



Full wwPDB X-ray Structure Validation Report ⓘ

Oct 6, 2020 – 03:01 AM EDT

PDB ID : 6OSI
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 following versions of software and data (see [references ⓘ](#)) were used in the production of this report:

MolProbity : 4.02b-467
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : 1.13
EDS : **FAILED**
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : 2.14.6

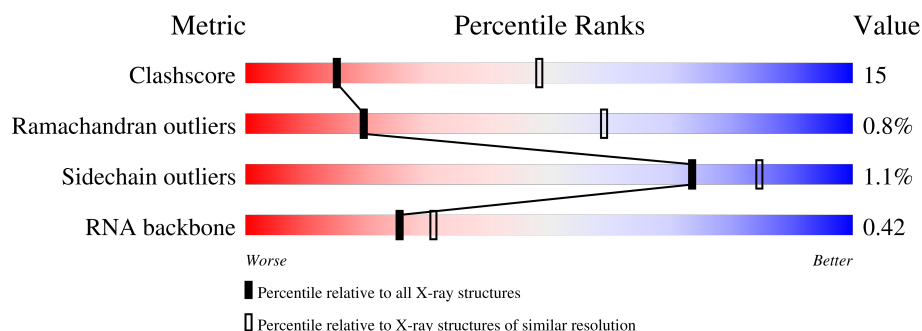
1 Overall quality at a glance

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))
Clashscore	141614	1041 (4.50-3.78)
Ramachandran outliers	138981	1036 (4.52-3.76)
Sidechain outliers	138945	1022 (4.52-3.76)
RNA backbone	3102	1049 (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 on 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 $\leq 5\%$.

Note EDS failed to run properly.

Mol	Chain	Length	Quality of chain
1	QA	1521	
1	XA	1521	
2	QB	256	
2	XB	256	
3	QC	239	
3	XC	239	

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Mol	Chain	Length	Quality of chain
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	
15	XO	89	
16	QP	88	












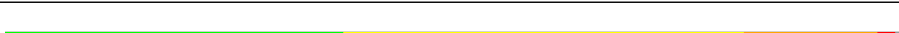













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Mol	Chain	Length	Quality of chain
16	XP	88	
17	QQ	105	
17	XQ	105	
18	QR	88	
18	XR	88	
19	QS	93	
19	XS	93	
20	QT	106	
20	XT	106	
21	QU	27	
21	XU	27	
22	QV	77	
22	XV	77	
23	QX	19	
23	XX	19	
24	R0	85	
24	Y0	85	
25	R1	98	
25	Y1	98	
26	R2	72	
26	Y2	72	
27	R3	60	
27	Y3	60	
28	R4	71	
28	Y4	71	


























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Mol	Chain	Length	Quality of chain
29	R5	60	 68% 25% 5% .
29	Y5	60	 63% 30% 5% .
30	R6	54	 70% 22% . . .
30	Y6	54	 63% 28% 6% . .
31	R7	49	 61% 35% .
31	Y7	49	 82% 16% .
32	R8	65	 60% 32% 6% .
32	Y8	65	 63% 35% .
33	R9	37	 57% 38% 5%
33	Y9	37	 62% 35% .
34	RA	2905	 41% 42% 15% . .
34	YA	2905	 38% 45% 15% . .
35	RB	122	 55% 36% 6% . .
35	YB	122	 43% 45% 9% . .
36	RD	276	 76% 21% . .
36	YD	276	 79% 18% . .
37	RE	206	 73% 24% .
37	YE	206	 75% 24% .
38	RF	210	 75% 20% . .
38	YF	210	 73% 23% .
39	RG	182	 74% 25% . .
39	YG	182	 75% 24% .
40	RH	180	 62% 29% 6% .
40	YH	180	 77% 17% . . .
41	RI	148	 72% 24% . .

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Mol	Chain	Length	Quality of chain
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	
53	RY	110	
53	YY	110	

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Mol	Chain	Length	Quality of chain
54	RZ	206	 63% 23% 11%
54	YZ	206	 67% 23% 6%

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	XA	1688	-	-	X	-
55	MG	YA	3192	-	-	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 (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
55	QA	70	Total	Mg	0	0
			70	70		
55	YA	394	Total	Mg	0	0
			394	394		
55	Y5	1	Total	Mg	0	0
			1	1		
55	YR	2	Total	Mg	0	0
			2	2		
55	RN	1	Total	Mg	0	0
			1	1		
55	XE	1	Total	Mg	0	0
			1	1		
55	Y1	1	Total	Mg	0	0
			1	1		
55	YD	2	Total	Mg	0	0
			2	2		
55	Y8	2	Total	Mg	0	0
			2	2		
55	XA	88	Total	Mg	0	0
			88	88		
55	R0	2	Total	Mg	0	0
			2	2		
55	QL	2	Total	Mg	0	0
			2	2		
55	YU	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	QH	2	Total 2	Mg 2	0	0
55	YQ	1	Total 1	Mg 1	0	0
55	R8	2	Total 2	Mg 2	0	0
55	YX	1	Total 1	Mg 1	0	0
55	RD	1	Total 1	Mg 1	0	0
55	XO	1	Total 1	Mg 1	0	0
55	Y7	1	Total 1	Mg 1	0	0
55	QF	1	Total 1	Mg 1	0	0
55	RA	432	Total 432	Mg 432	0	0
55	YF	1	Total 1	Mg 1	0	0
55	YP	1	Total 1	Mg 1	0	0
55	RE	4	Total 4	Mg 4	0	0
55	YB	1	Total 1	Mg 1	0	0
55	Y2	1	Total 1	Mg 1	0	0
55	QE	1	Total 1	Mg 1	0	0
55	RF	2	Total 2	Mg 2	0	0
55	R3	1	Total 1	Mg 1	0	0
55	YE	4	Total 4	Mg 4	0	0

- Molecule 56 is IRON/SULFUR CLUSTER (three-letter code: 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 (three-letter code: ZN) (formula: Zn).

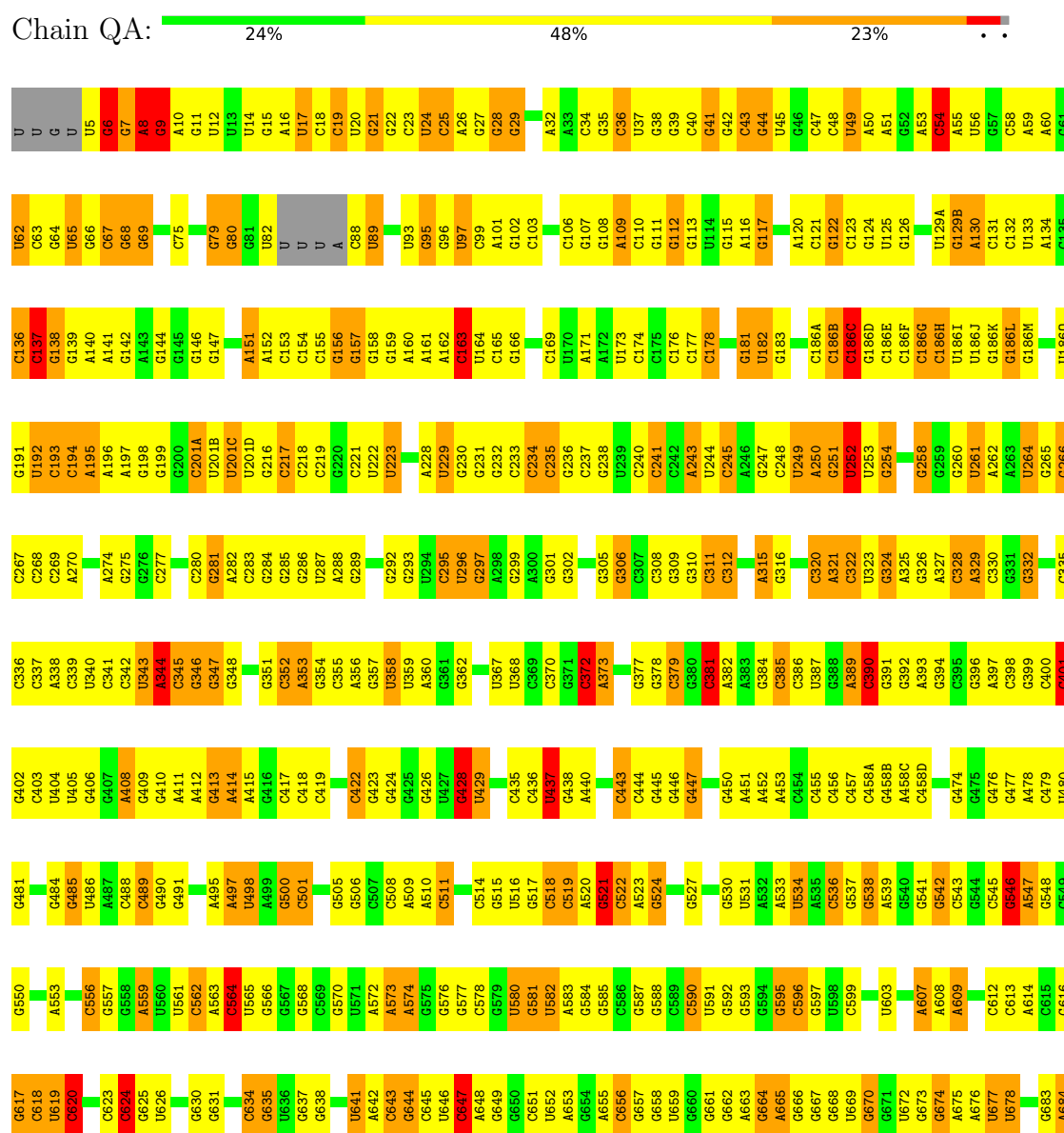
Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	Y9	1	Total	Zn	0	0
			1	1		
57	Y6	1	Total	Zn	0	0
			1	1		
57	QN	1	Total	Zn	0	0
			1	1		
57	XN	1	Total	Zn	0	0
			1	1		
57	R9	1	Total	Zn	0	0
			1	1		
57	R6	1	Total	Zn	0	0
			1	1		
57	Y5	1	Total	Zn	0	0
			1	1		
57	R5	1	Total	Zn	0	0
			1	1		
57	YY	1	Total	Zn	0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

3 Residue-property plots [i](#)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. 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. 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.

Note EDS failed to run properly.

• Molecule 1: 16S rRNA

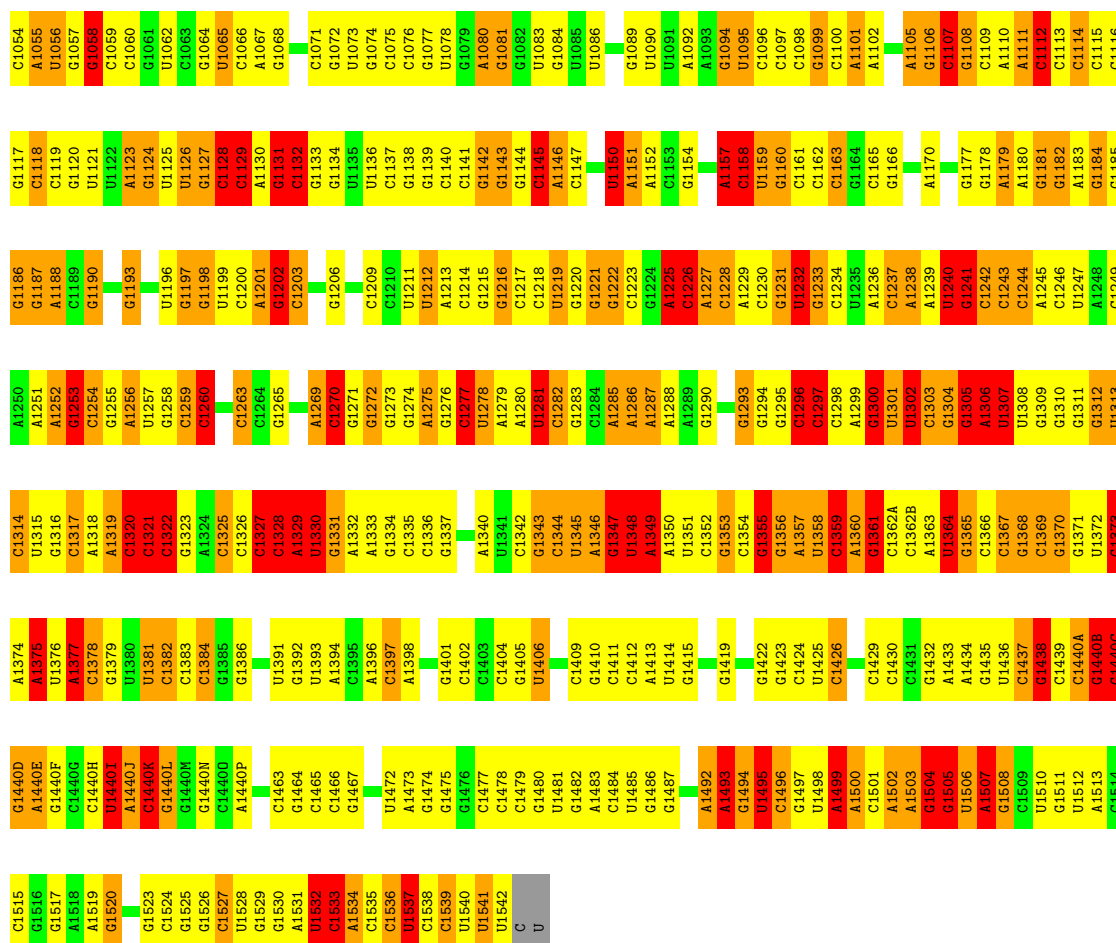


A1534	C1535	G1472	U1473	G1334	G1274	C1214	G1143	G1079	G1013	G951	C883	C811	C749	G685
U1536	G1474	C1397	A1475	C1335	A1275	G1215	G1144	A1080	A1014	U952	U884	C812	G750	U656
U1537	G1475	A1398	G1476	C1336	C1276	C1216	C1145	G1081	A1015	G953	G885	U813	U751	A657
C1538	G1476	G1400	G1477	C1337	U1278	G1217	A1146	U1086	A1016	G954	U889	A814	G752	G688
C1539	G1478	C1401	C1479	G1338	U1279	U1218	U1148	U1086	G1017	U955	U889	A815	A753	C689
U1540	C1478	C1402	C1479	C1339	A1280	G1220	G1149	G1087	G1023	U956	C817	A816	G755	G690
U1541	C1479	C1403	C1480	U1341	G1281	G1221	U1150	G1088	G1024	U957	G819	A817	C756	G691
U1542	C1480	C1404	C1342	G1343	C1282	C1222	A1151	G1089	U1025	A958	A919	A818	U757	U692
C	U1481	G1405	G1342	G1343	C1283	C1223	A1152	U1090	G1026	A959	A920	A819	C758	G693
U	U1482	U1406	C1405	G1343	G1284	G1224	C1153	U1092	C1027	U961	G894	G821	A759	A695
A1483	C1407	A1285	A1286	G1346	A1285	A1225	G1154	A1093	C1028A	G962	C897	G822	G760	A696
A1484	C1408	A1287	A1288	G1347	A1287	C1226	U1094	G1094	C1028B	G963	C898	G823	G761	A697
U1485	C1409	A1289	A1290	U1348	A1289	A1227	A1157	U1095	C1028C	U966	C899	C824	C762	G698
G1486	G1410	A1288	A1289	A1349	A1288	C1228	C1158	U1096	G1028D	U967	C900	G825	G763	C699
G1487	C1411	A1289	A1290	A1350	A1289	C1229	U1159	C1097	G1028E	U968	C901	G826	G764	C700
C1490	C1412	U1351	G1290	U1351	G1290	C1230	G1160	C1098	G1028F	A969	U905	U827	G765	C701
G1491	A1413	C1352	G1291	G1352	G1291	G1231	G1161	G1099	A1028G	G906	G906	A828	A766	A702
A1492	U1414	G1353	U1292	G1353	U1292	U1232	C1162	C1100	G1028H	C970	A907	G829	A767	G703
A1493	G1415	C1354	G1293	G1354	G1293	G1233	C1163	A1101	G1028I	C971	A908	G830	A768	A704
G1494	G1417	G1355	G1294	G1355	G1294	C1234	U1102	A1102	C1037	C972	A909	U831	G769	U705
G1495	A1418	G1356	G1295	G1356	G1295	U1235	C1103	C1103	C1038	A974	C912	C832	C770	A706
G1496	C1419	A1357	G1296	A1357	A1236	U1236	A1170	G1104	G1039	A975	A914	U833	C771	C707
G1497	U1358	C1297	C1297	U1358	C1237	C1237	G1175	A1105	U1040	G976	A913	U834	C772	C708
A1498	C1359	C1298	A1299	A1360	A1238	A1239	A1176	C1107	A1041	A977	A915	G837	G773	G709
A1499	A1360	A1239	A1299	A1360	A1239	A1239	A1177	C1108	G1042	A978	A916	G838	G774	G710
A1500	G1361	U1300	G1301	C1362A	U1240	U1240	G1177	C1109	G1043	A979	G917	G839	G775	G711
C1501	A1428	U1302	C1362B	U1302	C1242	G1241	C1178	C1109	C1043	C980	U918	G840	G776	A712
A1502	C1429	A1363	C1303	C1363	C1243	C1243	A1180	A1111	A1044	C981	A918	G841	A777	G713
G1503	G1504	G1364	G1304	C1364	G1244	G1244	G1181	C1112	C1045	U982	A919	U838D	G778	G714
G1504	G1505	G1365	G1305	C1365	A1245	A1245	G1182	C1113	A1046	U983	U920	C848	A715	A715
U1506	G1431	G1366	A1306	C1366	C1246	C1246	A1183	C1114	G1047	A984	U921	C849	A716	A716
A1507	G1432	C1367	U1307	C1367	U1247	U1247	G1184	C1115	U1049	C985	G922	U850	G717	G717
G1508	A1434	G1368	U1308	C1368	A1248	A1248	G1185	C1116	C1050	A986	G925	G851	G718	G718
C1509	G1435	C1369	G1309	C1369	C1249	C1249	G1186	C1117	C1051	G987	G926	G852	G719	C719
U1510	G1436	G1370	G1310	C1370	A1250	A1250	G1187	C1118	U1052	G988	G927	G853	G720	G720
G1511	C1437	G1371	G1311	G1371	A1251	A1251	A1188	C1119	G1053	C989	G928	G854	G721	G721
U1512	G1438	U1372	G1312	U1372	A1252	A1252	C1189	C1120	C1054	U990	G929	G855	A722	A722
A1513	G1439	G1373	G1313	G1373	G1253	G1253	G1190	G1120	A1055	U991	C930	C856	U723	U723
C1514	G1440B	A1374	C1314	C1374	G1254	G1254	A1191	A1123	U1056	U992	C931	G861	G725	G725
C1515	A1440C	A1375	U1315	A1375	G1255	G1255	U1195	G1124	C1060	C993	C932	G862	C726	C726
G1516	G1440D	U1376	G1316	U1376	A1256	A1256	U1196	U1125	G1061	A994	G933	G863	A727	A727
G1517	A1440E	C1377	C1317	C1377	U1257	U1257	G1197	G1126	U1062	C995	C934	U863	A728	A728
A1518	C1378	C1378	A1318	C1378	G1258	G1258	C1197	G1127	C1063	A996	A935	A864	A729	A729
A1519	U1440H	G1379	A1319	C1379	C1259	C1259	U1198	C1128	G1063	C997	C936	A865	G730	G730
G1520	U1440I	U1380	C1320	U1380	C1260	C1260	U1199	C1129	G1064	C998A	A937	A866	C731	C731
G1521	A1440J	U1381	C1321	U1381	A1261	A1261	C1200	C1130	U1065	C998B	A938	G867	C732	C732
U1522	C1440K	C1382	C1322	C1382	C1262	C1262	A1201	G1131	C1066	U999	G839	U870	G736	G736
G1523	G1440L	C1383	G1323	C1383	C1263	C1263	G1202	C1132	A1000	A1000	C940	U871	A737	A737
C1524	C1440M	C1384	A1324	C1384	C1264	C1264	C1203	G1133	C1069	G1001	G941	U872	G800	G800
G1525	A1440P	C1388	C1325	C1388	G1265	G1265	A1204	G1134	U1070	G1002	G942	U873	C738	C738
C1527	C1389	C1389	C1326	C1389	G1266	G1266	U1205	U1135	C1071	G1003	U943	A874	C739	C739
G1528	U1390	U1390	C1327	U1390	C1267	C1267	G1206	U1136	G1072	A1004	G944	G874	U740	U740
G1529	G1464	U1391	C1328	U1391	A1268	A1268	G1207	G1137	U1073	A1005	G945	C875	G741	G741
G1530	G1465	G1392	A1329	G1392	A1269	A1269	U1207	G1138	G1074	C1006	A946	G876	C805	C805
A1531	U1393	G1392	U1330	G1392	C1270	C1270	C1210	G1139	C1075	U1010	G947	C877	C806	C806
U1532	C1466	U1393	G1331	U1393	G1271	G1271	U1211	C1140	G1076	G1011	C948	C878	A807	A807
G1467	U1532	A1394	G1272	U1532	G1272	G1272	U1212	C1141	C1077	U1012	C949	C879	C744	C744
C1533	C1395	A1333	A1333	C1395	G1273	G1273	A1213	G1142	U1078	U1012	U950	C880	C748	C748

• Molecule 1: 16S rRNA

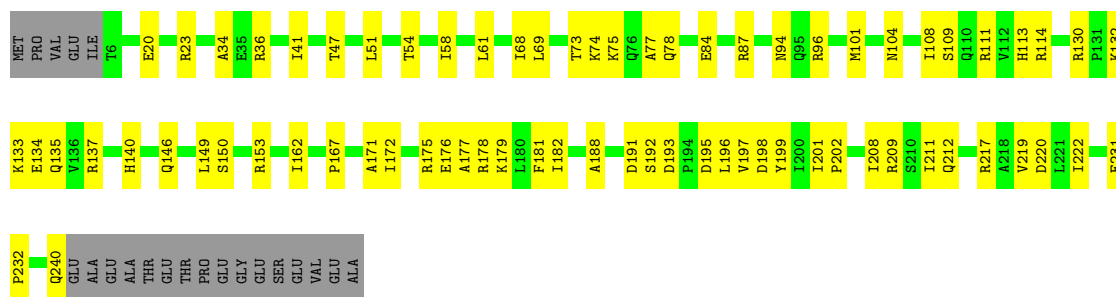
Chain XA:  28% 44% 21% 7%





• Molecule 2: 30S ribosomal protein S2

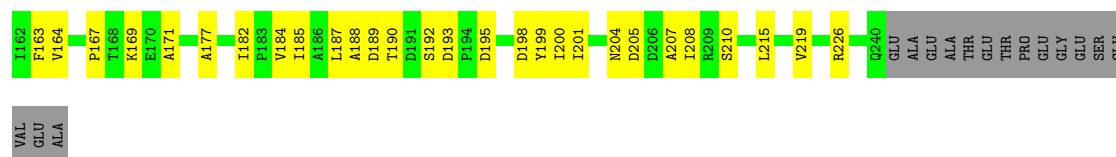
Chain QB: 64% 28% 8%



• Molecule 2: 30S ribosomal protein S2

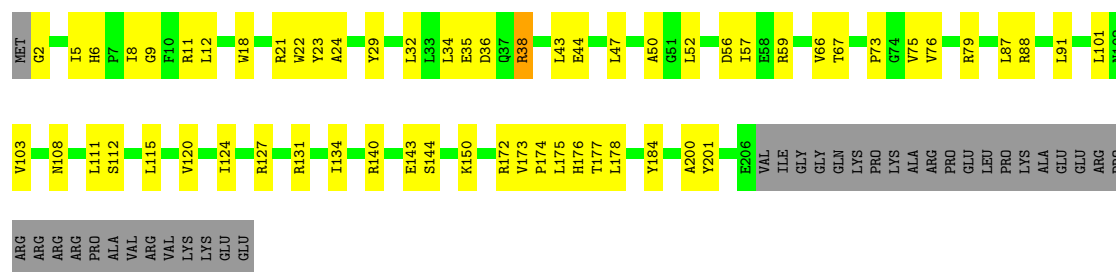
Chain XB: 69% 23% 8%





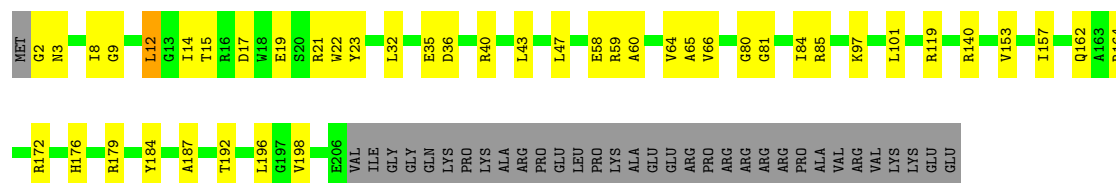
- Molecule 3: 30S ribosomal protein S3

Chain QC: 61% 25% 14%



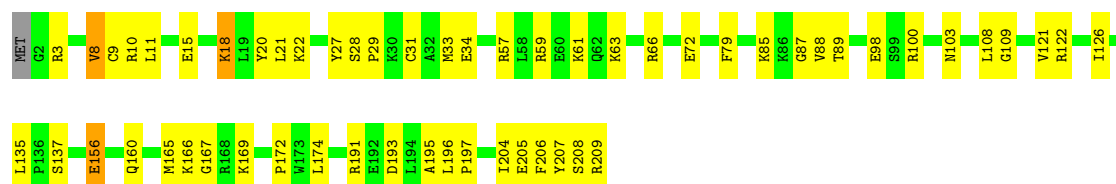
- Molecule 3: 30S ribosomal protein S3

Chain XC: 67% 18% 14%



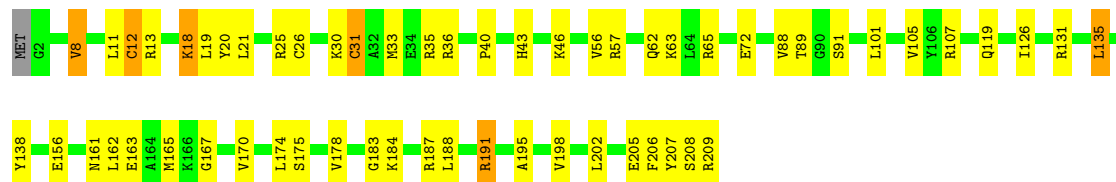
- Molecule 4: 30S ribosomal protein S4

Chain QD: 73% 25% 2%



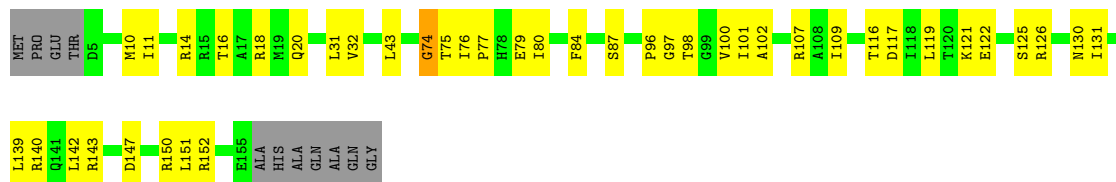
- Molecule 4: 30S ribosomal protein S4

Chain XD: 72% 25% 3%



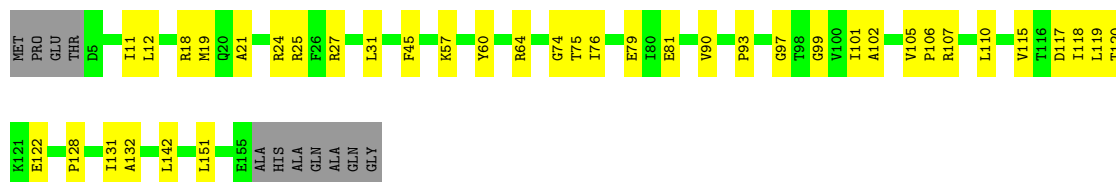
- Molecule 5: 30S ribosomal protein S5

Chain QE:  67% 25% 7%




- Molecule 5: 30S ribosomal protein S5

Chain XE:  69% 24% 7%



- Molecule 6: 30S ribosomal protein S6

Chain QF:  81% 19%




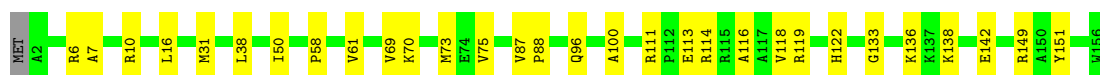
- Molecule 6: 30S ribosomal protein S6

Chain XF:  64% 36%




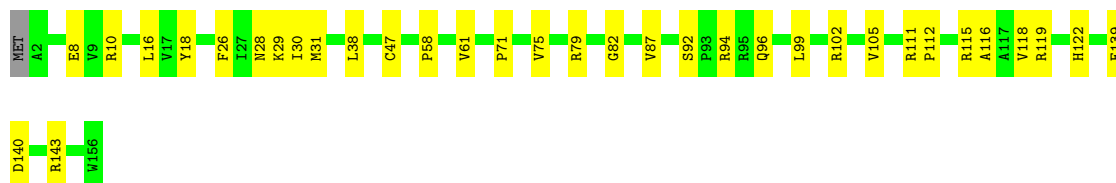
- Molecule 7: 30S ribosomal protein S7

Chain QG:  80% 19%



- Molecule 7: 30S ribosomal protein S7

Chain XG:  78% 22%




- Molecule 8: 30S ribosomal protein S8

Chain QH:  72% 28%



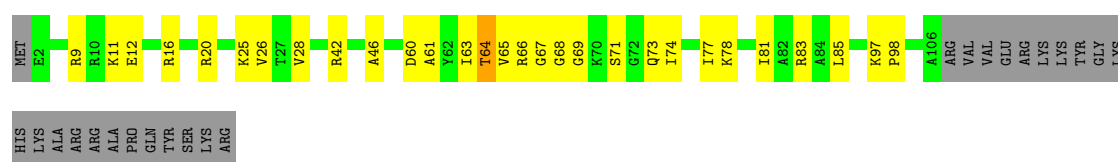
- Molecule 8: 30S ribosomal protein S8

Chain XH:  76% 23%



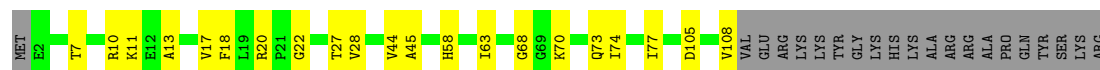
- Molecule 9: 30S ribosomal protein S9

Chain QI:  59% 22% 18%



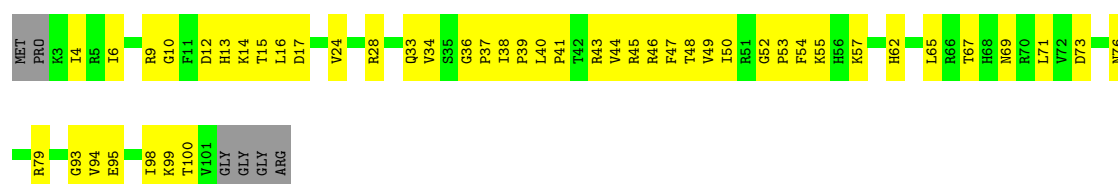
- Molecule 9: 30S ribosomal protein S9

Chain XI:  67% 16% 16%



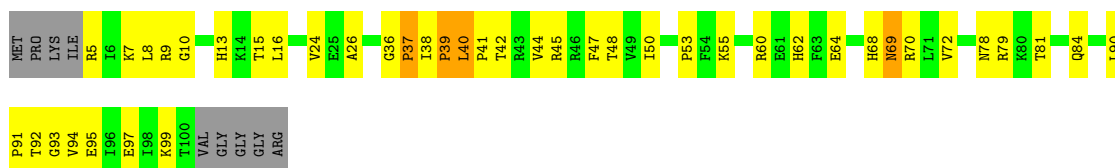
- Molecule 10: 30S ribosomal protein S10

Chain QJ:  50% 45% 6%



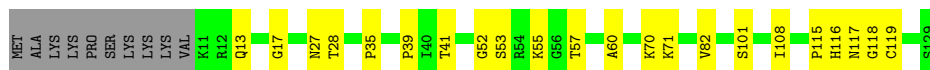
- Molecule 10: 30S ribosomal protein S10

Chain XJ:  50% 37% 9%



- Molecule 11: 30S ribosomal protein S11

Chain QK: 75% 17% 8%



- Molecule 11: 30S ribosomal protein S11

Chain XK: 72% 17% 10%



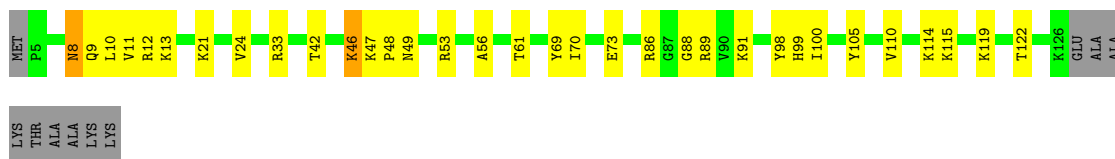
- Molecule 12: 30S ribosomal protein S12

Chain QL: 70% 23% 5%



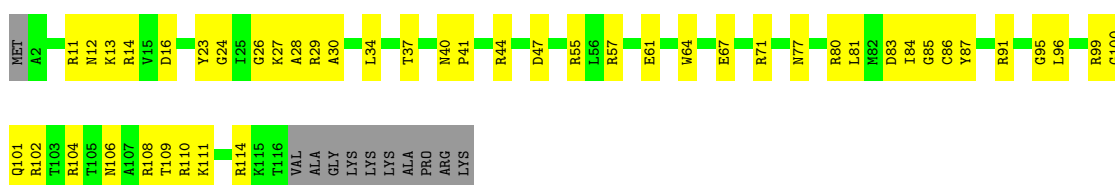
- Molecule 12: 30S ribosomal protein S12

Chain XL: 67% 23% 8%



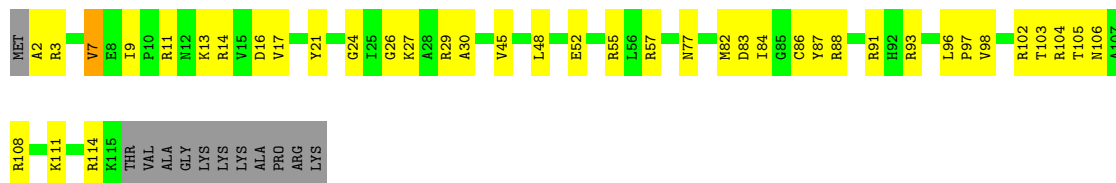
- Molecule 13: 30S ribosomal protein S13

Chain QM: 55% 37% 9%



- Molecule 13: 30S ribosomal protein S13

Chain XM:  59% 31% 10%



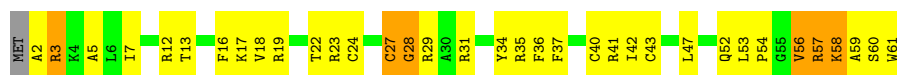
- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:  43% 51% 5%




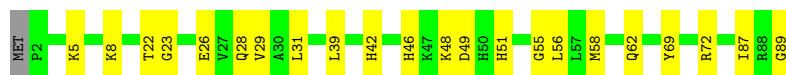
- Molecule 14: 30S ribosomal protein S14 type Z

Chain XN:  41% 48% 10%




- Molecule 15: 30S ribosomal protein S15

Chain QO:  74% 25%



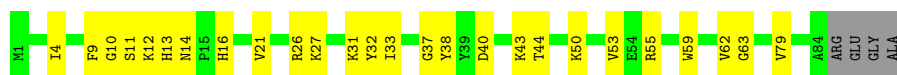
- Molecule 15: 30S ribosomal protein S15

Chain XO:  79% 19%



- Molecule 16: 30S ribosomal protein S16

Chain QP:  66% 30% 5%

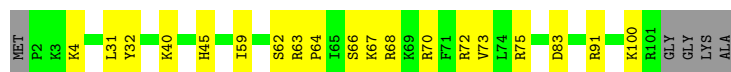
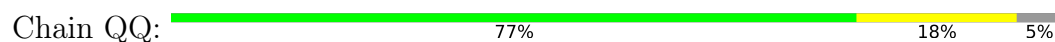


- Molecule 16: 30S ribosomal protein S16

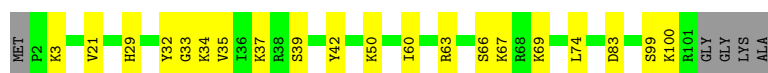
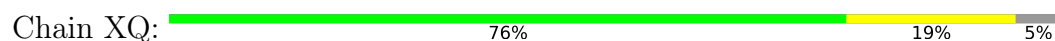
Chain XP:  72% 24% 5%



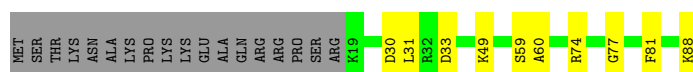
- Molecule 17: 30S ribosomal protein S17



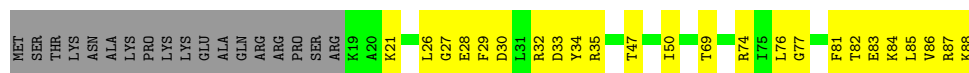
- Molecule 17: 30S ribosomal protein S17



- 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





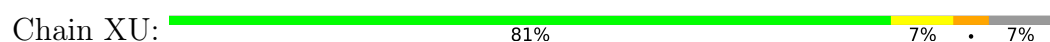
- Molecule 20: 30S ribosomal protein S20



- Molecule 21: 30S ribosomal protein Thx



- Molecule 21: 30S ribosomal protein Thx



- Molecule 22: tRNA(Pro)



- Molecule 22: tRNA(Pro)



- Molecule 23: mRNA



- Molecule 23: mRNA





- Molecule 24: 50S ribosomal protein L27

Chain R0: 81% 13% 5%



- Molecule 24: 50S ribosomal protein L27

Chain Y0: 81% 15% 5%



- Molecule 25: 50S ribosomal protein L28

Chain R1: 77% 20% 3%



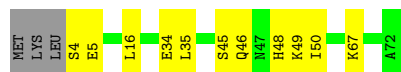
- Molecule 25: 50S ribosomal protein L28

Chain Y1: 82% 13% 5%



- Molecule 26: 50S ribosomal protein L29

Chain R2: 81% 15% 4%



- Molecule 26: 50S ribosomal protein L29

Chain Y2: 81% 14% 6%



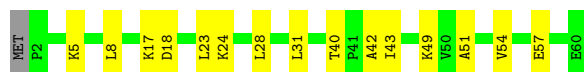
- Molecule 27: 50S ribosomal protein L30

Chain R3: 75% 23% 2%



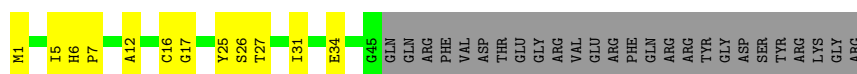
- Molecule 27: 50S ribosomal protein L30

Chain Y3: 73% 25% .



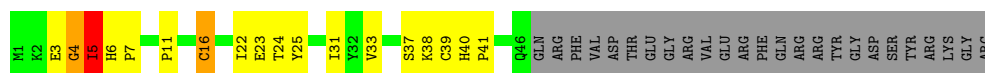
- Molecule 28: 50S ribosomal protein L31

Chain R4: 46% 17% 37%



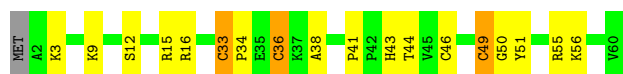
- Molecule 28: 50S ribosomal protein L31

Chain Y4: 39% 21% . . 35%



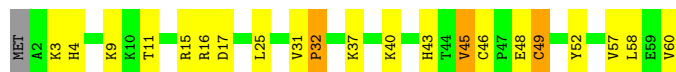
- Molecule 29: 50S ribosomal protein L32

Chain R5: 68% 25% 5% .



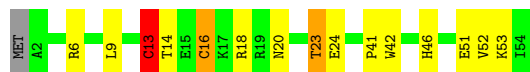
- Molecule 29: 50S ribosomal protein L32

Chain Y5: 63% 30% 5% .



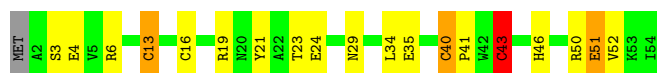
- Molecule 30: 50S ribosomal protein L33

Chain R6: 70% 22% . . .



- Molecule 30: 50S ribosomal protein L33

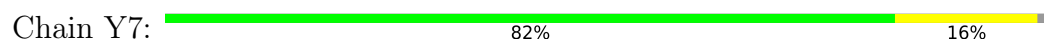
Chain Y6: 63% 28% 6% . . .



