE:HG12	2.18	0.43
4:QD:191:ARG:HD2	4:QD:191:ARG:HA	1.72	0.43
7:QG:6:ARG:HA	7:QG:6:ARG:HD3	1.75	0.43
15:QO:5:LYS:HE2	15:QO:5:LYS:HB2	1.90	0.43
19:QS:39:THR:HG22	19:QS:41:VAL:HG22	2.01	0.43
32:R8:31:HIS:HE1	34:RA:2421:G:N7	2.14	0.43
34:RA:39:C:H2'	34:RA:40:C:C6	2.54	0.43
34:RA:134:C:H2'	34:RA:135:G:C8	2.54	0.43
34:RA:206:U:H2'	34:RA:207:A:C8	2.50	0.43
34:RA:807:U:O2'	34:RA:2060:A:N1	2.48	0.43
34:RA:864:G:H1'	34:RA:914:C:H42	1.83	0.43
34:RA:967:C:H2'	34:RA:968:G:C8	2.54	0.43
34:RA:1467:C:C5	34:RA:1546:C:H2'	2.54	0.43
34:RA:1937:A:O2'	34:RA:1939:U:OP2	2.29	0.43
34:RA:1952:A:N3	34:RA:2560:C:O2'	2.41	0.43
34:RA:2736:G:H2'	34:RA:2737:G:C8	2.54	0.43
49:RU:88:ILE:HD12	50:RV:47:VAL:HG22	2.01	0.43
53:RY:28:LYS:NZ	53:RY:40:GLU:OE2	2.38	0.43
54:RZ:48:PHE:HA	54:RZ:51:ALA:HB3	2.01	0.43
1:XA:186(F):C:H2'	1:XA:186(G):C:C6	2.53	0.43
1:XA:272:C:H2'	1:XA:273:A:C8	2.53	0.43
1:XA:1028(C):C:N3	1:XA:1028(H):G:N1	2.56	0.43
1:XA:1071:C:H2'	1:XA:1072:G:C8	2.54	0.43
21:XU:3:LYS:HG2	21:XU:14:TRP:CD2	2.53	0.43
27:Y3:5:LYS:HE3	27:Y3:57:GLU:HB3	1.99	0.43
34:YA:263:C:H1'	34:YA:430:G:H1'	2.00	0.43
34:YA:270(N):U:H1'	34:YA:270(O):G:C5	2.53	0.43
34:YA:296:C:H2'	34:YA:297:C:H6	1.83	0.43
34:YA:363(A):G:H2'	34:YA:363(B):A:H8	1.83	0.43
34:YA:820:A:N3	34:YA:943:U:O2'	2.46	0.43
34:YA:1501:C:H2'	34:YA:1502:C:C6	2.54	0.43
34:YA:1539:G:H2'	34:YA:1540:G:C8	2.53	0.43
34:YA:1674:G:H1'	34:YA:1676:A:N6	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1800:C:OP2	36:YD:183:ARG:NH1	2.52	0.43
34:YA:2023:G:P	34:YA:2023:G:H8	2.42	0.43
34:YA:2064:C:H2'	34:YA:2065:C:C6	2.54	0.43
34:YA:2391:G:H1'	34:YA:2429:G:N2	2.33	0.43
40:YH:152:ARG:HA	40:YH:152:ARG:HD3	1.80	0.43
53:YY:76:CYS:CB	53:YY:79:CYS:SG	3.07	0.43
1:QA:285:G:H2'	1:QA:286:G:C8	2.54	0.43
1:QA:831:U:H2'	1:QA:832:C:H6	1.84	0.43
1:QA:975:A:H3'	14:QN:32:SER:HB3	2.01	0.43
1:QA:1123:A:H2'	1:QA:1124:G:C4	2.53	0.43
2:QB:150:SER:HA	2:QB:153:ARG:HH21	1.83	0.43
5:QE:80:ILE:HD12	8:QH:104:ARG:HH12	1.82	0.43
13:QM:34:LEU:HA	13:QM:37:THR:HG22	2.01	0.43
13:QM:84:ILE:HG13	19:QS:74:PHE:CE2	2.54	0.43
13:QM:95:GLY:HA2	13:QM:110:ARG:HH21	1.83	0.43
26:R2:16:LEU:H	26:R2:67:LYS:NZ	2.16	0.43
34:RA:29:U:H5''	49:RU:7:GLY:HA2	2.00	0.43
34:RA:210:C:H4'	34:RA:1367:A:H1'	2.00	0.43
34:RA:231:C:H3'	34:RA:232:G:C8	2.53	0.43
34:RA:259:G:H2'	34:RA:260:G:H8	1.84	0.43
34:RA:285:C:H2'	34:RA:286:C:C6	2.52	0.43
34:RA:624:C:H2'	34:RA:625:G:H8	1.83	0.43
34:RA:1258:C:H2'	34:RA:1259:G:C8	2.54	0.43
34:RA:1518:C:H2'	34:RA:1519:G:H8	1.83	0.43
34:RA:1604:C:H2'	34:RA:1605:C:C6	2.50	0.43
34:RA:1629:U:H2'	34:RA:1630(A):G:H8	1.83	0.43
34:RA:2391:G:C6	34:RA:2427:C:H1'	2.54	0.43
34:RA:2517:C:N3	34:RA:2542:A:N6	2.65	0.43
34:RA:2607:G:H2'	34:RA:2608:G:C8	2.54	0.43
34:RA:2737:G:H2'	34:RA:2738:A:H8	1.84	0.43
38:RF:152:GLU:OE1	38:RF:191:ARG:NE	2.52	0.43
53:RY:79:CYS:N	53:RY:102:CYS:SG	2.92	0.43
1:XA:186(A):C:H2'	1:XA:186(B):C:C6	2.54	0.43
1:XA:256:U:H2'	1:XA:257:G:C8	2.54	0.43
1:XA:555:C:H2'	1:XA:556:C:C6	2.53	0.43
1:XA:921:U:H2'	1:XA:922:G:C8	2.53	0.43
1:XA:936:C:C6	1:XA:936:C:C3'	3.01	0.43
1:XA:950:U:H3	1:XA:1231:G:H1	1.65	0.43
1:XA:1240:U:H5''	1:XA:1241:G:C8	2.54	0.43
1:XA:1256:A:N6	1:XA:1277:C:H5''	2.33	0.43
1:XA:1485:U:H2'	1:XA:1486:G:H8	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:XF:62:TRP:CD1	18:XR:35:ARG:NH2	2.87	0.43
6:XF:67:MET:HE1	6:XF:75:LEU:HD22	2.01	0.43
11:XK:82:VAL:HB	11:XK:108:ILE:HA	2.01	0.43
12:XL:11:VAL:CG2	17:XQ:29:HIS:CD2	3.00	0.43
34:YA:141(A):A:H1'	34:YA:1408:C:H1'	2.01	0.43
34:YA:161:U:H3'	34:YA:162:U:H5''	2.00	0.43
34:YA:679:C:H2'	34:YA:680:G:C8	2.53	0.43
34:YA:1181:C:H2'	34:YA:1182:A:C8	2.54	0.43
34:YA:1662:C:H2'	34:YA:1663:C:C6	2.53	0.43
34:YA:2044:C:C2	34:YA:2625:G:N2	2.87	0.43
34:YA:2346:A:N3	34:YA:2346:A:H5''	2.34	0.43
34:YA:2735:G:H2'	34:YA:2736:G:C8	2.54	0.43
35:YB:37:C:O2	47:YS:95:HIS:NE2	2.41	0.43
38:YF:158:THR:OG1	38:YF:159:GLY:N	2.51	0.43
47:YS:14:VAL:O	47:YS:18:ILE:HG12	2.18	0.43
48:YT:120:ARG:HA	48:YT:123:GLN:HB2	2.01	0.43
1:QA:1099:G:O5'	2:QB:96:ARG:HD2	2.19	0.43
1:QA:1221:G:O4'	19:QS:36:ARG:NH2	2.43	0.43
1:QA:1377:A:H2'	1:QA:1377:A:N3	2.34	0.43
4:QD:100:ARG:HG3	4:QD:137:SER:HA	2.00	0.43
12:QL:76:ASN:HD21	12:QL:108:ALA:HB3	1.84	0.43
34:RA:69:C:H2'	34:RA:70:G:H8	1.83	0.43
34:RA:121:G:H4'	34:RA:149:A:H5'	1.99	0.43
34:RA:453:C:H4'	34:RA:472:A:H62	1.84	0.43
34:RA:453:C:H4'	34:RA:472:A:N6	2.34	0.43
34:RA:1044:G:H1'	34:RA:1048:A:C4	2.54	0.43
34:RA:2068:U:H3	34:RA:2430:A:H2	1.65	0.43
34:RA:2134:A:H1'	34:RA:2158:A:C2	2.54	0.43
34:RA:2250:G:C6	45:RQ:82:ARG:CD	3.00	0.43
34:RA:2260:C:H2'	34:RA:2261:C:H6	1.82	0.43
37:RE:35:GLN:HB2	37:RE:37:ARG:HH21	1.84	0.43
40:RH:46:GLU:OE1	40:RH:51:ARG:NH1	2.52	0.43
43:RO:15:GLY:HA2	43:RO:47:ILE:HG22	2.00	0.43
1:XA:164:U:H2'	1:XA:165:C:C6	2.53	0.43
1:XA:290:C:H2'	1:XA:291:C:H6	1.83	0.43
1:XA:766:A:H2'	1:XA:767:A:O4'	2.18	0.43
1:XA:768:A:N3	1:XA:1512:U:O2'	2.52	0.43
1:XA:964:A:O2'	10:XJ:55:LYS:NZ	2.47	0.43
5:XE:105:VAL:HG11	5:XE:132:ALA:HB2	1.99	0.43
14:XN:53:LEU:HD12	14:XN:54:PRO:HD2	2.01	0.43
17:XQ:21:VAL:N	17:XQ:42:TYR:O	2.40	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:XR:21:LYS:HE2	18:XR:21:LYS:HB3	1.81	0.43
24:Y0:72:ARG:CB	24:Y0:75:LEU:HB2	2.48	0.43
34:YA:363(A):G:H2'	34:YA:363(B):A:C8	2.54	0.43
34:YA:511:U:H4'	34:YA:1235:G:H4'	2.01	0.43
34:YA:1204:A:H1'	34:YA:1206:G:N9	2.34	0.43
34:YA:1825:A:H2'	34:YA:1826:G:C8	2.53	0.43
34:YA:1849:G:H2'	34:YA:1850:G:C8	2.52	0.43
34:YA:2077:A:C6	34:YA:2435:A:C6	3.07	0.43
34:YA:2406:U:C4	44:YP:75:ILE:CD1	3.02	0.43
34:YA:2437:U:H2'	34:YA:2438:U:C6	2.53	0.43
34:YA:2469:A:H5''	34:YA:2470:G:H8	1.84	0.43
34:YA:2550:G:H2'	34:YA:2551:C:C6	2.54	0.43
34:YA:2567:G:H2'	34:YA:2568:C:C6	2.53	0.43
48:YT:16:ARG:NH2	48:YT:83:ILE:O	2.51	0.43
54:YZ:48:PHE:HA	54:YZ:51:ALA:HB3	2.00	0.43
1:QA:137:C:H2'	1:QA:138:G:C8	2.54	0.43
1:QA:359:U:H2'	1:QA:360:A:C8	2.49	0.43
1:QA:1143:G:H2'	1:QA:1144:G:C8	2.54	0.43
1:QA:1288:A:N1	1:QA:1371:G:H1'	2.33	0.43
1:QA:1379:G:H2'	1:QA:1380:U:C6	2.54	0.43
1:QA:1440(J):A:H2'	1:QA:1440(L):G:O6	2.19	0.43
1:QA:1440(O):C:H2'	1:QA:1440(P):A:H8	1.84	0.43
6:QF:78:GLU:HA	6:QF:81:ILE:HG12	2.01	0.43
11:QK:101:SER:O	11:QK:101:SER:OG	2.30	0.43
13:QM:29:ARG:HH21	13:QM:64:TRP:HE1	1.67	0.43
25:R1:78:LYS:HZ1	34:RA:270(S):G:N2	2.16	0.43
34:RA:288:C:H2'	34:RA:289:A:C8	2.53	0.43
34:RA:494:G:OP1	51:RW:8:ARG:NH1	2.52	0.43
34:RA:530:G:N3	34:RA:2021:C:H1'	2.34	0.43
34:RA:740:U:H2'	34:RA:741:G:C8	2.54	0.43
34:RA:746:A:H3'	34:RA:2612:C:C5	2.53	0.43
34:RA:1065:U:H3	34:RA:1069:A:H2'	1.82	0.43
34:RA:1112:G:H2'	34:RA:1113:U:O4'	2.19	0.43
34:RA:1297:C:O2'	34:RA:1302:A:N1	2.44	0.43
34:RA:2179:C:H2'	34:RA:2180:U:C6	2.54	0.43
34:RA:2374:C:H2'	34:RA:2375:G:C8	2.54	0.43
34:RA:2428:G:O2'	44:RP:56:SER:OG	2.36	0.43
34:RA:2520:C:O2'	34:RA:2565:A:O2'	2.32	0.43
45:RQ:77:LYS:NZ	45:RQ:84:GLY:O	2.40	0.43
1:XA:458(B):G:H2'	1:XA:458(C):A:H2'	2.01	0.43
1:XA:556:C:H2'	1:XA:557:G:H8	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:577:G:H1'	1:XA:816:A:H2'	2.00	0.43
1:XA:787:A:H2'	1:XA:788:U:C6	2.54	0.43
1:XA:996:A:H2'	1:XA:997:U:H6	1.84	0.43
1:XA:1253:G:C4	1:XA:1254:C:C5	3.07	0.43
1:XA:1505:G:H1'	23:XX:15:A:H2	1.83	0.43
1:XA:1525:G:H2'	1:XA:1526:G:C8	2.54	0.43
3:XC:8:ILE:HD11	3:XC:184:TYR:H	1.84	0.43
13:XM:52:GLU:HA	13:XM:55:ARG:HG2	2.00	0.43
20:XT:17:ARG:HE	20:XT:17:ARG:HB3	1.73	0.43
21:XU:3:LYS:CD	21:XU:14:TRP:CD2	3.00	0.43
24:Y0:26:TYR:N	24:Y0:29:GLN:OE1	2.52	0.43
34:YA:436:C:H2'	34:YA:438:G:C8	2.53	0.43
34:YA:635:C:H2'	34:YA:636:G:H8	1.84	0.43
34:YA:675:A:N3	34:YA:2443:C:O2'	2.47	0.43
34:YA:1660:C:H2'	34:YA:1661:G:H8	1.83	0.43
34:YA:1772:G:H21	34:YA:1774:C:H5'	1.84	0.43
34:YA:2131:G:H1'	34:YA:2158:A:H61	1.83	0.43
34:YA:2543:G:H2'	34:YA:2544:G:C8	2.53	0.43
38:YF:48:THR:OG1	38:YF:48:THR:O	2.36	0.43
47:YS:4:LEU:HD11	47:YS:12:PHE:CE2	2.51	0.43
1:QA:186(H):C:H1'	1:QA:186(L):G:N2	2.34	0.42
1:QA:197:A:N1	1:QA:220:G:O2'	2.46	0.42
1:QA:324:G:H2'	1:QA:326:G:N7	2.34	0.42
1:QA:418:C:H2'	1:QA:419:C:C6	2.53	0.42
1:QA:457:C:H2'	1:QA:458(A):C:C6	2.54	0.42
1:QA:518:C:H2'	1:QA:530:G:N3	2.34	0.42
1:QA:718:G:H21	18:QR:49:LYS:HE3	1.83	0.42
1:QA:979:C:C4	14:QN:19:ARG:CB	3.00	0.42
1:QA:1321:C:O2	19:QS:72:GLY:C	2.62	0.42
1:QA:1437:C:H2'	1:QA:1438:G:H8	1.83	0.42
3:QC:12:LEU:HG	3:QC:18:TRP:HE1	1.83	0.42
8:QH:10:LEU:HG	8:QH:83:ILE:HD11	1.99	0.42
13:QM:29:ARG:HD2	13:QM:29:ARG:HA	1.79	0.42
28:R4:34:GLU:OE1	39:RG:113:ARG:CD	2.66	0.42
34:RA:236:C:H2'	34:RA:237:C:H6	1.84	0.42
34:RA:272:G:H2'	34:RA:273(A):G:C8	2.54	0.42
34:RA:286:C:H2'	34:RA:287:C:C6	2.54	0.42
34:RA:1870:C:H2'	34:RA:1871:A:O4'	2.19	0.42
34:RA:1908:C:H2'	34:RA:1909:C:H6	1.84	0.42
34:RA:2161:C:H2'	34:RA:2162:G:C8	2.54	0.42
37:RE:120:TRP:CD2	37:RE:155:LYS:HB3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:RP:65:ARG:O	44:RP:68:GLN:NE2	2.52	0.42
54:RZ:53:ILE:HG22	54:RZ:71:VAL:HG13	1.99	0.42
1:XA:7:G:H5'	1:XA:298:A:H5'	2.00	0.42
1:XA:107:G:C2	1:XA:108:G:H1'	2.54	0.42
1:XA:310:G:H5''	16:XP:31:LYS:HB2	2.00	0.42
1:XA:503:C:OP1	12:XL:119:LYS:HE2	2.19	0.42
1:XA:585:G:N3	1:XA:879:C:H4'	2.34	0.42
1:XA:639:G:H2'	1:XA:640:A:H8	1.84	0.42
1:XA:657:G:H4'	15:XO:28:GLN:HG2	2.01	0.42
1:XA:679:C:H2'	1:XA:680:C:C6	2.53	0.42
1:XA:857:C:H2'	1:XA:858:G:O4'	2.20	0.42
1:XA:1049:U:OP1	14:XN:3:ARG:NH2	2.52	0.42
1:XA:1217:C:P	14:XN:5:ALA:CB	2.98	0.42
1:XA:1361:G:C4	14:XN:18:VAL:HG12	2.54	0.42
11:XK:108:ILE:C	18:XR:87:ARG:HD2	2.39	0.42
33:Y9:10:ILE:N	33:Y9:14:CYS:SG	2.84	0.42
34:YA:151:C:H2'	34:YA:152:G:C8	2.52	0.42
34:YA:270(V):C:H2'	34:YA:270(W):G:C8	2.53	0.42
34:YA:687:C:N3	34:YA:787:U:H4'	2.34	0.42
34:YA:741:G:H2'	34:YA:742:G:C8	2.54	0.42
34:YA:1069:A:H2'	34:YA:1073:A:N7	2.34	0.42
34:YA:1278:A:H2'	34:YA:1279:G:C8	2.54	0.42
34:YA:1535:U:C4	34:YA:1537:C:H1'	2.54	0.42
34:YA:2786:U:O2'	37:YE:62:PRO:HA	2.18	0.42
34:YA:2840:C:H2'	34:YA:2841:C:C6	2.54	0.42
54:YZ:85:HIS:NE2	54:YZ:87:ASP:OD1	2.52	0.42
1:QA:157:G:H2'	1:QA:158:G:C8	2.54	0.42
1:QA:323:U:H4'	20:QT:19:SER:HA	2.01	0.42
1:QA:781:A:H4'	1:QA:1522:U:O2'	2.19	0.42
1:QA:1260:C:H2'	1:QA:1275:A:H61	1.84	0.42
1:QA:1410:G:H2'	1:QA:1411:C:C6	2.55	0.42
13:QM:28:ALA:CB	21:QU:21:TYR:OH	2.68	0.42
34:RA:807:U:H2'	34:RA:808:G:C8	2.54	0.42
34:RA:825:C:H4'	34:RA:2428:G:N7	2.34	0.42
34:RA:1711:C:H2'	34:RA:1712:C:C6	2.54	0.42
34:RA:2547:U:H2'	34:RA:2548:G:C8	2.54	0.42
34:RA:2580:U:H5'	37:RE:130:GLY:O	2.19	0.42
46:RR:11:ASN:O	46:RR:12:ARG:HG3	2.19	0.42
54:RZ:130:PRO:HA	54:RZ:133:ILE:HD11	2.01	0.42
1:XA:68(P):A:C5	1:XA:68(Q):C:H1'	2.54	0.42
1:XA:518:C:H5	1:XA:529:G:H3'	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1305:G:C6	1:XA:1331:G:N7	2.81	0.42
10:XJ:62:HIS:NE2	14:YN:61:TRP:HE3	2.16	0.42
32:Y8:4:MET:HG3	32:Y8:61:LEU:HD11	2.01	0.42
34:YA:67:U:H2'	34:YA:68:G:H8	1.83	0.42
34:YA:189:G:H2'	34:YA:205:G:N2	2.34	0.42
34:YA:335:C:H2'	34:YA:336:C:H6	1.84	0.42
34:YA:779:U:H2'	34:YA:780:G:C8	2.53	0.42
37:YE:144:ARG:HG3	37:YE:145:LYS:H	1.84	0.42
40:YH:9:ILE:HG22	40:YH:49:VAL:HB	1.95	0.42
45:YQ:141:GLN:HG3	54:YZ:123:ASP:OD1	2.19	0.42
1:QA:45:U:H4'	1:QA:306:G:N2	2.34	0.42
1:QA:125:U:H2'	1:QA:126:G:C8	2.55	0.42
1:QA:320:C:H2'	1:QA:321:A:C8	2.53	0.42
1:QA:522:C:H2'	1:QA:523:A:H8	1.84	0.42
1:QA:624:C:O2'	16:QP:10:GLY:CA	2.68	0.42
1:QA:832:C:H2'	1:QA:833:U:C6	2.54	0.42
1:QA:1086:U:H3	1:QA:1099:G:H1	1.65	0.42
1:QA:1186:G:C2	14:QN:61:TRP:O	2.66	0.42
1:QA:1530:G:H2'	1:QA:1531:A:C8	2.54	0.42
4:QD:122:ARG:HA	4:QD:122:ARG:HD2	1.90	0.42
13:QM:37:THR:O	13:QM:55:ARG:NH2	2.53	0.42
13:QM:84:ILE:O	19:QS:74:PHE:HE2	1.77	0.42
17:QQ:45:HIS:H	17:QQ:72:ARG:HA	1.84	0.42
34:RA:237:C:H2'	34:RA:238:C:C6	2.54	0.42
34:RA:636:G:C4	44:RP:115:LEU:HD11	2.54	0.42
34:RA:828:U:H4'	34:RA:831:G:C2	2.54	0.42
34:RA:1629:U:H2'	34:RA:1630(A):G:C8	2.55	0.42
34:RA:1857:G:H21	34:RA:1886:C:H42	1.67	0.42
34:RA:1909:C:H2'	34:RA:1910:G:C8	2.53	0.42
34:RA:2208:U:H2'	34:RA:2209:C:C6	2.54	0.42
34:RA:2363:C:H2'	34:RA:2364:C:H6	1.84	0.42
34:RA:2658:C:H5''	40:RH:158:HIS:NE2	2.34	0.42
37:RE:109:LYS:HG2	37:RE:191:PRO:HB3	2.00	0.42
1:XA:181:G:H4'	1:XA:182:U:H5'	2.01	0.42
1:XA:280:C:C4	17:XQ:39:SER:N	2.70	0.42
1:XA:538:G:H2'	1:XA:539:A:C8	2.54	0.42
1:XA:677:U:H2'	1:XA:678:U:C6	2.53	0.42
1:XA:684:A:H2'	1:XA:685:G:C8	2.54	0.42
1:XA:712:A:H2'	1:XA:713:G:C8	2.53	0.42
1:XA:787:A:H2'	1:XA:788:U:H6	1.84	0.42
1:XA:951:G:H1'	1:XA:971:G:H5'	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1376:U:C5	7:XG:10:ARG:HD3	2.53	0.42
1:XA:1439:C:H2'	1:XA:1440(A):C:C6	2.54	0.42
3:XC:66:VAL:HB	3:XC:101:LEU:HD13	2.00	0.42
6:XF:62:TRP:NE1	18:XR:35:ARG:NH2	2.63	0.42
6:XF:89:MET:SD	18:XR:76:LEU:HD22	2.59	0.42
7:XG:16:LEU:CD2	9:XI:45:ALA:HB2	2.47	0.42
12:XL:42:THR:HA	12:XL:53:ARG:O	2.18	0.42
14:XN:23:ARG:NH1	14:XN:24:CYS:HB3	2.34	0.42
28:Y4:39:CYS:C	28:Y4:41:PRO:HD3	2.44	0.42
34:YA:521:G:H2'	34:YA:522:G:H8	1.84	0.42
34:YA:532:A:N1	34:YA:2020:A:H1'	2.33	0.42
34:YA:935:C:H2'	34:YA:936:C:C6	2.54	0.42
34:YA:945:A:H62	34:YA:2448:A:N6	1.74	0.42
34:YA:1198:U:H2'	34:YA:1199:U:C6	2.54	0.42
34:YA:2014:A:H2'	34:YA:2015:A:C4	2.54	0.42
34:YA:2136:C:H2'	34:YA:2137:C:C6	2.54	0.42
34:YA:2182:G:H2'	34:YA:2183:C:C6	2.54	0.42
40:YH:159:GLU:HG2	40:YH:169:VAL:HG21	2.01	0.42
1:QA:445:G:H2'	1:QA:446:G:C8	2.52	0.42
1:QA:972:C:OP2	10:QJ:57:LYS:HE3	2.20	0.42
5:QE:102:ALA:H	5:QE:107:ARG:NH2	2.18	0.42
7:QG:58:PRO:HA	7:QG:61:VAL:HG12	2.01	0.42
22:QV:50:G:H2'	22:QV:51:A:H8	1.85	0.42
24:R0:29:GLN:HG3	34:RA:923:C:H4'	2.01	0.42
25:R1:2:SER:N	34:RA:1364:G:OP2	2.52	0.42
34:RA:245:G:N2	34:RA:384:U:O2'	2.37	0.42
34:RA:949:C:H2'	34:RA:950:G:C8	2.54	0.42
34:RA:1162:G:H4'	50:RV:24:LYS:HB3	2.01	0.42
34:RA:1292:U:H2'	34:RA:1293:C:C6	2.54	0.42
34:RA:1999:C:H2'	34:RA:2000:G:C8	2.50	0.42
34:RA:2513:G:N2	37:RE:143:ASN:OD1	2.52	0.42
34:RA:2863:C:H2'	34:RA:2864:G:C8	2.55	0.42
36:RD:13:ARG:HD2	36:RD:13:ARG:HA	1.80	0.42
36:RD:49:ILE:HD11	36:RD:52:ARG:HA	2.00	0.42
46:RR:8:ARG:HD2	46:RR:10:LEU:HD21	2.01	0.42
1:XA:133:U:O5'	1:XA:133:U:H6	2.03	0.42
1:XA:741:G:P	15:XO:35:ARG:HH21	1.54	0.42
1:XA:1055:A:H2'	1:XA:1056:U:O4'	2.18	0.42
33:Y9:6:SER:O	33:Y9:6:SER:OG	2.35	0.42
34:YA:11:G:H22	34:YA:2627:G:H5''	1.83	0.42
34:YA:13:A:N1	34:YA:525:U:H2'	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:654(B):G:N2	34:YA:654(V):A:H1'	2.35	0.42
34:YA:665:C:H2'	34:YA:666:G:H8	1.83	0.42
34:YA:741:G:H2'	34:YA:742:G:H8	1.84	0.42
34:YA:1102:C:H2'	34:YA:1103:A:C8	2.55	0.42
34:YA:1399:C:H2'	34:YA:1400:G:H8	1.85	0.42
34:YA:1430:C:H2'	34:YA:1431:U:C6	2.55	0.42
34:YA:1820:U:O2	36:YD:202:LYS:HB3	2.19	0.42
34:YA:2014:A:H8	34:YA:2014:A:OP2	2.03	0.42
34:YA:2452:C:H2'	34:YA:2453:A:C8	2.54	0.42
44:YP:46:LYS:HB3	44:YP:46:LYS:HE3	1.78	0.42
51:YW:57:ASN:O	51:YW:61:ASN:HB2	2.19	0.42
53:YY:79:CYS:SG	53:YY:81:LYS:HE2	2.60	0.42
1:QA:129(B):G:H5'	1:QA:186(L):G:H5'	2.01	0.42
1:QA:410:G:H2'	1:QA:429:U:C4	2.55	0.42
1:QA:630:G:H2'	1:QA:631:G:C8	2.55	0.42
1:QA:953:G:H3'	1:QA:954:G:C8	2.54	0.42
1:QA:976:G:N2	1:QA:1362(A):C:H2'	2.35	0.42
1:QA:979:C:N4	1:QA:1318:A:H61	2.18	0.42
1:QA:1014:A:N9	19:QS:34:TRP:NE1	2.50	0.42
1:QA:1108:G:OP1	3:QC:174:PRO:C	2.53	0.42
1:QA:1271:G:H2'	1:QA:1272:G:C8	2.54	0.42
1:QA:1472:U:H2'	1:QA:1473:A:C8	2.54	0.42
2:QB:34:ALA:H	2:QB:41:ILE:HB	1.84	0.42
3:QC:43:LEU:HG	3:QC:47:LEU:HD22	2.00	0.42
4:QD:59:ARG:HH12	4:QD:66:ARG:NH2	2.16	0.42
4:QD:172:PRO:HG3	6:XF:28:ARG:HH12	1.84	0.42
5:QE:126:ARG:HA	5:QE:131:ILE:HD11	2.01	0.42
12:QL:79:GLU:OE2	12:QL:80:HIS:NE2	2.53	0.42
13:QM:47:ASP:OD1	13:QM:47:ASP:N	2.48	0.42
34:RA:528:A:C2	34:RA:2042:A:H2'	2.55	0.42
34:RA:1123:C:H2'	34:RA:1124:C:H6	1.85	0.42
34:RA:2159:G:H2'	34:RA:2160:G:H8	1.82	0.42
37:RE:134:ILE:HD12	37:RE:134:ILE:HA	1.85	0.42
51:RW:13:SER:HA	51:RW:99:ARG:HB2	2.01	0.42
54:RZ:67:LEU:HD12	54:RZ:90:VAL:HB	2.02	0.42
1:XA:262:A:H2'	1:XA:263:A:C8	2.55	0.42
1:XA:400:C:H2'	1:XA:401:C:C6	2.55	0.42
1:XA:685:G:HO2'	11:XK:42:TRP:HD1	1.64	0.42
1:XA:714:G:H1'	1:XA:777:A:C8	2.55	0.42
1:XA:757:U:H2'	1:XA:758:G:O4'	2.18	0.42
1:XA:821:G:H2'	1:XA:822:C:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:948:C:OP2	13:XM:106:ASN:OD1	2.36	0.42
1:XA:1084:G:H21	1:XA:1102:A:H62	1.67	0.42
1:XA:1305:G:H4'	1:XA:1332:A:N6	2.34	0.42
3:XC:187:ALA:HB3	3:XC:198:VAL:HG13	2.00	0.42
6:XF:27:GLN:HA	6:XF:30:LEU:HD12	2.02	0.42
10:XJ:62:HIS:CD2	14:XN:59:ALA:CB	2.99	0.42
20:XT:11:SER:O	20:XT:11:SER:OG	2.28	0.42
32:Y8:13:ARG:NH2	34:YA:250:G:OP2	2.52	0.42
34:YA:576:U:H2'	34:YA:577:G:C8	2.55	0.42
34:YA:962:G:H2'	34:YA:963:U:C6	2.55	0.42
34:YA:1819:A:H5''	36:YD:161:THR:HG21	2.02	0.42
34:YA:2154:G:H2'	34:YA:2155:G:C8	2.54	0.42
35:YB:44:G:H1'	35:YB:47:C:H42	1.83	0.42
44:YP:57:THR:C	44:YP:59:LEU:H	2.27	0.42
46:YR:35:THR:HA	46:YR:112:ALA:O	2.19	0.42
47:YS:34:HIS:O	47:YS:97:ARG:NH2	2.52	0.42
1:QA:21:G:H2'	1:QA:22:G:C8	2.55	0.42
1:QA:287:U:H2'	1:QA:288:A:H8	1.85	0.42
1:QA:358:U:H2'	1:QA:359:U:C6	2.55	0.42
1:QA:408:A:H3'	1:QA:409:G:H8	1.83	0.42
1:QA:766:A:H2'	1:QA:767:A:O4'	2.19	0.42
1:QA:926:G:H2'	1:QA:1505:G:N3	2.34	0.42
1:QA:987:G:H2'	1:QA:988:G:C8	2.55	0.42
1:QA:1109:C:OP2	3:QC:176:HIS:HD2	2.02	0.42
1:QA:1126:U:H3'	1:QA:1127:G:H8	1.83	0.42
1:QA:1134:G:H3'	1:QA:1135:U:C6	2.54	0.42
1:QA:1390:U:H2'	1:QA:1391:U:C6	2.54	0.42
4:QD:15:GLU:HG2	4:QD:63:LYS:HB3	2.01	0.42
7:QG:75:VAL:HA	7:QG:88:PRO:HA	2.00	0.42
34:RA:13:A:N3	34:RA:14:A:N6	2.66	0.42
34:RA:262:A:H2'	34:RA:263:C:O4'	2.19	0.42
34:RA:375:C:H2'	34:RA:376:C:C6	2.54	0.42
34:RA:672:C:H2'	34:RA:673:C:C6	2.55	0.42
34:RA:704:G:N2	34:RA:726:G:O2'	2.52	0.42
34:RA:1509:C:H3'	34:RA:1510:A:H4'	2.00	0.42
34:RA:2533:A:OP1	34:RA:2665:A:O2'	2.29	0.42
34:RA:2841:C:H2'	34:RA:2842:G:H8	1.84	0.42
36:RD:142:VAL:HG23	36:RD:193:VAL:HA	2.02	0.42
45:RQ:7:MET:SD	45:RQ:7:MET:N	2.90	0.42
1:XA:186(Q):U:O2	20:XT:105:SER:OG	2.37	0.42
1:XA:972:C:C2'	10:XJ:55:LYS:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1086:U:H3	1:XA:1099:G:H22	1.67	0.42
1:XA:1300:G:O3'	13:XM:21:TYR:HE1	2.03	0.42
1:XA:1492:A:H1'	1:XA:1493:A:C6	2.54	0.42
2:XB:87:ARG:HH21	2:XB:219:VAL:HG13	1.84	0.42
2:XB:195:ASP:O	8:XH:74:PRO:HG2	2.20	0.42
3:XC:64:VAL:HG13	3:XC:97:LYS:HD2	2.01	0.42
7:XG:102:ARG:HA	7:XG:105:VAL:HG22	2.01	0.42
11:XK:108:ILE:O	18:XR:87:ARG:HA	2.19	0.42
18:XR:85:LEU:HD12	18:XR:85:LEU:HA	1.83	0.42
34:YA:65:C:H2'	34:YA:66:C:C6	2.55	0.42
34:YA:128:C:H2'	34:YA:129:C:C6	2.54	0.42
34:YA:373:U:H1'	34:YA:423:A:N3	2.35	0.42
34:YA:654(B):G:H22	34:YA:654(V):A:H1'	1.84	0.42
34:YA:676:A:C8	34:YA:2070:G:H1'	2.55	0.42
34:YA:689:A:H2'	34:YA:690:G:C8	2.54	0.42
34:YA:852:G:H2'	34:YA:853:G:H8	1.85	0.42
34:YA:985:C:H2'	34:YA:986:C:C6	2.55	0.42
34:YA:1012:U:O4	42:YN:25:ARG:HD3	2.19	0.42
34:YA:1303:G:H1'	34:YA:1641:A:C2	2.55	0.42
34:YA:1556:C:H2'	34:YA:1557:C:C6	2.54	0.42
34:YA:2299:G:N2	34:YA:2318:G:H1'	2.34	0.42
34:YA:2305:A:O5'	39:YG:134:GLY:HA3	2.20	0.42
34:YA:2584:U:O3'	34:YA:2602:A:H2	2.02	0.42
34:YA:2689:U:OP2	34:YA:2872:G:N2	2.41	0.42
38:YF:114:VAL:HG11	38:YF:202:PHE:CZ	2.55	0.42
44:YP:82:GLY:HA2	44:YP:113:LYS:O	2.18	0.42
1:QA:21:G:H1'	1:QA:915:A:N1	2.34	0.42
1:QA:34:C:H2'	1:QA:35:G:H8	1.83	0.42
1:QA:320:C:N4	1:QA:329:A:OP2	2.52	0.42
1:QA:740:U:O4'	15:QO:42:HIS:CD2	2.73	0.42
1:QA:821:G:H8	1:QA:821:G:P	2.43	0.42
1:QA:943:U:O2'	1:QA:1232:U:OP2	2.36	0.42
1:QA:953:G:C8	13:QM:104:ARG:NH2	2.79	0.42
1:QA:1099:G:C5'	2:QB:96:ARG:HD2	2.49	0.42
1:QA:1466:C:H2'	1:QA:1467:G:O4'	2.19	0.42
12:QL:57:LYS:HA	12:QL:67:THR:HA	2.00	0.42
34:RA:105:C:H2'	34:RA:106:C:C6	2.54	0.42
34:RA:189:G:H2'	34:RA:205:G:N2	2.34	0.42
34:RA:263:C:H2'	34:RA:264:C:O4'	2.20	0.42
34:RA:270(V):C:H2'	34:RA:270(W):G:H8	1.85	0.42
34:RA:524:U:H2'	34:RA:525:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1041:C:H2'	34:RA:1042:G:C8	2.51	0.42
34:RA:1096:A:H2'	34:RA:1097:U:O4'	2.20	0.42
34:RA:1107:G:H2'	34:RA:1108:U:C6	2.54	0.42
34:RA:1165:U:H2'	34:RA:1166:C:C6	2.55	0.42
34:RA:1375:C:H2'	34:RA:1376:C:C6	2.55	0.42
34:RA:2065:C:H1'	34:RA:2449:U:H3	1.84	0.42
38:RF:70:THR:HG23	38:RF:72:ARG:H	1.85	0.42
1:XA:105:G:H2'	1:XA:106:C:C6	2.55	0.42
1:XA:111:G:O5'	1:XA:111:G:C8	2.70	0.42
1:XA:474:G:H2'	1:XA:475:G:C8	2.55	0.42
1:XA:926:G:H2'	1:XA:1505:G:N2	2.35	0.42
1:XA:1330:U:C5'	13:XM:24:GLY:O	2.68	0.42
2:XB:177:ALA:HB1	2:XB:182:ILE:HB	2.01	0.42
3:XC:119:ARG:HG2	3:XC:140:ARG:HH22	1.85	0.42
33:Y9:32:HIS:CD2	33:Y9:32:HIS:N	2.87	0.42
34:YA:118:A:N3	34:YA:178:G:H1'	2.35	0.42
34:YA:134:C:H2'	34:YA:135:G:C8	2.54	0.42
34:YA:270(S):G:H2'	34:YA:270(T):G:H8	1.85	0.42
34:YA:584:C:OP2	49:YU:10:ARG:NH2	2.53	0.42
34:YA:603:A:O4'	34:YA:655:A:N6	2.52	0.42
34:YA:654(B):G:H2'	34:YA:654(C):C:C6	2.55	0.42
34:YA:673:C:H2'	34:YA:674:G:C8	2.55	0.42
34:YA:1869:G:H2'	34:YA:1871:A:N7	2.35	0.42
34:YA:2072:G:N1	34:YA:2438:U:C2	2.88	0.42
34:YA:2109:U:H2'	34:YA:2110:G:C8	2.55	0.42
34:YA:2291:U:H5''	34:YA:2380:C:H1'	2.02	0.42
34:YA:2419:U:H2'	34:YA:2420:C:C6	2.55	0.42
34:YA:2855:C:H2'	34:YA:2856:C:C6	2.54	0.42
39:YG:18:GLU:OE1	39:YG:21:ARG:NH2	2.50	0.42
47:YS:18:ILE:HG21	47:YS:88:ASP:HA	2.02	0.42
52:YX:25:LYS:HB3	52:YX:80:ILE:HD11	2.00	0.42
1:QA:8:A:C8	4:QD:209:ARG:O	2.72	0.42
1:QA:344:A:H3'	1:QA:345:C:C6	2.55	0.42
1:QA:345:C:H5'	48:RT:41:ARG:HD2	2.02	0.42
1:QA:581:G:N1	1:QA:759:A:OP2	2.37	0.42
1:QA:822:C:H2'	1:QA:823:G:C8	2.54	0.42
1:QA:1070:U:H2'	1:QA:1071:C:C6	2.55	0.42
1:QA:1294:G:H2'	1:QA:1295:G:C8	2.55	0.42
1:QA:1437:C:H2'	1:QA:1438:G:C8	2.55	0.42
2:QB:175:ARG:O	2:QB:179:LYS:HG3	2.20	0.42
4:QD:205:GLU:CG	5:QE:107:ARG:HH12	2.33	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:QI:65:VAL:HG11	9:QI:73:GLN:HG3	2.01	0.42
12:QL:102:ARG:HB3	12:QL:109:GLY:HA2	2.01	0.42
14:QN:41:ARG:HG3	14:QN:42:ILE:HG13	2.01	0.42
32:R8:61:LEU:HD12	32:R8:62:LEU:HG	2.02	0.42
34:RA:191:A:N6	34:RA:206:U:O2	2.53	0.42
34:RA:476:G:H1'	34:RA:480:A:H61	1.84	0.42
34:RA:755:C:H2'	34:RA:756:C:C6	2.55	0.42
34:RA:1572:A:H2'	34:RA:1573:G:C8	2.55	0.42
34:RA:2333:A:H1'	34:RA:2335:A:C5	2.55	0.42
34:RA:2683:C:OP1	48:RT:53:ARG:NH1	2.42	0.42
34:RA:2735:G:H2'	34:RA:2736:G:C8	2.55	0.42
1:XA:373:A:H1'	1:XA:481:G:O4'	2.20	0.42
1:XA:477:G:H2'	1:XA:478:A:C8	2.55	0.42
1:XA:714:G:H2'	1:XA:715:A:C8	2.55	0.42
1:XA:729:A:H2'	1:XA:730:G:H8	1.84	0.42
1:XA:901:A:O5'	1:XA:901:A:C8	2.70	0.42
1:XA:946:A:OP1	13:XM:114:ARG:NH2	2.53	0.42
1:XA:1253:G:N1	1:XA:1254:C:N4	2.67	0.42
1:XA:1311:G:H3'	19:XS:5:LEU:HD11	1.31	0.42
1:XA:1313:U:C5	19:XS:4:SER:OG	2.72	0.42
1:XA:1329:A:H4'	13:XM:29:ARG:CZ	2.50	0.42
1:XA:1512:U:H2'	1:XA:1513:A:C8	2.54	0.42
30:Y6:40:CYS:HB3	30:Y6:43:CYS:CB	2.50	0.42
34:YA:610:C:H2'	34:YA:611:C:C6	2.55	0.42
34:YA:740:U:H2'	34:YA:741:G:C8	2.54	0.42
34:YA:765:G:H2'	34:YA:766:C:C6	2.55	0.42
34:YA:1119:C:H2'	34:YA:1120:G:H8	1.85	0.42
34:YA:1174:A:H2	34:YA:1176:G:H4'	1.85	0.42
34:YA:1292:U:H2'	34:YA:1293:C:C6	2.55	0.42
34:YA:1534:G:H3'	34:YA:1534:G:N3	2.34	0.42
34:YA:1799:G:H8	36:YD:181:GLU:CD	2.27	0.42
34:YA:1812:A:H2'	34:YA:1813:G:C8	2.55	0.42
34:YA:2053:G:H2'	34:YA:2054:A:C8	2.55	0.42
34:YA:2249:U:C4	34:YA:2252:G:H5''	2.55	0.42
34:YA:2468:G:OP2	34:YA:2468:G:N2	2.51	0.42
34:YA:2554:U:H2'	34:YA:2555:U:C6	2.55	0.42
37:YE:102:VAL:HG23	37:YE:200:GLU:HA	2.02	0.42
42:YN:48:MET:HB2	42:YN:48:MET:HE2	1.68	0.42
45:YQ:110:THR:OG1	45:YQ:111:GLU:N	2.53	0.42
48:YT:6:LEU:HA	48:YT:9:LEU:HB2	2.02	0.42
1:QA:35:G:O2'	12:QL:118:SER:O	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:129(A):U:H4'	1:QA:130:A:OP1	2.18	0.42
1:QA:163:C:H2'	1:QA:164:U:O4'	2.20	0.42
1:QA:830:G:H21	1:QA:1540:U:H5'	1.84	0.42
1:QA:920:U:O2'	1:QA:1081:G:O2'	2.34	0.42
1:QA:1313:U:C4'	19:QS:6:LYS:HZ3	2.29	0.42
1:QA:1509:C:H2'	1:QA:1510:U:H6	1.85	0.42
33:R9:29:ASN:HB3	33:R9:32:HIS:CD2	2.55	0.42
34:RA:26:G:H1'	34:RA:515:A:H61	1.85	0.42
34:RA:27:G:H1'	34:RA:513:A:H61	1.84	0.42
34:RA:389:G:H1	44:RP:71:VAL:HG12	1.84	0.42
34:RA:564:C:N4	34:RA:573:G:OP1	2.49	0.42
34:RA:611:C:H2'	34:RA:612:G:C8	2.55	0.42
34:RA:730:C:H2'	34:RA:731:C:C6	2.55	0.42
34:RA:804:A:H2'	34:RA:806:C:C4	2.55	0.42
34:RA:1444(B):A:H1'	34:RA:1460:A:N3	2.35	0.42
34:RA:1629:U:O2	34:RA:2698:U:H4'	2.20	0.42
34:RA:1654:A:OP1	46:RR:2:ARG:HD3	2.20	0.42
34:RA:2651:C:H2'	34:RA:2652:C:H6	1.84	0.42
34:RA:2784:C:H2'	34:RA:2785:C:C6	2.55	0.42
34:RA:2859:G:H2'	34:RA:2860:A:C8	2.54	0.42
38:RF:8:GLN:NE2	38:RF:19:GLU:OE1	2.51	0.42
40:RH:126:PRO:HB2	40:RH:127:GLU:H	1.68	0.42
1:XA:321:A:N6	1:XA:328:C:H1'	2.35	0.42
1:XA:599:C:H2'	1:XA:600:C:C6	2.55	0.42
1:XA:1359:C:H4'	1:XA:1362(A):C:N4	2.35	0.42
19:XS:36:ARG:NH2	19:XS:72:GLY:O	2.52	0.42
22:XV:50:G:H2'	22:XV:51:A:C8	2.54	0.42
34:YA:417:C:O2	34:YA:2407:G:N1	2.52	0.42
34:YA:811:U:O4	44:YP:21:ARG:NH2	2.53	0.42
34:YA:1576:U:H2'	34:YA:1577:C:C6	2.54	0.42
34:YA:2043:C:N4	34:YA:2777:G:C5	2.87	0.42
34:YA:2108:C:H5'	34:YA:2150:U:O2'	2.19	0.42
34:YA:2233:U:H2'	34:YA:2234:G:C8	2.54	0.42
36:YD:45:ASN:O	36:YD:47:GLY:N	2.52	0.42
53:YY:5:MET:HE2	53:YY:5:MET:HB3	1.81	0.42
1:QA:5:U:H4'	1:QA:6:G:C8	2.55	0.42
1:QA:124:G:H2'	1:QA:125:U:O4'	2.20	0.42
1:QA:339:C:H2'	1:QA:340:U:C6	2.55	0.42
1:QA:862:C:O2'	1:QA:874:G:OP1	2.29	0.42
1:QA:976:G:OP1	14:QN:31:ARG:HG2	2.19	0.42
1:QA:1014:A:C1'	19:QS:34:TRP:CG	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1085:U:H3'	1:QA:1086:U:C6	2.55	0.42
6:QF:50:TYR:CZ	18:QR:77:GLY:HA2	2.55	0.42
13:QM:83:ASP:O	19:QS:66:MET:CE	2.65	0.42
21:QU:3:LYS:HD3	21:QU:14:TRP:CG	2.55	0.42
31:R7:12:ARG:HH21	31:R7:44:PRO:HB3	1.84	0.42
32:R8:49:VAL:HG23	32:R8:53:PRO:HD3	2.02	0.42
34:RA:1148:A:H2'	34:RA:1149:G:C8	2.55	0.42
34:RA:1200:C:H2'	34:RA:1201:C:C6	2.55	0.42
34:RA:1333:C:H2'	34:RA:1334:G:C8	2.47	0.42
34:RA:1688:U:H1'	34:RA:1701:A:C6	2.54	0.42
34:RA:2746:U:O4	34:RA:2755:C:H4'	2.20	0.42
36:RD:76:PRO:HB3	36:RD:118:VAL:HG22	2.02	0.42
1:XA:56:U:H2'	1:XA:57:G:C8	2.55	0.42
1:XA:390:C:O5'	1:XA:390:C:H6	2.03	0.42
1:XA:728:A:C8	15:XO:54:ARG:NH1	2.84	0.42
1:XA:1187:G:C4	14:XN:61:TRP:O	2.73	0.42
1:XA:1253:G:C2	1:XA:1254:C:C6	3.08	0.42
1:XA:1256:A:C8	1:XA:1278:U:H5'	2.54	0.42
1:XA:1414:U:H3	1:XA:1486:G:H1	1.68	0.42
1:XA:1510:U:H3	1:XA:1525:G:H1	1.68	0.42
3:XC:23:TYR:CB	10:XJ:93:GLY:C	2.93	0.42
3:XC:60:ALA:C	10:XJ:91:PRO:HG2	2.45	0.42
4:XD:105:VAL:HG21	4:XD:126:ILE:HD13	2.02	0.42
10:XJ:7:LYS:HE2	10:XJ:9:ARG:CG	2.49	0.42
13:XM:84:ILE:HD11	19:XS:65:ASN:CB	2.45	0.42
34:YA:279:C:H2'	34:YA:280:C:H6	1.85	0.42
34:YA:363(C):G:H2'	34:YA:363(D):G:C8	2.54	0.42
34:YA:453:C:H4'	34:YA:472:A:H62	1.84	0.42
34:YA:635:C:H2'	34:YA:636:G:C8	2.55	0.42
34:YA:892:G:H2'	34:YA:893:C:C6	2.54	0.42
34:YA:2086:U:OP2	36:YD:263:ARG:NH1	2.52	0.42
34:YA:2138:C:H2'	34:YA:2139:C:C6	2.55	0.42
37:YE:2:LYS:HD2	37:YE:95:ILE:HG22	2.02	0.42
42:YN:28:THR:O	42:YN:32:THR:OG1	2.32	0.42
44:YP:7:ARG:HA	44:YP:8:PRO:HD2	1.97	0.42
45:YQ:34:LEU:HB2	45:YQ:118:LEU:HD22	2.01	0.42
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.20	0.41
1:QA:669:U:H2'	1:QA:670:G:C8	2.54	0.41
1:QA:801:U:H2'	1:QA:802:A:H8	1.85	0.41
1:QA:893:C:H2'	1:QA:894:G:H8	1.85	0.41
1:QA:1124:G:C4'	10:QJ:36:GLY:H	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1130:A:H62	1:QA:1144:G:H21	1.67	0.41
1:QA:1176:A:H62	1:QA:1182:G:H21	1.67	0.41
1:QA:1220:G:N2	19:QS:54:GLY:HA2	2.33	0.41
1:QA:1483:A:H1'	34:RA:1948:G:H1'	2.02	0.41
3:QC:22:TRP:HH2	3:QC:32:LEU:HD13	1.85	0.41
4:QD:109:GLY:HA3	4:QD:165:MET:HG2	2.02	0.41
7:QG:75:VAL:HG12	7:QG:88:PRO:HB3	2.01	0.41
19:QS:70:LYS:N	19:QS:73:GLU:OE1	2.52	0.41
20:QT:14:LYS:HA	20:QT:17:ARG:HG2	2.02	0.41
34:RA:557:U:H2'	34:RA:558:G:C8	2.55	0.41
34:RA:1370:C:O2'	34:RA:1811:G:O2'	2.25	0.41
34:RA:1501:C:H2'	34:RA:1502:C:C6	2.55	0.41
34:RA:1574:C:H2'	34:RA:1575:C:C6	2.55	0.41
34:RA:2538:C:H2'	34:RA:2539:C:C6	2.55	0.41
38:RF:178:PRO:HB3	38:RF:198:ALA:HB2	2.02	0.41
39:RG:34:LEU:HD21	39:RG:172:LEU:HD21	2.02	0.41
39:RG:39:ILE:HB	39:RG:92:VAL:HG13	2.01	0.41
44:RP:84:ASN:HA	44:RP:115:LEU:O	2.20	0.41
49:RU:85:LYS:HE2	49:RU:116:ALA:HA	2.01	0.41
1:XA:51:A:H61	1:XA:314:C:H1'	1.85	0.41
1:XA:68(Y):U:H2'	1:XA:68(Z):C:C6	2.55	0.41
1:XA:167:G:H2'	1:XA:168:G:H8	1.85	0.41
1:XA:664:G:N3	1:XA:726:C:H4'	2.35	0.41
1:XA:1073:U:OP1	5:XE:57:LYS:HE3	2.19	0.41
1:XA:1184:G:H2'	1:XA:1185:G:C8	2.52	0.41
1:XA:1188:A:H4'	14:XN:59:ALA:O	2.19	0.41
1:XA:1229:A:OP2	13:XM:104:ARG:O	2.37	0.41
1:XA:1256:A:OP2	1:XA:1279:A:N6	2.52	0.41
1:XA:1500:A:H2'	1:XA:1501:C:C6	2.55	0.41
3:XC:8:ILE:HG12	3:XC:184:TYR:HB3	2.02	0.41
9:XI:13:ALA:HB1	9:XI:73:GLN:HG3	2.01	0.41
19:XS:30:LEU:HD13	19:XS:48:THR:HG23	2.01	0.41
32:Y8:60:LEU:HD12	32:Y8:60:LEU:HA	1.82	0.41
34:YA:220:G:N2	34:YA:427:U:H2'	2.35	0.41
34:YA:852:G:H2'	34:YA:853:G:C8	2.55	0.41
34:YA:1510:A:H2'	34:YA:1510:A:N3	2.33	0.41
34:YA:1675:C:O2	37:YE:128:SER:OG	2.37	0.41
34:YA:1709:U:H2'	34:YA:1710:C:C6	2.55	0.41
34:YA:2054:A:H2	34:YA:2616:C:N3	2.01	0.41
34:YA:2651:C:H2'	34:YA:2652:C:H6	1.85	0.41
36:YD:66:ASP:OD1	36:YD:103:ARG:NH1	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:151:A:H3'	1:QA:152:A:H8	1.85	0.41
1:QA:538:G:O5'	12:QL:115:LYS:HG3	2.19	0.41
1:QA:694:A:H2'	1:QA:695:A:O4'	2.20	0.41
1:QA:1103:C:HO2'	2:QB:111:ARG:HE	1.58	0.41
1:QA:1105:A:H2'	1:QA:1106:G:C8	2.54	0.41
1:QA:1160:G:O4'	2:QB:132:LYS:HE2	2.10	0.41
1:QA:1175:G:H2'	1:QA:1176:A:C8	2.55	0.41
1:QA:1304:G:O2'	1:QA:1333:A:N1	2.52	0.41
1:QA:1310:G:H2'	1:QA:1311:G:H8	1.84	0.41
9:QI:77:ILE:O	9:QI:81:ILE:HG12	2.20	0.41
26:R2:45:SER:OG	26:R2:46:GLN:N	2.53	0.41
34:RA:172:C:H2'	34:RA:173:G:C8	2.55	0.41
34:RA:242:G:H22	34:RA:254:G:H2'	1.84	0.41
34:RA:676:A:C2	34:RA:677:A:C8	3.09	0.41
34:RA:831:G:O2'	44:RP:38:GLN:OE1	2.38	0.41
34:RA:863:A:O2'	35:RB:100:G:N3	2.49	0.41
34:RA:1212:G:H1'	34:RA:1236:G:N2	2.35	0.41
34:RA:1464:C:H2'	34:RA:1465:G:H8	1.85	0.41
34:RA:1511:A:H3'	34:RA:1512:G:H8	1.85	0.41
34:RA:1812:A:H2'	34:RA:1813:G:H8	1.85	0.41
34:RA:2427:C:H5'	34:RA:2429:G:H5'	2.00	0.41
34:RA:2751:G:N1	40:RH:3:ARG:CB	2.77	0.41
34:RA:2773:C:H2'	34:RA:2774:C:C6	2.55	0.41
49:RU:91:ASP:C	49:RU:93:LYS:H	2.28	0.41
49:RU:107:ALA:HA	49:RU:110:VAL:HG12	2.01	0.41