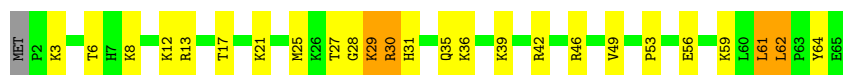
- Molecule 31: 50S ribosomal protein L34



- Molecule 31: 50S ribosomal protein L34



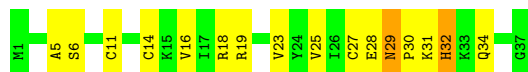
- Molecule 32: 50S ribosomal protein L35



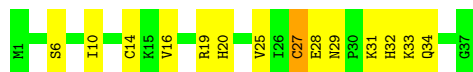
- Molecule 32: 50S ribosomal protein L35



- Molecule 33: 50S ribosomal protein L36



- Molecule 33: 50S ribosomal protein L36

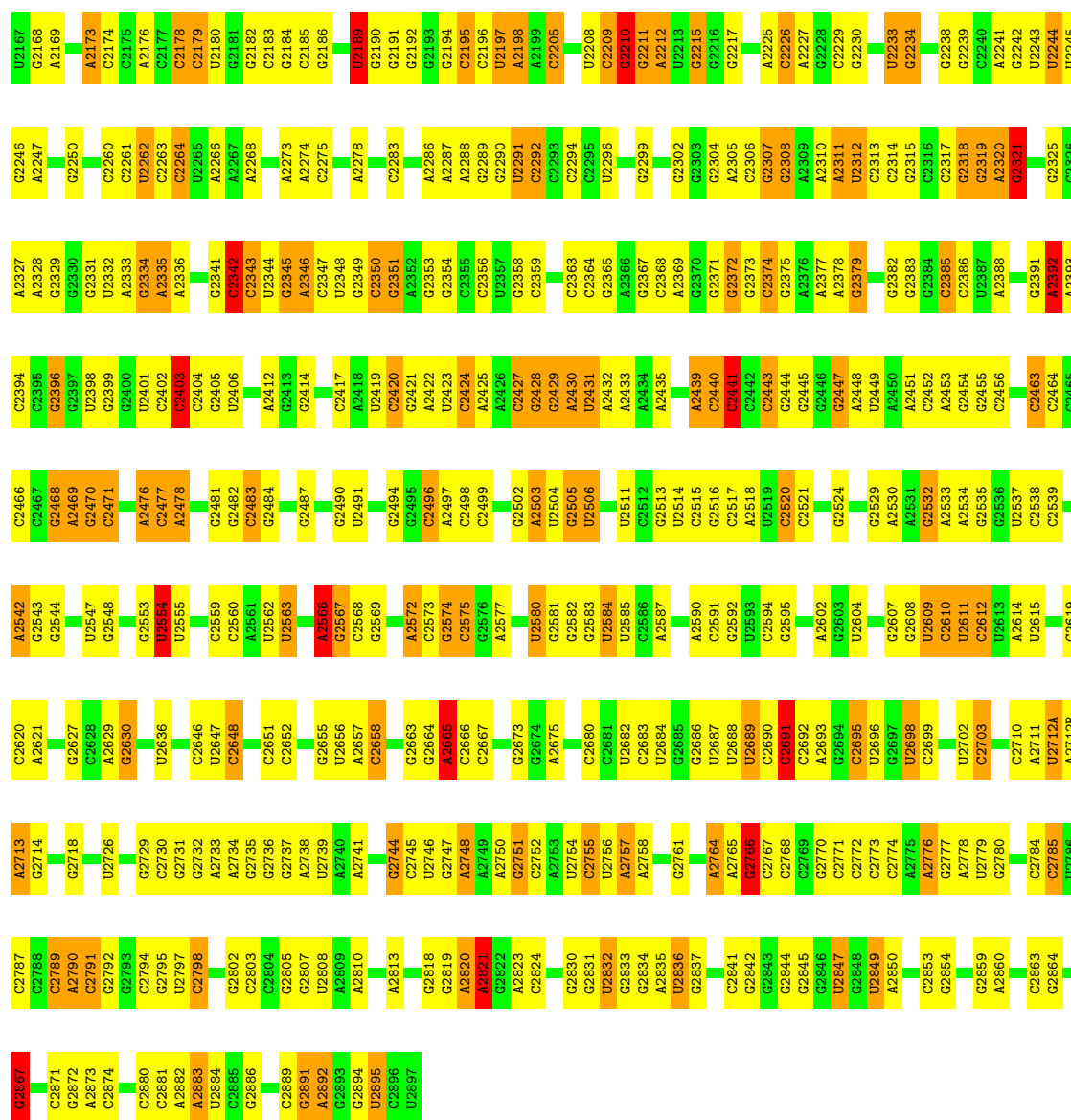


- Molecule 34: 23S rRNA



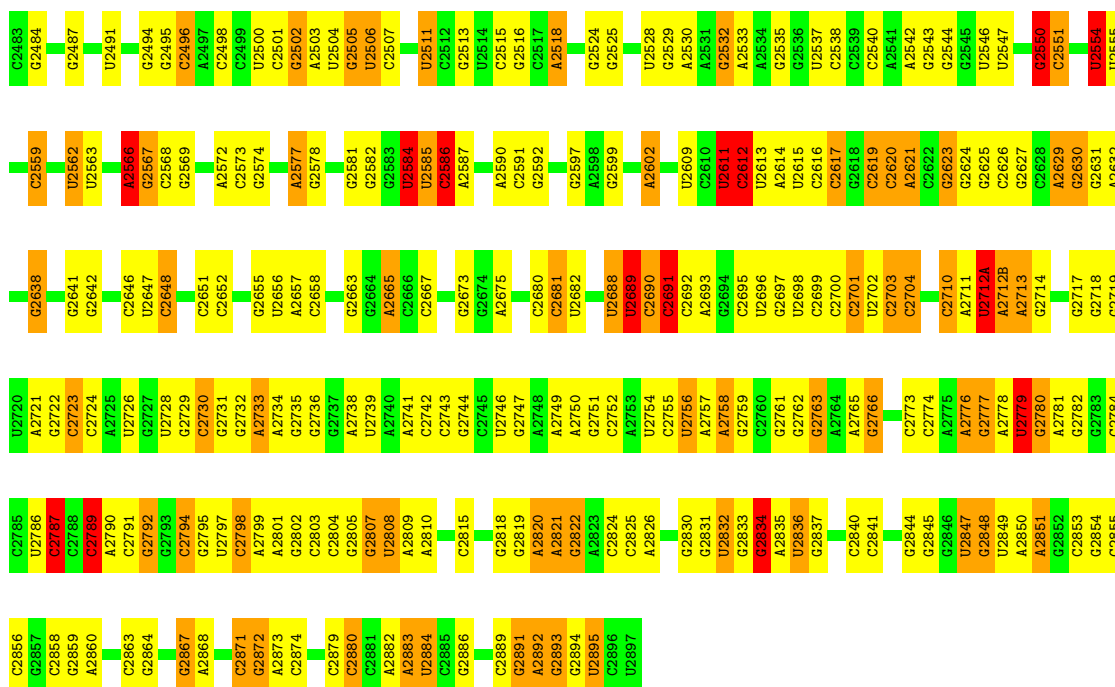
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G1015	U943	G859	C791	G	G	C595	G520	U448	C366	C253	C254	C184	C76	U
U1019	G944	U860	G792	G713	C	C596	G521		C370	A255	A256	C185	G81	C
A1020	A945			U714	C	G597	G522	C451	G371	G189	G190	G189	G82	A
A1021	G946	A863	C795	G715	G	U597	C523	G452	G372	A300	A301	A190	G83	G7
G1022		A864	C796	A716	C	G598	U524	C453	U373	A257	A258	A191	A8	A8
U1023	C949	A865	C797	G717	A	G599	U525	A454	A374	C302	C303	C192	A9	U9
G1024	G950	A866	C798		C		A526	C455	C375	U303	U304	C97	G97	
G1025	A953	U867	C799	C721	G	G602	C527	C456	C376	G304	G305	G98	G10	G10
U1026	G954	U868	A800	A722	C	A603	A528	A457		U305	U306	U99	G11	G11
C1027	C955	G869		G725	G	G604	A529	G458	G379	A197	A198	G101	U12	U12
A1028	G956	G873	A804	G726	G	C605	G530	U459	U380	C198	C199	G102	A13	A13
A1029	A957		C806		C	U607	C531	A460	G381	G307	G308	A103	A14	A14
G1030	U958	U877	U807	G729	C		A532	C461	G382	A265	U200	U104	G15	G15
G1031	A959	G883	C730	G730	C	C611	G533	G462	U383	C201	C202	C105	C18	C18
A1032	A960	C884	C731	C731	G	U612	U534	G463	U384	G266	U202	C106	C19	C19
U1033	C961					G613		U464	C385	C267			C20	C20
G1034		A655	C812	A734	A655	U614	C537	G465	U387	C270D	G205	U114		
C1041	C965	G856	U813		G856	G615	G539	A466	G386	C270E	U206	U118	G23	G23
G1042	G966	U857	C814	G738	U857	G616	G540	G467	G388	C270F	A207	A119	G24	G24
C1043	C967	C888	C815	G739	C888	A617	C541		G389	U270G		A119	U25	U25
G1044	G968	A890	C816	U740	C859	G617	C544	A470	A390	C270H	C210	U120	G26	G26
A1045	U969	G894	C817	G741	G894	G618A	C545	A471	G391		G212	G121	G27	G27
A1046	C970	U895	C818	G742	G895	G618B	C546	A472	C392	C270L	G213	G125	A28	A28
G1047	C971	A896	A819		G896	G620	A547		U395	U270M	A214		U29	U29
A1048	G972		A820		G897	A621		U475		U270N	G215	C129	G30	G30
U1049	A973	A1048	U821	U746	G898	G622	G551	G476	G400	U270P	A216		C31	C31
C1050	G974A	C903	U822	G748	A670	C623	G552	A477		C270Q	G217	G131	U33	U33
A1050	C974B	C904	G823	C749	C671	G624	U553	A479	C404	C270R	A218	C134	C34	C34
G1051	G975	U905	A824		G672	G625	U554	A480	U405	C270S	G219	G135	G35	G35
C1052		U906	C825	A752	C673	U626	G556	A481	G406	C270T	G220		G36	G36
U1053	A980	U907	U826	C753	G674	A627	U557	A482	G407	C270U	A221	G137B		
G1054		A910	U827	C754	A675	G628	G558		G408	C270V	A222		C39	C39
U1055	A984	A911	U828	C755	A676	G629	G559	C486	C409	C270W	A223	A140	C40	C40
G1056	C985		A829	C756	A677	G630	G563	C487	G410		G224	A141A		
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G1060	A988	G916	U833	G759	G880	A633	U568	G495	G342	C271B	A228	C144	C47	C47
U1061	A990	A917	C834			C634	U569	G496	G343	C271C	U230	G145	G48	G48
G1062		A918	A835	G765	C883	G635	G570	A497	A345	U271D	G231		A49	A49
		G919		G769	G884	G636	G573	U499	A346	G271E	G232	A149	U50	U50
U1065			C838		A885	A637	C574	G500	G347	G272	A233	C150	G51	G51
U1066	G993	U822	U839	G769	G886	G638	C574		G348	G273A	C234	C151		
A1067	C994	C923	C840		C887	U639	A575	A503	G351		C235	G152	G54	G54
G1068	C995	G776		G776	U888	C640	U576	U504	G352	G275	C236	C153	G55	G55
A1069	A996	A777		A777	G889	G641	U577	A505	A428	A276	C237	G154		
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G1071	C998	A926	U847	U779	C691	A643	A578	G508	U434	A278		U161	A64	A64
C1072	U999	G929	U848	G780	C692	A644	C579	C509	A359	C279	G242	U	C65	C65
A1073	A1000	U930	A849		G895	C645	C580	C509	U362	C280	U243	U	C66	C66
G1074	C1005	G931	C850	A782		A646	C581	U511	A244	G281	A244	U	U67	U67
C1075		G932	U851	A783	C998	G651	G582	G512	A363A	A282	G245	G171	G68	G68
U1076		A933	G852	A784	G702	C652	G583	A514	G363B	U284	C246	C172	C69	C69
A1077	C1008	G835	G853	G785	G703	A653	A586	A514	G363D	C285	G247	G173	G70	G70
U1082		C936	G854	C788	U703	A654A		A515	G363E	C286	G248		A71	A71
U1083	G1011		G855	U787	G704	G654B	C589	C516	U363F	C287	C249	G177	U72	U72
U1084	C1013	A941	C957	A789	G704	G654C	A590	C517	A363G	C288	G250	G178	A73	A73
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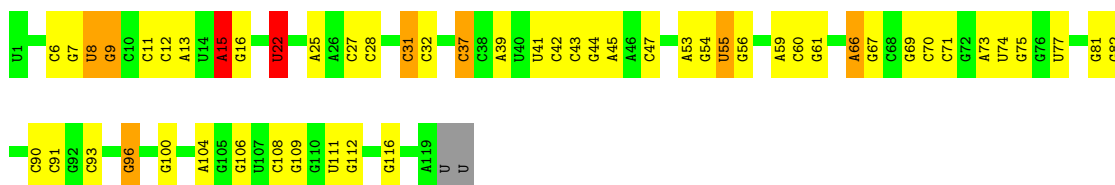


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A1273	G1059	G993	U1066	U1066	G994	A918	U848	G775	G687	A647	G583	C509	G438	A363G	C292
A1274	U1060	C1122	U1067	U1067	G994	A919	A849	G776	U688	G647	C510	C510		C364	
A1275	U1061	C1123	U1068	U1068	C995	C914	C844	A777	A689	G648	G585	U511	G443	C365	C296
G1195	U1062	C1124	U1069	U1069	A996	C915	C845	G778	G690	G649	G586	G512	G444	C366	C297
G1196	U1063	C1125	U1070	U1070	G997	G916	C846	U779	C691	C650	A586	A513	G445	G370	C298
A1276	U1064	C1126	U1071	U1071	C998	A917	U847	G780	C692	G651	C589	A514	G446	A371	A300
G1277	U1065	C1127	U1072	U1072	G998	A918	U848	A781	G693	C652	A590	A515	G447	A372	A300
G1278	U1066	C1128	U1073	U1073	U1000	A919	A849	A782	G694	A653	C591	G518	G448	U373	U303
G1279	U1067	C1129	U1074	U1074	A1000	G920	C850	A783	G695	A654A	G592	G519	G449	A374	G304
G1280	U1068	C1130	U1075	U1075	C1005	G921	U851	A784	A699	G654B	G593	U519	G450	A375	U305
A1204	U1069	C1131	U1076	U1076	G1008	G922	G852	A785	G700	C654C	G594	U520	G451	C376	U306
U1205	U1070	C1132	U1077	U1077	C1009	C923	G853	C786	G701	G	C595	G521	G452	C377	G307
G1206	U1071	C1133	U1078	U1078	A1009	C924	G854	U787	G704	G	G596	G522	G453		
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U1211	U1073	C1135	U1080	U1080	A1011	C926	G856	A789	G706	G	C598	U524	G455	G381	A312
G1212	U1074	C1136	U1081	U1081	G1012	G927	C857	C790	U709	C	G599	U525	G456	U382	
G1213	U1075	C1137	U1082	U1082	G1013	G928	C858	C791	G710	G	G600	A526	G457	U383	
G1214	U1076	C1138	U1083	U1083	U1014	G929	U858	C792	G713	G	C601	C527	G458	U384	C316
G1215	U1077	C1139	U1084	U1084	U1015	G930	U859	A793	G714	A	G602	A528	G459	C385	G317
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G1217	U1079	C1141	U1086	U1086	G1017	G932	A861	C795	G716	C	G604	A530	G461	U387	C319
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G1219	U1081	C1143	U1088	U1088	G1019	C934	G863	C797	G718	G	U607	A532	G463	G389	G321
G1220	U1082	C1144	U1089	U1089	U1020	C935	G864	C798	G719	G	U608	G533	G464	A390	A322
G1221	U1083	C1145	U1090	U1090	A1021	C936	G865	G799	G720	C	A609	U534	G465	G391	G323
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G1234	U1096	C1158	U1103	U1103	U1037	A960	G884	C815	G740	C	A621	U555	A481	C409	C343
G1235	U1097	C1159	U1104	U1104	G1038	G961	G885	C816	G741	C	G622	G556	A482	G410	G344
G1236	U1098	C1160	U1105	U1105	G1039	G962	G886	C817	G742	C	G623	U557	A483	G411	A345
G1237	U1099	C1161	U1106	U1106	U1040	G963	G887	G818	G743	C	G624	G558	C484	A412	A346
G1238	U1100	C1162	U1107	U1107	C1041	C964	G888	G819	A752	C	G625	G559	C485	C413	A347
G1239	U1101	C1163	U1108	U1108	C1042	C971	G889	A820	G753	C	G626	G563	C486	C414	G348
G1240	U1102	C1164	U1109	U1109	C1043	A972	G890	U821	G754	C	G627	C564	C487	C415	
G1241	U1103	C1165	U1110	U1110	G1044	A973	G891	U822	G755	C	G628	C565	C488	C416	G352
G1242	U1104	C1166	U1111	U1111	C1045	G974A	G892	U823	G756	C	G629	U568	G491	C417	
G1243	U1105	C1167	U1112	U1112	A1046	C975	G893	U824	G757	C	A632	U569	G494	G418	G356
G1244	U1106	C1168	U1113	U1113	A1047	C976	G894	A825	G758	C	A633	U570	G495	C419	A357
G1245	U1107	C1169	U1114	U1114	A1048	C977	G895	U826	G759	C	A634	G573	G496	C420	U358
G1246	U1108	C1170	U1115	U1115	A1049	C978	G896	U827	G760	C	A635	U574	G497	G423	A359
G1247	U1109	C1171	U1116	U1116	A1050	A983	G897	U828	G761	C	A636	U575	A498	A423	G360
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G1249	U1111	C1173	U1118	U1118	G1052	C985	G899	U830	G763	C	A638	U577	G500	A428	G362A
G1250	U1112	C1174	U1119	U1119	G1053	C986	G900	U831	G764	C	A639	U578	G501	A429	G363A
G1251	U1113	C1175	U1120	U1120	G1054	C987	G901	U832	G765	C	A640	U579	G502	A430	G363B
G1252	U1114	C1176	U1121	U1121	A1055	C988	G902	U833	G766	C	A641	U580	G503	G431	G363C
G1253	U1115	C1177	U1122	U1122	G1056	C989	G903	U834	G767	C	A642		G504	U432	G363D
G1254	U1116	C1178	U1123	U1123		C990	G904	U835	G768	C	A643		G505	A433	
G1255	U1117	C1179	U1124	U1124		U905	G905	U836	G769	C	A644		G506	A434	
G1256	U1118	C1180	U1125	U1125		U906	G906	U837	G770	C	A645		G507	A435	
G1257	U1119	C1181	U1126	U1126		U907	G907	U838	G771	C	A646		G508	A436	
G1258	U1120	C1182	U1127	U1127		U908	G908	U839	G772	C	A647		G509	A437	
G1259	U1121	C1183	U1128	U1128		U909	G909	U840	G773	C	A648		G510	A438	
G1260	U1122	C1184	U1129	U1129		U910	G910	U841	G774	C	A649		G511	A439	
G1261	U1123	C1185	U1130	U1130		U911	G911	U842	G775	C	A650		G512	A440	
G1262	U1124	C1186	U1131	U1131		U912	G912	U843	G776	C	A651		G513	A441	
G1263	U1125	C1187	U1132	U1132		U913	G913	U844	G777	C	A652		G514	A442	
G1264	U1126	C1188	U1133	U1133		U914	G914	U845	G778	C	A653		G515	A443	
G1265	U1127	C1189	U1134	U1134		U915	G915	U846	G779	C	A654		G516	A444	
G1266	U1128	C1190	U1135	U1135		U916	G916	U847	G780	C	A655		G517	A445	
G1267	U1129	C1191	U1136	U1136		U917	G917	U848	G781	C	A656		G518	A446	
G1268	U1130	C1192	U1137	U1137		U918	G918	U849	G782	C	A657		G519	A447	
G1269	U1131	C1193	U1138	U1138		U919	G919	U850	G783	C	A658		G520	A448	
G1270	U1132	C1194	U1139	U1139		U920	G920	U851	G784	C	A659		G521	A449	
G1271	U1133	C1195	U1140	U1140		U921	G921	U852	G785	C	A660		G522	A450	
G1272	U1134	C1196	U1141	U1141		U922	G922	U853	G786	C	A661		G523	A451	
G1273	U1135	C1197	U1142	U1142		U923	G923	U854	G787	C	A662		G524	A452	
G1274	U1136	C1198	U1143	U1143		U924	G924	U855	G788	C	A663		G525	A453	
G1275	U1137	C1199	U1144	U1144		U925	G925	U856	G789	C	A664		G526	A454	
G1276	U1138	C1200	U1145	U1145		U926	G926	U857	G790	C	A665		G527	A455	
G1277	U1139	C1201	U1146	U1146		U927	G927	U858	G791	C	A666		G528	A456	
G1278	U1140	C1202	U1147	U1147		U928	G928	U859	G792	C	A667		G529	A457	
G1279	U1141	C1203	U1148	U1148		U929	G929	U860	G793	C	A668		G530	A458	
G1280	U1142	C1204	U1149	U1149		U930	G930	U861	G794	C	A669		G531	A459	
G1281	U1143	C1205	U1150	U1150		U931	G931	U862	G795	C	A670		G532	A460	
G1282	U1144	C1206	U1151	U1151		U932	G932	U863	G796	C	A671		G533	A461	
G1283	U1145	C1207	U1152	U1152		U933	G933	U864	G797	C	A672		G534	A462	
G1284	U1146	C1208	U1153	U1153		U934									

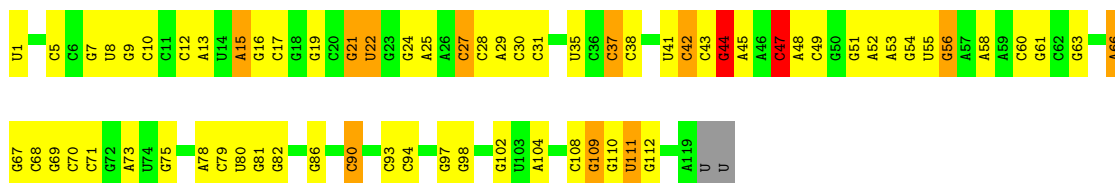
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U2423	G2353	C2284	U2197	C2136	U2076	G2010	A1929	C1838	C1755	C1657	A1570	C1501	A1427	A1359
C2424	G2354	C2285	A2198	C2137	A2077	G2011	G1930	C1839	G1756	C1658	A1571	C1502	C1428	A1360
A2425	G2355	C2286	A2199	C2138	C2078	G2012	U1931	C1843	A1762	C1659	G1572	U1503	G1429	G1361
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C2427	U2357	A2287	U2208	C2140	G2080	A2014	A1936	A1847	G1764	C1661	C1574	C1505	U1431	C1363
G2428	A2288	A2288	C2209	C2142	C2081	A2015	A1937	A1848		C1662	C1575	C1506	C1432	G1364
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A2430	C2359	G2290	G2211	C2144	C2083	A2019	A1939	G1850	G1772	C1664	U1577	A1508		A1367
U2431	G2360	U2291	G2212	U2145	C2084	A2020	A1940		C1773	C1665	U1578	C1509	C1437	A1368
A2432	G2362	C2292	A2212	C2146	C2085	C2021	U1940	A1853	A1773	C1666	A1579	A1510		A1444B
C2433	C2363	C2293	U2213	G2147	U2086	U2022	C1941	A1854	G1775	C1667	A1580	A1511	C1445	G1369
A2434	C2364	C2294	G2215	U2148	G2087	G2023	U1944		U1776	C1670	G1581	G1512	C1446	C1370
A2435		C2295	A2225	G2149	U2088	G2024		G1857	G1777	U1671	G1582	G1513	C1447	G1371
G2436	C2368	G2296	A2226	U2150	U2089	C2025	C1947	G1858	U1778	C1672	A1583	C1515	G1448	U1372
U2437	A2369	A2227	G2227	G2151	G2090	C2026	C1948		U1779	C1673	A1585	U1516	G1449A	C1375
U2438	G2370	G2228	A2227	U2152	U2091	G2027	G1949	U1864	U1780	C1674	A1587	G1521	G1449B	C1376
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C2442	C2373	G2232	G2233	G2155	G2094	G2032	A1952	A1871	A1783	C1686	C1598	U1523	G1455	A1379
C2443	C2374	U2232	G2233	G2156	U2096	A2033	A1953	A1872	U1789	C1687	C1599	G1524	G1456	G1380
G2444	A2377	G2307	U2233	G2157	C2097	U2034	G1954	G1878	A1784	U1690			A1457	
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G2446	G2379	A2310	G2235	G2159	U2099	C2036	U1956	C1880	C1783	A1689	C1604	A1529	G1459	G1385
G2447	C2380	G2311	G2236	G2160	G2100	G2037	C1957	C1881	C1788	A1690	C1605	C1533	A1460	G1386
A2448	G2381	U2312	G2237	C2161	G2101	G2038	C1958	C1882	A1785	C1686	G1606	C1534	G1461	C1387
U2449	G2382	C2313	G2238	G2162	U2102	C2039	C1959	G1883	A1791	C1694	C1607	U1535	C1462	G1388
A2450	G2383	G2314	G2239	C2163	C2103	C2040	G1969	A1884		C1695	A1608	A1536	C1464	C1389
A2451	G2384	G2315	C2240	C2164	G2104		U1963	A1885	U1794		A1609	A1536	G1465	
C2452	G2385	A2241	G2241	G2165	C2105	C2043	G1964		C1795	C1698	A1610	C1537	G1466	U1391
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G2454	A2388	G2316	U2245	G2167	C2107	G2045	A1966	A1889	C1797	C1699	C1612	G1539	C1468	A1393
G2455	G2319	G2319	G2246	G2168	C2108	G2046	C1967	A1900	U1798	A1700	G1613	G1540	A1469	U1394
C2456	A2320	G2320	G2247	A2169	U2109	U2047	G1968	C1893	G1799	A1701	A1614	U1541	G1470	A1395
U2457	G2321	G2321	A2247	A2170	G2110	G2048	A1969	G1899	C1800	G1707	G1615	G1542	A1471	U1396
G2458	A2322	A2322	G2248	A2171	C2111	G2049	A1970	A1900	G1801	C1708	A1616	A1543	A1472	U1397
A2459	G2323	G2323	U2249	U2172	G2112	C2050	A1971	A1900	A1802	C1709	A1617	C1544		C1398
U2460	C2324	C2324	G2250	A2173	U2113	A2051	A1972	G1903	A1803	C1710	A1618	A1545A	G1476	G1400
G2461	G2325	C2325	G2251	C2175	A2114	G2052	A1981		A1812	C1711		C1546	A1477	G1401
U2462	G2252	G2252	G2252	A2176	G2115	G2053	C1982	G1906	G1813		A1634	C1547	G1478	C1402
					A2117	C2055		G1907		G1718		C1548	G1479	C1403
C2465	U2261	C2261	C2261	C2179	U2118	C2056	G1989	C1908	G1816	G1725	C1638	C1549	G1480	C1404
C2466	U2262	C2262	C2262	U2180	A2119	G2058	C1990	C1909	G1817		U1639	C1554	U1482	U1405
C2467	C2263	C2263	C2263	U2181	G2120	A2059	U1991	C1910	U1818	G1728	C1640	A1554	U1483	U1406
A2469	U2265	C2265	C2265	G2182	G2121	A2060	G1992	A1919	A1819	U1729	A1641	G1555	G1484	C1407
G2470	A2266	G2266	G2266	C2183	U2122	G2061	U1993	A1914	U1820	U1730	G1644	C1556	G1485	C1408
C2471	G2267	A2267	A2267	G2184	G2123	A2062	C1994	C1914		G1731	C1645	C1557	A1486	C1409
G2472	A2268	A2268	A2268	C2185	G2124	C2063	U1995	U1915	A1825	G1732	G1646	A1558	G1487	G1410
U2473	G2271	G2271	G2271	G2186	G2125	C2064	C1996		G1826	U1733	C1646	G1559		C1411
C2474	U2272	C2272	C2272	U2187	A2126	C2065		A1918	C1827	G1734	G1647	C1560	A1490	A1412
G2475	G2341	G2341	U2273	C2188	G2127	C2066	C1999	A1919	G1828	C1735	C1648	G1561	C1493	U1415
C2476	U2342	C2342	C2342	U2193	C2128	C2066	U1999	G1918	A1829	G1741	G1649	G1562	A1494	G1416
	U2343	G2343	G2343	G2190	G2129	A2069	G2001	C1920	C1830	C1742	G1650	G1563	C1495	C1417
G2479	C2345	G2345	C2275	C2191	U2130	G2070	G2002	U1923	G1831	G1743	G1651	C1564	A1496	G1418
C2480	A2346	A2346	G2192	G2192	U2131	A2071	G2003	C1924	U1834		A1652	C1565	U1497	A1419
G2481	G2347	G2347	G2193	G2193	U2132	G2072	G2004	C1925	G1835		G1750	A1666	U1498	G1420
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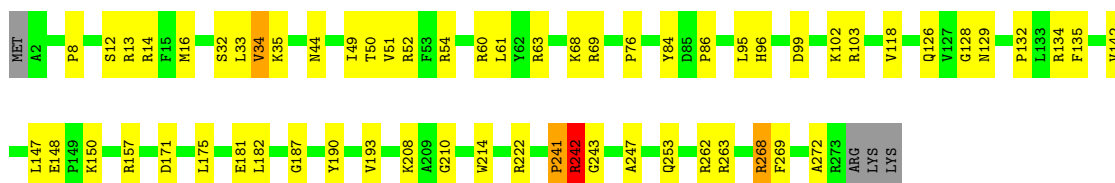
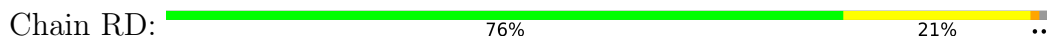
• Molecule 35: 5S rRNA



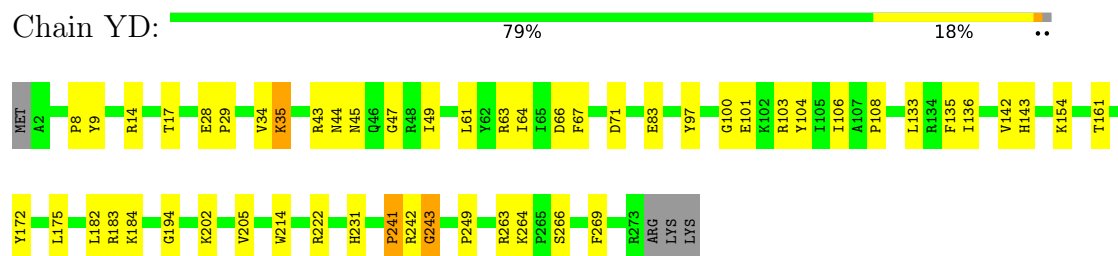
• Molecule 35: 5S rRNA



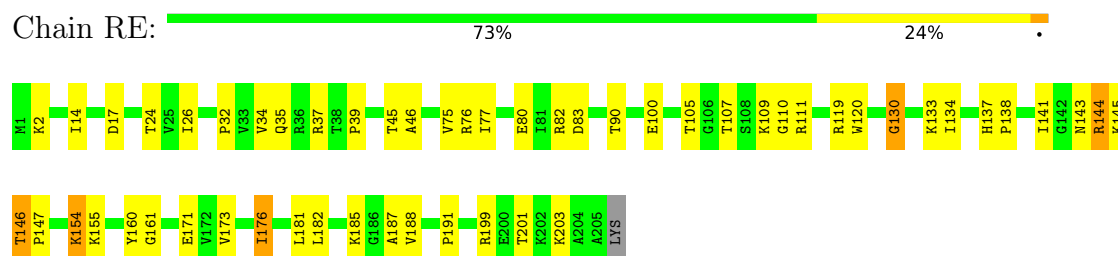
• Molecule 36: 50S ribosomal protein L2



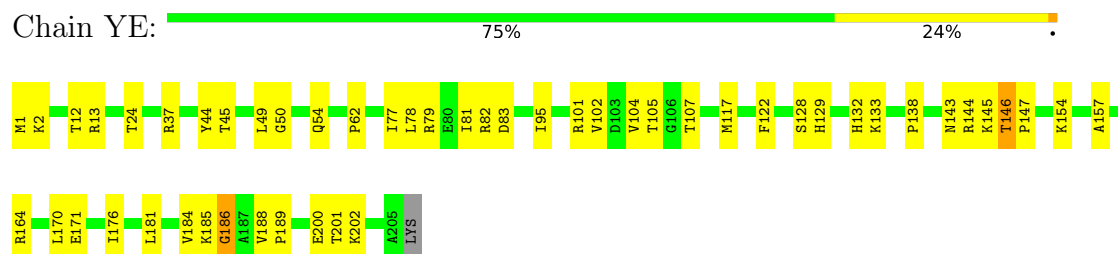
- Molecule 36: 50S ribosomal protein L2



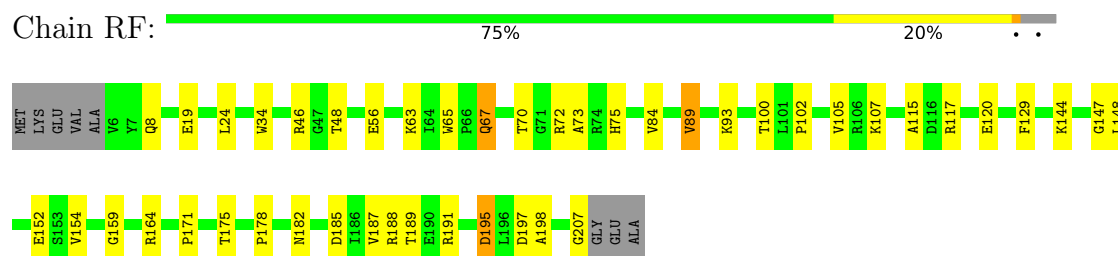
- Molecule 37: 50S ribosomal protein L3



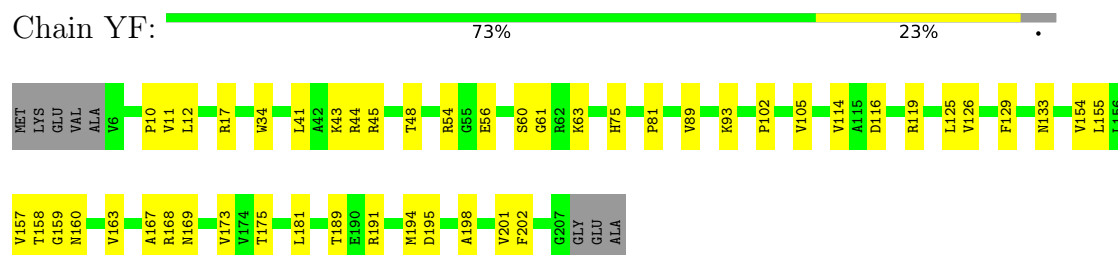
- Molecule 37: 50S ribosomal protein L3



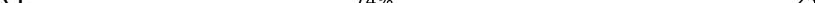
- Molecule 38: 50S ribosomal protein L4

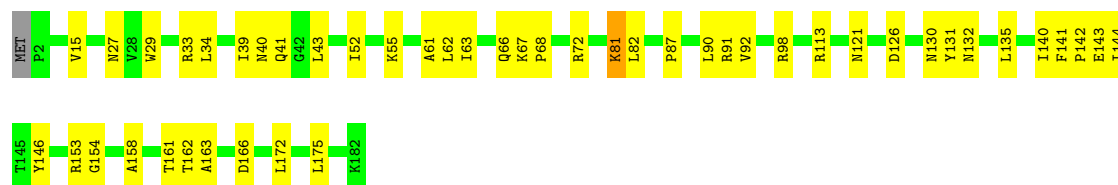


- Molecule 38: 50S ribosomal protein L4

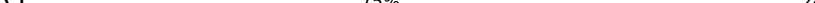


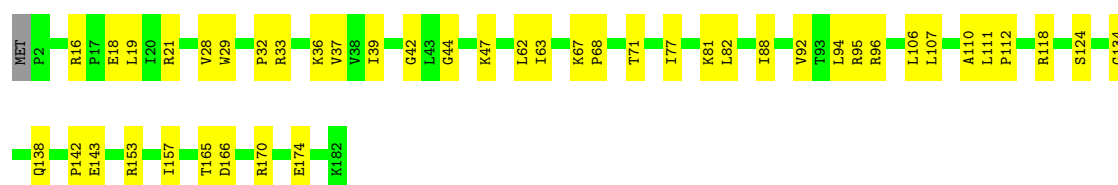
- Molecule 39: 50S ribosomal protein L5

Chain RG:  74% 25% ..



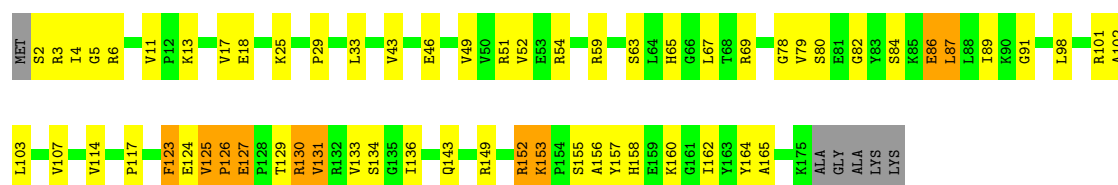
- Molecule 39: 50S ribosomal protein L5

Chain YG:  75% 24%




- Molecule 40: 50S ribosomal protein L6

Chain RH:  62% 29% 6% .



- Molecule 40: 50S ribosomal protein L6

Chain YH:  77% 17% ...

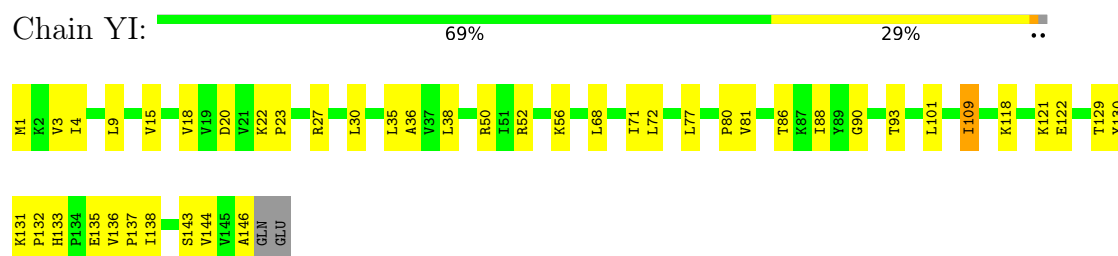


- Molecule 41: 50S ribosomal protein L9

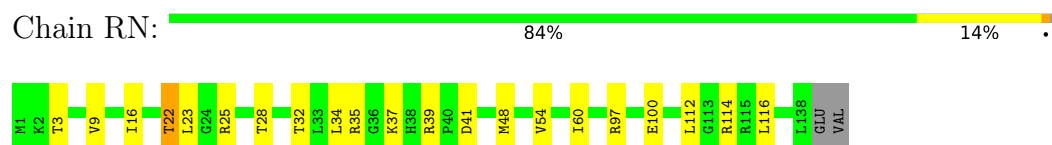
Chain RI:  72% 24% ..



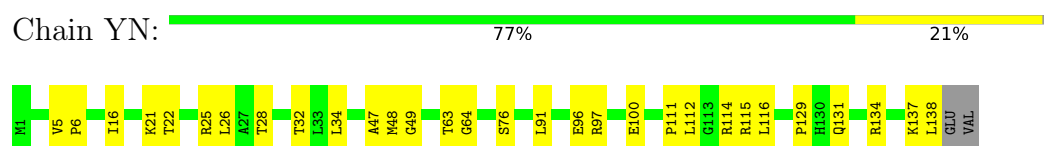
- Molecule 41: 50S ribosomal protein L9



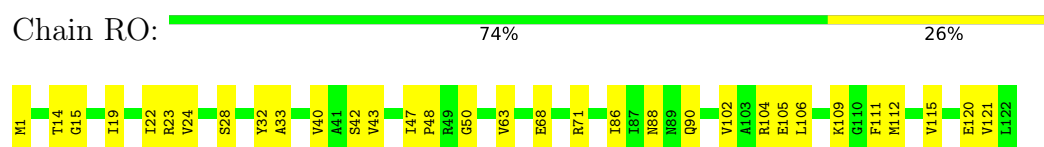
- Molecule 42: 50S ribosomal protein L13



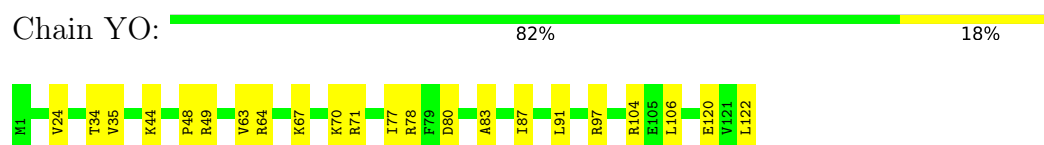
- Molecule 42: 50S ribosomal protein L13



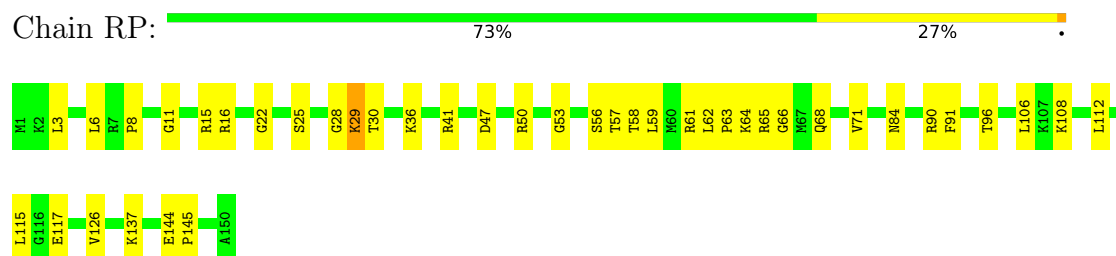
- Molecule 43: 50S ribosomal protein L14



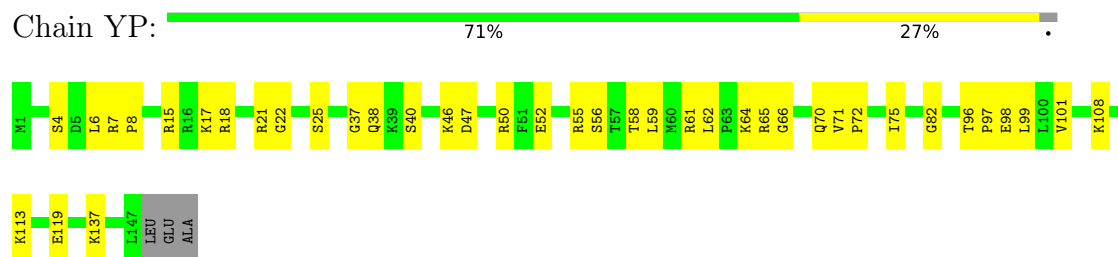
- Molecule 43: 50S ribosomal protein L14



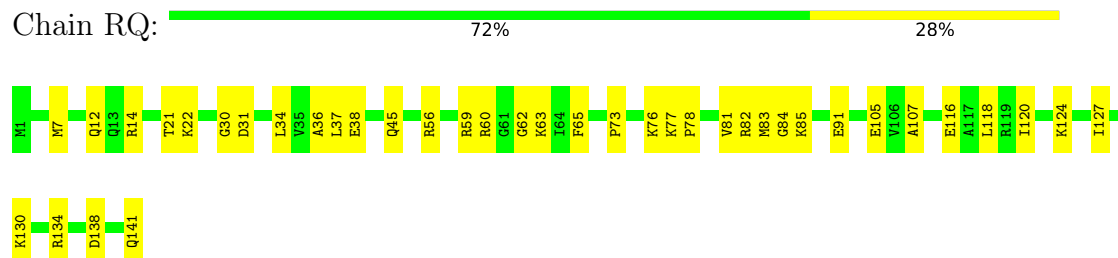
- Molecule 44: 50S ribosomal protein L15



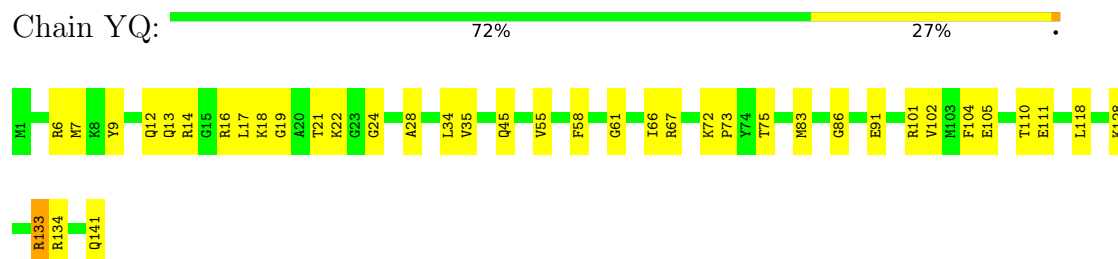
- Molecule 44: 50S ribosomal protein L15



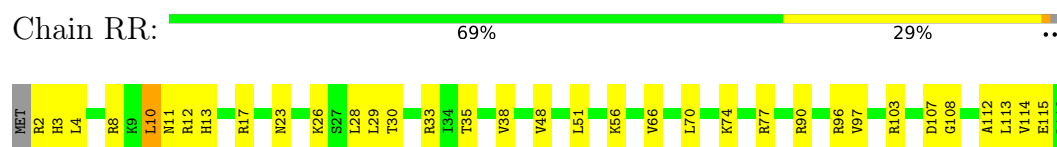
- Molecule 45: 50S ribosomal protein L16



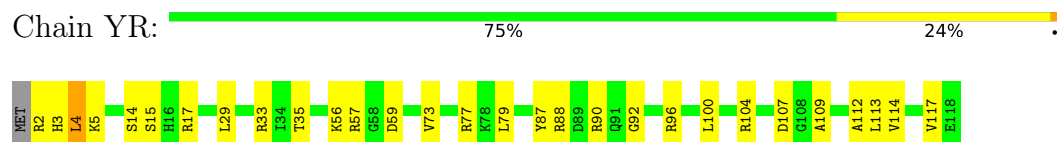
- Molecule 45: 50S ribosomal protein L16



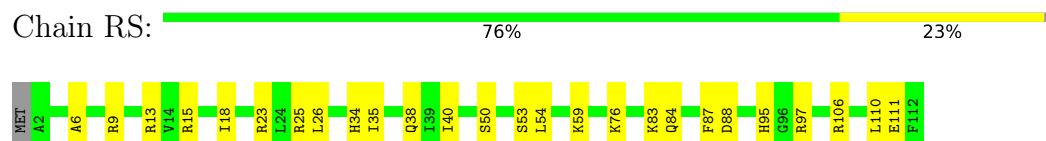
- Molecule 46: 50S ribosomal protein L17




- Molecule 46: 50S ribosomal protein L17



- Molecule 47: 50S ribosomal protein L18



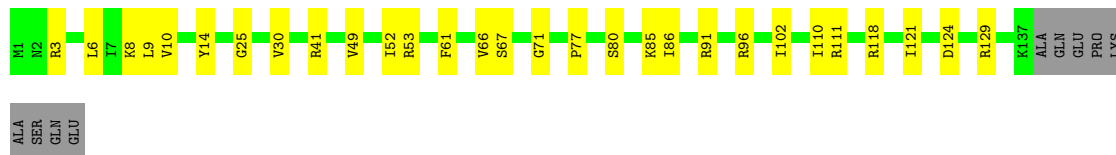
- Molecule 47: 50S ribosomal protein L18

Chain YS:  79% 19% ...



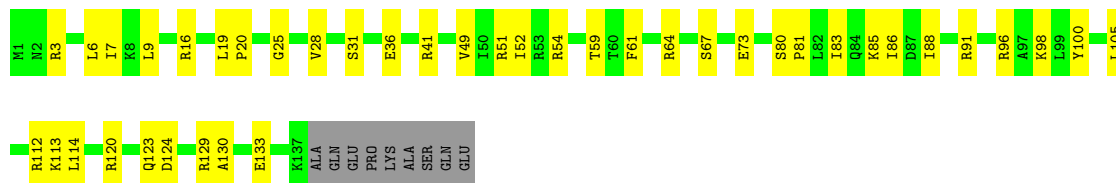
- Molecule 48: 50S ribosomal protein L19

Chain RT:  74% 20% 6%



- Molecule 48: 50S ribosomal protein L19

Chain YT:  66% 28% 6%




- Molecule 49: 50S ribosomal protein L20

Chain RU:  70% 26% ..




- Molecule 49: 50S ribosomal protein L20

Chain YU:  83% 14% ..




- Molecule 50: 50S ribosomal protein L21

Chain RV:  76% 24%




- Molecule 50: 50S ribosomal protein L21

Chain YV:  80% 20%




- Molecule 51: 50S ribosomal protein L22

Chain RW:  78% 22%




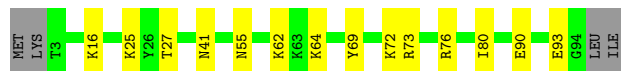
- Molecule 51: 50S ribosomal protein L22

Chain YW:  78% 22%




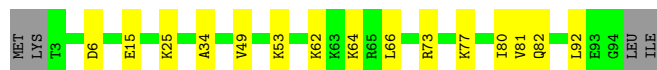
- Molecule 52: 50S ribosomal protein L23

Chain RX:  81% 15% .




- Molecule 52: 50S ribosomal protein L23

Chain YX:  80% 16% .




- Molecule 53: 50S ribosomal protein L24

Chain RY:  75% 19% . .



- Molecule 53: 50S ribosomal protein L24

Chain YY:  76% 20% . .



- Molecule 54: 50S ribosomal protein L25

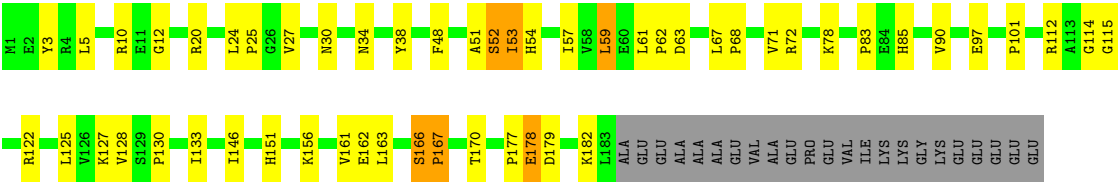
Chain RZ:

63%

23%

•

11%



• Molecule 54: 50S ribosomal protein L25

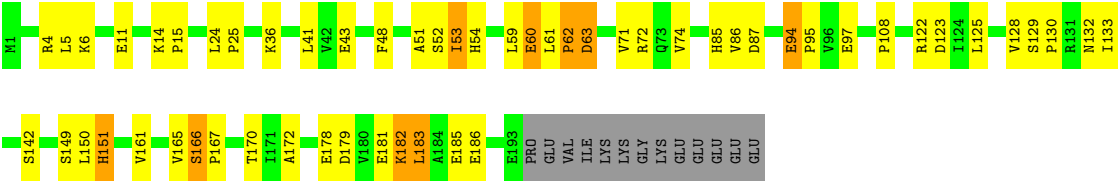
Chain YZ:

67%

23%

•

6%



4 Data and refinement statistics

EDS failed to run properly - this section is therefore incomplete.

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	Depositor
% Data completeness (in resolution range)	98.5 (49.85-4.14)	Depositor
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	Depositor
Wilson B-factor (Å ²)	171.1	Xtriage
Anisotropy	0.389	Xtriage
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
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	0.31	0/36343	1.10	485/56720 (0.9%)
1	XA	0.44	28/36435 (0.1%)	1.31	648/56865 (1.1%)
2	QB	0.36	0/1942	0.67	0/2619
2	XB	0.37	0/1950	0.64	1/2630 (0.0%)
3	QC	0.36	0/1629	0.66	0/2195
3	XC	0.37	0/1629	0.61	0/2195
4	QD	0.45	1/1733 (0.1%)	0.65	0/2318
4	XD	0.52	2/1733 (0.1%)	0.70	2/2318 (0.1%)
5	QE	0.37	0/1171	0.67	0/1576
5	XE	0.43	0/1171	0.62	0/1576
6	QF	0.39	0/856	0.68	0/1154
6	XF	0.41	0/856	0.62	0/1154
7	QG	0.35	0/1276	0.63	1/1709 (0.1%)
7	XG	0.36	0/1276	0.61	0/1709
8	QH	0.40	0/1128	0.62	0/1517
8	XH	0.42	0/1128	0.66	0/1517
9	QI	0.42	0/831	0.74	0/1120
9	XI	0.36	0/849	0.72	0/1144
10	QJ	0.35	0/814	0.67	0/1095
10	XJ	0.68	1/790 (0.1%)	0.80	1/1063 (0.1%)
11	QK	0.36	0/900	0.57	0/1213
11	XK	0.39	0/879	0.59	0/1187
12	QL	0.41	0/991	0.70	1/1327 (0.1%)
12	XL	0.45	0/972	0.76	2/1301 (0.2%)
13	QM	0.35	0/931	0.75	0/1248
13	XM	0.37	0/924	0.66	0/1238
14	QN	0.67	1/501 (0.2%)	0.84	3/664 (0.5%)
14	XN	0.69	1/501 (0.2%)	0.89	2/664 (0.3%)
15	QO	0.38	0/745	0.57	0/992
15	XO	0.40	0/740	0.56	0/987
16	QP	0.40	0/721	0.64	0/970
16	XP	0.38	0/721	0.66	0/970

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
17	QQ	0.38	0/847	0.62	0/1131
17	XQ	0.47	0/847	0.64	0/1131
18	QR	0.38	0/579	0.56	0/768
18	XR	0.39	0/579	0.58	0/768
19	QS	0.35	0/680	0.72	1/915 (0.1%)
19	XS	0.36	0/689	0.70	0/926
20	QT	0.77	2/765 (0.3%)	1.14	8/1007 (0.8%)
20	XT	0.37	0/765	0.75	2/1007 (0.2%)
21	QU	0.34	0/221	0.58	0/288
21	XU	0.52	0/221	0.61	0/288
22	QV	0.28	0/1621	0.84	5/2523 (0.2%)
22	XV	0.44	0/1621	1.24	15/2523 (0.6%)
23	QX	0.41	0/459	1.04	0/715
23	XX	0.60	0/459	1.31	2/715 (0.3%)
24	R0	0.40	0/652	0.63	0/867
24	Y0	0.59	0/657	0.60	0/874
25	R1	0.54	0/753	0.68	0/1000
25	Y1	0.59	0/736	0.74	0/978
26	R2	0.37	0/583	0.62	0/771
26	Y2	0.47	0/577	0.62	0/764
27	R3	0.39	0/474	0.59	0/635
27	Y3	0.62	0/474	0.59	0/635
28	R4	0.33	0/357	0.60	0/483
28	Y4	1.56	2/366 (0.5%)	1.47	9/495 (1.8%)
29	R5	0.87	3/473 (0.6%)	0.79	2/639 (0.3%)
29	Y5	0.94	2/473 (0.4%)	0.77	1/639 (0.2%)
30	R6	0.95	3/460 (0.7%)	0.81	2/613 (0.3%)
30	Y6	1.33	6/460 (1.3%)	1.01	3/613 (0.5%)
31	R7	0.53	0/417	0.62	0/550
31	Y7	0.63	0/426	0.66	0/561
32	R8	0.43	0/525	0.88	4/691 (0.6%)
32	Y8	0.59	0/525	0.84	0/691
33	R9	0.62	1/310 (0.3%)	0.72	1/407 (0.2%)
33	Y9	0.64	0/310	0.73	0/407
34	RA	0.26	0/69520	1.00	605/108527 (0.6%)
34	YA	0.29	2/69543 (0.0%)	1.02	662/108563 (0.6%)
35	RB	0.57	0/2878	1.40	38/4490 (0.8%)
35	YB	0.72	0/2878	1.67	85/4490 (1.9%)
36	RD	0.52	0/2165	0.71	3/2919 (0.1%)
36	YD	0.64	0/2165	0.74	4/2919 (0.1%)
37	RE	0.50	0/1601	0.83	3/2160 (0.1%)
37	YE	0.66	0/1601	0.85	3/2160 (0.1%)
38	RF	0.49	0/1620	0.70	1/2194 (0.0%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# Z >5	RMSZ	# Z >5
38	YF	0.67	0/1620	0.65	1/2194 (0.0%)
39	RG	0.41	0/1499	0.69	0/2016
39	YG	0.43	0/1499	0.68	0/2016
40	RH	0.39	0/1362	0.83	5/1841 (0.3%)
40	YH	0.68	1/1362 (0.1%)	0.86	6/1841 (0.3%)
41	RI	0.45	1/1151 (0.1%)	0.81	3/1558 (0.2%)
41	YI	0.45	1/1151 (0.1%)	0.79	0/1558
42	RN	0.45	0/1131	0.68	1/1525 (0.1%)
42	YN	0.63	0/1131	0.71	2/1525 (0.1%)
43	RO	0.51	0/943	0.65	0/1269
43	YO	0.60	0/943	0.63	0/1269
44	RP	0.44	0/1162	0.76	1/1544 (0.1%)
44	YP	0.54	0/1139	0.83	1/1514 (0.1%)
45	RQ	0.45	0/1143	0.73	0/1527
45	YQ	0.61	0/1143	0.77	2/1527 (0.1%)
46	RR	0.48	0/974	0.68	0/1302
46	YR	0.57	0/974	0.70	0/1302
47	RS	0.40	0/892	0.66	0/1187
47	YS	0.52	0/892	0.67	0/1187
48	RT	0.43	0/1155	0.69	0/1542
48	YT	0.54	0/1155	0.72	1/1542 (0.1%)
49	RU	0.49	0/982	0.62	0/1306
49	YU	0.70	0/982	0.62	0/1306
50	RV	0.48	0/790	0.74	1/1057 (0.1%)
50	YV	0.63	0/790	0.76	1/1057 (0.1%)
51	RW	0.52	0/911	0.63	0/1220
51	YW	0.68	0/911	0.64	0/1220
52	RX	0.52	0/739	0.60	0/993
52	YX	0.66	0/739	0.68	0/993
53	RY	0.72	4/831 (0.5%)	0.67	2/1108 (0.2%)
53	YY	0.73	1/831 (0.1%)	0.72	1/1108 (0.1%)
54	RZ	0.43	0/1493	0.89	6/2026 (0.3%)
54	YZ	0.51	0/1561	0.85	5/2119 (0.2%)
All	All	0.40	63/315379 (0.0%)	1.01	2644/471694 (0.6%)

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 (63) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
28	Y4	5	ILE	CA-CB	-21.62	1.05	1.54
28	Y4	4	GLY	N-CA	-18.71	1.18	1.46
1	XA	309	G	C3'-C2'	-15.74	1.35	1.52
30	R6	16	CYS	CB-SG	14.21	2.06	1.82
30	Y6	16	CYS	CB-SG	-14.07	1.58	1.82
20	QT	74	LYS	CA-CB	-13.70	1.23	1.53
29	Y5	32	PRO	N-CA	13.21	1.69	1.47
40	YH	12	PRO	N-CD	-13.08	1.29	1.47
30	Y6	13	CYS	CB-SG	-12.97	1.60	1.82
20	QT	73	HIS	N-CA	-12.33	1.21	1.46
1	XA	617	G	C1'-N9	12.04	1.66	1.48
14	QN	43	CYS	CB-SG	11.16	2.01	1.82
14	XN	43	CYS	CB-SG	10.98	2.00	1.82
4	XD	12	CYS	CB-SG	10.97	2.00	1.82
53	RY	102	CYS	CB-SG	-10.92	1.63	1.82
29	R5	34	PRO	N-CD	10.48	1.62	1.47
53	YY	79	CYS	CB-SG	-10.34	1.64	1.82
1	XA	309	G	C4'-O4'	-9.97	1.32	1.45
1	XA	309	G	C4'-C3'	9.41	1.63	1.53
29	R5	33	CYS	C-N	8.94	1.51	1.34
30	Y6	40	CYS	CB-SG	8.90	1.97	1.82
30	Y6	40	CYS	C-N	8.78	1.50	1.34
1	XA	116	A	P-O5'	8.69	1.68	1.59
1	XA	1358	U	P-O5'	8.49	1.68	1.59
1	XA	608	A	C1'-N9	-8.48	1.34	1.46
33	R9	29	ASN	C-N	8.38	1.50	1.34
53	RY	79	CYS	CB-SG	8.21	1.96	1.82
1	XA	1320	C	C2'-C1'	7.96	1.62	1.53
30	R6	13	CYS	CB-SG	-7.91	1.68	1.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
30	R6	41	PRO	N-CD	7.44	1.58	1.47
34	YA	745	G	O3'-P	-7.19	1.52	1.61
1	XA	608	A	C2'-C1'	7.09	1.61	1.53
41	RI	94	ALA	C-N	7.05	1.50	1.34
30	Y6	41	PRO	N-CD	7.05	1.57	1.47
1	XA	309	G	O4'-C1'	-6.81	1.32	1.41
4	QD	8	VAL	CB-CG1	6.79	1.67	1.52
1	XA	1347	G	C4'-C3'	6.59	1.60	1.53
1	XA	617	G	O4'-C1'	6.57	1.50	1.41
1	XA	636	U	P-O5'	6.49	1.66	1.59
1	XA	1320	C	C1'-N1	6.33	1.58	1.48
1	XA	1160	G	C1'-N9	6.18	1.58	1.48
53	RY	99	CYS	CB-SG	-6.10	1.71	1.82
1	XA	1158	C	C1'-N1	6.03	1.57	1.48
1	XA	1253	G	O3'-P	6.00	1.68	1.61
29	Y5	31	VAL	C-N	5.97	1.45	1.34
1	XA	1158	C	C2'-C1'	5.95	1.59	1.53
53	RY	76	CYS	CB-SG	-5.84	1.72	1.81
10	XJ	39	PRO	N-CD	-5.78	1.39	1.47
1	XA	1349	A	C1'-N9	5.77	1.57	1.48
1	XA	116	A	P-OP2	-5.67	1.39	1.49
4	XD	31	CYS	CB-SG	5.57	1.91	1.82
1	XA	1359	C	P-O5'	-5.46	1.54	1.59
1	XA	1158	C	C3'-C2'	5.37	1.58	1.52
30	Y6	51	GLU	CG-CD	-5.32	1.44	1.51
34	YA	745	G	C3'-O3'	-5.32	1.34	1.42
41	YI	109	ILE	C-N	5.26	1.46	1.34
1	XA	1440(B)	G	C5'-C4'	5.25	1.57	1.51
1	XA	635	G	O3'-P	5.13	1.67	1.61
1	XA	1225	A	C1'-N9	-5.13	1.39	1.46
29	R5	33	CYS	CB-SG	-5.13	1.73	1.81
1	XA	608	A	C3'-C2'	5.07	1.58	1.52
1	XA	309	G	C5'-C4'	5.06	1.57	1.51
1	XA	308	C	C2'-C1'	-5.01	1.47	1.53