1:XA:260:G:H2'	1:XA:261:U:C6	2.56	0.41
1:XA:355:C:O5'	1:XA:355:C:C6	2.70	0.41
1:XA:532:A:O5'	1:XA:532:A:H8	2.03	0.41
1:XA:576:G:N2	1:XA:760:G:OP2	2.53	0.41
1:XA:580:U:H2'	1:XA:581:G:O4'	2.19	0.41
1:XA:584:G:H1	1:XA:757:U:H3	1.68	0.41
1:XA:730:G:N3	1:XA:765:G:H4'	2.34	0.41
1:XA:960:U:H4'	1:XA:961:U:H5''	2.02	0.41
1:XA:1376:U:C4	7:XG:10:ARG:CD	3.02	0.41
4:XD:101:LEU:HD22	4:XD:138:TYR:HB3	2.01	0.41
5:XE:75:THR:HG22	5:XE:117:ASP:O	2.20	0.41
5:XE:128:PRO:HA	5:XE:131:ILE:HG12	2.02	0.41
6:XF:39:LYS:HB2	6:XF:64:GLN:HB3	2.01	0.41
6:XF:89:MET:SD	18:XR:34:TYR:CE2	3.13	0.41
6:XF:99:ALA:HB3	18:XR:29:PHE:HD1	1.71	0.41
34:YA:279:C:H2'	34:YA:280:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:486:C:H2'	34:YA:487:C:C6	2.55	0.41
34:YA:870:A:OP1	45:YQ:6:ARG:NH2	2.25	0.41
34:YA:1995:U:H2'	34:YA:1996:C:C5	2.56	0.41
34:YA:2241:A:H2'	34:YA:2242:G:C8	2.54	0.41
34:YA:2732:G:H3'	34:YA:2733:A:O4'	2.20	0.41
34:YA:2749:A:H3'	34:YA:2750:A:H2'	2.02	0.41
34:YA:2819:G:H2'	34:YA:2821:A:N7	2.35	0.41
37:YE:24:THR:HG22	37:YE:186:GLY:H	1.84	0.41
37:YE:201:THR:OG1	37:YE:202:LYS:N	2.53	0.41
44:YP:15:ARG:HD3	44:YP:15:ARG:HA	1.85	0.41
44:YP:47:ASP:OD2	44:YP:50:ARG:NH1	2.53	0.41
1:QA:29:G:HO2'	1:QA:295:C:HO2'	1.52	0.41
1:QA:99:C:H2'	1:QA:101:A:C8	2.55	0.41
1:QA:120:A:H2'	1:QA:122:G:C8	2.54	0.41
1:QA:138:G:H2'	1:QA:139:G:C8	2.54	0.41
1:QA:418:C:H2'	1:QA:419:C:H6	1.85	0.41
1:QA:736:C:H2'	1:QA:737:A:C8	2.56	0.41
1:QA:1418:A:H1'	34:RA:1959:G:H1'	2.02	0.41
8:QH:81:HIS:ND1	8:QH:138:TRP:O	2.39	0.41
27:R3:4:LEU:HD21	27:R3:56:VAL:HB	2.03	0.41
34:RA:49:A:H61	34:RA:177:G:H2'	1.84	0.41
34:RA:523:C:H5''	34:RA:541:C:O2'	2.19	0.41
34:RA:1069:A:H4'	34:RA:1070:A:H5''	2.02	0.41
34:RA:2084:C:H2'	34:RA:2085:C:C6	2.55	0.41
34:RA:2524:G:H21	34:RA:2741:A:H1'	1.84	0.41
34:RA:2881:C:H2'	34:RA:2882:A:H8	1.85	0.41
45:RQ:116:GLU:O	45:RQ:120:ILE:HG12	2.20	0.41
1:XA:59:A:H1'	1:XA:354:G:N2	2.35	0.41
1:XA:196:A:N3	1:XA:222:U:H1'	2.35	0.41
1:XA:435:C:H2'	1:XA:436:C:C6	2.53	0.41
1:XA:571:U:H5''	1:XA:819:A:C5	2.56	0.41
1:XA:861:G:O2'	1:XA:874:G:O2'	2.24	0.41
1:XA:913:A:OP1	12:XL:91:LYS:HE2	2.21	0.41
1:XA:1230:C:C5	13:XM:105:THR:HB	2.55	0.41
1:XA:1301:U:H4'	13:XM:17:VAL:HG23	2.02	0.41
2:XB:115:LEU:HB2	2:XB:145:LEU:HD23	2.02	0.41
3:XC:35:GLU:HB3	3:XC:59:ARG:HH22	1.85	0.41
13:XM:3:ARG:HA	13:XM:3:ARG:HD3	1.96	0.41
14:XM:24:CYS:SG	14:XM:40:CYS:N	2.93	0.41
29:Y5:25:LEU:HG	51:YW:19:LEU:HD12	2.03	0.41
34:YA:222:A:N6	34:YA:232:G:H1'	2.34	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:303:U:H2'	34:YA:304:G:H8	1.85	0.41
34:YA:534:U:H2'	34:YA:535:C:C6	2.55	0.41
34:YA:629:G:O2'	34:YA:649:G:N2	2.54	0.41
34:YA:911:A:N1	45:YQ:9:TYR:HB3	2.35	0.41
34:YA:1187:G:N2	34:YA:1188:U:O4	2.51	0.41
34:YA:1566:A:N3	36:YD:214:TRP:CE3	2.88	0.41
41:YI:50:ARG:HA	41:YI:50:ARG:HD3	1.80	0.41
41:YI:121:LYS:HA	41:YI:121:LYS:HD3	1.67	0.41
46:YR:104:ARG:HD2	46:YR:109:ALA:HB3	2.02	0.41
53:YY:102:CYS:SG	53:YY:103:GLY:N	2.93	0.41
1:QA:108:G:N2	1:QA:108:G:OP2	2.49	0.41
1:QA:329:A:H2'	1:QA:332:G:N7	2.35	0.41
1:QA:583:A:H2'	1:QA:584:G:O4'	2.21	0.41
1:QA:777:A:H2'	1:QA:778:G:O4'	2.21	0.41
1:QA:792:A:O2'	1:QA:794:A:N7	2.47	0.41
1:QA:974:A:P	14:QN:31:ARG:HB2	2.56	0.41
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.56	0.41
1:QA:1332:A:H3'	1:QA:1333:A:C8	2.55	0.41
1:QA:1477:C:H2'	1:QA:1478:C:C6	2.56	0.41
1:QA:1517:G:H2'	1:QA:1518:A:O4'	2.21	0.41
3:QC:140:ARG:HA	3:QC:143:GLU:HG2	2.02	0.41
8:QH:3:THR:OG1	8:QH:4:ASP:N	2.54	0.41
29:R5:33:CYS:SG	29:R5:46:CYS:HB2	2.60	0.41
34:RA:199:A:N1	34:RA:2433:A:H2'	2.36	0.41
34:RA:475:U:H2'	34:RA:476:G:O4'	2.21	0.41
34:RA:1046:A:H5'	34:RA:1047:G:H8	1.85	0.41
34:RA:1053:C:H2'	34:RA:1054:A:C8	2.55	0.41
34:RA:1129:A:H1'	34:RA:2516:G:H1'	2.01	0.41
34:RA:1221:C:H2'	34:RA:1222:C:H6	1.85	0.41
34:RA:2250:G:C2	45:RQ:82:ARG:HG3	2.55	0.41
34:RA:2748:A:O2'	40:RH:63:SER:O	2.20	0.41
36:RD:268:ARG:HG3	36:RD:269:PHE:CD2	2.55	0.41
46:RR:13:HIS:O	46:RR:17:ARG:HB2	2.20	0.41
1:XA:657:G:O2'	15:XO:23:GLY:HA2	2.20	0.41
1:XA:762:C:H2'	1:XA:763:G:C8	2.55	0.41
1:XA:1209:C:O2'	1:XA:1214:C:N4	2.53	0.41
1:XA:1499:A:H1'	1:XA:1520:G:H4'	2.03	0.41
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	2.02	0.41
34:YA:409:C:H2'	34:YA:410:G:H8	1.85	0.41
34:YA:822:U:C5	34:YA:944:G:H1'	2.55	0.41
34:YA:840:C:H2'	34:YA:841:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:919:G:N1	34:YA:2268:A:C4	2.88	0.41
34:YA:1688:U:H1'	34:YA:1701:A:C6	2.55	0.41
34:YA:2103:C:H2'	34:YA:2104:G:C8	2.56	0.41
34:YA:2134:A:H3'	34:YA:2135:A:C8	2.53	0.41
34:YA:2286:A:H1'	34:YA:2287:A:C5	2.55	0.41
34:YA:2728:U:H2'	34:YA:2729:G:C8	2.55	0.41
37:YE:132:HIS:CD2	37:YE:132:HIS:O	2.73	0.41
1:QA:343:U:H2'	1:QA:345:C:C4	2.55	0.41
1:QA:782:A:H3'	1:QA:783:C:C6	2.55	0.41
1:QA:801:U:H2'	1:QA:802:A:C8	2.55	0.41
1:QA:1187:G:N2	14:QN:60:SER:HG	2.16	0.41
1:QA:1314:C:C5	19:QS:6:LYS:NZ	2.89	0.41
4:QD:28:SER:HA	4:QD:29:PRO:HD3	1.96	0.41
4:QD:169:LYS:CG	6:XF:82:ARG:HH22	2.33	0.41
13:QM:77:ASN:O	13:QM:81:LEU:HG	2.21	0.41
24:R0:43:THR:HG21	34:RA:2336:A:N6	2.36	0.41
32:R8:39:LYS:NZ	34:RA:2351:G:O6	2.49	0.41
34:RA:270(T):G:H2'	34:RA:270(U):G:C8	2.54	0.41
34:RA:797:C:H2'	34:RA:798:G:C8	2.56	0.41
34:RA:957:A:OP1	45:RQ:76:LYS:HG2	2.21	0.41
34:RA:1362:C:H2'	34:RA:1363:C:H6	1.85	0.41
34:RA:1435:G:H2'	34:RA:1436:G:C8	2.56	0.41
34:RA:1589:C:H2'	34:RA:1590:U:C6	2.55	0.41
34:RA:1692:U:H3'	34:RA:1694:C:H41	1.86	0.41
34:RA:2544:G:H1'	34:RA:2646:C:H4'	2.02	0.41
44:RP:137:LYS:HA	44:RP:137:LYS:HD3	1.85	0.41
45:RQ:34:LEU:HD13	45:RQ:118:LEU:HD12	2.03	0.41
53:RY:99:CYS:HB3	53:RY:102:CYS:H	1.85	0.41
1:XA:40:C:H2'	1:XA:41:G:H8	1.86	0.41
1:XA:1466:C:H2'	1:XA:1467:G:O4'	2.21	0.41
3:XC:91:LEU:O	3:XC:95:THR:OG1	2.33	0.41
5:XE:110:LEU:HB3	5:XE:115:VAL:HB	2.03	0.41
13:XM:87:TYR:OH	13:XM:91:ARG:NH1	2.53	0.41
32:Y8:4:MET:SD	34:YA:592:G:N2	2.89	0.41
34:YA:172:C:H2'	34:YA:173:G:C8	2.55	0.41
34:YA:270(D):C:H2'	34:YA:270(E):C:C6	2.55	0.41
34:YA:804:A:H2'	34:YA:806:C:C4	2.55	0.41
34:YA:1038:C:H2'	34:YA:1039:G:C8	2.56	0.41
34:YA:1361:G:N2	34:YA:1371:G:H1'	2.35	0.41
34:YA:1561:G:H2'	34:YA:1562:A:C8	2.55	0.41
34:YA:1790:C:H2'	34:YA:1791:A:C5	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2742:C:H2'	34:YA:2743:C:C6	2.56	0.41
39:YG:39:ILE:HG12	39:YG:157:ILE:HD12	2.02	0.41
54:YZ:6:LYS:O	54:YZ:62:PRO:HD3	2.20	0.41
1:QA:9:G:C5'	5:QE:122:GLU:CD	2.93	0.41
1:QA:80:G:N2	1:QA:89:U:H1'	2.35	0.41
1:QA:186(A):C:C1'	20:QT:81:LYS:HE3	2.50	0.41
1:QA:355:C:O2'	1:QA:388:G:N3	2.45	0.41
1:QA:553:A:O2'	12:QL:29:GLY:O	2.35	0.41
1:QA:870:U:H4'	1:QA:871:U:H3'	2.03	0.41
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.56	0.41
1:QA:1203:C:H5'	14:QN:3:ARG:CZ	2.50	0.41
1:QA:1463:C:H2'	1:QA:1464:G:C8	2.56	0.41
1:QA:1479:C:H2'	1:QA:1480:G:C8	2.55	0.41
1:QA:1494:G:H4'	34:RA:1913:A:N7	2.35	0.41
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.03	0.41
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	2.03	0.41
34:RA:576:U:H2'	34:RA:577:G:C8	2.56	0.41
34:RA:580:C:H2'	34:RA:581:C:C6	2.56	0.41
34:RA:822:U:H2'	34:RA:823:G:C8	2.56	0.41
34:RA:1588:C:H2'	34:RA:1589:C:C6	2.56	0.41
34:RA:1927:A:H2'	34:RA:1928:A:H8	1.86	0.41
34:RA:2014:A:O3'	51:RW:92:ARG:NH2	2.53	0.41
34:RA:2109:U:H2'	34:RA:2110:G:C8	2.56	0.41
34:RA:2226:C:H2'	34:RA:2227:A:O4'	2.20	0.41
34:RA:2537:U:H2'	34:RA:2538:C:C6	2.56	0.41
37:RE:134:ILE:HD12	37:RE:137:HIS:HB2	2.02	0.41
39:RG:63:ILE:HD13	39:RG:141:PHE:HB3	2.02	0.41
44:RP:41:ARG:HD3	44:RP:41:ARG:HA	1.82	0.41
45:RQ:31:ASP:OD2	45:RQ:134:ARG:NH2	2.54	0.41
48:RT:66:VAL:HA	48:RT:71:GLY:HA2	2.02	0.41
49:RU:27:LEU:O	49:RU:31:SER:HB3	2.20	0.41
54:RZ:5:LEU:H	54:RZ:59:LEU:HA	1.84	0.41
1:XA:254:G:OP2	17:XQ:67:LYS:HB3	2.20	0.41
1:XA:451:A:C6	1:XA:480:U:H2'	2.55	0.41
1:XA:646:U:H2'	1:XA:647:C:C6	2.55	0.41
1:XA:649:G:H2'	1:XA:650:G:H8	1.84	0.41
1:XA:769:G:N2	1:XA:811:C:H1'	2.35	0.41
1:XA:1073:U:H3	1:XA:1102:A:H61	1.69	0.41
1:XA:1158:C:O3'	2:XB:133:LYS:HD3	2.19	0.41
4:XD:161:ASN:O	4:XD:165:MET:HB2	2.21	0.41
14:XN:47:LEU:HD22	14:XN:52:GLN:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:Y6:23:THR:OG1	30:Y6:24:GLU:N	2.42	0.41
32:Y8:34:TRP:CD1	34:YA:2420:C:OP1	2.74	0.41
34:YA:6:A:H2'	34:YA:7:G:O4'	2.20	0.41
34:YA:69:C:H2'	34:YA:70:G:C8	2.55	0.41
34:YA:807:U:H2'	34:YA:808:G:C8	2.56	0.41
34:YA:1329:U:H5''	34:YA:1330:C:H5	1.86	0.41
34:YA:1336:A:H2'	34:YA:1337:G:C8	2.56	0.41
34:YA:1882:C:H3'	34:YA:1883:G:H8	1.86	0.41
35:YB:15:A:H1'	35:YB:109:G:C5	2.56	0.41
42:YN:5:VAL:HA	42:YN:6:PRO:HD3	1.93	0.41
1:QA:250:A:H1'	1:QA:252:U:C6	2.56	0.41
1:QA:581:G:H2'	1:QA:582:U:C6	2.55	0.41
1:QA:739:C:HO2'	15:QO:42:HIS:CE1	2.37	0.41
1:QA:1013:G:N2	1:QA:1017:G:O6	2.54	0.41
1:QA:1052:U:H2'	1:QA:1200:C:N4	2.36	0.41
1:QA:1061:G:H2'	1:QA:1062:U:O4'	2.20	0.41
1:QA:1117:G:N3	1:QA:1180:A:H1'	2.35	0.41
1:QA:1202:G:H2'	1:QA:1202:G:N3	2.36	0.41
1:QA:1409:C:H2'	1:QA:1410:G:C8	2.55	0.41
4:QD:8:VAL:HG13	4:QD:21:LEU:HD12	2.02	0.41
25:R1:8:SER:HB3	25:R1:66:HIS:CD2	2.55	0.41
29:R5:43:HIS:NE2	34:RA:2884:U:OP2	2.50	0.41
29:R5:51:TYR:HD1	29:R5:55:ARG:O	2.03	0.41
34:RA:98:G:H1'	34:RA:103:A:H1'	2.03	0.41
34:RA:272:G:H2'	34:RA:273(A):G:H8	1.86	0.41
34:RA:390:A:H4'	34:RA:391:G:H5'	2.02	0.41
34:RA:678:C:H2'	34:RA:679:C:C6	2.56	0.41
34:RA:691:C:H2'	34:RA:692:C:C6	2.56	0.41
34:RA:935:C:H2'	34:RA:936:C:C6	2.55	0.41
39:RG:33:ARG:H	39:RG:162:THR:HG22	1.85	0.41
40:RH:91:GLY:HA2	40:RH:160:LYS:HG2	2.03	0.41
42:RN:97:ARG:HA	42:RN:100:GLU:HB2	2.02	0.41
48:RT:8:LYS:HB2	48:RT:8:LYS:HE2	1.86	0.41
49:RU:58:ARG:HH11	49:RU:93:LYS:NZ	2.18	0.41
54:RZ:151:HIS:HB2	54:RZ:170:THR:HA	2.02	0.41
1:XA:130:A:OP2	17:XQ:63:ARG:HD3	2.20	0.41
1:XA:587:G:O2'	8:XH:3:THR:HA	2.20	0.41
1:XA:658:G:C1'	15:XO:22:THR:OG1	2.68	0.41
1:XA:990:C:H2'	1:XA:991:U:O4'	2.20	0.41
1:XA:1004:A:H2	1:XA:1024:G:H2'	1.85	0.41
1:XA:1349:A:H2'	1:XA:1350:A:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1367:C:H2'	1:XA:1368:G:H8	1.86	0.41
1:XA:1440(B):G:O2'	1:XA:1440(C):G:C6	2.72	0.41
6:XF:22:GLU:OE2	6:XF:84:ASN:ND2	2.40	0.41
10:XJ:8:LEU:C	10:XJ:8:LEU:HD12	2.46	0.41
10:XJ:16:LEU:HD22	10:XJ:94:VAL:HG22	2.02	0.41
29:Y5:11:THR:HG23	29:Y5:15:ARG:HD2	2.02	0.41
34:YA:318:C:H2'	34:YA:319:C:H6	1.84	0.41
34:YA:444:C:H2'	34:YA:445:C:C6	2.56	0.41
34:YA:755:C:H2'	34:YA:756:C:C6	2.55	0.41
34:YA:1130:U:C2	34:YA:2025:C:H5''	2.55	0.41
34:YA:1843:C:H2'	34:YA:1844:C:C6	2.56	0.41
34:YA:1909:C:H2'	34:YA:1910:G:C8	2.56	0.41
34:YA:2036:C:H2'	34:YA:2037:G:C8	2.55	0.41
34:YA:2073:C:H2'	34:YA:2074:U:H6	1.86	0.41
36:YD:231:HIS:CD2	36:YD:249:PRO:HG3	2.56	0.41
37:YE:104:VAL:HG11	37:YE:188:VAL:HG12	2.03	0.41
44:YP:37:GLY:O	44:YP:40:SER:OG	2.36	0.41
48:YT:3:ARG:O	48:YT:7:ILE:HG12	2.21	0.41
50:YV:68:LYS:HD3	50:YV:68:LYS:HA	1.74	0.41
1:QA:55:A:H61	1:QA:357:G:H2'	1.86	0.41
1:QA:663:A:H2'	1:QA:664:G:C8	2.56	0.41
1:QA:1330:U:H5''	13:QM:24:GLY:C	2.45	0.41
3:QC:73:PRO:HA	3:QC:76:VAL:HG22	2.01	0.41
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.20	0.41
4:QD:27:TYR:O	6:XF:13:ASN:ND2	2.54	0.41
4:QD:166:LYS:HG2	36:YD:135:PHE:CZ	2.55	0.41
7:QG:87:VAL:HG23	7:QG:151:TYR:HB3	2.02	0.41
10:QJ:53:PRO:CB	14:QN:42:ILE:CD1	2.99	0.41
34:RA:445:C:H2'	34:RA:446:G:C8	2.55	0.41
34:RA:568:U:H2'	34:RA:570:G:N7	2.36	0.41
34:RA:740:U:H2'	34:RA:741:G:H8	1.84	0.41
34:RA:903:C:H2'	34:RA:904:C:H6	1.85	0.41
34:RA:1076:C:C4	34:RA:1077:A:H1'	2.56	0.41
34:RA:1381:G:H1'	34:RA:1571:A:N1	2.36	0.41
34:RA:1695:G:H1'	36:RD:8:PRO:O	2.20	0.41
34:RA:1908:C:H2'	34:RA:1909:C:C6	2.56	0.41
34:RA:2185:C:H2'	34:RA:2186:G:H8	1.84	0.41
46:RR:96:ARG:HB2	46:RR:117:VAL:HG12	2.02	0.41
1:XA:125:U:H2'	1:XA:126:G:C8	2.56	0.41
1:XA:309:G:H2'	1:XA:310:G:C8	2.56	0.41
1:XA:421:U:C4'	3:XC:192:THR:HG22	2.46	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:954:G:H22	1:XA:1228:C:H42	1.67	0.41
1:XA:1124:G:H4'	10:XJ:36:GLY:CA	2.51	0.41
1:XA:1440(I):U:H4'	1:XA:1440(J):A:C6	2.56	0.41
2:XB:75:LYS:HA	2:XB:75:LYS:HD3	1.86	0.41
2:XB:88:ALA:O	2:XB:226:ARG:NH1	2.46	0.41
2:XB:193:ASP:N	2:XB:193:ASP:OD2	2.41	0.41
3:XC:23:TYR:CE2	10:XJ:95:GLU:CG	3.04	0.41
9:XI:10:ARG:CZ	9:XI:105:ASP:HB2	2.51	0.41
10:XJ:40:LEU:N	10:XJ:40:LEU:CD1	2.84	0.41
11:XK:108:ILE:HD13	18:XR:87:ARG:NH2	2.36	0.41
24:Y0:72:ARG:HB3	24:Y0:75:LEU:HB2	2.02	0.41
25:Y1:3:LYS:HB3	34:YA:1364:G:OP1	2.20	0.41
26:Y2:4:SER:OG	26:Y2:5:GLU:N	2.39	0.41
31:Y7:11:LYS:O	31:Y7:15:THR:OG1	2.34	0.41
34:YA:7:G:H2'	34:YA:8:A:C8	2.55	0.41
34:YA:312:G:H4'	34:YA:331:A:N3	2.35	0.41
34:YA:2825:C:H2'	34:YA:2826:A:O4'	2.21	0.41
34:YA:2832:U:H1'	34:YA:2834:G:C5	2.55	0.41
36:YD:44:ASN:OD1	36:YD:44:ASN:N	2.53	0.41
43:YO:70:LYS:HE2	43:YO:70:LYS:HB3	1.81	0.41
1:QA:103:C:OP2	20:QT:14:LYS:HD2	2.21	0.41
1:QA:488:C:H2'	1:QA:489:C:C6	2.56	0.41
1:QA:573:A:H2'	1:QA:574:A:C8	2.55	0.41
1:QA:619:U:H2'	1:QA:620:C:C6	2.56	0.41
1:QA:648:A:H2'	1:QA:649:G:H8	1.85	0.41
1:QA:684:A:H2'	1:QA:685:G:C8	2.56	0.41
1:QA:955:U:C2'	19:QS:83:HIS:CA	2.95	0.41
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.35	0.41
1:QA:1240:U:C2'	7:QG:38:LEU:CD1	2.87	0.41
1:QA:1364:U:C1'	21:QU:14:TRP:HZ2	2.34	0.41
1:QA:1407:C:H2'	1:QA:1408:A:C8	2.56	0.41
2:QB:20:GLU:HG3	2:QB:191:ASP:HB2	2.02	0.41
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.87	0.41
3:QC:36:ASP:OD1	3:QC:59:ARG:NH2	2.53	0.41
3:QC:79:ARG:CZ	11:XK:104:GLN:CA	2.88	0.41
5:QE:11:ILE:HG21	5:QE:31:LEU:HD23	2.02	0.41
13:QM:40:ASN:HA	13:QM:41:PRO:HD3	1.92	0.41
14:QN:12:ARG:HE	14:QN:14:PRO:HD2	1.86	0.41
25:R1:80:LEU:HD12	25:R1:81:LYS:HB2	2.03	0.41
28:R4:27:THR:HG21	39:RG:62:LEU:HD13	2.03	0.41
32:R8:3:LYS:H	32:R8:3:LYS:HG2	1.71	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:47:C:H2'	34:RA:48:G:H8	1.86	0.41
34:RA:256:A:H2'	34:RA:257:A:C8	2.56	0.41
34:RA:455:C:N3	34:RA:472:A:H2'	2.36	0.41
34:RA:456:C:C5	52:RX:69:TYR:CE1	3.09	0.41
34:RA:923:C:H2'	34:RA:924:C:C6	2.55	0.41
34:RA:1303:G:H5'	34:RA:1642:G:H21	1.85	0.41
34:RA:1417:C:O2'	34:RA:1587:A:N3	2.45	0.41
34:RA:1579:A:H2'	34:RA:1580:A:C8	2.55	0.41
34:RA:1793:C:H2'	34:RA:1794:U:C6	2.56	0.41
34:RA:1991:U:H2'	34:RA:1992:G:H5''	2.03	0.41
34:RA:2085:C:H4'	36:RD:262:ARG:NH2	2.35	0.41
34:RA:2134:A:H1'	34:RA:2158:A:N3	2.35	0.41
34:RA:2205:C:O2	34:RA:2226:C:N4	2.54	0.41
34:RA:2385:C:H2'	34:RA:2386:C:C6	2.56	0.41
34:RA:2440:C:H2'	34:RA:2441:C:H4'	2.03	0.41
34:RA:2470:G:OP1	45:RQ:56:ARG:NH2	2.48	0.41
34:RA:2470:G:P	45:RQ:56:ARG:HH21	2.43	0.41
34:RA:2497:A:H1'	34:RA:2498:C:H5	1.86	0.41
34:RA:2764:A:H2'	34:RA:2766:G:C8	2.56	0.41
39:RG:141:PHE:HB2	39:RG:144:ILE:HD13	2.03	0.41
40:RH:123:PHE:HD2	40:RH:123:PHE:HA	1.77	0.41
41:RI:14:ASP:HB3	41:RI:15:VAL:H	1.65	0.41
49:RU:39:LEU:HD23	49:RU:39:LEU:HA	1.93	0.41
1:XA:240:C:H2'	1:XA:241:C:C6	2.56	0.41
1:XA:354:G:N3	1:XA:354:G:H2'	2.35	0.41
1:XA:668:G:O2'	15:XO:46:HIS:ND1	2.47	0.41
1:XA:735:C:H2'	1:XA:736:C:C6	2.55	0.41
1:XA:802:A:H3'	1:XA:803:G:H8	1.86	0.41
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.56	0.41
1:XA:1320:C:N4	19:XS:37:ARG:N	2.69	0.41
2:XB:40:HIS:HB2	2:XB:190:THR:HG21	2.01	0.41
12:XL:56:ALA:HB2	12:XL:70:ILE:HD11	2.03	0.41
14:YN:56:VAL:CG1	14:YN:57:ARG:N	2.59	0.41
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	2.03	0.41
18:XR:30:ASP:OD2	18:XR:33:ASP:N	2.54	0.41
20:XT:18:GLN:HE21	20:XT:22:ARG:NH2	2.19	0.41
28:Y4:31:ILE:HG21	39:YG:142:PRO:HB2	2.03	0.41
29:Y5:41:PRO:O	29:Y5:44:THR:OG1	2.35	0.41
34:YA:375:C:H2'	34:YA:376:C:C6	2.56	0.41
34:YA:459:U:H2'	34:YA:460:A:H8	1.85	0.41
34:YA:558:G:H2'	34:YA:559:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:558:G:P	42:YN:111:PRO:HD2	2.61	0.41
34:YA:632:A:H2'	34:YA:633:A:C8	2.56	0.41
34:YA:665:C:H2'	34:YA:666:G:C8	2.56	0.41
34:YA:748:G:OP1	51:YW:88:ARG:NH2	2.40	0.41
34:YA:923:C:H2'	34:YA:924:C:C6	2.56	0.41
34:YA:1050:A:N7	34:YA:2751:G:N3	2.67	0.41
34:YA:1056:G:H5''	34:YA:1057:A:H5'	2.02	0.41
34:YA:1502:C:H2'	34:YA:1503:U:C6	2.56	0.41
34:YA:1503:U:H2'	34:YA:1504:C:C6	2.56	0.41
34:YA:1914:C:H2'	34:YA:1915:U:O4'	2.21	0.41
34:YA:2059:A:C6	34:YA:2503:A:C6	3.05	0.41
34:YA:2134:A:H1'	34:YA:2158:A:C2	2.56	0.41
34:YA:2363:C:H2'	34:YA:2364:C:H6	1.86	0.41
34:YA:2402:C:H1'	34:YA:2403:C:C5	2.50	0.41
34:YA:2413:G:O2'	44:YP:70:GLN:NE2	2.48	0.41
34:YA:2503:A:O2'	34:YA:2505:G:OP2	2.23	0.41
34:YA:2820:A:H1'	46:YR:3:HIS:CE1	2.56	0.41
35:YB:111:U:H2'	35:YB:112:G:H8	1.85	0.41
36:YD:32:SER:C	36:YD:34:VAL:H	2.29	0.41
36:YD:61:LEU:HD23	36:YD:61:LEU:HA	1.94	0.41
37:YE:154:LYS:HD2	37:YE:154:LYS:HA	1.86	0.41
38:YF:157:VAL:HG21	38:YF:181:LEU:HD13	2.03	0.41
40:YH:86:GLU:H	40:YH:86:GLU:HG2	1.51	0.41
44:YP:6:LEU:HD23	44:YP:6:LEU:HA	1.90	0.41
45:YQ:55:VAL:HG13	54:YZ:178:GLU:HB3	2.03	0.41
48:YT:19:LEU:HA	48:YT:20:PRO:HD3	1.91	0.41
52:YX:34:ALA:O	52:YX:77:LYS:NZ	2.54	0.41
52:YX:92:LEU:HD23	52:YX:92:LEU:HA	1.86	0.41
54:YZ:4:ARG:NH1	54:YZ:60:GLU:OE2	2.54	0.41
54:YZ:5:LEU:HB3	54:YZ:6:LYS:H	1.72	0.41
54:YZ:94:GLU:HA	54:YZ:95:PRO:HD2	1.75	0.41
1:QA:10:A:H2'	1:QA:11:G:H8	1.85	0.41
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.39	0.41
1:QA:411:A:H2'	1:QA:413:G:C8	2.55	0.41
1:QA:692:U:H5'	1:QA:797:C:H5''	2.02	0.41
1:QA:818:G:H1'	1:QA:820:U:C4	2.55	0.41
1:QA:958:A:N7	19:QS:79:THR:HG21	2.36	0.41
1:QA:1026:G:H2'	1:QA:1027:C:O4'	2.20	0.41
1:QA:1080:A:H5'	5:QE:14:ARG:NH2	2.36	0.41
1:QA:1298:C:H6	1:QA:1298:C:H2'	1.55	0.41
3:QC:23:TYR:CD1	10:QJ:10:GLY:HA2	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:QL:93:LEU:HA	12:QL:94:PRO:HD3	1.96	0.41
25:R1:86:SER:O	25:R1:88:LYS:N	2.53	0.41
34:RA:713:G:H2'	34:RA:714:U:C6	2.56	0.41
34:RA:795:C:H2'	34:RA:796:C:C6	2.56	0.41
34:RA:1011:G:OP2	49:RU:70:ARG:NH2	2.54	0.41
34:RA:1468:C:H2'	34:RA:1469:A:C8	2.55	0.41
34:RA:1775:U:N3	34:RA:1776:G:H1'	2.36	0.41
34:RA:2345:G:H4'	34:RA:2346:A:H5'	2.03	0.41
36:RD:35:LYS:HB3	36:RD:63:ARG:HA	2.03	0.41
41:RI:143:SER:HB2	41:RI:144:VAL:H	1.64	0.41
47:RS:50:SER:O	47:RS:76:LYS:NZ	2.41	0.41
49:RU:58:ARG:O	49:RU:62:ILE:HG12	2.20	0.41
50:RV:73:SER:OG	50:RV:74:LYS:N	2.53	0.41
54:RZ:24:LEU:HA	54:RZ:25:PRO:HD3	1.92	0.41
1:XA:22:G:H4'	1:XA:885:G:C8	2.56	0.41
1:XA:171:A:H2'	1:XA:172:A:C8	2.56	0.41
1:XA:299:G:H2'	1:XA:300:A:C8	2.56	0.41
1:XA:323:U:H3'	1:XA:324:G:H8	1.84	0.41
1:XA:1165:C:H2'	1:XA:1166:G:C8	2.55	0.41
1:XA:1314:C:H6	1:XA:1314:C:O5'	2.04	0.41
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.85	0.41
10:XJ:90:LEU:HD12	10:XJ:90:LEU:HA	1.90	0.41
19:XS:19:VAL:HA	19:XS:22:LEU:HB2	2.01	0.41
34:YA:709:U:H2'	34:YA:710:G:C8	2.56	0.41
34:YA:881:G:H2'	34:YA:882:G:C8	2.56	0.41
34:YA:1123:C:H2'	34:YA:1124:C:C6	2.56	0.41
34:YA:1252:G:N2	49:YU:33:ARG:HD3	2.36	0.41
34:YA:1836:C:H2'	34:YA:1837:C:C6	2.56	0.41
34:YA:1949:G:H3'	34:YA:1950:G:H21	1.86	0.41
34:YA:2850:A:H3'	34:YA:2851:A:H8	1.86	0.41
46:YR:56:LYS:NZ	46:YR:90:ARG:O	2.53	0.41
48:YT:130:ALA:HA	48:YT:133:GLU:HG2	2.03	0.41
1:QA:296:U:O2'	1:QA:556:C:O2	2.27	0.40
1:QA:542:G:P	4:QD:10:ARG:HH12	2.44	0.40
1:QA:709:G:H2'	1:QA:710:G:O4'	2.22	0.40
1:QA:756:C:H2'	1:QA:757:U:C6	2.56	0.40
1:QA:947:G:H5'	13:QM:109:THR:CG2	2.50	0.40
1:QA:956:U:H5'	19:QS:83:HIS:CA	2.51	0.40
1:QA:986:A:H2'	1:QA:987:G:H8	1.85	0.40
1:QA:996:A:N1	1:QA:1046:A:H1'	2.36	0.40
1:QA:1152:A:H3'	1:QA:1153:C:C6	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1278:U:H4'	1:QA:1279:A:C8	2.56	0.40
1:QA:1409:C:H2'	1:QA:1410:G:H8	1.86	0.40
1:QA:1498:U:H1'	1:QA:1499:A:N7	2.36	0.40
2:QB:167:PRO:O	2:QB:171:ALA:CB	2.67	0.40
13:QM:84:ILE:O	19:QS:74:PHE:CD2	2.57	0.40
20:QT:74:LYS:O	20:QT:76:ALA:N	2.55	0.40
34:RA:271(B):C:O2	34:RA:272:G:H1'	2.20	0.40
34:RA:2469:A:H2	34:RA:2481:G:H21	1.69	0.40
34:RA:2790:A:H2	34:RA:2791:C:H2'	1.86	0.40
34:RA:2820:A:C5	46:RR:4:LEU:HD12	2.56	0.40
35:RB:15:A:OP2	35:RB:69:G:N2	2.54	0.40
37:RE:144:ARG:HB3	37:RE:145:LYS:H	1.66	0.40
40:RH:126:PRO:HD2	40:RH:131:VAL:HA	2.03	0.40
44:RP:144:GLU:HA	44:RP:145:PRO:HD3	1.83	0.40
49:RU:34:LYS:HA	49:RU:34:LYS:HD3	1.72	0.40
1:XA:17:U:H2'	1:XA:18:C:C6	2.56	0.40
1:XA:864:A:H2	1:XA:918:A:H1'	1.86	0.40
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.56	0.40
1:XA:1305:G:H2'	1:XA:1331:G:H21	1.74	0.40
10:XJ:5:ARG:N	10:XJ:99:LYS:O	2.54	0.40
11:XK:109:VAL:HG13	18:XR:86:VAL:HB	2.03	0.40
16:XP:72:ARG:HA	16:XP:75:ARG:HG2	2.03	0.40
34:YA:71:A:H5''	34:YA:72:U:H3'	2.02	0.40
34:YA:363(D):G:H2'	34:YA:363(E):G:H8	1.85	0.40
34:YA:1128:A:N6	34:YA:2518:A:C6	2.89	0.40
34:YA:1166:C:H2'	34:YA:1167:U:C6	2.56	0.40
34:YA:1174:A:H61	55:YA:3192:MG:MG	1.10	0.40
34:YA:1781:C:H4'	34:YA:1782:C:C5'	2.51	0.40
34:YA:2090:G:N3	34:YA:2230:G:C2	2.89	0.40
34:YA:2717:G:HO2'	48:YT:96:ARG:NH2	2.19	0.40
34:YA:2859:G:H2'	34:YA:2860:A:C8	2.56	0.40
36:YD:172:TYR:HB3	36:YD:184:LYS:HG2	2.04	0.40
38:YF:116:ASP:OD1	38:YF:119:ARG:NH2	2.52	0.40
41:YI:143:SER:HB2	41:YI:144:VAL:H	1.60	0.40
43:YO:71:ARG:HH21	43:YO:77:ILE:HG21	1.86	0.40
1:QA:28:G:H2'	1:QA:296:U:H5''	2.02	0.40
1:QA:385:C:H2'	1:QA:386:C:C6	2.55	0.40
1:QA:665:A:N3	1:QA:732:C:H2'	2.36	0.40
1:QA:767:A:H1'	1:QA:1525:G:H1'	2.02	0.40
1:QA:968:A:N3	1:QA:1197:G:H1'	2.37	0.40
1:QA:980:C:H1'	14:QN:19:ARG:HG2	0.41	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1051:C:H2'	1:QA:1052:U:C2	2.57	0.40
1:QA:1107:C:H5''	3:QC:173:VAL:N	2.32	0.40
1:QA:1221:G:OP1	1:QA:1321:C:N4	2.54	0.40
1:QA:1431:C:H2'	1:QA:1432:G:O4'	2.21	0.40
12:QL:32:PHE:HB3	12:QL:84:LEU:HD21	2.03	0.40
17:QQ:75:ARG:HA	17:QQ:75:ARG:HD2	1.88	0.40
24:R0:60:PHE:CZ	34:RA:2365:G:H4'	2.56	0.40
34:RA:234:C:H2'	34:RA:235:U:H6	1.86	0.40
34:RA:997:G:O5'	49:RU:58:ARG:NH1	2.55	0.40
34:RA:1050:A:H2'	34:RA:1051:G:O4'	2.21	0.40
34:RA:2011:U:H2'	34:RA:2012:G:O4'	2.20	0.40
36:RD:134:ARG:N	36:RD:187:GLY:O	2.54	0.40
40:RH:102:ALA:HA	40:RH:117:PRO:HD3	2.03	0.40
40:RH:103:LEU:O	40:RH:114:VAL:HA	2.22	0.40
1:XA:136:C:H42	1:XA:227:G:H1	1.68	0.40
1:XA:373:A:C2'	1:XA:374:A:H5'	2.52	0.40
1:XA:1019:C:H2'	1:XA:1020:U:C6	2.56	0.40
1:XA:1051:C:H2'	1:XA:1052:U:C6	2.56	0.40
1:XA:1300:G:N1	1:XA:1334:G:C6	2.89	0.40
2:XB:134:GLU:HG3	2:XB:137:ARG:NE	2.37	0.40
2:XB:188:ALA:HB1	2:XB:192:SER:HB3	2.03	0.40
4:XD:170:VAL:HB	4:XD:174:LEU:HD12	2.02	0.40
13:XM:26:GLY:O	13:XM:30:ALA:HB2	2.20	0.40
23:XX:8:A:H2'	23:XX:9:G:C8	2.55	0.40
24:Y0:23:VAL:HA	24:Y0:38:VAL:HG12	2.03	0.40
27:Y3:17:LYS:HB2	27:Y3:17:LYS:HE3	1.88	0.40
34:YA:452:G:N2	34:YA:457:A:O2'	2.55	0.40
34:YA:601:C:H2'	34:YA:602:G:O4'	2.21	0.40
34:YA:620:G:H4'	34:YA:621:A:H5'	2.03	0.40
34:YA:797:C:H2'	34:YA:798:G:C8	2.57	0.40
34:YA:839:U:H2'	34:YA:840:C:H6	1.85	0.40
34:YA:844:C:H3'	34:YA:845:G:H8	1.87	0.40
34:YA:849:A:H61	34:YA:929:G:H1'	1.86	0.40
34:YA:1080:C:H2'	34:YA:1081:U:H6	1.86	0.40
34:YA:1087:G:C8	34:YA:1089:G:H1'	2.56	0.40
34:YA:1158:C:H2'	34:YA:1159:U:C6	2.57	0.40
34:YA:1169:G:H2'	34:YA:1170:G:O4'	2.21	0.40
34:YA:2091:U:H2'	34:YA:2092:U:C5	2.57	0.40
34:YA:2537:U:H2'	34:YA:2538:C:C6	2.55	0.40
35:YB:5:C:O2'	35:YB:27:C:O2	2.39	0.40
40:YH:115:VAL:HG21	40:YH:148:ILE:HD11	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:YS:4:LEU:HA	47:YS:8:GLU:CD	2.46	0.40
48:YT:80:SER:HA	48:YT:81:PRO:HD3	1.95	0.40
48:YT:96:ARG:HE	48:YT:96:ARG:HB3	1.72	0.40
53:YY:12:THR:HA	53:YY:26:LYS:HA	2.03	0.40
54:YZ:14:LYS:HA	54:YZ:15:PRO:HD3	1.93	0.40
1:QA:95:G:H2'	1:QA:96:G:C8	2.56	0.40
1:QA:728:A:H2'	1:QA:729:A:C8	2.57	0.40
1:QA:741:G:H4'	15:QO:55:GLY:HA3	2.02	0.40
1:QA:955:U:C2'	19:QS:83:HIS:HA	2.52	0.40
1:QA:1049:U:H5''	1:QA:1050:G:C8	2.55	0.40
1:QA:1123:A:C1'	10:QJ:37:PRO:HD2	2.50	0.40
3:QC:56:ASP:HB3	3:QC:67:THR:HG23	2.02	0.40
9:QI:25:LYS:O	9:QI:60:ASP:HA	2.21	0.40
24:R0:43:THR:HG21	34:RA:2336:A:H61	1.85	0.40
34:RA:151:C:H2'	34:RA:152:G:H8	1.86	0.40
34:RA:486:C:H2'	34:RA:487:C:C6	2.56	0.40
34:RA:519:U:H2'	34:RA:520:G:C8	2.56	0.40
34:RA:941:A:O2'	34:RA:1190:G:O3'	2.30	0.40
34:RA:1186:G:H2'	34:RA:1187:G:O4'	2.21	0.40
34:RA:1561:G:H2'	34:RA:1562:A:C8	2.56	0.40
34:RA:1808:U:H2'	34:RA:1809:A:O4'	2.22	0.40
34:RA:2348:U:H2'	34:RA:2349:G:C8	2.56	0.40
47:RS:59:LYS:HA	47:RS:59:LYS:HD2	1.94	0.40
53:RY:47:LYS:HA	53:RY:47:LYS:HD2	1.94	0.40
1:XA:68(A):G:H22	1:XA:101:A:H2	1.68	0.40
1:XA:225:C:H2'	1:XA:226:G:C8	2.56	0.40
1:XA:418:C:H2'	1:XA:419:C:H6	1.85	0.40
1:XA:707:C:H2'	1:XA:708:C:C6	2.56	0.40
1:XA:922:G:H1'	5:XE:19:MET:CB	2.50	0.40
1:XA:1035:A:H2'	1:XA:1036:G:H8	1.87	0.40
1:XA:1101:A:N3	1:XA:1102:A:H1'	2.37	0.40
1:XA:1118:C:H2'	1:XA:1119:C:C6	2.56	0.40
1:XA:1302:U:O2	13:XM:27:LYS:HE2	2.21	0.40
1:XA:1320:C:N4	19:XS:37:ARG:CA	2.60	0.40
1:XA:1359:C:H4'	1:XA:1362(A):C:H42	1.86	0.40
8:XH:34:GLU:O	8:XH:38:ILE:HG12	2.22	0.40
11:XK:51:LYS:HE2	11:XK:51:LYS:HB2	1.93	0.40
12:XL:70:ILE:HG13	12:XL:100:ILE:HG13	2.03	0.40
14:XN:13:THR:O	14:XN:13:THR:OG1	2.36	0.40
34:YA:38:A:H2'	34:YA:39:C:C6	2.57	0.40
34:YA:238:C:H1'	34:YA:609(A):A:H1'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:797:C:H2'	34:YA:798:G:H8	1.86	0.40
34:YA:887:A:H1'	34:YA:889:C:C5	2.56	0.40
34:YA:2292:C:H2'	34:YA:2293:C:C6	2.56	0.40
39:YG:95:ARG:HB3	39:YG:96:ARG:H	1.70	0.40
43:YO:67:LYS:HD2	43:YO:67:LYS:HA	1.87	0.40
50:YV:69:LYS:HA	50:YV:87:HIS:O	2.21	0.40
54:YZ:178:GLU:HB3	54:YZ:179:ASP:H	1.60	0.40
1:QA:44:G:OP1	16:QP:12:LYS:CD	2.64	0.40
1:QA:107:G:H4'	1:QA:378:G:H4'	2.02	0.40
1:QA:477:G:H2'	1:QA:478:A:C8	2.56	0.40
1:QA:668:G:O4'	15:QO:48:LYS:O	2.39	0.40
1:QA:1002:G:H3'	1:QA:1003:G:H8	1.85	0.40
1:QA:1179:A:H2'	1:QA:1180:A:H8	1.87	0.40
1:QA:1281:U:H5''	1:QA:1282:C:H5	1.87	0.40
1:QA:1285:A:N1	1:QA:1354:C:O2'	2.54	0.40
1:QA:1485:U:H2'	1:QA:1486:G:C8	2.55	0.40
2:QB:208:ILE:HA	2:QB:211:ILE:HG12	2.03	0.40
3:QC:12:LEU:HG	3:QC:18:TRP:NE1	2.36	0.40
10:QJ:14:LYS:HD3	10:QJ:15:THR:HG23	2.02	0.40
16:QP:14:ASN:OD1	16:QP:16:HIS:NE2	2.54	0.40
34:RA:67:U:H2'	34:RA:68:G:H8	1.87	0.40
34:RA:413:C:H2'	34:RA:414:C:H6	1.86	0.40
34:RA:741:G:H2'	34:RA:742:G:C8	2.56	0.40
34:RA:817:C:O2'	34:RA:932:G:N2	2.55	0.40
34:RA:1031:G:H2'	34:RA:1032:A:C8	2.57	0.40
34:RA:1556:C:H2'	34:RA:1557:C:C6	2.57	0.40
34:RA:1853:A:N1	34:RA:2087:G:H1'	2.36	0.40
34:RA:2019:A:H2	34:RA:2035:G:H22	1.68	0.40
34:RA:2453:A:H2'	34:RA:2454:G:C8	2.45	0.40
34:RA:2463:C:H2'	34:RA:2464:C:C6	2.56	0.40
34:RA:2767:C:H2'	34:RA:2768:C:C6	2.57	0.40
35:RB:75:G:O2'	54:RZ:85:HIS:NE2	2.35	0.40
39:RG:132:ASN:HD22	39:RG:158:ALA:HA	1.86	0.40
46:RR:3:HIS:HB3	46:RR:4:LEU:H	1.64	0.40
53:RY:67:LEU:HD23	53:RY:67:LEU:HA	1.96	0.40
1:XA:162:A:N7	1:XA:163:C:H1'	2.36	0.40
1:XA:200:G:H2'	1:XA:201(A):C:O4'	2.22	0.40
1:XA:254:G:H5'	17:XQ:66:SER:CB	2.51	0.40
1:XA:280:C:N4	17:XQ:39:SER:H	2.15	0.40
1:XA:1424:C:H2'	1:XA:1425:U:H6	1.86	0.40
1:XA:1437:C:H2'	1:XA:1438:G:C8	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:48:THR:HG22	10:XJ:60:ARG:HD2	2.02	0.40
14:XN:7:ILE:HG22	14:XN:23:ARG:HE	1.87	0.40
14:XN:47:LEU:HA	14:XN:47:LEU:HD23	1.86	0.40
24:Y0:70:GLN:HG2	24:Y0:72:ARG:HG2	2.03	0.40
29:Y5:46:CYS:HB3	29:Y5:49:CYS:HB3	2.03	0.40
34:YA:390:A:C6	44:YP:71:VAL:HG21	2.57	0.40
34:YA:642:G:H21	34:YA:646:A:H2	1.69	0.40
34:YA:862:G:H2'	34:YA:863:A:O4'	2.20	0.40
34:YA:1689:A:H2'	34:YA:1690:A:C8	2.56	0.40
34:YA:1754:C:H5''	48:YT:113:LYS:HD3	2.03	0.40
34:YA:1820:U:N3	36:YD:202:LYS:HD2	2.37	0.40
34:YA:1830:C:H2'	34:YA:1831:G:H8	1.87	0.40
34:YA:1836:C:H2'	34:YA:1837:C:H6	1.86	0.40
34:YA:2043:C:H42	34:YA:2625:G:H1	1.69	0.40
34:YA:2096:U:C2	34:YA:2194:G:C2	3.10	0.40
34:YA:2122:U:H2'	34:YA:2123:G:C8	2.57	0.40
38:YF:195:ASP:OD1	38:YF:195:ASP:N	2.47	0.40
46:YR:87:TYR:OH	46:YR:117:VAL:O	2.31	0.40
50:YV:100:ARG:HE	50:YV:100:ARG:HB2	1.70	0.40
53:YY:39:VAL:HG23	53:YY:42:VAL:HB	2.02	0.40
54:YZ:24:LEU:HA	54:YZ:25:PRO:HD3	1.87	0.40
54:YZ:128:VAL:HG22	54:YZ:161:VAL:HG22	2.03	0.40
1:QA:277:C:P	17:QQ:68:ARG:HH21	2.44	0.40
1:QA:343:U:H1'	1:QA:347:G:N2	2.36	0.40
1:QA:390:C:H2'	1:QA:391:G:C8	2.57	0.40
1:QA:450:G:H5''	1:QA:451:A:H3'	2.04	0.40
1:QA:912:C:H2'	1:QA:913:A:C8	2.56	0.40
1:QA:957:U:P	19:QS:80:TYR:O	2.77	0.40
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.56	0.40
1:QA:1329:A:OP1	13:QM:29:ARG:HD3	2.22	0.40
2:QB:75:LYS:HA	2:QB:75:LYS:HD3	1.83	0.40
4:QD:88:VAL:CG1	5:QE:97:GLY:HA3	2.47	0.40
31:R7:7:PRO:HB2	34:RA:1309:G:H4'	2.04	0.40
32:R8:27:THR:HA	44:RP:62:LEU:HD22	2.04	0.40
33:R9:29:ASN:HA	33:R9:30:PRO:HD3	1.93	0.40
34:RA:151:C:H2'	34:RA:152:G:C8	2.57	0.40
34:RA:969:U:H2'	34:RA:970:C:C6	2.56	0.40
34:RA:1464:C:H2'	34:RA:1465:G:C8	2.57	0.40
34:RA:1509:C:H2'	34:RA:1511:A:C8	2.57	0.40
34:RA:2145:C:H2'	34:RA:2147:G:C2	2.56	0.40
34:RA:2405:G:H1'	34:RA:2412:A:H61	1.87	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RI:40:THR:OG1	41:RI:41:GLU:N	2.55	0.40
44:RP:64:LYS:O	44:RP:66:GLY:N	2.55	0.40
45:RQ:30:GLY:HA2	45:RQ:107:ALA:HB2	2.03	0.40
48:RT:52:ILE:HG13	48:RT:61:PHE:HB3	2.02	0.40
1:XA:59:A:H3'	1:XA:331:G:N2	2.33	0.40
1:XA:293:G:H5'	1:XA:610:G:H21	1.86	0.40
1:XA:690:G:H1'	1:XA:698:G:N2	2.36	0.40
1:XA:767:A:H1'	1:XA:1525:G:H1'	2.02	0.40
1:XA:860:A:H3'	1:XA:861:G:C8	2.54	0.40
1:XA:969:A:O2'	10:XJ:55:LYS:NZ	2.44	0.40
1:XA:1114:C:H2'	1:XA:1115:C:C6	2.56	0.40
1:XA:1275:A:H2'	1:XA:1276:G:O4'	2.22	0.40
1:XA:1302:U:H1'	13:XM:27:LYS:HE2	0.96	0.40
1:XA:1332:A:H3'	1:XA:1333:A:H8	1.87	0.40
4:XD:202:LEU:HA	4:XD:205:GLU:HB2	2.03	0.40
6:XF:7:ASN:HD21	18:XR:35:ARG:CZ	2.34	0.40
8:XH:81:HIS:ND1	8:XH:138:TRP:O	2.33	0.40
22:XV:19:G:C8	34:YA:2112:G:N7	2.88	0.40
25:Y1:41:ARG:NH2	34:YA:1365:A:O5'	2.40	0.40
34:YA:197:A:C6	34:YA:2430:A:C2	3.08	0.40
34:YA:270(S):G:H2'	34:YA:270(T):G:C8	2.56	0.40
34:YA:363(F):U:H3'	34:YA:363(G):A:C8	2.56	0.40
34:YA:594:U:H2'	34:YA:595:C:C6	2.56	0.40
34:YA:1456:G:C2	34:YA:2704:C:N3	2.89	0.40
34:YA:1656:C:H2'	34:YA:1657:C:C6	2.55	0.40
34:YA:1869:G:H5'	34:YA:1870:C:OP2	2.22	0.40
34:YA:2053:G:N2	34:YA:2617:C:N3	2.69	0.40
34:YA:2065:C:H2'	34:YA:2066:C:C6	2.55	0.40
34:YA:2429:G:N7	44:YP:56:SER:OG	2.35	0.40
34:YA:2591:C:H2'	34:YA:2592:G:C8	2.56	0.40
34:YA:2746:U:O4	34:YA:2755:C:H4'	2.21	0.40
34:YA:2820:A:C6	46:YR:4:LEU:CD1	3.04	0.40
36:YD:175:LEU:O	36:YD:182:LEU:HA	2.22	0.40
39:YG:47:LYS:HD3	39:YG:81:LYS:HB2	2.04	0.40
42:YN:34:LEU:O	42:YN:49:GLY:HA3	2.21	0.40