All (2644) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	617	G	C4-N9-C1'	38.95	177.13	126.50
1	XA	617	G	C8-N9-C1'	-38.89	76.44	127.00
1	XA	1505	G	C8-N9-C1'	-27.87	90.77	127.00
1	XA	625	G	C8-N9-C1'	-27.83	90.82	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1505	G	C4-N9-C1'	27.65	162.44	126.50
1	XA	877	C	C2-N1-C1'	25.01	146.31	118.80
1	XA	877	C	C6-N1-C1'	-23.72	92.33	120.80
1	XA	309	G	C4-N9-C1'	-23.02	96.57	126.50
1	XA	309	G	C8-N9-C1'	22.84	156.70	127.00
1	XA	1234	C	C2-N1-C1'	22.21	143.24	118.80
20	QT	74	LYS	N-CA-CB	21.24	148.84	110.60
1	XA	1440(B)	G	C8-N9-C1'	-21.03	99.66	127.00
1	XA	1440(B)	G	C4-N9-C1'	20.48	153.12	126.50
1	XA	1234	C	C6-N1-C1'	-20.33	96.41	120.80
34	YA	2111	C	C2-N1-C1'	20.05	140.86	118.80
34	YA	2111	C	C6-N1-C1'	-19.88	96.95	120.80
1	XA	618	C	C6-N1-C1'	-19.79	97.06	120.80
1	XA	1112	C	C6-N1-C1'	-19.56	97.33	120.80
1	XA	1348	U	C6-N1-C1'	-19.54	93.84	121.20
1	XA	186(B)	C	C2-N1-C1'	18.68	139.35	118.80
34	YA	2014	A	O5'-P-OP2	-18.66	88.31	110.70
1	XA	1112	C	C2-N1-C1'	18.30	138.93	118.80
1	XA	618	C	C2-N1-C1'	18.11	138.72	118.80
1	XA	972	C	C6-N1-C1'	-18.08	99.10	120.80
1	XA	972	C	C2-N1-C1'	18.07	138.68	118.80
1	XA	310	G	O5'-P-OP1	-17.82	89.31	110.70
1	XA	186(B)	C	C6-N1-C1'	-17.76	99.49	120.80
1	XA	625	G	C4-N9-C1'	17.56	149.32	126.50
1	XA	1358	U	O5'-P-OP1	17.50	131.70	110.70
28	Y4	5	ILE	CB-CA-C	17.14	145.87	111.60
1	XA	608	A	C8-N9-C1'	-16.92	97.25	127.70
1	XA	957	U	C2-N1-C1'	16.57	137.59	117.70
1	XA	877	C	O4'-C1'-N1	16.55	121.44	108.20
1	XA	878	G	C8-N9-C1'	-16.48	105.57	127.00
1	XA	309	G	O4'-C1'-N9	-16.30	95.16	108.20
1	XA	860	A	C8-N9-C1'	-15.99	98.92	127.70
1	XA	1320	C	N1-C1'-C2'	15.78	134.51	114.00
1	XA	1369	C	O5'-P-OP1	-15.53	91.73	105.70
1	XA	980	C	C2-N1-C1'	15.51	135.86	118.80
1	XA	635	G	P-O3'-C3'	15.38	138.15	119.70
37	RE	146	THR	C-N-CD	-15.28	86.99	120.60
1	XA	957	U	C6-N1-C1'	-15.26	99.83	121.20
1	XA	860	A	C4-N9-C1'	15.23	153.71	126.30
1	QA	194	C	C2-N1-C1'	14.87	135.16	118.80
1	XA	1348	U	C2-N1-C1'	14.68	135.32	117.70
1	XA	1320	C	C6-N1-C1'	-14.48	103.42	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	887	A	O5'-P-OP2	-14.38	92.76	105.70
1	XA	309	G	O5'-P-OP1	14.31	127.87	110.70
1	XA	980	C	C6-N1-C1'	-14.23	103.73	120.80
54	RZ	166	SER	C-N-CD	-14.13	89.51	120.60
37	YE	146	THR	C-N-CD	-14.12	89.53	120.60
1	XA	674	G	C8-N9-C1'	-14.03	108.77	127.00
1	XA	1358	U	OP1-P-OP2	-13.99	98.61	119.60
1	XA	878	G	C4-N9-C1'	13.99	144.68	126.50
1	XA	674	G	C4-N9-C1'	13.92	144.60	126.50
1	QA	194	C	C6-N1-C1'	-13.60	104.48	120.80
35	YB	30	C	C6-N1-C2	-13.53	114.89	120.30
1	XA	625	G	O4'-C1'-N9	13.51	119.00	108.20
1	XA	1349	A	O4'-C1'-N9	13.16	118.73	108.20
34	YA	2442	C	C2-N1-C1'	13.03	133.13	118.80
40	RH	86	GLU	CB-CA-C	-12.83	84.74	110.40
1	XA	1302	U	C2-N1-C1'	12.81	133.07	117.70
1	XA	608	A	N9-C1'-C2'	12.73	130.55	114.00
34	YA	1076	C	C2-N1-C1'	12.72	132.79	118.80
54	YZ	166	SER	C-N-CD	-12.57	92.94	120.60
34	YA	270(L)	C	C2-N1-C1'	12.42	132.47	118.80
1	XA	1244	C	O5'-P-OP2	-12.26	94.67	105.70
1	XA	1320	C	C2-N1-C1'	12.11	132.12	118.80
34	YA	2442	C	C6-N1-C1'	-12.10	106.28	120.80
1	XA	1301	U	C2-N1-C1'	12.03	132.13	117.70
1	XA	686	U	C2-N1-C1'	12.01	132.11	117.70
1	XA	723	U	C2-N1-C1'	11.76	131.82	117.70
34	YA	1076	C	C6-N1-C1'	-11.63	106.84	120.80
1	XA	132	C	OP1-P-O3'	11.60	130.72	105.20
34	RA	2789	C	C2-N1-C1'	11.56	131.52	118.80
1	XA	116	A	OP1-P-OP2	-11.50	102.34	119.60
1	QA	856	C	C2-N1-C1'	11.47	131.42	118.80
34	YA	270(L)	C	C6-N1-C1'	-11.38	107.15	120.80
1	XA	1232	U	O5'-P-OP1	11.36	124.33	110.70
1	XA	618	C	O4'-C1'-N1	11.31	117.25	108.20
1	XA	1507	A	C4-N9-C1'	-11.26	106.03	126.30
34	RA	2836	U	C2-N1-C1'	11.24	131.19	117.70
1	XA	1527	C	C2-N1-C1'	11.13	131.04	118.80
1	XA	607	A	C4-N9-C1'	11.10	146.29	126.30
1	XA	607	A	C8-N9-C1'	-11.08	107.76	127.70
1	XA	1302	U	C6-N1-C1'	-11.00	105.80	121.20
1	XA	1347	G	C4-N9-C1'	-10.94	112.28	126.50
1	XA	1359	C	O5'-P-OP1	-10.93	95.86	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1307	U	O5'-P-OP1	-10.88	95.91	105.70
34	YA	2394	C	C2-N1-C1'	10.86	130.75	118.80
1	XA	1344	C	C2-N1-C1'	10.85	130.74	118.80
1	XA	68(T)	C	C2-N1-C1'	10.83	130.72	118.80
34	YA	2064	C	C2-N1-C1'	10.83	130.71	118.80
34	YA	1535	U	C2-N1-C1'	10.82	130.68	117.70
1	XA	948	C	C2-N1-C1'	-10.81	106.91	118.80
1	XA	1347	G	C8-N9-C1'	10.77	141.00	127.00
34	YA	2394	C	OP1-P-OP2	-10.76	103.46	119.60
34	RA	2789	C	C6-N1-C1'	-10.67	108.00	120.80
1	XA	1507	A	O4'-C1'-N9	10.58	116.67	108.20
1	XA	1507	A	C8-N9-C1'	10.58	146.74	127.70
34	RA	2431	U	C2-N1-C1'	10.57	130.38	117.70
1	XA	259	G	O5'-P-OP2	-10.53	96.22	105.70
1	XA	1375	A	C4-N9-C1'	10.53	145.25	126.30
1	XA	1375	A	C8-N9-C1'	-10.52	108.77	127.70
1	XA	677	U	C2-N1-C1'	10.51	130.31	117.70
1	XA	686	U	C6-N1-C1'	-10.50	106.50	121.20
1	QA	856	C	C6-N1-C1'	-10.49	108.22	120.80
1	XA	1343	G	C4-N9-C1'	10.48	140.13	126.50
34	RA	1534	G	C4-N9-C1'	10.47	140.12	126.50
34	YA	2443	C	C2-N1-C1'	10.47	130.32	118.80
1	XA	1440(C)	G	C8-N9-C1'	-10.44	113.43	127.00
1	XA	1259	C	C2-N1-C1'	10.44	130.28	118.80
1	XA	1328	C	O5'-P-OP1	-10.43	96.31	105.70
1	QA	677	U	C2-N1-C1'	10.42	130.21	117.70
1	QA	1234	C	C2-N1-C1'	10.42	130.26	118.80
1	XA	636	U	C2-N1-C1'	10.41	130.19	117.70
1	XA	1343	G	C8-N9-C1'	-10.39	113.49	127.00
34	YA	2098	U	C2-N1-C1'	10.39	130.16	117.70
34	RA	1534	G	C8-N9-C1'	-10.38	113.50	127.00
1	XA	956	U	C2-N1-C1'	10.37	130.15	117.70
1	XA	1438	G	O5'-P-OP1	10.33	123.10	110.70
1	QA	980	C	C2-N1-C1'	10.32	130.15	118.80
1	XA	1301	U	C6-N1-C1'	-10.29	106.79	121.20
1	XA	1112	C	O4'-C1'-N1	10.28	116.42	108.20
1	XA	617	G	O5'-P-OP2	-10.27	96.45	105.70
1	XA	608	A	O4'-C1'-N9	10.26	116.40	108.20
1	XA	981	U	O5'-P-OP2	-10.25	96.48	105.70
1	XA	1527	C	C6-N1-C1'	-10.24	108.51	120.80
1	XA	1111	A	C4-N9-C1'	10.23	144.71	126.30
1	XA	1111	A	C8-N9-C1'	-10.16	109.41	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1260	C	C2-N1-C1'	10.13	129.94	118.80
1	XA	1328	C	O5'-P-OP2	10.12	122.84	110.70
34	YA	1094	U	C2-N1-C1'	10.11	129.83	117.70
34	YA	2064	C	C6-N1-C1'	-10.10	108.68	120.80
34	YA	2822	G	O5'-P-OP2	-10.10	96.61	105.70
34	RA	419	C	C2-N1-C1'	10.08	129.89	118.80
1	QA	88	C	C2-N1-C1'	10.04	129.85	118.80
1	QA	1037	C	C2-N1-C1'	10.04	129.84	118.80
1	XA	1440(C)	G	C4-N9-C1'	10.03	139.54	126.50
34	RA	270(L)	C	C2-N1-C1'	10.02	129.82	118.80
1	XA	723	U	C6-N1-C1'	-10.01	107.19	121.20
1	XA	948	C	C6-N1-C1'	9.96	132.75	120.80
34	YA	2394	C	C6-N1-C1'	-9.96	108.85	120.80
1	XA	1344	C	C6-N1-C1'	-9.93	108.89	120.80
1	XA	186(A)	C	C2-N1-C1'	9.92	129.71	118.80
34	YA	2789	C	C2-N1-C1'	9.91	129.70	118.80
1	XA	385	C	C2-N1-C1'	9.90	129.70	118.80
1	XA	1355	G	C4-N9-C1'	9.90	139.37	126.50
1	XA	1355	G	C8-N9-C1'	-9.90	114.13	127.00
34	YA	2474	C	C2-N1-C1'	9.87	129.66	118.80
34	RA	2189	U	C2-N1-C1'	9.87	129.54	117.70
1	XA	68(T)	C	C6-N1-C1'	-9.87	108.95	120.80
30	Y6	43	CYS	N-CA-CB	-9.83	92.90	110.60
1	XA	1328	C	OP1-P-OP2	-9.83	104.86	119.60
34	YA	1078	U	C2-N1-C1'	9.83	129.49	117.70
34	RA	1742	C	C2-N1-C1'	9.79	129.57	118.80
1	XA	1297	C	C2-N1-C1'	9.74	129.51	118.80
34	RA	1644	C	C2-N1-C1'	9.70	129.47	118.80
1	XA	1356	G	C4-N9-C1'	9.65	139.04	126.50
34	YA	2443	C	C6-N1-C1'	-9.64	109.23	120.80
1	XA	308	C	P-O3'-C3'	-9.64	108.14	119.70
1	XA	623	C	C2-N1-C1'	9.59	129.34	118.80
34	YA	1644	C	C2-N1-C1'	9.59	129.34	118.80
34	RA	2836	U	C6-N1-C1'	-9.57	107.80	121.20
1	XA	1356	G	C8-N9-C1'	-9.57	114.55	127.00
1	XA	1259	C	C6-N1-C1'	-9.55	109.34	120.80
1	QA	536	C	C2-N1-C1'	9.54	129.29	118.80
1	QA	1234	C	C6-N1-C1'	-9.53	109.37	120.80
37	YE	146	THR	C-N-CA	9.52	161.97	122.00
34	YA	2620	C	C2-N1-C1'	9.51	129.26	118.80
1	XA	635	G	N9-C1'-C2'	-9.49	101.56	112.00
34	YA	2098	U	C6-N1-C1'	-9.48	107.93	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2871	C	C2-N1-C1'	9.48	129.23	118.80
1	XA	1342	C	C2-N1-C1'	9.45	129.20	118.80
34	RA	373	U	C2-N1-C1'	9.43	129.01	117.70
1	XA	1297	C	C6-N1-C1'	-9.38	109.54	120.80
1	XA	692	U	C2-N1-C1'	9.38	128.96	117.70
1	QA	980	C	C6-N1-C1'	-9.34	109.59	120.80
1	XA	1505	G	N9-C1'-C2'	9.31	126.11	114.00
1	XA	1343	G	N9-C1'-C2'	-9.27	101.81	112.00
1	QA	1260	C	C6-N1-C1'	-9.26	109.68	120.80
1	XA	310	G	OP1-P-OP2	-9.25	105.72	119.60
1	QA	995	C	C2-N1-C1'	9.22	128.95	118.80
1	XA	309	G	C5'-C4'-O4'	-9.20	98.06	109.10
1	QA	88	C	C6-N1-C1'	-9.20	109.76	120.80
1	XA	617	G	O4'-C1'-N9	9.19	115.55	108.20
34	RA	270(L)	C	C6-N1-C1'	-9.18	109.78	120.80
1	XA	986	A	C4-N9-C1'	9.18	142.82	126.30
1	XA	68(S)	C	C2-N1-C1'	9.18	128.90	118.80
1	QA	1037	C	C6-N1-C1'	-9.16	109.81	120.80
1	XA	669	U	C2-N1-C1'	9.15	128.68	117.70
34	RA	419	C	C6-N1-C1'	-9.15	109.82	120.80
54	RZ	166	SER	C-N-CA	9.14	160.40	122.00
1	XA	677	U	C6-N1-C1'	-9.14	108.40	121.20
34	YA	888	C	O5'-P-OP2	-9.13	97.48	105.70
34	YA	2342	C	C2-N1-C1'	9.12	128.84	118.80
1	XA	986	A	C8-N9-C1'	-9.12	111.29	127.70
34	YA	1535	U	C6-N1-C1'	-9.10	108.47	121.20
30	R6	16	CYS	CA-CB-SG	9.09	130.37	114.00
1	XA	186(A)	C	C6-N1-C1'	-9.09	109.89	120.80
20	QT	73	HIS	N-CA-C	9.09	135.53	111.00
20	QT	74	LYS	N-CA-C	-9.08	86.47	111.00
34	YA	2787	C	C2-N1-C1'	9.08	128.78	118.80
34	YA	1941	C	C2-N1-C1'	9.07	128.78	118.80
34	YA	373	U	C2-N1-C1'	9.06	128.58	117.70
1	XA	1342	C	C6-N1-C1'	-9.06	109.93	120.80
34	YA	2794	C	C2-N1-C1'	9.05	128.75	118.80
1	XA	385	C	C6-N1-C1'	-9.04	109.95	120.80
1	XA	739	C	O5'-P-OP1	9.03	121.54	110.70
1	XA	115	G	C4-N9-C1'	9.02	138.22	126.50
1	XA	860	A	O5'-P-OP2	-9.02	97.58	105.70
1	XA	498	U	C2-N1-C1'	9.01	128.52	117.70
1	XA	1157	A	O4'-C1'-N9	9.01	115.41	108.20
34	RA	1742	C	C6-N1-C1'	-9.00	110.00	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2789	C	C6-N1-C1'	-9.00	110.00	120.80
1	QA	714	G	C4-N9-C1'	8.99	138.18	126.50
34	YA	2474	C	C6-N1-C1'	-8.99	110.02	120.80
34	RA	2431	U	C6-N1-C1'	-8.98	108.62	121.20
1	XA	1129	C	C2-N1-C1'	8.98	128.68	118.80
1	QA	1114	C	C2-N1-C1'	8.96	128.65	118.80
34	RA	2691	C	C2-N1-C1'	8.96	128.65	118.80
1	XA	115	G	C8-N9-C1'	-8.94	115.37	127.00
1	QA	1028(C)	C	C2-N1-C1'	8.93	128.62	118.80
1	QA	1131	G	C4-N9-C1'	8.92	138.10	126.50
1	XA	115	G	P-O3'-C3'	8.92	130.41	119.70
1	QA	714	G	C8-N9-C1'	-8.92	115.41	127.00
34	YA	2164	C	C2-N1-C1'	8.91	128.60	118.80
1	QA	677	U	C6-N1-C1'	-8.91	108.73	121.20
1	XA	956	U	C6-N1-C1'	-8.90	108.74	121.20
1	XA	636	U	C6-N1-C1'	-8.89	108.75	121.20
28	Y4	39	CYS	C-N-CA	8.88	143.91	121.70
1	QA	1325	C	C2-N1-C1'	8.88	128.56	118.80
1	XA	1329	A	OP1-P-OP2	-8.87	106.29	119.60
35	RB	22	U	C5-C6-N1	8.86	127.13	122.70
1	QA	1131	G	C8-N9-C1'	-8.85	115.49	127.00
1	XA	856	C	C2-N1-C1'	8.85	128.53	118.80
34	YA	2111	C	O4'-C1'-N1	8.85	115.28	108.20
34	RA	2114	A	C4-N9-C1'	8.83	142.20	126.30
34	YA	2871	C	C6-N1-C1'	-8.83	110.20	120.80
1	XA	981	U	OP1-P-OP2	8.82	132.84	119.60
1	XA	1347	G	C5'-C4'-C3'	8.82	130.12	116.00
1	QA	1440(K)	C	C2-N1-C1'	8.82	128.50	118.80
34	RA	1644	C	C6-N1-C1'	-8.81	110.22	120.80
34	RA	2874	C	C2-N1-C1'	8.80	128.48	118.80
1	QA	1235	U	C2-N1-C1'	8.78	128.23	117.70
1	QA	400	C	C2-N1-C1'	8.77	128.45	118.80
1	QA	1277	C	C2-N1-C1'	8.77	128.44	118.80
1	XA	623	C	C6-N1-C1'	-8.75	110.30	120.80
34	YA	1644	C	C6-N1-C1'	-8.75	110.30	120.80
1	XA	136	C	C2-N1-C1'	8.73	128.41	118.80
34	YA	2502	G	C8-N9-C1'	-8.73	115.65	127.00
34	RA	2114	A	C8-N9-C1'	-8.72	112.00	127.70
34	YA	1534	G	C8-N9-C1'	-8.72	115.66	127.00
34	YA	12	U	C2-N1-C1'	8.70	128.15	117.70
34	RA	1882	C	C2-N1-C1'	8.70	128.37	118.80
34	YA	2620	C	C6-N1-C1'	-8.70	110.37	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	536	C	C6-N1-C1'	-8.69	110.37	120.80
1	XA	309	G	OP2-P-O3'	8.69	124.31	105.20
1	QA	379	C	C2-N1-C1'	8.65	128.32	118.80
34	YA	413	C	C2-N1-C1'	8.65	128.32	118.80
34	YA	1790	C	C2-N1-C1'	8.64	128.31	118.80
34	RA	1391	U	C2-N1-C1'	8.60	128.01	117.70
1	XA	826	C	C2-N1-C1'	8.59	128.25	118.80
34	YA	1094	U	C6-N1-C1'	-8.59	109.17	121.20
1	QA	43	C	C2-N1-C1'	8.59	128.25	118.80
35	YB	60	C	C6-N1-C2	-8.59	116.87	120.30
34	RA	338	G	C8-N9-C1'	-8.58	115.85	127.00
1	QA	723	U	C2-N1-C1'	8.57	127.99	117.70
1	XA	1198	G	C8-N9-C1'	-8.57	115.85	127.00
1	XA	267	C	O5'-P-OP1	-8.57	97.98	105.70
1	QA	1301	U	C2-N1-C1'	8.57	127.98	117.70
34	RA	338	G	C4-N9-C1'	8.57	137.64	126.50
34	YA	2619	C	C2-N1-C1'	8.57	128.22	118.80
1	XA	1277	C	C2-N1-C1'	8.56	128.22	118.80
1	XA	1150	U	C2-N1-C1'	8.55	127.97	117.70
34	YA	1611	C	C2-N1-C1'	8.53	128.19	118.80
34	RA	2098	U	C2-N1-C1'	8.53	127.94	117.70
1	XA	1198	G	C4-N9-C1'	8.53	137.59	126.50
35	YB	54	G	N1-C6-O6	8.53	125.02	119.90
1	QA	498	U	C2-N1-C1'	8.52	127.92	117.70
1	XA	1327	C	C2-N1-C1'	8.51	128.17	118.80
34	YA	1403	C	C2-N1-C1'	8.49	128.14	118.80
34	YA	2312	U	C2-N1-C1'	8.49	127.89	117.70
2	XB	89	GLY	C-N-CA	8.48	142.91	121.70
54	YZ	166	SER	C-N-CA	8.48	157.62	122.00
34	YA	1534	G	C4-N9-C1'	8.48	137.52	126.50
1	QA	385	C	C2-N1-C1'	8.47	128.12	118.80
1	XA	201(C)	U	C2-N1-C1'	8.47	127.87	117.70
30	Y6	43	CYS	CB-CA-C	8.47	127.34	110.40
34	RA	904	C	C2-N1-C1'	8.47	128.11	118.80
1	QA	995	C	C6-N1-C1'	-8.46	110.64	120.80
34	RA	2559	C	C2-N1-C1'	8.46	128.11	118.80
1	QA	193	C	C2-N1-C1'	8.46	128.10	118.80
37	RE	146	THR	C-N-CA	8.44	157.45	122.00
1	XA	68(Q)	C	C2-N1-C1'	8.44	128.09	118.80
34	RA	2506	U	C2-N1-C1'	8.44	127.83	117.70
34	RA	508	G	C4-N9-C1'	8.43	137.46	126.50
1	XA	68(S)	C	C6-N1-C1'	-8.42	110.69	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	384	U	C2-N1-C1'	8.41	127.80	117.70
1	XA	1158	C	C2-N1-C1'	-8.41	109.55	118.80
34	RA	2189	U	C6-N1-C1'	-8.40	109.44	121.20
34	RA	2006	C	C2-N1-C1'	8.40	128.04	118.80
34	RA	1506	C	C2-N1-C1'	8.39	128.03	118.80
34	YA	1078	U	C6-N1-C1'	-8.38	109.47	121.20
34	RA	280	C	C2-N1-C1'	8.38	128.01	118.80
34	RA	35	G	C8-N9-C1'	-8.37	116.12	127.00
1	XA	68(V)	U	C2-N1-C1'	8.36	127.73	117.70
40	YH	12	PRO	CA-N-CD	8.35	123.40	111.70
1	QA	1313	U	C2-N1-C1'	8.35	127.72	117.70
34	RA	508	G	C8-N9-C1'	-8.34	116.15	127.00
34	YA	2342	C	C6-N1-C1'	-8.34	110.79	120.80
34	RA	714	U	C2-N1-C1'	8.33	127.70	117.70
34	YA	1882	C	C2-N1-C1'	8.33	127.96	118.80
34	YA	2787	C	C6-N1-C1'	-8.32	110.81	120.80
34	RA	1437	C	C2-N1-C1'	8.31	127.94	118.80
34	RA	35	G	C4-N9-C1'	8.31	137.31	126.50
1	XA	1129	C	C6-N1-C1'	-8.31	110.83	120.80
34	YA	2502	G	C4-N9-C1'	8.30	137.30	126.50
1	XA	1345	U	C2-N1-C1'	8.30	127.66	117.70
34	RA	2803	C	C2-N1-C1'	8.30	127.93	118.80
4	XD	18	LYS	CD-CE-NZ	8.30	130.79	111.70
34	YA	2794	C	C6-N1-C1'	-8.29	110.85	120.80
34	YA	1941	C	C6-N1-C1'	-8.29	110.85	120.80
34	YA	2501	C	C2-N1-C1'	8.28	127.91	118.80
34	YA	2889	C	C2-N1-C1'	8.28	127.91	118.80
1	XA	754	C	N1-C1'-C2'	8.27	124.75	114.00
1	QA	1145	C	C2-N1-C1'	8.27	127.89	118.80
1	XA	1226	C	C2-N1-C1'	-8.26	109.71	118.80
1	XA	323	U	C2-N1-C1'	8.25	127.61	117.70
1	QA	1440(K)	C	C6-N1-C1'	-8.24	110.91	120.80
34	RA	2787	C	C2-N1-C1'	8.24	127.86	118.80
1	XA	1260	C	C2-N1-C1'	8.24	127.86	118.80
1	QA	624	C	C2-N1-C1'	8.22	127.84	118.80
1	XA	116	A	O5'-P-OP2	8.20	120.54	110.70
34	YA	509	C	C2-N1-C1'	8.20	127.82	118.80
34	RA	2691	C	C6-N1-C1'	-8.18	110.98	120.80
1	QA	1114	C	C6-N1-C1'	-8.18	110.98	120.80
36	YD	34	VAL	N-CA-C	-8.16	88.97	111.00
1	XA	1145	C	C2-N1-C1'	8.16	127.77	118.80
34	YA	2815	C	C2-N1-C1'	8.15	127.77	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2164	C	C6-N1-C1'	-8.13	111.05	120.80
1	QA	1325	C	C6-N1-C1'	-8.12	111.06	120.80
28	Y4	5	ILE	N-CA-C	-8.11	89.11	111.00
34	RA	2554	U	C2-N1-C1'	8.11	127.43	117.70
1	QA	163	C	C2-N1-C1'	8.10	127.71	118.80
34	YA	856	C	C2-N1-C1'	8.09	127.70	118.80
1	QA	1028(C)	C	C6-N1-C1'	-8.08	111.10	120.80
1	QA	1219	U	C2-N1-C1'	8.08	127.40	117.70
34	RA	1870	C	C2-N1-C1'	8.08	127.69	118.80
1	QA	443	C	C2-N1-C1'	8.07	127.68	118.80
34	YA	1742	C	C2-N1-C1'	8.06	127.67	118.80
35	YB	30	C	C5-C6-N1	8.06	125.03	121.00
34	RA	1905	C	C2-N1-C1'	8.06	127.66	118.80
34	YA	2619	C	C6-N1-C1'	-8.05	111.13	120.80
1	XA	692	U	C6-N1-C1'	-8.05	109.93	121.20
1	QA	400	C	C6-N1-C1'	-8.04	111.15	120.80
34	RA	1881	C	C2-N1-C1'	8.04	127.64	118.80
34	RA	2168	G	C8-N9-C1'	-8.04	116.55	127.00
1	XA	1253	G	P-O3'-C3'	-8.04	110.05	119.70
34	YA	1880	C	C2-N1-C1'	8.04	127.64	118.80
34	RA	2874	C	C6-N1-C1'	-8.03	111.17	120.80
1	XA	856	C	C6-N1-C1'	-8.03	111.17	120.80
29	Y5	32	PRO	CA-N-CD	-8.02	100.27	111.50
1	XA	1197	G	C4-N9-C1'	8.02	136.93	126.50
1	XA	1277	C	C6-N1-C1'	-8.02	111.18	120.80
40	RH	152	ARG	C-N-CA	8.01	141.73	121.70
1	XA	669	U	C6-N1-C1'	-8.01	109.99	121.20
1	QA	1277	C	C6-N1-C1'	-8.01	111.19	120.80
1	XA	133	U	OP1-P-OP2	-8.00	107.60	119.60
34	RA	1649	G	C8-N9-C1'	-7.99	116.61	127.00
34	RA	373	U	C6-N1-C1'	-7.99	110.02	121.20
34	YA	270(Q)	C	C2-N1-C1'	7.99	127.59	118.80
40	YH	151	ILE	N-CA-C	-7.99	89.43	111.00
34	RA	1882	C	C6-N1-C1'	-7.99	111.22	120.80
34	RA	2168	G	C4-N9-C1'	7.97	136.86	126.50
34	RA	2456	C	C2-N1-C1'	7.97	127.56	118.80
1	XA	1202	G	C4-N9-C1'	7.97	136.86	126.50
1	XA	943	U	C2-N1-C1'	7.97	127.26	117.70
34	YA	2127	G	C4-N9-C1'	7.97	136.86	126.50
34	YA	420	C	C2-N1-C1'	7.96	127.56	118.80
1	QA	1367	C	O4'-C1'-N1	7.96	114.57	108.20
1	XA	1270	C	C2-N1-C1'	7.96	127.55	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	1879	C	C2-N1-C1'	7.95	127.55	118.80
1	XA	1197	G	C8-N9-C1'	-7.95	116.67	127.00
1	XA	136	C	C6-N1-C1'	-7.94	111.27	120.80
1	QA	623	C	C2-N1-C1'	7.93	127.53	118.80
34	YA	721	C	C2-N1-C1'	7.93	127.53	118.80
34	YA	860	U	O4'-C1'-N1	7.93	114.54	108.20
34	RA	2291	U	C2-N1-C1'	7.92	127.21	117.70
1	XA	1347	G	P-O3'-C3'	7.92	129.20	119.70
34	YA	541	C	C2-N1-C1'	7.92	127.51	118.80
34	YA	1790	C	C6-N1-C1'	-7.92	111.30	120.80
1	QA	110	C	C2-N1-C1'	7.92	127.51	118.80
1	XA	1401	G	C4-N9-C1'	7.91	136.78	126.50
1	QA	1369	C	C2-N1-C1'	7.91	127.50	118.80
1	QA	43	C	C6-N1-C1'	-7.90	111.32	120.80
1	XA	1202	G	C8-N9-C1'	-7.90	116.73	127.00
35	YB	70	C	C6-N1-C2	-7.89	117.14	120.30
34	YA	2127	G	C8-N9-C1'	-7.88	116.75	127.00
34	YA	413	C	C6-N1-C1'	-7.88	111.34	120.80
34	YA	1533	C	C2-N1-C1'	7.88	127.46	118.80
1	QA	379	C	C6-N1-C1'	-7.87	111.36	120.80
1	XA	36	C	C2-N1-C1'	7.87	127.46	118.80
1	QA	984	C	C2-N1-C1'	7.86	127.44	118.80
34	RA	2343	C	C2-N1-C1'	7.85	127.43	118.80
1	QA	201(A)	C	C2-N1-C1'	7.84	127.43	118.80
34	YA	1951	U	C2-N1-C1'	7.84	127.11	117.70
34	YA	2087	G	C8-N9-C1'	-7.83	116.81	127.00
34	RA	2658	C	C2-N1-C1'	7.83	127.41	118.80
1	XA	1401	G	C8-N9-C1'	-7.82	116.83	127.00
1	XA	381	C	C2-N1-C1'	7.82	127.40	118.80
34	YA	2656	U	C2-N1-C1'	7.82	127.08	117.70
34	RA	141(B)	C	C2-N1-C1'	7.82	127.40	118.80
34	RA	2178	C	C2-N1-C1'	7.81	127.39	118.80
1	XA	836	G	C8-N9-C1'	-7.81	116.84	127.00
1	QA	186(H)	C	C2-N1-C1'	7.81	127.39	118.80
1	QA	1235	U	C6-N1-C1'	-7.81	110.27	121.20
34	YA	2087	G	C4-N9-C1'	7.81	136.65	126.50
34	YA	1611	C	C6-N1-C1'	-7.80	111.44	120.80
1	XA	826	C	C6-N1-C1'	-7.80	111.44	120.80
1	XA	1505	G	O5'-P-OP2	7.79	120.05	110.70
34	RA	2695	C	C2-N1-C1'	7.79	127.37	118.80
35	RB	11	C	C6-N1-C2	-7.79	117.18	120.30
1	QA	838(B)	U	C2-N1-C1'	7.79	127.05	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2251	G	C4-N9-C1'	7.78	136.62	126.50
35	YB	37	C	N3-C2-O2	-7.78	116.45	121.90
1	XA	836	G	C4-N9-C1'	7.78	136.61	126.50
1	XA	1426	C	C2-N1-C1'	7.77	127.35	118.80
34	RA	1087	G	O4'-C1'-N9	-7.77	101.98	108.20
34	RA	2559	C	C6-N1-C1'	-7.76	111.49	120.80
1	XA	1158	C	C6-N1-C1'	7.76	130.11	120.80
34	YA	1403	C	C6-N1-C1'	-7.76	111.49	120.80
34	YA	114	U	C2-N1-C1'	7.75	127.00	117.70
1	QA	193	C	C6-N1-C1'	-7.75	111.50	120.80
34	YA	2836	U	C2-N1-C1'	7.75	126.99	117.70
35	YB	111	U	C5-C4-O4	7.74	130.54	125.90
1	QA	320	C	C2-N1-C1'	7.74	127.31	118.80
1	QA	385	C	C6-N1-C1'	-7.74	111.52	120.80
1	XA	1327	C	C6-N1-C1'	-7.73	111.52	120.80
28	Y4	3	GLU	C-N-CA	-7.73	106.06	122.30
34	RA	2130	U	C2-N1-C1'	7.73	126.97	117.70
1	XA	1058	G	O5'-P-OP1	7.72	119.97	110.70
22	XV	15	G	C4-N9-C1'	7.72	136.54	126.50
1	XA	68(Q)	C	C6-N1-C1'	-7.72	111.54	120.80
34	RA	904	C	C6-N1-C1'	-7.72	111.54	120.80
1	XA	1325	C	C2-N1-C1'	7.72	127.29	118.80
1	XA	1058	G	C4-N9-C1'	7.71	136.53	126.50
34	YA	2251	G	C8-N9-C1'	-7.71	116.97	127.00
1	XA	1049	U	C2-N1-C1'	7.71	126.95	117.70
1	XA	322	C	C2-N1-C1'	7.70	127.27	118.80
34	YA	373	U	C6-N1-C1'	-7.69	110.43	121.20
34	RA	1533	C	C2-N1-C1'	7.69	127.26	118.80
34	YA	2235	G	C4-N9-C1'	7.69	136.49	126.50
1	XA	1140	C	C2-N1-C1'	7.67	127.24	118.80
1	XA	310	G	O5'-P-OP2	7.67	119.90	110.70
34	RA	2006	C	C6-N1-C1'	-7.67	111.60	120.80
34	RA	2656	U	C2-N1-C1'	7.66	126.89	117.70
1	QA	705	U	C2-N1-C1'	7.66	126.89	117.70
34	RA	280	C	C6-N1-C1'	-7.66	111.61	120.80
1	XA	1381	U	C2'-C3'-O3'	7.66	126.35	109.50
34	RA	544	C	C2-N1-C1'	7.65	127.21	118.80
34	YA	414	C	C2-N1-C1'	7.64	127.21	118.80
1	QA	186(B)	C	C2-N1-C1'	7.64	127.20	118.80
1	XA	498	U	C6-N1-C1'	-7.64	110.51	121.20
14	QN	24	CYS	CA-CB-SG	7.64	127.75	114.00
1	XA	1260	C	C6-N1-C1'	-7.64	111.64	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
22	XV	15	G	N3-C4-C5	-7.63	124.78	128.60
34	RA	63	U	N1-C1'-C2'	7.63	123.92	114.00
35	YB	10	C	C6-N1-C2	-7.63	117.25	120.30
34	YA	2501	C	C6-N1-C1'	-7.62	111.65	120.80
34	RA	1437	C	C6-N1-C1'	-7.62	111.65	120.80
34	RA	1225	C	C2-N1-C1'	7.62	127.19	118.80
34	YA	2235	G	C8-N9-C1'	-7.62	117.10	127.00
34	RA	114	U	C2-N1-C1'	7.61	126.83	117.70
34	RA	1506	C	C6-N1-C1'	-7.60	111.67	120.80
1	XA	1058	G	C8-N9-C1'	-7.60	117.11	127.00
1	QA	957	U	C2-N1-C1'	7.60	126.82	117.70
34	RA	613	U	C2-N1-C1'	7.60	126.82	117.70
1	XA	1233	G	C4-N9-C1'	7.60	136.38	126.50
34	YA	2889	C	C6-N1-C1'	-7.60	111.68	120.80
1	XA	1358	U	O5'-C5'-C4'	7.59	126.13	111.70
1	QA	524	G	C4-N9-C1'	7.59	136.37	126.50
34	RA	1790	C	C2-N1-C1'	7.59	127.14	118.80
34	YA	1990	C	C2-N1-C1'	7.59	127.14	118.80
34	YA	2431	U	C2-N1-C1'	7.59	126.80	117.70
34	RA	2803	C	C6-N1-C1'	-7.58	111.70	120.80
1	QA	624	C	C6-N1-C1'	-7.58	111.70	120.80
34	RA	2787	C	C6-N1-C1'	-7.58	111.70	120.80
1	QA	989	C	C2-N1-C1'	7.58	127.14	118.80
1	XA	323	U	OP1-P-OP2	-7.58	108.23	119.60
1	XA	68(R)	U	C2-N1-C1'	7.57	126.78	117.70
34	RA	2832	U	P-O3'-C3'	7.56	128.78	119.70
34	YA	1882	C	C6-N1-C1'	-7.56	111.72	120.80
34	RA	2666	C	C2-N1-C1'	7.55	127.11	118.80
34	RA	413	C	C2-N1-C1'	7.55	127.10	118.80
1	QA	524	G	C8-N9-C1'	-7.54	117.19	127.00
1	QA	692	U	C2-N1-C1'	7.54	126.75	117.70
34	RA	721	C	C2-N1-C1'	7.54	127.09	118.80
34	YA	2132	U	C2-N1-C1'	7.54	126.74	117.70
34	YA	509	C	C6-N1-C1'	-7.53	111.76	120.80
34	RA	2262	U	C2-N1-C1'	7.53	126.74	117.70
1	QA	1145	C	C6-N1-C1'	-7.52	111.77	120.80
34	YA	2130	U	C2-N1-C1'	7.52	126.72	117.70
20	QT	73	HIS	N-CA-CB	7.52	124.13	110.60
1	XA	309	G	OP1-P-OP2	-7.52	108.33	119.60
34	RA	1535	U	C2-N1-C1'	7.51	126.71	117.70
35	YB	31	C	N3-C2-O2	-7.51	116.64	121.90
1	QA	1440(B)	G	C8-N9-C1'	-7.51	117.24	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1128	C	C2-N1-C1'	7.50	127.06	118.80
1	XA	1233	G	C8-N9-C1'	-7.50	117.25	127.00
1	XA	309	G	C3'-C2'-C1'	-7.50	95.50	101.50
34	YA	1404	C	C2-N1-C1'	7.49	127.04	118.80
1	QA	20	U	C2-N1-C1'	7.49	126.68	117.70
1	QA	1028(D)	G	C4-N9-C1'	7.48	136.22	126.50
1	QA	848	C	C2-N1-C1'	7.48	127.03	118.80
1	QA	1326	C	C2-N1-C1'	7.48	127.03	118.80
1	XA	1062	U	C2-N1-C1'	7.48	126.67	117.70
34	YA	2190	G	C8-N9-C1'	-7.47	117.28	127.00
1	QA	1361	G	C4-N9-C1'	7.47	136.21	126.50
1	XA	1495	U	N1-C1'-C2'	-7.47	103.78	112.00
1	XA	690	G	C4-N9-C1'	7.47	136.21	126.50
1	QA	757	U	C2-N1-C1'	7.46	126.66	117.70
1	QA	1440(B)	G	C4-N9-C1'	7.46	136.20	126.50
1	XA	309	G	P-O5'-C5'	7.46	132.84	120.90
1	QA	24	U	C2-N1-C1'	7.46	126.65	117.70
34	YA	269	U	C2-N1-C1'	7.46	126.65	117.70
1	XA	618	C	O5'-P-OP1	7.45	119.64	110.70
1	XA	1107	C	O5'-P-OP1	7.45	119.64	110.70
1	XA	1145	C	C6-N1-C1'	-7.45	111.87	120.80
35	YB	82	G	C8-N9-C4	-7.45	103.42	106.40
1	QA	581	G	C4-N9-C1'	7.44	136.18	126.50
34	YA	12	U	C6-N1-C1'	-7.44	110.79	121.20
1	XA	1373	G	O5'-P-OP1	7.43	119.62	110.70
34	RA	1672	C	C2-N1-C1'	7.43	126.98	118.80
34	YA	856	C	C6-N1-C1'	-7.43	111.88	120.80
35	YB	10	C	C5-C6-N1	7.43	124.71	121.00
1	QA	1361	G	C8-N9-C1'	-7.43	117.35	127.00
1	XA	1329	A	OP2-P-O3'	7.42	121.53	105.20
1	XA	1226	C	C6-N1-C1'	7.42	129.71	120.80
34	RA	1558	A	P-O3'-C3'	7.41	128.59	119.70
34	YA	2815	C	C6-N1-C1'	-7.41	111.91	120.80
34	RA	1549	C	C2-N1-C1'	7.41	126.94	118.80
34	RA	1870	C	C6-N1-C1'	-7.40	111.92	120.80
1	QA	1028(D)	G	C8-N9-C1'	-7.40	117.38	127.00
1	XA	1314	C	C2-N1-C1'	7.40	126.94	118.80
34	RA	1075	C	C2-N1-C1'	7.40	126.94	118.80
1	XA	68(M)	U	OP1-P-OP2	-7.39	108.51	119.60
1	XA	690	G	C8-N9-C1'	-7.39	117.39	127.00
36	RD	34	VAL	N-CA-C	-7.39	91.04	111.00
1	QA	163	C	C6-N1-C1'	-7.39	111.93	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	1742	C	C6-N1-C1'	-7.38	111.94	120.80
34	RA	602	G	C8-N9-C1'	-7.38	117.41	127.00
34	RA	1577	C	C2-N1-C1'	7.38	126.91	118.80
34	YA	2034	U	C2-N1-C1'	7.38	126.55	117.70
34	RA	1881	C	C6-N1-C1'	-7.37	111.95	120.80
34	YA	1880	C	C6-N1-C1'	-7.37	111.95	120.80
1	QA	1315	U	C2-N1-C1'	7.37	126.54	117.70
34	RA	1905	C	C6-N1-C1'	-7.37	111.96	120.80
1	QA	1056	U	C2-N1-C1'	7.37	126.54	117.70
34	YA	2190	G	C4-N9-C1'	7.37	136.08	126.50
34	RA	1734	C	C2-N1-C1'	7.37	126.90	118.80
35	YB	1	U	N1-C2-O2	7.37	127.95	122.80
35	RB	11	C	N1-C2-O2	7.36	123.32	118.90
1	XA	838(B)	U	C2-N1-C1'	7.36	126.53	117.70
1	XA	726	C	C2-N1-C1'	7.35	126.89	118.80
34	YA	2161	C	C2-N1-C1'	7.35	126.89	118.80
1	QA	581	G	C8-N9-C1'	-7.35	117.45	127.00
34	YA	1005	C	C2-N1-C1'	7.35	126.89	118.80
35	YB	70	C	C5-C6-N1	7.35	124.67	121.00
1	QA	1150	U	C2-N1-C1'	7.34	126.51	117.70
35	YB	37	C	C6-N1-C2	-7.34	117.36	120.30
1	QA	154	C	C2-N1-C1'	7.34	126.87	118.80
1	QA	54	C	C2-N1-C1'	7.34	126.87	118.80
1	QA	443	C	C6-N1-C1'	-7.33	112.01	120.80
1	QA	862	C	C2-N1-C1'	7.33	126.86	118.80
34	RA	1433	U	C2-N1-C1'	7.32	126.48	117.70
34	RA	2374	C	C2-N1-C1'	7.32	126.85	118.80
34	RA	602	G	C4-N9-C1'	7.31	136.01	126.50
1	XA	1367	C	O4'-C1'-N1	7.31	114.05	108.20
34	RA	9	U	C2-N1-C1'	7.31	126.47	117.70
1	XA	115	G	OP2-P-O3'	7.31	121.28	105.20
34	YA	1558	A	P-O3'-C3'	7.31	128.47	119.70
1	QA	322	C	C2-N1-C1'	7.31	126.84	118.80
1	XA	1270	C	C6-N1-C1'	-7.31	112.03	120.80
1	QA	137	C	C2-N1-C1'	7.30	126.83	118.80
1	QA	1113	C	C2-N1-C1'	7.30	126.83	118.80
34	RA	231	C	C2-N1-C1'	7.30	126.83	118.80
1	QA	723	U	C6-N1-C1'	-7.30	110.98	121.20
1	QA	1376	U	C2-N1-C1'	7.30	126.46	117.70
34	RA	1788	C	C2-N1-C1'	7.30	126.83	118.80
1	QA	1230	C	C2-N1-C1'	7.29	126.83	118.80
34	RA	2766	G	C4-N9-C1'	7.29	135.98	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1301	U	C6-N1-C1'	-7.29	110.99	121.20
34	RA	1391	U	C6-N1-C1'	-7.29	110.99	121.20
1	XA	1113	C	C2-N1-C1'	7.29	126.82	118.80
1	QA	201(A)	C	C6-N1-C1'	-7.29	112.05	120.80
35	YB	94	C	C6-N1-C2	-7.29	117.38	120.30
34	YA	270(Q)	C	C6-N1-C1'	-7.29	112.06	120.80
34	YA	1407	C	C2-N1-C1'	7.29	126.81	118.80
35	YB	102	G	N1-C6-O6	-7.28	115.53	119.90
1	XA	1327	C	OP1-P-O3'	7.28	121.21	105.20
1	XA	368	U	C2-N1-C1'	7.28	126.43	117.70
34	RA	2456	C	C6-N1-C1'	-7.27	112.08	120.80
1	QA	198	G	C4-N9-C1'	7.27	135.94	126.50
34	RA	657	U	C2-N1-C1'	7.26	126.42	117.70
34	RA	1879	C	C6-N1-C1'	-7.26	112.08	120.80
1	XA	443	C	C2-N1-C1'	7.26	126.79	118.80
34	YA	420	C	C6-N1-C1'	-7.26	112.08	120.80
1	QA	198	G	C8-N9-C1'	-7.26	117.56	127.00
34	RA	2821	A	O5'-P-OP1	-7.26	99.16	105.70
1	XA	590	C	C2-N1-C1'	7.26	126.78	118.80
34	YA	2312	U	C6-N1-C1'	-7.25	111.04	121.20
34	RA	384	U	C6-N1-C1'	-7.25	111.05	121.20
35	YB	47	C	N1-C2-O2	7.25	123.25	118.90
34	RA	161	U	C2-N1-C1'	7.25	126.40	117.70
35	RB	22	U	C6-N1-C2	-7.25	116.65	121.00
1	QA	623	C	C6-N1-C1'	-7.24	112.11	120.80
34	RA	2098	U	C6-N1-C1'	-7.24	111.06	121.20
1	QA	1369	C	C6-N1-C1'	-7.24	112.12	120.80
34	YA	721	C	C6-N1-C1'	-7.23	112.12	120.80
34	RA	779	U	C2-N1-C1'	7.23	126.38	117.70
1	XA	201(C)	U	C6-N1-C1'	-7.23	111.08	121.20
34	YA	1533	C	C6-N1-C1'	-7.23	112.12	120.80
1	QA	110	C	C6-N1-C1'	-7.23	112.12	120.80
34	RA	2343	C	C6-N1-C1'	-7.23	112.12	120.80
34	RA	2766	G	C8-N9-C1'	-7.23	117.60	127.00
34	YA	2063	C	C2-N1-C1'	7.23	126.75	118.80
34	YA	541	C	C6-N1-C1'	-7.21	112.15	120.80
1	QA	1097	C	C2-N1-C1'	7.21	126.73	118.80
1	QA	437	U	C2-N1-C1'	7.20	126.34	117.70
1	QA	498	U	C6-N1-C1'	-7.20	111.12	121.20
34	RA	1213	A	C8-N9-C1'	-7.20	114.74	127.70
1	QA	320	C	C6-N1-C1'	-7.19	112.17	120.80
34	RA	1213	A	C4-N9-C1'	7.19	139.24	126.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1131	G	C4-N9-C1'	7.19	135.85	126.50
1	XA	1343	G	C3'-C2'-C1'	7.19	107.25	101.50
1	XA	1225	A	C5'-C4'-O4'	7.19	117.72	109.10
1	XA	1131	G	C8-N9-C1'	-7.19	117.66	127.00
1	XA	1277	C	P-O3'-C3'	7.18	128.32	119.70
34	YA	2559	C	C2-N1-C1'	7.18	126.70	118.80
34	YA	2858	C	C2-N1-C1'	7.18	126.70	118.80
1	XA	1346	A	C8-N9-C1'	-7.18	114.77	127.70
34	RA	2658	C	C6-N1-C1'	-7.18	112.18	120.80
34	RA	714	U	C6-N1-C1'	-7.18	111.15	121.20
34	RA	1533	C	C6-N1-C1'	-7.18	112.19	120.80
1	QA	79	G	C4-N9-C1'	7.17	135.83	126.50
1	QA	984	C	C6-N1-C1'	-7.17	112.20	120.80
34	RA	453	C	C2-N1-C1'	7.17	126.69	118.80
34	YA	1271	G	C4-N9-C1'	7.17	135.82	126.50
1	XA	1140	C	C6-N1-C1'	-7.17	112.20	120.80
1	QA	1328	C	OP1-P-OP2	-7.16	108.86	119.60
1	XA	946	A	O5'-P-OP1	7.16	119.29	110.70
34	YA	105	C	C2-N1-C1'	7.16	126.68	118.80
1	XA	381	C	C6-N1-C1'	-7.16	112.21	120.80
1	XA	36	C	C6-N1-C1'	-7.16	112.21	120.80
36	YD	35	LYS	CA-CB-CG	7.16	129.14	113.40
1	XA	1361	G	C4-N9-C1'	7.15	135.80	126.50
34	RA	1649	G	C4-N9-C1'	7.15	135.80	126.50
1	QA	283	C	C2-N1-C1'	7.15	126.67	118.80