All (35) 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)
7:QG:149:ARG:NE	3:XC:81:GLY:O[4_555]	0.51	1.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:149:ARG:NH1	3:XC:85:ARG:N[4_555]	1.02	1.18
7:QG:149:ARG:NH1	3:XC:85:ARG:CA[4_555]	1.16	1.04
7:QG:149:ARG:CZ	3:XC:85:ARG:N[4_555]	1.35	0.85
7:QG:149:ARG:NH1	3:XC:85:ARG:CB[4_555]	1.52	0.68
7:QG:149:ARG:NH2	3:XC:84:ILE:CA[4_555]	1.62	0.58
7:QG:149:ARG:NE	3:XC:81:GLY:C[4_555]	1.67	0.53
7:QG:149:ARG:CZ	3:XC:81:GLY:O[4_555]	1.67	0.53
7:QG:149:ARG:CD	3:XC:81:GLY:O[4_555]	1.70	0.50
7:QG:149:ARG:NH2	3:XC:85:ARG:N[4_555]	1.70	0.50
29:Y5:60:VAL:O	50:YV:49:THR:OG1[4_545]	1.72	0.48
7:QG:149:ARG:O	3:XC:80:GLY:O[4_555]	1.75	0.45
7:QG:149:ARG:NH2	3:XC:84:ILE:C[4_555]	1.77	0.43
9:QI:98:PRO:CB	10:XJ:79:ARG:NH1[4_555]	1.78	0.42
9:QI:98:PRO:CB	10:XJ:79:ARG:CZ[4_555]	1.81	0.39
7:QG:149:ARG:NH2	3:XC:84:ILE:N[4_555]	1.82	0.38
7:QG:149:ARG:NH2	3:XC:84:ILE:CG2[4_555]	1.83	0.37
36:RD:134:ARG:NH1	4:XD:163:GLU:O[4_555]	1.89	0.31
6:QF:20:ALA:CB	4:XD:195:ALA:CB[4_555]	1.92	0.28
9:QI:98:PRO:CA	10:XJ:79:ARG:NH1[4_555]	1.96	0.24
27:R3:3:ARG:NH2	44:YP:137:LYS:NZ[3_455]	1.96	0.24
6:QF:14:LEU:C	4:XD:20:TYR:OH[4_555]	1.98	0.22
6:QF:14:LEU:O	4:XD:20:TYR:OH[4_555]	1.98	0.22
9:QI:98:PRO:O	10:XJ:79:ARG:NH1[4_555]	1.99	0.21
7:QG:149:ARG:CD	3:XC:85:ARG:CG[4_555]	2.01	0.19
7:QG:149:ARG:NH2	3:XC:84:ILE:CB[4_555]	2.01	0.19
9:QI:98:PRO:C	10:XJ:79:ARG:NH1[4_555]	2.05	0.15
36:RD:135:PHE:CE1	4:XD:167:GLY:CA[4_555]	2.07	0.13
26:R2:34:GLU:OE1	34:YA:277:C:O2[3_555]	2.14	0.06
6:QF:15:ASP:CB	4:XD:20:TYR:CD2[4_555]	2.17	0.03
27:R3:60:GLU:O	44:YP:119:GLU:OE2[3_455]	2.17	0.03
9:QI:98:PRO:CB	10:XJ:79:ARG:NH2[4_555]	2.18	0.02
6:QF:14:LEU:CA	4:XD:20:TYR:OH[4_555]	2.19	0.01
7:QG:149:ARG:NH1	3:XC:85:ARG:CG[4_555]	2.19	0.01
7:QG:149:ARG:CD	3:XC:81:GLY:C[4_555]	2.19	0.01

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	233/256 (91%)	206 (88%)	27 (12%)	0	100	100
2	XB	234/256 (91%)	202 (86%)	31 (13%)	1 (0%)	30	67
3	QC	203/239 (85%)	180 (89%)	23 (11%)	0	100	100
3	XC	203/239 (85%)	182 (90%)	21 (10%)	0	100	100
4	QD	206/209 (99%)	195 (95%)	10 (5%)	1 (0%)	25	62
4	XD	206/209 (99%)	194 (94%)	11 (5%)	1 (0%)	25	62
5	QE	149/162 (92%)	134 (90%)	14 (9%)	1 (1%)	19	56
5	XE	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	19	56
6	QF	99/101 (98%)	96 (97%)	3 (3%)	0	100	100
6	XF	99/101 (98%)	98 (99%)	1 (1%)	0	100	100
7	QG	153/156 (98%)	145 (95%)	8 (5%)	0	100	100
7	XG	153/156 (98%)	142 (93%)	11 (7%)	0	100	100
8	QH	135/138 (98%)	127 (94%)	8 (6%)	0	100	100
8	XH	135/138 (98%)	126 (93%)	9 (7%)	0	100	100
9	QI	103/128 (80%)	91 (88%)	12 (12%)	0	100	100
9	XI	105/128 (82%)	97 (92%)	8 (8%)	0	100	100
10	QJ	97/105 (92%)	88 (91%)	8 (8%)	1 (1%)	13	47
10	XJ	94/105 (90%)	87 (93%)	5 (5%)	2 (2%)	5	32
11	QK	117/129 (91%)	108 (92%)	9 (8%)	0	100	100
11	XK	114/129 (88%)	104 (91%)	10 (9%)	0	100	100
12	QL	123/132 (93%)	98 (80%)	24 (20%)	1 (1%)	16	53
12	XL	120/132 (91%)	99 (82%)	21 (18%)	0	100	100
13	QM	113/126 (90%)	96 (85%)	16 (14%)	1 (1%)	14	50
13	XM	112/126 (89%)	100 (89%)	11 (10%)	1 (1%)	14	50
14	QN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	7	37
14	XN	58/61 (95%)	49 (84%)	7 (12%)	2 (3%)	3	24
15	QO	86/89 (97%)	80 (93%)	6 (7%)	0	100	100
15	XO	85/89 (96%)	81 (95%)	4 (5%)	0	100	100
16	QP	82/88 (93%)	76 (93%)	6 (7%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
16	XP	82/88 (93%)	78 (95%)	4 (5%)	0	100	100
17	QQ	98/105 (93%)	91 (93%)	7 (7%)	0	100	100
17	XQ	98/105 (93%)	94 (96%)	4 (4%)	0	100	100
18	QR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
18	XR	68/88 (77%)	66 (97%)	2 (3%)	0	100	100
19	QS	81/93 (87%)	66 (82%)	15 (18%)	0	100	100
19	XS	82/93 (88%)	65 (79%)	17 (21%)	0	100	100
20	QT	97/106 (92%)	86 (89%)	8 (8%)	3 (3%)	3	25
20	XT	97/106 (92%)	84 (87%)	10 (10%)	3 (3%)	3	25
21	QU	23/27 (85%)	21 (91%)	2 (9%)	0	100	100
21	XU	23/27 (85%)	23 (100%)	0	0	100	100
24	R0	79/85 (93%)	71 (90%)	8 (10%)	0	100	100
24	Y0	80/85 (94%)	75 (94%)	5 (6%)	0	100	100
25	R1	93/98 (95%)	76 (82%)	17 (18%)	0	100	100
25	Y1	91/98 (93%)	78 (86%)	12 (13%)	1 (1%)	12	45
26	R2	67/72 (93%)	63 (94%)	4 (6%)	0	100	100
26	Y2	66/72 (92%)	64 (97%)	2 (3%)	0	100	100
27	R3	57/60 (95%)	56 (98%)	1 (2%)	0	100	100
27	Y3	57/60 (95%)	55 (96%)	2 (4%)	0	100	100
28	R4	43/71 (61%)	41 (95%)	2 (5%)	0	100	100
28	Y4	44/71 (62%)	28 (64%)	12 (27%)	4 (9%)	0	10
29	R5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	7	35
29	Y5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	7	35
30	R6	51/54 (94%)	46 (90%)	5 (10%)	0	100	100
30	Y6	51/54 (94%)	49 (96%)	2 (4%)	0	100	100
31	R7	45/49 (92%)	43 (96%)	2 (4%)	0	100	100
31	Y7	46/49 (94%)	45 (98%)	1 (2%)	0	100	100
32	R8	62/65 (95%)	51 (82%)	9 (14%)	2 (3%)	3	25
32	Y8	62/65 (95%)	48 (77%)	14 (23%)	0	100	100
33	R9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100
33	Y9	35/37 (95%)	33 (94%)	2 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
36	RD	270/276 (98%)	244 (90%)	24 (9%)	2 (1%)	19	56
36	YD	270/276 (98%)	241 (89%)	28 (10%)	1 (0%)	30	67
37	RE	203/206 (98%)	159 (78%)	39 (19%)	5 (2%)	4	29
37	YE	203/206 (98%)	162 (80%)	39 (19%)	2 (1%)	13	47
38	RF	200/210 (95%)	183 (92%)	15 (8%)	2 (1%)	13	47
38	YF	200/210 (95%)	183 (92%)	16 (8%)	1 (0%)	25	62
39	RG	179/182 (98%)	150 (84%)	28 (16%)	1 (1%)	22	59
39	YG	179/182 (98%)	152 (85%)	27 (15%)	0	100	100
40	RH	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	7	37
40	YH	172/180 (96%)	147 (86%)	21 (12%)	4 (2%)	5	31
41	RI	144/148 (97%)	114 (79%)	24 (17%)	6 (4%)	2	21
41	YI	144/148 (97%)	118 (82%)	22 (15%)	4 (3%)	4	27
42	RN	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	19	56
42	YN	136/140 (97%)	123 (90%)	12 (9%)	1 (1%)	19	56
43	RO	120/122 (98%)	109 (91%)	11 (9%)	0	100	100
43	YO	120/122 (98%)	112 (93%)	8 (7%)	0	100	100
44	RP	148/150 (99%)	114 (77%)	31 (21%)	3 (2%)	6	34
44	YP	145/150 (97%)	116 (80%)	28 (19%)	1 (1%)	19	56
45	RQ	139/141 (99%)	120 (86%)	18 (13%)	1 (1%)	19	56
45	YQ	139/141 (99%)	111 (80%)	27 (19%)	1 (1%)	19	56
46	RR	115/118 (98%)	103 (90%)	12 (10%)	0	100	100
46	YR	115/118 (98%)	104 (90%)	10 (9%)	1 (1%)	14	50
47	RS	109/112 (97%)	95 (87%)	14 (13%)	0	100	100
47	YS	109/112 (97%)	95 (87%)	13 (12%)	1 (1%)	14	50
48	RT	135/146 (92%)	116 (86%)	19 (14%)	0	100	100
48	YT	135/146 (92%)	121 (90%)	14 (10%)	0	100	100
49	RU	115/118 (98%)	106 (92%)	6 (5%)	3 (3%)	4	29
49	YU	115/118 (98%)	109 (95%)	6 (5%)	0	100	100
50	RV	99/101 (98%)	87 (88%)	11 (11%)	1 (1%)	13	47
50	YV	99/101 (98%)	90 (91%)	8 (8%)	1 (1%)	13	47
51	RW	111/113 (98%)	104 (94%)	7 (6%)	0	100	100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
51	YW	111/113 (98%)	107 (96%)	4 (4%)	0	100	100
52	RX	90/96 (94%)	85 (94%)	5 (6%)	0	100	100
52	YX	90/96 (94%)	84 (93%)	6 (7%)	0	100	100
53	RY	105/110 (96%)	102 (97%)	3 (3%)	0	100	100
53	YY	105/110 (96%)	99 (94%)	6 (6%)	0	100	100
54	RZ	181/206 (88%)	139 (77%)	38 (21%)	4 (2%)	5	32
54	YZ	191/206 (93%)	145 (76%)	39 (20%)	7 (4%)	2	23
All	All	11368/12128 (94%)	10080 (89%)	1202 (11%)	86 (1%)	16	53

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	QL	105	TYR
20	QT	75	ASN
32	R8	30	ARG
37	RE	147	PRO
40	RH	157	TYR
41	RI	11	ASN
44	RP	108	LYS
49	RU	91	ASP
49	RU	92	ARG
54	RZ	53	ILE
4	XD	156	GLU
20	XT	74	LYS
20	XT	75	ASN
28	Y4	24	THR
37	YE	147	PRO
40	YH	157	TYR
44	YP	108	LYS
50	YV	50	PRO
54	YZ	53	ILE
54	YZ	182	LYS
14	QN	17	LYS
32	R8	29	LYS
36	RD	243	GLY
39	RG	81	LYS
40	RH	126	PRO
41	RI	132	PRO
42	RN	22	THR
44	RP	22	GLY

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Mol	Chain	Res	Type
49	RU	90	VAL
54	RZ	167	PRO
14	XN	57	ARG
36	YD	243	GLY
40	YH	47	GLU
41	YI	122	GLU
41	YI	132	PRO
47	YS	110	LEU
54	YZ	60	GLU
54	YZ	167	PRO
20	QT	74	LYS
36	RD	242	ARG
37	RE	130	GLY
38	RF	67	GLN
38	RF	129	PHE
10	XJ	37	PRO
14	XN	56	VAL
28	Y4	5	ILE
38	YF	129	PHE
46	YR	4	LEU
10	QJ	55	LYS
29	R5	49	CYS
37	RE	17	ASP
37	RE	83	ASP
41	RI	10	GLU
41	RI	122	GLU
44	RP	29	LYS
54	RZ	52	SER
54	RZ	63	ASP
10	XJ	40	LEU
13	XM	7	VAL
20	XT	73	HIS
28	Y4	40	HIS
40	YH	152	ARG
41	YI	15	VAL
54	YZ	183	LEU
20	QT	98	PRO
37	RE	82	ARG
40	RH	156	ALA
50	RV	53	GLU
5	XE	74	GLY
40	YH	156	ALA

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Mol	Chain	Res	Type
42	YN	22	THR
54	YZ	61	LEU
4	QD	156	GLU
13	QM	13	LYS
41	RI	15	VAL
25	Y1	54	ALA
29	Y5	49	CYS
37	YE	54	GLN
45	YQ	7	MET
54	YZ	94	GLU
5	QE	74	GLY
2	XB	208	ILE
28	Y4	4	GLY
45	RQ	78	PRO
41	YI	133	HIS
41	RI	119	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	203/220 (92%)	202 (100%)	1 (0%)	86	90
2	XB	204/220 (93%)	203 (100%)	1 (0%)	86	90
3	QC	159/188 (85%)	158 (99%)	1 (1%)	84	88
3	XC	159/188 (85%)	157 (99%)	2 (1%)	65	77
4	QD	180/181 (99%)	179 (99%)	1 (1%)	84	88
4	XD	180/181 (99%)	177 (98%)	3 (2%)	56	72
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	115 (99%)	1 (1%)	75	83
6	QF	90/90 (100%)	89 (99%)	1 (1%)	70	80
6	XF	90/90 (100%)	90 (100%)	0	100	100
7	QG	126/127 (99%)	126 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
7	XG	126/127 (99%)	125 (99%)	1 (1%)	79	84
8	QH	118/119 (99%)	117 (99%)	1 (1%)	79	84
8	XH	118/119 (99%)	117 (99%)	1 (1%)	79	84
9	QI	79/99 (80%)	76 (96%)	3 (4%)	28	51
9	XI	81/99 (82%)	79 (98%)	2 (2%)	42	62
10	QJ	89/92 (97%)	89 (100%)	0	100	100
10	XJ	86/92 (94%)	81 (94%)	5 (6%)	17	40
11	QK	90/99 (91%)	88 (98%)	2 (2%)	47	65
11	XK	88/99 (89%)	88 (100%)	0	100	100
12	QL	104/109 (95%)	103 (99%)	1 (1%)	73	81
12	XL	103/109 (94%)	101 (98%)	2 (2%)	52	69
13	QM	93/101 (92%)	93 (100%)	0	100	100
13	XM	92/101 (91%)	92 (100%)	0	100	100
14	QN	49/50 (98%)	47 (96%)	2 (4%)	26	49
14	XN	49/50 (98%)	47 (96%)	2 (4%)	26	49
15	QO	79/80 (99%)	77 (98%)	2 (2%)	42	62
15	XO	79/80 (99%)	79 (100%)	0	100	100
16	QP	72/74 (97%)	72 (100%)	0	100	100
16	XP	72/74 (97%)	72 (100%)	0	100	100
17	QQ	95/97 (98%)	95 (100%)	0	100	100
17	XQ	95/97 (98%)	93 (98%)	2 (2%)	48	66
18	QR	61/77 (79%)	61 (100%)	0	100	100
18	XR	61/77 (79%)	61 (100%)	0	100	100
19	QS	72/80 (90%)	72 (100%)	0	100	100
19	XS	73/80 (91%)	72 (99%)	1 (1%)	62	75
20	QT	76/82 (93%)	75 (99%)	1 (1%)	65	77
20	XT	76/82 (93%)	75 (99%)	1 (1%)	65	77
21	QU	20/22 (91%)	20 (100%)	0	100	100
21	XU	20/22 (91%)	19 (95%)	1 (5%)	20	44
24	R0	65/67 (97%)	65 (100%)	0	100	100
24	Y0	65/67 (97%)	65 (100%)	0	100	100