1	XA	68(V)	U	C6-N1-C1'	-7.15	111.19	121.20
1	XA	955	U	C2-N1-C1'	7.15	126.28	117.70
34	RA	2178	C	C6-N1-C1'	-7.14	112.23	120.80
1	QA	643	C	C2-N1-C1'	7.14	126.66	118.80
1	QA	719	C	C2-N1-C1'	7.14	126.66	118.80
1	QA	223	U	C2-N1-C1'	7.13	126.26	117.70
34	RA	2506	U	C6-N1-C1'	-7.13	111.22	121.20
1	QA	789	U	C2-N1-C1'	7.13	126.25	117.70
1	QA	186(H)	C	C6-N1-C1'	-7.12	112.26	120.80
1	QA	1313	U	C6-N1-C1'	-7.12	111.24	121.20
1	XA	1361	G	C8-N9-C1'	-7.12	117.75	127.00
1	XA	1150	U	C6-N1-C1'	-7.11	111.24	121.20
1	QA	79	G	C8-N9-C1'	-7.11	117.76	127.00
1	XA	946	A	O5'-P-OP2	-7.11	99.30	105.70
34	YA	1271	G	C8-N9-C1'	-7.11	117.76	127.00
34	YA	1022	G	P-O3'-C3'	7.11	128.23	119.70
1	QA	1406	U	C2-N1-C1'	7.10	126.22	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	323	U	C6-N1-C1'	-7.10	111.25	121.20
34	RA	2584	U	O4'-C1'-N1	7.10	113.88	108.20
1	XA	658	G	C4-N9-C1'	7.09	135.72	126.50
34	YA	629	G	C4-N9-C1'	7.09	135.72	126.50
1	QA	826	C	C2-N1-C1'	7.09	126.60	118.80
1	XA	531	U	C2-N1-C1'	7.09	126.21	117.70
34	RA	141(B)	C	C6-N1-C1'	-7.09	112.29	120.80
35	YB	1	U	N3-C2-O2	-7.09	117.24	122.20
34	YA	652	C	C2-N1-C1'	7.08	126.59	118.80
35	YB	80	U	N3-C2-O2	-7.08	117.24	122.20
1	XA	1348	U	O4'-C1'-N1	7.08	113.86	108.20
34	YA	2784	C	C2-N1-C1'	7.08	126.59	118.80
34	RA	2889	C	C2-N1-C1'	7.08	126.58	118.80
34	RA	2695	C	C6-N1-C1'	-7.07	112.31	120.80
34	RA	1178	C	C2-N1-C1'	7.07	126.58	118.80
34	RA	1370	C	C2-N1-C1'	7.07	126.58	118.80
1	QA	748	C	P-O3'-C3'	7.07	128.18	119.70
34	RA	537	C	C2-N1-C1'	7.06	126.57	118.80
34	YA	1314	C	C2-N1-C1'	7.06	126.57	118.80
34	YA	1045	A	P-O3'-C3'	7.06	128.17	119.70
35	YB	27	C	C6-N1-C2	-7.06	117.48	120.30
34	RA	846	C	P-O3'-C3'	7.05	128.16	119.70
1	QA	186(B)	C	C6-N1-C1'	-7.05	112.34	120.80
34	YA	2550	G	N9-C1'-C2'	7.05	123.17	114.00
1	XA	678	U	C2-N1-C1'	7.05	126.16	117.70
1	XA	1426	C	C6-N1-C1'	-7.05	112.34	120.80
34	YA	846	C	P-O3'-C3'	7.05	128.16	119.70
1	XA	658	G	C8-N9-C1'	-7.04	117.85	127.00
1	XA	1325	C	C6-N1-C1'	-7.04	112.35	120.80
34	YA	629	G	C8-N9-C1'	-7.03	117.86	127.00
35	YB	30	C	N3-C2-O2	-7.03	116.98	121.90
1	QA	312	C	C2-N1-C1'	7.03	126.53	118.80
1	XA	309	G	C5'-C4'-C3'	7.03	127.25	116.00
34	YA	1070	A	C4-N9-C1'	7.03	138.95	126.30
1	QA	634	C	C2-N1-C1'	7.03	126.53	118.80
1	XA	1345	U	C6-N1-C1'	-7.03	111.36	121.20
35	YB	68	C	C6-N1-C2	-7.03	117.49	120.30
34	YA	2380	C	C2-N1-C1'	7.02	126.52	118.80
1	XA	811	C	C2-N1-C1'	7.02	126.52	118.80
1	QA	618	C	C2-N1-C1'	7.02	126.52	118.80
34	YA	2584	U	O4'-C1'-N1	7.02	113.81	108.20
35	RB	27	C	C6-N1-C2	-7.01	117.49	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1384	C	C2-N1-C1'	7.01	126.52	118.80
34	RA	544	C	C6-N1-C1'	-7.01	112.39	120.80
1	QA	1086	U	C2-N1-C1'	7.01	126.11	117.70
34	RA	2698	U	C2-N1-C1'	7.01	126.11	117.70
1	XA	1358	U	OP1-P-O3'	7.01	120.62	105.20
34	RA	1141	U	C2-N1-C1'	7.01	126.11	117.70
35	RB	11	C	N3-C2-O2	-7.01	117.00	121.90
34	YA	1741	C	C2-N1-C1'	7.00	126.50	118.80
35	YB	54	G	C4-C5-N7	7.00	113.60	110.80
1	XA	1232	U	OP1-P-OP2	-7.00	109.10	119.60
1	XA	322	C	C6-N1-C1'	-7.00	112.40	120.80
34	RA	1790	C	C6-N1-C1'	-6.99	112.41	120.80
34	RA	184	C	C2-N1-C1'	6.99	126.49	118.80
34	RA	2321	G	C4-N9-C1'	6.99	135.59	126.50
34	YA	2723	C	C2-N1-C1'	6.99	126.49	118.80
35	YB	31	C	N1-C2-O2	6.98	123.09	118.90
34	YA	613	U	C2-N1-C1'	6.98	126.07	117.70
34	YA	1728	G	O4'-C1'-N9	6.98	113.78	108.20
1	QA	1128	C	C6-N1-C1'	-6.97	112.43	120.80
34	YA	1433	U	C2-N1-C1'	6.97	126.07	117.70
34	YA	271(C)	G	P-O3'-C3'	6.97	128.06	119.70
1	QA	195	A	C4-N9-C1'	6.96	138.84	126.30
1	QA	1219	U	C6-N1-C1'	-6.96	111.45	121.20
1	XA	1037	C	C2-N1-C1'	6.96	126.46	118.80
1	XA	131	C	C2-N1-C1'	6.96	126.45	118.80
34	YA	1070	A	C8-N9-C1'	-6.95	115.19	127.70
1	XA	1346	A	C4-N9-C1'	6.95	138.81	126.30
1	XA	1366	C	C2-N1-C1'	6.95	126.44	118.80
34	RA	1022	G	P-O3'-C3'	6.95	128.03	119.70
34	RA	2554	U	C6-N1-C1'	-6.95	111.48	121.20
34	YA	503	A	P-O3'-C3'	6.94	128.03	119.70
34	RA	721	C	C6-N1-C1'	-6.94	112.47	120.80
20	QT	73	HIS	CB-CA-C	-6.94	96.52	110.40
34	YA	1956	U	C2-N1-C1'	6.94	126.02	117.70
34	RA	1330	C	C2-N1-C1'	6.93	126.42	118.80
1	XA	115	G	O4'-C1'-N9	6.93	113.75	108.20
34	RA	2483	C	C2-N1-C1'	6.93	126.42	118.80
1	XA	323	U	O5'-P-OP1	-6.93	99.47	105.70
1	XA	619	U	C2-N1-C1'	-6.93	109.39	117.70
1	XA	879	C	C2-N1-C1'	6.93	126.42	118.80
1	XA	310	G	C8-N9-C1'	6.92	136.00	127.00
34	YA	1097	U	C2-N1-C1'	6.92	126.01	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	1990	C	C6-N1-C1'	-6.92	112.49	120.80
1	QA	989	C	C6-N1-C1'	-6.92	112.49	120.80
34	RA	2321	G	C8-N9-C1'	-6.92	118.01	127.00
1	QA	590	C	C2-N1-C1'	6.92	126.41	118.80
34	YA	414	C	C6-N1-C1'	-6.90	112.52	120.80
34	RA	2666	C	C6-N1-C1'	-6.90	112.52	120.80
35	YB	54	G	C5-N7-C8	-6.90	100.85	104.30
1	QA	1371	G	C4-N9-C1'	6.89	135.46	126.50
34	RA	1225	C	C6-N1-C1'	-6.89	112.53	120.80
1	XA	1242	C	C2-N1-C1'	6.89	126.38	118.80
34	RA	413	C	C6-N1-C1'	-6.89	112.53	120.80
34	RA	2471	C	C2-N1-C1'	6.89	126.38	118.80
41	RI	131	LYS	N-CA-C	6.89	129.60	111.00
34	RA	1577	C	C6-N1-C1'	-6.89	112.53	120.80
34	YA	2465	C	C2-N1-C1'	6.89	126.38	118.80
1	XA	931	C	C2-N1-C1'	6.89	126.38	118.80
34	YA	1788	C	C2-N1-C1'	6.88	126.37	118.80
1	QA	195	A	C8-N9-C1'	-6.87	115.33	127.70
1	QA	848	C	C6-N1-C1'	-6.87	112.55	120.80
34	RA	2075	U	C2-N1-C1'	6.87	125.95	117.70
35	YB	1	U	C5-C6-N1	6.87	126.14	122.70
34	RA	2703	C	C2-N1-C1'	6.87	126.36	118.80
34	RA	1675	C	C2-N1-C1'	6.87	126.35	118.80
34	YA	904	C	C2-N1-C1'	6.87	126.35	118.80
34	RA	2871	C	C2-N1-C1'	6.86	126.34	118.80
1	XA	948	C	C5'-C4'-O4'	-6.86	100.87	109.10
1	QA	952	U	C2-N1-C1'	6.85	125.92	117.70
1	QA	328	C	P-O3'-C3'	6.85	127.92	119.70
1	XA	186(O)	U	C2-N1-C1'	6.85	125.92	117.70
1	QA	1259	C	C2-N1-C1'	6.84	126.33	118.80
34	YA	1506	C	C2-N1-C1'	6.84	126.33	118.80
34	RA	2403	C	C2-N1-C1'	6.84	126.32	118.80
1	XA	525	C	C2-N1-C1'	6.84	126.32	118.80
34	YA	404	C	P-O3'-C3'	6.84	127.91	119.70
34	YA	859	G	P-O3'-C3'	6.84	127.91	119.70
1	QA	1326	C	C6-N1-C1'	-6.84	112.59	120.80
1	XA	310	G	C4-N9-C1'	-6.84	117.61	126.50
34	YA	270(Z)	G	C4-N9-C1'	6.84	135.39	126.50
34	YA	2343	C	C2-N1-C1'	6.83	126.32	118.80
34	YA	1653	G	P-O3'-C3'	6.83	127.90	119.70
34	YA	2321	G	C4-N9-C1'	6.83	135.38	126.50
1	QA	1371	G	C8-N9-C1'	-6.83	118.12	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1307	U	OP1-P-OP2	6.83	129.84	119.60
1	QA	1263	C	C2-N1-C1'	6.83	126.31	118.80
34	YA	537	C	C2-N1-C1'	6.83	126.31	118.80
34	RA	1066	U	C2-N1-C1'	6.82	125.88	117.70
34	RA	1404	C	C2-N1-C1'	6.82	126.30	118.80
35	RB	71	C	N1-C2-O2	6.82	122.99	118.90
34	YA	591	C	C2-N1-C1'	6.82	126.30	118.80
1	QA	620	C	C2-N1-C1'	6.82	126.30	118.80
34	RA	642	G	C8-N9-C1'	-6.81	118.14	127.00
34	YA	1372	U	C2-N1-C1'	6.81	125.87	117.70
34	YA	384	U	C2-N1-C1'	6.80	125.86	117.70
34	YA	1404	C	C6-N1-C1'	-6.80	112.64	120.80
34	RA	404	C	P-O3'-C3'	6.80	127.86	119.70
34	RA	1130	U	P-O3'-C3'	6.80	127.86	119.70
34	RA	1686	C	C2-N1-C1'	6.80	126.28	118.80
34	RA	1777	U	C2-N1-C1'	6.80	125.86	117.70
34	RA	1516	U	C2-N1-C1'	6.80	125.86	117.70
1	QA	595	G	C4-N9-C1'	6.80	135.33	126.50
1	QA	1242	C	C2-N1-C1'	6.80	126.28	118.80
34	RA	343	C	C2-N1-C1'	6.79	126.28	118.80
34	RA	642	G	C4-N9-C1'	6.79	135.33	126.50
1	XA	1128	C	C2-N1-C1'	6.79	126.27	118.80
1	XA	943	U	C6-N1-C1'	-6.79	111.70	121.20
34	YA	1870	C	C2-N1-C1'	6.79	126.27	118.80
34	YA	2895	U	C2-N1-C1'	6.79	125.84	117.70
34	RA	1105	U	C2-N1-C1'	6.78	125.84	117.70
34	RA	1672	C	C6-N1-C1'	-6.78	112.66	120.80
34	YA	270(Z)	G	C8-N9-C1'	-6.78	118.18	127.00
34	YA	2554	U	C2-N1-C1'	6.78	125.83	117.70
34	YA	1687	G	C4-N9-C1'	6.77	135.31	126.50
22	XV	56	C	N1-C2-O2	6.77	122.96	118.90
1	QA	344	A	O4'-C1'-N9	-6.77	102.79	108.20
34	YA	1914	C	O4'-C1'-N1	6.77	113.61	108.20
34	RA	1734	C	C6-N1-C1'	-6.76	112.68	120.80
1	XA	948	C	O5'-P-OP1	-6.76	99.61	105.70
1	QA	137	C	C6-N1-C1'	-6.76	112.69	120.80
1	XA	1314	C	C6-N1-C1'	-6.76	112.69	120.80
1	XA	757	U	C2-N1-C1'	6.75	125.81	117.70
42	YN	114	ARG	N-CA-C	-6.75	92.77	111.00
1	QA	1482	G	C4-N9-C1'	6.75	135.28	126.50
1	QA	19	C	C2-N1-C1'	6.74	126.22	118.80
1	XA	1358	U	P-O5'-C5'	6.73	131.67	120.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	1075	C	C6-N1-C1'	-6.73	112.72	120.80
1	QA	595	G	C8-N9-C1'	-6.73	118.25	127.00
34	RA	1549	C	C6-N1-C1'	-6.73	112.72	120.80
1	QA	862	C	C6-N1-C1'	-6.73	112.73	120.80
34	YA	2321	G	C8-N9-C1'	-6.73	118.26	127.00
1	QA	1140	C	C2-N1-C1'	6.72	126.20	118.80
1	QA	1366	C	C2-N1-C1'	6.72	126.19	118.80
34	RA	568	U	C2-N1-C1'	6.72	125.76	117.70
34	RA	2291	U	C6-N1-C1'	-6.71	111.80	121.20
1	QA	580	U	C2-N1-C1'	6.71	125.76	117.70
1	XA	1241	G	C4-N9-C1'	6.71	135.23	126.50
34	YA	1005	C	C6-N1-C1'	-6.71	112.75	120.80
1	XA	1313	U	C2-N1-C1'	6.71	125.75	117.70
34	RA	2752	C	C2-N1-C1'	6.71	126.18	118.80
34	YA	1951	U	C6-N1-C1'	-6.71	111.81	121.20
1	XA	1225	A	C8-N9-C1'	-6.71	115.63	127.70
34	RA	1188	U	C2-N1-C1'	6.70	125.74	117.70
1	XA	714	G	C4-N9-C1'	6.70	135.22	126.50
35	RB	22	U	C2-N1-C1'	6.70	125.74	117.70
34	RA	420	C	C2-N1-C1'	6.70	126.17	118.80
1	XA	714	G	C8-N9-C1'	-6.70	118.30	127.00
34	YA	2374	C	C2-N1-C1'	6.70	126.16	118.80
34	YA	1391	U	C2-N1-C1'	6.69	125.73	117.70
1	XA	1537	U	P-O3'-C3'	6.69	127.73	119.70
1	QA	578	C	C2-N1-C1'	6.69	126.16	118.80
34	RA	1653	G	P-O3'-C3'	6.69	127.72	119.70
20	QT	74	LYS	CA-C-O	6.68	134.14	120.10
34	YA	464	U	C2-N1-C1'	6.68	125.72	117.70
1	XA	944	G	C4-N9-C1'	6.68	135.19	126.50
34	YA	1687	G	C8-N9-C1'	-6.68	118.31	127.00
1	XA	590	C	C6-N1-C1'	-6.68	112.79	120.80
34	YA	2173	A	O5'-P-OP1	6.68	118.71	110.70
40	YH	152	ARG	C-N-CA	6.68	138.39	121.70
1	QA	1157	A	O4'-C1'-N9	6.67	113.54	108.20
34	RA	2667	C	C2-N1-C1'	6.67	126.14	118.80
34	RA	1788	C	C6-N1-C1'	-6.67	112.79	120.80
34	YA	2681	C	P-O3'-C3'	6.67	127.71	119.70
1	XA	726	C	C6-N1-C1'	-6.67	112.80	120.80
1	QA	154	C	C6-N1-C1'	-6.66	112.80	120.80
1	QA	992	U	P-O3'-C3'	6.66	127.70	119.70
1	QA	1482	G	C8-N9-C1'	-6.66	118.34	127.00
34	RA	2374	C	C6-N1-C1'	-6.66	112.80	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	343	U	C2-N1-C1'	6.66	125.70	117.70
34	RA	1407	C	C2-N1-C1'	6.66	126.13	118.80
34	RA	231	C	C6-N1-C1'	-6.66	112.81	120.80
34	RA	1240	U	C2-N1-C1'	6.66	125.69	117.70
34	YA	1754	C	C2-N1-C1'	6.65	126.11	118.80
34	YA	2161	C	C6-N1-C1'	-6.65	112.82	120.80
1	QA	1351	U	C2-N1-C1'	6.65	125.68	117.70
1	XA	62	U	C2-N1-C1'	6.65	125.68	117.70
1	QA	54	C	C6-N1-C1'	-6.65	112.82	120.80
1	QA	322	C	C6-N1-C1'	-6.65	112.82	120.80
34	YA	1407	C	C6-N1-C1'	-6.64	112.83	120.80
1	QA	122	G	C4-N9-C1'	6.64	135.13	126.50
1	XA	307	C	C2-N1-C1'	6.63	126.10	118.80
1	XA	1113	C	C6-N1-C1'	-6.63	112.84	120.80
1	XA	1241	G	C8-N9-C1'	-6.63	118.38	127.00
35	RB	27	C	N1-C2-O2	6.63	122.88	118.90
1	QA	36	C	C2-N1-C1'	6.63	126.09	118.80
1	QA	355	C	C2-N1-C1'	6.63	126.09	118.80
1	QA	1113	C	C6-N1-C1'	-6.63	112.85	120.80
1	QA	1230	C	C6-N1-C1'	-6.62	112.85	120.80
1	XA	718	G	C8-N9-C1'	-6.62	118.39	127.00
34	YA	2656	U	C6-N1-C1'	-6.62	111.93	121.20
34	RA	1046	A	C4-N9-C1'	6.62	138.21	126.30
1	QA	1129	C	C2-N1-C1'	6.62	126.08	118.80
34	RA	229	A	P-O3'-C3'	6.62	127.64	119.70
34	RA	1611	C	C2-N1-C1'	6.61	126.08	118.80
34	YA	897	C	C2-N1-C1'	6.61	126.07	118.80
1	XA	443	C	C6-N1-C1'	-6.61	112.86	120.80
19	QS	41	VAL	N-CA-C	6.61	128.85	111.00
1	QA	1206	G	C4-N9-C1'	6.60	135.09	126.50
34	RA	503	A	P-O3'-C3'	6.60	127.62	119.70
34	RA	636	G	C8-N9-C1'	-6.60	118.42	127.00
1	XA	944	G	C8-N9-C1'	-6.60	118.42	127.00
34	RA	2871	C	C6-N1-C1'	-6.60	112.88	120.80
34	YA	1774	C	C2-N1-C1'	6.60	126.06	118.80
1	QA	838(B)	U	C6-N1-C1'	-6.59	111.97	121.20
34	YA	1857	G	C4-N9-C1'	6.59	135.07	126.50
34	YA	2559	C	C6-N1-C1'	-6.59	112.89	120.80
34	YA	2612	C	O5'-P-OP2	-6.59	99.77	105.70
34	YA	2836	U	C6-N1-C1'	-6.59	111.98	121.20
1	QA	343	U	C2-N1-C1'	6.58	125.60	117.70
1	XA	277	C	C2-N1-C1'	6.58	126.04	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	617	G	O4'-C1'-C2'	-6.58	99.22	105.80
1	QA	1097	C	C6-N1-C1'	-6.58	112.91	120.80
34	RA	1920	C	C2-N1-C1'	6.58	126.03	118.80
34	YA	2063	C	C6-N1-C1'	-6.58	112.91	120.80
34	RA	271(C)	G	P-O3'-C3'	6.57	127.59	119.70
34	RA	1045	A	P-O3'-C3'	6.57	127.59	119.70
34	RA	2040	C	C2-N1-C1'	6.57	126.03	118.80
1	QA	122	G	C8-N9-C1'	-6.57	118.46	127.00
35	YB	54	G	C2-N3-C4	-6.57	108.62	111.90
34	YA	1049	C	C2-N1-C1'	6.57	126.02	118.80
1	QA	1206	G	C8-N9-C1'	-6.56	118.48	127.00
34	RA	2636	U	C2-N1-C1'	6.56	125.57	117.70
14	XN	28	GLY	N-CA-C	6.55	129.49	113.10
35	YB	71	C	C6-N1-C2	-6.55	117.68	120.30
34	RA	2130	U	C6-N1-C1'	-6.55	112.03	121.20
34	YA	637	A	P-O3'-C3'	6.55	127.56	119.70
34	YA	1857	G	C8-N9-C1'	-6.55	118.48	127.00
1	QA	56	U	C2-N1-C1'	6.55	125.56	117.70
1	QA	957	U	C6-N1-C1'	-6.55	112.03	121.20
1	XA	578	C	C2-N1-C1'	6.55	126.00	118.80
22	XV	76	A	C8-N9-C4	-6.55	103.18	105.80
34	YA	114	U	C6-N1-C1'	-6.55	112.03	121.20
35	YB	27	C	N3-C2-O2	-6.55	117.32	121.90
1	XA	718	G	C4-N9-C1'	6.54	135.01	126.50
34	YA	1881	C	C2-N1-C1'	6.54	126.00	118.80
20	QT	74	LYS	CA-C-N	-6.54	102.81	117.20
1	XA	12	U	C2-N1-C1'	6.54	125.55	117.70
34	YA	2710	C	C2-N1-C1'	6.54	125.99	118.80
1	QA	390	C	C2-N1-C1'	6.54	125.99	118.80
35	YB	63	G	N1-C6-O6	-6.54	115.98	119.90
34	RA	1662	C	C2-N1-C1'	6.53	125.99	118.80
34	YA	2858	C	C6-N1-C1'	-6.53	112.96	120.80
34	RA	541	C	C2-N1-C1'	6.53	125.98	118.80
1	XA	1049	U	C6-N1-C1'	-6.53	112.06	121.20
1	QA	283	C	C6-N1-C1'	-6.53	112.97	120.80
1	QA	1148	U	C2-N1-C1'	6.53	125.53	117.70
34	YA	2617	C	C2-N1-C1'	6.53	125.98	118.80
1	XA	964	A	C8-N9-C1'	-6.52	115.96	127.70
34	YA	512	G	O4'-C1'-N9	6.52	113.42	108.20
34	YA	1982	C	C2-N1-C1'	6.52	125.97	118.80
1	QA	643	C	C6-N1-C1'	-6.52	112.97	120.80
34	RA	453	C	C6-N1-C1'	-6.52	112.97	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	856	C	C2-N1-C1'	6.52	125.97	118.80
34	RA	2824	C	C2-N1-C1'	6.52	125.97	118.80
1	QA	521	G	C4-N9-C1'	6.52	134.97	126.50
1	XA	266	G	O4'-C1'-N9	-6.51	102.99	108.20
34	RA	1046	A	C8-N9-C1'	-6.51	115.98	127.70
1	QA	719	C	C6-N1-C1'	-6.50	112.99	120.80
1	XA	636	U	O5'-P-OP1	-6.50	99.84	105.70
1	XA	1074	G	C4-N9-C1'	6.50	134.95	126.50
1	QA	822	C	C2-N1-C1'	6.50	125.95	118.80
34	RA	2342	C	C2-N1-C1'	6.50	125.95	118.80
34	YA	2784	C	C6-N1-C1'	-6.50	113.00	120.80
34	RA	363(F)	U	C2-N1-C1'	6.50	125.50	117.70
34	RA	2656	U	C6-N1-C1'	-6.50	112.11	121.20
1	XA	241	C	C2-N1-C1'	6.50	125.95	118.80
1	QA	136	C	C2-N1-C1'	6.49	125.94	118.80
34	YA	105	C	C6-N1-C1'	-6.49	113.01	120.80
34	RA	636	G	C4-N9-C1'	6.49	134.93	126.50
34	YA	1026	U	P-O3'-C3'	6.49	127.48	119.70
34	YA	1686	C	C2-N1-C1'	6.49	125.93	118.80
34	RA	637	A	P-O3'-C3'	6.48	127.48	119.70
34	RA	2096	U	C2-N1-C1'	6.48	125.48	117.70
1	XA	748	C	P-O3'-C3'	6.48	127.48	119.70
35	YB	60	C	C5-C6-N1	6.48	124.24	121.00
1	XA	131	C	C6-N1-C1'	-6.48	113.02	120.80
1	QA	826	C	C6-N1-C1'	-6.48	113.03	120.80
1	XA	201(A)	C	C2-N1-C1'	6.48	125.93	118.80
34	RA	537	C	C6-N1-C1'	-6.47	113.03	120.80
34	RA	2043	C	C2-N1-C1'	6.47	125.92	118.80
1	QA	705	U	C6-N1-C1'	-6.47	112.14	121.20
34	YA	652	C	C6-N1-C1'	-6.47	113.04	120.80
34	RA	2889	C	C6-N1-C1'	-6.47	113.04	120.80
34	YA	2431	U	C6-N1-C1'	-6.47	112.15	121.20
1	QA	312	C	C6-N1-C1'	-6.46	113.04	120.80
1	QA	1017	G	C8-N9-C1'	-6.46	118.60	127.00
34	RA	270(Q)	C	C2-N1-C1'	6.46	125.90	118.80
1	QA	1127	G	C4-N9-C1'	6.45	134.89	126.50
34	RA	114	U	C6-N1-C1'	-6.45	112.16	121.20
1	QA	1327	C	O4'-C1'-N1	6.45	113.36	108.20
1	XA	20	U	C2-N1-C1'	6.45	125.44	117.70
1	QA	6	G	C4-N9-C1'	6.45	134.88	126.50
1	QA	775	G	C4-N9-C1'	6.45	134.88	126.50
34	RA	2095	C	C2-N1-C1'	6.45	125.89	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	2262	U	C6-N1-C1'	-6.45	112.17	121.20
34	YA	745	G	P-O3'-C3'	-6.45	111.97	119.70
34	YA	753	C	C2-N1-C1'	6.44	125.89	118.80
54	RZ	62	PRO	C-N-CA	6.44	137.81	121.70
1	QA	775	G	C8-N9-C1'	-6.44	118.63	127.00
34	YA	1415	U	C2-N1-C1'	6.44	125.43	117.70
34	RA	1178	C	C6-N1-C1'	-6.44	113.07	120.80
35	YB	27	C	N1-C2-O2	6.44	122.76	118.90
34	RA	753	C	C2-N1-C1'	6.44	125.88	118.80
34	RA	1728	G	O4'-C1'-N9	6.44	113.35	108.20
34	YA	2132	U	C6-N1-C1'	-6.44	112.19	121.20
1	XA	834	C	C2-N1-C1'	6.44	125.88	118.80
1	XA	1384	C	C6-N1-C1'	-6.43	113.08	120.80
34	RA	1370	C	C6-N1-C1'	-6.43	113.08	120.80
1	QA	521	G	C8-N9-C1'	-6.43	118.64	127.00
1	XA	1074	G	C8-N9-C1'	-6.43	118.65	127.00
34	YA	565	C	C2-N1-C1'	6.42	125.87	118.80
34	YA	2494	G	O5'-P-OP1	-6.42	99.92	105.70
34	RA	669	G	C4-N9-C1'	6.42	134.85	126.50
1	QA	692	U	C6-N1-C1'	-6.42	112.21	121.20
22	QV	30	C	C2-N1-C1'	6.42	125.86	118.80
1	XA	796	C	C2-N1-C1'	6.42	125.86	118.80
34	YA	974(B)	C	C2-N1-C1'	6.42	125.86	118.80
34	RA	639	U	C2-N1-C1'	6.42	125.40	117.70
34	RA	1892	C	C2-N1-C1'	6.42	125.86	118.80
42	RN	114	ARG	N-CA-C	-6.42	93.68	111.00
30	R6	13	CYS	CA-CB-SG	-6.41	102.46	114.00
34	RA	613	U	C6-N1-C1'	-6.41	112.23	121.20
34	RA	1528	A	O4'-C1'-N9	6.41	113.33	108.20
34	YA	2097	C	C2-N1-C1'	6.41	125.85	118.80
34	YA	2393	A	OP1-P-O3'	6.41	119.30	105.20
1	QA	6	G	C8-N9-C1'	-6.41	118.67	127.00
1	QA	1017	G	C4-N9-C1'	6.41	134.83	126.50
34	RA	184	C	C6-N1-C1'	-6.41	113.11	120.80
1	QA	687	A	P-O3'-C3'	6.41	127.39	119.70
1	XA	972	C	N1-C1'-C2'	6.41	122.33	114.00
1	XA	1349	A	C8-N9-C1'	6.40	139.22	127.70
34	YA	1314	C	C6-N1-C1'	-6.40	113.12	120.80
34	YA	1640	C	C2-N1-C1'	6.40	125.84	118.80
34	YA	2089	U	C2-N1-C1'	6.39	125.37	117.70
1	XA	68(R)	U	C6-N1-C1'	-6.39	112.26	121.20
1	XA	232	G	C4-N9-C1'	6.39	134.80	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2040	C	C2-N1-C1'	6.39	125.82	118.80
34	RA	1774	C	C2-N1-C1'	6.38	125.82	118.80
1	QA	1045	C	C2-N1-C1'	6.38	125.82	118.80
53	RY	99	CYS	CA-CB-SG	6.38	125.48	114.00
1	QA	1440(H)	C	C2-N1-C1'	6.38	125.82	118.80
1	QA	1538	C	P-O3'-C3'	6.38	127.35	119.70
1	XA	598	U	C2-N1-C1'	6.38	125.35	117.70
34	YA	650	C	C2-N1-C1'	6.38	125.81	118.80
34	YA	2130	U	C6-N1-C1'	-6.38	112.28	121.20
1	QA	672	U	C2-N1-C1'	6.37	125.34	117.70
34	RA	1509	C	C2-N1-C1'	6.37	125.81	118.80
1	XA	811	C	C6-N1-C1'	-6.37	113.15	120.80
34	RA	266	G	C4-N9-C1'	6.37	134.78	126.50
1	QA	1075	C	C2-N1-C1'	6.37	125.81	118.80
1	QA	1127	G	C8-N9-C1'	-6.37	118.72	127.00
34	YA	2380	C	C6-N1-C1'	-6.37	113.16	120.80
1	QA	618	C	C6-N1-C1'	-6.37	113.16	120.80
22	XV	15	G	C8-N9-C4	-6.37	103.85	106.40
34	YA	35	G	C4-N9-C1'	6.36	134.77	126.50
35	YB	38	C	C6-N1-C2	-6.36	117.76	120.30
1	XA	1366	C	C6-N1-C1'	-6.36	113.17	120.80
1	QA	1384	C	C2-N1-C1'	6.36	125.79	118.80
34	RA	669	G	C8-N9-C1'	-6.36	118.74	127.00
34	RA	2028	U	C2-N1-C1'	6.35	125.33	117.70
1	XA	1465	C	C2-N1-C1'	6.35	125.79	118.80
1	QA	634	C	C6-N1-C1'	-6.35	113.18	120.80
34	YA	1741	C	C6-N1-C1'	-6.35	113.18	120.80
1	QA	24	U	C6-N1-C1'	-6.35	112.31	121.20
34	YA	1598	C	C2-N1-C1'	6.35	125.79	118.80
34	RA	266	G	C8-N9-C1'	-6.35	118.75	127.00
34	YA	2723	C	C6-N1-C1'	-6.35	113.18	120.80
1	XA	972	C	O4'-C1'-N1	6.35	113.28	108.20
1	XA	989	C	C2-N1-C1'	6.35	125.78	118.80
35	YB	86	G	C8-N9-C4	6.35	108.94	106.40
1	XA	1062	U	C6-N1-C1'	-6.35	112.32	121.20
1	XA	322	C	P-O3'-C3'	6.34	127.31	119.70
1	XA	805	C	C2-N1-C1'	6.34	125.78	118.80
1	XA	1377	A	P-O3'-C3'	6.34	127.31	119.70
34	YA	2195	C	C2-N1-C1'	6.34	125.78	118.80
34	YA	2658	C	C2-N1-C1'	6.34	125.78	118.80
1	XA	283	C	C2-N1-C1'	6.34	125.78	118.80
34	YA	2146	C	C2-N1-C1'	6.34	125.78	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	2466	C	C2-N1-C1'	6.34	125.78	118.80
34	RA	2179	C	C2-N1-C1'	6.34	125.77	118.80
34	RA	2483	C	C6-N1-C1'	-6.34	113.20	120.80
1	QA	20	U	C6-N1-C1'	-6.33	112.33	121.20
1	XA	618	C	O5'-P-OP2	-6.33	100.00	105.70
1	XA	1219	U	C2-N1-C1'	-6.33	110.10	117.70
34	YA	242	G	P-O3'-C3'	6.33	127.30	119.70
35	YB	28	C	C6-N1-C2	-6.33	117.77	120.30
34	RA	2582	G	C4-N9-C1'	6.33	134.73	126.50
34	RA	1330	C	C6-N1-C1'	-6.33	113.20	120.80
1	XA	1349	A	C4-N9-C1'	-6.33	114.91	126.30
34	YA	2343	C	C6-N1-C1'	-6.33	113.20	120.80
34	RA	339	U	C2-N1-C1'	6.33	125.29	117.70
34	RA	18	C	C2-N1-C1'	6.33	125.76	118.80
1	QA	757	U	C6-N1-C1'	-6.32	112.35	121.20
34	RA	2403	C	C6-N1-C1'	-6.32	113.21	120.80
34	RA	242	G	P-O3'-C3'	6.32	127.29	119.70
34	YA	269	U	C6-N1-C1'	-6.32	112.35	121.20
34	YA	1914	C	C2-N1-C1'	6.32	125.75	118.80
1	QA	955	U	C2-N1-C1'	6.32	125.28	117.70
34	RA	1535	U	C6-N1-C1'	-6.32	112.35	121.20
1	QA	1403	C	C2-N1-C1'	6.32	125.75	118.80
34	RA	1857	G	C4-N9-C1'	6.32	134.71	126.50
34	RA	2712(A)	U	P-O3'-C3'	6.32	127.28	119.70
34	RA	1154	G	C4-N9-C1'	6.32	134.71	126.50
1	XA	232	G	C8-N9-C1'	-6.32	118.79	127.00
34	YA	76	C	C2-N1-C1'	6.31	125.74	118.80
34	RA	1951	U	C2-N1-C1'	6.31	125.27	117.70
1	XA	879	C	C6-N1-C1'	-6.31	113.23	120.80
1	XA	595	G	C4-N9-C1'	6.31	134.70	126.50
34	RA	1990	C	C2-N1-C1'	6.31	125.74	118.80
34	RA	683	C	C2-N1-C1'	6.30	125.73	118.80
40	YH	82	GLY	N-CA-C	6.30	128.86	113.10
42	YN	48	MET	CG-SD-CE	-6.30	90.11	100.20
1	QA	1382	C	C2-N1-C1'	6.30	125.73	118.80
34	YA	229	A	P-O3'-C3'	6.30	127.26	119.70
1	QA	1150	U	C6-N1-C1'	-6.30	112.38	121.20
12	QL	104	VAL	C-N-CA	6.30	137.45	121.70
1	XA	1505	G	O5'-P-OP1	-6.30	100.03	105.70
1	QA	117	G	C4-N9-C1'	6.30	134.69	126.50
34	RA	1510	A	C4-N9-C1'	6.30	137.63	126.30
1	XA	656	C	C2-N1-C1'	6.30	125.73	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1201	A	O4'-C1'-N9	-6.29	103.17	108.20
34	YA	2126	A	P-O3'-C3'	6.29	127.25	119.70
1	QA	1315	U	C6-N1-C1'	-6.29	112.39	121.20
34	YA	2145	C	C2-N1-C1'	6.29	125.72	118.80
1	XA	501	C	C2-N1-C1'	6.29	125.72	118.80
1	XA	931	C	C6-N1-C1'	-6.29	113.25	120.80
34	RA	2471	C	C6-N1-C1'	-6.29	113.25	120.80
34	YA	35	G	C8-N9-C1'	-6.29	118.83	127.00
35	YB	30	C	C2-N1-C1'	6.29	125.72	118.80
1	XA	950	U	C2-N1-C1'	6.29	125.24	117.70
1	QA	590	C	C6-N1-C1'	-6.28	113.26	120.80
1	XA	1504	G	P-O3'-C3'	6.28	127.24	119.70
34	YA	904	C	C6-N1-C1'	-6.28	113.26	120.80
1	QA	570	G	C4-N9-C1'	6.28	134.67	126.50
34	RA	687	C	C2-N1-C1'	6.28	125.71	118.80
34	RA	1049	C	C2-N1-C1'	6.28	125.71	118.80
34	YA	2034	U	C6-N1-C1'	-6.28	112.41	121.20
1	XA	1440(I)	U	C2-N1-C1'	6.28	125.23	117.70
1	XA	1297	C	N1-C1'-C2'	6.28	122.16	114.00
1	XA	1499	A	C4-N9-C1'	6.27	137.59	126.30
1	QA	1242	C	C6-N1-C1'	-6.27	113.28	120.80
34	YA	1799	G	P-O3'-C3'	6.27	127.22	119.70
1	QA	381	C	C2-N1-C1'	6.27	125.70	118.80
1	QA	1056	U	C6-N1-C1'	-6.27	112.43	121.20
34	RA	2582	G	C8-N9-C1'	-6.27	118.85	127.00
34	YA	2465	C	C6-N1-C1'	-6.27	113.28	120.80
1	QA	981	U	C2-N1-C1'	6.26	125.22	117.70
34	RA	1327	C	C2-N1-C1'	6.26	125.69	118.80
34	RA	9	U	C6-N1-C1'	-6.26	112.43	121.20
34	YA	343	C	C2-N1-C1'	6.26	125.69	118.80
34	RA	2703	C	C6-N1-C1'	-6.26	113.29	120.80
1	XA	920	U	C2-N1-C1'	6.26	125.21	117.70
34	YA	1788	C	C6-N1-C1'	-6.26	113.29	120.80
34	RA	2379	G	C8-N9-C1'	-6.26	118.86	127.00
1	QA	249	U	C2-N1-C1'	6.26	125.21	117.70
34	RA	427	U	C2-N1-C1'	6.26	125.21	117.70
10	XJ	39	PRO	CA-N-CD	6.26	120.46	111.70
34	RA	1857	G	C8-N9-C1'	-6.25	118.87	127.00
1	XA	525	C	C6-N1-C1'	-6.25	113.30	120.80
1	XA	838(B)	U	C6-N1-C1'	-6.25	112.45	121.20
1	QA	1129	C	C6-N1-C1'	-6.25	113.30	120.80
1	QA	963	G	C4-N9-C1'	6.25	134.62	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	RB	11	C	C2-N1-C1'	6.25	125.67	118.80
34	YA	2891	G	C4-N9-C1'	6.25	134.62	126.50
34	RA	2379	G	C4-N9-C1'	6.25	134.62	126.50
1	XA	608	A	C5'-C4'-C3'	6.25	125.99	116.00
34	RA	222	A	P-O3'-C3'	6.24	127.19	119.70
34	RA	2174	C	C2-N1-C1'	6.24	125.67	118.80
1	QA	620	C	C6-N1-C1'	-6.24	113.31	120.80
1	XA	1037	C	C6-N1-C1'	-6.24	113.31	120.80
1	XA	595	G	C8-N9-C1'	-6.24	118.89	127.00
34	YA	537	C	C6-N1-C1'	-6.24	113.32	120.80
1	XA	252	U	C2-N1-C1'	6.23	125.18	117.70
1	QA	19	C	C6-N1-C1'	-6.23	113.32	120.80
34	RA	2126	A	P-O3'-C3'	6.23	127.18	119.70
1	QA	1259	C	C6-N1-C1'	-6.23	113.32	120.80
1	XA	1242	C	C6-N1-C1'	-6.23	113.32	120.80
1	QA	117	G	C8-N9-C1'	-6.23	118.90	127.00
34	RA	1154	G	C8-N9-C1'	-6.23	118.90	127.00
1	QA	1263	C	C6-N1-C1'	-6.23	113.33	120.80
34	RA	343	C	C6-N1-C1'	-6.22	113.33	120.80
1	XA	186(H)	C	C2-N1-C1'	6.22	125.65	118.80
34	YA	591	C	C6-N1-C1'	-6.22	113.33	120.80
1	XA	974	A	C8-N9-C1'	6.22	138.90	127.70
34	YA	1201	C	C2-N1-C1'	6.22	125.64	118.80
34	YA	1506	C	C6-N1-C1'	-6.22	113.33	120.80
34	RA	749	C	C2-N1-C1'	6.22	125.64	118.80
34	RA	1404	C	C6-N1-C1'	-6.22	113.34	120.80
34	RA	1675	C	C6-N1-C1'	-6.22	113.34	120.80
34	RA	229	A	OP2-P-O3'	6.22	118.88	105.20
34	YA	619	G	C4-N9-C1'	6.22	134.58	126.50
1	XA	1128	C	C6-N1-C1'	-6.21	113.34	120.80
1	XA	1326	C	C2-N1-C1'	6.21	125.64	118.80
1	QA	261	U	C2-N1-C1'	6.21	125.15	117.70
34	RA	2891	G	C4-N9-C1'	6.21	134.57	126.50
38	RF	197	ASP	N-CA-C	-6.21	94.24	111.00
1	XA	1321	C	C2-N1-C1'	6.21	125.63	118.80
1	QA	1336	C	C2-N1-C1'	6.21	125.63	118.80
34	RA	1433	U	C6-N1-C1'	-6.20	112.52	121.20
34	YA	1870	C	C6-N1-C1'	-6.20	113.36	120.80
1	QA	1003	G	C4-N9-C1'	6.20	134.56	126.50
34	RA	1686	C	C6-N1-C1'	-6.20	113.36	120.80
34	YA	2471	C	C2-N1-C1'	6.20	125.62	118.80
34	RA	1510	A	C8-N9-C1'	-6.20	116.55	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1499	A	C8-N9-C1'	-6.20	116.55	127.70
34	RA	2891	G	C8-N9-C1'	-6.20	118.94	127.00
1	XA	222	U	C2-N1-C1'	6.20	125.13	117.70
34	YA	2648	C	C2-N1-C1'	6.20	125.61	118.80
1	QA	570	G	C8-N9-C1'	-6.19	118.95	127.00
1	XA	868	C	C2-N1-C1'	6.19	125.61	118.80
1	XA	962	C	C2-N1-C1'	6.19	125.61	118.80
1	XA	974	A	C4-N9-C1'	-6.19	115.16	126.30
1	QA	963	G	C8-N9-C1'	-6.19	118.95	127.00
1	QA	358	U	C2-N1-C1'	6.18	125.12	117.70
34	RA	161	U	C6-N1-C1'	-6.18	112.54	121.20
34	YA	1542	G	C4-N9-C1'	6.18	134.54	126.50
34	RA	657	U	C6-N1-C1'	-6.18	112.55	121.20
1	QA	1140	C	C6-N1-C1'	-6.18	113.38	120.80
1	XA	68(I)	G	C4-N9-C1'	6.18	134.53	126.50
34	YA	619	G	C8-N9-C1'	-6.18	118.97	127.00
34	YA	2891	G	C8-N9-C1'	-6.17	118.97	127.00
34	RA	1741	C	C2-N1-C1'	6.17	125.59	118.80
34	RA	779	U	C6-N1-C1'	-6.17	112.56	121.20
1	QA	1429	C	C2-N1-C1'	6.17	125.58	118.80
1	QA	67	C	C2-N1-C1'	6.17	125.58	118.80
35	RB	70	C	C5-C6-N1	6.17	124.08	121.00
1	QA	578	C	C6-N1-C1'	-6.16	113.41	120.80
7	QG	73	MET	N-CA-CB	-6.16	99.50	110.60
1	QA	1414	U	C2-N1-C1'	6.16	125.09	117.70
34	YA	1327	C	C2-N1-C1'	6.16	125.58	118.80
34	RA	2439	A	P-O3'-C3'	6.16	127.09	119.70
22	XV	15	G	N3-C4-N9	6.16	129.69	126.00
34	RA	420	C	C6-N1-C1'	-6.16	113.41	120.80
34	YA	2374	C	C6-N1-C1'	-6.16	113.41	120.80
34	YA	669	G	C4-N9-C1'	6.15	134.50	126.50
1	XA	368	U	C6-N1-C1'	-6.15	112.59	121.20
34	YA	2437	U	C2-N1-C1'	6.15	125.08	117.70
34	YA	2231	C	C2-N1-C1'	6.15	125.57	118.80
34	RA	1819	A	P-O3'-C3'	6.15	127.08	119.70
34	RA	1218	C	C2-N1-C1'	6.15	125.56	118.80
1	XA	1109	C	C2-N1-C1'	6.15	125.56	118.80
1	QA	1003	G	C8-N9-C1'	-6.14	119.01	127.00
34	YA	2420	C	C2-N1-C1'	6.14	125.56	118.80
34	RA	2532	G	C4-N9-C1'	6.14	134.48	126.50
1	QA	1376	U	C6-N1-C1'	-6.14	112.61	121.20
34	YA	202	U	C2-N1-C1'	6.14	125.07	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	9	G	O5'-P-OP1	-6.14	100.18	105.70
34	RA	1411	C	C2-N1-C1'	6.14	125.55	118.80
22	XV	15	G	C2-N3-C4	6.14	114.97	111.90
34	RA	1930	G	C4-N9-C1'	6.13	134.47	126.50
34	YA	2207	C	C2-N1-C1'	6.13	125.55	118.80
1	XA	328	C	O4'-C1'-N1	6.13	113.11	108.20
34	RA	2752	C	C6-N1-C1'	-6.13	113.45	120.80
34	YA	1514	U	C2-N1-C1'	6.13	125.05	117.70
1	QA	651	C	C2-N1-C1'	6.12	125.54	118.80
1	XA	938	A	C4-N9-C1'	6.12	137.31	126.30
35	YB	86	G	N7-C8-N9	-6.12	110.04	113.10
34	RA	2689	U	P-O3'-C3'	6.12	127.04	119.70
1	XA	1253	G	C5'-C4'-O4'	-6.12	101.76	109.10
34	YA	2803	C	C2-N1-C1'	6.12	125.53	118.80
1	XA	1225	A	O4'-C1'-N9	6.12	113.09	108.20
34	RA	1328	G	C4-N9-C1'	6.12	134.45	126.50
34	RA	1312	U	P-O3'-C3'	6.11	127.04	119.70
1	XA	1437	C	C2-N1-C1'	-6.11	112.07	118.80
35	YB	29	A	C4-C5-N7	6.11	113.75	110.70
34	RA	1992	G	P-O3'-C3'	6.11	127.03	119.70
1	XA	68(I)	G	C8-N9-C1'	-6.11	119.06	127.00
34	YA	97	C	C2-N1-C1'	6.10	125.51	118.80
34	YA	1542	G	C8-N9-C1'	-6.10	119.07	127.00
1	XA	688	G	C4-N9-C1'	6.10	134.43	126.50
1	XA	797	C	C2-N1-C1'	6.10	125.51	118.80
34	RA	1694	C	P-O3'-C3'	6.10	127.02	119.70
34	RA	2234	G	C8-N9-C1'	-6.10	119.07	127.00
35	RB	54	G	C8-N9-C4	-6.10	103.96	106.40
41	RI	10	GLU	C-N-CA	6.10	136.94	121.70
34	RA	1542	G	C4-N9-C1'	6.09	134.42	126.50
36	RD	33	LEU	CA-CB-CG	6.09	129.32	115.30
1	XA	323	U	O5'-P-OP2	6.09	118.02	110.70
34	RA	2532	G	C8-N9-C1'	-6.09	119.08	127.00
34	YA	642	G	C4-N9-C1'	6.09	134.42	126.50
34	YA	1694	C	P-O3'-C3'	6.09	127.01	119.70
34	RA	2356	C	C2-N1-C1'	6.09	125.50	118.80
34	RA	2667	C	C6-N1-C1'	-6.09	113.49	120.80
34	YA	1315	C	C2-N1-C1'	6.09	125.50	118.80
1	QA	1366	C	C6-N1-C1'	-6.09	113.50	120.80
34	YA	395	U	C2-N1-C1'	6.09	125.00	117.70
1	QA	223	U	C6-N1-C1'	-6.08	112.68	121.20
1	XA	1203	C	C2-N1-C1'	6.08	125.49	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1270	C	C2-N1-C1'	6.08	125.49	118.80
34	YA	221	A	P-O3'-C3'	6.08	127.00	119.70
1	XA	688	G	C8-N9-C1'	-6.08	119.10	127.00
1	XA	955	U	C6-N1-C1'	-6.08	112.69	121.20
35	YB	29	A	C5-N7-C8	-6.08	100.86	103.90
34	YA	1964	G	O4'-C1'-N9	-6.07	103.34	108.20
34	RA	1930	G	C8-N9-C1'	-6.07	119.12	127.00
1	XA	1507	A	N9-C1'-C2'	6.07	121.89	114.00
34	YA	669	G	C8-N9-C1'	-6.06	119.12	127.00
34	YA	1754	C	C6-N1-C1'	-6.06	113.52	120.80
1	QA	789	U	C6-N1-C1'	-6.06	112.72	121.20
34	YA	484	C	C2-N1-C1'	6.06	125.47	118.80
1	XA	1263	C	C2-N1-C1'	6.05	125.46	118.80
1	QA	97	U	C2-N1-C1'	6.05	124.96	117.70
1	QA	437	U	C6-N1-C1'	-6.05	112.73	121.20
1	QA	36	C	C6-N1-C1'	-6.05	113.54	120.80