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
25	R1	80/83 (96%)	78 (98%)	2 (2%)	42	62
25	Y1	78/83 (94%)	78 (100%)	0	100	100
26	R2	64/67 (96%)	64 (100%)	0	100	100
26	Y2	64/67 (96%)	64 (100%)	0	100	100
27	R3	51/52 (98%)	50 (98%)	1 (2%)	50	68
27	Y3	51/52 (98%)	51 (100%)	0	100	100
28	R4	40/63 (64%)	40 (100%)	0	100	100
28	Y4	41/63 (65%)	40 (98%)	1 (2%)	44	63
29	R5	51/52 (98%)	50 (98%)	1 (2%)	50	68
29	Y5	51/52 (98%)	49 (96%)	2 (4%)	27	50
30	R6	51/52 (98%)	50 (98%)	1 (2%)	50	68
30	Y6	51/52 (98%)	50 (98%)	1 (2%)	50	68
31	R7	40/42 (95%)	40 (100%)	0	100	100
31	Y7	41/42 (98%)	41 (100%)	0	100	100
32	R8	54/55 (98%)	54 (100%)	0	100	100
32	Y8	54/55 (98%)	54 (100%)	0	100	100
33	R9	34/34 (100%)	34 (100%)	0	100	100
33	Y9	34/34 (100%)	33 (97%)	1 (3%)	37	58
36	RD	214/218 (98%)	211 (99%)	3 (1%)	62	75
36	YD	214/218 (98%)	214 (100%)	0	100	100
37	RE	165/166 (99%)	162 (98%)	3 (2%)	54	71
37	YE	165/166 (99%)	160 (97%)	5 (3%)	36	57
38	RF	161/166 (97%)	158 (98%)	3 (2%)	52	69
38	YF	161/166 (97%)	161 (100%)	0	100	100
39	RG	155/156 (99%)	154 (99%)	1 (1%)	84	88
39	YG	155/156 (99%)	152 (98%)	3 (2%)	52	69
40	RH	145/148 (98%)	137 (94%)	8 (6%)	18	42
40	YH	145/148 (98%)	139 (96%)	6 (4%)	26	49
41	RI	122/124 (98%)	120 (98%)	2 (2%)	58	74
41	YI	122/124 (98%)	118 (97%)	4 (3%)	33	55
42	RN	117/119 (98%)	114 (97%)	3 (3%)	41	61

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
42	YN	117/119 (98%)	116 (99%)	1 (1%)	75	83
43	RO	100/100 (100%)	100 (100%)	0	100	100
43	YO	100/100 (100%)	99 (99%)	1 (1%)	73	81
44	RP	116/116 (100%)	116 (100%)	0	100	100
44	YP	114/116 (98%)	113 (99%)	1 (1%)	75	83
45	RQ	111/111 (100%)	109 (98%)	2 (2%)	54	71
45	YQ	111/111 (100%)	111 (100%)	0	100	100
46	RR	100/101 (99%)	99 (99%)	1 (1%)	73	81
46	YR	100/101 (99%)	100 (100%)	0	100	100
47	RS	87/88 (99%)	87 (100%)	0	100	100
47	YS	87/88 (99%)	85 (98%)	2 (2%)	45	64
48	RT	120/127 (94%)	118 (98%)	2 (2%)	56	72
48	YT	120/127 (94%)	118 (98%)	2 (2%)	56	72
49	RU	93/94 (99%)	92 (99%)	1 (1%)	70	80
49	YU	93/94 (99%)	92 (99%)	1 (1%)	70	80
50	RV	82/82 (100%)	80 (98%)	2 (2%)	44	63
50	YV	82/82 (100%)	78 (95%)	4 (5%)	21	44
51	RW	92/92 (100%)	91 (99%)	1 (1%)	70	80
51	YW	92/92 (100%)	92 (100%)	0	100	100
52	RX	74/78 (95%)	73 (99%)	1 (1%)	62	75
52	YX	74/78 (95%)	72 (97%)	2 (3%)	40	60
53	RY	88/91 (97%)	87 (99%)	1 (1%)	70	80
53	YY	88/91 (97%)	87 (99%)	1 (1%)	70	80
54	RZ	162/179 (90%)	161 (99%)	1 (1%)	84	88
54	YZ	167/179 (93%)	164 (98%)	3 (2%)	54	71
All	All	9610/10066 (96%)	9488 (99%)	122 (1%)	65	77

All (122) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	229	VAL
3	QC	111	LEU
4	QD	18	LYS

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Mol	Chain	Res	Type
6	QF	74	ASP
8	QH	59	LEU
9	QI	17	VAL
9	QI	64	THR
9	QI	85	LEU
11	QK	41	THR
11	QK	82	VAL
12	QL	18	VAL
14	QN	33	VAL
14	QN	43	CYS
15	QO	22	THR
15	QO	87	ILE
20	QT	73	HIS
25	R1	73	LEU
25	R1	92	LYS
27	R3	13	ILE
29	R5	36	CYS
30	R6	23	THR
36	RD	44	ASN
36	RD	51	VAL
36	RD	268	ARG
37	RE	107	THR
37	RE	143	ASN
37	RE	176	ILE
38	RF	89	VAL
38	RF	124	LEU
38	RF	195	ASP
39	RG	92	VAL
40	RH	17	VAL
40	RH	107	VAL
40	RH	115	VAL
40	RH	123	PHE
40	RH	125	VAL
40	RH	127	GLU
40	RH	129	THR
40	RH	131	VAL
41	RI	5	LEU
41	RI	81	VAL
42	RN	34	LEU
42	RN	60	ILE
42	RN	96	GLU
45	RQ	27	VAL

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Mol	Chain	Res	Type
45	RQ	96	VAL
46	RR	10	LEU
48	RT	66	VAL
48	RT	75	ILE
49	RU	90	VAL
50	RV	33	VAL
50	RV	52	VAL
51	RW	52	GLU
52	RX	27	THR
53	RY	15	VAL
54	RZ	90	VAL
2	XB	162	ILE
3	XC	12	LEU
3	XC	162	GLN
4	XD	18	LYS
4	XD	135	LEU
4	XD	146	ILE
5	XE	12	LEU
7	XG	38	LEU
8	XH	118	VAL
9	XI	26	VAL
9	XI	27	THR
10	XJ	8	LEU
10	XJ	42	THR
10	XJ	68	HIS
10	XJ	69	ASN
10	XJ	96	ILE
12	XL	6	THR
12	XL	105	TYR
14	XN	3	ARG
14	XN	27	CYS
17	XQ	50	LYS
17	XQ	74	LEU
19	XS	11	VAL
20	XT	71	THR
21	XU	3	LYS
28	Y4	16	CYS
29	Y5	37	LYS
29	Y5	45	VAL
30	Y6	43	CYS
33	Y9	27	CYS
37	YE	33	VAL

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Mol	Chain	Res	Type
37	YE	104	VAL
37	YE	107	THR
37	YE	176	ILE
37	YE	184	VAL
39	YG	5	VAL
39	YG	37	VAL
39	YG	140	ILE
40	YH	67	LEU
40	YH	86	GLU
40	YH	115	VAL
40	YH	125	VAL
40	YH	133	VAL
40	YH	169	VAL
41	YI	86	THR
41	YI	93	THR
41	YI	127	VAL
41	YI	136	VAL
42	YN	96	GLU
43	YO	24	VAL
44	YP	45	LEU
47	YS	4	LEU
47	YS	110	LEU
48	YT	66	VAL
48	YT	105	LEU
49	YU	94	ASN
50	YV	46	VAL
50	YV	62	LEU
50	YV	78	LYS
50	YV	79	VAL
52	YX	49	VAL
52	YX	66	LEU
53	YY	79	CYS
54	YZ	71	VAL
54	YZ	165	VAL
54	YZ	180	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (95) such sidechains are listed below:

Mol	Chain	Res	Type
2	QB	45	GLN
3	QC	3	ASN
3	QC	6	HIS

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Mol	Chain	Res	Type
3	QC	108	ASN
3	QC	176	HIS
4	QD	45	GLN
4	QD	103	ASN
4	QD	123	HIS
4	QD	125	HIS
7	QG	28	ASN
7	QG	37	ASN
7	QG	97	GLN
7	QG	109	ASN
11	QK	13	GLN
12	QL	9	GLN
12	QL	78	GLN
13	QM	77	ASN
15	QO	62	GLN
16	QP	13	HIS
17	QQ	45	HIS
17	QQ	94	ASN
19	QS	23	ASN
19	QS	57	HIS
19	QS	69	HIS
24	R0	3	HIS
24	R0	12	ASN
25	R1	42	GLN
25	R1	47	GLN
26	R2	9	GLN
28	R4	6	HIS
30	R6	20	ASN
31	R7	36	GLN
32	R8	31	HIS
32	R8	33	ASN
32	R8	35	GLN
36	RD	166	GLN
36	RD	253	GLN
37	RE	66	HIS
37	RE	180	ASN
38	RF	67	GLN
40	RH	61	HIS
42	RN	131	GLN
44	RP	68	GLN
45	RQ	113	GLN
47	RS	38	GLN

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Mol	Chain	Res	Type
47	RS	68	GLN
48	RT	58	ASN
48	RT	79	HIS
51	RW	34	ASN
52	RX	41	ASN
2	XB	25	ASN
2	XB	37	ASN
3	XC	108	ASN
3	XC	162	GLN
3	XC	176	HIS
4	XD	116	GLN
4	XD	119	GLN
4	XD	123	HIS
4	XD	125	HIS
6	XF	57	GLN
6	XF	73	ASN
6	XF	100	ASN
7	XG	110	GLN
7	XG	122	HIS
7	XG	148	ASN
10	XJ	56	HIS
10	XJ	62	HIS
10	XJ	78	ASN
11	XK	38	ASN
11	XK	93	GLN
11	XK	117	ASN
12	XL	8	ASN
12	XL	99	HIS
13	XM	40	ASN
13	XM	77	ASN
14	XN	49	HIS
15	XO	28	GLN
20	XT	9	ASN
20	XT	18	GLN
25	Y1	47	GLN
26	Y2	38	GLN
26	Y2	47	ASN
29	Y5	22	HIS
37	YE	55	ASN
37	YE	132	HIS
37	YE	192	ASN
38	YF	160	ASN

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Mol	Chain	Res	Type
38	YF	204	ASN
39	YG	132	ASN
40	YH	74	ASN
41	YI	105	HIS
45	YQ	46	GLN
45	YQ	113	GLN
49	YU	72	HIS
50	YV	11	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1509/1521 (99%)	532 (35%)	14 (0%)
1	XA	1514/1521 (99%)	469 (30%)	27 (1%)
22	QV	66/77 (85%)	15 (22%)	1 (1%)
22	XV	66/77 (85%)	16 (24%)	1 (1%)
23	QX	18/19 (94%)	5 (27%)	0
23	XX	18/19 (94%)	5 (27%)	0
34	RA	2877/2905 (99%)	706 (24%)	40 (1%)
34	YA	2880/2905 (99%)	754 (26%)	40 (1%)
35	RB	119/122 (97%)	20 (16%)	1 (0%)
35	YB	119/122 (97%)	23 (19%)	1 (0%)
All	All	9186/9288 (98%)	2545 (27%)	125 (1%)

All (2545) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	QA	6	G
1	QA	7	G
1	QA	8	A
1	QA	9	G
1	QA	15	G
1	QA	16	A
1	QA	25	C
1	QA	27	G
1	QA	29	G
1	QA	32	A
1	QA	39	G
1	QA	41	G
1	QA	42	G
1	QA	44	G

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Mol	Chain	Res	Type
1	QA	47	C
1	QA	48	C
1	QA	49	U
1	QA	50	A
1	QA	51	A
1	QA	53	A
1	QA	54	C
1	QA	58	C
1	QA	62	U
1	QA	65	U
1	QA	68	G
1	QA	69	G
1	QA	79	G
1	QA	80	G
1	QA	82	U
1	QA	95	G
1	QA	102	G
1	QA	109	A
1	QA	113	G
1	QA	121	C
1	QA	129(B)	G
1	QA	130	A
1	QA	131	C
1	QA	132	C
1	QA	134	A
1	QA	136	C
1	QA	137	C
1	QA	138	G
1	QA	142	G
1	QA	144	G
1	QA	146	G
1	QA	147	G
1	QA	151	A
1	QA	153	C
1	QA	156	G
1	QA	157	G
1	QA	161	A
1	QA	163	C
1	QA	169	C
1	QA	171	A
1	QA	178	C
1	QA	181	G

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Mol	Chain	Res	Type
1	QA	182	U
1	QA	183	G
1	QA	186(C)	C
1	QA	186(D)	G
1	QA	186(I)	U
1	QA	186(J)	U
1	QA	186(L)	G
1	QA	186(M)	G
1	QA	195	A
1	QA	196	A
1	QA	197	A
1	QA	201(A)	C
1	QA	201(B)	U
1	QA	201(C)	U
1	QA	201(D)	U
1	QA	216	G
1	QA	228	A
1	QA	229	U
1	QA	235	C
1	QA	240	C
1	QA	241	C
1	QA	243	A
1	QA	244	U
1	QA	245	C
1	QA	247	G
1	QA	250	A
1	QA	252	U
1	QA	254	G
1	QA	258	G
1	QA	264	U
1	QA	266	G
1	QA	267	C
1	QA	274	A
1	QA	275	G
1	QA	281	G
1	QA	289	G
1	QA	296	U
1	QA	297	G
1	QA	299	G
1	QA	301	G
1	QA	305	G
1	QA	306	G

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Mol	Chain	Res	Type
1	QA	315	A
1	QA	316	G
1	QA	321	A
1	QA	322	C
1	QA	324	G
1	QA	327	A
1	QA	328	C
1	QA	329	A
1	QA	330	C
1	QA	332	G
1	QA	344	A
1	QA	345	C
1	QA	346	G
1	QA	347	G
1	QA	348	G
1	QA	351	G
1	QA	352	C
1	QA	353	A
1	QA	354	G
1	QA	356	A
1	QA	367	U
1	QA	368	U
1	QA	372	C
1	QA	373	A
1	QA	381	C
1	QA	382	A
1	QA	384	G
1	QA	389	A
1	QA	390	C
1	QA	392	G
1	QA	393	A
1	QA	394	G
1	QA	397	A
1	QA	398	C
1	QA	399	G
1	QA	401	C
1	QA	406	G
1	QA	408	A
1	QA	412	A
1	QA	413	G
1	QA	414	A
1	QA	422	C

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Mol	Chain	Res	Type
1	QA	424	G
1	QA	426	G
1	QA	428	G
1	QA	429	U
1	QA	437	U
1	QA	438	G
1	QA	440	A
1	QA	443	C
1	QA	452	A
1	QA	453	A
1	QA	458(B)	G
1	QA	458(C)	A
1	QA	458(D)	C
1	QA	474	G
1	QA	476	G
1	QA	481	G
1	QA	484	G
1	QA	485	G
1	QA	486	U
1	QA	489	C
1	QA	497	A
1	QA	498	U
1	QA	501	C
1	QA	508	C
1	QA	509	A
1	QA	510	A
1	QA	511	C
1	QA	514	C
1	QA	515	G
1	QA	517	G
1	QA	518	C
1	QA	519	C
1	QA	521	G
1	QA	522	C
1	QA	527	G
1	QA	531	U
1	QA	533	A
1	QA	534	U
1	QA	536	C
1	QA	537	G
1	QA	538	G
1	QA	541	G

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Mol	Chain	Res	Type
1	QA	542	G
1	QA	546	G
1	QA	547	A
1	QA	550	G
1	QA	559	A
1	QA	562	C
1	QA	564	C
1	QA	572	A
1	QA	573	A
1	QA	574	A
1	QA	576	G
1	QA	577	G
1	QA	580	U
1	QA	582	U
1	QA	587	G
1	QA	588	G
1	QA	590	C
1	QA	592	G
1	QA	596	C
1	QA	597	G
1	QA	599	C
1	QA	603	U
1	QA	607	A
1	QA	609	A
1	QA	614	A
1	QA	616	G
1	QA	617	G
1	QA	618	C
1	QA	619	U
1	QA	620	C
1	QA	624	C
1	QA	635	G
1	QA	641	U
1	QA	644	G
1	QA	647	C
1	QA	652	U
1	QA	653	A
1	QA	655	A
1	QA	661	G
1	QA	664	G
1	QA	665	A
1	QA	670	G

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Mol	Chain	Res	Type
1	QA	683	G
1	QA	684	A
1	QA	686	U
1	QA	687	A
1	QA	688	G
1	QA	695	A
1	QA	700	G
1	QA	702	A
1	QA	703	G
1	QA	708	C
1	QA	710	G
1	QA	716	A
1	QA	718	G
1	QA	721	G
1	QA	723	U
1	QA	724	G
1	QA	729	A
1	QA	749	C
1	QA	753	A
1	QA	754	C
1	QA	755	G
1	QA	773	G
1	QA	776	G
1	QA	777	A
1	QA	785	G
1	QA	787	A
1	QA	793	U
1	QA	794	A
1	QA	796	C
1	QA	799	G
1	QA	811	C
1	QA	812	C
1	QA	815	A
1	QA	816	A
1	QA	817	C
1	QA	818	G
1	QA	820	U
1	QA	821	G
1	QA	828	A
1	QA	829	G
1	QA	837	G
1	QA	838(B)	U

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Mol	Chain	Res	Type
1	QA	838(C)	C
1	QA	838(D)	U
1	QA	848	C
1	QA	853	G
1	QA	855	G
1	QA	867	G
1	QA	871	U
1	QA	872	A
1	QA	873	A
1	QA	874	G
1	QA	876	G
1	QA	880	C
1	QA	885	G
1	QA	889	A
1	QA	890	G
1	QA	914	A
1	QA	916	G
1	QA	918	A
1	QA	919	A
1	QA	926	G
1	QA	927	G
1	QA	928	G
1	QA	934	C
1	QA	935	A
1	QA	938	A
1	QA	941	G
1	QA	942	G
1	QA	946	A
1	QA	952	U
1	QA	957	U
1	QA	960	U
1	QA	961	U
1	QA	966	G
1	QA	967	C
1	QA	968	A
1	QA	969	A
1	QA	971	G
1	QA	972	C
1	QA	973	G
1	QA	974	A
1	QA	975	A
1	QA	976	G

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Mol	Chain	Res	Type
1	QA	977	A
1	QA	979	C
1	QA	980	C
1	QA	981	U
1	QA	986	A
1	QA	988	G
1	QA	992	U
1	QA	993	G
1	QA	998(A)	G
1	QA	999	U
1	QA	1004	A
1	QA	1006	C
1	QA	1010	G
1	QA	1015	A
1	QA	1016	A
1	QA	1023	G
1	QA	1024	G
1	QA	1025	U
1	QA	1026	G
1	QA	1027	C
1	QA	1028(A)	C
1	QA	1028(C)	C
1	QA	1028(D)	G
1	QA	1028(F)	G
1	QA	1037	C
1	QA	1042	G
1	QA	1044	A
1	QA	1046	A
1	QA	1050	G
1	QA	1054	C
1	QA	1055	A
1	QA	1056	U
1	QA	1060	C
1	QA	1064	G
1	QA	1065	U
1	QA	1066	C
1	QA	1076	C
1	QA	1088	G
1	QA	1089	G
1	QA	1094	G
1	QA	1095	U
1	QA	1099	G

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Mol	Chain	Res	Type
1	QA	1101	A
1	QA	1104	G
1	QA	1107	C
1	QA	1117	G
1	QA	1123	A
1	QA	1124	G
1	QA	1125	U
1	QA	1126	U
1	QA	1127	G
1	QA	1128	C
1	QA	1129	C
1	QA	1130	A
1	QA	1131	G
1	QA	1132	C
1	QA	1133	G
1	QA	1136	U
1	QA	1137	C
1	QA	1138	G
1	QA	1139	G
1	QA	1140	C
1	QA	1142	G
1	QA	1143	G
1	QA	1145	C
1	QA	1146	A
1	QA	1147	C
1	QA	1151	A
1	QA	1154	G
1	QA	1157	A
1	QA	1158	C
1	QA	1159	U
1	QA	1178	G
1	QA	1179	A
1	QA	1181	G
1	QA	1183	A
1	QA	1184	G
1	QA	1190	G
1	QA	1196	U
1	QA	1197	G
1	QA	1200	C
1	QA	1201	A
1	QA	1202	G
1	QA	1203	C

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Mol	Chain	Res	Type
1	QA	1206	G
1	QA	1211	U
1	QA	1212	U
1	QA	1213	A
1	QA	1216	G
1	QA	1218	C
1	QA	1221	G
1	QA	1222	G
1	QA	1224	G
1	QA	1225	A
1	QA	1226	C
1	QA	1228	C
1	QA	1235	U
1	QA	1236	A
1	QA	1238	A
1	QA	1240	U
1	QA	1244	C
1	QA	1246	C
1	QA	1250	A
1	QA	1251	A
1	QA	1252	A
1	QA	1253	G
1	QA	1254	C
1	QA	1256	A
1	QA	1257	U
1	QA	1258	G
1	QA	1260	C
1	QA	1263	C
1	QA	1265	G
1	QA	1268	A
1	QA	1269	A
1	QA	1270	C
1	QA	1272	G
1	QA	1273	G
1	QA	1274	G
1	QA	1275	A
1	QA	1277	C
1	QA	1278	U
1	QA	1279	A
1	QA	1280	A
1	QA	1281	U
1	QA	1282	C

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Mol	Chain	Res	Type
1	QA	1285	A
1	QA	1286	A
1	QA	1287	A
1	QA	1290	G
1	QA	1293	G
1	QA	1296	C
1	QA	1297	C
1	QA	1299	A
1	QA	1300	G
1	QA	1301	U
1	QA	1303	C
1	QA	1307	U
1	QA	1312	G
1	QA	1318	A
1	QA	1319	A
1	QA	1320	C
1	QA	1321	C
1	QA	1322	C
1	QA	1323	G
1	QA	1324	A
1	QA	1325	C
1	QA	1329	A
1	QA	1331	G
1	QA	1332	A
1	QA	1335	C
1	QA	1336	C
1	QA	1338	G
1	QA	1340	A
1	QA	1346	A
1	QA	1347	G
1	QA	1348	U
1	QA	1350	A
1	QA	1353	G
1	QA	1355	G
1	QA	1356	G
1	QA	1358	U
1	QA	1359	C
1	QA	1361	G
1	QA	1363	A
1	QA	1364	U
1	QA	1365	G
1	QA	1367	C

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Mol	Chain	Res	Type
1	QA	1370	G
1	QA	1373	G
1	QA	1375	A
1	QA	1377	A
1	QA	1378	C
1	QA	1379	G
1	QA	1380	U
1	QA	1381	U
1	QA	1382	C
1	QA	1384	C
1	QA	1394	A
1	QA	1395	C
1	QA	1397	C
1	QA	1398	A
1	QA	1399	C
1	QA	1401	G
1	QA	1413	A
1	QA	1419	G
1	QA	1422	G
1	QA	1432	G
1	QA	1435	G
1	QA	1436	U
1	QA	1440(C)	G
1	QA	1440(D)	G
1	QA	1440(E)	A
1	QA	1440(H)	C
1	QA	1440(J)	A
1	QA	1440(K)	C
1	QA	1440(L)	G
1	QA	1475	G
1	QA	1487	G
1	QA	1490	C
1	QA	1492	A
1	QA	1493	A
1	QA	1494	G
1	QA	1497	G
1	QA	1499	A
1	QA	1502	A
1	QA	1503	A
1	QA	1504	G
1	QA	1505	G
1	QA	1506	U

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Mol	Chain	Res	Type
1	QA	1507	A
1	QA	1517	G
1	QA	1519	A
1	QA	1520	G
1	QA	1529	G
1	QA	1530	G
1	QA	1532	U
1	QA	1533	C
1	QA	1534	A
1	QA	1535	C
1	QA	1537	U
1	QA	1538	C
1	QA	1539	C
1	QA	1541	U
22	QV	8	U
22	QV	10	G
22	QV	11	C
22	QV	15	G
22	QV	18	U
22	QV	19	G
22	QV	21(B)	A
22	QV	22	G
22	QV	31	G
22	QV	46	G
22	QV	47	U
22	QV	48	C
22	QV	59	A
22	QV	61	C
22	QV	67	U
23	QX	10	G
23	QX	12	A
23	QX	13	A
23	QX	16	C
23	QX	19	U
34	RA	7	G
34	RA	15	G
34	RA	23	G
34	RA	34	C
34	RA	35	G
34	RA	36	G
34	RA	46	C
34	RA	51	G

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Mol	Chain	Res	Type
34	RA	55	G
34	RA	71	A
34	RA	72	U
34	RA	74	A
34	RA	75	G
34	RA	83	G
34	RA	101	G
34	RA	102	G
34	RA	103	A
34	RA	114	U
34	RA	118	A
34	RA	120	U
34	RA	125	G
34	RA	128	C
34	RA	131	G
34	RA	140	A
34	RA	161	U
34	RA	177	G
34	RA	181	A
34	RA	196	A
34	RA	198	C
34	RA	199	A
34	RA	206	U
34	RA	215	G
34	RA	216	A
34	RA	221	A
34	RA	222	A
34	RA	223	A
34	RA	228	A
34	RA	229	A
34	RA	230	U
34	RA	232	G
34	RA	242	G
34	RA	243	U
34	RA	245	G
34	RA	248	G
34	RA	249	C
34	RA	252	G
34	RA	261	G
34	RA	265	A
34	RA	266	G
34	RA	267	C

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Mol	Chain	Res	Type
34	RA	270(L)	C
34	RA	270(M)	U
34	RA	270(N)	U
34	RA	270(O)	G
34	RA	270(Q)	C
34	RA	271(D)	U
34	RA	275	G
34	RA	276	A
34	RA	277	C
34	RA	278	A
34	RA	280	C
34	RA	283	A
34	RA	299	A
34	RA	300	A
34	RA	311	A
34	RA	312	G
34	RA	316	C
34	RA	317	G
34	RA	323	G
34	RA	324	A
34	RA	329	G
34	RA	330	A
34	RA	332	A
34	RA	342	G
34	RA	343	C
34	RA	352	G
34	RA	362	U
34	RA	364	C
34	RA	371	A
34	RA	372	G
34	RA	373	U
34	RA	386	G
34	RA	387	U
34	RA	405	U
34	RA	407	G
34	RA	411	G
34	RA	412	A
34	RA	428	A
34	RA	444	C
34	RA	448	U
34	RA	451	C
34	RA	454	A

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Mol	Chain	Res	Type
34	RA	455	C
34	RA	456	C
34	RA	457	A
34	RA	458	G
34	RA	459	U
34	RA	467	G
34	RA	470	A
34	RA	479	A
34	RA	481	G
34	RA	494	G
34	RA	496	G
34	RA	504	U
34	RA	505	A
34	RA	508	G
34	RA	510	C
34	RA	512	G
34	RA	513	A
34	RA	527	C
34	RA	528	A
34	RA	529	A
34	RA	530	G
34	RA	531	C
34	RA	532	A
34	RA	533	G
34	RA	537	C
34	RA	539	G
34	RA	540	G
34	RA	546	C
34	RA	547	A
34	RA	554	U
34	RA	563	G
34	RA	568	U
34	RA	573	G
34	RA	575	A
34	RA	592	G
34	RA	599	G
34	RA	603	A
34	RA	604	G
34	RA	607	U
34	RA	613	U
34	RA	614	U
34	RA	615	G

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Mol	Chain	Res	Type
34	RA	616	A
34	RA	617	G
34	RA	618(A)	G
34	RA	621	A
34	RA	622	G
34	RA	626	U
34	RA	627	A
34	RA	634	C
34	RA	637	A
34	RA	638	G
34	RA	645	C
34	RA	646	A
34	RA	651	G
34	RA	652	C
34	RA	654(A)	A
34	RA	654(B)	G
34	RA	657	U
34	RA	668	G
34	RA	669	G
34	RA	670	A
34	RA	677	A
34	RA	685	A
34	RA	686	G
34	RA	689	A
34	RA	695	G
34	RA	702	G
34	RA	717	G
34	RA	722	A
34	RA	726	G
34	RA	730	C
34	RA	734	A
34	RA	738	G
34	RA	747	U
34	RA	748	G
34	RA	753	C
34	RA	764	A
34	RA	765	G
34	RA	769	G
34	RA	775	G
34	RA	776	G
34	RA	777	A
34	RA	782	A

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Mol	Chain	Res	Type
34	RA	784	A
34	RA	785	G
34	RA	789	A
34	RA	792	G
34	RA	800	A
34	RA	805	G
34	RA	809	G
34	RA	812	C
34	RA	819	A
34	RA	827	U
34	RA	828	U
34	RA	829	A
34	RA	845	G
34	RA	847	U
34	RA	854	G
34	RA	856	C
34	RA	857	C
34	RA	859	G
34	RA	860	U
34	RA	865	C
34	RA	867	C
34	RA	869	G
34	RA	877	U
34	RA	887	A
34	RA	889	C
34	RA	890	A
34	RA	896	A
34	RA	905	U
34	RA	907	U
34	RA	910	A
34	RA	915	C
34	RA	917	A
34	RA	919	G
34	RA	926	A
34	RA	932	G
34	RA	941	A
34	RA	945	A
34	RA	946	G
34	RA	953	A
34	RA	957	A
34	RA	959	A
34	RA	960	A

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Mol	Chain	Res	Type
34	RA	961	C
34	RA	974(A)	G
34	RA	974(B)	C
34	RA	975	G
34	RA	980	A
34	RA	983	A
34	RA	996	A
34	RA	1005	C
34	RA	1008	C
34	RA	1011	G
34	RA	1012	U
34	RA	1013	C
34	RA	1015	G
34	RA	1022	G
34	RA	1023	U
34	RA	1025	G
34	RA	1026	U
34	RA	1027	A
34	RA	1033	U
34	RA	1044	G
34	RA	1045	A
34	RA	1046	A
34	RA	1050	A
34	RA	1058	G
34	RA	1060	U
34	RA	1067	A
34	RA	1069	A
34	RA	1070	A
34	RA	1071	G
34	RA	1072	C
34	RA	1073	A
34	RA	1077	A
34	RA	1082	U
34	RA	1083	U
34	RA	1084	A
34	RA	1085	A
34	RA	1088	A
34	RA	1089	G
34	RA	1090	U
34	RA	1097	U
34	RA	1099	G
34	RA	1102	C

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Mol	Chain	Res	Type
34	RA	1103	A
34	RA	1106	G
34	RA	1110	G
34	RA	1112	G
34	RA	1113	U
34	RA	1114	G
34	RA	1122	G
34	RA	1128	A
34	RA	1129	A
34	RA	1130	U
34	RA	1131	G
34	RA	1135	C
34	RA	1136	G
34	RA	1139	G
34	RA	1141	U
34	RA	1142(A)	U
34	RA	1142(B)	A
34	RA	1155	A
34	RA	1156	A
34	RA	1168	G
34	RA	1170	G
34	RA	1173	G
34	RA	1174	A
34	RA	1175	U
34	RA	1176	G
34	RA	1179	C
34	RA	1181	C
34	RA	1190	G
34	RA	1195	G
34	RA	1204	A
34	RA	1205	U
34	RA	1206	G
34	RA	1210	A
34	RA	1212	G
34	RA	1213	A
34	RA	1220	A
34	RA	1236	G
34	RA	1238	G
34	RA	1240	U
34	RA	1241	A
34	RA	1244	G
34	RA	1247	A

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Mol	Chain	Res	Type
34	RA	1250	G
34	RA	1253	A
34	RA	1255	U
34	RA	1256	G
34	RA	1265	A
34	RA	1271	G
34	RA	1272	A
34	RA	1273	U
34	RA	1281	G
34	RA	1282	U
34	RA	1286	A
34	RA	1300	U
34	RA	1301	A
34	RA	1308	A
34	RA	1313	U
34	RA	1314	C
34	RA	1319	G
34	RA	1326	U
34	RA	1329	U
34	RA	1332	G
34	RA	1341	U
34	RA	1349	A
34	RA	1350	C
34	RA	1352	U
34	RA	1365	A
34	RA	1368	G
34	RA	1370	C
34	RA	1378	A
34	RA	1384	A
34	RA	1385	G
34	RA	1394	U
34	RA	1407	C
34	RA	1408	C
34	RA	1410	G
34	RA	1411	C
34	RA	1416	G
34	RA	1419	A
34	RA	1420	U
34	RA	1421	G
34	RA	1427	A
34	RA	1428	C
34	RA	1434	A

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Mol	Chain	Res	Type
34	RA	1444(B)	A
34	RA	1445	C
34	RA	1448	G
34	RA	1449(A)	A
34	RA	1449(B)	G
34	RA	1451	C
34	RA	1455	G
34	RA	1461	G
34	RA	1466	G
34	RA	1467	C
34	RA	1471	A
34	RA	1472	A
34	RA	1474	C
34	RA	1480	G
34	RA	1482	U
34	RA	1483	G
34	RA	1485	G
34	RA	1490	A
34	RA	1493	C
34	RA	1494	A
34	RA	1496	A
34	RA	1497	U
34	RA	1506	C
34	RA	1507	A
34	RA	1508	A
34	RA	1510	A
34	RA	1515	C
34	RA	1521	G
34	RA	1533	C
34	RA	1534	G
34	RA	1535	U
34	RA	1536	A
34	RA	1537	C
34	RA	1538	G
34	RA	1543	A
34	RA	1544	C
34	RA	1545(A)	A
34	RA	1558	A
34	RA	1559	G
34	RA	1560	G
34	RA	1566	A
34	RA	1567	A

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Mol	Chain	Res	Type
34	RA	1569	A
34	RA	1578	U
34	RA	1579	A
34	RA	1582	C
34	RA	1586	A
34	RA	1598	C
34	RA	1607	C
34	RA	1608	A
34	RA	1609	A
34	RA	1610	A
34	RA	1611	C
34	RA	1613	G
34	RA	1616	A
34	RA	1617	C
34	RA	1618	A
34	RA	1640	C
34	RA	1644	C
34	RA	1646	C
34	RA	1648	C
34	RA	1649	G
34	RA	1654	A
34	RA	1664	A
34	RA	1665	A
34	RA	1667	G
34	RA	1668	A
34	RA	1674	G
34	RA	1675	C
34	RA	1688	U
34	RA	1694	C
34	RA	1695	G
34	RA	1698	A
34	RA	1718	G
34	RA	1725	G
34	RA	1729	A
34	RA	1731	G
34	RA	1732	A
34	RA	1733	G
34	RA	1742	C
34	RA	1743	G
34	RA	1756	G
34	RA	1762	A
34	RA	1763	G

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Mol	Chain	Res	Type
34	RA	1764	G
34	RA	1773	A
34	RA	1774	C
34	RA	1780	A
34	RA	1784	A
34	RA	1787	A
34	RA	1791	A
34	RA	1799	G
34	RA	1800	C
34	RA	1816	G
34	RA	1820	U
34	RA	1829	A
34	RA	1835	G
34	RA	1846	G
34	RA	1847	A
34	RA	1848	A
34	RA	1858	G
34	RA	1869	G
34	RA	1872	A
34	RA	1878	G
34	RA	1881	C
34	RA	1882	C
34	RA	1884	A
34	RA	1888	G
34	RA	1889	A
34	RA	1896	G
34	RA	1900	A
34	RA	1903	G
34	RA	1905	C
34	RA	1906	G
34	RA	1913	A
34	RA	1929	G
34	RA	1930	G
34	RA	1931	U
34	RA	1932	A
34	RA	1936	A
34	RA	1937	A
34	RA	1938	A
34	RA	1939	U
34	RA	1955	U
34	RA	1963	U
34	RA	1965	C

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Mol	Chain	Res	Type
34	RA	1966	A
34	RA	1967	C
34	RA	1969	A
34	RA	1970	A
34	RA	1971	A
34	RA	1972	A
34	RA	1981	A
34	RA	1982	C
34	RA	1992	G
34	RA	1993	U
34	RA	2020	A
34	RA	2021	C
34	RA	2023	G
34	RA	2031	A
34	RA	2032	G
34	RA	2033	A
34	RA	2043	C
34	RA	2049	G
34	RA	2052	G
34	RA	2055	C
34	RA	2056	G
34	RA	2059	A
34	RA	2060	A
34	RA	2061	G
34	RA	2062	A
34	RA	2069	G
34	RA	2077	A
34	RA	2080	G
34	RA	2089	U
34	RA	2092	U
34	RA	2093	G
34	RA	2095	C
34	RA	2096	U
34	RA	2097	C
34	RA	2099	U
34	RA	2110	G
34	RA	2111	C
34	RA	2112	G
34	RA	2113	U
34	RA	2114	A
34	RA	2115	G
34	RA	2116	G

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Mol	Chain	Res	Type
34	RA	2117	A
34	RA	2118	U
34	RA	2119	A
34	RA	2120	G
34	RA	2124	G
34	RA	2126	A
34	RA	2127	G
34	RA	2128	C
34	RA	2131	G
34	RA	2132	U
34	RA	2133	G
34	RA	2134	A
34	RA	2136	C
34	RA	2137	C
34	RA	2142	C
34	RA	2145	C
34	RA	2146	C
34	RA	2147	G
34	RA	2148	G
34	RA	2158	A
34	RA	2164	C
34	RA	2166	G
34	RA	2169	A
34	RA	2173	A
34	RA	2176	A
34	RA	2178	C
34	RA	2189	U
34	RA	2190	G
34	RA	2191	G
34	RA	2192	G
34	RA	2194	G
34	RA	2197	U
34	RA	2198	A
34	RA	2209	C
34	RA	2210	G
34	RA	2211	G
34	RA	2212	A
34	RA	2215	G
34	RA	2225	A
34	RA	2238	G
34	RA	2239	G
34	RA	2243	U

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Mol	Chain	Res	Type
34	RA	2244	U
34	RA	2266	A
34	RA	2275	C
34	RA	2283	C
34	RA	2287	A
34	RA	2288	A
34	RA	2302	G
34	RA	2304	G
34	RA	2305	A
34	RA	2307	G
34	RA	2308	G
34	RA	2310	A
34	RA	2311	A
34	RA	2319	G
34	RA	2320	A
34	RA	2321	G
34	RA	2325	G
34	RA	2334	G
34	RA	2335	A
34	RA	2342	C
34	RA	2345	G
34	RA	2346	A
34	RA	2347	C
34	RA	2350	C
34	RA	2354	G
34	RA	2372	G
34	RA	2383	G
34	RA	2385	C
34	RA	2392	A
34	RA	2396	G
34	RA	2402	C
34	RA	2403	C
34	RA	2406	U
34	RA	2414	G
34	RA	2423	U
34	RA	2424	C
34	RA	2425	A
34	RA	2427	C
34	RA	2428	G
34	RA	2429	G
34	RA	2430	A
34	RA	2432	A

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Mol	Chain	Res	Type
34	RA	2435	A
34	RA	2439	A
34	RA	2440	C
34	RA	2441	C
34	RA	2445	G
34	RA	2447	G
34	RA	2448	A
34	RA	2469	A
34	RA	2470	G
34	RA	2476	A
34	RA	2478	A
34	RA	2482	G
34	RA	2484	G
34	RA	2487	G
34	RA	2491	U
34	RA	2494	G
34	RA	2499	C
34	RA	2502	G
34	RA	2503	A
34	RA	2504	U
34	RA	2505	G
34	RA	2506	U
34	RA	2518	A
34	RA	2520	C
34	RA	2529	G
34	RA	2535	G
34	RA	2542	A
34	RA	2543	G
34	RA	2554	U
34	RA	2562	U
34	RA	2566	A
34	RA	2567	G
34	RA	2569	G
34	RA	2572	A
34	RA	2573	C
34	RA	2577	A
34	RA	2584	U
34	RA	2585	U
34	RA	2602	A
34	RA	2609	U
34	RA	2610	C
34	RA	2611	U

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Mol	Chain	Res	Type
34	RA	2612	C
34	RA	2614	A
34	RA	2615	U
34	RA	2621	A
34	RA	2629	A
34	RA	2630	G
34	RA	2655	G
34	RA	2665	A
34	RA	2673	G
34	RA	2675	A
34	RA	2682	U
34	RA	2686	G
34	RA	2689	U
34	RA	2690	C
34	RA	2691	C
34	RA	2702	U
34	RA	2712(A)	U
34	RA	2712(B)	A
34	RA	2713	A
34	RA	2714	G
34	RA	2718	G
34	RA	2726	U
34	RA	2732	G
34	RA	2733	A
34	RA	2734	A
34	RA	2744	G
34	RA	2748	A
34	RA	2751	G
34	RA	2755	C
34	RA	2757	A
34	RA	2758	A
34	RA	2761	G
34	RA	2764	A
34	RA	2765	A
34	RA	2766	G
34	RA	2777	G
34	RA	2778	A
34	RA	2779	U
34	RA	2780	G
34	RA	2790	A
34	RA	2791	C
34	RA	2792	G

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Mol	Chain	Res	Type
34	RA	2794	C
34	RA	2797	U
34	RA	2798	C
34	RA	2802	G
34	RA	2807	G
34	RA	2808	U
34	RA	2813	A
34	RA	2818	G
34	RA	2820	A
34	RA	2821	A
34	RA	2830	G
34	RA	2833	G
34	RA	2834	G
34	RA	2835	A
34	RA	2847	U
34	RA	2849	U
34	RA	2850	A
34	RA	2867	G
34	RA	2872	G
34	RA	2873	A
34	RA	2880	C
34	RA	2883	A
34	RA	2886	G
34	RA	2892	A
34	RA	2894	G
34	RA	2895	U
35	RB	8	U
35	RB	9	G
35	RB	12	C
35	RB	13	A
35	RB	15	A
35	RB	22	U
35	RB	25	A
35	RB	32	C
35	RB	41	U
35	RB	42	C
35	RB	44	G
35	RB	45	A
35	RB	53	A
35	RB	56	G
35	RB	67	G
35	RB	73	A