1	XA	578	C	C6-N1-C1'	-6.05	113.54	120.80
1	XA	617	G	C3'-C2'-O2'	6.05	130.85	113.30
34	YA	184	C	C2-N1-C1'	6.05	125.45	118.80
34	YA	2884	U	C2-N1-C1'	6.05	124.96	117.70
34	RA	1542	G	C8-N9-C1'	-6.05	119.14	127.00
1	QA	1137	C	C2-N1-C1'	6.04	125.45	118.80
34	RA	1427	A	P-O3'-C3'	6.04	126.95	119.70
1	QA	355	C	C6-N1-C1'	-6.04	113.55	120.80
1	XA	307	C	C6-N1-C1'	-6.04	113.55	120.80
1	QA	1406	U	C6-N1-C1'	-6.04	112.75	121.20
34	RA	1920	C	C6-N1-C1'	-6.04	113.56	120.80
34	YA	595	C	C2-N1-C1'	6.04	125.44	118.80
34	YA	657	U	C2-N1-C1'	6.04	124.95	117.70
34	RA	1328	G	C8-N9-C1'	-6.04	119.15	127.00
28	Y4	5	ILE	N-CA-CB	6.04	124.68	110.80
34	YA	897	C	C6-N1-C1'	-6.04	113.56	120.80
34	RA	2359	C	C2-N1-C1'	6.03	125.44	118.80
1	QA	75	C	C2-N1-C1'	6.03	125.43	118.80
40	RH	87	LEU	N-CA-CB	-6.03	98.34	110.40
1	XA	1330	U	OP1-P-OP2	-6.03	110.56	119.60
34	RA	1314	C	C2-N1-C1'	6.03	125.43	118.80
34	YA	1108	U	C2-N1-C1'	6.03	124.93	117.70
34	YA	1240	U	C2-N1-C1'	6.03	124.93	117.70
1	XA	531	U	C6-N1-C1'	-6.02	112.77	121.20
34	YA	155	C	C2-N1-C1'	6.02	125.42	118.80
34	YA	544	C	C2-N1-C1'	6.02	125.42	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	252	U	C2-N1-C1'	6.02	124.92	117.70
34	RA	1407	C	C6-N1-C1'	-6.02	113.58	120.80
35	RB	37	C	C6-N1-C2	-6.02	117.89	120.30
1	XA	938	A	C8-N9-C1'	-6.02	116.87	127.70
34	RA	2574	G	C4-N9-C1'	6.02	134.32	126.50
1	XA	1285	A	P-O3'-C3'	6.02	126.92	119.70
34	RA	1611	C	C6-N1-C1'	-6.01	113.58	120.80
1	XA	864	A	C4-N9-C1'	6.01	137.13	126.30
34	YA	1879	C	C2-N1-C1'	6.01	125.42	118.80
34	YA	1047	G	C4-N9-C1'	6.01	134.31	126.50
34	YA	1774	C	C6-N1-C1'	-6.01	113.59	120.80
1	XA	277	C	C6-N1-C1'	-6.01	113.59	120.80
34	YA	2712(A)	U	P-O3'-C3'	6.01	126.91	119.70
34	RA	1101	U	C2-N1-C1'	6.00	124.91	117.70
1	XA	436	C	C2-N1-C1'	6.00	125.40	118.80
1	XA	1478	C	C2-N1-C1'	6.00	125.40	118.80
34	YA	642	G	C8-N9-C1'	-6.00	119.20	127.00
1	QA	1362(A)	C	C2-N1-C1'	6.00	125.40	118.80
34	YA	2439	A	P-O3'-C3'	6.00	126.90	119.70
34	RA	2040	C	C6-N1-C1'	-6.00	113.61	120.80
1	XA	587	G	C4-N9-C1'	6.00	134.29	126.50
1	XA	678	U	C6-N1-C1'	-6.00	112.81	121.20
34	RA	1662	C	C6-N1-C1'	-5.99	113.61	120.80
34	YA	1930	G	C4-N9-C1'	5.99	134.29	126.50
41	RI	130	TYR	C-N-CA	5.99	136.67	121.70
34	RA	541	C	C6-N1-C1'	-5.99	113.61	120.80
34	YA	267	C	C2-N1-C1'	5.99	125.39	118.80
34	YA	1049	C	C6-N1-C1'	-5.99	113.61	120.80
34	YA	1549	C	C2-N1-C1'	5.99	125.39	118.80
35	YB	31	C	C2-N1-C1'	5.99	125.39	118.80
35	YB	54	G	C6-C5-N7	-5.99	126.81	130.40
1	QA	390	C	C6-N1-C1'	-5.98	113.62	120.80
34	RA	1994	C	C2-N1-C1'	5.98	125.38	118.80
1	QA	536	C	O5'-P-OP2	-5.98	100.32	105.70
1	XA	587	G	C8-N9-C1'	-5.98	119.23	127.00
34	YA	613	U	C6-N1-C1'	-5.97	112.84	121.20
34	YA	2060	A	O4'-C1'-N9	-5.97	103.42	108.20
34	YA	635	C	C2-N1-C1'	5.97	125.37	118.80
1	XA	201(A)	C	C6-N1-C1'	-5.97	113.64	120.80
1	XA	241	C	C6-N1-C1'	-5.97	113.64	120.80
1	XA	1100	C	C2-N1-C1'	5.96	125.36	118.80
34	YA	1427	A	P-O3'-C3'	5.96	126.86	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	1992	G	P-O3'-C3'	5.96	126.86	119.70
40	YH	12	PRO	N-CA-CB	-5.96	96.04	102.60
1	QA	456	C	C2-N1-C1'	5.96	125.36	118.80
1	QA	678	U	C2-N1-C1'	5.96	124.85	117.70
1	QA	1285	A	P-O3'-C3'	5.96	126.85	119.70
34	RA	2698	U	C6-N1-C1'	-5.96	112.85	121.20
34	RA	2824	C	C6-N1-C1'	-5.96	113.65	120.80
35	RB	70	C	C6-N1-C2	-5.96	117.92	120.30
34	YA	1675	C	C2-N1-C1'	5.96	125.36	118.80
34	YA	1047	G	C8-N9-C1'	-5.96	119.25	127.00
34	YA	1433	U	C6-N1-C1'	-5.96	112.86	121.20
34	YA	1235	G	C4-N9-C1'	5.95	134.24	126.50
34	YA	2582	G	C4-N9-C1'	5.95	134.24	126.50
34	YA	2710	C	C6-N1-C1'	-5.95	113.66	120.80
35	YB	22	U	C5-C6-N1	5.95	125.67	122.70
34	RA	2234	G	C4-N9-C1'	5.95	134.23	126.50
1	XA	169	C	C2-N1-C1'	5.95	125.34	118.80
1	XA	635	G	C4'-C3'-C2'	-5.95	96.65	102.60
1	XA	795	C	C2-N1-C1'	5.95	125.34	118.80
34	YA	2175	C	C2-N1-C1'	5.95	125.34	118.80
34	YA	2617	C	C6-N1-C1'	-5.95	113.66	120.80
1	QA	1343	G	C4-N9-C1'	5.95	134.23	126.50
1	QA	1359	C	C2-N1-C1'	5.95	125.34	118.80
34	RA	2574	G	C8-N9-C1'	-5.95	119.27	127.00
1	QA	905	U	C2-N1-C1'	5.94	124.83	117.70
1	QA	920	U	C2-N1-C1'	5.94	124.83	117.70
34	YA	419	C	C2-N1-C1'	5.94	125.34	118.80
34	RA	2095	C	C6-N1-C1'	-5.94	113.67	120.80
1	QA	177	C	C2-N1-C1'	5.94	125.33	118.80
34	RA	2739	U	C2-N1-C1'	5.94	124.83	117.70
34	YA	391	G	C4-N9-C1'	5.94	134.22	126.50
34	YA	2780	G	C8-N9-C1'	5.93	134.72	127.00
34	RA	2463	C	C2-N1-C1'	5.93	125.33	118.80
1	XA	1440(H)	C	C2-N1-C1'	5.93	125.33	118.80
34	YA	1672	C	C2-N1-C1'	5.93	125.33	118.80
34	YA	1881	C	C6-N1-C1'	-5.93	113.68	120.80
1	QA	822	C	C6-N1-C1'	-5.93	113.69	120.80
1	XA	619	U	C6-N1-C1'	5.93	129.50	121.20
1	XA	862	C	C2-N1-C1'	5.93	125.32	118.80
1	XA	1143	G	C8-N9-C1'	-5.93	119.29	127.00
34	YA	1516	U	C2-N1-C1'	5.93	124.82	117.70
34	YA	2394	C	O5'-P-OP2	5.93	117.82	110.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	RB	27	C	C5-C6-N1	5.93	123.96	121.00
1	XA	1493	A	C4-N9-C1'	5.93	136.97	126.30
34	YA	1930	G	C8-N9-C1'	-5.93	119.29	127.00
1	QA	930	C	C2-N1-C1'	5.93	125.32	118.80
1	QA	1327	C	OP1-P-O3'	5.93	118.24	105.20
34	YA	1982	C	C6-N1-C1'	-5.93	113.69	120.80
1	QA	1086	U	C6-N1-C1'	-5.92	112.91	121.20
1	XA	56	U	C2-N1-C1'	5.92	124.81	117.70
34	YA	838	C	C2-N1-C1'	5.92	125.31	118.80
1	QA	559	A	OP2-P-O3'	5.92	118.22	105.20
34	YA	1093	G	C4-N9-C1'	5.92	134.19	126.50
35	YB	75	G	C8-N9-C4	5.92	108.77	106.40
34	YA	568	U	C2-N1-C1'	5.92	124.80	117.70
34	YA	1093	G	C8-N9-C1'	-5.92	119.31	127.00
1	QA	1151	A	C4-N9-C1'	5.92	136.95	126.30
34	YA	1154	G	C4-N9-C1'	5.92	134.19	126.50
34	RA	856	C	C6-N1-C1'	-5.91	113.70	120.80
34	YA	1686	C	C6-N1-C1'	-5.91	113.70	120.80
1	QA	192	U	C2-N1-C1'	5.91	124.79	117.70
34	RA	581	C	C2-N1-C1'	5.91	125.30	118.80
1	QA	1211	U	C2-N1-C1'	5.91	124.79	117.70
34	RA	2144	U	C2-N1-C1'	5.91	124.79	117.70
35	RB	54	G	N7-C8-N9	5.91	116.05	113.10
34	YA	974(B)	C	C6-N1-C1'	-5.91	113.71	120.80
1	XA	864	A	C8-N9-C1'	-5.90	117.07	127.70
34	RA	1226	G	O5'-P-OP1	-5.90	100.39	105.70
34	RA	1930	G	P-O3'-C3'	5.90	126.78	119.70
34	RA	2342	C	C6-N1-C1'	-5.90	113.72	120.80
1	XA	121	C	C2-N1-C1'	5.90	125.29	118.80
34	YA	1097	U	C6-N1-C1'	-5.90	112.94	121.20
34	YA	2780	G	C4-N9-C1'	-5.89	118.84	126.50
34	RA	2034	U	C2-N1-C1'	5.89	124.77	117.70
34	YA	26	G	C4-N9-C1'	5.89	134.16	126.50
34	RA	254	G	C4-N9-C1'	5.89	134.16	126.50
1	XA	34	C	C2-N1-C1'	5.89	125.28	118.80
1	XA	335	C	C2-N1-C1'	5.89	125.28	118.80
1	QA	1282	C	C2-N1-C1'	5.88	125.27	118.80
1	QA	1343	G	C8-N9-C1'	-5.88	119.35	127.00
34	YA	1920	C	C2-N1-C1'	5.88	125.27	118.80
34	YA	2582	G	C8-N9-C1'	-5.88	119.35	127.00
34	RA	553	U	C2-N1-C1'	5.88	124.76	117.70
34	RA	1141	U	C6-N1-C1'	-5.88	112.96	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	753	C	C6-N1-C1'	-5.88	113.74	120.80
1	QA	545	C	C2-N1-C1'	5.88	125.27	118.80
34	RA	2043	C	C6-N1-C1'	-5.88	113.74	120.80
1	QA	447	G	C4-N9-C1'	5.88	134.14	126.50
1	XA	656	C	C6-N1-C1'	-5.88	113.75	120.80
1	XA	1143	G	C4-N9-C1'	5.88	134.14	126.50
34	RA	245	G	C8-N9-C1'	-5.88	119.36	127.00
34	RA	1964	G	O4'-C1'-N9	-5.87	103.50	108.20
1	XA	796	C	C6-N1-C1'	-5.87	113.75	120.80
1	QA	136	C	C6-N1-C1'	-5.87	113.76	120.80
34	RA	1105	U	C6-N1-C1'	-5.87	112.98	121.20
1	XA	685	G	C4-N9-C1'	5.87	134.13	126.50
28	Y4	5	ILE	CA-CB-CG1	5.87	122.15	111.00
34	YA	1956	U	C6-N1-C1'	-5.87	112.98	121.20
34	YA	2776	A	P-O3'-C3'	5.87	126.74	119.70
1	XA	1056	U	C2-N1-C1'	5.87	124.74	117.70
1	QA	1517	G	C4-N9-C1'	5.87	134.13	126.50
1	XA	132	C	C2-N1-C1'	5.87	125.25	118.80
34	YA	364	C	C2-N1-C1'	5.86	125.25	118.80
34	YA	391	G	C8-N9-C1'	-5.86	119.38	127.00
34	YA	2691	C	C2-N1-C1'	5.86	125.25	118.80
1	QA	952	U	C6-N1-C1'	-5.86	112.99	121.20
34	YA	565	C	C6-N1-C1'	-5.86	113.77	120.80
1	XA	163	C	C2-N1-C1'	5.86	125.24	118.80
28	Y4	5	ILE	CA-CB-CG2	-5.86	99.19	110.90
34	YA	1537	C	C2-N1-C1'	5.86	125.24	118.80
34	RA	1649	G	N9-C1'-C2'	-5.86	105.56	112.00
34	RA	1864	U	C2-N1-C1'	5.86	124.73	117.70
4	XD	8	VAL	CG1-CB-CG2	5.86	120.27	110.90
34	YA	796	C	C2-N1-C1'	5.86	125.24	118.80
35	YB	55	U	N3-C4-O4	5.85	123.50	119.40
54	RZ	59	LEU	CA-CB-CG	5.85	128.76	115.30
34	YA	1235	G	C8-N9-C1'	-5.85	119.39	127.00
34	YA	1437	C	C2-N1-C1'	5.85	125.24	118.80
34	RA	245	G	C4-N9-C1'	5.85	134.11	126.50
1	XA	857	C	C2-N1-C1'	5.85	125.24	118.80
34	RA	1688	U	C2-N1-C1'	5.84	124.72	117.70
34	RA	365	C	C2-N1-C1'	5.84	125.23	118.80
34	RA	1892	C	C6-N1-C1'	-5.84	113.79	120.80
34	RA	254	G	C8-N9-C1'	-5.84	119.41	127.00
1	XA	718	G	O4'-C1'-N9	-5.84	103.53	108.20
1	XA	1493	A	C8-N9-C1'	-5.84	117.19	127.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	650	C	C6-N1-C1'	-5.84	113.79	120.80
34	RA	270(Q)	C	C6-N1-C1'	-5.84	113.80	120.80
34	YA	1927	A	C4-N9-C1'	5.84	136.81	126.30
1	XA	980	C	OP1-P-O3'	5.84	118.04	105.20
1	XA	1075	C	C2-N1-C1'	5.84	125.22	118.80
34	YA	2097	C	C6-N1-C1'	-5.84	113.80	120.80
34	YA	2895	U	C6-N1-C1'	-5.84	113.03	121.20
1	QA	825	G	C4-N9-C1'	5.83	134.08	126.50
34	RA	1990	C	C6-N1-C1'	-5.83	113.80	120.80
1	XA	626	U	O5'-P-OP1	-5.83	100.45	105.70
1	QA	1151	A	C8-N9-C1'	-5.83	117.20	127.70
1	QA	1045	C	C6-N1-C1'	-5.83	113.80	120.80
1	QA	1440(H)	C	C6-N1-C1'	-5.83	113.81	120.80
34	RA	2776	A	P-O3'-C3'	5.83	126.69	119.70
1	XA	834	C	C6-N1-C1'	-5.83	113.81	120.80
34	RA	1474	C	C2-N1-C1'	5.83	125.21	118.80
35	YB	93	C	N1-C2-O2	5.83	122.39	118.90
34	YA	2150	U	C2-N1-C1'	5.82	124.69	117.70
34	RA	276	A	O5'-P-OP1	5.82	117.69	110.70
34	RA	943	U	C2-N1-C1'	5.82	124.69	117.70
34	RA	2093	G	C4-N9-C1'	5.82	134.07	126.50
34	YA	1085	A	P-O3'-C3'	5.82	126.68	119.70
34	YA	1154	G	C8-N9-C1'	-5.82	119.44	127.00
34	YA	2040	C	C6-N1-C1'	-5.82	113.82	120.80
1	QA	500	G	C4-N9-C1'	5.82	134.06	126.50
35	RB	15	A	C8-N9-C4	5.82	108.13	105.80
1	QA	500	G	C8-N9-C1'	-5.82	119.44	127.00
1	QA	1075	C	C6-N1-C1'	-5.82	113.82	120.80
34	RA	753	C	C6-N1-C1'	-5.82	113.82	120.80
35	RB	6	C	C6-N1-C2	-5.82	117.97	120.30
34	YA	2146	C	C6-N1-C1'	-5.81	113.83	120.80
1	QA	1517	G	C8-N9-C1'	-5.81	119.44	127.00
34	YA	26	G	C8-N9-C1'	-5.81	119.45	127.00
34	YA	779	U	C2-N1-C1'	5.81	124.67	117.70
1	QA	564	C	C2-N1-C1'	5.81	125.19	118.80
32	R8	62	LEU	CA-CB-CG	5.81	128.66	115.30
34	RA	1670	C	C2-N1-C1'	5.81	125.19	118.80
1	XA	283	C	C6-N1-C1'	-5.81	113.83	120.80
34	YA	2195	C	C6-N1-C1'	-5.81	113.83	120.80
34	YA	678	C	C2-N1-C1'	5.81	125.19	118.80
1	XA	685	G	C8-N9-C1'	-5.80	119.45	127.00
1	XA	805	C	C6-N1-C1'	-5.80	113.83	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	1799	G	P-O3'-C3'	5.80	126.66	119.70
1	XA	186(O)	U	C6-N1-C1'	-5.80	113.08	121.20
1	QA	447	G	C8-N9-C1'	-5.80	119.46	127.00
34	RA	284	U	C2-N1-C1'	5.80	124.66	117.70
34	YA	2688	U	O4'-C1'-N1	5.80	112.84	108.20
1	QA	1384	C	C6-N1-C1'	-5.80	113.84	120.80
34	RA	1707	G	C4-N9-C1'	5.80	134.04	126.50
1	XA	1494	G	C4-N9-C1'	5.80	134.04	126.50
34	YA	1598	C	C6-N1-C1'	-5.80	113.84	120.80
34	YA	1640	C	C6-N1-C1'	-5.80	113.84	120.80
34	YA	2482	G	C4-N9-C1'	5.80	134.04	126.50
1	QA	1074	G	C4-N9-C1'	5.80	134.04	126.50
34	YA	1510	A	O5'-P-OP2	-5.80	100.48	105.70
34	RA	1186	G	C4-N9-C1'	5.79	134.03	126.50
12	XL	47	LYS	N-CA-C	5.79	126.64	111.00
34	YA	1019	U	O5'-P-OP1	-5.79	100.49	105.70
34	RA	2075	U	C6-N1-C1'	-5.79	113.09	121.20
1	QA	1237	C	C2-N1-C1'	5.79	125.17	118.80
34	RA	825	C	C2-N1-C1'	5.79	125.17	118.80
34	RA	2401	U	C2-N1-C1'	5.79	124.64	117.70
34	YA	2554	U	C6-N1-C1'	-5.79	113.10	121.20
34	RA	725	G	C4-N9-C1'	5.79	134.02	126.50
1	XA	1465	C	C6-N1-C1'	-5.79	113.86	120.80
1	QA	825	G	C8-N9-C1'	-5.78	119.48	127.00
34	RA	856	C	P-O3'-C3'	5.78	126.64	119.70
34	RA	1186	G	C8-N9-C1'	-5.78	119.48	127.00
1	XA	309	G	O5'-P-OP2	-5.78	100.50	105.70
34	RA	2179	C	C6-N1-C1'	-5.78	113.86	120.80
34	YA	2586	C	C2-N1-C1'	5.78	125.16	118.80
34	RA	1777	U	C6-N1-C1'	-5.78	113.11	121.20
1	XA	266	G	OP2-P-O3'	5.78	117.91	105.20
34	YA	2460	U	C2-N1-C1'	5.78	124.64	117.70
34	YA	2689	U	P-O3'-C3'	5.78	126.64	119.70
34	YA	284	U	C2-N1-C1'	5.78	124.63	117.70
1	QA	133	U	C2-N1-C1'	5.78	124.63	117.70
34	RA	1774	C	C6-N1-C1'	-5.78	113.87	120.80
1	XA	1354	C	C2-N1-C1'	5.78	125.15	118.80
34	YA	2466	C	C6-N1-C1'	-5.78	113.87	120.80
34	RA	1516	U	C6-N1-C1'	-5.77	113.12	121.20
34	YA	1405	U	C2-N1-C1'	5.77	124.63	117.70
34	YA	2658	C	C6-N1-C1'	-5.77	113.87	120.80
34	YA	1372	U	C6-N1-C1'	-5.77	113.12	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	1649	G	C4-N9-C1'	5.77	134.00	126.50
1	QA	516	U	C2-N1-C1'	5.77	124.62	117.70
1	QA	1213	A	C4-N9-C1'	5.77	136.68	126.30
1	XA	1364	U	C2-N1-C1'	5.77	124.62	117.70
34	RA	18	C	C6-N1-C1'	-5.77	113.88	120.80
34	RA	140	A	O4'-C1'-N9	5.76	112.81	108.20
1	XA	458(B)	G	C4-N9-C1'	5.76	134.00	126.50
34	YA	318	C	C2-N1-C1'	5.76	125.14	118.80
1	QA	1215	G	C4-N9-C1'	5.76	133.99	126.50
1	XA	989	C	C6-N1-C1'	-5.76	113.88	120.80
1	QA	67	C	C6-N1-C1'	-5.76	113.89	120.80
1	QA	1377	A	O4'-C1'-N9	5.76	112.81	108.20
34	YA	76	C	C6-N1-C1'	-5.76	113.89	120.80
34	RA	687	C	C6-N1-C1'	-5.76	113.89	120.80
34	YA	1927	A	C8-N9-C1'	-5.76	117.33	127.70
34	RA	1509	C	C6-N1-C1'	-5.76	113.89	120.80
1	XA	1090	U	C2-N1-C1'	5.76	124.61	117.70
34	YA	1577	C	C2-N1-C1'	5.76	125.13	118.80
1	QA	824	C	C2-N1-C1'	5.75	125.13	118.80
34	RA	1180	C	C2-N1-C1'	5.75	125.13	118.80
1	XA	501	C	C6-N1-C1'	-5.75	113.89	120.80
34	RA	725	G	C8-N9-C1'	-5.75	119.52	127.00
1	QA	353	A	C4-N9-C1'	5.75	136.65	126.30
34	RA	512	G	P-O3'-C3'	5.75	126.60	119.70
34	YA	1649	G	C8-N9-C1'	-5.75	119.52	127.00
34	YA	1819	A	P-O3'-C3'	5.75	126.60	119.70
1	QA	176	C	C2-N1-C1'	5.75	125.12	118.80
34	RA	1066	U	C6-N1-C1'	-5.75	113.15	121.20
35	YB	97	G	N1-C2-N3	5.75	127.35	123.90
34	RA	26	G	C4-N9-C1'	5.75	133.97	126.50
1	XA	236	G	C4-N9-C1'	5.75	133.97	126.50
34	RA	2093	G	C8-N9-C1'	-5.75	119.53	127.00
34	YA	2233	U	C2-N1-C1'	5.74	124.59	117.70
35	YB	66	A	P-O3'-C3'	5.74	126.59	119.70
34	RA	2064	C	C2-N1-C1'	5.74	125.11	118.80
1	XA	1317	C	C2-N1-C1'	5.74	125.11	118.80
22	XV	15	G	C8-N9-C1'	-5.74	119.54	127.00
34	YA	343	C	C6-N1-C1'	-5.74	113.91	120.80
34	YA	384	U	C6-N1-C1'	-5.74	113.17	121.20
1	XA	1437	C	P-O3'-C3'	-5.74	112.82	119.70
1	QA	943	U	C2-N1-C1'	5.74	124.58	117.70
1	QA	1401	G	C4-N9-C1'	5.74	133.96	126.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	678	C	C2-N1-C1'	5.74	125.11	118.80
34	RA	1982	C	C2-N1-C1'	5.74	125.11	118.80
1	XA	117	G	C4-N9-C1'	5.74	133.96	126.50
1	XA	1326	C	C6-N1-C1'	-5.73	113.92	120.80
34	YA	1289	C	C2-N1-C1'	5.73	125.11	118.80
1	QA	1403	C	C6-N1-C1'	-5.73	113.92	120.80
35	RB	66	A	P-O3'-C3'	5.73	126.58	119.70
1	QA	370	C	C2-N1-C1'	5.73	125.10	118.80
1	QA	1247	U	C2-N1-C1'	5.73	124.58	117.70
34	RA	25	U	C2-N1-C1'	5.73	124.58	117.70
34	YA	271(C)	G	OP2-P-O3'	5.73	117.81	105.20
35	YB	42	C	C6-N1-C2	-5.73	118.01	120.30
23	XX	19	U	C2-N1-C1'	5.73	124.57	117.70
34	YA	871	U	C2-N1-C1'	5.73	124.57	117.70
34	YA	2145	C	C6-N1-C1'	-5.73	113.93	120.80
34	YA	2452	C	C2-N1-C1'	5.73	125.10	118.80
1	QA	1382	C	C6-N1-C1'	-5.72	113.93	120.80
34	RA	1707	G	C8-N9-C1'	-5.72	119.56	127.00
1	QA	1074	G	C8-N9-C1'	-5.72	119.56	127.00
22	QV	31	G	C4-N9-C1'	5.72	133.94	126.50
34	YA	1101	U	C2-N1-C1'	5.72	124.57	117.70
34	YA	2291	U	C2-N1-C1'	5.72	124.57	117.70
1	QA	556	C	C2-N1-C1'	5.72	125.09	118.80
34	RA	1049	C	C6-N1-C1'	-5.72	113.94	120.80
34	YA	1914	C	C6-N1-C1'	-5.72	113.94	120.80
34	RA	1121	C	C2-N1-C1'	5.72	125.09	118.80
1	XA	757	U	C6-N1-C1'	-5.72	113.20	121.20
1	XA	1537	U	OP1-P-O3'	5.71	117.77	105.20
22	XV	76	A	N7-C8-N9	5.71	116.66	113.80
34	RA	556	G	C4-N9-C1'	5.71	133.93	126.50
34	RA	839	U	C2-N1-C1'	5.71	124.56	117.70
1	XA	1313	U	C6-N1-C1'	-5.71	113.20	121.20
34	YA	1411	C	C2-N1-C1'	5.71	125.08	118.80
1	XA	513	C	C2-N1-C1'	5.71	125.08	118.80
1	XA	1494	G	C8-N9-C1'	-5.71	119.58	127.00
34	YA	2482	G	C8-N9-C1'	-5.71	119.58	127.00
35	YB	79	C	N3-C2-O2	-5.71	117.90	121.90
35	YB	82	G	N7-C8-N9	5.71	115.95	113.10
34	RA	683	C	C6-N1-C1'	-5.71	113.95	120.80
34	RA	568	U	C6-N1-C1'	-5.70	113.22	121.20
1	QA	381	C	C6-N1-C1'	-5.70	113.96	120.80
1	QA	580	U	C6-N1-C1'	-5.70	113.22	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	1327	C	C6-N1-C1'	-5.70	113.96	120.80
34	YA	1556	C	C2-N1-C1'	5.70	125.07	118.80
34	YA	1734	C	C2-N1-C1'	5.70	125.07	118.80
35	YB	43	C	C6-N1-C2	-5.70	118.02	120.30
1	XA	607	A	O4'-C1'-N9	5.70	112.76	108.20
34	RA	66	C	C2-N1-C1'	5.69	125.06	118.80
34	RA	2312	U	C2-N1-C1'	5.69	124.53	117.70
1	XA	117	G	C8-N9-C1'	-5.69	119.60	127.00
1	QA	1215	G	C8-N9-C1'	-5.69	119.60	127.00
34	RA	395	U	C2-N1-C1'	5.69	124.53	117.70
34	RA	2174	C	C6-N1-C1'	-5.69	113.97	120.80
35	YB	80	U	C5-C4-O4	5.69	129.31	125.90
1	XA	832	C	C2-N1-C1'	5.69	125.06	118.80
34	RA	634	C	C2-N1-C1'	5.69	125.06	118.80
34	RA	1188	U	C6-N1-C1'	-5.69	113.24	121.20
34	RA	2636	U	C6-N1-C1'	-5.69	113.24	121.20
1	XA	236	G	C8-N9-C1'	-5.69	119.61	127.00
1	XA	458(B)	G	C8-N9-C1'	-5.69	119.61	127.00
34	YA	2663	G	C4-N9-C1'	5.68	133.89	126.50
1	XA	352	C	C2-N1-C1'	5.68	125.05	118.80
34	YA	208	C	C2-N1-C1'	5.68	125.05	118.80
14	QN	43	CYS	CB-CA-C	5.68	121.76	110.40
1	XA	34	C	C6-N1-C1'	-5.68	113.98	120.80
1	XA	1240	U	C2-N1-C1'	-5.68	110.88	117.70
35	RB	91	C	C6-N1-C2	-5.68	118.03	120.30
34	YA	1391	U	C6-N1-C1'	-5.68	113.25	121.20
45	YQ	19	GLY	N-CA-C	-5.68	98.91	113.10
1	XA	134	A	C4-N9-C1'	5.67	136.51	126.30
34	YA	1448	G	C4-N9-C1'	5.67	133.88	126.50
1	QA	1322	C	C2-N1-C1'	5.67	125.04	118.80
34	RA	1218	C	C6-N1-C1'	-5.67	113.99	120.80
34	YA	1588	C	C2-N1-C1'	5.67	125.04	118.80
34	RA	2210	G	C4-N9-C1'	5.67	133.87	126.50
34	RA	2664	G	C4-N9-C1'	5.66	133.86	126.50
34	YA	1201	C	C6-N1-C1'	-5.66	114.01	120.80
34	YA	2084	C	C2-N1-C1'	5.66	125.03	118.80
1	QA	1401	G	C8-N9-C1'	-5.66	119.64	127.00
1	XA	343	U	C6-N1-C1'	-5.66	113.28	121.20
34	YA	923	C	C2-N1-C1'	5.66	125.02	118.80
34	RA	26	G	C8-N9-C1'	-5.66	119.65	127.00
1	XA	186(H)	C	C6-N1-C1'	-5.66	114.01	120.80
1	XA	1440(A)	C	C2-N1-C1'	5.66	125.02	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	18	C	C2-N1-C1'	5.66	125.02	118.80
1	QA	1213	A	C8-N9-C1'	-5.66	117.52	127.70
34	RA	556	G	C8-N9-C1'	-5.66	119.65	127.00
34	YA	271(B)	C	C2-N1-C1'	5.65	125.02	118.80
35	YB	1	U	C6-N1-C2	-5.65	117.61	121.00
1	QA	295	C	C2-N1-C1'	5.65	125.02	118.80
34	YA	464	U	C6-N1-C1'	-5.65	113.28	121.20
34	YA	2763	G	C4-N9-C1'	5.65	133.85	126.50
1	QA	1351	U	C6-N1-C1'	-5.65	113.29	121.20
1	XA	1357	A	C4-N9-C1'	5.65	136.47	126.30
34	RA	1240	U	C6-N1-C1'	-5.65	113.29	121.20
1	QA	353	A	C8-N9-C1'	-5.65	117.53	127.70
34	RA	749	C	C6-N1-C1'	-5.65	114.02	120.80
34	YA	1417	C	C2-N1-C1'	5.65	125.01	118.80
34	YA	2471	C	C6-N1-C1'	-5.65	114.02	120.80
34	RA	568	U	O5'-P-OP1	-5.65	100.62	105.70
1	QA	1336	C	C6-N1-C1'	-5.64	114.03	120.80
34	RA	2496	C	O5'-P-OP1	-5.64	100.62	105.70
35	YB	58	A	N1-C6-N6	-5.64	115.21	118.60
1	XA	62	U	C6-N1-C1'	-5.64	113.30	121.20
34	YA	229	A	OP2-P-O3'	5.64	117.61	105.20
34	YA	2663	G	C8-N9-C1'	-5.64	119.67	127.00
37	YE	186	GLY	N-CA-C	5.64	127.19	113.10
1	XA	537	G	C8-N9-C1'	5.64	134.33	127.00
34	YA	2179	C	C2-N1-C1'	5.64	125.00	118.80
1	XA	1321	C	C6-N1-C1'	-5.63	114.04	120.80
34	YA	2756	U	OP1-P-O3'	5.63	117.59	105.20
1	XA	309	G	P-O3'-C3'	5.63	126.46	119.70
34	RA	2318	G	O4'-C1'-N9	5.63	112.70	108.20
1	QA	1359	C	C6-N1-C1'	-5.63	114.05	120.80
1	XA	68(J)	G	C4-N9-C1'	5.63	133.81	126.50
34	RA	2210	G	C8-N9-C1'	-5.62	119.69	127.00
34	RA	848	G	C4-N9-C1'	5.62	133.81	126.50
1	XA	1243	C	O4'-C1'-N1	5.62	112.70	108.20
36	YD	241	PRO	C-N-CA	5.62	135.76	121.70
1	XA	868	C	C6-N1-C1'	-5.62	114.06	120.80
1	QA	343	U	C6-N1-C1'	-5.62	113.33	121.20
34	RA	1005	C	C2-N1-C1'	5.62	124.98	118.80
1	XA	1328	C	OP2-P-O3'	5.62	117.56	105.20
1	QA	1538	C	OP1-P-O3'	5.62	117.56	105.20
34	YA	2752	C	C2-N1-C1'	5.62	124.98	118.80
34	RA	1992	G	OP2-P-O3'	5.62	117.55	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	2867	G	C4-N9-C1'	5.62	133.80	126.50
34	YA	270(D)	C	C2-N1-C1'	5.62	124.98	118.80
1	XA	797	C	C6-N1-C1'	-5.61	114.07	120.80
1	XA	980	C	C3'-C2'-C1'	-5.61	97.01	101.50
1	QA	1429	C	C6-N1-C1'	-5.61	114.07	120.80
34	RA	2785	C	C2-N1-C1'	5.61	124.97	118.80
1	XA	312	C	C2-N1-C1'	5.61	124.97	118.80
1	XA	905	U	C2-N1-C1'	5.61	124.43	117.70
1	XA	1231	G	OP1-P-O3'	-5.61	92.87	105.20
20	QT	73	HIS	CA-CB-CG	5.60	123.13	113.60
34	RA	102	G	P-O3'-C3'	5.60	126.42	119.70
34	RA	1741	C	C6-N1-C1'	-5.60	114.08	120.80
34	RA	2466	C	C2-N1-C1'	5.60	124.96	118.80
34	YA	1327	C	C6-N1-C1'	-5.60	114.08	120.80
34	RA	752	A	P-O3'-C3'	5.60	126.42	119.70
1	XA	636	U	P-O5'-C5'	5.60	129.86	120.90
34	RA	1411	C	C6-N1-C1'	-5.60	114.08	120.80
34	YA	155	C	C6-N1-C1'	-5.60	114.08	120.80
34	YA	2207	C	C6-N1-C1'	-5.60	114.08	120.80
34	YA	2566	A	P-O3'-C3'	5.60	126.42	119.70
34	YA	2763	G	C8-N9-C1'	-5.60	119.72	127.00
1	XA	848	C	C2-N1-C1'	5.59	124.95	118.80
34	YA	887	A	OP1-P-OP2	5.59	127.99	119.60
34	YA	2648	C	C6-N1-C1'	-5.59	114.09	120.80
1	QA	56	U	C6-N1-C1'	-5.59	113.37	121.20
35	RB	60	C	C5-C6-N1	5.59	123.80	121.00
34	YA	1448	G	C8-N9-C1'	-5.59	119.73	127.00
1	QA	1229	A	C4-N9-C1'	5.59	136.37	126.30
34	RA	2044	C	C2-N1-C1'	5.59	124.95	118.80
35	RB	108	C	C6-N1-C2	5.59	122.53	120.30
1	XA	134	A	C8-N9-C1'	-5.59	117.64	127.70
35	YB	54	G	N3-C4-C5	5.59	131.39	128.60
34	RA	848	G	C8-N9-C1'	-5.59	119.73	127.00
34	YA	2231	C	C6-N1-C1'	-5.59	114.09	120.80
1	XA	749	C	C2-N1-C1'	5.59	124.94	118.80
1	XA	962	C	C6-N1-C1'	-5.59	114.09	120.80
34	YA	862	G	C4-N9-C1'	5.59	133.76	126.50
34	YA	1777	U	C2-N1-C1'	5.59	124.40	117.70
1	QA	428	G	C4-N9-C1'	5.58	133.76	126.50
1	QA	1417	G	C4-N9-C1'	5.58	133.76	126.50
34	RA	1298	C	C2-N1-C1'	5.58	124.94	118.80
34	RA	1776	G	C8-N9-C1'	-5.58	119.74	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1358	U	C2-N1-C1'	-5.58	111.00	117.70
1	QA	651	C	C6-N1-C1'	-5.58	114.11	120.80
34	YA	97	C	C6-N1-C1'	-5.58	114.11	120.80
44	RP	59	LEU	CA-CB-CG	5.58	128.12	115.30
1	XA	1158	C	N1-C1'-C2'	5.58	121.25	114.00
34	YA	2420	C	C6-N1-C1'	-5.58	114.11	120.80
1	QA	962	C	C2-N1-C1'	5.57	124.93	118.80
1	QA	1303	C	C2-N1-C1'	5.57	124.93	118.80
1	XA	537	G	C4-N9-C1'	-5.57	119.26	126.50
1	QA	647	C	C2-N1-C1'	5.57	124.93	118.80
34	RA	1776	G	C4-N9-C1'	5.57	133.74	126.50
1	XA	400	C	C2-N1-C1'	5.57	124.93	118.80
34	YA	484	C	C6-N1-C1'	-5.57	114.12	120.80
34	YA	636	G	C8-N9-C1'	-5.57	119.76	127.00
1	QA	1270	C	C6-N1-C1'	-5.57	114.12	120.80
29	R5	34	PRO	CA-N-CD	-5.57	103.71	111.50
1	XA	1109	C	C6-N1-C1'	-5.57	114.12	120.80
34	YA	602	G	C4-N9-C1'	5.57	133.74	126.50
1	XA	12	U	C6-N1-C1'	-5.56	113.41	121.20
34	YA	636	G	C4-N9-C1'	5.56	133.73	126.50
34	YA	2210	G	N9-C1'-C2'	5.56	121.23	114.00
34	YA	2704	C	C2-N1-C1'	5.56	124.92	118.80
34	RA	2664	G	C8-N9-C1'	-5.56	119.77	127.00
1	QA	1197	G	C8-N9-C1'	-5.56	119.77	127.00
1	QA	849	C	C2-N1-C1'	5.56	124.91	118.80
1	XA	68(J)	G	C8-N9-C1'	-5.56	119.77	127.00
1	QA	1148	U	C6-N1-C1'	-5.56	113.42	121.20
34	RA	2663	G	C4-N9-C1'	5.55	133.72	126.50
34	YA	595	C	C6-N1-C1'	-5.55	114.13	120.80
34	YA	2134	A	C8-N9-C1'	-5.55	117.70	127.70
34	YA	2730	C	C2-N1-C1'	5.55	124.91	118.80
1	QA	1137	C	C6-N1-C1'	-5.55	114.14	120.80
1	XA	980	C	OP2-P-O3'	-5.55	92.99	105.20
1	XA	1357	A	C8-N9-C1'	-5.55	117.71	127.70
34	RA	1304	C	C2-N1-C1'	5.55	124.91	118.80
34	YA	448	U	C2-N1-C1'	5.55	124.36	117.70
1	QA	1197	G	C4-N9-C1'	5.55	133.71	126.50
1	XA	1098	C	C2-N1-C1'	5.55	124.90	118.80
34	RA	1914	C	O4'-C1'-N1	5.54	112.64	108.20
1	QA	1417	G	C8-N9-C1'	-5.54	119.79	127.00
34	RA	2356	C	C6-N1-C1'	-5.54	114.15	120.80
34	RA	2420	C	C2-N1-C1'	5.54	124.90	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1437	C	C6-N1-C1'	5.54	127.45	120.80
34	RA	2663	G	C8-N9-C1'	-5.54	119.80	127.00
1	XA	479	C	C2-N1-C1'	5.54	124.89	118.80
28	Y4	39	CYS	N-CA-C	-5.54	96.04	111.00
32	R8	61	LEU	C-N-CA	5.54	135.55	121.70
34	YA	1315	C	C6-N1-C1'	-5.54	114.15	120.80
34	RA	1312	U	C2-N1-C1'	5.54	124.35	117.70
34	RA	1313	U	C2-N1-C1'	5.54	124.35	117.70
54	YZ	62	PRO	C-N-CA	5.54	135.54	121.70
34	YA	544	C	C6-N1-C1'	-5.54	114.16	120.80
34	YA	2803	C	C6-N1-C1'	-5.54	114.16	120.80
34	RA	2566	A	P-O3'-C3'	5.53	126.34	119.70
34	RA	2580	U	C2-N1-C1'	5.53	124.34	117.70
34	YA	184	C	C6-N1-C1'	-5.53	114.16	120.80
34	YA	576	U	C2-N1-C1'	5.53	124.34	117.70
1	QA	794	A	C4-N9-C1'	5.53	136.25	126.30
34	RA	202	U	C2-N1-C1'	5.53	124.33	117.70
34	RA	1483	G	C4-N9-C1'	5.53	133.69	126.50
40	RH	153	LYS	N-CA-C	5.53	125.92	111.00
34	RA	2359	C	C6-N1-C1'	-5.53	114.17	120.80
34	YA	1507	A	O4'-C1'-N9	5.53	112.62	108.20
1	QA	1388	C	C2-N1-C1'	5.52	124.88	118.80
1	XA	1203	C	C6-N1-C1'	-5.52	114.17	120.80
1	XA	1353	G	C8-N9-C1'	-5.52	119.82	127.00
34	YA	1515	C	C2-N1-C1'	5.52	124.88	118.80
34	RA	2575	C	C2-N1-C1'	5.52	124.87	118.80
1	XA	420	U	C2-N1-C1'	5.52	124.33	117.70
1	QA	1229	A	C8-N9-C1'	-5.52	117.76	127.70
35	YB	61	G	C8-N9-C4	-5.52	104.19	106.40
34	RA	509	C	C2-N1-C1'	5.52	124.87	118.80
1	XA	1105	A	N9-C1'-C2'	-5.52	105.93	112.00
34	RA	2867	G	C8-N9-C1'	-5.51	119.83	127.00
34	YA	2133	G	C4-N9-C1'	5.51	133.67	126.50
34	YA	9	U	C2-N1-C1'	5.51	124.31	117.70
34	YA	270(N)	U	C2-N1-C1'	5.51	124.31	117.70
1	QA	956	U	C2-N1-C1'	5.51	124.31	117.70
1	XA	25	C	C2-N1-C1'	5.51	124.86	118.80
1	XA	526	C	C2-N1-C1'	5.51	124.86	118.80
34	YA	602	G	C8-N9-C1'	-5.51	119.84	127.00
1	QA	1352	C	C2-N1-C1'	5.51	124.86	118.80
34	YA	2334	G	O4'-C1'-N9	-5.51	103.79	108.20
34	YA	2475	C	C2-N1-C1'	5.51	124.86	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	619	G	C4-N9-C1'	5.51	133.66	126.50
34	YA	2808	U	C2-N1-C1'	5.51	124.31	117.70
1	XA	1353	G	C4-N9-C1'	5.50	133.65	126.50
34	YA	848	G	C4-N9-C1'	5.50	133.66	126.50
34	YA	2532	G	C4-N9-C1'	5.50	133.66	126.50
34	RA	817	C	C2-N1-C1'	5.50	124.85	118.80
1	XA	37	U	C2-N1-C1'	5.50	124.30	117.70
34	YA	365	C	C2-N1-C1'	5.50	124.85	118.80
34	YA	1879	C	C6-N1-C1'	-5.50	114.20	120.80
44	YP	59	LEU	CA-CB-CG	5.50	127.95	115.30
34	RA	2205	C	C2-N1-C1'	5.50	124.85	118.80
1	XA	858	G	C4-N9-C1'	5.50	133.64	126.50
35	YB	37	C	N1-C2-O2	5.50	122.20	118.90
1	QA	75	C	C6-N1-C1'	-5.49	114.21	120.80
1	QA	428	G	C8-N9-C1'	-5.49	119.86	127.00
34	YA	862	G	C8-N9-C1'	-5.49	119.86	127.00
1	QA	1362(A)	C	C6-N1-C1'	-5.49	114.21	120.80
34	YA	206	U	C2-N1-C1'	5.49	124.29	117.70
34	YA	546	C	C2-N1-C1'	5.49	124.84	118.80
34	YA	2511	U	C2-N1-C1'	5.49	124.29	117.70
1	XA	1440(A)	C	C6-N1-C1'	-5.49	114.22	120.80
34	YA	1498	C	C2-N1-C1'	5.49	124.84	118.80
34	RA	201	C	C2-N1-C1'	5.49	124.83	118.80
34	RA	2404	C	C2-N1-C1'	5.49	124.83	118.80
34	YA	1599	C	C2-N1-C1'	5.49	124.83	118.80
34	RA	806	C	C2-N1-C1'	5.48	124.83	118.80
35	RB	31	C	C6-N1-C2	-5.48	118.11	120.30
1	XA	1263	C	C6-N1-C1'	-5.48	114.22	120.80
1	QA	707	C	C2-N1-C1'	5.48	124.83	118.80
34	RA	1994	C	C6-N1-C1'	-5.48	114.22	120.80
34	RA	2233	U	C2-N1-C1'	5.48	124.28	117.70
34	YA	838	C	C6-N1-C1'	-5.48	114.22	120.80
34	YA	2824	C	C2-N1-C1'	5.48	124.83	118.80
1	XA	266	G	P-O3'-C3'	5.48	126.27	119.70
34	YA	898	C	C2-N1-C1'	5.48	124.83	118.80
1	XA	1219	U	C6-N1-C1'	5.48	128.87	121.20
34	YA	2496	C	O5'-P-OP1	-5.48	100.77	105.70
1	QA	1409	C	C2-N1-C1'	5.47	124.82	118.80
34	RA	435	C	C2-N1-C1'	5.47	124.82	118.80
34	RA	2096	U	C6-N1-C1'	-5.47	113.54	121.20
1	XA	1302	U	P-O3'-C3'	5.47	126.27	119.70
35	YB	90	C	N1-C2-O2	5.47	122.19	118.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	1415	U	C6-N1-C1'	-5.47	113.54	121.20
1	QA	241	C	C2-N1-C1'	5.47	124.81	118.80
1	QA	788	U	C2-N1-C1'	5.47	124.26	117.70
1	XA	1478	C	C6-N1-C1'	-5.47	114.24	120.80
34	YA	752	A	P-O3'-C3'	5.47	126.26	119.70
34	RA	1483	G	C8-N9-C1'	-5.46	119.90	127.00
34	RA	1687	G	C4-N9-C1'	5.46	133.60	126.50
34	RA	2563	U	C2-N1-C1'	5.46	124.25	117.70
35	YB	94	C	N3-C4-C5	-5.46	119.72	121.90
34	RA	363(F)	U	C6-N1-C1'	-5.46	113.56	121.20
1	XA	651	C	C2-N1-C1'	5.46	124.80	118.80
1	XA	992	U	P-O3'-C3'	5.46	126.25	119.70
34	RA	619	G	C8-N9-C1'	-5.46	119.91	127.00
1	XA	947	G	C4-N9-C1'	5.46	133.59	126.50
34	RA	1314	C	C6-N1-C1'	-5.46	114.25	120.80
34	RA	1498	C	C2-N1-C1'	5.45	124.80	118.80
34	YA	435	C	C2-N1-C1'	5.45	124.80	118.80
1	QA	1440(L)	G	C4-N9-C1'	5.45	133.59	126.50
34	YA	2028	U	C2-N1-C1'	5.45	124.24	117.70
1	XA	795	C	C6-N1-C1'	-5.45	114.26	120.80
34	YA	267	C	C6-N1-C1'	-5.45	114.26	120.80
34	YA	848	G	C8-N9-C1'	-5.45	119.91	127.00
34	YA	2792	G	C4-N9-C1'	5.45	133.59	126.50
1	XA	436	C	C6-N1-C1'	-5.45	114.26	120.80
1	XA	916	G	C4-N9-C1'	5.45	133.58	126.50
1	XA	1373	G	OP1-P-OP2	-5.45	111.43	119.60
34	YA	1218	C	C2-N1-C1'	5.45	124.79	118.80
1	QA	456	C	C6-N1-C1'	-5.45	114.26	120.80
1	QA	1435	G	C4-N9-C1'	5.45	133.58	126.50
34	RA	219	G	C4-N9-C1'	5.45	133.58	126.50
34	RA	930	U	C2-N1-C1'	5.45	124.24	117.70
1	XA	153	C	C2-N1-C1'	5.45	124.79	118.80
22	QV	31	G	C8-N9-C1'	-5.44	119.92	127.00
34	YA	419	C	C6-N1-C1'	-5.44	114.27	120.80
34	YA	964	C	C2-N1-C1'	5.44	124.79	118.80
1	QA	1327	C	C2-N1-C1'	5.44	124.79	118.80
34	YA	919	G	C4-N9-C1'	5.44	133.58	126.50
1	QA	794	A	C8-N9-C1'	-5.44	117.91	127.70
50	RV	48	GLY	C-N-CA	5.44	135.30	121.70
1	XA	5	U	C2-N1-C1'	5.44	124.23	117.70
1	XA	1440(H)	C	C6-N1-C1'	-5.44	114.27	120.80
1	QA	656	C	C2-N1-C1'	5.44	124.78	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	254	G	C4-N9-C1'	5.44	133.57	126.50
34	YA	1343	G	C4-N9-C1'	5.44	133.57	126.50
34	YA	2133	G	C8-N9-C1'	-5.44	119.93	127.00
34	RA	639	U	C6-N1-C1'	-5.43	113.59	121.20
34	RA	825	C	C6-N1-C1'	-5.43	114.28	120.80
34	YA	1930	G	P-O3'-C3'	5.43	126.22	119.70
34	RA	41	C	C2-N1-C1'	5.43	124.78	118.80
35	RB	43	C	C6-N1-C2	-5.43	118.13	120.30
1	XA	1100	C	C6-N1-C1'	-5.43	114.28	120.80
34	RA	1504	C	C2-N1-C1'	5.43	124.78	118.80
34	YA	1102	C	C2-N1-C1'	5.43	124.77	118.80
34	YA	2134	A	C4-N9-C1'	5.43	136.08	126.30
1	XA	20	U	C6-N1-C1'	-5.43	113.60	121.20
1	XA	137	C	C2-N1-C1'	5.43	124.77	118.80
34	YA	635	C	C6-N1-C1'	-5.43	114.28	120.80
35	YB	68	C	C5-C6-N1	5.43	123.71	121.00
34	YA	922	U	C2-N1-C1'	5.43	124.21	117.70
34	YA	2273	A	C4-N9-C1'	5.43	136.07	126.30
1	QA	709	G	C4-N9-C1'	5.42	133.55	126.50
12	XL	46	LYS	C-N-CA	-5.42	108.14	121.70
1	QA	906	G	C4-N9-C1'	5.42	133.55	126.50
34	YA	234	C	C2-N1-C1'	5.42	124.77	118.80
34	RA	2173	A	O5'-P-OP1	5.42	117.21	110.70
1	XA	1515	C	C2-N1-C1'	5.42	124.76	118.80
1	XA	68(E)	C	C2-N1-C1'	5.42	124.76	118.80
1	QA	372	C	C2-N1-C1'	5.42	124.76	118.80
34	RA	838	C	C2-N1-C1'	5.42	124.76	118.80
34	RA	1687	G	C8-N9-C1'	-5.42	119.95	127.00
1	XA	328	C	P-O3'-C3'	5.42	126.20	119.70
34	RA	191	A	C4-N9-C1'	5.42	136.05	126.30
35	YB	98	G	C8-N9-C4	-5.42	104.23	106.40
34	YA	2089	U	C6-N1-C1'	-5.42	113.62	121.20
34	RA	2648	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	916	G	C8-N9-C1'	-5.41	119.96	127.00
1	QA	177	C	C6-N1-C1'	-5.41	114.31	120.80
34	RA	621	A	O4'-C1'-N9	5.41	112.53	108.20
34	RA	2299	G	C8-N9-C1'	-5.41	119.97	127.00
34	YA	75	G	C4-N9-C1'	5.41	133.54	126.50
34	YA	1549	C	C6-N1-C1'	-5.41	114.31	120.80
34	RA	76	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	945	G	P-O3'-C3'	-5.41	113.21	119.70
34	YA	2175	C	C6-N1-C1'	-5.41	114.31	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	972	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	524	G	C4-N9-C1'	5.41	133.53	126.50
34	YA	1418	G	C4-N9-C1'	5.41	133.53	126.50
34	YA	2532	G	C8-N9-C1'	-5.41	119.97	127.00
34	YA	1672	C	C6-N1-C1'	-5.41	114.31	120.80
34	RA	391	G	C4-N9-C1'	5.41	133.53	126.50
34	RA	628	G	C4-N9-C1'	5.41	133.53	126.50
34	RA	2299	G	C4-N9-C1'	5.41	133.53	126.50
1	XA	549	C	C2-N1-C1'	5.41	124.75	118.80
34	YA	407	G	C4-N9-C1'	5.41	133.53	126.50
34	YA	523	C	C2-N1-C1'	5.41	124.75	118.80
1	XA	858	G	C8-N9-C1'	-5.40	119.97	127.00
1	QA	1435	G	C8-N9-C1'	-5.40	119.98	127.00
1	XA	598	U	C6-N1-C1'	-5.40	113.64	121.20
1	XA	947	G	C8-N9-C1'	-5.40	119.98	127.00
34	RA	1951	U	C6-N1-C1'	-5.40	113.64	121.20
1	XA	1243	C	OP1-P-O3'	5.40	117.07	105.20
34	YA	2834	G	C4-N9-C1'	5.40	133.51	126.50
34	RA	1178	C	P-O3'-C3'	5.39	126.17	119.70
34	YA	994	C	C2-N1-C1'	5.39	124.73	118.80
34	YA	2072	G	C4-N9-C1'	5.39	133.51	126.50
1	XA	234	C	C2-N1-C1'	5.39	124.73	118.80
1	XA	1440(I)	U	C6-N1-C1'	-5.39	113.65	121.20
34	YA	1178	C	P-O3'-C3'	5.39	126.17	119.70
34	YA	1819	A	OP2-P-O3'	5.39	117.06	105.20
1	XA	169	C	C6-N1-C1'	-5.39	114.33	120.80
34	YA	1920	C	C6-N1-C1'	-5.39	114.33	120.80
48	YT	114	LEU	CA-CB-CG	5.39	127.70	115.30
1	QA	401	C	C2-N1-C1'	5.38	124.72	118.80
1	QA	834	C	C2-N1-C1'	5.38	124.72	118.80
34	YA	1992	G	OP2-P-O3'	5.38	117.05	105.20
34	RA	581	C	C6-N1-C1'	-5.38	114.34	120.80
34	YA	2667	C	C2-N1-C1'	5.38	124.72	118.80
34	RA	281	G	C4-N9-C1'	5.38	133.50	126.50
34	RA	2028	U	C6-N1-C1'	-5.38	113.67	121.20
34	RA	2745	C	C2-N1-C1'	5.38	124.72	118.80
34	YA	254	G	C8-N9-C1'	-5.38	120.00	127.00
1	QA	591	U	C2-N1-C1'	5.38	124.16	117.70
34	RA	1961	C	C2-N1-C1'	5.38	124.72	118.80
1	XA	862	C	C6-N1-C1'	-5.38	114.34	120.80
40	YH	155	SER	N-CA-C	5.38	125.53	111.00
1	XA	132	C	C6-N1-C1'	-5.38	114.35	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	524	G	C8-N9-C1'	-5.38	120.01	127.00
34	YA	887	A	O4'-C1'-N9	5.38	112.50	108.20
34	RA	628	G	C8-N9-C1'	-5.38	120.01	127.00
1	XA	739	C	C2-N1-C1'	5.38	124.71	118.80
34	YA	1188	U	C2-N1-C1'	5.38	124.15	117.70
1	QA	672	U	C6-N1-C1'	-5.38	113.67	121.20
1	QA	764	C	C2-N1-C1'	5.38	124.71	118.80
34	RA	219	G	C8-N9-C1'	-5.38	120.01	127.00
1	QA	805	C	C2-N1-C1'	5.37	124.71	118.80
1	XA	1075	C	C6-N1-C1'	-5.37	114.35	120.80
34	YA	102	G	P-O3'-C3'	5.37	126.15	119.70
34	YA	919	G	C8-N9-C1'	-5.37	120.02	127.00
1	QA	1225	A	O4'-C1'-N9	5.37	112.50	108.20
34	RA	1405	U	C2-N1-C1'	5.37	124.14	117.70
34	RA	2463	C	C6-N1-C1'	-5.37	114.36	120.80
34	YA	971	C	C2-N1-C1'	5.37	124.71	118.80
34	YA	1370	C	C2-N1-C1'	5.37	124.71	118.80
34	YA	1437	C	C6-N1-C1'	-5.37	114.36	120.80
34	YA	1675	C	C6-N1-C1'	-5.37	114.36	120.80
1	QA	930	C	C6-N1-C1'	-5.37	114.36	120.80
34	YA	1508	A	P-O3'-C3'	5.37	126.14	119.70
34	YA	2056	G	C4-N9-C1'	5.37	133.48	126.50
35	YB	75	G	C5-C6-O6	5.37	131.82	128.60
34	YA	1396	U	C2-N1-C1'	5.37	124.14	117.70
14	QN	43	CYS	CA-CB-SG	-5.37	104.34	114.00
34	RA	365	C	C6-N1-C1'	-5.37	114.36	120.80
34	RA	370	G	O4'-C1'-N9	-5.37	103.91	108.20
1	XA	335	C	C6-N1-C1'	-5.37	114.36	120.80
34	YA	858	U	C2-N1-C1'	5.36	124.14	117.70
34	YA	2792	G	C8-N9-C1'	-5.36	120.03	127.00
1	QA	709	G	C8-N9-C1'	-5.36	120.03	127.00
1	QA	906	G	C8-N9-C1'	-5.36	120.03	127.00
1	QA	1282	C	C6-N1-C1'	-5.36	114.36	120.80
14	XN	58	LYS	N-CA-C	-5.36	96.52	111.00
34	RA	833	U	C2-N1-C1'	5.36	124.13	117.70
34	YA	1343	G	C8-N9-C1'	-5.36	120.03	127.00
1	QA	955	U	C6-N1-C1'	-5.36	113.70	121.20
1	XA	1188	A	C4-N9-C1'	5.36	135.94	126.30
33	R9	32	HIS	CB-CA-C	5.36	121.11	110.40
34	RA	339	U	C6-N1-C1'	-5.36	113.70	121.20
1	XA	980	C	O3'-P-O5'	5.36	114.17	104.00
1	XA	1296	C	O4'-C1'-N1	5.36	112.48	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1440(L)	G	C8-N9-C1'	-5.35	120.04	127.00
34	RA	2089	U	C2-N1-C1'	5.35	124.12	117.70
34	RA	191	A	C8-N9-C1'	-5.35	118.07	127.70
1	QA	945	G	C4-N9-C1'	5.35	133.45	126.50
22	QV	30	C	C6-N1-C1'	-5.35	114.38	120.80
34	RA	1636	C	C2-N1-C1'	5.35	124.68	118.80
1	XA	121	C	C6-N1-C1'	-5.35	114.38	120.80
1	XA	920	U	C6-N1-C1'	-5.35	113.71	121.20
1	XA	1160	G	C5'-C4'-O4'	5.35	115.52	109.10
1	QA	981	U	C6-N1-C1'	-5.35	113.71	121.20
34	RA	2441	C	C2-N1-C1'	5.35	124.68	118.80
34	YA	1537	C	C6-N1-C1'	-5.35	114.38	120.80
1	QA	1187	G	C4-N9-C1'	5.35	133.45	126.50
34	RA	427	U	C6-N1-C1'	-5.35	113.72	121.20
1	QA	8	A	OP1-P-O3'	5.34	116.96	105.20
1	QA	545	C	C6-N1-C1'	-5.34	114.39	120.80
1	QA	1515	C	C2-N1-C1'	5.34	124.68	118.80
1	XA	290	C	C2-N1-C1'	5.34	124.68	118.80
20	XT	10	LEU	CA-CB-CG	5.34	127.59	115.30
1	QA	479	C	C2-N1-C1'	5.34	124.68	118.80
1	QA	1028(G)	A	C4-N9-C1'	5.34	135.91	126.30
1	XA	564	C	C6-N1-C1'	-5.34	114.39	120.80
34	YA	1104	C	C2-N1-C1'	5.34	124.67	118.80
34	YA	2273	A	C8-N9-C1'	-5.34	118.09	127.70
34	YA	75	G	C8-N9-C1'	-5.34	120.06	127.00
34	RA	2166	G	C4-N9-C1'	5.33	133.44	126.50
34	RA	2392	A	O4'-C1'-N9	5.33	112.47	108.20
1	QA	593	G	C4-N9-C1'	5.33	133.43	126.50
34	RA	595	C	C2-N1-C1'	5.33	124.67	118.80
34	RA	658	C	C2-N1-C1'	5.33	124.67	118.80
35	RB	27	C	C2-N1-C1'	5.33	124.67	118.80
1	XA	1423	G	C4-N9-C1'	5.33	133.43	126.50
1	XA	1536	C	C2-N1-C1'	5.33	124.67	118.80
1	QA	251	G	OP1-P-O3'	5.33	116.93	105.20
1	QA	201(C)	U	C2-N1-C1'	5.33	124.09	117.70
34	RA	629	G	C4-N9-C1'	5.33	133.43	126.50
34	RA	2157	G	C4-N9-C1'	5.33	133.43	126.50
1	XA	950	U	C6-N1-C1'	-5.33	113.74	121.20
35	YB	110	G	N1-C6-O6	5.33	123.10	119.90
1	QA	519	C	C2-N1-C1'	5.33	124.66	118.80
34	RA	1271	G	C4-N9-C1'	5.33	133.42	126.50
1	XA	163	C	C6-N1-C1'	-5.33	114.41	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	789	U	C2-N1-C1'	5.33	124.09	117.70
34	YA	108	U	C2-N1-C1'	5.33	124.09	117.70
1	QA	1210	C	C2-N1-C1'	5.32	124.66	118.80
34	RA	2060	A	P-O3'-C3'	5.32	126.09	119.70
22	XV	56	C	C6-N1-C2	-5.32	118.17	120.30
22	XV	56	C	C2-N1-C1'	5.32	124.66	118.80
34	YA	2691	C	C6-N1-C1'	-5.32	114.41	120.80
1	QA	93	U	C2-N1-C1'	5.32	124.09	117.70
34	RA	1581	G	C4-N9-C1'	5.32	133.42	126.50
1	QA	21	G	C4-N9-C1'	5.32	133.42	126.50
1	QA	89	U	C2-N1-C1'	5.32	124.08	117.70
34	RA	1068	G	C4-N9-C1'	5.32	133.41	126.50
34	YA	796	C	C6-N1-C1'	-5.32	114.42	120.80
34	YA	1264	G	OP1-P-O3'	5.32	116.90	105.20
34	YA	1688	U	C2-N1-C1'	5.32	124.08	117.70
1	QA	17	U	C2-N1-C1'	5.32	124.08	117.70
34	YA	1418	G	C8-N9-C1'	-5.32	120.09	127.00
45	YQ	17	LEU	CB-CA-C	-5.32	100.10	110.20
1	XA	1354	C	C6-N1-C1'	-5.31	114.42	120.80
34	RA	1474	C	C6-N1-C1'	-5.31	114.42	120.80
1	XA	964	A	C4-N9-C1'	5.31	135.86	126.30
34	YA	2798	C	C2-N1-C1'	5.31	124.64	118.80
34	YA	534	U	C2-N1-C1'	5.31	124.07	117.70
34	RA	684	G	C4-N9-C1'	5.31	133.40	126.50
1	XA	1404	C	C2-N1-C1'	5.31	124.64	118.80
34	YA	407	G	C8-N9-C1'	-5.31	120.10	127.00
35	YB	49	C	N3-C4-C5	-5.31	119.78	121.90
1	QA	564	C	C6-N1-C1'	-5.31	114.43	120.80
1	QA	744	C	C2-N1-C1'	5.31	124.64	118.80
1	QA	174	C	C2-N1-C1'	5.30	124.64	118.80
34	RA	1670	C	C6-N1-C1'	-5.30	114.43	120.80
1	XA	631	G	C4-N9-C1'	5.30	133.40	126.50
1	XA	1105	A	O4'-C1'-N9	5.30	112.44	108.20
1	QA	786	G	C4-N9-C1'	5.30	133.39	126.50
1	XA	857	C	C6-N1-C1'	-5.30	114.44	120.80
34	YA	364	C	C6-N1-C1'	-5.30	114.44	120.80
34	YA	398	G	OP1-P-O3'	5.30	116.86	105.20
34	YA	553	U	C2-N1-C1'	5.30	124.06	117.70
34	YA	2081	C	C2-N1-C1'	5.30	124.63	118.80
34	YA	2403	C	C2-N1-C1'	5.30	124.63	118.80
34	YA	2099	U	C2-N1-C1'	5.30	124.06	117.70
34	RA	391	G	C8-N9-C1'	-5.30	120.11	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	651	G	C8-N9-C1'	-5.30	120.11	127.00
1	QA	674	G	C4-N9-C1'	5.30	133.39	126.50
34	RA	1100	C	C2-N1-C1'	5.30	124.62	118.80
34	RA	1430	C	C2-N1-C1'	5.30	124.63	118.80
35	RB	47	C	N1-C2-O2	5.30	122.08	118.90
1	XA	878	G	O4'-C1'-N9	5.30	112.44	108.20
34	YA	2834	G	C8-N9-C1'	-5.30	120.11	127.00
1	QA	249	U	C6-N1-C1'	-5.29	113.79	121.20
1	QA	1187	G	C8-N9-C1'	-5.29	120.12	127.00
1	XA	1188	A	C8-N9-C1'	-5.29	118.17	127.70
1	XA	1423	G	C8-N9-C1'	-5.29	120.12	127.00
34	RA	155	C	C2-N1-C1'	5.29	124.62	118.80
34	RA	281	G	C8-N9-C1'	-5.29	120.12	127.00
34	RA	1121	C	C6-N1-C1'	-5.29	114.45	120.80
1	XA	1327	C	O4'-C1'-N1	5.29	112.43	108.20
34	YA	2072	G	C8-N9-C1'	-5.29	120.12	127.00
34	YA	2110	G	O4'-C1'-N9	-5.29	103.97	108.20
34	YA	2354	G	C4-N9-C1'	5.29	133.38	126.50
28	Y4	4	GLY	N-CA-C	5.29	126.33	113.10
1	QA	112	G	C4-N9-C1'	5.29	133.38	126.50
1	QA	1012	U	C2-N1-C1'	5.29	124.05	117.70
34	RA	1588	C	C2-N1-C1'	5.29	124.62	118.80
1	XA	252	U	C6-N1-C1'	-5.29	113.80	121.20
34	YA	1508	A	OP2-P-O3'	5.29	116.83	105.20
1	XA	831	U	C2-N1-C1'	5.28	124.04	117.70
34	YA	2056	G	C8-N9-C1'	-5.28	120.13	127.00
34	YA	2599	G	C4-N9-C1'	5.28	133.37	126.50
1	QA	593	G	C8-N9-C1'	-5.28	120.13	127.00
1	QA	754	C	N1-C1'-C2'	5.28	120.86	114.00
1	QA	1203	C	C2-N1-C1'	5.28	124.61	118.80
34	RA	1068	G	C8-N9-C1'	-5.28	120.14	127.00
35	RB	96	G	C8-N9-C4	-5.28	104.29	106.40
34	RA	2166	G	C8-N9-C1'	-5.28	120.14	127.00
34	YA	604	G	C4-N9-C1'	5.28	133.36	126.50
35	YB	29	A	N7-C8-N9	5.28	116.44	113.80
1	QA	217	C	C2-N1-C1'	5.28	124.60	118.80
34	RA	1113	U	C2-N1-C1'	5.28	124.03	117.70
34	RA	2157	G	C8-N9-C1'	-5.28	120.14	127.00
1	XA	1281	U	C2-N1-C1'	5.28	124.03	117.70
34	YA	2162	G	C4-N9-C1'	5.27	133.36	126.50
34	YA	2586	C	C6-N1-C1'	-5.27	114.47	120.80
35	YB	78	A	C8-N9-C4	-5.27	103.69	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	1404	C	C2-N1-C1'	5.27	124.60	118.80
34	RA	1201	C	C2-N1-C1'	5.27	124.60	118.80
1	XA	1347	G	N9-C1'-C2'	-5.27	106.20	112.00
34	YA	1105	U	C2-N1-C1'	5.27	124.03	117.70
1	QA	221	C	C2-N1-C1'	5.27	124.60	118.80
1	QA	455	C	C2-N1-C1'	5.27	124.60	118.80
34	RA	267	C	C2-N1-C1'	5.27	124.60	118.80
1	QA	824	C	C6-N1-C1'	-5.27	114.48	120.80
1	QA	1237	C	C6-N1-C1'	-5.27	114.48	120.80
34	RA	1581	G	C8-N9-C1'	-5.27	120.15	127.00
22	QV	4	U	C2-N1-C1'	5.26	124.02	117.70
34	YA	678	C	C6-N1-C1'	-5.26	114.48	120.80
1	QA	786	G	C8-N9-C1'	-5.26	120.16	127.00
1	QA	945	G	C8-N9-C1'	-5.26	120.16	127.00
1	XA	1108	G	C8-N9-C1'	-5.26	120.16	127.00
35	YB	38	C	N3-C2-O2	-5.26	118.22	121.90
54	YZ	151	HIS	N-CA-C	5.26	125.21	111.00
34	YA	271(E)	G	C4-N9-C1'	5.26	133.34	126.50
1	XA	222	U	C6-N1-C1'	-5.26	113.84	121.20
34	YA	604	G	C8-N9-C1'	-5.26	120.17	127.00
34	YA	2359	C	C2-N1-C1'	5.26	124.58	118.80
1	XA	1440(K)	C	C2-N1-C1'	5.26	124.58	118.80
34	YA	2779	U	C2-N1-C1'	5.26	124.01	117.70
1	QA	556	C	C6-N1-C1'	-5.25	114.49	120.80
35	RB	60	C	C6-N1-C2	-5.25	118.20	120.30
34	YA	2354	G	C8-N9-C1'	-5.25	120.17	127.00
34	RA	684	G	C8-N9-C1'	-5.25	120.17	127.00
34	RA	2061	G	O5'-P-OP2	-5.25	100.97	105.70
1	XA	849	C	C2-N1-C1'	5.25	124.58	118.80
34	YA	1577	C	C6-N1-C1'	-5.25	114.50	120.80
34	YA	2128	C	C2-N1-C1'	5.25	124.58	118.80
1	QA	1402	C	C2-N1-C1'	5.25	124.58	118.80
1	QA	1514	C	C2-N1-C1'	5.25	124.58	118.80
34	RA	104	U	C2-N1-C1'	5.25	124.00	117.70
34	RA	1180	C	C6-N1-C1'	-5.25	114.50	120.80
34	RA	2610	C	P-O3'-C3'	5.25	126.00	119.70
34	RA	2832	U	C2-N1-C1'	5.25	123.99	117.70
1	XA	186(F)	C	C2-N1-C1'	5.24	124.57	118.80
34	YA	318	C	C6-N1-C1'	-5.24	114.51	120.80
1	QA	370	C	C6-N1-C1'	-5.24	114.51	120.80
1	XA	744	C	C2-N1-C1'	5.24	124.57	118.80
1	XA	1364	U	C6-N1-C1'	-5.24	113.86	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	RB	28	C	C5-C6-N1	5.24	123.62	121.00
34	YA	2438	U	C2-N1-C1'	5.24	123.99	117.70
34	RA	613	U	O4'-C1'-N1	5.24	112.39	108.20
34	RA	1271	G	C8-N9-C1'	-5.24	120.19	127.00
1	XA	617	G	P-O3'-C3'	5.24	125.98	119.70
1	XA	631	G	C8-N9-C1'	-5.24	120.19	127.00
1	XA	1186	G	O4'-C1'-N9	-5.24	104.01	108.20
34	RA	198	C	C2-N1-C1'	5.23	124.56	118.80
34	RA	2665	A	O4'-C1'-N9	5.23	112.39	108.20
1	XA	342	C	C2-N1-C1'	5.23	124.56	118.80
34	YA	794	G	C4-N9-C1'	5.23	133.30	126.50
34	YA	2437	U	C6-N1-C1'	-5.23	113.88	121.20
1	XA	1108	G	C4-N9-C1'	5.23	133.30	126.50
22	XV	15	G	N7-C8-N9	5.23	115.72	113.10
34	YA	1556	C	C6-N1-C1'	-5.23	114.53	120.80
1	QA	501	C	C2-N1-C1'	5.23	124.55	118.80
1	XA	1317	C	C6-N1-C1'	-5.23	114.53	120.80
34	YA	1782	C	O5'-P-OP2	5.23	116.97	110.70
35	RB	82	G	N1-C6-O6	5.22	123.03	119.90
34	YA	2455	G	C4-N9-C1'	5.22	133.29	126.50
1	QA	261	U	C6-N1-C1'	-5.22	113.89	121.20
34	RA	270(D)	C	C2-N1-C1'	5.22	124.55	118.80
34	RA	2064	C	C6-N1-C1'	-5.22	114.53	120.80
1	XA	1300	G	O4'-C1'-N9	5.22	112.38	108.20
1	XA	1533	C	C2-N1-C1'	5.22	124.55	118.80
34	YA	1544	C	C2-N1-C1'	5.22	124.55	118.80
1	QA	112	G	C8-N9-C1'	-5.22	120.21	127.00
34	RA	2264	C	C2-N1-C1'	5.22	124.54	118.80
1	QA	358	U	C6-N1-C1'	-5.22	113.89	121.20
34	RA	1153	C	C2-N1-C1'	5.22	124.54	118.80
1	QA	21	G	C8-N9-C1'	-5.22	120.22	127.00
1	QA	1028(G)	A	C8-N9-C1'	-5.22	118.31	127.70
1	QA	1381	U	C2-N1-C1'	5.21	123.96	117.70
34	RA	629	G	C8-N9-C1'	-5.21	120.22	127.00
34	RA	2477	C	O5'-P-OP1	-5.21	101.01	105.70
34	YA	684	G	C4-N9-C1'	5.21	133.28	126.50
34	YA	976	C	C2-N1-C1'	5.21	124.54	118.80
34	YA	235	U	C2-N1-C1'	5.21	123.96	117.70
34	YA	2189	U	C2-N1-C1'	5.21	123.96	117.70
34	YA	1588	C	C6-N1-C1'	-5.21	114.55	120.80
35	YB	108	C	C6-N1-C2	5.21	122.38	120.30
34	RA	678	C	C6-N1-C1'	-5.21	114.55	120.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
54	RZ	178	GLU	C-N-CA	5.21	134.72	121.70
1	QA	1028(I)	G	C4-N9-C1'	5.21	133.27	126.50
34	RA	1556	C	C2-N1-C1'	5.21	124.53	118.80
1	XA	513	C	C6-N1-C1'	-5.21	114.55	120.80
1	XA	1508	G	C8-N9-C1'	-5.21	120.23	127.00
34	YA	653	A	P-O3'-C3'	5.21	125.95	119.70
34	RA	1982	C	C6-N1-C1'	-5.21	114.55	120.80
1	XA	1322	C	C2-N1-C1'	5.21	124.53	118.80
22	XV	31	G	C4-N9-C1'	5.21	133.27	126.50
1	QA	1414	U	C6-N1-C1'	-5.21	113.91	121.20
34	RA	884	C	C2-N1-C1'	5.21	124.53	118.80
1	XA	1078	U	C2-N1-C1'	5.20	123.94	117.70
34	YA	1026	U	OP1-P-O3'	5.20	116.65	105.20
34	YA	1411	C	C6-N1-C1'	-5.20	114.56	120.80
34	RA	1349	A	O4'-C1'-N9	5.20	112.36	108.20
34	YA	312	G	C4-N9-C1'	5.20	133.26	126.50
34	YA	1514	U	C6-N1-C1'	-5.20	113.92	121.20
34	YA	2452	C	C6-N1-C1'	-5.20	114.56	120.80
35	YB	17	C	N1-C2-O2	5.20	122.02	118.90
35	YB	49	C	C6-N1-C2	-5.20	118.22	120.30
1	QA	546	G	P-O3'-C3'	5.20	125.94	119.70
34	RA	965	C	C2-N1-C1'	5.20	124.52	118.80
53	YY	79	CYS	N-CA-CB	5.20	119.95	110.60
34	RA	66	C	C6-N1-C1'	-5.20	114.56	120.80
1	XA	1406	U	C2-N1-C1'	5.20	123.93	117.70
34	YA	2599	G	C8-N9-C1'	-5.20	120.25	127.00
34	YA	2611	U	C2-N1-C1'	5.20	123.94	117.70
34	YA	2495	G	OP1-P-O3'	5.19	116.62	105.20
34	YA	2874	C	C2-N1-C1'	5.19	124.51	118.80
35	YB	54	G	N7-C8-N9	5.19	115.70	113.10
1	XA	1132	C	C2-N1-C1'	5.19	124.51	118.80
34	YA	639	U	C2-N1-C1'	5.19	123.93	117.70
34	RA	230	U	C2-N1-C1'	5.19	123.92	117.70
34	YA	2137	C	C2-N1-C1'	5.19	124.51	118.80
1	QA	674	G	C8-N9-C1'	-5.19	120.26	127.00
1	XA	352	C	C6-N1-C1'	-5.18	114.58	120.80
1	XA	1142	G	C4-N9-C1'	5.18	133.24	126.50
34	YA	271(E)	G	C8-N9-C1'	-5.18	120.26	127.00
34	YA	1707	G	C4-N9-C1'	5.18	133.24	126.50
34	YA	2085	C	C2-N1-C1'	5.18	124.50	118.80
1	XA	981	U	O5'-P-OP1	-5.18	101.04	105.70
1	QA	8	A	P-O3'-C3'	5.18	125.92	119.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	176	C	C6-N1-C1'	-5.18	114.58	120.80
34	RA	2452	C	C2-N1-C1'	5.18	124.50	118.80
34	RA	2805	G	C4-N9-C1'	5.18	133.23	126.50
1	XA	1232	U	C2-N1-C1'	5.18	123.92	117.70
1	QA	1261	A	C4-N9-C1'	5.18	135.62	126.30
1	XA	724	G	C4-N9-C1'	5.17	133.23	126.50
34	RA	1110	G	C4-N9-C1'	5.17	133.22	126.50
1	XA	1508	G	C4-N9-C1'	5.17	133.22	126.50
34	YA	1289	C	C6-N1-C1'	-5.17	114.59	120.80
34	YA	2162	G	C8-N9-C1'	-5.17	120.28	127.00
34	RA	1544	C	C2-N1-C1'	5.17	124.49	118.80
34	YA	624	C	C2-N1-C1'	5.17	124.49	118.80
1	XA	1206	G	C4-N9-C1'	5.17	133.22	126.50
34	YA	1406	U	C2-N1-C1'	5.17	123.90	117.70
34	YA	1734	C	C6-N1-C1'	-5.17	114.60	120.80
34	RA	1956	U	C2-N1-C1'	5.17	123.90	117.70
34	RA	2195	C	C2-N1-C1'	5.17	124.48	118.80
34	YA	480	A	C4-N9-C1'	5.17	135.60	126.30
35	RB	59	A	N1-C2-N3	-5.16	126.72	129.30
1	QA	851	G	C4-N9-C1'	5.16	133.21	126.50
1	QA	1157	A	OP2-P-O3'	5.16	116.56	105.20
1	XA	1157	A	C3'-C2'-C1'	5.16	105.63	101.50
1	XA	1348	U	O5'-C5'-C4'	5.16	121.51	111.70
34	YA	1313	U	C2-N1-C1'	5.16	123.89	117.70
34	RA	2099	U	C2-N1-C1'	5.16	123.89	117.70
1	XA	545	C	C2-N1-C1'	5.16	124.48	118.80
1	XA	617	G	C1'-C2'-O2'	5.16	126.08	110.60
34	YA	2179	C	C6-N1-C1'	-5.16	114.61	120.80
36	YD	243	GLY	N-CA-C	5.16	126.00	113.10
34	RA	364	C	C2-N1-C1'	5.16	124.47	118.80
34	RA	651	G	C4-N9-C1'	5.16	133.21	126.50
34	RA	1298	C	C6-N1-C1'	-5.16	114.61	120.80
1	XA	851	G	C4-N9-C1'	5.16	133.21	126.50
1	XA	1219	U	OP1-P-O3'	-5.16	93.85	105.20
1	QA	1027	C	C2-N1-C1'	5.16	124.47	118.80
34	YA	657	U	C6-N1-C1'	-5.16	113.98	121.20
1	XA	1359	C	O4'-C1'-N1	5.16	112.32	108.20
34	YA	202	U	C6-N1-C1'	-5.16	113.98	121.20
34	YA	684	G	C8-N9-C1'	-5.16	120.30	127.00
1	XA	1157	A	OP2-P-O3'	5.15	116.53	105.20
34	YA	208	C	C6-N1-C1'	-5.15	114.62	120.80
34	YA	395	U	C6-N1-C1'	-5.15	113.99	121.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	YA	508	G	C4-N9-C1'	5.15	133.20	126.50
34	YA	2455	G	C8-N9-C1'	-5.15	120.30	127.00
53	RY	99	CYS	CB-CA-C	-5.15	100.10	110.40
34	YA	312	G	C8-N9-C1'	-5.15	120.31	127.00
1	QA	178	C	C2-N1-C1'	5.15	124.46	118.80
1	QA	1440(I)	U	C2-N1-C1'	5.15	123.88	117.70
34	RA	634	C	C6-N1-C1'	-5.15	114.62	120.80
34	YA	94	G	C4-N9-C1'	5.15	133.19	126.50
34	YA	1303	G	C4-N9-C1'	5.15	133.19	126.50
35	YB	69	G	C8-N9-C4	-5.15	104.34	106.40
1	QA	252	U	C6-N1-C1'	-5.15	114.00	121.20
1	QA	262	A	C4-N9-C1'	5.15	135.56	126.30
34	RA	2466	C	C6-N1-C1'	-5.14	114.63	120.80
36	RD	241	PRO	C-N-CA	5.14	134.55	121.70
34	YA	2752	C	C6-N1-C1'	-5.14	114.63	120.80
35	YB	86	G	C5-N7-C8	5.14	106.87	104.30
1	QA	851	G	C8-N9-C1'	-5.14	120.32	127.00
34	RA	319	C	C2-N1-C1'	5.14	124.45	118.80
34	RA	1510	A	P-O5'-C5'	5.14	129.12	120.90
34	RA	1674	G	C4-N9-C1'	5.14	133.18	126.50
1	XA	1142	G	C8-N9-C1'	-5.14	120.32	127.00
1	XA	1320	C	O4'-C4'-C3'	-5.14	98.86	104.00
34	YA	923	C	C6-N1-C1'	-5.14	114.63	120.80
1	QA	295	C	C6-N1-C1'	-5.14	114.64	120.80
34	RA	755	C	C2-N1-C1'	5.14	124.45	118.80
1	XA	1349	A	O5'-P-OP1	-5.14	101.08	105.70
30	Y6	13	CYS	CA-CB-SG	-5.14	104.75	114.00
34	YA	2084	C	C6-N1-C1'	-5.14	114.64	120.80
50	YV	35	LEU	CA-CB-CG	5.14	127.11	115.30
1	QA	1322	C	C6-N1-C1'	-5.13	114.64	120.80
34	RA	929	G	C4-N9-C1'	5.13	133.17	126.50
1	XA	564	C	C2-N1-C1'	5.13	124.45	118.80
1	XA	832	C	C6-N1-C1'	-5.13	114.64	120.80
34	YA	271(B)	C	C6-N1-C1'	-5.13	114.64	120.80
34	YA	1417	C	C6-N1-C1'	-5.13	114.64	120.80
34	YA	1707	G	C8-N9-C1'	-5.13	120.33	127.00
32	R8	28	GLY	N-CA-C	5.13	125.92	113.10
1	XA	1347	G	O5'-C5'-C4'	5.13	121.44	111.70
34	YA	658	C	C2-N1-C1'	5.13	124.44	118.80
34	YA	794	G	C8-N9-C1'	-5.13	120.33	127.00
34	YA	866	A	C4-N9-C1'	5.13	135.53	126.30
34	YA	2013	A	OP1-P-O3'	5.13	116.48	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
35	YB	27	C	C2-N1-C1'	5.13	124.44	118.80
34	RA	1005	C	C6-N1-C1'	-5.13	114.65	120.80
34	RA	1674	G	C8-N9-C1'	-5.13	120.34	127.00
35	RB	90	C	C5-C6-N1	5.13	123.56	121.00
1	XA	1306	A	P-O3'-C3'	-5.13	113.55	119.70
34	RA	1135	C	C2-N1-C1'	5.12	124.44	118.80
1	XA	724	G	C8-N9-C1'	-5.12	120.34	127.00
1	QA	97	U	C6-N1-C1'	-5.12	114.03	121.20
35	RB	15	A	N9-C4-C5	-5.12	103.75	105.80
1	XA	288	A	C8-N9-C1'	-5.12	118.48	127.70
34	YA	18	C	C6-N1-C1'	-5.12	114.65	120.80
1	QA	234	C	C2-N1-C1'	5.12	124.43	118.80
1	QA	1028(I)	G	C8-N9-C1'	-5.12	120.34	127.00
34	RA	2805	G	C8-N9-C1'	-5.12	120.34	127.00
35	RB	55	U	C5-C6-N1	5.12	125.26	122.70
1	XA	988	G	C4-N9-C1'	5.12	133.16	126.50
20	XT	72	LEU	CA-CB-CG	5.12	127.08	115.30
35	YB	44	G	C5-C6-N1	5.12	114.06	111.50
1	QA	28	G	C4-N9-C1'	5.12	133.16	126.50
34	YA	94	G	C8-N9-C1'	-5.12	120.34	127.00
1	XA	1306	A	N9-C1'-C2'	5.12	120.66	114.00
34	YA	2540	C	C2-N1-C1'	5.12	124.43	118.80
1	QA	1261	A	C8-N9-C1'	-5.12	118.49	127.70
34	RA	1112	G	C4-N9-C1'	5.12	133.15	126.50
1	XA	288	A	C4-N9-C1'	5.12	135.51	126.30
34	RA	814	C	C2-N1-C1'	5.12	124.43	118.80
34	YA	270(D)	C	C6-N1-C1'	-5.12	114.66	120.80
35	YB	1	U	C2-N1-C1'	5.12	123.84	117.70
34	RA	2443	C	C2-N1-C1'	5.11	124.42	118.80
35	RB	106	G	C8-N9-C4	-5.11	104.36	106.40
1	XA	312	C	C6-N1-C1'	-5.11	114.66	120.80
34	YA	1479	G	C4-N9-C1'	5.11	133.15	126.50
1	QA	797	C	C2-N1-C1'	5.11	124.42	118.80
1	XA	1028(C)	C	C2-N1-C1'	5.11	124.42	118.80
1	QA	262	A	C8-N9-C1'	-5.11	118.50	127.70
1	XA	1532	U	C2-N1-C1'	5.11	123.83	117.70
34	RA	1579	A	C4-N9-C1'	5.11	135.50	126.30
1	XA	1098	C	C6-N1-C1'	-5.11	114.67	120.80
35	YB	30	C	N3-C4-C5	-5.11	119.86	121.90
29	R5	34	PRO	N-CA-CB	5.10	109.42	103.30
34	RA	1101	U	C6-N1-C1'	-5.10	114.06	121.20
34	YA	1579	A	C4-N9-C1'	5.10	135.49	126.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	305	U	C2-N1-C1'	5.10	123.82	117.70
34	RA	351	G	C8-N9-C1'	-5.10	120.37	127.00
34	RA	1026	U	OP1-P-O3'	5.10	116.42	105.20
34	RA	2895	U	C2-N1-C1'	5.10	123.82	117.70
35	RB	27	C	N3-C2-O2	-5.10	118.33	121.90
1	XA	749	C	C6-N1-C1'	-5.10	114.68	120.80
35	YB	102	G	C5-C6-N1	5.10	114.05	111.50
1	QA	186(C)	C	C2-N1-C1'	5.10	124.41	118.80
34	YA	851	U	C2-N1-C1'	5.10	123.82	117.70
1	QA	856	C	O4'-C1'-N1	5.10	112.28	108.20
1	QA	962	C	C6-N1-C1'	-5.10	114.68	120.80
34	RA	2785	C	C6-N1-C1'	-5.10	114.68	120.80
34	YA	1072	C	C2-N1-C1'	-5.10	113.19	118.80
35	YB	61	G	N7-C8-N9	5.10	115.65	113.10
1	XA	1206	G	C8-N9-C1'	-5.10	120.37	127.00
34	YA	1240	U	C6-N1-C1'	-5.10	114.06	121.20
38	YF	133	ASN	N-CA-C	-5.10	97.24	111.00
34	YA	2229	C	C2-N1-C1'	5.09	124.40	118.80
1	QA	186(G)	C	C2-N1-C1'	5.09	124.40	118.80
1	QA	1256	A	O4'-C1'-N9	5.09	112.27	108.20
34	RA	29	U	C2-N1-C1'	5.09	123.81	117.70
35	RB	28	C	C6-N1-C2	-5.09	118.26	120.30
34	RA	915	C	C2-N1-C1'	5.09	124.40	118.80
34	RA	1265	A	OP1-P-OP2	-5.09	111.97	119.60
34	YA	1303	G	C8-N9-C1'	-5.09	120.38	127.00
34	YA	1869	G	C4-N9-C1'	5.09	133.12	126.50
35	YB	44	G	C4-N9-C1'	-5.09	119.88	126.50
34	YA	2462	U	C2-N1-C1'	5.09	123.80	117.70
35	YB	51	G	N1-C2-N3	5.09	126.95	123.90
1	QA	311	C	C2-N1-C1'	5.08	124.39	118.80
1	XA	1305	G	C1'-C2'-O2'	-5.08	95.34	110.60
34	YA	189	G	C4-N9-C1'	5.08	133.11	126.50
1	QA	1244	C	C2-N1-C1'	5.08	124.39	118.80
34	RA	2217	G	C4-N9-C1'	5.08	133.11	126.50
34	RA	2351	G	C8-N9-C1'	-5.08	120.39	127.00
34	YA	2884	U	C6-N1-C1'	-5.08	114.08	121.20
34	RA	509	C	C6-N1-C1'	-5.08	114.70	120.80
1	XA	848	C	C6-N1-C1'	-5.08	114.70	120.80
34	YA	1050	A	O4'-C1'-N9	5.08	112.27	108.20
34	YA	1108	U	C6-N1-C1'	-5.08	114.09	121.20
1	QA	1316	G	C8-N9-C1'	-5.08	120.40	127.00
34	RA	318	C	C2-N1-C1'	5.08	124.39	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
34	RA	2351	G	C4-N9-C1'	5.08	133.10	126.50
35	YB	31	C	C6-N1-C1'	-5.08	114.70	120.80
34	RA	99	U	P-O3'-C3'	5.08	125.80	119.70
34	RA	1110	G	C8-N9-C1'	-5.08	120.40	127.00
34	RA	1174	A	C4-N9-C1'	5.08	135.44	126.30
34	YA	1516	U	C6-N1-C1'	-5.08	114.09	121.20
34	RA	120	U	C2-N1-C1'	5.08	123.79	117.70
54	RZ	12	GLY	N-CA-C	-5.08	100.41	113.10
34	YA	508	G	C8-N9-C1'	-5.08	120.40	127.00
34	YA	2093	G	C4-N9-C1'	5.07	133.09	126.50
1	QA	1115	C	C2-N1-C1'	5.07	124.38	118.80
1	QA	1352	C	C6-N1-C1'	-5.07	114.72	120.80
1	XA	851	G	C8-N9-C1'	-5.07	120.41	127.00
34	YA	690	G	C4-N9-C1'	5.07	133.09	126.50
1	XA	456	C	C2-N1-C1'	5.07	124.38	118.80
22	XV	56	C	N3-C2-O2	-5.07	118.35	121.90
35	YB	21	G	C8-N9-C4	-5.07	104.37	106.40
1	QA	192	U	C6-N1-C1'	-5.07	114.11	121.20
34	YA	1178	C	C2-N1-C1'	5.07	124.37	118.80
1	XA	1220	G	O5'-P-OP1	-5.07	101.14	105.70
34	RA	929	G	C8-N9-C1'	-5.06	120.42	127.00
34	RA	2044	C	C6-N1-C1'	-5.06	114.73	120.80
34	RA	2420	C	C6-N1-C1'	-5.06	114.72	120.80
1	XA	526	C	C6-N1-C1'	-5.06	114.72	120.80
1	QA	1158	C	O4'-C1'-N1	5.06	112.25	108.20
37	RE	146	THR	N-CA-C	5.06	124.66	111.00
1	XA	400	C	C6-N1-C1'	-5.06	114.73	120.80
1	XA	1247	U	C2-N1-C1'	5.06	123.77	117.70
34	YA	1252	G	O4'-C1'-N9	-5.06	104.15	108.20
34	YA	2730	C	C6-N1-C1'	-5.06	114.73	120.80
1	QA	14	U	C2-N1-C1'	5.06	123.77	117.70
1	QA	905	U	C6-N1-C1'	-5.06	114.12	121.20
34	RA	1257	C	C2-N1-C1'	5.06	124.36	118.80
34	RA	1289	C	C2-N1-C1'	5.06	124.36	118.80
34	YA	480	A	C8-N9-C1'	-5.06	118.59	127.70
1	QA	281	G	C4-N9-C1'	5.06	133.07	126.50
34	RA	1927	A	C4-N9-C1'	5.06	135.40	126.30
34	RA	2441	C	C6-N1-C1'	-5.06	114.73	120.80
34	YA	1432	C	C2-N1-C1'	5.06	124.36	118.80
34	YA	1967	C	C2-N1-C1'	5.06	124.36	118.80
1	QA	849	C	C6-N1-C1'	-5.06	114.73	120.80
34	YA	813	U	C2-N1-C1'	5.06	123.77	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	QA	920	U	C6-N1-C1'	-5.05	114.12	121.20
34	RA	1578	U	C2-N1-C1'	5.05	123.77	117.70
34	RA	1680	U	C2-N1-C1'	5.05	123.77	117.70
40	RH	155	SER	N-CA-C	5.05	124.65	111.00
1	QA	28	G	C8-N9-C1'	-5.05	120.43	127.00
1	XA	581	G	C4-N9-C1'	5.05	133.07	126.50
1	QA	12	U	C2-N1-C1'	5.05	123.76	117.70
34	RA	704	G	C4-N9-C1'	5.05	133.07	126.50
22	XV	28	U	C5-C6-N1	5.05	125.23	122.70
34	YA	1633	G	C4-N9-C1'	5.05	133.06	126.50
34	YA	2562	U	C2-N1-C1'	5.05	123.76	117.70
34	YA	1869	G	C8-N9-C1'	-5.05	120.44	127.00
34	RA	2739	U	C6-N1-C1'	-5.04	114.14	121.20
1	XA	988	G	C8-N9-C1'	-5.04	120.44	127.00
34	YA	2101	G	C4-N9-C1'	5.04	133.06	126.50
35	YB	22	U	C6-N1-C2	-5.04	117.97	121.00
1	QA	1303	C	C6-N1-C1'	-5.04	114.75	120.80
34	RA	1112	G	C8-N9-C1'	-5.04	120.45	127.00
34	YA	74	A	O4'-C1'-N9	-5.04	104.17	108.20
34	YA	1515	C	C6-N1-C1'	-5.04	114.75	120.80
1	QA	647	C	C6-N1-C1'	-5.04	114.75	120.80
1	QA	678	U	C6-N1-C1'	-5.04	114.15	121.20
34	RA	2144	U	C6-N1-C1'	-5.04	114.15	121.20
1	XA	25	C	C6-N1-C1'	-5.04	114.76	120.80
1	QA	1388	C	C6-N1-C1'	-5.03	114.76	120.80
34	RA	2226	C	C2-N1-C1'	5.03	124.33	118.80
34	YA	866	A	C8-N9-C1'	-5.03	118.64	127.70
1	XA	479	C	C6-N1-C1'	-5.03	114.77	120.80
1	XA	1349	A	N9-C1'-C2'	5.03	120.54	114.00
34	YA	2093	G	C8-N9-C1'	-5.03	120.46	127.00
1	QA	855	G	C4-N9-C1'	5.03	133.04	126.50
34	RA	435	C	C6-N1-C1'	-5.03	114.77	120.80
34	RA	1579	A	C8-N9-C1'	-5.03	118.65	127.70
1	QA	1316	G	C4-N9-C1'	5.03	133.03	126.50
1	XA	1440(K)	C	C6-N1-C1'	-5.03	114.77	120.80
34	YA	568	U	C6-N1-C1'	-5.03	114.16	121.20
34	YA	690	G	C8-N9-C1'	-5.03	120.47	127.00
34	YA	1479	G	C8-N9-C1'	-5.03	120.47	127.00
34	YA	1579	A	C8-N9-C1'	-5.03	118.65	127.70
34	RA	652	C	C2-N1-C1'	5.02	124.33	118.80
34	YA	649	G	C4-N9-C1'	5.02	133.03	126.50
34	RA	2217	G	C8-N9-C1'	-5.02	120.47	127.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	XA	1243	C	C2-N1-C1'	5.02	124.32	118.80
54	YZ	63	ASP	CB-CG-OD1	5.02	122.82	118.30
34	RA	351	G	C4-N9-C1'	5.02	133.02	126.50
1	XA	1170	A	C4-N9-C1'	5.02	135.34	126.30
34	YA	189	G	C8-N9-C1'	-5.02	120.47	127.00
1	QA	998(A)	G	C4-N9-C1'	5.02	133.02	126.50
1	XA	1402	C	C2-N1-C1'	5.02	124.32	118.80
34	YA	539	G	C4-N9-C1'	5.02	133.02	126.50
34	YA	1924	C	C2-N1-C1'	5.02	124.32	118.80
34	RA	838	C	C6-N1-C1'	-5.02	114.78	120.80
34	YA	1218	C	C6-N1-C1'	-5.02	114.78	120.80
34	RA	201	C	C6-N1-C1'	-5.01	114.78	120.80
34	RA	2292	C	C2-N1-C1'	5.01	124.32	118.80
1	XA	860	A	O4'-C1'-N9	5.01	112.21	108.20
1	QA	883	C	C2-N1-C1'	5.01	124.31	118.80
1	XA	1371	G	C4-N9-C1'	5.01	133.01	126.50
1	QA	372	C	C6-N1-C1'	-5.01	114.79	120.80
34	RA	1136	G	C4-N9-C1'	5.01	133.01	126.50
1	XA	1056	U	C6-N1-C1'	-5.01	114.19	121.20
34	YA	1633	G	C8-N9-C1'	-5.01	120.49	127.00
34	YA	2101	G	C8-N9-C1'	-5.01	120.49	127.00
32	R8	62	LEU	N-CA-C	5.01	124.52	111.00
34	RA	1304	C	C6-N1-C1'	-5.01	114.79	120.80
35	YB	78	A	N9-C4-C5	5.01	107.80	105.80
34	RA	856	C	C2'-C3'-O3'	5.00	121.71	113.70
34	RA	1174	A	C8-N9-C1'	-5.00	118.69	127.70
34	RA	2086	U	C2-N1-C1'	5.00	123.70	117.70
1	XA	1347	G	C2'-C3'-O3'	-5.00	98.49	109.50
34	YA	365	C	C6-N1-C1'	-5.00	114.80	120.80
1	QA	352	C	C2-N1-C1'	5.00	124.30	118.80
34	RA	806	C	C6-N1-C1'	-5.00	114.80	120.80
35	RB	91	C	N3-C4-C5	-5.00	119.90	121.90
1	XA	930	C	C2-N1-C1'	5.00	124.30	118.80
23	XX	15	A	N9-C4-C5	-5.00	103.80	105.80
34	YA	1926	U	C2-N1-C1'	5.00	123.70	117.70
34	YA	2271	G	C4-N9-C1'	5.00	133.00	126.50