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Mol	Chain	Res	Type
35	RB	77	U
35	RB	81	G
35	RB	96	G
35	RB	109	G
1	XA	6	G
1	XA	9	G
1	XA	16	A
1	XA	18	C
1	XA	19	C
1	XA	22	G
1	XA	31	G
1	XA	32	A
1	XA	39	G
1	XA	41	G
1	XA	44	G
1	XA	47	C
1	XA	48	C
1	XA	51	A
1	XA	59	A
1	XA	65	U
1	XA	66	G
1	XA	68(E)	C
1	XA	68(F)	G
1	XA	68(I)	G
1	XA	68(K)	G
1	XA	68(M)	U
1	XA	68(N)	U
1	XA	68(P)	A
1	XA	68(Q)	C
1	XA	68(T)	C
1	XA	68(V)	U
1	XA	68(W)	G
1	XA	101	A
1	XA	108	G
1	XA	109	A
1	XA	116	A
1	XA	121	C
1	XA	129(B)	G
1	XA	131	C
1	XA	142	G
1	XA	144	G
1	XA	147	G

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Mol	Chain	Res	Type
1	XA	151	A
1	XA	160	A
1	XA	161	A
1	XA	163	C
1	XA	169	C
1	XA	173	U
1	XA	177	C
1	XA	182	U
1	XA	183	G
1	XA	186(A)	C
1	XA	186(H)	C
1	XA	186(K)	G
1	XA	186(L)	G
1	XA	186(N)	G
1	XA	195	A
1	XA	197	A
1	XA	201(B)	U
1	XA	201(C)	U
1	XA	201(D)	U
1	XA	216	G
1	XA	231	G
1	XA	247	G
1	XA	251	G
1	XA	259	G
1	XA	261	U
1	XA	263	A
1	XA	266	G
1	XA	267	C
1	XA	278	G
1	XA	281	G
1	XA	289	G
1	XA	309	G
1	XA	310	G
1	XA	315	A
1	XA	328	C
1	XA	329	A
1	XA	330	C
1	XA	332	G
1	XA	345	C
1	XA	346	G
1	XA	347	G
1	XA	348	G

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Mol	Chain	Res	Type
1	XA	351	G
1	XA	352	C
1	XA	353	A
1	XA	354	G
1	XA	356	A
1	XA	367	U
1	XA	368	U
1	XA	369	C
1	XA	372	C
1	XA	373	A
1	XA	378	G
1	XA	379	C
1	XA	386	C
1	XA	387	U
1	XA	390	C
1	XA	391	G
1	XA	392	G
1	XA	393	A
1	XA	397	A
1	XA	398	C
1	XA	412	A
1	XA	413	G
1	XA	414	A
1	XA	422	C
1	XA	423	G
1	XA	424	G
1	XA	428	G
1	XA	429	U
1	XA	440	A
1	XA	443	C
1	XA	444	C
1	XA	451	A
1	XA	452	A
1	XA	453	A
1	XA	458(C)	A
1	XA	458(D)	C
1	XA	481	G
1	XA	484	G
1	XA	485	G
1	XA	495	A
1	XA	497	A
1	XA	498	U

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Mol	Chain	Res	Type
1	XA	509	A
1	XA	511	C
1	XA	517	G
1	XA	518	C
1	XA	521	G
1	XA	524	G
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	537	G
1	XA	547	A
1	XA	549	C
1	XA	559	A
1	XA	560	U
1	XA	562	C
1	XA	568	G
1	XA	571	U
1	XA	572	A
1	XA	573	A
1	XA	576	G
1	XA	577	G
1	XA	581	G
1	XA	587	G
1	XA	588	G
1	XA	590	C
1	XA	596	C
1	XA	608	A
1	XA	610	G
1	XA	613	C
1	XA	617	G
1	XA	618	C
1	XA	620	C
1	XA	625	G
1	XA	629	G
1	XA	634	C
1	XA	637	G
1	XA	642	A
1	XA	653	A
1	XA	654	G

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Mol	Chain	Res	Type
1	XA	661	G
1	XA	665	A
1	XA	671	G
1	XA	674	G
1	XA	686	U
1	XA	688	G
1	XA	695	A
1	XA	702	A
1	XA	703	G
1	XA	718	G
1	XA	721	G
1	XA	723	U
1	XA	724	G
1	XA	739	C
1	XA	741	G
1	XA	749	C
1	XA	751	U
1	XA	753	A
1	XA	755	G
1	XA	758	G
1	XA	760	G
1	XA	777	A
1	XA	781	A
1	XA	789	U
1	XA	793	U
1	XA	794	A
1	XA	799	G
1	XA	809	G
1	XA	811	C
1	XA	812	C
1	XA	815	A
1	XA	816	A
1	XA	817	C
1	XA	818	G
1	XA	821	G
1	XA	828	A
1	XA	829	G
1	XA	838(B)	U
1	XA	838(C)	C
1	XA	838(D)	U
1	XA	848	C
1	XA	853	G

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Mol	Chain	Res	Type
1	XA	855	G
1	XA	859	A
1	XA	867	G
1	XA	871	U
1	XA	872	A
1	XA	876	G
1	XA	877	C
1	XA	884	U
1	XA	885	G
1	XA	889	A
1	XA	898	G
1	XA	899	C
1	XA	902	G
1	XA	914	A
1	XA	916	G
1	XA	926	G
1	XA	927	G
1	XA	934	C
1	XA	935	A
1	XA	943	U
1	XA	946	A
1	XA	948	C
1	XA	957	U
1	XA	958	A
1	XA	960	U
1	XA	961	U
1	XA	966	G
1	XA	967	C
1	XA	968	A
1	XA	969	A
1	XA	971	G
1	XA	972	C
1	XA	973	G
1	XA	974	A
1	XA	975	A
1	XA	976	G
1	XA	977	A
1	XA	979	C
1	XA	980	C
1	XA	981	U
1	XA	991	U
1	XA	992	U

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Mol	Chain	Res	Type
1	XA	993	G
1	XA	1004	A
1	XA	1006	C
1	XA	1015	A
1	XA	1023	G
1	XA	1025	U
1	XA	1026	G
1	XA	1028(C)	C
1	XA	1028(D)	G
1	XA	1036	G
1	XA	1037	C
1	XA	1043	C
1	XA	1046	A
1	XA	1048	G
1	XA	1050	G
1	XA	1053	G
1	XA	1054	C
1	XA	1055	A
1	XA	1058	G
1	XA	1060	C
1	XA	1064	G
1	XA	1065	U
1	XA	1066	C
1	XA	1076	C
1	XA	1080	A
1	XA	1081	G
1	XA	1083	U
1	XA	1089	G
1	XA	1094	G
1	XA	1095	U
1	XA	1099	G
1	XA	1101	A
1	XA	1106	G
1	XA	1107	C
1	XA	1114	C
1	XA	1116	C
1	XA	1118	C
1	XA	1123	A
1	XA	1124	G
1	XA	1125	U
1	XA	1126	U
1	XA	1127	G

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Mol	Chain	Res	Type
1	XA	1128	C
1	XA	1129	C
1	XA	1130	A
1	XA	1131	G
1	XA	1132	C
1	XA	1134	G
1	XA	1136	U
1	XA	1137	C
1	XA	1138	G
1	XA	1139	G
1	XA	1145	C
1	XA	1146	A
1	XA	1147	C
1	XA	1150	U
1	XA	1151	A
1	XA	1154	G
1	XA	1157	A
1	XA	1158	C
1	XA	1159	U
1	XA	1161	C
1	XA	1163	C
1	XA	1177	G
1	XA	1178	G
1	XA	1179	A
1	XA	1181	G
1	XA	1182	G
1	XA	1183	A
1	XA	1184	G
1	XA	1187	G
1	XA	1190	G
1	XA	1193	G
1	XA	1196	U
1	XA	1197	G
1	XA	1200	C
1	XA	1201	A
1	XA	1202	G
1	XA	1203	C
1	XA	1211	U
1	XA	1212	U
1	XA	1213	A
1	XA	1216	G
1	XA	1221	G

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Mol	Chain	Res	Type
1	XA	1222	G
1	XA	1225	A
1	XA	1226	C
1	XA	1227	A
1	XA	1228	C
1	XA	1232	U
1	XA	1236	A
1	XA	1237	C
1	XA	1238	A
1	XA	1240	U
1	XA	1241	G
1	XA	1243	C
1	XA	1246	C
1	XA	1252	A
1	XA	1253	G
1	XA	1254	C
1	XA	1256	A
1	XA	1257	U
1	XA	1258	G
1	XA	1260	C
1	XA	1263	C
1	XA	1265	G
1	XA	1269	A
1	XA	1270	C
1	XA	1272	G
1	XA	1273	G
1	XA	1274	G
1	XA	1275	A
1	XA	1277	C
1	XA	1278	U
1	XA	1280	A
1	XA	1281	U
1	XA	1282	C
1	XA	1285	A
1	XA	1286	A
1	XA	1287	A
1	XA	1290	G
1	XA	1293	G
1	XA	1296	C
1	XA	1297	C
1	XA	1298	C
1	XA	1299	A

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Mol	Chain	Res	Type
1	XA	1300	G
1	XA	1302	U
1	XA	1303	C
1	XA	1304	G
1	XA	1305	G
1	XA	1306	A
1	XA	1307	U
1	XA	1312	G
1	XA	1319	A
1	XA	1320	C
1	XA	1321	C
1	XA	1322	C
1	XA	1323	G
1	XA	1325	C
1	XA	1327	C
1	XA	1328	C
1	XA	1329	A
1	XA	1330	U
1	XA	1331	G
1	XA	1335	C
1	XA	1336	C
1	XA	1337	G
1	XA	1340	A
1	XA	1346	A
1	XA	1347	G
1	XA	1348	U
1	XA	1349	A
1	XA	1353	G
1	XA	1355	G
1	XA	1356	G
1	XA	1359	C
1	XA	1360	A
1	XA	1361	G
1	XA	1363	A
1	XA	1364	U
1	XA	1365	G
1	XA	1368	G
1	XA	1370	G
1	XA	1373	G
1	XA	1375	A
1	XA	1378	C
1	XA	1379	G

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Mol	Chain	Res	Type
1	XA	1381	U
1	XA	1382	C
1	XA	1384	C
1	XA	1386	G
1	XA	1394	A
1	XA	1397	C
1	XA	1398	A
1	XA	1413	A
1	XA	1419	G
1	XA	1426	C
1	XA	1432	G
1	XA	1433	A
1	XA	1435	G
1	XA	1438	G
1	XA	1440(B)	G
1	XA	1440(C)	G
1	XA	1440(D)	G
1	XA	1440(E)	A
1	XA	1440(I)	U
1	XA	1440(J)	A
1	XA	1440(K)	C
1	XA	1440(L)	G
1	XA	1475	G
1	XA	1477	C
1	XA	1487	G
1	XA	1492	A
1	XA	1493	A
1	XA	1494	G
1	XA	1495	U
1	XA	1496	C
1	XA	1497	G
1	XA	1498	U
1	XA	1499	A
1	XA	1500	A
1	XA	1502	A
1	XA	1503	A
1	XA	1504	G
1	XA	1505	G
1	XA	1506	U
1	XA	1507	A
1	XA	1517	G
1	XA	1519	A

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Mol	Chain	Res	Type
1	XA	1520	G
1	XA	1528	U
1	XA	1529	G
1	XA	1530	G
1	XA	1531	A
1	XA	1532	U
1	XA	1533	C
1	XA	1534	A
1	XA	1538	C
1	XA	1539	C
1	XA	1541	U
22	XV	8	U
22	XV	11	C
22	XV	16	C
22	XV	17	C
22	XV	18	U
22	XV	19	G
22	XV	20	G
22	XV	21(B)	A
22	XV	42	A
22	XV	43	G
22	XV	46	G
22	XV	47	U
22	XV	48	C
22	XV	58	A
22	XV	59	A
22	XV	61	C
23	XX	9	G
23	XX	10	G
23	XX	12	A
23	XX	13	A
23	XX	15	A
34	YA	9	U
34	YA	15	G
34	YA	23	G
34	YA	28	A
34	YA	34	C
34	YA	35	G
34	YA	36	G
34	YA	46	C
34	YA	51	G
34	YA	54	G

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Mol	Chain	Res	Type
34	YA	55	G
34	YA	64	A
34	YA	72	U
34	YA	74	A
34	YA	75	G
34	YA	78	A
34	YA	90	U
34	YA	96	G
34	YA	101	G
34	YA	102	G
34	YA	103	A
34	YA	118	A
34	YA	120	U
34	YA	125	G
34	YA	131	G
34	YA	138	G
34	YA	142	G
34	YA	155	C
34	YA	161	U
34	YA	162	U
34	YA	178	G
34	YA	188	G
34	YA	196	A
34	YA	199	A
34	YA	204	A
34	YA	205	G
34	YA	215	G
34	YA	216	A
34	YA	221	A
34	YA	222	A
34	YA	223	A
34	YA	226	G
34	YA	228	A
34	YA	229	A
34	YA	230	U
34	YA	232	G
34	YA	233	A
34	YA	242	G
34	YA	243	U
34	YA	245	G
34	YA	248	G
34	YA	252	G

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Mol	Chain	Res	Type
34	YA	261	G
34	YA	265	A
34	YA	266	G
34	YA	267	C
34	YA	269	U
34	YA	270(L)	C
34	YA	270(M)	U
34	YA	270(N)	U
34	YA	270(Q)	C
34	YA	271(D)	U
34	YA	271(E)	G
34	YA	274	G
34	YA	275	G
34	YA	277	C
34	YA	278	A
34	YA	279	C
34	YA	283	A
34	YA	299	A
34	YA	300	A
34	YA	311	A
34	YA	316	C
34	YA	317	G
34	YA	323	G
34	YA	329	G
34	YA	330	A
34	YA	332	A
34	YA	338	G
34	YA	342	G
34	YA	343	C
34	YA	352	G
34	YA	363(A)	G
34	YA	363(F)	U
34	YA	364	C
34	YA	371	A
34	YA	372	G
34	YA	374	A
34	YA	380	U
34	YA	386	G
34	YA	387	U
34	YA	399	G
34	YA	405	U
34	YA	407	G

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Mol	Chain	Res	Type
34	YA	411	G
34	YA	412	A
34	YA	420	C
34	YA	428	A
34	YA	429	A
34	YA	444	C
34	YA	448	U
34	YA	454	A
34	YA	455	C
34	YA	457	A
34	YA	470	A
34	YA	473	G
34	YA	479	A
34	YA	480	A
34	YA	481	G
34	YA	494	G
34	YA	496	G
34	YA	504	U
34	YA	505	A
34	YA	508	G
34	YA	509	C
34	YA	512	G
34	YA	518	G
34	YA	527	C
34	YA	528	A
34	YA	529	A
34	YA	530	G
34	YA	531	C
34	YA	532	A
34	YA	533	G
34	YA	537	C
34	YA	539	G
34	YA	540	G
34	YA	546	C
34	YA	547	A
34	YA	554	U
34	YA	563	G
34	YA	568	U
34	YA	573	G
34	YA	574	C
34	YA	575	A
34	YA	599	G

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Mol	Chain	Res	Type
34	YA	603	A
34	YA	604	G
34	YA	607	U
34	YA	614	U
34	YA	615	G
34	YA	617	G
34	YA	621	A
34	YA	622	G
34	YA	627	A
34	YA	629	G
34	YA	634	C
34	YA	637	A
34	YA	638	G
34	YA	645	C
34	YA	646	A
34	YA	647	G
34	YA	650	C
34	YA	651	G
34	YA	654(A)	A
34	YA	654(B)	G
34	YA	658	C
34	YA	686	G
34	YA	695	G
34	YA	700	G
34	YA	701	G
34	YA	704	G
34	YA	714	U
34	YA	721	C
34	YA	722	A
34	YA	726	G
34	YA	730	C
34	YA	731	C
34	YA	738	G
34	YA	747	U
34	YA	748	G
34	YA	753	C
34	YA	764	A
34	YA	771	G
34	YA	775	G
34	YA	777	A
34	YA	782	A
34	YA	784	A

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Mol	Chain	Res	Type
34	YA	785	G
34	YA	789	A
34	YA	790	C
34	YA	792	G
34	YA	805	G
34	YA	812	C
34	YA	819	A
34	YA	827	U
34	YA	828	U
34	YA	847	U
34	YA	854	G
34	YA	856	C
34	YA	857	C
34	YA	859	G
34	YA	860	U
34	YA	865	C
34	YA	866	A
34	YA	869	G
34	YA	872	A
34	YA	877	U
34	YA	878	A
34	YA	879	G
34	YA	889	C
34	YA	890	A
34	YA	896	A
34	YA	897	C
34	YA	899	A
34	YA	901	A
34	YA	904	C
34	YA	905	U
34	YA	906	G
34	YA	907	U
34	YA	910	A
34	YA	915	C
34	YA	917	A
34	YA	926	A
34	YA	932	G
34	YA	933	A
34	YA	941	A
34	YA	945	A
34	YA	946	G
34	YA	953	A

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Mol	Chain	Res	Type
34	YA	957	A
34	YA	959	A
34	YA	961	C
34	YA	973	A
34	YA	974(A)	G
34	YA	974(B)	C
34	YA	975	G
34	YA	983	A
34	YA	989	G
34	YA	1005	C
34	YA	1008	C
34	YA	1011	G
34	YA	1012	U
34	YA	1013	C
34	YA	1015	G
34	YA	1017	G
34	YA	1020	A
34	YA	1022	G
34	YA	1023	U
34	YA	1024	G
34	YA	1026	U
34	YA	1027	A
34	YA	1033	U
34	YA	1037	G
34	YA	1044	G
34	YA	1045	A
34	YA	1046	A
34	YA	1048	A
34	YA	1050	A
34	YA	1051	G
34	YA	1054	A
34	YA	1058	G
34	YA	1059	G
34	YA	1061	U
34	YA	1062	G
34	YA	1065	U
34	YA	1067	A
34	YA	1068	G
34	YA	1071	G
34	YA	1073	A
34	YA	1074	G
34	YA	1076	C

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Mol	Chain	Res	Type
34	YA	1077	A
34	YA	1078	U
34	YA	1081	U
34	YA	1082	U
34	YA	1083	U
34	YA	1084	A
34	YA	1085	A
34	YA	1086	A
34	YA	1087	G
34	YA	1088	A
34	YA	1090	U
34	YA	1093	G
34	YA	1095	A
34	YA	1096	A
34	YA	1097	U
34	YA	1099	G
34	YA	1103	A
34	YA	1104	C
34	YA	1110	G
34	YA	1111	A
34	YA	1112	G
34	YA	1115	G
34	YA	1122	G
34	YA	1126	A
34	YA	1130	U
34	YA	1131	G
34	YA	1132	A
34	YA	1135	C
34	YA	1136	G
34	YA	1139	G
34	YA	1142(A)	U
34	YA	1142(B)	A
34	YA	1156	A
34	YA	1168	G
34	YA	1170	G
34	YA	1173	G
34	YA	1174	A
34	YA	1175	U
34	YA	1176	G
34	YA	1179	C
34	YA	1180	C
34	YA	1183	G

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Mol	Chain	Res	Type
34	YA	1186	G
34	YA	1190	G
34	YA	1195	G
34	YA	1204	A
34	YA	1205	U
34	YA	1206	G
34	YA	1210	A
34	YA	1212	G
34	YA	1218	C
34	YA	1220	A
34	YA	1221	C
34	YA	1236	G
34	YA	1238	G
34	YA	1240	U
34	YA	1241	A
34	YA	1243	G
34	YA	1244	G
34	YA	1247	A
34	YA	1248	G
34	YA	1253	A
34	YA	1256	G
34	YA	1265	A
34	YA	1267	U
34	YA	1271	G
34	YA	1272	A
34	YA	1273	U
34	YA	1275	A
34	YA	1281	G
34	YA	1288	U
34	YA	1300	U
34	YA	1301	A
34	YA	1313	U
34	YA	1319	G
34	YA	1329	U
34	YA	1341	U
34	YA	1349	A
34	YA	1352	U
34	YA	1365	A
34	YA	1368	G
34	YA	1370	C
34	YA	1378	A
34	YA	1379	A

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Mol	Chain	Res	Type
34	YA	1384	A
34	YA	1385	G
34	YA	1386	C
34	YA	1388	G
34	YA	1395	A
34	YA	1403	C
34	YA	1404	C
34	YA	1407	C
34	YA	1408	C
34	YA	1411	C
34	YA	1412	A
34	YA	1416	G
34	YA	1419	A
34	YA	1420	U
34	YA	1421	G
34	YA	1427	A
34	YA	1428	C
34	YA	1437	C
34	YA	1444(B)	A
34	YA	1445	C
34	YA	1448	G
34	YA	1449(A)	A
34	YA	1449(B)	G
34	YA	1455	G
34	YA	1461	G
34	YA	1464	C
34	YA	1467	C
34	YA	1471	A
34	YA	1472	A
34	YA	1475	G
34	YA	1478	G
34	YA	1480	G
34	YA	1482	U
34	YA	1483	G
34	YA	1485	G
34	YA	1487	G
34	YA	1490	A
34	YA	1493	C
34	YA	1496	A
34	YA	1497	U
34	YA	1506	C
34	YA	1507	A

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Mol	Chain	Res	Type
34	YA	1508	A
34	YA	1509	C
34	YA	1510	A
34	YA	1511	A
34	YA	1514	U
34	YA	1521	G
34	YA	1523	U
34	YA	1534	G
34	YA	1535	U
34	YA	1536	A
34	YA	1537	C
34	YA	1538	G
34	YA	1543	A
34	YA	1544	C
34	YA	1545(A)	A
34	YA	1554	A
34	YA	1555	G
34	YA	1558	A
34	YA	1559	G
34	YA	1560	G
34	YA	1566	A
34	YA	1567	A
34	YA	1569	A
34	YA	1578	U
34	YA	1580	A
34	YA	1585	C
34	YA	1586	A
34	YA	1607	C
34	YA	1608	A
34	YA	1609	A
34	YA	1610	A
34	YA	1613	G
34	YA	1616	A
34	YA	1617	C
34	YA	1618	A
34	YA	1634	A
34	YA	1638	C
34	YA	1640	C
34	YA	1644	C
34	YA	1648	C
34	YA	1651	G
34	YA	1654	A

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Mol	Chain	Res	Type
34	YA	1665	A
34	YA	1670	C
34	YA	1674	G
34	YA	1693	U
34	YA	1694	C
34	YA	1695	G
34	YA	1718	G
34	YA	1725	G
34	YA	1728	G
34	YA	1729	A
34	YA	1730	U
34	YA	1731	G
34	YA	1732	A
34	YA	1741	C
34	YA	1742	C
34	YA	1743	G
34	YA	1750	G
34	YA	1753	G
34	YA	1756	G
34	YA	1762	A
34	YA	1763	G
34	YA	1764	G
34	YA	1773	A
34	YA	1774	C
34	YA	1776	G
34	YA	1779	U
34	YA	1780	A
34	YA	1781	C
34	YA	1782	C
34	YA	1784	A
34	YA	1787	A
34	YA	1791	A
34	YA	1799	G
34	YA	1800	C
34	YA	1802	A
34	YA	1816	G
34	YA	1820	U
34	YA	1847	A
34	YA	1853	A
34	YA	1858	G
34	YA	1864	U
34	YA	1869	G

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Mol	Chain	Res	Type
34	YA	1872	A
34	YA	1878	G
34	YA	1881	C
34	YA	1882	C
34	YA	1885	A
34	YA	1888	G
34	YA	1889	A
34	YA	1900	A
34	YA	1903	G
34	YA	1906	G
34	YA	1913	A
34	YA	1914	C
34	YA	1929	G
34	YA	1930	G
34	YA	1931	U
34	YA	1932	A
34	YA	1936	A
34	YA	1937	A
34	YA	1938	A
34	YA	1939	U
34	YA	1944	U
34	YA	1955	U
34	YA	1963	U
34	YA	1965	C
34	YA	1967	C
34	YA	1969	A
34	YA	1970	A
34	YA	1971	A
34	YA	1972	A
34	YA	1981	A
34	YA	1982	C
34	YA	1989	G
34	YA	1991	U
34	YA	1992	G
34	YA	1993	U
34	YA	2004	G
34	YA	2013	A
34	YA	2020	A
34	YA	2021	C
34	YA	2022	U
34	YA	2023	G
34	YA	2031	A

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Mol	Chain	Res	Type
34	YA	2032	G
34	YA	2033	A
34	YA	2039	C
34	YA	2043	C
34	YA	2052	G
34	YA	2055	C
34	YA	2056	G
34	YA	2059	A
34	YA	2060	A
34	YA	2061	G
34	YA	2062	A
34	YA	2069	G
34	YA	2075	U
34	YA	2080	G
34	YA	2092	U
34	YA	2093	G
34	YA	2094	G
34	YA	2099	U
34	YA	2107	C
34	YA	2108	C
34	YA	2111	C
34	YA	2113	U
34	YA	2114	A
34	YA	2115	G
34	YA	2116	G
34	YA	2118	U
34	YA	2119	A
34	YA	2120	G
34	YA	2126	A
34	YA	2127	G
34	YA	2128	C
34	YA	2131	G
34	YA	2132	U
34	YA	2133	G
34	YA	2135	A
34	YA	2137	C
34	YA	2138	C
34	YA	2145	C
34	YA	2146	C
34	YA	2148	G
34	YA	2158	A
34	YA	2159	G

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Mol	Chain	Res	Type
34	YA	2164	C
34	YA	2165	G
34	YA	2166	G
34	YA	2172	U
34	YA	2173	A
34	YA	2176	A
34	YA	2190	G
34	YA	2191	G
34	YA	2194	G
34	YA	2197	U
34	YA	2198	A
34	YA	2199	A
34	YA	2209	C
34	YA	2210	G
34	YA	2211	G
34	YA	2212	A
34	YA	2215	G
34	YA	2225	A
34	YA	2234	G
34	YA	2238	G
34	YA	2266	A
34	YA	2275	C
34	YA	2278	A
34	YA	2279	G
34	YA	2280	G
34	YA	2283	C
34	YA	2287	A
34	YA	2288	A
34	YA	2289	G
34	YA	2299	G
34	YA	2302	G
34	YA	2307	G
34	YA	2308	G
34	YA	2309	A
34	YA	2310	A
34	YA	2311	A
34	YA	2312	U
34	YA	2314	C
34	YA	2318	G
34	YA	2319	G
34	YA	2320	A
34	YA	2321	G

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Mol	Chain	Res	Type
34	YA	2322	A
34	YA	2325	G
34	YA	2327	A
34	YA	2329	G
34	YA	2330	G
34	YA	2334	G
34	YA	2335	A
34	YA	2336	A
34	YA	2337	G
34	YA	2340	G
34	YA	2342	C
34	YA	2343	C
34	YA	2346	A
34	YA	2347	C
34	YA	2350	C
34	YA	2354	G
34	YA	2372	G
34	YA	2377	A
34	YA	2379	G
34	YA	2383	G
34	YA	2385	C
34	YA	2391	G
34	YA	2392	A
34	YA	2396	G
34	YA	2400	G
34	YA	2402	C
34	YA	2403	C
34	YA	2406	U
34	YA	2410	G
34	YA	2413	G
34	YA	2414	G
34	YA	2423	U
34	YA	2424	C
34	YA	2425	A
34	YA	2427	C
34	YA	2428	G
34	YA	2429	G
34	YA	2430	A
34	YA	2435	A
34	YA	2439	A
34	YA	2440	C
34	YA	2441	C

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Mol	Chain	Res	Type
34	YA	2445	G
34	YA	2448	A
34	YA	2469	A
34	YA	2470	G
34	YA	2471	C
34	YA	2475	C
34	YA	2476	A
34	YA	2480	C
34	YA	2484	G
34	YA	2487	G
34	YA	2491	U
34	YA	2498	C
34	YA	2500	U
34	YA	2502	G
34	YA	2504	U
34	YA	2505	G
34	YA	2506	U
34	YA	2513	G
34	YA	2518	A
34	YA	2524	G
34	YA	2525	G
34	YA	2529	G
34	YA	2530	A
34	YA	2535	G
34	YA	2542	A
34	YA	2550	G
34	YA	2551	C
34	YA	2554	U
34	YA	2559	C
34	YA	2562	U
34	YA	2567	G
34	YA	2569	G
34	YA	2572	A
34	YA	2573	C
34	YA	2574	G
34	YA	2577	A
34	YA	2578	G
34	YA	2584	U
34	YA	2585	U
34	YA	2586	C
34	YA	2602	A
34	YA	2609	U

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Mol	Chain	Res	Type
34	YA	2611	U
34	YA	2612	C
34	YA	2615	U
34	YA	2621	A
34	YA	2623	G
34	YA	2629	A
34	YA	2630	G
34	YA	2632	A
34	YA	2638	G
34	YA	2655	G
34	YA	2665	A
34	YA	2673	G
34	YA	2675	A
34	YA	2682	U
34	YA	2689	U
34	YA	2690	C
34	YA	2691	C
34	YA	2701	C
34	YA	2702	U
34	YA	2703	C
34	YA	2712(A)	U
34	YA	2712(B)	A
34	YA	2713	A
34	YA	2714	G
34	YA	2718	G
34	YA	2724	C
34	YA	2726	U
34	YA	2733	A
34	YA	2734	A
34	YA	2739	U
34	YA	2744	G
34	YA	2758	A
34	YA	2761	G
34	YA	2762	G
34	YA	2765	A
34	YA	2766	G
34	YA	2777	G
34	YA	2778	A
34	YA	2779	U
34	YA	2780	G
34	YA	2787	C
34	YA	2789	C

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Mol	Chain	Res	Type
34	YA	2790	A
34	YA	2791	C
34	YA	2792	G
34	YA	2794	C
34	YA	2797	U
34	YA	2798	C
34	YA	2807	G
34	YA	2808	U
34	YA	2818	G
34	YA	2820	A
34	YA	2821	A
34	YA	2830	G
34	YA	2832	U
34	YA	2833	G
34	YA	2834	G
34	YA	2835	A
34	YA	2847	U
34	YA	2848	G
34	YA	2851	A
34	YA	2867	G
34	YA	2872	G
34	YA	2873	A
34	YA	2879	C
34	YA	2880	C
34	YA	2883	A
34	YA	2886	G
34	YA	2891	G
34	YA	2892	A
34	YA	2893	G
34	YA	2895	U
35	YB	7	G
35	YB	8	U
35	YB	9	G
35	YB	13	A
35	YB	15	A
35	YB	16	G
35	YB	19	G
35	YB	21	G
35	YB	22	U
35	YB	25	A
35	YB	35	U
35	YB	41	U

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Mol	Chain	Res	Type
35	YB	42	C
35	YB	44	G
35	YB	45	A
35	YB	47	C
35	YB	52	A
35	YB	53	A
35	YB	56	G
35	YB	67	G
35	YB	73	A
35	YB	81	G
35	YB	109	G

All (125) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	QA	8	A
1	QA	65	U
1	QA	251	G
1	QA	328	C
1	QA	428	G
1	QA	687	A
1	QA	748	C
1	QA	992	U
1	QA	1054	C
1	QA	1225	A
1	QA	1278	U
1	QA	1285	A
1	QA	1504	G
1	QA	1538	C
22	QV	10	G
34	RA	99	U
34	RA	102	G
34	RA	222	A
34	RA	229	A
34	RA	242	G
34	RA	271(C)	G
34	RA	277	C
34	RA	404	C
34	RA	503	A
34	RA	512	G
34	RA	637	A
34	RA	752	A

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Mol	Chain	Res	Type
34	RA	846	C
34	RA	856	C
34	RA	1022	G
34	RA	1026	U
34	RA	1045	A
34	RA	1069	A
34	RA	1130	U
34	RA	1178	C
34	RA	1312	U
34	RA	1427	A
34	RA	1558	A
34	RA	1653	G
34	RA	1694	C
34	RA	1799	G
34	RA	1819	A
34	RA	1930	G
34	RA	1992	G
34	RA	2060	A
34	RA	2126	A
34	RA	2320	A
34	RA	2439	A
34	RA	2468	G
34	RA	2566	A
34	RA	2610	C
34	RA	2689	U
34	RA	2776	A
34	RA	2791	C
34	RA	2832	U
35	RB	66	A
1	XA	115	G
1	XA	266	G
1	XA	309	G
1	XA	328	C
1	XA	428	G
1	XA	608	A
1	XA	617	G
1	XA	635	G
1	XA	748	C
1	XA	980	C
1	XA	992	U
1	XA	1054	C
1	XA	1225	A

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Mol	Chain	Res	Type
1	XA	1253	G
1	XA	1285	A
1	XA	1304	G
1	XA	1320	C
1	XA	1346	A
1	XA	1348	U
1	XA	1359	C
1	XA	1377	A
1	XA	1379	G
1	XA	1381	U
1	XA	1440(B)	G
1	XA	1504	G
1	XA	1505	G
1	XA	1537	U
22	XV	10	G
34	YA	102	G
34	YA	177	G
34	YA	221	A
34	YA	229	A
34	YA	241	A
34	YA	242	G
34	YA	271(C)	G
34	YA	278	A
34	YA	404	C
34	YA	503	A
34	YA	637	A
34	YA	653	A
34	YA	752	A
34	YA	846	C
34	YA	856	C
34	YA	859	G
34	YA	1022	G
34	YA	1026	U
34	YA	1045	A
34	YA	1085	A
34	YA	1178	C
34	YA	1427	A
34	YA	1508	A
34	YA	1535	U
34	YA	1558	A
34	YA	1608	A
34	YA	1653	G

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Mol	Chain	Res	Type
34	YA	1694	C
34	YA	1799	G
34	YA	1819	A
34	YA	1930	G
34	YA	1992	G
34	YA	2126	A
34	YA	2439	A
34	YA	2566	A
34	YA	2681	C
34	YA	2689	U
34	YA	2712(A)	U
34	YA	2712(B)	A
34	YA	2776	A
35	YB	66	A

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

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

Of 1038 ligands modelled in this entry, 1036 are monoatomic - leaving 2 for Mogul analysis.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
56	SF4	XD	301	4	0,12,12	-	-	-		
56	SF4	QD	301	4	0,12,12	-	-	-		

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	SF4	XD	301	4	-	-	0/6/5/5
56	SF4	QD	301	4	-	-	0/6/5/5

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 2 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	QD	301	SF4	2	0

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	1511/1521 (99%)	-0.06	20 (1%) 74 60	186, 276, 733, 884	0
1	XA	1515/1521 (99%)	-0.17	16 (1%) 77 64	158, 261, 672, 775	0
2	QB	235/256 (91%)	0.03	10 (4%) 40 32	230, 330, 393, 429	0
2	XB	236/256 (92%)	0.28	18 (7%) 21 19	237, 291, 340, 364	0
3	QC	205/239 (85%)	0.26	13 (6%) 27 24	271, 379, 421, 449	0
3	XC	205/239 (85%)	0.35	12 (5%) 29 25	275, 359, 467, 497	0
4	QD	208/209 (99%)	0.70	23 (11%) 12 12	231, 275, 325, 369	0
4	XD	208/209 (99%)	0.60	18 (8%) 17 16	216, 258, 306, 370	0
5	QE	151/162 (93%)	0.44	10 (6%) 26 23	208, 268, 318, 333	0
5	XE	151/162 (93%)	0.12	9 (5%) 29 24	174, 222, 277, 313	0
6	QF	101/101 (100%)	0.32	6 (5%) 29 25	224, 285, 333, 355	0
6	XF	101/101 (100%)	0.46	7 (6%) 24 21	278, 343, 376, 406	0
7	QG	155/156 (99%)	-0.05	4 (2%) 57 43	332, 425, 492, 522	0
7	XG	155/156 (99%)	0.08	5 (3%) 50 38	327, 458, 559, 580	0
8	QH	137/138 (99%)	1.15	27 (19%) 3 6	230, 290, 341, 368	0
8	XH	137/138 (99%)	0.61	12 (8%) 17 16	197, 259, 299, 342	0
9	QI	105/128 (82%)	0.07	1 (0%) 79 65	289, 373, 413, 449	0
9	XI	107/128 (83%)	0.21	3 (2%) 55 41	364, 448, 487, 522	0
10	QJ	99/105 (94%)	0.41	3 (3%) 52 40	354, 404, 458, 476	0
10	XJ	96/105 (91%)	0.73	9 (9%) 15 15	340, 397, 495, 509	0
11	QK	119/129 (92%)	0.45	8 (6%) 25 22	172, 269, 315, 333	0
11	XK	116/129 (89%)	0.55	9 (7%) 20 19	213, 279, 334, 364	0
12	QL	125/132 (94%)	0.79	14 (11%) 11 12	183, 237, 288, 334	0
12	XL	122/132 (92%)	0.87	21 (17%) 5 7	168, 221, 289, 338	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
13	QM	115/126 (91%)	0.02	2 (1%) 69 53	298, 386, 443, 469	0
13	XM	114/126 (90%)	0.34	7 (6%) 28 24	317, 414, 450, 463	0
14	QN	60/61 (98%)	0.74	7 (11%) 10 11	295, 353, 479, 493	0
14	XN	60/61 (98%)	1.00	12 (20%) 3 6	312, 556, 587, 612	0
15	QO	88/89 (98%)	0.73	13 (14%) 7 9	196, 272, 314, 335	0
15	XO	87/89 (97%)	0.57	9 (10%) 13 13	182, 221, 267, 284	0
16	QP	84/88 (95%)	0.97	14 (16%) 5 7	189, 247, 303, 348	0
16	XP	84/88 (95%)	1.56	30 (35%) 1 2	264, 358, 461, 493	0
17	QQ	100/105 (95%)	1.19	19 (19%) 4 6	199, 251, 286, 319	0
17	XQ	100/105 (95%)	0.61	16 (16%) 6 8	174, 231, 273, 307	0
18	QR	70/88 (79%)	0.20	3 (4%) 40 32	240, 297, 336, 375	0
18	XR	70/88 (79%)	0.21	3 (4%) 40 32	168, 247, 321, 337	0
19	QS	83/93 (89%)	0.81	4 (4%) 36 30	308, 459, 605, 672	0
19	XS	84/93 (90%)	0.77	6 (7%) 23 21	341, 414, 456, 474	0
20	QT	99/106 (93%)	1.29	31 (31%) 1 3	205, 271, 358, 377	0
20	XT	99/106 (93%)	1.14	19 (19%) 4 6	198, 242, 278, 302	0
21	QU	25/27 (92%)	0.81	2 (8%) 20 18	300, 347, 463, 563	0
21	XU	25/27 (92%)	1.18	5 (20%) 3 6	336, 374, 530, 549	0
22	QV	68/77 (88%)	-0.19	1 (1%) 71 57	294, 387, 435, 446	0
22	XV	68/77 (88%)	-0.34	0 100 100	281, 411, 474, 504	0
23	QX	19/19 (100%)	0.21	0 100 100	368, 432, 461, 464	0
23	XX	19/19 (100%)	0.29	0 100 100	356, 422, 471, 476	0
24	R0	81/85 (95%)	0.79	15 (18%) 4 6	166, 206, 296, 364	0
24	Y0	82/85 (96%)	0.57	6 (7%) 22 20	120, 168, 274, 329	0
25	R1	95/98 (96%)	1.23	20 (21%) 3 5	162, 201, 262, 291	0
25	Y1	93/98 (94%)	1.06	15 (16%) 5 8	117, 176, 219, 232	0
26	R2	69/72 (95%)	0.38	4 (5%) 30 25	124, 192, 238, 283	0
26	Y2	68/72 (94%)	0.88	11 (16%) 5 8	124, 171, 214, 231	0
27	R3	59/60 (98%)	0.51	7 (11%) 10 11	175, 228, 281, 338	0
27	Y3	59/60 (98%)	0.49	4 (6%) 25 22	115, 168, 241, 269	0
28	R4	45/71 (63%)	-0.29	0 100 100	237, 382, 418, 429	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2			OWAB(Å ²)	Q<0.9
28	Y4	46/71 (64%)	-0.31	0	100	100	206, 273, 315, 322	0
29	R5	59/60 (98%)	0.19	1 (1%)	69	53	142, 193, 225, 291	0
29	Y5	59/60 (98%)	0.15	1 (1%)	69	53	122, 172, 225, 300	0
30	R6	53/54 (98%)	-0.27	1 (1%)	66	50	175, 230, 267, 357	0
30	Y6	53/54 (98%)	0.22	2 (3%)	44	35	144, 194, 248, 260	0
31	R7	47/49 (95%)	0.96	7 (14%)	7	9	138, 167, 186, 207	0
31	Y7	48/49 (97%)	0.75	9 (18%)	4	6	111, 146, 192, 224	0
32	R8	64/65 (98%)	0.75	7 (10%)	12	13	154, 201, 248, 284	0
32	Y8	64/65 (98%)	1.21	15 (23%)	2	4	120, 172, 209, 259	0
33	R9	37/37 (100%)	1.48	10 (27%)	2	4	260, 289, 340, 357	0
33	Y9	37/37 (100%)	1.25	6 (16%)	5	8	174, 205, 233, 250	0
34	RA	2882/2905 (99%)	-0.31	3 (0%)	92	89	123, 197, 357, 505	0
34	YA	2883/2905 (99%)	-0.32	13 (0%)	87	76	96, 149, 276, 493	0
35	RB	120/122 (98%)	-0.35	0	100	100	205, 256, 303, 350	0
35	YB	120/122 (98%)	-0.41	1 (0%)	82	69	135, 175, 210, 248	0
36	RD	272/276 (98%)	0.71	38 (13%)	7	10	127, 186, 231, 284	0
36	YD	272/276 (98%)	0.62	25 (9%)	16	15	107, 159, 207, 243	0
37	RE	205/206 (99%)	0.78	30 (14%)	7	9	128, 211, 265, 310	0
37	YE	205/206 (99%)	0.68	24 (11%)	10	11	102, 157, 205, 254	0
38	RF	202/210 (96%)	0.25	9 (4%)	39	31	143, 199, 272, 328	0
38	YF	202/210 (96%)	0.47	16 (7%)	20	18	101, 160, 215, 256	0
39	RG	181/182 (99%)	-0.04	5 (2%)	55	41	231, 307, 360, 388	0
39	YG	181/182 (99%)	0.06	9 (4%)	35	29	178, 226, 291, 327	0
40	RH	174/180 (96%)	0.23	12 (6%)	24	21	189, 269, 313, 358	0
40	YH	174/180 (96%)	0.36	11 (6%)	27	24	123, 175, 217, 258	0
41	RI	146/148 (98%)	0.29	11 (7%)	22	20	188, 254, 300, 327	0
41	YI	146/148 (98%)	0.06	7 (4%)	36	30	158, 226, 271, 293	0
42	RN	138/140 (98%)	0.49	14 (10%)	14	13	139, 219, 260, 268	0
42	YN	138/140 (98%)	0.71	18 (13%)	9	10	94, 160, 205, 231	0
43	RO	122/122 (100%)	0.34	8 (6%)	26	23	158, 202, 247, 286	0
43	YO	122/122 (100%)	0.11	1 (0%)	82	69	113, 159, 199, 213	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
44	RP	150/150 (100%)	0.72	27 (18%) 4 7	160, 228, 287, 331	0
44	YP	147/150 (98%)	0.66	16 (10%) 12 13	128, 166, 217, 255	0
45	RQ	141/141 (100%)	0.36	13 (9%) 16 15	194, 231, 267, 309	0
45	YQ	141/141 (100%)	0.37	5 (3%) 47 36	132, 174, 238, 314	0
46	RR	117/118 (99%)	0.94	19 (16%) 5 8	121, 180, 224, 257	0
46	YR	117/118 (99%)	0.99	27 (23%) 2 4	104, 155, 212, 237	0
47	RS	111/112 (99%)	0.40	10 (9%) 17 15	191, 262, 311, 357	0
47	YS	111/112 (99%)	0.70	22 (19%) 3 6	146, 196, 282, 328	0
48	RT	137/146 (93%)	0.33	11 (8%) 20 18	158, 225, 307, 320	0
48	YT	137/146 (93%)	0.46	14 (10%) 13 13	127, 185, 257, 282	0
49	RU	117/118 (99%)	0.70	13 (11%) 12 12	149, 243, 286, 304	0
49	YU	117/118 (99%)	0.56	7 (5%) 29 24	101, 147, 194, 223	0
50	RV	101/101 (100%)	0.19	10 (9%) 14 14	165, 222, 278, 288	0
50	YV	101/101 (100%)	0.35	12 (11%) 10 11	118, 170, 240, 280	0
51	RW	113/113 (100%)	0.59	10 (8%) 17 16	117, 160, 226, 339	0
51	YW	113/113 (100%)	0.62	12 (10%) 13 13	92, 137, 192, 239	0
52	RX	92/96 (95%)	0.58	6 (6%) 26 23	127, 177, 212, 235	0
52	YX	92/96 (95%)	0.76	11 (11%) 10 11	110, 146, 190, 259	0
53	RY	107/110 (97%)	0.50	6 (5%) 31 26	170, 219, 264, 315	0
53	YY	107/110 (97%)	0.29	3 (2%) 55 41	107, 170, 205, 244	0
54	RZ	183/206 (88%)	-0.07	4 (2%) 62 47	211, 258, 298, 354	0
54	YZ	193/206 (93%)	0.14	9 (4%) 37 30	124, 196, 287, 350	0
All	All	20769/21416 (96%)	0.16	1144 (5%) 32 26	92, 221, 460, 884	0

All (1144) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	XD	4	TYR	11.2
17	QQ	24	GLU	9.4
2	XB	101	MET	9.1
8	QH	111	ILE	9.0
12	XL	28	LYS	8.6
17	QQ	7	THR	8.6
10	XJ	63	PHE	8.5

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Mol	Chain	Res	Type	RSRZ
45	YQ	38	GLU	8.5
13	QM	93	ARG	8.4
17	QQ	35	VAL	8.3
11	QK	129	SER	8.0
17	QQ	36	ILE	7.9
11	XK	126	ARG	7.8
36	RD	185	VAL	7.8
54	RZ	79	ARG	7.8
20	QT	70	SER	7.7
41	RI	37	VAL	7.7
47	YS	9	ARG	7.6
47	YS	4	LEU	7.4
4	QD	128	VAL	7.4
17	QQ	33	GLY	7.2
3	QC	129	ALA	7.1
26	Y2	15	LYS	7.1
11	XK	122	LYS	7.1
24	R0	3	HIS	7.1
36	RD	147	LEU	7.1
16	XP	29	ASP	7.0
20	XT	9	ASN	7.0
26	R2	8	LYS	6.9
50	RV	72	VAL	6.8
48	RT	1	MET	6.8
53	RY	1	MET	6.8
36	YD	184	LYS	6.7
47	RS	2	ALA	6.6
4	XD	2	GLY	6.6
48	RT	99	LEU	6.5
24	R0	76	GLY	6.5
19	XS	56	GLN	6.4
19	QS	33	THR	6.4
11	QK	128	ALA	6.3
38	RF	81	PRO	6.3
46	YR	48	VAL	6.3
8	QH	101	PRO	6.3
17	QQ	32	TYR	6.3
12	XL	20	LYS	6.1
3	QC	124	ILE	6.1
21	XU	4	GLY	6.1
17	QQ	34	LYS	6.0
16	QP	29	ASP	5.9

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Mol	Chain	Res	Type	RSRZ
4	XD	11	LEU	5.9
20	XT	11	SER	5.9
11	XK	125	PHE	5.9
47	YS	8	GLU	5.9
47	RS	3	ARG	5.8
14	XN	53	LEU	5.8
52	RX	34	ALA	5.8
20	QT	71	THR	5.7
6	QF	72	VAL	5.7
37	YE	113	PHE	5.7
3	XC	158	GLY	5.6
16	XP	1	MET	5.6
34	YA	2602	A	5.6
47	RS	8	GLU	5.5
8	QH	135	CYS	5.5
47	YS	3	ARG	5.5
46	RR	48	VAL	5.5
10	XJ	47	PHE	5.5
45	RQ	39	PRO	5.4
5	QE	26	PHE	5.4
14	XN	48	ALA	5.4
47	YS	7	TYR	5.4
46	RR	69	ASP	5.4
3	XC	178	LEU	5.4
12	XL	29	GLY	5.3
40	RH	165	ALA	5.3
38	RF	41	LEU	5.3
46	RR	66	VAL	5.3
44	YP	35	HIS	5.3
36	RD	6	PHE	5.3
3	QC	158	GLY	5.3
4	QD	146	ILE	5.3
16	QP	24	ALA	5.3
20	QT	56	MET	5.2
26	Y2	12	GLU	5.2
41	RI	38	LEU	5.2
10	QJ	58	ASP	5.2
3	QC	189	ALA	5.2
24	Y0	2	ALA	5.2
36	RD	5	LYS	5.2
3	XC	154	SER	5.2
37	RE	188	VAL	5.2

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Mol	Chain	Res	Type	RSRZ
16	XP	30	GLY	5.2
1	XA	1375	A	5.2
2	XB	71	VAL	5.1
37	RE	79	ARG	5.1
40	YH	64	LEU	5.1
8	QH	112	LEU	5.1
14	QN	11	LYS	5.1
17	QQ	37	LYS	5.1
37	RE	182	LEU	5.1
40	RH	150	ALA	5.1
5	XE	13	ILE	5.1
10	XJ	46	ARG	5.0
48	YT	106	SER	5.0
42	YN	75	TYR	5.0
25	R1	12	PRO	5.0
38	YF	181	LEU	5.0
48	YT	104	ASN	5.0
18	XR	31	LEU	5.0
8	QH	99	GLU	5.0
36	YD	169	GLU	5.0
16	XP	25	ARG	4.9
3	XC	165	THR	4.9
8	QH	134	ILE	4.9
16	XP	28	ARG	4.9
16	XP	60	LEU	4.9
11	QK	127	LYS	4.9
49	RU	37	GLU	4.9
2	XB	98	LEU	4.9
44	RP	110	TYR	4.9
52	RX	33	LYS	4.9
50	RV	73	SER	4.9
41	RI	36	ALA	4.9
37	RE	152	LYS	4.9
36	RD	184	LYS	4.8
46	YR	6	SER	4.8
37	RE	26	ILE	4.8
44	RP	71	VAL	4.8
48	YT	1	MET	4.8
3	XC	175	LEU	4.8
10	XJ	65	LEU	4.8
16	QP	25	ARG	4.8
20	QT	72	LEU	4.8

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Mol	Chain	Res	Type	RSRZ
20	XT	10	LEU	4.8
15	XO	60	VAL	4.8
16	XP	27	LYS	4.7
15	QO	66	LEU	4.7
20	XT	72	LEU	4.7
16	XP	31	LYS	4.7
46	RR	70	LEU	4.7
47	YS	11	LYS	4.7
50	YV	81	TYR	4.7
4	QD	94	LEU	4.7
44	RP	50	ARG	4.7
1	QA	1065	U	4.7
41	YI	21	VAL	4.6
12	QL	32	PHE	4.6
8	XH	112	LEU	4.6
46	YR	69	ASP	4.6
16	QP	70	ALA	4.6
34	RA	2319	G	4.6
36	RD	211	ARG	4.6
10	XJ	58	ASP	4.6
3	XC	155	GLY	4.6
46	YR	29	LEU	4.6
15	XO	63	ARG	4.6
47	YS	17	ARG	4.6
16	XP	65	GLN	4.6
33	R9	28	GLU	4.6
52	YX	62	LYS	4.5
40	RH	105	LEU	4.5
4	QD	68	TYR	4.5
46	RR	65	LEU	4.5
5	XE	81	GLU	4.5
20	QT	9	ASN	4.5
2	XB	97	TRP	4.5
3	QC	130	VAL	4.5
4	XD	5	ILE	4.5
51	YW	98	LYS	4.5
16	XP	4	ILE	4.4
4	XD	64	LEU	4.4
5	QE	43	LEU	4.4
4	QD	139	ARG	4.4
46	RR	68	ARG	4.4
15	QO	54	ARG	4.4

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Mol	Chain	Res	Type	RSRZ
16	QP	28	ARG	4.4
47	YS	92	TYR	4.4
31	R7	10	ARG	4.4
48	RT	102	ILE	4.4
19	XS	55	LYS	4.4
13	XM	82	MET	4.4
4	QD	67	ILE	4.4
20	XT	68	LYS	4.4
5	XE	25	ARG	4.4
20	QT	11	SER	4.4
31	R7	46	VAL	4.3
1	XA	134	A	4.3
40	RH	151	ILE	4.3
12	XL	89	ARG	4.3
50	YV	74	LYS	4.3
36	RD	226	MET	4.3
36	RD	36	PRO	4.3
17	QQ	26	GLN	4.3
3	QC	128	PHE	4.3
8	XH	91	ARG	4.3
36	RD	181	GLU	4.3
48	YT	109	GLU	4.3
37	RE	111	ARG	4.2
42	RN	99	LEU	4.2
37	YE	156	MET	4.2
8	QH	120	THR	4.2
36	YD	170	GLY	4.2
8	QH	19	VAL	4.2
11	XK	124	LYS	4.2
31	R7	14	LYS	4.2
36	YD	38	LYS	4.2
47	YS	13	ARG	4.2
48	RT	50	ILE	4.2
42	YN	82	LEU	4.2
14	QN	53	LEU	4.2
37	RE	121	ASN	4.2
50	RV	81	TYR	4.2
20	XT	60	GLU	4.2
37	RE	123	ALA	4.2
11	QK	84	VAL	4.2
20	QT	8	ARG	4.2
12	XL	120	TYR	4.2

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Mol	Chain	Res	Type	RSRZ
20	XT	12	ALA	4.2
6	XF	79	LEU	4.2
12	QL	93	LEU	4.2
2	QB	101	MET	4.2
42	RN	84	LYS	4.2
48	RT	94	ALA	4.2
5	XE	24	ARG	4.1
54	RZ	78	LYS	4.1
1	QA	60	A	4.1
20	XT	30	LYS	4.1
6	XF	72	VAL	4.1
31	Y7	15	THR	4.1
10	XJ	62	HIS	4.1
33	R9	25	VAL	4.1
18	QR	66	LEU	4.1
16	XP	3	LYS	4.1
53	YY	63	LYS	4.1
8	QH	95	VAL	4.1
12	XL	10	LEU	4.1
49	RU	35	ALA	4.1
8	XH	111	ILE	4.0
37	RE	156	MET	4.0
49	RU	91	ASP	4.0
4	QD	64	LEU	4.0
37	YE	195	LEU	4.0
10	XJ	64	GLU	4.0
25	R1	26	ARG	4.0
47	RS	4	LEU	4.0
2	QB	163	PHE	4.0
42	YN	81	GLY	4.0
31	Y7	48	LYS	4.0
32	Y8	11	LYS	4.0
36	RD	155	LEU	4.0
37	RE	195	LEU	4.0
24	R0	74	ARG	4.0
41	RI	3	VAL	4.0
2	XB	163	PHE	4.0
8	XH	80	ILE	4.0
50	RV	74	LYS	3.9
20	QT	67	ALA	3.9
52	YX	28	PHE	3.9
7	QG	8	GLU	3.9

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Mol	Chain	Res	Type	RSRZ
8	XH	133	LEU	3.9
51	YW	96	ILE	3.9
12	QL	86	ARG	3.9
20	QT	22	ARG	3.9
36	RD	259	THR	3.9
30	R6	4	GLU	3.9
53	YY	64	GLU	3.9
1	XA	1376	U	3.9
20	QT	13	LEU	3.9
24	R0	71	ASP	3.9
31	R7	22	MET	3.9
34	YA	2181	G	3.9
31	R7	45	ALA	3.9
42	RN	115	ARG	3.9
25	R1	3	LYS	3.9
45	YQ	39	PRO	3.9
12	QL	10	LEU	3.8
24	R0	75	LEU	3.8
41	RI	92	VAL	3.8
27	R3	14	GLY	3.8
25	R1	21	ARG	3.8
5	XE	129	ILE	3.8
7	XG	8	GLU	3.8
25	R1	27	GLU	3.8
11	XK	121	PRO	3.8
36	RD	173	VAL	3.8
14	QN	13	THR	3.8
52	RX	39	ILE	3.8
12	XL	7	ILE	3.8
50	RV	77	ALA	3.8
16	XP	2	VAL	3.8
47	YS	28	VAL	3.8
42	YN	76	SER	3.8
2	XB	108	ILE	3.7
17	XQ	83	ASP	3.7
37	RE	128	SER	3.7
20	QT	12	ALA	3.7
24	R0	4	LYS	3.7
42	YN	46	VAL	3.7
44	RP	3	LEU	3.7
46	RR	71	GLN	3.7
3	XC	153	VAL	3.7

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Mol	Chain	Res	Type	RSRZ
47	YS	12	PHE	3.7
37	YE	76	ARG	3.7
36	RD	258	LYS	3.7
16	QP	7	ALA	3.7
38	YF	37	VAL	3.7
24	R0	77	ARG	3.7
37	RE	151	TYR	3.7
40	YH	67	LEU	3.7
41	RI	21	VAL	3.7
41	YI	30	LEU	3.7
3	QC	120	VAL	3.7
17	XQ	24	GLU	3.7
25	R1	11	ARG	3.7
54	YZ	79	ARG	3.7
36	RD	16	MET	3.6
6	XF	95	GLU	3.6
3	QC	152	ILE	3.6
8	QH	100	ILE	3.6
41	RI	1	MET	3.6
2	QB	173	ALA	3.6
31	R7	18	PHE	3.6
17	QQ	30	PRO	3.6
12	QL	18	VAL	3.6
20	XT	64	ASP	3.6
11	XK	120	ARG	3.6
15	XO	68	ARG	3.6
45	RQ	100	GLY	3.6
52	RX	68	ARG	3.6
46	RR	47	PHE	3.6
46	RR	67	LEU	3.6
24	R0	45	PHE	3.6
20	QT	74	LYS	3.6
16	XP	74	LEU	3.6
3	XC	162	GLN	3.6
51	RW	99	ARG	3.6
44	RP	51	PHE	3.6
16	QP	68	ASP	3.6
3	QC	178	LEU	3.6
44	YP	3	LEU	3.6
33	R9	24	TYR	3.5
12	XL	27	LEU	3.5
26	Y2	20	GLU	3.5

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Mol	Chain	Res	Type	RSRZ
4	QD	77	ASN	3.5
7	XG	28	ASN	3.5
25	Y1	4	VAL	3.5
48	RT	22	PHE	3.5
36	YD	174	ILE	3.5
15	XO	65	ARG	3.5
49	RU	36	ARG	3.5
36	YD	5	LYS	3.5
15	XO	32	LEU	3.5
48	RT	114	LEU	3.5
47	YS	16	ASN	3.5
13	XM	90	LEU	3.5
17	QQ	39	SER	3.5
20	QT	73	HIS	3.5
7	QG	33	ASP	3.5
10	XJ	60	ARG	3.5
37	YE	7	VAL	3.5
43	RO	38	VAL	3.5
51	YW	86	LEU	3.5
15	QO	62	GLN	3.5
36	RD	28	GLU	3.4
16	XP	9	PHE	3.4
38	YF	41	LEU	3.4
1	XA	1367	C	3.4
16	QP	5	ARG	3.4
53	RY	33	LYS	3.4
52	YX	54	VAL	3.4
16	XP	22	THR	3.4
25	Y1	11	ARG	3.4
40	RH	166	GLY	3.4
14	QN	14	PRO	3.4
26	Y2	21	LEU	3.4
38	YF	50	SER	3.4
51	RW	98	LYS	3.4
2	QB	214	ILE	3.4
44	RP	26	GLY	3.4
8	QH	133	LEU	3.4
11	QK	125	PHE	3.4
5	XE	14	ARG	3.4
12	XL	19	ARG	3.4
37	YE	149	ARG	3.4
54	YZ	166	SER	3.4

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Mol	Chain	Res	Type	RSRZ
17	XQ	36	ILE	3.4
44	RP	35	HIS	3.4
47	RS	5	THR	3.4
20	XT	56	MET	3.4
1	QA	1112	C	3.4
51	RW	81	ALA	3.4
25	Y1	38	SER	3.4
46	YR	44	LEU	3.4
11	QK	11	LYS	3.4
36	RD	40	THR	3.4
4	QD	93	PHE	3.4
7	QG	37	ASN	3.3
20	QT	26	ASN	3.3
20	XT	63	ILE	3.3
25	R1	10	LYS	3.3
25	Y1	92	LYS	3.3
42	YN	83	LYS	3.3
15	XO	36	ILE	3.3
15	XO	66	LEU	3.3
3	XC	167	TRP	3.3
36	RD	52	ARG	3.3
36	RD	169	GLU	3.3
17	XQ	37	LYS	3.3
33	Y9	15	LYS	3.3
36	YD	168	ARG	3.3
12	QL	7	ILE	3.3
21	XU	3	LYS	3.3
36	YD	175	LEU	3.3
44	RP	53	GLY	3.3
33	Y9	26	ILE	3.3
20	QT	27	LYS	3.3
36	RD	42	GLY	3.3
47	YS	2	ALA	3.3
36	YD	44	ASN	3.3
20	QT	30	LYS	3.3
6	QF	53	ALA	3.3
40	YH	57	ASP	3.3
2	QB	97	TRP	3.3
7	XG	11	GLN	3.3
14	XN	61	TRP	3.3
33	R9	23	VAL	3.3
37	RE	163	GLU	3.3

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Mol	Chain	Res	Type	RSRZ
15	QO	58	MET	3.3
21	QU	16	GLY	3.2
32	Y8	20	GLY	3.2
4	XD	135	LEU	3.2
46	RR	44	LEU	3.2
12	QL	19	ARG	3.2
26	Y2	13	ALA	3.2
54	YZ	193	GLU	3.2
47	YS	20	ARG	3.2
51	RW	42	ARG	3.2
49	YU	7	GLY	3.2
26	Y2	66	GLU	3.2
48	RT	11	GLU	3.2
50	RV	76	LYS	3.2
50	RV	78	LYS	3.2
1	QA	1111	A	3.2
20	XT	18	GLN	3.2
36	YD	41	GLY	3.2
32	Y8	54	GLU	3.2
36	RD	175	LEU	3.2
5	XE	18	ARG	3.2
17	XQ	84	LEU	3.2
45	YQ	91	GLU	3.2
38	RF	184	TYR	3.2
47	RS	20	ARG	3.2
53	RY	20	TYR	3.2
32	Y8	63	PRO	3.2
25	R1	95	LEU	3.2
46	YR	47	PHE	3.2
33	R9	29	ASN	3.2
49	YU	91	ASP	3.1
25	Y1	37	ILE	3.1
44	RP	40	SER	3.1
8	QH	93	VAL	3.1
16	XP	68	ASP	3.1
33	Y9	25	VAL	3.1
8	XH	18	ARG	3.1
25	Y1	70	VAL	3.1
37	YE	188	VAL	3.1
54	YZ	168	GLU	3.1
17	QQ	22	LEU	3.1
12	XL	126	LYS	3.1

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Mol	Chain	Res	Type	RSRZ
2	XB	68	ILE	3.1
25	R1	7	ILE	3.1
36	RD	41	GLY	3.1
1	XA	135	C	3.1
6	QF	90	VAL	3.1
34	YA	2139	C	3.1
16	XP	34	GLU	3.1
16	QP	27	LYS	3.1
1	XA	1374	A	3.1
49	RU	79	PHE	3.1
15	QO	56	LEU	3.1
34	YA	2334	G	3.1
8	QH	67	PRO	3.1
37	RE	126	PRO	3.1
39	YG	11	TYR	3.1
31	Y7	47	ARG	3.1
33	Y9	34	GLN	3.1
36	YD	271	ILE	3.1
24	R0	46	LYS	3.1
51	YW	46	PHE	3.0
39	YG	34	LEU	3.0
42	YN	45	ASN	3.0
42	YN	109	LYS	3.0
44	RP	43	GLY	3.0
27	Y3	57	GLU	3.0
46	YR	24	GLN	3.0
7	XG	5	ARG	3.0
25	R1	41	ARG	3.0
49	RU	28	ARG	3.0
1	QA	378	G	3.0
8	XH	101	PRO	3.0
50	YV	76	LYS	3.0
12	XL	14	GLY	3.0
46	YR	7	GLY	3.0
20	QT	37	SER	3.0
38	RF	98	SER	3.0
12	XL	16	GLU	3.0
34	RA	2602	A	3.0
4	XD	66	ARG	3.0
16	XP	71	ARG	3.0
36	YD	134	ARG	3.0
48	YT	105	LEU	3.0

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Mol	Chain	Res	Type	RSRZ
45	RQ	40	ALA	3.0
24	R0	53	MET	3.0
16	XP	32	TYR	3.0
40	RH	86	GLU	3.0
8	QH	123	GLU	3.0
16	QP	4	ILE	3.0
20	QT	18	GLN	3.0
38	YF	55	GLY	3.0
40	YH	71	LEU	3.0
36	RD	35	LYS	3.0
44	YP	65	ARG	3.0
5	QE	81	GLU	3.0
20	QT	64	ASP	3.0
7	QG	9	VAL	3.0
16	XP	24	ALA	3.0
46	YR	25	ALA	3.0
2	XB	51	LEU	3.0
20	XT	71	THR	2.9
4	QD	80	GLU	2.9
6	XF	53	ALA	2.9
38	RF	37	VAL	2.9
46	YR	65	LEU	2.9
6	QF	96	PRO	2.9
4	XD	3	ARG	2.9
48	RT	103	ARG	2.9
25	Y1	12	PRO	2.9
37	RE	153	GLY	2.9
49	RU	94	ASN	2.9
49	YU	44	ASN	2.9
54	YZ	74	VAL	2.9
45	RQ	21	THR	2.9
49	RU	19	LYS	2.9
42	RN	73	THR	2.9
32	R8	11	LYS	2.9
32	R8	54	GLU	2.9
16	XP	66	PRO	2.9
33	R9	30	PRO	2.9
48	YT	102	ILE	2.9
50	RV	71	LEU	2.9
36	RD	38	LYS	2.9
42	YN	68	GLU	2.9
49	YU	37	GLU	2.9

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Mol	Chain	Res	Type	RSRZ
16	XP	26	ARG	2.9
31	R7	23	ARG	2.9
25	R1	44	PRO	2.9
46	RR	51	LEU	2.9
1	QA	1246	C	2.9
20	QT	23	ARG	2.9
14	XN	54	PRO	2.9
4	XD	70	ILE	2.9
17	XQ	4	LYS	2.9
8	XH	93	VAL	2.9
14	XN	56	VAL	2.9
44	YP	75	ILE	2.9
20	XT	13	LEU	2.9
49	RU	34	LYS	2.8
37	YE	157	ALA	2.8
3	QC	131	ARG	2.8
9	XI	71	SER	2.8
4	XD	93	PHE	2.8
2	QB	102	LEU	2.8
40	YH	107	VAL	2.8
4	QD	4	TYR	2.8
11	XK	11	LYS	2.8
24	Y0	45	PHE	2.8
16	QP	66	PRO	2.8
8	QH	36	LEU	2.8
11	XK	123	LYS	2.8
15	QO	67	LEU	2.8
32	Y8	65	GLU	2.8
44	RP	70	GLN	2.8
33	R9	9	ARG	2.8
37	YE	79	ARG	2.8
46	YR	2	ARG	2.8
32	Y8	19	SER	2.8
49	RU	30	LYS	2.8
12	QL	30	ALA	2.8
25	Y1	41	ARG	2.8
33	R9	20	HIS	2.8
33	Y9	12	ASP	2.8
2	XB	200	ILE	2.8
4	QD	126	ILE	2.8
25	Y1	91	LYS	2.8
46	RR	42	LYS	2.8

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Mol	Chain	Res	Type	RSRZ
51	YW	21	VAL	2.8
4	XD	15	GLU	2.8
44	RP	41	ARG	2.8
38	YF	39	TRP	2.8
1	XA	1368	G	2.8
36	YD	15	PHE	2.8
41	RI	30	LEU	2.8
44	RP	46	LYS	2.8
14	XN	51	GLY	2.8
36	RD	183	ARG	2.8
46	RR	10	LEU	2.8
2	QB	71	VAL	2.8
16	QP	2	VAL	2.8
50	YV	70	ILE	2.8
20	QT	15	ARG	2.8
21	XU	6	ARG	2.8
39	YG	35	GLU	2.8
16	XP	70	ALA	2.8
20	QT	66	ALA	2.8
20	XT	58	LYS	2.8
50	YV	78	LYS	2.8
8	QH	119	LEU	2.8
45	RQ	17	LEU	2.8
40	YH	151	ILE	2.8
42	YN	115	ARG	2.8
20	QT	60	GLU	2.8
26	R2	60	LEU	2.7
2	XB	58	ILE	2.7
4	XD	133	VAL	2.7
14	QN	25	VAL	2.7
44	YP	43	GLY	2.7
31	Y7	1	MET	2.7
8	QH	127	LEU	2.7
37	YE	182	LEU	2.7
36	YD	173	VAL	2.7
37	RE	3	GLY	2.7
37	RE	76	ARG	2.7
38	YF	44	ARG	2.7
12	QL	98	TYR	2.7
37	RE	25	VAL	2.7
1	QA	966	G	2.7
27	R3	12	PRO	2.7

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Mol	Chain	Res	Type	RSRZ
37	YE	121	ASN	2.7
3	QC	199	LYS	2.7
14	XN	44	LEU	2.7
32	Y8	40	GLU	2.7
2	XB	165	VAL	2.7
39	YG	161	THR	2.7
44	YP	36	LYS	2.7
19	XS	20	LEU	2.7
12	XL	11	VAL	2.7
39	RG	157	ILE	2.7
37	RE	96	PHE	2.7
42	RN	68	GLU	2.7
45	RQ	47	ILE	2.7
49	RU	22	LYS	2.7
15	XO	59	MET	2.7
43	RO	2	ILE	2.7
47	RS	7	TYR	2.7
48	YT	22	PHE	2.7
26	R2	11	GLU	2.7
37	YE	152	LYS	2.7
1	QA	134	A	2.7
5	QE	106	PRO	2.7
25	Y1	73	LEU	2.7
44	YP	56	SER	2.7
20	XT	55	ILE	2.7
7	XG	10	ARG	2.7
14	QN	12	ARG	2.7
38	YF	40	GLN	2.7
48	YT	46	GLU	2.7
24	Y0	3	HIS	2.7
51	RW	82	LEU	2.7
34	YA	949	C	2.7
37	YE	68	ALA	2.7
5	QE	15	ARG	2.7
17	QQ	25	ARG	2.7
51	YW	92	ARG	2.7
47	YS	88	ASP	2.6
30	Y6	11	LEU	2.6
36	RD	133	LEU	2.6
45	RQ	37	LEU	2.6
48	RT	96	ARG	2.6
40	RH	153	LYS	2.6

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Mol	Chain	Res	Type	RSRZ
33	R9	12	ASP	2.6
37	YE	27	LEU	2.6
42	YN	26	LEU	2.6
50	YV	80	GLN	2.6
52	YX	94	GLY	2.6
12	XL	90	VAL	2.6
26	Y2	68	ARG	2.6
9	XI	70	LYS	2.6
20	QT	29	LYS	2.6
38	YF	110	LEU	2.6
40	RH	120	GLY	2.6
42	YN	77	GLY	2.6
43	RO	74	GLY	2.6
38	YF	56	GLU	2.6
51	YW	40	ASN	2.6
5	QE	128	PRO	2.6
5	XE	21	ALA	2.6
8	QH	13	ILE	2.6
25	Y1	90	ILE	2.6
51	YW	17	VAL	2.6
48	YT	76	PHE	2.6
38	YF	184	TYR	2.6
37	YE	153	GLY	2.6
46	YR	72	ASP	2.6
4	XD	24	GLU	2.6
12	XL	17	LYS	2.6
31	Y7	11	LYS	2.6
6	XF	75	LEU	2.6
37	YE	71	GLY	2.6
37	RE	155	LYS	2.6
39	RG	75	LYS	2.6
45	YQ	139	GLU	2.6
2	XB	26	PRO	2.6
4	XD	37	PRO	2.6
42	RN	79	PRO	2.6
36	YD	133	LEU	2.6
46	YR	14	SER	2.6
52	RX	65	ARG	2.6
19	QS	50	ALA	2.6
42	RN	103	VAL	2.6
43	RO	1	MET	2.6
27	R3	26	LEU	2.6

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Mol	Chain	Res	Type	RSRZ
21	QU	14	TRP	2.6
38	YF	34	TRP	2.6
13	XM	85	GLY	2.6
3	XC	4	LYS	2.6
44	RP	33	ARG	2.6
10	QJ	59	SER	2.6
51	YW	97	LYS	2.6
44	RP	57	THR	2.6
44	RP	52	GLU	2.6
46	YR	41	ALA	2.6
24	Y0	46	LYS	2.5
51	YW	74	ALA	2.5
1	QA	108	G	2.5
36	RD	154	LYS	2.5
36	YD	183	ARG	2.5
44	YP	24	GLY	2.5
46	YR	8	ARG	2.5
38	YF	82	ILE	2.5
36	RD	215	LEU	2.5
45	RQ	80	GLU	2.5
46	YR	102	GLU	2.5
17	XQ	34	LYS	2.5
26	Y2	69	ARG	2.5
1	QA	1183	A	2.5
35	YB	88	C	2.5
47	YS	18	ILE	2.5
44	YP	6	LEU	2.5
13	QM	113	PRO	2.5
54	RZ	166	SER	2.5
16	XP	23	ASP	2.5
12	QL	99	HIS	2.5
37	RE	2	LYS	2.5
31	Y7	23	ARG	2.5
44	RP	79	ARG	2.5
1	QA	325	A	2.5
1	XA	769	G	2.5
1	QA	133	U	2.5
12	QL	128	ALA	2.5
53	RY	43	ASN	2.5
36	YD	36	PRO	2.5
36	YD	14	ARG	2.5
52	YX	56	THR	2.5

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Mol	Chain	Res	Type	RSRZ
1	XA	1054	C	2.5
1	QA	1248	A	2.5
4	QD	5	ILE	2.5
44	RP	54	GLY	2.5
52	YX	71	GLY	2.5
27	R3	15	TYR	2.5
46	YR	51	LEU	2.5
16	XP	7	ALA	2.5
21	XU	14	TRP	2.5
25	Y1	3	LYS	2.5
50	YV	84	LYS	2.5
24	R0	72	ARG	2.5
25	Y1	27	GLU	2.5
1	XA	1248	A	2.5
4	QD	133	VAL	2.5
25	R1	22	GLY	2.5
8	XH	119	LEU	2.5
20	QT	53	LEU	2.5
32	Y8	60	LEU	2.5
37	RE	160	TYR	2.5
2	XB	152	PHE	2.5
16	QP	26	ARG	2.5
26	Y2	70	GLN	2.5
8	XH	120	THR	2.5
36	YD	185	VAL	2.5
37	YE	134	ILE	2.5
45	RQ	90	VAL	2.5
47	YS	14	VAL	2.5
19	XS	16	LEU	2.5
37	RE	1	MET	2.5
15	QO	35	ARG	2.5
17	QQ	27	PHE	2.5
3	QC	198	VAL	2.5
47	YS	98	VAL	2.5
9	QI	70	LYS	2.4
32	Y8	51	ALA	2.4
37	YE	28	ALA	2.4
37	YE	205	ALA	2.4
50	YV	83	ARG	2.4
17	XQ	30	PRO	2.4
22	QV	75	C	2.4
34	YA	2180	U	2.4

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Mol	Chain	Res	Type	RSRZ
46	YR	79	LEU	2.4
42	RN	80	GLY	2.4
46	YR	99	LYS	2.4
31	Y7	45	ALA	2.4
44	YP	110	TYR	2.4
45	RQ	25	ASP	2.4
1	QA	1186	G	2.4
2	XB	70	PHE	2.4
15	QO	68	ARG	2.4
45	RQ	104	PHE	2.4
51	RW	46	PHE	2.4
1	XA	1249	C	2.4
2	XB	196	LEU	2.4
19	XS	9	VAL	2.4
41	YI	44	LEU	2.4
41	YI	114	LEU	2.4
32	Y8	5	LYS	2.4
24	R0	78	TYR	2.4
25	R1	71	TYR	2.4
39	YG	178	PHE	2.4
51	RW	63	ASP	2.4
40	RH	172	LYS	2.4
41	YI	99	GLU	2.4
17	QQ	29	HIS	2.4
48	RT	100	TYR	2.4
43	RO	81	ASP	2.4
4	QD	137	SER	2.4
15	QO	70	LEU	2.4
25	R1	70	VAL	2.4
40	RH	103	LEU	2.4
42	YN	138	LEU	2.4
43	YO	86	ILE	2.4
44	RP	36	LYS	2.4
44	RP	39	LYS	2.4
5	QE	22	GLY	2.4
4	XD	10	ARG	2.4
45	RQ	38	GLU	2.4
4	QD	104	VAL	2.4
27	R3	6	VAL	2.4
46	YR	5	LYS	2.4
3	QC	10	PHE	2.4
37	RE	122	PHE	2.4

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Mol	Chain	Res	Type	RSRZ
54	YZ	88	PHE	2.4
8	XH	135	CYS	2.4
17	QQ	56	VAL	2.4
1	XA	1538	C	2.4
27	R3	20	LYS	2.4
46	RR	73	VAL	2.4
41	RI	20	ASP	2.4
48	YT	86	ILE	2.4
52	YX	53	LYS	2.4
4	QD	71	SER	2.4
38	YF	61	GLY	2.4
46	YR	71	GLN	2.4
54	YZ	192	ALA	2.4
43	RO	7	TYR	2.4
12	XL	13	LYS	2.4
37	RE	184	VAL	2.4
37	YE	133	LYS	2.4
42	RN	54	VAL	2.4
49	YU	16	LYS	2.4
2	XB	194	PRO	2.4
4	QD	51	PRO	2.4
24	R0	43	THR	2.4
9	XI	106	ALA	2.3
52	RX	70	LEU	2.3
17	XQ	56	VAL	2.3
20	QT	63	ILE	2.3
3	XC	164	ARG	2.3
24	R0	6	GLY	2.3
20	QT	59	ALA	2.3
38	YF	192	LEU	2.3
40	YH	105	LEU	2.3
42	YN	101	HIS	2.3
1	QA	107	G	2.3
20	QT	69	GLY	2.3
4	QD	103	ASN	2.3
5	QE	31	LEU	2.3
14	XN	60	SER	2.3
11	QK	32	ILE	2.3
49	YU	62	ILE	2.3
8	QH	14	ARG	2.3
46	YR	17	ARG	2.3
20	XT	69	GLY	2.3

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Mol	Chain	Res	Type	RSRZ
32	R8	51	ALA	2.3
41	RI	35	LEU	2.3
14	XN	37	PHE	2.3
44	RP	38	GLN	2.3
46	RR	24	GLN	2.3
39	RG	39	ILE	2.3
50	RV	79	VAL	2.3
50	YV	79	VAL	2.3
2	XB	137	ARG	2.3
4	QD	3	ARG	2.3
25	Y1	6	GLU	2.3
38	RF	44	ARG	2.3
14	XN	15	LYS	2.3
16	XP	6	LEU	2.3
39	YG	173	LEU	2.3
42	RN	2	LYS	2.3
38	YF	73	ALA	2.3
47	YS	6	ALA	2.3
26	Y2	63	VAL	2.3
44	YP	23	PRO	2.3
54	RZ	169	GLU	2.3
5	QE	110	LEU	2.3
19	QS	30	LEU	2.3
32	Y8	59	LYS	2.3
42	YN	87	LEU	2.3
25	R1	4	VAL	2.3
36	RD	174	ILE	2.3
39	RG	41	GLN	2.3
51	YW	11	ARG	2.3
8	QH	132	GLU	2.3
39	YG	168	GLU	2.3
4	XD	78	LEU	2.3
24	Y0	49	LYS	2.3
37	RE	118	LYS	2.3
49	RU	27	LEU	2.3
51	RW	86	LEU	2.3
3	XC	163	ALA	2.3
20	QT	41	ILE	2.3
42	RN	122	VAL	2.3
45	YQ	47	ILE	2.3
8	QH	84	ARG	2.3
32	Y8	57	ARG	2.3

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Mol	Chain	Res	Type	RSRZ
37	RE	74	PRO	2.3
50	YV	85	LYS	2.3
26	Y2	16	LEU	2.3
31	Y7	31	LEU	2.3
32	R8	50	LEU	2.3
38	RF	71	GLY	2.3
15	QO	60	VAL	2.2
40	YH	115	VAL	2.2
41	RI	4	ILE	2.2
6	QF	75	LEU	2.2
39	YG	32	PRO	2.2
48	YT	11	GLU	2.2
36	RD	267	SER	2.2
14	XN	59	ALA	2.2
32	R8	48	PHE	2.2
32	Y8	10	ALA	2.2
40	YH	113	VAL	2.2
43	RO	111	PHE	2.2
52	YX	59	VAL	2.2
13	XM	93	ARG	2.2
34	YA	2142	C	2.2
34	YA	2178	C	2.2
32	R8	59	LYS	2.2
32	Y8	3	LYS	2.2
18	QR	76	LEU	2.2
36	RD	230	ASP	2.2
4	QD	98	GLU	2.2
8	QH	136	GLU	2.2
10	QJ	62	HIS	2.2
27	R3	60	GLU	2.2
17	QQ	11	VAL	2.2
25	R1	20	ARG	2.2
40	RH	170	ARG	2.2
44	YP	61	ARG	2.2
47	YS	30	ARG	2.2
1	QA	135	C	2.2
15	QO	57	LEU	2.2
31	Y7	42	LEU	2.2
8	QH	9	MET	2.2
11	XK	113	PRO	2.2
38	RF	70	THR	2.2
46	RR	72	ASP	2.2

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Mol	Chain	Res	Type	RSRZ
19	XS	17	GLU	2.2
36	YD	224	ALA	2.2
41	YI	3	VAL	2.2
44	YP	54	GLY	2.2
20	XT	25	ARG	2.2
48	YT	61	PHE	2.2
52	YX	52	VAL	2.2
34	YA	2319	G	2.2
42	RN	83	LYS	2.2
44	RP	45	LEU	2.2
42	YN	72	TYR	2.2
6	QF	83	ASP	2.2
8	QH	137	VAL	2.2
12	XL	95	GLY	2.2
16	XP	5	ARG	2.2
17	XQ	80	GLY	2.2
20	QT	16	HIS	2.2
20	XT	66	ALA	2.2
29	Y5	2	ALA	2.2
20	QT	24	LEU	2.2
36	RD	177	LEU	2.2
46	YR	70	LEU	2.2
4	QD	207	TYR	2.2
24	Y0	53	MET	2.2
12	QL	101	VAL	2.2
16	QP	80	PHE	2.2
29	R5	24	ALA	2.2
37	YE	204	ALA	2.2
17	QQ	86	GLU	2.2
18	XR	38	GLU	2.2
24	R0	19	LYS	2.2
34	YA	985	C	2.2
48	YT	114	LEU	2.2
17	XQ	32	TYR	2.2
42	RN	46	VAL	2.2
1	XA	1364	U	2.2
37	YE	127	ASP	2.2
38	RF	100	THR	2.2
44	YP	76	LYS	2.2
4	XD	144	ASP	2.2
15	XO	57	LEU	2.2
36	RD	186	HIS	2.2

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Mol	Chain	Res	Type	RSRZ
13	XM	113	PRO	2.2
18	XR	80	PRO	2.2
39	RG	21	ARG	2.2
14	XN	11	LYS	2.2
44	RP	29	LYS	2.2
21	XU	2	GLY	2.2
10	XJ	67	THR	2.2
18	QR	58	LEU	2.2
37	RE	24	THR	2.2
12	XL	23	LYS	2.1
16	XP	33	ILE	2.1
37	RE	198	VAL	2.1
39	YG	20	ILE	2.1
15	QO	55	GLY	2.1
37	YE	6	GLY	2.1
34	YA	2179	C	2.1
44	RP	6	LEU	2.1
47	RS	32	LEU	2.1
1	XA	1187	G	2.1
2	QB	175	ARG	2.1
17	QQ	38	ARG	2.1
17	XQ	101	ARG	2.1
5	XE	88	LYS	2.1
46	RR	52	ILE	2.1
36	YD	22	SER	2.1
47	RS	12	PHE	2.1
36	RD	237	GLU	2.1
42	YN	73	THR	2.1
36	RD	273	ARG	2.1
2	QB	93	VAL	2.1
41	YI	1	MET	2.1
17	XQ	6	LEU	2.1
37	YE	123	ALA	2.1
46	YR	21	TYR	2.1
34	YA	2107	C	2.1
8	QH	15	ASN	2.1
12	XL	99	HIS	2.1
11	QK	110	ASP	2.1
51	RW	22	ASP	2.1
27	Y3	50	VAL	2.1
37	RE	116	VAL	2.1
44	YP	114	ILE	2.1

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Mol	Chain	Res	Type	RSRZ
43	RO	84	ALA	2.1
25	Y1	20	ARG	2.1
27	Y3	20	LYS	2.1
33	Y9	22	ARG	2.1
44	RP	16	ARG	2.1
2	XB	174	VAL	2.1
12	XL	18	VAL	2.1
13	XM	78	ILE	2.1
26	R2	52	ASP	2.1
49	RU	110	VAL	2.1
53	YY	24	VAL	2.1
1	QA	1187	G	2.1
34	YA	2182	G	2.1
5	QE	132	ALA	2.1
16	XP	64	ALA	2.1
36	YD	240	ALA	2.1
44	YP	68	GLN	2.1
30	Y6	53	LYS	2.1
49	YU	28	ARG	2.1
40	RH	147	ASN	2.1
8	QH	83	ILE	2.1
15	QO	4	THR	2.1
25	R1	46	LEU	2.1
1	QA	1367	C	2.1
4	XD	130	GLY	2.1
32	R8	23	VAL	2.1
50	YV	72	VAL	2.1
53	RY	6	HIS	2.1
32	Y8	48	PHE	2.1
36	YD	124	PRO	2.1
44	RP	31	ALA	2.1
1	QA	551	U	2.1
46	YR	40	LYS	2.1
47	RS	11	LYS	2.1
50	YV	82	ARG	2.1
8	QH	6	ILE	2.0
19	QS	49	ILE	2.0
33	R9	11	CYS	2.0
42	YN	99	LEU	2.0
46	RR	28	LEU	2.0
36	RD	32	SER	2.0
1	QA	1366	C	2.0

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Mol	Chain	Res	Type	RSRZ
44	RP	28	GLY	2.0
47	YS	5	THR	2.0
47	YS	91	PRO	2.0
51	RW	83	LYS	2.0
36	RD	13	ARG	2.0
46	RR	8	ARG	2.0
40	YH	125	VAL	2.0
40	YH	41	MET	2.0
54	YZ	150	LEU	2.0
17	XQ	86	GLU	2.0
25	R1	6	GLU	2.0
1	XA	1369	C	2.0
6	XF	51	PRO	2.0
6	XF	96	PRO	2.0
25	R1	77	ALA	2.0
36	RD	232	PRO	2.0
53	RY	65	ALA	2.0
16	XP	17	TYR	2.0
2	QB	174	VAL	2.0
27	Y3	23	LEU	2.0
46	YR	52	ILE	2.0
52	YX	70	LEU	2.0
42	RN	1	MET	2.0
52	YX	89	ILE	2.0
13	XM	99	ARG	2.0
17	XQ	68	ARG	2.0
36	YD	153	ALA	2.0
45	RQ	15	GLY	2.0
54	YZ	80	ARG	2.0
1	XA	1290	G	2.0
12	XL	8	ASN	2.0
8	XH	95	VAL	2.0
14	QN	47	LEU	2.0
17	XQ	31	LEU	2.0
25	R1	47	GLN	2.0
36	RD	46	GLN	2.0
36	YD	155	LEU	2.0
48	YT	30	VAL	2.0
50	RV	40	LEU	2.0
51	YW	85	VAL	2.0
46	YR	9	LYS	2.0
12	QL	129	ALA	2.0

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Mol	Chain	Res	Type	RSRZ
34	RA	2798	C	2.0
4	QD	7	PRO	2.0
12	QL	31	PRO	2.0

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

There are no non-standard protein/DNA/RNA residues in this entry.

6.3 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

6.4 Ligands [i](#)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 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
55	MG	YA	3277	1/1	-0.50	0.38	213,213,213,213	0
55	MG	QA	1634	1/1	-0.34	0.28	175,175,175,175	0
55	MG	RA	3139	1/1	-0.29	0.42	290,290,290,290	0
55	MG	RA	3164	1/1	-0.24	0.31	199,199,199,199	0
55	MG	YA	3192	1/1	-0.23	0.25	219,219,219,219	0
55	MG	RA	3186	1/1	-0.18	0.20	205,205,205,205	0
55	MG	YA	3142	1/1	-0.17	0.39	158,158,158,158	0
55	MG	QH	201	1/1	-0.16	0.17	188,188,188,188	0
55	MG	YA	3145	1/1	-0.16	0.29	84,84,84,84	0
55	MG	QE	201	1/1	-0.14	0.42	198,198,198,198	0
55	MG	RA	3011	1/1	-0.13	0.23	129,129,129,129	0
55	MG	RA	3169	1/1	-0.10	0.37	131,131,131,131	0
55	MG	RA	3163	1/1	-0.09	0.23	165,165,165,165	0
55	MG	YA	3091	1/1	-0.09	0.29	145,145,145,145	0
55	MG	RA	3224	1/1	-0.07	0.23	181,181,181,181	0
55	MG	QA	1654	1/1	-0.06	0.31	189,189,189,189	0
55	MG	RA	3075	1/1	-0.04	0.49	147,147,147,147	0
55	MG	RA	3272	1/1	-0.03	0.27	188,188,188,188	0
55	MG	YA	3254	1/1	0.02	0.23	181,181,181,181	0
55	MG	RA	3211	1/1	0.03	0.27	145,145,145,145	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	2989	1/1	0.04	0.27	136,136,136,136	0
55	MG	RA	2907	1/1	0.05	0.22	158,158,158,158	0
55	MG	YA	3202	1/1	0.05	0.41	164,164,164,164	0
55	MG	RA	3078	1/1	0.07	0.45	208,208,208,208	0
55	MG	RA	3326	1/1	0.10	0.22	165,165,165,165	0
55	MG	RA	3030	1/1	0.10	0.22	157,157,157,157	0
55	MG	YA	3250	1/1	0.11	0.34	148,148,148,148	0
55	MG	XA	1675	1/1	0.11	0.17	137,137,137,137	0
55	MG	RA	2921	1/1	0.11	0.43	136,136,136,136	0
55	MG	YA	3126	1/1	0.12	0.52	84,84,84,84	0
55	MG	RA	3223	1/1	0.12	0.41	122,122,122,122	0
55	MG	XA	1647	1/1	0.13	0.14	199,199,199,199	0
55	MG	RA	3013	1/1	0.14	0.42	143,143,143,143	0
55	MG	RA	2909	1/1	0.14	0.30	186,186,186,186	0
55	MG	RA	3122	1/1	0.14	0.21	97,97,97,97	0
55	MG	RA	3008	1/1	0.15	0.29	150,150,150,150	0
55	MG	XA	1651	1/1	0.15	0.25	162,162,162,162	0
55	MG	YA	3093	1/1	0.16	0.26	127,127,127,127	0
55	MG	YA	3117	1/1	0.16	0.88	120,120,120,120	0
55	MG	YA	2962	1/1	0.17	0.41	124,124,124,124	0
55	MG	RA	3138	1/1	0.17	0.18	185,185,185,185	0
55	MG	RA	3275	1/1	0.17	0.26	156,156,156,156	0
55	MG	RA	3023	1/1	0.18	0.36	98,98,98,98	0
55	MG	RA	3005	1/1	0.18	0.31	174,174,174,174	0
55	MG	RA	3035	1/1	0.18	0.23	113,113,113,113	0
55	MG	YA	3234	1/1	0.19	0.32	123,123,123,123	0
55	MG	QA	1627	1/1	0.20	0.21	173,173,173,173	0
55	MG	RA	3193	1/1	0.20	0.22	141,141,141,141	0
55	MG	QA	1605	1/1	0.20	0.31	188,188,188,188	0
55	MG	QA	1647	1/1	0.20	0.23	225,225,225,225	0
55	MG	RA	2937	1/1	0.20	0.28	119,119,119,119	0
55	MG	YA	3262	1/1	0.20	0.44	150,150,150,150	0
55	MG	RA	3172	1/1	0.20	0.24	107,107,107,107	0
55	MG	YA	3176	1/1	0.21	0.21	111,111,111,111	0
55	MG	RA	3179	1/1	0.21	0.32	121,121,121,121	0
55	MG	XA	1680	1/1	0.22	0.36	144,144,144,144	0
55	MG	RA	3206	1/1	0.23	0.28	101,101,101,101	0
55	MG	YA	2965	1/1	0.23	0.34	94,94,94,94	0
55	MG	XA	1620	1/1	0.24	0.23	138,138,138,138	0
55	MG	XA	1676	1/1	0.25	0.35	143,143,143,143	0
55	MG	QA	1662	1/1	0.25	0.30	151,151,151,151	0
55	MG	QA	1615	1/1	0.25	0.27	139,139,139,139	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	QA	1624	1/1	0.26	0.23	92,92,92,92	0
55	MG	YA	2951	1/1	0.26	0.34	101,101,101,101	0
55	MG	XA	1679	1/1	0.26	0.25	124,124,124,124	0
55	MG	RA	3286	1/1	0.27	0.51	126,126,126,126	0
55	MG	RA	2938	1/1	0.27	0.37	159,159,159,159	0
55	MG	YA	3213	1/1	0.28	0.20	169,169,169,169	0
55	MG	RA	3217	1/1	0.28	0.12	205,205,205,205	0
55	MG	YA	2905	1/1	0.28	0.56	175,175,175,175	0
55	MG	YA	3175	1/1	0.29	0.50	117,117,117,117	0
55	MG	QA	1636	1/1	0.29	0.26	134,134,134,134	0
55	MG	YA	3281	1/1	0.29	0.45	151,151,151,151	0
55	MG	QA	1602	1/1	0.30	0.21	148,148,148,148	0
55	MG	RA	2935	1/1	0.30	0.24	132,132,132,132	0
55	MG	YA	3015	1/1	0.30	0.25	123,123,123,123	0
55	MG	XA	1657	1/1	0.30	0.48	236,236,236,236	0
55	MG	YA	3039	1/1	0.31	0.10	123,123,123,123	0
55	MG	YA	2980	1/1	0.31	0.21	84,84,84,84	0
55	MG	QA	1664	1/1	0.31	0.13	156,156,156,156	0
55	MG	YA	3245	1/1	0.32	0.49	84,84,84,84	0
55	MG	XA	1660	1/1	0.32	0.32	114,114,114,114	0
55	MG	YA	3290	1/1	0.32	0.41	211,211,211,211	0
55	MG	YA	3178	1/1	0.33	0.40	84,84,84,84	0
55	MG	YA	3233	1/1	0.33	0.17	153,153,153,153	0
55	MG	RA	3294	1/1	0.34	0.14	143,143,143,143	0
55	MG	RA	2906	1/1	0.34	0.40	150,150,150,150	0
55	MG	RA	2963	1/1	0.34	0.20	256,256,256,256	0
55	MG	RA	3140	1/1	0.35	0.37	88,88,88,88	0
55	MG	RA	3083	1/1	0.35	0.66	150,150,150,150	0
55	MG	YA	2916	1/1	0.35	0.37	121,121,121,121	0
55	MG	YA	3162	1/1	0.37	0.13	112,112,112,112	0
55	MG	YA	2955	1/1	0.37	0.48	110,110,110,110	0
55	MG	QA	1613	1/1	0.37	0.35	127,127,127,127	0
55	MG	XA	1672	1/1	0.37	0.23	160,160,160,160	0
55	MG	YA	2948	1/1	0.37	0.33	84,84,84,84	0
55	MG	YA	3137	1/1	0.37	0.31	110,110,110,110	0
55	MG	RA	3029	1/1	0.37	0.34	100,100,100,100	0
55	MG	YA	2954	1/1	0.37	0.39	135,135,135,135	0
55	MG	YA	2904	1/1	0.38	0.47	122,122,122,122	0
55	MG	YA	3164	1/1	0.38	0.37	84,84,84,84	0
55	MG	YA	3171	1/1	0.38	0.26	84,84,84,84	0
55	MG	RA	3161	1/1	0.38	0.28	116,116,116,116	0
55	MG	YA	3068	1/1	0.38	0.21	158,158,158,158	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3120	1/1	0.38	0.41	84,84,84,84	0
55	MG	RA	2930	1/1	0.39	0.32	136,136,136,136	0
55	MG	YA	2972	1/1	0.39	0.31	100,100,100,100	0
55	MG	RA	3117	1/1	0.39	0.12	243,243,243,243	0
55	MG	RA	2923	1/1	0.39	0.28	174,174,174,174	0
55	MG	YA	3060	1/1	0.40	0.18	177,177,177,177	0
55	MG	YA	3148	1/1	0.40	0.18	102,102,102,102	0
55	MG	YA	3279	1/1	0.40	0.21	122,122,122,122	0
55	MG	XA	1650	1/1	0.40	0.19	189,189,189,189	0
55	MG	QA	1655	1/1	0.40	0.17	121,121,121,121	0
55	MG	YA	3115	1/1	0.41	0.30	148,148,148,148	0
55	MG	RA	3170	1/1	0.41	0.18	132,132,132,132	0
55	MG	RA	3127	1/1	0.41	0.14	132,132,132,132	0
55	MG	RA	3018	1/1	0.41	0.11	136,136,136,136	0
55	MG	YA	3179	1/1	0.41	0.32	84,84,84,84	0
55	MG	XA	1613	1/1	0.41	0.50	171,171,171,171	0
55	MG	YB	201	1/1	0.41	0.35	104,104,104,104	0
55	MG	XA	1628	1/1	0.42	0.20	109,109,109,109	0
55	MG	XA	1601	1/1	0.42	0.25	174,174,174,174	0
55	MG	RA	2962	1/1	0.42	0.27	124,124,124,124	0
55	MG	QA	1663	1/1	0.42	0.28	128,128,128,128	0
55	MG	YA	3127	1/1	0.42	0.24	84,84,84,84	0
55	MG	RA	3289	1/1	0.43	0.28	125,125,125,125	0
55	MG	RA	3238	1/1	0.43	0.29	157,157,157,157	0
55	MG	YA	3205	1/1	0.43	0.42	152,152,152,152	0
55	MG	RA	3028	1/1	0.43	0.24	96,96,96,96	0
55	MG	YA	3059	1/1	0.43	0.15	189,189,189,189	0
55	MG	YA	3194	1/1	0.44	0.53	163,163,163,163	0
55	MG	YA	3186	1/1	0.44	0.24	187,187,187,187	0
55	MG	QA	1643	1/1	0.44	0.24	180,180,180,180	0
55	MG	RA	3137	1/1	0.45	0.10	177,177,177,177	0
55	MG	RA	2929	1/1	0.45	0.20	211,211,211,211	0
55	MG	RA	3302	1/1	0.45	0.19	116,116,116,116	0
55	MG	XA	1649	1/1	0.45	0.17	123,123,123,123	0
55	MG	RA	3074	1/1	0.46	0.16	149,149,149,149	0
55	MG	RA	3173	1/1	0.46	0.25	130,130,130,130	0
55	MG	RA	3162	1/1	0.46	0.55	139,139,139,139	0
55	MG	YA	2956	1/1	0.46	0.29	114,114,114,114	0
55	MG	RA	3106	1/1	0.46	0.23	90,90,90,90	0
55	MG	RA	3332	1/1	0.46	0.40	120,120,120,120	0
55	MG	YA	3109	1/1	0.46	0.28	95,95,95,95	0
55	MG	RA	2947	1/1	0.46	0.24	118,118,118,118	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	QA	1670	1/1	0.46	0.20	190,190,190,190	0
55	MG	RA	3124	1/1	0.46	0.13	115,115,115,115	0
55	MG	QA	1604	1/1	0.47	0.29	153,153,153,153	0
55	MG	RA	3213	1/1	0.47	0.12	157,157,157,157	0
55	MG	YA	3003	1/1	0.47	0.28	97,97,97,97	0
55	MG	RA	3314	1/1	0.47	0.38	137,137,137,137	0
55	MG	RA	3132	1/1	0.48	0.36	238,238,238,238	0
55	MG	YA	3199	1/1	0.48	0.36	186,186,186,186	0
55	MG	YA	3131	1/1	0.48	0.20	141,141,141,141	0
55	MG	QA	1628	1/1	0.48	0.12	238,238,238,238	0
55	MG	XA	1678	1/1	0.49	0.15	173,173,173,173	0
55	MG	XA	1612	1/1	0.49	0.50	191,191,191,191	0
55	MG	RA	3039	1/1	0.49	0.16	256,256,256,256	0
55	MG	YA	3239	1/1	0.49	0.41	84,84,84,84	0
55	MG	RA	3190	1/1	0.49	0.18	143,143,143,143	0
55	MG	RA	3034	1/1	0.49	0.19	111,111,111,111	0
55	MG	XA	1630	1/1	0.49	0.24	180,180,180,180	0
55	MG	YA	3140	1/1	0.49	0.16	84,84,84,84	0
55	MG	YA	3141	1/1	0.49	0.32	102,102,102,102	0
55	MG	RA	3183	1/1	0.49	0.33	201,201,201,201	0
55	MG	YA	3097	1/1	0.49	0.67	135,135,135,135	0
55	MG	XA	1606	1/1	0.49	0.15	165,165,165,165	0
55	MG	YA	3004	1/1	0.49	0.48	84,84,84,84	0
55	MG	YA	3267	1/1	0.50	0.14	84,84,84,84	0
55	MG	XA	1652	1/1	0.50	0.09	143,143,143,143	0
55	MG	RA	3026	1/1	0.50	0.36	84,84,84,84	0
55	MG	RA	3086	1/1	0.50	0.35	84,84,84,84	0
55	MG	RA	3171	1/1	0.50	0.39	115,115,115,115	0
55	MG	RA	3293	1/1	0.50	0.13	121,121,121,121	0
55	MG	RA	3104	1/1	0.51	0.36	84,84,84,84	0
55	MG	RA	2953	1/1	0.51	0.32	101,101,101,101	0
55	MG	YA	3174	1/1	0.51	0.26	94,94,94,94	0
55	MG	XA	1634	1/1	0.52	0.26	107,107,107,107	0
55	MG	RA	3129	1/1	0.52	0.29	126,126,126,126	0
55	MG	YA	3258	1/1	0.52	0.35	88,88,88,88	0
55	MG	YA	3259	1/1	0.52	0.17	84,84,84,84	0
55	MG	RA	3052	1/1	0.52	0.23	84,84,84,84	0
55	MG	YA	3211	1/1	0.52	0.42	101,101,101,101	0
55	MG	XA	1618	1/1	0.52	0.28	103,103,103,103	0
55	MG	RA	3134	1/1	0.52	0.25	117,117,117,117	0
55	MG	RA	2943	1/1	0.52	0.38	132,132,132,132	0
55	MG	RA	3092	1/1	0.52	0.28	98,98,98,98	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3011	1/1	0.52	0.30	84,84,84,84	0
55	MG	YU	201	1/1	0.52	0.13	97,97,97,97	0
55	MG	YA	2982	1/1	0.53	0.32	84,84,84,84	0
55	MG	YA	2989	1/1	0.53	0.15	120,120,120,120	0
55	MG	RA	2916	1/1	0.53	0.27	97,97,97,97	0
55	MG	QA	1637	1/1	0.53	0.26	126,126,126,126	0
55	MG	RA	3073	1/1	0.53	0.22	89,89,89,89	0
55	MG	YA	3090	1/1	0.53	0.22	84,84,84,84	0
55	MG	RA	3328	1/1	0.54	0.26	145,145,145,145	0
55	MG	YA	3050	1/1	0.54	0.29	84,84,84,84	0
55	MG	QA	1632	1/1	0.54	0.10	84,84,84,84	0
55	MG	YA	3288	1/1	0.54	0.47	84,84,84,84	0
55	MG	XA	1632	1/1	0.54	0.19	104,104,104,104	0
55	MG	RA	3281	1/1	0.54	0.28	105,105,105,105	0
55	MG	RA	3118	1/1	0.54	0.11	186,186,186,186	0
55	MG	XA	1674	1/1	0.55	0.17	159,159,159,159	0
55	MG	YA	2940	1/1	0.55	0.23	84,84,84,84	0
55	MG	RA	3057	1/1	0.55	0.70	180,180,180,180	0
55	MG	RA	3226	1/1	0.55	0.30	84,84,84,84	0
55	MG	RA	3088	1/1	0.55	0.29	101,101,101,101	0
55	MG	YA	3253	1/1	0.55	0.36	84,84,84,84	0
55	MG	YA	3256	1/1	0.56	0.23	94,94,94,94	0
55	MG	RA	3220	1/1	0.56	0.78	166,166,166,166	0
55	MG	RA	2941	1/1	0.56	0.39	167,167,167,167	0
55	MG	YA	3049	1/1	0.56	0.27	84,84,84,84	0
55	MG	RA	2905	1/1	0.56	0.29	184,184,184,184	0
55	MG	RA	3174	1/1	0.56	0.22	142,142,142,142	0
55	MG	YA	3183	1/1	0.56	0.14	89,89,89,89	0
55	MG	RA	3144	1/1	0.56	0.47	126,126,126,126	0
55	MG	YA	3187	1/1	0.56	0.26	117,117,117,117	0
55	MG	QA	1618	1/1	0.56	0.34	176,176,176,176	0
55	MG	XA	1665	1/1	0.56	0.45	123,123,123,123	0
55	MG	RA	2969	1/1	0.56	0.26	104,104,104,104	0
55	MG	XA	1642	1/1	0.57	0.38	128,128,128,128	0
55	MG	RA	2912	1/1	0.57	0.49	132,132,132,132	0
55	MG	RA	3180	1/1	0.57	0.20	168,168,168,168	0
55	MG	RA	2924	1/1	0.57	0.33	98,98,98,98	0
55	MG	XA	1688	1/1	0.57	0.15	122,122,122,122	0
55	MG	RA	3221	1/1	0.57	0.51	182,182,182,182	0
55	MG	RA	2913	1/1	0.57	0.15	107,107,107,107	0
57	ZN	QN	101	1/1	0.57	0.18	439,439,439,439	0
55	MG	RA	3324	1/1	0.58	0.31	120,120,120,120	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3122	1/1	0.58	0.40	84,84,84,84	0
55	MG	YA	3057	1/1	0.58	0.29	105,105,105,105	0
55	MG	XA	1621	1/1	0.58	0.53	128,128,128,128	0
55	MG	RA	3308	1/1	0.58	0.25	161,161,161,161	0
55	MG	YA	3044	1/1	0.58	0.30	84,84,84,84	0
55	MG	QA	1614	1/1	0.58	0.33	120,120,120,120	0
55	MG	RA	3167	1/1	0.59	0.27	165,165,165,165	0
55	MG	YA	3151	1/1	0.59	0.28	94,94,94,94	0
55	MG	YA	3155	1/1	0.59	0.36	99,99,99,99	0
55	MG	YA	3237	1/1	0.59	0.41	115,115,115,115	0
55	MG	YA	3010	1/1	0.59	0.41	84,84,84,84	0
55	MG	YA	2974	1/1	0.59	0.43	84,84,84,84	0
55	MG	YA	3114	1/1	0.59	0.29	116,116,116,116	0
55	MG	RA	3065	1/1	0.59	0.24	105,105,105,105	0
55	MG	RA	3208	1/1	0.59	0.30	84,84,84,84	0
55	MG	RA	3064	1/1	0.59	0.47	110,110,110,110	0
55	MG	RA	3304	1/1	0.59	0.28	155,155,155,155	0
55	MG	RA	3076	1/1	0.60	0.26	114,114,114,114	0
55	MG	XA	1619	1/1	0.60	0.32	111,111,111,111	0
55	MG	YA	3017	1/1	0.60	0.44	107,107,107,107	0
55	MG	YA	3032	1/1	0.60	0.21	84,84,84,84	0
55	MG	RA	3002	1/1	0.60	0.27	132,132,132,132	0
55	MG	YA	2961	1/1	0.60	0.27	117,117,117,117	0
55	MG	RA	3095	1/1	0.60	0.14	258,258,258,258	0
55	MG	YA	2964	1/1	0.60	0.36	115,115,115,115	0
55	MG	YA	3055	1/1	0.60	0.12	92,92,92,92	0
55	MG	RA	3101	1/1	0.60	0.68	120,120,120,120	0
55	MG	Y5	102	1/1	0.60	0.24	84,84,84,84	0
55	MG	RE	304	1/1	0.60	0.53	96,96,96,96	0
55	MG	RA	3242	1/1	0.60	0.22	101,101,101,101	0
55	MG	XA	1669	1/1	0.60	0.09	187,187,187,187	0
55	MG	YA	3282	1/1	0.60	0.14	116,116,116,116	0
55	MG	YA	3287	1/1	0.60	0.35	84,84,84,84	0
55	MG	YA	2931	1/1	0.60	0.39	84,84,84,84	0
55	MG	RA	2965	1/1	0.60	0.20	211,211,211,211	0
55	MG	YA	3228	1/1	0.60	0.28	115,115,115,115	0
55	MG	RA	2992	1/1	0.60	0.15	123,123,123,123	0
55	MG	RA	3198	1/1	0.60	0.17	144,144,144,144	0
55	MG	RA	3260	1/1	0.61	0.41	104,104,104,104	0
55	MG	YA	3061	1/1	0.61	0.14	146,146,146,146	0
55	MG	QA	1617	1/1	0.61	0.36	159,159,159,159	0
55	MG	YA	3128	1/1	0.61	0.38	134,134,134,134	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3276	1/1	0.61	0.51	115,115,115,115	0
55	MG	RA	2942	1/1	0.61	0.25	109,109,109,109	0
55	MG	YA	3135	1/1	0.61	0.32	84,84,84,84	0
55	MG	YA	2952	1/1	0.61	0.41	101,101,101,101	0
55	MG	Y8	101	1/1	0.61	0.58	197,197,197,197	0
55	MG	YA	3048	1/1	0.61	0.37	84,84,84,84	0
55	MG	XA	1616	1/1	0.61	0.35	291,291,291,291	0
55	MG	RA	3093	1/1	0.61	0.17	131,131,131,131	0
55	MG	QA	1625	1/1	0.61	0.21	104,104,104,104	0
55	MG	R0	101	1/1	0.61	0.26	147,147,147,147	0
55	MG	YA	2935	1/1	0.61	0.39	84,84,84,84	0
55	MG	R8	102	1/1	0.62	0.13	109,109,109,109	0
55	MG	YA	3069	1/1	0.62	0.26	176,176,176,176	0
55	MG	QA	1619	1/1	0.62	0.28	123,123,123,123	0
55	MG	YA	3018	1/1	0.62	0.95	120,120,120,120	0
55	MG	YA	3144	1/1	0.62	0.31	93,93,93,93	0
55	MG	RA	3320	1/1	0.62	0.25	84,84,84,84	0
55	MG	RA	2952	1/1	0.62	0.17	143,143,143,143	0
55	MG	YA	3107	1/1	0.62	0.31	204,204,204,204	0
55	MG	YA	3232	1/1	0.62	0.26	91,91,91,91	0
55	MG	RA	3123	1/1	0.62	0.28	115,115,115,115	0
55	MG	RA	3252	1/1	0.62	0.30	121,121,121,121	0
55	MG	RA	3059	1/1	0.63	0.36	153,153,153,153	0
55	MG	RA	3313	1/1	0.63	0.23	203,203,203,203	0
55	MG	XA	1646	1/1	0.63	0.20	148,148,148,148	0
55	MG	XA	1682	1/1	0.63	0.20	95,95,95,95	0
55	MG	QA	1609	1/1	0.63	0.10	120,120,120,120	0
55	MG	QA	1669	1/1	0.63	0.27	158,158,158,158	0
55	MG	QA	1629	1/1	0.63	0.24	142,142,142,142	0
55	MG	QA	1601	1/1	0.63	0.26	123,123,123,123	0
55	MG	RA	3020	1/1	0.63	0.33	126,126,126,126	0
55	MG	RA	3295	1/1	0.64	0.28	129,129,129,129	0
55	MG	YA	2959	1/1	0.64	0.32	84,84,84,84	0
55	MG	YA	3024	1/1	0.64	0.24	84,84,84,84	0
55	MG	YA	3224	1/1	0.64	0.35	84,84,84,84	0
55	MG	YA	2984	1/1	0.64	0.52	84,84,84,84	0
55	MG	YA	3077	1/1	0.64	0.21	87,87,87,87	0
55	MG	YA	3134	1/1	0.65	0.17	120,120,120,120	0
55	MG	XA	1607	1/1	0.65	0.23	108,108,108,108	0
55	MG	YA	2957	1/1	0.65	0.18	84,84,84,84	0
55	MG	RA	3094	1/1	0.65	0.10	106,106,106,106	0
55	MG	RA	2910	1/1	0.65	0.18	149,149,149,149	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3048	1/1	0.65	0.25	168,168,168,168	0
55	MG	YA	3085	1/1	0.65	0.29	84,84,84,84	0
55	MG	RA	3051	1/1	0.65	0.46	170,170,170,170	0
55	MG	YA	3180	1/1	0.66	0.29	90,90,90,90	0
55	MG	YA	3242	1/1	0.66	0.13	84,84,84,84	0
55	MG	XA	1633	1/1	0.66	0.26	99,99,99,99	0
55	MG	QA	1638	1/1	0.66	0.27	84,84,84,84	0
55	MG	YA	3218	1/1	0.66	0.32	84,84,84,84	0
55	MG	RA	3143	1/1	0.66	0.19	109,109,109,109	0
55	MG	RA	3103	1/1	0.66	0.42	84,84,84,84	0
55	MG	RA	3210	1/1	0.66	0.17	121,121,121,121	0
55	MG	YA	3196	1/1	0.66	0.20	84,84,84,84	0
55	MG	QA	1645	1/1	0.66	0.17	101,101,101,101	0
55	MG	RA	3071	1/1	0.66	0.64	288,288,288,288	0
55	MG	YA	2933	1/1	0.67	0.46	97,97,97,97	0
55	MG	YA	3273	1/1	0.67	0.23	102,102,102,102	0
55	MG	YA	2981	1/1	0.67	0.32	103,103,103,103	0
55	MG	RA	2918	1/1	0.67	0.27	176,176,176,176	0
55	MG	R0	102	1/1	0.67	0.10	120,120,120,120	0
55	MG	YA	3035	1/1	0.67	0.27	122,122,122,122	0
55	MG	QA	1606	1/1	0.67	0.22	116,116,116,116	0
55	MG	RA	3079	1/1	0.67	0.32	135,135,135,135	0
55	MG	RA	2931	1/1	0.67	0.19	125,125,125,125	0
55	MG	YA	3086	1/1	0.67	0.31	84,84,84,84	0
55	MG	YA	2953	1/1	0.67	0.44	113,113,113,113	0
55	MG	RA	3147	1/1	0.67	0.51	104,104,104,104	0
55	MG	RA	3240	1/1	0.67	0.21	89,89,89,89	0
55	MG	RA	3054	1/1	0.68	0.37	84,84,84,84	0
55	MG	RA	2920	1/1	0.68	0.17	113,113,113,113	0
55	MG	YA	3203	1/1	0.68	0.27	84,84,84,84	0
55	MG	RA	2939	1/1	0.68	0.14	84,84,84,84	0
55	MG	YA	3209	1/1	0.68	0.19	111,111,111,111	0
55	MG	YA	2995	1/1	0.68	0.28	116,116,116,116	0
55	MG	RA	3053	1/1	0.68	0.34	122,122,122,122	0
55	MG	YA	3268	1/1	0.68	0.27	89,89,89,89	0
55	MG	RA	3182	1/1	0.68	0.12	150,150,150,150	0
55	MG	RA	3199	1/1	0.68	0.26	84,84,84,84	0
55	MG	XA	1658	1/1	0.69	0.33	179,179,179,179	0
55	MG	RA	2986	1/1	0.69	0.34	84,84,84,84	0
55	MG	XA	1664	1/1	0.69	0.30	84,84,84,84	0
55	MG	YA	3005	1/1	0.69	0.32	84,84,84,84	0
55	MG	YA	3143	1/1	0.69	0.39	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	YA	2908	1/1	0.69	0.30	84,84,84,84	0
55	MG	QA	1607	1/1	0.69	0.34	84,84,84,84	0
55	MG	RA	2903	1/1	0.69	0.13	100,100,100,100	0
55	MG	XA	1670	1/1	0.69	0.34	136,136,136,136	0
55	MG	RA	3102	1/1	0.69	0.29	102,102,102,102	0
55	MG	YA	3189	1/1	0.69	0.21	93,93,93,93	0
55	MG	YA	2936	1/1	0.69	0.42	84,84,84,84	0
55	MG	RA	3136	1/1	0.69	0.38	84,84,84,84	0
55	MG	RA	3156	1/1	0.70	0.19	106,106,106,106	0
55	MG	XA	1623	1/1	0.70	0.18	127,127,127,127	0
55	MG	YA	3257	1/1	0.70	0.19	84,84,84,84	0
55	MG	QA	1626	1/1	0.70	0.18	104,104,104,104	0
55	MG	RA	3327	1/1	0.70	0.31	84,84,84,84	0
55	MG	RA	3273	1/1	0.70	0.29	113,113,113,113	0
55	MG	YA	3182	1/1	0.70	0.14	84,84,84,84	0
55	MG	YA	3291	1/1	0.70	0.33	84,84,84,84	0
55	MG	YA	3247	1/1	0.70	0.21	87,87,87,87	0
55	MG	YR	202	1/1	0.70	0.40	119,119,119,119	0
55	MG	YA	2944	1/1	0.70	0.18	106,106,106,106	0
55	MG	RA	3305	1/1	0.70	0.22	134,134,134,134	0
55	MG	XA	1656	1/1	0.71	0.13	98,98,98,98	0
55	MG	YA	3132	1/1	0.71	0.10	124,124,124,124	0
55	MG	YA	3087	1/1	0.71	0.43	84,84,84,84	0
55	MG	XA	1685	1/1	0.71	0.18	113,113,113,113	0
55	MG	YA	3153	1/1	0.71	0.41	84,84,84,84	0
55	MG	YA	3002	1/1	0.71	0.28	132,132,132,132	0
55	MG	RA	3133	1/1	0.71	0.88	169,169,169,169	0
55	MG	YA	2963	1/1	0.71	0.35	84,84,84,84	0
55	MG	YA	3210	1/1	0.71	0.40	121,121,121,121	0
55	MG	YA	2907	1/1	0.71	0.46	151,151,151,151	0
55	MG	QA	1642	1/1	0.71	0.07	157,157,157,157	0
55	MG	YA	3248	1/1	0.71	0.27	134,134,134,134	0
55	MG	YA	3133	1/1	0.72	0.16	84,84,84,84	0
55	MG	RA	3045	1/1	0.72	0.31	169,169,169,169	0
55	MG	RA	3112	1/1	0.72	0.24	84,84,84,84	0
55	MG	YA	3265	1/1	0.72	0.34	107,107,107,107	0
55	MG	RA	3115	1/1	0.72	0.10	130,130,130,130	0
55	MG	RA	3204	1/1	0.72	0.34	167,167,167,167	0
55	MG	YA	3271	1/1	0.72	0.30	92,92,92,92	0
55	MG	RA	2954	1/1	0.72	0.62	306,306,306,306	0
55	MG	RA	2968	1/1	0.72	0.13	176,176,176,176	0
55	MG	YA	3111	1/1	0.72	0.17	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	2998	1/1	0.72	0.18	84,84,84,84	0
55	MG	QA	1660	1/1	0.72	0.16	127,127,127,127	0
55	MG	YA	3067	1/1	0.72	0.11	102,102,102,102	0
55	MG	RA	2972	1/1	0.72	0.33	84,84,84,84	0
55	MG	RA	3125	1/1	0.72	0.38	174,174,174,174	0
55	MG	XA	1603	1/1	0.72	0.15	189,189,189,189	0
55	MG	YA	3156	1/1	0.72	0.26	84,84,84,84	0
55	MG	YA	3083	1/1	0.72	0.33	84,84,84,84	0
55	MG	YA	2932	1/1	0.72	0.70	84,84,84,84	0
55	MG	RA	2904	1/1	0.72	0.30	219,219,219,219	0
55	MG	YA	3001	1/1	0.72	0.11	84,84,84,84	0
55	MG	RA	3225	1/1	0.73	0.32	93,93,93,93	0
55	MG	YA	3094	1/1	0.73	0.17	104,104,104,104	0
55	MG	YA	3095	1/1	0.73	0.14	84,84,84,84	0
55	MG	QA	1623	1/1	0.73	0.24	84,84,84,84	0
55	MG	YA	2988	1/1	0.73	0.31	84,84,84,84	0
55	MG	RA	3237	1/1	0.73	0.33	84,84,84,84	0
55	MG	YA	3110	1/1	0.73	0.20	177,177,177,177	0
55	MG	YA	3051	1/1	0.73	0.31	84,84,84,84	0
55	MG	YA	3154	1/1	0.73	0.14	138,138,138,138	0
55	MG	RA	2917	1/1	0.73	0.15	100,100,100,100	0
55	MG	QA	1648	1/1	0.73	0.28	139,139,139,139	0
55	MG	RA	2926	1/1	0.73	0.31	124,124,124,124	0
55	MG	XA	1602	1/1	0.73	0.20	96,96,96,96	0
55	MG	RA	3046	1/1	0.73	0.22	150,150,150,150	0
55	MG	YA	3173	1/1	0.73	0.29	84,84,84,84	0
55	MG	YA	2915	1/1	0.73	0.28	107,107,107,107	0
55	MG	XA	1637	1/1	0.73	0.16	84,84,84,84	0
55	MG	YA	3284	1/1	0.73	0.10	128,128,128,128	0
55	MG	YA	2930	1/1	0.73	0.41	84,84,84,84	0
55	MG	RA	3107	1/1	0.73	0.25	94,94,94,94	0
55	MG	QL	201	1/1	0.73	0.19	258,258,258,258	0
55	MG	RA	3222	1/1	0.73	0.36	166,166,166,166	0
55	MG	RA	3031	1/1	0.73	0.14	94,94,94,94	0
55	MG	RA	3166	1/1	0.73	0.23	124,124,124,124	0
55	MG	RA	3322	1/1	0.73	0.23	104,104,104,104	0
55	MG	RA	3285	1/1	0.73	0.17	161,161,161,161	0
55	MG	RA	2957	1/1	0.74	0.32	95,95,95,95	0
55	MG	RA	2964	1/1	0.74	0.17	84,84,84,84	0
55	MG	YA	3104	1/1	0.74	0.28	105,105,105,105	0
55	MG	RA	3157	1/1	0.74	0.19	156,156,156,156	0
55	MG	YA	2934	1/1	0.74	0.56	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	2976	1/1	0.74	0.28	84,84,84,84	0
55	MG	YA	2906	1/1	0.74	0.28	84,84,84,84	0
55	MG	RA	2908	1/1	0.74	0.12	102,102,102,102	0
55	MG	RA	2999	1/1	0.74	0.41	121,121,121,121	0
55	MG	YA	3054	1/1	0.74	0.14	93,93,93,93	0
55	MG	YA	2983	1/1	0.74	0.56	84,84,84,84	0
55	MG	RA	3280	1/1	0.74	0.13	84,84,84,84	0
55	MG	RA	3001	1/1	0.74	0.16	95,95,95,95	0
55	MG	RA	2966	1/1	0.74	0.14	149,149,149,149	0
57	ZN	XN	101	1/1	0.74	0.14	489,489,489,489	0
55	MG	QA	1651	1/1	0.75	0.25	116,116,116,116	0
55	MG	RA	3152	1/1	0.75	0.47	122,122,122,122	0
55	MG	QA	1622	1/1	0.75	0.49	169,169,169,169	0
55	MG	YA	2912	1/1	0.75	0.30	84,84,84,84	0
55	MG	QA	1621	1/1	0.75	0.32	159,159,159,159	0
55	MG	RA	3214	1/1	0.75	0.29	157,157,157,157	0
55	MG	YA	2926	1/1	0.75	0.22	84,84,84,84	0
55	MG	RA	3111	1/1	0.75	0.32	102,102,102,102	0
55	MG	RA	3330	1/1	0.75	0.22	84,84,84,84	0
55	MG	RA	3066	1/1	0.75	0.22	117,117,117,117	0
55	MG	QA	1666	1/1	0.75	0.13	178,178,178,178	0
55	MG	RA	3200	1/1	0.75	0.25	141,141,141,141	0
55	MG	RA	3307	1/1	0.75	0.40	132,132,132,132	0
55	MG	RA	2936	1/1	0.75	0.12	87,87,87,87	0
55	MG	YA	3066	1/1	0.75	0.24	113,113,113,113	0
55	MG	RA	3205	1/1	0.75	0.27	100,100,100,100	0
55	MG	XA	1668	1/1	0.75	0.13	131,131,131,131	0
55	MG	YA	2979	1/1	0.75	0.38	95,95,95,95	0
55	MG	YQ	201	1/1	0.75	0.08	111,111,111,111	0
55	MG	QA	1649	1/1	0.75	0.24	109,109,109,109	0
55	MG	YA	3082	1/1	0.75	0.38	84,84,84,84	0
55	MG	YA	3123	1/1	0.75	0.23	84,84,84,84	0
55	MG	YA	3161	1/1	0.75	0.23	132,132,132,132	0
55	MG	RA	2975	1/1	0.76	0.51	104,104,104,104	0
55	MG	RA	2933	1/1	0.76	0.16	194,194,194,194	0
55	MG	YA	3158	1/1	0.76	0.30	84,84,84,84	0
55	MG	RA	3299	1/1	0.76	0.10	102,102,102,102	0
55	MG	QA	1658	1/1	0.76	0.10	84,84,84,84	0
55	MG	YA	3240	1/1	0.76	0.25	84,84,84,84	0
55	MG	YA	3195	1/1	0.76	0.16	84,84,84,84	0
55	MG	YA	3243	1/1	0.76	0.28	108,108,108,108	0
55	MG	YA	3038	1/1	0.76	0.25	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å ²)	Q<0.9
55	MG	YA	3168	1/1	0.76	0.50	84,84,84,84	0
55	MG	YA	3286	1/1	0.76	0.32	144,144,144,144	0
55	MG	YA	3118	1/1	0.76	0.33	84,84,84,84	0
55	MG	YA	3119	1/1	0.76	0.39	84,84,84,84	0
55	MG	RA	3282	1/1	0.76	0.28	149,149,149,149	0
55	MG	RA	2950	1/1	0.76	0.09	108,108,108,108	0
55	MG	YA	3292	1/1	0.76	0.13	109,109,109,109	0
55	MG	RA	3271	1/1	0.76	0.22	102,102,102,102	0
55	MG	YE	302	1/1	0.76	0.24	131,131,131,131	0
55	MG	YA	3124	1/1	0.76	0.36	84,84,84,84	0
55	MG	QA	1631	1/1	0.76	0.10	110,110,110,110	0
55	MG	RA	2928	1/1	0.76	0.17	138,138,138,138	0
55	MG	XA	1671	1/1	0.76	0.08	149,149,149,149	0
55	MG	XE	201	1/1	0.76	0.20	157,157,157,157	0
55	MG	YA	3272	1/1	0.77	0.26	98,98,98,98	0
55	MG	QA	1641	1/1	0.77	0.18	155,155,155,155	0
55	MG	YA	3275	1/1	0.77	0.24	112,112,112,112	0
55	MG	YA	3042	1/1	0.77	0.34	84,84,84,84	0
55	MG	YA	3072	1/1	0.77	0.32	106,106,106,106	0
55	MG	YA	2968	1/1	0.77	0.33	84,84,84,84	0
55	MG	RA	3056	1/1	0.77	0.31	139,139,139,139	0
55	MG	YA	2929	1/1	0.77	0.39	84,84,84,84	0
55	MG	RA	3194	1/1	0.77	0.13	111,111,111,111	0
55	MG	RA	3176	1/1	0.77	0.15	152,152,152,152	0
55	MG	QA	1665	1/1	0.77	0.17	84,84,84,84	0
55	MG	YA	3255	1/1	0.77	0.24	84,84,84,84	0
55	MG	YA	3088	1/1	0.77	0.25	84,84,84,84	0
55	MG	QF	301	1/1	0.77	0.12	145,145,145,145	0
55	MG	RA	3218	1/1	0.77	0.17	196,196,196,196	0
55	MG	RA	2976	1/1	0.77	0.47	139,139,139,139	0
55	MG	RA	3116	1/1	0.77	0.18	89,89,89,89	0
55	MG	YA	3263	1/1	0.77	0.53	88,88,88,88	0
55	MG	RA	3311	1/1	0.77	0.26	84,84,84,84	0
55	MG	YA	3096	1/1	0.77	0.26	92,92,92,92	0
55	MG	RA	3146	1/1	0.77	0.09	84,84,84,84	0
55	MG	YA	2945	1/1	0.77	0.17	86,86,86,86	0
55	MG	RA	3202	1/1	0.78	0.18	134,134,134,134	0
55	MG	YA	3025	1/1	0.78	0.10	98,98,98,98	0
55	MG	YA	3031	1/1	0.78	0.48	84,84,84,84	0
55	MG	RA	3027	1/1	0.78	0.23	92,92,92,92	0
55	MG	XA	1605	1/1	0.78	0.43	161,161,161,161	0
55	MG	RA	3038	1/1	0.78	0.20	119,119,119,119	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3141	1/1	0.78	0.25	84,84,84,84	0
55	MG	XA	1654	1/1	0.78	0.13	118,118,118,118	0
55	MG	XA	1610	1/1	0.78	0.57	237,237,237,237	0
55	MG	RA	3310	1/1	0.78	0.53	116,116,116,116	0
55	MG	YA	2911	1/1	0.78	0.24	84,84,84,84	0
55	MG	RA	3278	1/1	0.78	0.12	113,113,113,113	0
55	MG	RA	3177	1/1	0.78	0.15	156,156,156,156	0
55	MG	YA	3053	1/1	0.78	0.22	93,93,93,93	0
55	MG	YA	3006	1/1	0.78	0.35	84,84,84,84	0
55	MG	YA	2950	1/1	0.78	0.17	111,111,111,111	0
55	MG	YA	3129	1/1	0.78	0.30	84,84,84,84	0
55	MG	YA	3130	1/1	0.78	0.22	84,84,84,84	0
55	MG	YA	3165	1/1	0.78	0.22	84,84,84,84	0
55	MG	XA	1641	1/1	0.78	0.16	112,112,112,112	0
55	MG	YA	3169	1/1	0.78	0.14	119,119,119,119	0
55	MG	YA	2922	1/1	0.78	0.22	84,84,84,84	0
55	MG	RA	3256	1/1	0.78	0.10	84,84,84,84	0
55	MG	QA	1616	1/1	0.78	0.10	128,128,128,128	0
55	MG	YA	3073	1/1	0.79	0.16	84,84,84,84	0
55	MG	RA	3207	1/1	0.79	0.13	151,151,151,151	0
55	MG	YA	3212	1/1	0.79	0.29	84,84,84,84	0
55	MG	YA	2985	1/1	0.79	0.47	84,84,84,84	0
55	MG	RA	3276	1/1	0.79	0.14	138,138,138,138	0
55	MG	RA	3251	1/1	0.79	0.16	177,177,177,177	0
55	MG	YA	3159	1/1	0.79	0.30	84,84,84,84	0
55	MG	RA	3297	1/1	0.79	0.22	167,167,167,167	0
55	MG	YA	2997	1/1	0.79	0.37	84,84,84,84	0
55	MG	RA	3318	1/1	0.79	0.41	84,84,84,84	0
55	MG	QA	1603	1/1	0.79	0.10	121,121,121,121	0
55	MG	QA	1610	1/1	0.79	1.36	211,211,211,211	0
55	MG	YA	3065	1/1	0.79	0.13	107,107,107,107	0
55	MG	RA	3037	1/1	0.79	0.09	145,145,145,145	0
55	MG	YA	2913	1/1	0.79	0.29	84,84,84,84	0
55	MG	RA	2970	1/1	0.79	0.49	102,102,102,102	0
55	MG	RA	2982	1/1	0.79	0.14	87,87,87,87	0
55	MG	RA	3241	1/1	0.79	0.28	84,84,84,84	0
55	MG	YA	3236	1/1	0.80	0.28	84,84,84,84	0
55	MG	RA	3150	1/1	0.80	0.17	84,84,84,84	0
55	MG	Y2	101	1/1	0.80	0.20	133,133,133,133	0
55	MG	YA	3274	1/1	0.80	0.29	84,84,84,84	0
55	MG	YA	3013	1/1	0.80	0.24	84,84,84,84	0
55	MG	RA	3265	1/1	0.80	0.34	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3136	1/1	0.80	0.25	84,84,84,84	0
55	MG	YA	3167	1/1	0.80	0.19	84,84,84,84	0
55	MG	YA	2921	1/1	0.80	0.56	84,84,84,84	0
55	MG	RA	3175	1/1	0.80	0.13	84,84,84,84	0
55	MG	YA	2903	1/1	0.80	0.18	90,90,90,90	0
55	MG	RA	3329	1/1	0.80	0.19	93,93,93,93	0
55	MG	YA	3026	1/1	0.80	0.28	84,84,84,84	0
55	MG	YA	2969	1/1	0.80	0.37	84,84,84,84	0
55	MG	RA	3010	1/1	0.80	0.14	138,138,138,138	0
55	MG	XA	1629	1/1	0.80	0.08	135,135,135,135	0
55	MG	RA	3243	1/1	0.80	0.18	84,84,84,84	0
55	MG	RA	2914	1/1	0.80	0.14	129,129,129,129	0
55	MG	RA	2987	1/1	0.80	0.23	84,84,84,84	0
55	MG	YA	3231	1/1	0.80	0.19	84,84,84,84	0
55	MG	YA	3101	1/1	0.80	0.69	139,139,139,139	0
55	MG	YA	3043	1/1	0.80	0.29	84,84,84,84	0
55	MG	RA	3017	1/1	0.80	0.18	84,84,84,84	0
55	MG	YA	3270	1/1	0.80	0.26	84,84,84,84	0
55	MG	RA	3203	1/1	0.81	0.14	193,193,193,193	0
55	MG	YA	3150	1/1	0.81	0.67	84,84,84,84	0
55	MG	YA	3021	1/1	0.81	0.56	84,84,84,84	0
55	MG	YA	2967	1/1	0.81	0.09	84,84,84,84	0
55	MG	QA	1620	1/1	0.81	0.21	159,159,159,159	0
55	MG	RA	3025	1/1	0.81	0.13	84,84,84,84	0
55	MG	YA	3191	1/1	0.81	0.26	84,84,84,84	0
55	MG	YA	2999	1/1	0.81	0.19	84,84,84,84	0
55	MG	YA	2971	1/1	0.81	0.25	84,84,84,84	0
55	MG	YA	3062	1/1	0.81	0.20	119,119,119,119	0
55	MG	YA	3034	1/1	0.81	0.23	84,84,84,84	0
55	MG	YA	3197	1/1	0.81	0.14	84,84,84,84	0
55	MG	RA	2974	1/1	0.81	0.38	84,84,84,84	0
55	MG	QH	202	1/1	0.81	0.32	211,211,211,211	0
55	MG	RA	3004	1/1	0.81	0.06	205,205,205,205	0
55	MG	RA	2911	1/1	0.81	0.17	111,111,111,111	0
55	MG	XA	1644	1/1	0.81	0.32	235,235,235,235	0
55	MG	RA	3195	1/1	0.81	0.53	170,170,170,170	0
55	MG	YA	3074	1/1	0.81	0.16	84,84,84,84	0
55	MG	YA	3112	1/1	0.81	0.34	96,96,96,96	0
55	MG	YP	201	1/1	0.81	0.16	113,113,113,113	0
55	MG	RA	2959	1/1	0.81	0.30	84,84,84,84	0
55	MG	YA	3078	1/1	0.81	0.27	140,140,140,140	0
55	MG	RA	3047	1/1	0.81	0.07	139,139,139,139	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3022	1/1	0.81	0.31	84,84,84,84	0
55	MG	RA	3120	1/1	0.81	0.27	129,129,129,129	0
55	MG	RA	2981	1/1	0.82	0.18	109,109,109,109	0
55	MG	XA	1640	1/1	0.82	0.08	101,101,101,101	0
55	MG	XA	1625	1/1	0.82	0.13	190,190,190,190	0
55	MG	YA	3188	1/1	0.82	0.14	124,124,124,124	0
55	MG	QA	1657	1/1	0.82	0.36	157,157,157,157	0
55	MG	RA	2927	1/1	0.82	0.09	135,135,135,135	0
55	MG	YA	3030	1/1	0.82	0.26	110,110,110,110	0
55	MG	YA	2942	1/1	0.82	0.26	120,120,120,120	0
55	MG	RA	3323	1/1	0.82	0.31	205,205,205,205	0
55	MG	YA	2958	1/1	0.82	0.40	84,84,84,84	0
55	MG	RA	2994	1/1	0.82	0.12	90,90,90,90	0
55	MG	YA	3056	1/1	0.82	0.25	84,84,84,84	0
55	MG	RA	2995	1/1	0.82	0.30	260,260,260,260	0
55	MG	RF	301	1/1	0.82	0.25	118,118,118,118	0
55	MG	YA	3041	1/1	0.82	0.25	84,84,84,84	0
55	MG	RA	3036	1/1	0.83	0.07	136,136,136,136	0
55	MG	RA	3325	1/1	0.83	0.18	84,84,84,84	0
55	MG	RA	3192	1/1	0.83	0.12	105,105,105,105	0
55	MG	RA	2945	1/1	0.83	0.25	84,84,84,84	0
55	MG	RA	3135	1/1	0.83	0.13	100,100,100,100	0
55	MG	YA	3252	1/1	0.83	0.31	118,118,118,118	0
55	MG	RA	3077	1/1	0.83	0.55	185,185,185,185	0
55	MG	XA	1614	1/1	0.83	0.07	106,106,106,106	0
55	MG	RA	2983	1/1	0.83	0.30	84,84,84,84	0
55	MG	YA	3181	1/1	0.83	0.14	115,115,115,115	0
55	MG	RA	3228	1/1	0.83	0.21	105,105,105,105	0
55	MG	RA	3168	1/1	0.83	0.06	206,206,206,206	0
55	MG	YA	2943	1/1	0.83	0.17	93,93,93,93	0
55	MG	QA	1608	1/1	0.83	0.18	97,97,97,97	0
55	MG	YA	2986	1/1	0.83	0.19	84,84,84,84	0
55	MG	RA	3032	1/1	0.83	0.19	84,84,84,84	0
55	MG	YE	303	1/1	0.83	0.40	124,124,124,124	0
55	MG	YA	3075	1/1	0.83	0.39	84,84,84,84	0
55	MG	YA	3022	1/1	0.83	0.27	84,84,84,84	0
55	MG	YR	201	1/1	0.83	0.14	95,95,95,95	0
55	MG	YA	3052	1/1	0.83	0.10	84,84,84,84	0
55	MG	YA	2946	1/1	0.83	0.15	87,87,87,87	0
55	MG	RA	2901	1/1	0.83	0.14	98,98,98,98	0
55	MG	RA	3003	1/1	0.83	0.18	108,108,108,108	0
55	MG	YA	3206	1/1	0.84	0.11	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3298	1/1	0.84	0.17	95,95,95,95	0
55	MG	RA	3098	1/1	0.84	0.41	212,212,212,212	0
55	MG	RA	3042	1/1	0.84	0.07	111,111,111,111	0
55	MG	RA	3160	1/1	0.84	0.11	109,109,109,109	0
55	MG	Y8	102	1/1	0.84	0.32	123,123,123,123	0
55	MG	QL	202	1/1	0.84	0.08	95,95,95,95	0
55	MG	YA	3223	1/1	0.84	0.14	84,84,84,84	0
55	MG	YA	3103	1/1	0.84	0.46	84,84,84,84	0
55	MG	YA	3227	1/1	0.84	0.30	90,90,90,90	0
55	MG	YA	3177	1/1	0.84	0.11	90,90,90,90	0
55	MG	RA	3306	1/1	0.84	0.12	111,111,111,111	0
55	MG	RA	2967	1/1	0.84	0.10	230,230,230,230	0
55	MG	QA	1656	1/1	0.84	0.17	105,105,105,105	0
55	MG	RA	3058	1/1	0.84	0.30	147,147,147,147	0
55	MG	YA	2996	1/1	0.84	0.12	84,84,84,84	0
55	MG	YA	3070	1/1	0.84	0.23	84,84,84,84	0
55	MG	YA	2937	1/1	0.84	0.21	84,84,84,84	0
55	MG	YA	2938	1/1	0.84	0.20	84,84,84,84	0
55	MG	XA	1631	1/1	0.84	0.30	167,167,167,167	0
55	MG	YA	2910	1/1	0.84	0.20	84,84,84,84	0
55	MG	RA	3012	1/1	0.84	0.13	106,106,106,106	0
55	MG	QA	1635	1/1	0.84	0.11	112,112,112,112	0
55	MG	YA	2970	1/1	0.84	0.42	84,84,84,84	0
55	MG	R8	101	1/1	0.84	0.19	111,111,111,111	0
55	MG	YA	3007	1/1	0.84	0.58	84,84,84,84	0
55	MG	XA	1615	1/1	0.84	0.10	162,162,162,162	0
55	MG	YA	3198	1/1	0.84	0.41	124,124,124,124	0
55	MG	YA	2973	1/1	0.84	0.14	90,90,90,90	0
55	MG	YA	3200	1/1	0.84	0.38	142,142,142,142	0
55	MG	XA	1686	1/1	0.84	0.21	108,108,108,108	0
55	MG	YA	2919	1/1	0.84	0.36	84,84,84,84	0
55	MG	RE	303	1/1	0.84	0.18	109,109,109,109	0
55	MG	RA	2961	1/1	0.85	0.14	101,101,101,101	0
55	MG	RA	3201	1/1	0.85	0.34	125,125,125,125	0
55	MG	RA	3110	1/1	0.85	0.14	108,108,108,108	0
55	MG	RA	3315	1/1	0.85	0.19	100,100,100,100	0
55	MG	RA	2985	1/1	0.85	0.30	139,139,139,139	0
55	MG	YA	3027	1/1	0.85	0.11	102,102,102,102	0
55	MG	YA	3157	1/1	0.85	0.25	84,84,84,84	0
55	MG	RA	3155	1/1	0.85	0.13	95,95,95,95	0
55	MG	XA	1681	1/1	0.85	0.11	171,171,171,171	0
55	MG	YA	2941	1/1	0.85	0.11	106,106,106,106	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3236	1/1	0.85	0.23	84,84,84,84	0
55	MG	YD	302	1/1	0.85	0.35	99,99,99,99	0
55	MG	YA	3269	1/1	0.85	0.23	84,84,84,84	0
55	MG	YA	3185	1/1	0.85	0.12	87,87,87,87	0
55	MG	RA	3097	1/1	0.85	0.04	98,98,98,98	0
55	MG	YA	3098	1/1	0.85	0.26	174,174,174,174	0
55	MG	XA	1655	1/1	0.85	0.26	84,84,84,84	0
55	MG	XA	1643	1/1	0.85	0.18	105,105,105,105	0
55	MG	XA	1673	1/1	0.85	0.12	114,114,114,114	0
55	MG	YA	3222	1/1	0.85	0.15	84,84,84,84	0
55	MG	YA	3020	1/1	0.85	0.18	110,110,110,110	0
55	MG	RA	3055	1/1	0.86	0.24	123,123,123,123	0
55	MG	QA	1646	1/1	0.86	0.07	84,84,84,84	0
55	MG	RA	3119	1/1	0.86	0.11	137,137,137,137	0
55	MG	YA	2990	1/1	0.86	0.08	84,84,84,84	0
55	MG	RA	3089	1/1	0.86	0.17	198,198,198,198	0
55	MG	RA	3283	1/1	0.86	0.41	117,117,117,117	0
55	MG	RA	3181	1/1	0.86	0.14	180,180,180,180	0
55	MG	YA	2966	1/1	0.86	0.28	84,84,84,84	0
55	MG	RA	2934	1/1	0.86	0.21	94,94,94,94	0
55	MG	YA	3285	1/1	0.86	0.13	94,94,94,94	0
55	MG	YA	3108	1/1	0.86	0.12	117,117,117,117	0
55	MG	RA	3288	1/1	0.86	0.13	99,99,99,99	0
55	MG	RA	2977	1/1	0.86	0.11	84,84,84,84	0
55	MG	YA	2914	1/1	0.86	0.45	84,84,84,84	0
55	MG	RA	3185	1/1	0.86	0.24	84,84,84,84	0
55	MG	RA	3033	1/1	0.86	0.16	95,95,95,95	0
55	MG	YA	2918	1/1	0.86	0.20	84,84,84,84	0
55	MG	YA	3009	1/1	0.86	0.24	84,84,84,84	0
55	MG	RA	3062	1/1	0.86	0.26	84,84,84,84	0
55	MG	RA	3191	1/1	0.86	0.39	148,148,148,148	0
55	MG	XA	1635	1/1	0.86	0.11	159,159,159,159	0
55	MG	RA	2919	1/1	0.86	0.10	130,130,130,130	0
55	MG	RA	3230	1/1	0.86	0.17	84,84,84,84	0
55	MG	RA	3043	1/1	0.86	0.09	133,133,133,133	0
55	MG	RA	3303	1/1	0.86	0.20	256,256,256,256	0
55	MG	YA	2901	1/1	0.86	0.32	242,242,242,242	0
55	MG	RA	3006	1/1	0.86	0.17	84,84,84,84	0
55	MG	YA	3081	1/1	0.87	0.18	84,84,84,84	0
55	MG	YA	2939	1/1	0.87	0.11	84,84,84,84	0
55	MG	RA	3100	1/1	0.87	0.60	165,165,165,165	0
55	MG	QA	1661	1/1	0.87	0.12	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	2979	1/1	0.87	0.11	135,135,135,135	0
55	MG	RA	3215	1/1	0.87	0.11	102,102,102,102	0
55	MG	YA	3149	1/1	0.87	0.15	93,93,93,93	0
55	MG	RA	3151	1/1	0.87	0.13	84,84,84,84	0
55	MG	QA	1652	1/1	0.87	0.09	162,162,162,162	0
55	MG	YA	3063	1/1	0.87	0.17	104,104,104,104	0
55	MG	YA	3040	1/1	0.87	0.17	84,84,84,84	0
55	MG	XA	1659	1/1	0.87	0.15	84,84,84,84	0
55	MG	RA	2951	1/1	0.87	0.24	255,255,255,255	0
55	MG	XA	1661	1/1	0.87	0.20	105,105,105,105	0
55	MG	RA	3292	1/1	0.87	0.15	105,105,105,105	0
55	MG	RA	2956	1/1	0.87	0.28	198,198,198,198	0
55	MG	YA	3071	1/1	0.87	0.22	84,84,84,84	0
55	MG	RA	3087	1/1	0.87	0.29	164,164,164,164	0
55	MG	XA	1687	1/1	0.87	0.54	172,172,172,172	0
55	MG	RA	3041	1/1	0.87	0.07	131,131,131,131	0
55	MG	YA	3235	1/1	0.87	0.25	84,84,84,84	0
55	MG	RA	3121	1/1	0.87	0.31	177,177,177,177	0
55	MG	YA	2975	1/1	0.87	0.12	97,97,97,97	0
55	MG	RA	3246	1/1	0.87	0.20	84,84,84,84	0
55	MG	YA	3080	1/1	0.87	0.13	94,94,94,94	0
55	MG	RE	302	1/1	0.88	0.25	84,84,84,84	0
55	MG	XA	1617	1/1	0.88	0.17	84,84,84,84	0
55	MG	YA	3166	1/1	0.88	0.22	144,144,144,144	0
55	MG	XA	1667	1/1	0.88	0.13	173,173,173,173	0
55	MG	RA	3247	1/1	0.88	0.19	84,84,84,84	0
55	MG	RA	3250	1/1	0.88	0.21	84,84,84,84	0
55	MG	YA	2993	1/1	0.88	0.19	84,84,84,84	0
55	MG	YA	3079	1/1	0.88	0.11	84,84,84,84	0
55	MG	RA	3148	1/1	0.88	0.21	89,89,89,89	0
55	MG	YA	3246	1/1	0.88	0.09	129,129,129,129	0
55	MG	YA	3283	1/1	0.88	0.28	131,131,131,131	0
55	MG	RA	3301	1/1	0.88	0.17	142,142,142,142	0
55	MG	YA	2949	1/1	0.88	0.17	84,84,84,84	0
55	MG	RA	3184	1/1	0.88	0.11	103,103,103,103	0
55	MG	YA	3029	1/1	0.88	0.18	84,84,84,84	0
55	MG	RA	3197	1/1	0.88	0.34	84,84,84,84	0
55	MG	RA	2988	1/1	0.88	0.16	101,101,101,101	0
55	MG	QA	1639	1/1	0.88	0.09	135,135,135,135	0
55	MG	RA	3209	1/1	0.88	0.14	165,165,165,165	0
55	MG	YA	3220	1/1	0.88	0.17	84,84,84,84	0
55	MG	XA	1608	1/1	0.88	0.17	108,108,108,108	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YE	301	1/1	0.88	0.25	113,113,113,113	0
55	MG	YA	3036	1/1	0.88	0.23	84,84,84,84	0
55	MG	XA	1609	1/1	0.88	0.21	96,96,96,96	0
55	MG	YE	304	1/1	0.88	0.33	84,84,84,84	0
55	MG	YA	3226	1/1	0.88	0.06	100,100,100,100	0
55	MG	RA	2960	1/1	0.88	0.21	108,108,108,108	0
55	MG	YA	3266	1/1	0.88	0.23	102,102,102,102	0
55	MG	RA	3021	1/1	0.88	0.09	96,96,96,96	0
55	MG	RA	3044	1/1	0.88	0.37	156,156,156,156	0
55	MG	RA	3080	1/1	0.88	0.14	108,108,108,108	0
57	ZN	R9	101	1/1	0.88	0.10	314,314,314,314	0
55	MG	RA	3277	1/1	0.88	0.14	182,182,182,182	0
55	MG	YA	2987	1/1	0.89	0.22	84,84,84,84	0
55	MG	YA	3064	1/1	0.89	0.17	84,84,84,84	0
55	MG	RA	3109	1/1	0.89	0.12	84,84,84,84	0
55	MG	YA	3016	1/1	0.89	0.05	84,84,84,84	0
55	MG	RA	3321	1/1	0.89	0.12	88,88,88,88	0
55	MG	RA	3153	1/1	0.89	0.08	117,117,117,117	0
55	MG	QA	1612	1/1	0.89	0.10	141,141,141,141	0
55	MG	RA	3009	1/1	0.89	0.11	101,101,101,101	0
55	MG	YA	3201	1/1	0.89	0.37	139,139,139,139	0
55	MG	RA	3068	1/1	0.89	0.15	113,113,113,113	0
55	MG	RA	3113	1/1	0.89	0.12	84,84,84,84	0
55	MG	XA	1626	1/1	0.89	0.05	112,112,112,112	0
55	MG	XA	1627	1/1	0.89	0.38	165,165,165,165	0
55	MG	YA	2978	1/1	0.89	0.10	90,90,90,90	0
55	MG	RA	3114	1/1	0.89	0.10	84,84,84,84	0
55	MG	RA	3105	1/1	0.89	0.18	107,107,107,107	0
55	MG	QA	1659	1/1	0.89	0.04	125,125,125,125	0
55	MG	RA	3016	1/1	0.89	0.19	84,84,84,84	0
55	MG	YA	3217	1/1	0.89	0.15	104,104,104,104	0
55	MG	RA	3165	1/1	0.89	0.13	197,197,197,197	0
55	MG	RA	3231	1/1	0.89	0.10	141,141,141,141	0
55	MG	RA	3317	1/1	0.89	0.11	84,84,84,84	0
57	ZN	RY	201	1/1	0.89	0.07	344,344,344,344	0
55	MG	RA	3254	1/1	0.89	0.11	130,130,130,130	0
55	MG	YA	3147	1/1	0.90	0.18	84,84,84,84	0
55	MG	RA	3264	1/1	0.90	0.14	148,148,148,148	0
55	MG	YA	2920	1/1	0.90	0.12	84,84,84,84	0
55	MG	RA	3050	1/1	0.90	0.22	110,110,110,110	0
55	MG	RA	3096	1/1	0.90	0.11	122,122,122,122	0
55	MG	YA	2923	1/1	0.90	0.16	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	3216	1/1	0.90	0.15	84,84,84,84	0
55	MG	YA	3125	1/1	0.90	0.26	89,89,89,89	0
55	MG	RA	3131	1/1	0.90	0.12	117,117,117,117	0
55	MG	RA	2958	1/1	0.90	0.18	91,91,91,91	0
55	MG	YA	3221	1/1	0.90	0.09	84,84,84,84	0
55	MG	RA	2948	1/1	0.90	0.12	84,84,84,84	0
55	MG	YA	2992	1/1	0.90	0.12	84,84,84,84	0
55	MG	YA	3045	1/1	0.90	0.23	84,84,84,84	0
55	MG	YA	3019	1/1	0.90	0.07	84,84,84,84	0
55	MG	RA	3099	1/1	0.90	0.29	84,84,84,84	0
55	MG	RA	3149	1/1	0.90	0.42	85,85,85,85	0
55	MG	YA	3230	1/1	0.90	0.19	84,84,84,84	0
55	MG	XA	1662	1/1	0.90	0.10	141,141,141,141	0
55	MG	XA	1645	1/1	0.90	0.21	106,106,106,106	0
55	MG	YA	2998	1/1	0.90	0.32	84,84,84,84	0
55	MG	RA	2993	1/1	0.90	0.07	141,141,141,141	0
55	MG	XA	1666	1/1	0.90	0.16	113,113,113,113	0
55	MG	QA	1644	1/1	0.90	0.09	84,84,84,84	0
55	MG	RA	2946	1/1	0.90	0.17	96,96,96,96	0
55	MG	RA	2980	1/1	0.90	0.17	84,84,84,84	0
55	MG	QA	1650	1/1	0.90	0.23	108,108,108,108	0
55	MG	RA	3126	1/1	0.90	0.07	137,137,137,137	0
55	MG	QA	1653	1/1	0.91	0.29	130,130,130,130	0
55	MG	RA	2996	1/1	0.91	0.18	177,177,177,177	0
55	MG	RA	3232	1/1	0.91	0.06	99,99,99,99	0
55	MG	YA	3100	1/1	0.91	0.19	84,84,84,84	0
55	MG	YA	3028	1/1	0.91	0.20	84,84,84,84	0
55	MG	YA	2947	1/1	0.91	0.09	84,84,84,84	0
55	MG	RA	3040	1/1	0.91	0.12	89,89,89,89	0
55	MG	YA	3008	1/1	0.91	0.26	84,84,84,84	0
55	MG	YA	3160	1/1	0.91	0.09	112,112,112,112	0
55	MG	YA	2909	1/1	0.91	0.24	84,84,84,84	0
55	MG	YA	3289	1/1	0.91	0.10	84,84,84,84	0
55	MG	RA	3081	1/1	0.91	0.17	84,84,84,84	0
55	MG	YA	3193	1/1	0.91	0.34	176,176,176,176	0
55	MG	RA	3287	1/1	0.91	0.11	123,123,123,123	0
55	MG	RA	3128	1/1	0.91	0.19	187,187,187,187	0
55	MG	YA	3037	1/1	0.91	0.26	84,84,84,84	0
55	MG	YA	3264	1/1	0.91	0.20	84,84,84,84	0
55	MG	YA	3138	1/1	0.91	0.18	98,98,98,98	0
55	MG	RA	3239	1/1	0.91	0.10	84,84,84,84	0
55	MG	RF	302	1/1	0.91	0.08	158,158,158,158	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3291	1/1	0.91	0.15	84,84,84,84	0
55	MG	RA	2915	1/1	0.91	0.10	84,84,84,84	0
55	MG	XA	1636	1/1	0.91	0.12	95,95,95,95	0
55	MG	RA	3178	1/1	0.91	0.41	232,232,232,232	0
55	MG	YA	3238	1/1	0.91	0.10	129,129,129,129	0
55	MG	YX	101	1/1	0.91	0.08	84,84,84,84	0
55	MG	YA	3121	1/1	0.91	0.09	84,84,84,84	0
55	MG	XA	1604	1/1	0.91	0.12	176,176,176,176	0
55	MG	RA	3257	1/1	0.91	0.19	86,86,86,86	0
55	MG	RA	3258	1/1	0.91	0.25	165,165,165,165	0
55	MG	RA	2978	1/1	0.92	0.22	84,84,84,84	0
55	MG	RA	3319	1/1	0.92	0.11	114,114,114,114	0
55	MG	RO	201	1/1	0.92	0.35	186,186,186,186	0
55	MG	XA	1684	1/1	0.92	0.13	210,210,210,210	0
55	MG	RA	3300	1/1	0.92	0.13	117,117,117,117	0
55	MG	XA	1663	1/1	0.92	0.11	115,115,115,115	0
55	MG	RA	3259	1/1	0.92	0.19	97,97,97,97	0
55	MG	RA	3227	1/1	0.92	0.25	123,123,123,123	0
55	MG	RA	3262	1/1	0.92	0.24	194,194,194,194	0
55	MG	RA	3069	1/1	0.92	0.52	189,189,189,189	0
55	MG	RA	3219	1/1	0.92	0.40	143,143,143,143	0
55	MG	XA	1648	1/1	0.92	0.05	137,137,137,137	0
55	MG	RA	3267	1/1	0.92	0.16	143,143,143,143	0
55	MG	YA	3046	1/1	0.92	0.19	124,124,124,124	0
55	MG	YA	3047	1/1	0.92	0.15	84,84,84,84	0
55	MG	RA	2997	1/1	0.92	0.27	161,161,161,161	0
55	MG	YA	2928	1/1	0.92	0.17	103,103,103,103	0
55	MG	RA	3188	1/1	0.92	0.22	140,140,140,140	0
55	MG	RA	3234	1/1	0.92	0.07	101,101,101,101	0
55	MG	RA	3235	1/1	0.92	0.14	84,84,84,84	0
55	MG	RA	3212	1/1	0.92	0.10	170,170,170,170	0
55	MG	YA	3280	1/1	0.92	0.06	120,120,120,120	0
55	MG	RA	2944	1/1	0.92	0.11	84,84,84,84	0
55	MG	QA	1611	1/1	0.92	0.15	124,124,124,124	0
55	MG	RA	3014	1/1	0.92	0.13	84,84,84,84	0
55	MG	RA	2949	1/1	0.93	0.13	96,96,96,96	0
55	MG	YA	3092	1/1	0.93	0.08	149,149,149,149	0
55	MG	RA	3253	1/1	0.93	0.23	84,84,84,84	0
55	MG	YA	2917	1/1	0.93	0.23	98,98,98,98	0
55	MG	RA	3019	1/1	0.93	0.13	84,84,84,84	0
55	MG	RA	3268	1/1	0.93	0.13	84,84,84,84	0
55	MG	YA	3014	1/1	0.93	0.05	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3063	1/1	0.93	0.17	84,84,84,84	0
55	MG	YA	3076	1/1	0.93	0.24	158,158,158,158	0
55	MG	RA	3284	1/1	0.93	0.10	108,108,108,108	0
55	MG	RA	3189	1/1	0.93	0.31	174,174,174,174	0
55	MG	YD	301	1/1	0.93	0.14	86,86,86,86	0
55	MG	RA	3091	1/1	0.93	0.28	132,132,132,132	0
55	MG	YA	3106	1/1	0.93	0.12	84,84,84,84	0
55	MG	XA	1622	1/1	0.93	0.10	132,132,132,132	0
55	MG	YA	3000	1/1	0.93	0.10	93,93,93,93	0
55	MG	YA	3241	1/1	0.93	0.18	84,84,84,84	0
55	MG	XA	1653	1/1	0.93	0.11	84,84,84,84	0
55	MG	RA	3249	1/1	0.93	0.10	84,84,84,84	0
55	MG	XA	1624	1/1	0.93	0.06	115,115,115,115	0
55	MG	XA	1611	1/1	0.93	0.41	278,278,278,278	0
55	MG	RA	3216	1/1	0.93	0.12	122,122,122,122	0
55	MG	YA	3190	1/1	0.93	0.28	99,99,99,99	0
55	MG	YA	3249	1/1	0.93	0.07	131,131,131,131	0
55	MG	XO	101	1/1	0.93	0.05	151,151,151,151	0
55	MG	YA	3139	1/1	0.93	0.07	84,84,84,84	0
55	MG	QA	1640	1/1	0.93	0.30	101,101,101,101	0
55	MG	QA	1667	1/1	0.94	0.13	154,154,154,154	0
55	MG	YA	3170	1/1	0.94	0.09	84,84,84,84	0
55	MG	YA	3215	1/1	0.94	0.17	84,84,84,84	0
55	MG	RA	3024	1/1	0.94	0.08	159,159,159,159	0
55	MG	RA	3158	1/1	0.94	0.07	117,117,117,117	0
55	MG	YA	2991	1/1	0.94	0.11	95,95,95,95	0
55	MG	YA	2960	1/1	0.94	0.24	84,84,84,84	0
55	MG	RN	201	1/1	0.94	0.13	98,98,98,98	0
55	MG	RA	3072	1/1	0.94	0.05	142,142,142,142	0
55	MG	RA	3015	1/1	0.94	0.15	141,141,141,141	0
55	MG	YA	3099	1/1	0.94	0.18	84,84,84,84	0
55	MG	YA	3225	1/1	0.94	0.13	100,100,100,100	0
55	MG	RA	3248	1/1	0.94	0.08	105,105,105,105	0
55	MG	RA	3007	1/1	0.94	0.13	87,87,87,87	0
55	MG	RA	3060	1/1	0.94	0.12	106,106,106,106	0
55	MG	RD	301	1/1	0.94	0.18	128,128,128,128	0
55	MG	YA	3204	1/1	0.94	0.13	135,135,135,135	0
55	MG	YA	3105	1/1	0.94	0.16	135,135,135,135	0
55	MG	RE	301	1/1	0.94	0.09	84,84,84,84	0
55	MG	RA	3061	1/1	0.94	0.18	91,91,91,91	0
55	MG	RA	3263	1/1	0.94	0.06	136,136,136,136	0
55	MG	YA	3260	1/1	0.94	0.04	84,84,84,84	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	Y1	101	1/1	0.94	0.07	117,117,117,117	0
55	MG	YA	3152	1/1	0.95	0.11	84,84,84,84	0
55	MG	YA	2977	1/1	0.95	0.09	84,84,84,84	0
55	MG	RA	2922	1/1	0.95	0.13	105,105,105,105	0
55	MG	RA	2973	1/1	0.95	0.17	84,84,84,84	0
55	MG	RA	3309	1/1	0.95	0.06	120,120,120,120	0
55	MG	YA	3219	1/1	0.95	0.07	91,91,91,91	0
55	MG	Y7	101	1/1	0.95	0.27	208,208,208,208	0
55	MG	RA	3090	1/1	0.95	0.19	138,138,138,138	0
55	MG	RA	3142	1/1	0.95	0.19	152,152,152,152	0
55	MG	XA	1677	1/1	0.95	0.05	147,147,147,147	0
55	MG	RA	3312	1/1	0.95	0.16	115,115,115,115	0
55	MG	RA	3279	1/1	0.95	0.04	169,169,169,169	0
55	MG	YA	3163	1/1	0.95	0.10	104,104,104,104	0
55	MG	YA	3033	1/1	0.95	0.09	84,84,84,84	0
55	MG	YA	3293	1/1	0.95	0.10	102,102,102,102	0
55	MG	YA	2924	1/1	0.95	0.11	84,84,84,84	0
55	MG	RA	3000	1/1	0.95	0.04	109,109,109,109	0
55	MG	RA	2990	1/1	0.95	0.14	103,103,103,103	0
55	MG	YA	3113	1/1	0.95	0.05	84,84,84,84	0
55	MG	YA	3012	1/1	0.95	0.12	84,84,84,84	0
55	MG	RA	3266	1/1	0.95	0.14	305,305,305,305	0
55	MG	YA	3116	1/1	0.95	0.29	133,133,133,133	0
55	MG	YA	3172	1/1	0.95	0.18	84,84,84,84	0
55	MG	RA	3145	1/1	0.95	0.14	112,112,112,112	0
55	MG	RA	2991	1/1	0.95	0.02	110,110,110,110	0
55	MG	RA	3269	1/1	0.95	0.06	200,200,200,200	0
55	MG	YA	2994	1/1	0.95	0.53	84,84,84,84	0
55	MG	RA	3233	1/1	0.95	0.11	84,84,84,84	0
55	MG	RA	3244	1/1	0.95	0.06	144,144,144,144	0
55	MG	RA	2925	1/1	0.95	0.18	84,84,84,84	0
55	MG	RA	3274	1/1	0.95	0.08	149,149,149,149	0
55	MG	YA	3278	1/1	0.95	0.05	85,85,85,85	0
55	MG	RA	3270	1/1	0.96	0.11	84,84,84,84	0
55	MG	RA	3049	1/1	0.96	0.10	84,84,84,84	0
55	MG	RA	3261	1/1	0.96	0.07	191,191,191,191	0
55	MG	RA	3187	1/1	0.96	0.12	130,130,130,130	0
55	MG	YA	3184	1/1	0.96	0.08	95,95,95,95	0
55	MG	YA	3146	1/1	0.96	0.08	84,84,84,84	0
55	MG	YA	3251	1/1	0.96	0.06	99,99,99,99	0
55	MG	YA	3058	1/1	0.96	0.05	84,84,84,84	0
55	MG	RA	3196	1/1	0.96	0.24	168,168,168,168	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	RA	3159	1/1	0.96	0.12	104,104,104,104	0
55	MG	RA	2955	1/1	0.96	0.10	192,192,192,192	0
55	MG	RA	3070	1/1	0.96	0.12	181,181,181,181	0
55	MG	RA	3130	1/1	0.96	0.10	119,119,119,119	0
55	MG	YA	2927	1/1	0.96	0.10	103,103,103,103	0
55	MG	RA	3290	1/1	0.96	0.06	95,95,95,95	0
55	MG	RA	2984	1/1	0.96	0.06	84,84,84,84	0
55	MG	YA	3261	1/1	0.96	0.07	190,190,190,190	0
55	MG	XA	1638	1/1	0.96	0.18	84,84,84,84	0
56	SF4	QD	301	8/8	0.96	0.06	181,237,336,420	0
55	MG	YA	3102	1/1	0.96	0.18	178,178,178,178	0
55	MG	YA	3084	1/1	0.96	0.17	84,84,84,84	0
55	MG	XA	1639	1/1	0.96	0.12	84,84,84,84	0
55	MG	RA	3067	1/1	0.96	0.05	101,101,101,101	0
57	ZN	Y9	101	1/1	0.96	0.05	162,162,162,162	0
55	MG	YA	2925	1/1	0.97	0.11	84,84,84,84	0
55	MG	RA	3084	1/1	0.97	0.11	150,150,150,150	0
55	MG	YF	301	1/1	0.97	0.08	90,90,90,90	0
55	MG	QA	1633	1/1	0.97	0.05	190,190,190,190	0
55	MG	RA	3245	1/1	0.97	0.19	93,93,93,93	0
55	MG	RA	3331	1/1	0.97	0.09	84,84,84,84	0
55	MG	YA	3214	1/1	0.97	0.03	95,95,95,95	0
55	MG	RA	2932	1/1	0.97	0.05	131,131,131,131	0
55	MG	RA	3082	1/1	0.97	0.09	84,84,84,84	0
55	MG	YA	3294	1/1	0.97	0.04	103,103,103,103	0
56	SF4	XD	301	8/8	0.97	0.05	163,216,235,295	0
55	MG	QA	1630	1/1	0.97	0.09	137,137,137,137	0
57	ZN	R5	101	1/1	0.97	0.03	268,268,268,268	0
57	ZN	R6	101	1/1	0.97	0.05	149,149,149,149	0
55	MG	RA	3255	1/1	0.97	0.05	99,99,99,99	0
55	MG	YA	3244	1/1	0.97	0.12	84,84,84,84	0
55	MG	XA	1683	1/1	0.97	0.06	120,120,120,120	0
57	ZN	Y5	101	1/1	0.97	0.07	308,308,308,308	0
55	MG	YA	3207	1/1	0.97	0.06	84,84,84,84	0
55	MG	YA	3208	1/1	0.98	0.09	100,100,100,100	0
55	MG	R3	101	1/1	0.98	0.09	94,94,94,94	0
55	MG	YA	3089	1/1	0.98	0.07	84,84,84,84	0
55	MG	RA	3108	1/1	0.98	0.06	117,117,117,117	0
55	MG	RA	2902	1/1	0.98	0.04	84,84,84,84	0
55	MG	RA	3229	1/1	0.98	0.09	84,84,84,84	0
55	MG	RA	3296	1/1	0.98	0.07	121,121,121,121	0
55	MG	RA	3154	1/1	0.98	0.06	127,127,127,127	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors($\text{\AA}^2$)	Q<0.9
55	MG	YA	2902	1/1	0.98	0.08	86,86,86,86	0
55	MG	YA	3023	1/1	0.98	0.07	84,84,84,84	0
55	MG	RA	3085	1/1	0.98	0.09	140,140,140,140	0
55	MG	YA	3229	1/1	0.99	0.07	84,84,84,84	0
55	MG	QA	1668	1/1	0.99	0.06	114,114,114,114	0
55	MG	RA	2940	1/1	0.99	0.04	84,84,84,84	0
55	MG	RA	3316	1/1	0.99	0.03	84,84,84,84	0
57	ZN	Y6	101	1/1	0.99	0.02	144,144,144,144	0
55	MG	RA	2971	1/1	0.99	0.04	84,84,84,84	0
57	ZN	YY	201	1/1	0.99	0.02	193,193,193,193	0

6.5 Other polymers [i](#)

There are no such residues in this entry.