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	1571	0
1	XA	32551	0	16418	1288	0
2	QB	1907	0	1958	99	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	XB	1915	0	1965	40	0
3	QC	1605	0	1667	135	0
3	XC	1605	0	1668	92	18
4	QD	1703	0	1762	108	0
4	XD	1703	0	1763	57	7
5	QE	1155	0	1213	76	0
5	XE	1155	0	1213	33	0
6	QF	843	0	857	10	5
6	XF	843	0	855	89	0
7	QG	1257	0	1296	53	18
7	XG	1257	0	1295	62	0
8	QH	1108	0	1165	52	0
8	XH	1108	0	1165	26	0
9	QI	816	0	822	51	6
9	XI	834	0	847	22	0
10	QJ	801	0	843	199	0
10	XJ	777	0	816	114	6
11	QK	885	0	904	35	0
11	XK	864	0	880	70	0
12	QL	975	0	1062	46	0
12	XL	956	0	1046	30	0
13	QM	921	0	974	137	0
13	XM	914	0	966	128	0
14	QN	492	0	528	288	0
14	XN	492	0	521	172	0
15	QO	734	0	770	57	0
15	XO	729	0	767	44	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	102	0
19	QS	665	0	678	223	0
19	XS	674	0	695	110	0
20	QT	763	0	861	26	0
20	XT	763	0	861	40	0
21	QU	217	0	223	44	0
21	XU	217	0	234	10	0
22	QV	1452	0	736	3	0
22	XV	1452	0	736	16	0
23	QX	409	0	209	5	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	6	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	25	0
28	Y4	357	0	362	9	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	18	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	990	0
34	YA	62091	0	31289	1253	1
35	RB	2573	0	1306	21	0
35	YB	2573	0	1306	13	0
36	RD	2115	0	2195	53	2
36	YD	2115	0	2195	64	0
37	RE	1568	0	1634	34	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	49	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	41	0
41	YI	1136	0	1223	30	0
42	RN	1104	0	1180	13	0
42	YN	1104	0	1180	17	0
43	RO	933	0	996	23	0
43	YO	933	0	996	19	0
44	RP	1145	0	1228	37	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
44	YP	1122	0	1206	44	2
45	RQ	1122	0	1179	41	0
45	YQ	1122	0	1179	33	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	16	0
48	RT	1141	0	1202	19	0
48	YT	1141	0	1202	29	0
49	RU	964	0	1022	38	0
49	YU	964	0	1022	22	0
50	RV	779	0	852	17	0
50	YV	779	0	852	11	1
51	RW	900	0	964	20	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	25	0
53	YY	818	0	910	19	0
54	RZ	1461	0	1493	36	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
55	Y5	1	0	0	0	0
55	Y7	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	197033	6993	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 (6993) 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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1106:G:C1'	3:QC:172:ARG:HE	1.06	1.58
34:YA:919:G:C6	34:YA:2268:A:N1	1.69	1.57
1:QA:1106:G:H4'	3:QC:172:ARG:CG	1.21	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:CA	29:Y5:32:PRO:N	1.69	1.44
30:R6:16:CYS:CB	30:R6:16:CYS:SG	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:1221:G:O2'	19:QS:77:THR:CG2	1.65	1.42
1:QA:1100:C:N4	2:QB:96:ARG:HH22	1.14	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1318:A:C3'	19:XS:11:VAL:HG21	1.50	1.40
1:XA:1187:G:C1'	14:XN:61:TRP:O	1.68	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:1542:U:O3'	2:XB:169:LYS:NZ	1.58	1.36
1:XA:675:A:C2	11:XK:118:GLY:HA2	1.60	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:XA:1316:G:H4'	14:XN:17:LYS:CG	1.49	1.34
1:QA:980:C:C1'	14:QN:19:ARG:CG	1.85	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
10:QJ:50:ILE:HG12	14:QN:41:ARG:CD	1.59	1.31
4:QD:197:PRO:HD3	6:XF:16:GLN:CB	1.05	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: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
6:XF:100:ASN:HD22	18:XR:27:GLY:C	1.35	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1378:C:OP2	7:QG:7:ALA:HB1	1.16	1.29
1:QA:979:C:N4	14:QN:19:ARG:HB2	1.46	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
21:XU:3:LYS:HD3	21:XU:14:TRP:CE3	1.67	1.29
1:XA:1320:C:C1'	19:XS:70:LYS:HD2	1.59	1.29
34:YA:1127:A:C2	34:YA:2518:A:N7	1.95	1.28
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
1:XA:1228:C:N4	13:XM:104:ARG:HG2	1.49	1.28
1:XA:1226:C:H2'	13:XM:103:THR:OG1	1.12	1.28
1:QA:1223:C:P	19:QS:78:ARG:NH2	2.07	1.28
34:YA:1566:A:C2	36:YD:214:TRP:CD2	2.21	1.28
1:QA:974:A:P	14:QN:29:ARG:NE	2.06	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
34:YA:2046:G:C2	34:YA:2623:G:C2	2.22	1.27
1:XA:1229:A:N6	13:XM:104:ARG:HE	1.32	1.27
1:QA:1307:U:P	13:QM:99:ARG:HG3	1.75	1.26
1:XA:1318:A:C6	14:XN:16:PHE:CG	2.18	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:QA:1317:C:OP1	14:QN:16:PHE:HD2	1.13	1.26
1:QA:1221:G:H4'	19:QS:36:ARG:NH2	0.93	1.26
1:XA:1228:C:C4	13:XM:104:ARG:HG2	1.69	1.26
1:QA:1320:C:H42	19:QS:37:ARG:CG	1.46	1.26
1:QA:986:A:O2'	19:QS:55:LYS:O	1.52	1.26
1:QA:957:U:H4'	19:QS:79:THR:C	1.56	1.25
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:1106:G:O2'	3:QC:172:ARG:CD	1.85	1.25
6:XF:94:GLN:OE1	18:XR:32:ARG:HD3	1.08	1.25
1:QA:1100:C:H41	2:QB:96:ARG:NH2	1.32	1.25
1:XA:1230:C:H41	13:XM:105:THR:CB	1.47	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1309:G:C5'	13:QM:77:ASN:ND2	1.98	1.25
1:QA:978:A:N6	14:QN:18:VAL:HG21	1.52	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:QA:972:C:OP1	10:QJ:57:LYS:CD	1.85	1.24
1:QA:607:A:C2	16:QP:31:LYS:HA	1.73	1.24
40:RH:98:LEU:HD21	40:RH:125:VAL:CG1	1.66	1.24
1:QA:1317:C:OP1	14:QN:16:PHE:CD2	1.91	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:YN:16:PHE:CE1	2.27	1.23
1:XA:1312:G:C3'	19:XS:6:LYS:NZ	1.98	1.23
40:RH:103:LEU:HD11	40:RH:123:PHE:CZ	1.72	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
3:QC:23:TYR:HB2	10:QJ:93:GLY:C	1.59	1.22
1:QA:1240:U:C6	7:QG:38:LEU:HD13	1.71	1.22
1:QA:669:U:H1'	15:QO:46:HIS:CE1	1.73	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
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
1:QA:1049:U:C5	14:QN:3:ARG:CB	2.23	1.20
1:QA:973:G:O3'	14:QN:29:ARG:NH2	1.75	1.20
1:XA:376:G:OP1	16:XP:67:THR:HG21	1.39	1.20
34:YA:270(P):U:O4	41:YI:52:ARG:NE	1.74	1.20
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:1108:G:OP1	3:QC:175:LEU:N	1.74	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:974:A:N7	14:QN:31:ARG:NH1	1.87	1.19
34:YA:2090:G:N1	34:YA:2230:G:O6	1.70	1.19
1:XA:1320:C:C4	19:XS:37:ARG:CA	2.24	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:1059:C:OP2	3:XC:2:GLY:CA	1.91	1.19
1:XA:421:U:O4'	3:XC:192:THR:HG21	1.38	1.19
34:YA:2045:C:C2	34:YA:2624:G:N2	2.11	1.18
1:XA:1320:C:C4	19:XS:37:ARG:HA	1.77	1.18
1:QA:959:A:H61	19:QS:78:ARG:HA	1.03	1.18
1:XA:1318:A:C6	14:YN:16:PHE:CE1	2.27	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: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
34:YA:2082:A:N6	34:YA:2237:G:N3	1.93	1.17
1:QA:1123:A:C4'	10:QJ:37:PRO:CD	2.23	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:XA:1305:G:C6	1:XA:1331:G:O6	1.99	1.16
1:QA:1152:A:OP1	10:QJ:13:HIS:NE2	1.76	1.16
1:QA:979:C:C4	14:QN:19:ARG:HD2	1.81	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:1312:G:C3'	19:XS:6:LYS:HZ2	1.55	1.15
1:XA:1230:C:N4	13:XM:105:THR:CG2	2.07	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: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:QA:669:U:C1'	15:QO:46:HIS:HE1	1.58	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:XA:1228:C:C6	13:XM:104:ARG:HA	1.81	1.14
1:QA:1541:U:P	2:QB:23:ARG:HH21	1.70	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:57:ARG:NH2	5:QE:107:ARG:CD	2.10	1.14
34:YA:2048:G:C2	34:YA:2621:A:C2	2.37	1.14
34:YA:1456:G:H1	34:YA:2703:C:N4	1.46	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:1359:C:P	14:YN:22:THR:OG1	2.06	1.13
1:XA:1318:A:N1	14:YN:16:PHE:CE2	2.16	1.13
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:XA:1229:A:N6	13:XM:104:ARG:NE	1.94	1.12
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:XG: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
6:XF:100:ASN:ND2	18:XR:27:GLY:CA	1.83	1.12
1:QA:972:C:OP1	10:QJ:57:LYS:HD2	0.94	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
1:XA:974:A:P	14:YN:31:ARG:HB2	1.90	1.11
3:QC:79:ARG:NE	11:XK:104:GLN:HG3	1.65	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:1318:A:O2'	19:XS:11:VAL:HG21	1.33	1.11
1:XA:1187:G:H1'	14:YN:61:TRP:O	1.33	1.11
34:YA:2082:A:N6	34:YA:2237:G:H21	1.48	1.11
1:QA:1123:A:C4'	10:QJ:37:PRO:HD3	1.81	1.11
1:QA:1320:C:C4	19:QS:37:ARG:HA	1.85	1.10
1:QA:957:U:H4'	19:QS:79:THR:O	1.41	1.10
1:XA:1320:C:N4	19:XS:37:ARG:CB	2.14	1.10
1:QA:1253:G:OP1	10:QJ:44:VAL:CB	1.98	1.10
1:QA:538:G:H3'	12:QL:115:LYS:HZ2	1.12	1.10
1:QA:980:C:C6	14:QN:19:ARG:HG3	1.85	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:R1:90:ILE:HG22	25:R1:94:LEU:HD11	1.19	1.10
1:XA:1188:A:H1'	14:XN:60:SER:HA	1.26	1.10
7:QG:16:LEU:CD2	9:QI:42:ARG:HG3	1.80	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
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
12:QL:7:ILE:HD11	17:QQ:32:TYR:HB3	1.28	1.09
34:RA:2751:G:N3	40:RH:3:ARG:CG	2.16	1.08
34:YA:2090:G:C6	34:YA:2230:G:O6	2.05	1.08
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
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
1:QA:948:C:H5''	13:QM:101:GLN:HG3	1.14	1.08
12:QL:7:ILE:HD11	17:QQ:32:TYR:CB	1.83	1.08
3:QC:23:TYR:H	10:QJ:93:GLY:HA2	1.03	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
10:QJ:50:ILE:HD11	14:QN:41:ARG:HD2	1.31	1.08
1:XA:1318:A:C2	14:XN:16:PHE:CZ	2.42	1.08
1:XA:1318:A:N6	14:XN:16:PHE:CB	2.17	1.08
1:XA:1320:C:H1'	19:XS:70:LYS:HD2	1.26	1.08
3:QC:23:TYR:CE2	10:QJ:95:GLU:CB	2.35	1.08
10:XJ:40:LEU:HB3	10:XJ:41:PRO:CD	1.84	1.08
1:XA:186(B):C:O2	20:XT:105:SER:HB2	1.49	1.08
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.84	1.08
10:QJ:50:ILE:HD11	14:QN:41:ARG:NH1	1.67	1.07
1:QA:1358:U:O3'	14:QN:22:THR:HG21	1.53	1.07
34:YA:2048:G:N1	34:YA:2621:A:C2	2.20	1.07
1:QA:1320:C:O2	19:QS:36:ARG:O	1.71	1.07
6:XF:99:ALA:O	18:XR:28:GLU:CA	2.02	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:918:A:N7	34:YA:2268:A:N6	2.01	1.07
1:QA:1100:C:C5	2:QB:96:ARG:NH2	2.21	1.07
1:XA:702:A:N6	34:YA:1848:A:C2	2.22	1.07
1:QA:978:A:H62	14:QN:18:VAL:CG2	1.66	1.07
1:QA:974:A:O5'	14:QN:31:ARG:HB2	1.53	1.07
13:XM:84:ILE:HD11	19:XS:65:ASN:CG	1.73	1.07
34:YA:1127:A:H2	34:YA:2518:A:C4	1.72	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
1:QA:972:C:P	10:QJ:57:LYS:CD	2.42	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:XA:741:G:P	15:XO:35:ARG:NH2	2.26	1.06
14:XN:27:CYS:SG	14:XN:28:GLY:N	2.28	1.06
1:QA:1280:A:H5''	10:QJ:40:LEU:HD23	1.30	1.06
4:QD:197:PRO:HD3	6:XF:16:GLN:HB3	1.06	1.06
1:QA:1253:G:OP1	10:QJ:44:VAL:HB	1.54	1.06
1:QA:1253:G:P	10:QJ:44:VAL:CB	2.43	1.06
1:QA:1318:A:N3	19:QS:37:ARG:CZ	2.17	1.06
34:YA:2046:G:C6	34:YA:2623:G:N1	2.24	1.06
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.06	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:XA:1318:A:C4'	19:XS:11:VAL:HG23	1.82	1.06
1:QA:657:G:O2'	15:QO:28:GLN:HG2	0.88	1.06
34:YA:2044:C:C4	34:YA:2625:G:N2	2.23	1.06
1:QA:1152:A:OP1	10:QJ:13:HIS:CE1	2.09	1.06
1:QA:538:G:H3'	12:QL:115:LYS:NZ	1.71	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:45:ARG:HG2	14:QN:36:PHE:CZ	1.69	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
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:1253:G:O5'	10:QJ:44:VAL:HB	1.57	1.05
1:QA:1179:A:H5'	9:QI:83:ARG:HH22	1.17	1.05
34:YA:2070:G:N2	34:YA:2442:C:N1	2.04	1.05
1:QA:974:A:H5'	14:QN:31:ARG:HB3	1.33	1.05
40:RH:87:LEU:O	40:RH:131:VAL:HG23	1.54	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1304:G:H5''	1:XA:1304:G:H8	1.16	1.05
1:XA:1309:G:C4'	13:XM:77:ASN:ND2	2.20	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
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:1221:G:C5'	19:QS:36:ARG:NH2	2.19	1.04
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:607:A:N1	16:QP:31:LYS:HA	1.72	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
34:YA:2099:U:O2	34:YA:2190:G:N2	1.91	1.04
34:YA:1566:A:N1	36:YD:214:TRP:CE2	2.26	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: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:973:G:O3'	14:QN:29:ARG:CZ	2.05	1.04
1:QA:1357:A:H5'	10:QJ:45:ARG:NH2	1.73	1.03
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:XA:1318:A:H4'	19:XS:11:VAL:HG23	1.08	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: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
13:XM:84:ILE:HG13	19:XS:65:ASN:O	1.58	1.03
1:XA:186(B):C:O2	20:XT:105:SER:CB	2.07	1.03
1:QA:1313:U:C5	19:QS:6:LYS:HE2	1.92	1.03
3:XC:23:TYR:CE2	10:XJ:95:GLU:HB2	1.94	1.03
34:YA:1127:A:N3	34:YA:2518:A:C8	2.27	1.03
1:QA:1106:G:O4'	3:QC:172:ARG:NE	1.92	1.02
1:XA:1372:U:OP1	9:XI:68:GLY:HA2	1.58	1.02
1:QA:1226:C:OP1	13:QM:87:TYR:OH	1.75	1.02
1:QA:979:C:C2	14:QN:19:ARG:HD2	1.93	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:23:TYR:CD2	10:QJ:95:GLU:CB	2.42	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:XA:1374:A:O2'	7:XG:31:MET:HE2	1.60	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:1318:A:C5	14:YN:16:PHE:CZ	2.46	1.02
1:XA:1309:G:C5'	13:XM:77:ASN:ND2	2.23	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: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: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: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
34:YA:2056:G:C6	34:YA:2577:A:C4	2.48	1.01
1:XA:1377:A:OP1	7:XG:94:ARG:NH2	1.93	1.01
6:XF:99:ALA:HB3	18:XR:29:PHE:CD1	1.96	1.01
34:YA:2082:A:N6	34:YA:2237:G:C2	2.26	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
26:R2:48:HIS:HE2	26:R2:49:LYS:HE2	1.21	1.01
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
34:YA:1050:A:C8	34:YA:2751:G:C5	2.49	1.00
1:QA:980:C:H1'	14:QN:19:ARG:CD	1.90	1.00
1:XA:719:C:O2	18:XR:50:ILE:HD12	1.60	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1186:G:H21	14:QN:61:TRP:C	1.65	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:1360:A:N7	14:QN:18:VAL:CA	2.12	0.99
1:QA:980:C:C1'	14:QN:19:ARG:HG3	1.89	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
6:XF:50:TYR:CE1	18:XR:77:GLY:C	2.22	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: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
34:YA:919:G:C6	34:YA:2268:A:N6	2.29	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:1188:A:C4'	14:QN:58:LYS:HZ1	1.73	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
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:1229:A:N6	13:QM:104:ARG:NE	2.10	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:23:TYR:H	10:QJ:93:GLY:CA	1.75	0.98
1:QA:1221:G:OP1	19:QS:36:ARG:NH1	1.96	0.98
1:QA:1318:A:N3	19:QS:37:ARG:NH1	2.10	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: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:1158:C:C4'	2:QB:133:LYS:HZ2	1.78	0.97
1:QA:1150:U:C1'	10:QJ:39:PRO:HG2	1.95	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
34:YA:2054:A:H62	34:YA:2577:A:H61	1.06	0.96
34:YA:747:U:O4	34:YA:2613:U:N3	1.98	0.96
29:Y5:43:HIS:CD2	34:YA:2884:U:H5	1.83	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:1360:A:C8	14:XN:17:LYS:C	2.35	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
34:YA:1252:G:N3	49:YU:33:ARG:NH1	2.13	0.95
1:QA:880:C:H5''	12:QL:12:ARG:NH2	1.80	0.95
1:QA:675:A:H2	11:QK:118:GLY:HA2	1.29	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:1347:G:O6	9:QI:11:LYS:CD	2.15	0.95
1:QA:982:U:H5''	14:QN:6:LEU:CG	1.96	0.95
1:QA:1099:G:P	2:QB:96:ARG:HD2	2.05	0.95
1:XA:1226:C:H2'	13:XM:103:THR:HG1	1.30	0.95
10:XJ:37:PRO:HB3	10:XJ:72:VAL:HG22	1.46	0.95
1:XA:1318:A:N6	14:XN:16:PHE:HB3	1.80	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
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:1160:G:H5'	2:QB:132:LYS:HE2	1.48	0.94
1:QA:986:A:H1'	19:QS:55:LYS:HA	1.46	0.94
1:QA:1223:C:OP1	19:QS:78:ARG:NH2	1.98	0.94
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1230:C:N4	13:XM:105:THR:HB	1.82	0.94
1:XA:1377:A:C6	7:XG:10:ARG:HG2	2.02	0.94
1:XA:1318:A:N1	14:XN:16:PHE:CD2	2.36	0.94
1:XA:1188:A:C1'	14:XN:60:SER:HA	1.98	0.94
34:YA:2046:G:N1	34:YA:2623:G:C6	2.35	0.94
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	1.49	0.94
1:XA:1228:C:N4	13:XM:104:ARG:CG	2.29	0.94
10:QJ:50:ILE:CD1	14:QN:41:ARG:CZ	2.45	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
1:QA:626:U:H4'	16:QP:38:TYR:CD2	2.02	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
34:RA:2680:C:OP2	37:RE:111:ARG:NH2	2.01	0.94
4:QD:197:PRO:CD	6:XF:16:GLN:HB3	1.78	0.94
1:QA:1313:U:O4	19:QS:4:SER:HB2	1.68	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
6:XF:100:ASN:HB2	18:XR:27:GLY:C	1.89	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
10:QJ:50:ILE:HD11	14:QN:41:ARG:HH11	1.23	0.93
1:QA:956:U:O2'	19:QS:80:TYR:O	1.87	0.93
34:YA:919:G:N1	34:YA:2268:A:C2	2.35	0.93
34:YA:1493:C:N4	34:YA:2210:G:C8	2.37	0.93
1:QA:1360:A:O4'	14:QN:17:LYS:HE3	1.66	0.93
1:QA:1014:A:O4'	19:QS:34:TRP:CD1	2.22	0.93
1:QA:958:A:N6	19:QS:77:THR:O	2.01	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:QA:1378:C:P	7:QG:7:ALA:HB1	2.07	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
1:QA:948:C:C5'	13:QM:101:GLN:CG	2.47	0.92
34:YA:2054:A:H62	34:YA:2577:A:N6	1.67	0.92
6:XF:100:ASN:ND2	18:XR:27:GLY:C	2.14	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
11:XK:91:ARG:CD	18:XR:88:LYS:NZ	2.33	0.92
1:QA:1221:G:H4'	19:QS:36:ARG:HH21	1.29	0.92
1:QA:980:C:O4'	14:QN:19:ARG:NE	2.01	0.92
1:QA:979:C:H2'	14:QN:19:ARG:CZ	1.99	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
11:QK:71:LYS:HZ2	34:RA:2146:C:H41	1.16	0.91
3:QC:23:TYR:N	10:QJ:93:GLY:CA	2.32	0.91
1:QA:1357:A:H5'	10:QJ:45:ARG:CZ	1.99	0.91
1:QA:1188:A:H4'	14:QN:58:LYS:HZ3	1.14	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
14:XN:56:VAL:HG13	14:XN:57:ARG:N	1.85	0.91
1:XA:1309:G:H5'	13:XM:77:ASN:ND2	1.86	0.91
1:XA:675:A:N3	11:XK:118:GLY:CA	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2056:G:C5	34:YA:2577:A:C5	2.58	0.91
1:QA:1100:C:C4	2:QB:96:ARG:NH2	2.39	0.90
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:XA:974:A:P	14:XN:31:ARG:CB	2.59	0.90
34:YA:2081:C:N3	34:YA:2239:G:N1	2.19	0.90
34:YA:2059:A:C2	34:YA:2503:A:C6	2.59	0.90
1:QA:1014:A:P	19:QS:32:LYS:HE2	2.11	0.90
34:YA:2093:G:H21	34:YA:2198:A:N6	1.68	0.90
34:YA:1456:G:H1	34:YA:2703:C:H42	0.98	0.90
1:QA:1235:U:O3'	21:QU:10:ARG:HD2	1.70	0.90
1:QA:972:C:P	10:QJ:57:LYS:CG	2.58	0.90
1:XA:528:C:N4	12:XL:49:ASN:OD1	2.05	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:XN:18:VAL:HG21	1.85	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:XN: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:1059:C:OP2	3:XC:2:GLY:C	2.10	0.89
1:XA:1318:A:C6	14:XN:16:PHE:CE2	2.60	0.89
1:XA:675:A:N3	11:XK:118:GLY:HA3	1.87	0.89
1:QA:1320:C:N3	19:QS:36:ARG:O	2.05	0.89
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
6:XF:50:TYR:HE1	18:XR:77:GLY:C	1.73	0.89
1:QA:1188:A:H4'	14:QN:58:LYS:HZ1	1.27	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:16:LEU:HD22	9:QI:42:ARG:HG3	1.45	0.89
1:QA:1357:A:H5'	10:QJ:45:ARG:HH22	1.31	0.89
1:QA:1123:A:H4'	10:QJ:37:PRO:HD3	0.90	0.89
1:QA:676:A:H4'	11:QK:115:PRO:HB3	1.53	0.89
1:QA:1358:U:H5''	14:QN:35:ARG:N	1.86	0.89
1:QA:960:U:O4	19:QS:78:ARG:HB3	1.71	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:1190:G:H5''	3:XC:176:HIS:CE1	1.76	0.89
1:XA:1112:C:C1'	3:XC:179:ARG:NH2	2.35	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: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:1253:G:OP1	10:QJ:44:VAL:CG2	2.20	0.88
1:QA:668:G:C4'	15:QO:48:LYS:O	2.20	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: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
10:XJ:47:PHE:HZ	14:XN:36:PHE:CD2	1.90	0.88
1:XA:1318:A:C1'	19:XS:11:VAL:HG21	2.04	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
1:XA:728:A:N7	15:XO:54:ARG:NH1	2.22	0.88
6:XF:94:GLN:CD	18:XR:32:ARG:HD3	1.95	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1131:G:H1	1:QA:1143:G:H21	1.22	0.87
1:QA:948:C:C5'	13:QM:101:GLN:HG2	2.04	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:1309:G:H5'	13:QM:77:ASN:ND2	1.87	0.87
1:QA:1307:U:P	13:QM:99:ARG:CG	2.63	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
41:RI:83:ALA:C	41:RI:89:TYR:CE2	2.49	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1493:C:C4	34:YA:2210:G:C8	2.64	0.86
1:QA:1313:U:C3'	19:QS:6:LYS:HZ3	1.74	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: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
35:RB:75:G:HO2'	54:RZ:85:HIS:HE2	1.22	0.85
1:QA:1307:U:OP2	13:QM:99:ARG:HG3	1.76	0.85
1:QA:959:A:H61	19:QS:78:ARG:C	1.80	0.85
10:QJ:45:ARG:CG	14:QN:36:PHE:CZ	2.55	0.85
1:QA:954:G:N2	19:QS:83:HIS:HE1	1.72	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:975:A:C2	14:QN:34:TYR:CD1	2.64	0.85
1:QA:617:G:O2'	16:QP:44:THR:HG21	1.77	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
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:1307:U:O5'	13:QM:99:ARG:HG3	1.77	0.84
1:QA:979:C:H42	14:QN:19:ARG:HB2	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:656:C:H4'	15:QO:62:GLN:NE2	1.90	0.84
1:QA:1235:U:O2'	21:QU:3:LYS: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
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:1230:C:N4	13:XM:105:THR:HG21	1.93	0.84
1:XA:974:A:C1'	14:XN:31:ARG:NH1	2.41	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
1:XA:675:A:H2	11:XK:118:GLY:C	1.80	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
3:QC:22:TRP:HA	10:QJ:93:GLY:CA	2.07	0.84
1:QA:1307:U:C5'	13:QM:99:ARG:HG3	2.08	0.84
1:QA:958:A:OP1	19:QS:79:THR:HG21	1.76	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
3:QC:23:TYR:CB	10:QJ:93:GLY:C	2.46	0.83
10:XJ:39:PRO:HA	10:XJ:70:ARG:HG2	1.57	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
34:YA:747:U:C5	34:YA:2613:U:C4	2.65	0.83
1:QA:1358:U:H5'	14:QN:35:ARG:H	1.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1318:A:N3	14:XN:16:PHE:CZ	2.46	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:2044:C:C4	34:YA:2625:G:C2	2.66	0.83
34:YA:747:U:C5	34:YA:2613:U:O4	2.32	0.83
34:YA:2048:G:C6	34:YA:2621:A:N1	2.46	0.83
1:QA:1253:G:OP1	10:QJ:44:VAL:HG21	1.79	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:948:C:P	13:QM:106:ASN:O	2.36	0.83
1:QA:1248:A:H62	21:QU:26:LYS:HD2	1.44	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
4:QD:205:GLU:CD	5:QE:100:VAL:HG13	1.99	0.83
11:QK:71:LYS:HZ3	34:RA:2146:C:H41	1.23	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:1243:C:H5''	21:QU:9:ARG:HG3	1.59	0.82
1:QA:980:C:H4'	14:QN:19:ARG:NH2	1.94	0.82
1:QA:309:G:H5''	16:QP:27:LYS:CE	2.09	0.82
34:YA:2078:C:N4	34:YA:2238:G:O6	2.11	0.82
34:YA:2045:C:N3	34:YA:2624:G:N2	2.26	0.82
1:QA:1187:G:C2	14:QN:60:SER:OG	2.32	0.82
4:QD:204:ILE:HG21	5:QE:98:THR:C	2.00	0.82
12:QL:7:ILE:HD12	17:QQ:32:TYR:CD1	2.11	0.82
1:XA:1377:A:P	7:XG:94:ARG:HH22	1.97	0.82
1:XA:974:A:N9	14:XN:31:ARG:HD3	1.92	0.82
1:QA:44:G:OP2	16:QP:12:LYS:NZ	2.13	0.82
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1307:U:C5'	13:QM:99:ARG:CG	2.57	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
34:YA:2046:G:C4	34:YA:2623:G:C2	2.65	0.82
34:YA:2097:C:N3	34:YA:2192:G:O6	2.11	0.82
34:YA:2070:G:C2	34:YA:2442:C:N3	2.46	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
10:QJ:47:PHE:CE2	14:QN:37:PHE:HD2	1.98	0.82
1:QA:1313:U:C4	19:QS:4:SER:HB2	2.15	0.82
1:QA:1223:C:OP2	19:QS:78:ARG:NH2	2.12	0.82
1:QA:1221:G:C4'	19:QS:36:ARG:HH21	1.87	0.82
1:QA:310:G:OP2	16:QP:27:LYS:HD3	1.78	0.82
1:XA:986:A:H1'	19:XS:52:TYR:OH	1.80	0.81
1:XA:1305:G:C2	1:XA:1331:G:C5	2.68	0.81
34:YA:918:A:C5	34:YA:2268:A:N6	2.47	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
3:XC:23:TYR:HE2	10:XJ:95:GLU:HB2	1.45	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
1:QA:1188:A:C3'	14:QN:58:LYS:NZ	2.44	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:204:ILE:HG22	5:QE:98:THR:O	1.81	0.80
1:QA:1358:U:O3'	14:QN:22:THR:CG2	2.27	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
1:QA:957:U:H5'	19:QS:81:ARG:HG3	1.60	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
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
13:XM:84:ILE:HG22	19:XS:74:PHE:CE1	2.14	0.80
1:XA:1315:U:O3'	14:XN:17:LYS:CE	2.28	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
4:QD:205:GLU:CD	5:QE:100:VAL:CG1	2.50	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
1:QA:981:U:C5'	14:QN:6:LEU:CD2	2.60	0.80
1:QA:656:C:H4'	15:QO:62:GLN:HE22	1.45	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
6:XF:100:ASN:CG	18:XR:27:GLY:HA2	2.01	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1321:C:N3	19:QS:36:ARG:NH1	2.30	0.79
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: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
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
3:QC:22:TRP:HA	10:QJ:93:GLY:HA2	1.65	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
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:1355:G:H1	1:QA:1367:C:H5	1.29	0.79
1:QA:742:G:C5'	15:QO:58:MET:SD	2.71	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
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:QA:957:U:C3'	19:QS:79:THR:O	2.31	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1309:G:H5'	13:QM:77:ASN:CG	2.02	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: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
1:XA:1318:A:N1	14:XN:16:PHE:CZ	2.50	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:602:G:HO2'	34:RA:604:G:HO2'	1.28	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:2108:C:N4	34:YA:2182:G:N2	2.29	0.78
34:YA:1566:A:C6	36:YD:214:TRP:CH2	2.72	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:1321:C:H5'	1:XA:1322:C:H5''	1.66	0.78
1:XA:675:A:N3	11:XK:118:GLY:HA2	1.98	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: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
1:QA:1179:A:H5'	9:QI:83:ARG:HH12	1.49	0.78
19:QS:61:TYR:CZ	34:RA:888:C:OP2	2.37	0.78
29:R5:3:LYS:HG2	34:RA:2611:U:C4	2.19	0.78
1:XA:1112:C:H1'	3:XC:179:ARG:CZ	2.13	0.78
1:XA:728:A:C8	15:XO:54:ARG:CZ	2.67	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:740:U:OP2	15:XO:2:PRO:HB3	1.83	0.78
1:XA:8:A:C6	4:XD:209:ARG:HA	2.19	0.78
1:QA:1226:C:H5'	13:QM:91:ARG:NH1	1.98	0.77
1:QA:979:C:H2'	14:QN:19:ARG:NH2	1.98	0.77
19:QS:65:ASN:O	19:QS:66:MET:HE2	1.84	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: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:979:C:C4	14:QN:19:ARG:CD	2.67	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:QA:1331:G:N1	21:QU:5:ASP:OD1	2.18	0.77
1:QA:740:U:C4'	15:QO:39:LEU:HG	2.15	0.77
1:XA:957:U:H4'	19:XS:79:THR:OG1	1.85	0.77
34:YA:919:G:N1	34:YA:2268:A:C5	2.53	0.77
34:YA:270(P):U:C4	41:YI:52:ARG:NH2	2.52	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
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:1305:G:H4'	1:QA:1332:A:H62	1.50	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1125:U:N3	10:QJ:73:ASP:OD1	2.18	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:1377:A:C5	7:XG:10:ARG:HD2	2.20	0.77
1:XA:1357:A:OP1	14:XN:35:ARG:NH1	2.08	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
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
1:QA:1330:U:C4	21:QU:7:ARG:NH1	2.53	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
43:YO:34:THR:HG22	43:YO:35:VAL:N	1.99	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:QA:1360:A:N6	14:QN:18:VAL:CG2	2.29	0.76
1:QA:1240:U:H3	7:QG:38:LEU:HB3	1.49	0.76
50:RV:45:THR:O	50:RV:45:THR:HG22	1.83	0.76
34:YA:2095:C:O2	34:YA:2194:G:N2	2.15	0.76
34:YA:442:G:H1'	38:YF:48:THR:HG21	1.67	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: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:QA:761:G:H5'	17:QQ:100:LYS:HZ3	1.49	0.76
11:XK:91:ARG:CG	18:XR:88:LYS:NZ	2.48	0.76
1:XA:1503:A:O2'	23:XX:15:A:N6	2.19	0.76
1:QA:1152:A:OP1	10:QJ:13:HIS:CD2	2.38	0.76
34:RA:2108:C:HO2'	34:RA:2142:C:HO2'	1.34	0.76
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:974:A:C4	14:QN:31:ARG:CZ	2.68	0.76
2:QB:178:ARG:O	8:QH:72:PRO:HD3	1.86	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
1:QA:624:C:O3'	16:QP:10:GLY:CA	2.30	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: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
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:2088:G:C2	34:YA:2232:U:O2	2.39	0.75
34:YA:2054:A:C2	34:YA:2616:C:N3	2.54	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:O	10:QJ:79:ARG:NH1	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
10:QJ:50:ILE:HD11	14:QN:41:ARG:CZ	2.12	0.75
1:QA:739:C:O2'	15:QO:42:HIS:CG	2.40	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:2087:G:O6	34:YA:2233:U:N3	2.20	0.75
34:YA:919:G:C6	34:YA:2268:A:C2	2.69	0.75
4:QD:205:GLU:OE1	5:QE:107:ARG:NH1	2.20	0.75
1:QA:959:A:N6	19:QS:78:ARG:C	2.38	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
1:QA:1188:A:H4'	14:QN:58:LYS:HZ2	1.52	0.74
1:QA:986:A:O2'	19:QS:55:LYS:C	2.25	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:918:A:N6	34:YA:2268:A:N6	2.33	0.74
34:YA:831:G:O2'	44:YP:38:GLN:OE1	2.04	0.74
1:QA:9:G:P	5:QE:122:GLU:HG2	2.26	0.74
34:YA:727:A:H2	36:YD:9:TYR:CD2	2.05	0.74
1:QA:1229:A:N1	13:QM:104:ARG:NE	2.34	0.74
1:QA:981:U:H5'	14:QN:6:LEU:CD2	2.16	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
1:QA:1222:G:H5'	19:QS:77:THR:OG1	1.86	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:QI: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: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
1:QA:954:G:N3	19:QS:83:HIS:HE1	1.84	0.74
1:XA:1377:A:N6	7:XG:10:ARG:HD2	2.03	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
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:1318:A:C5	14:XN:16:PHE:HE1	1.95	0.74
1:XA:1252:A:H2	1:XA:1355:G:H1'	1.53	0.74
34:YA:2056:G:C5	34:YA:2577:A:C6	2.76	0.74
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
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:982:U:O5'	14:QN:6:LEU:CD2	2.30	0.73
1:QA:980:C:N1	14:QN:19:ARG:HG3	1.99	0.73
1:QA:959:A:N6	19:QS:78:ARG:CA	2.45	0.73
1:QA:1376:U:C4	7:QG:10:ARG:NH2	2.34	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:981:U:O3'	14:QN:23:ARG:NH2	2.21	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
1:XA:595:G:H1'	1:XA:596:C:H5	1.52	0.73
4:QD:20:TYR:OH	6:XF:14:LEU:HA	1.87	0.73
10:XJ:47:PHE:CZ	14:XN:36:PHE:CD2	2.75	0.73
34:YA:2046:G:C5	34:YA:2623:G:N1	2.55	0.73
1:QA:1179:A:H5'	9:QI:83:ARG:CZ	2.18	0.73
1:QA:979:C:C4	14:QN:19:ARG:HB2	2.22	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
7:XG:16:LEU:HD21	9:XI:44:VAL:HG23	1.69	0.73
1:XA:1537:U:H3	23:XX:9:G:H1	1.37	0.73
34:YA:1061:U:H6	34:YA:1062:G:H5''	1.54	0.73
34:YA:34:C:H41	34:YA:447:A:H61	1.37	0.73
1:QA:609:A:C5'	16:QP:9:PHE:CE1	2.72	0.73
1:QA:979:C:C2	14:QN:19:ARG:CD	2.70	0.73
1:QA:642:A:H1'	8:QH:114:THR:O	1.88	0.73
11:XK:110:ASP:CB	18:XR:85:LEU:O	2.34	0.73
34:YA:1456:G:N2	34:YA:2704:C:C2	2.55	0.73
34:YA:919:G:O6	34:YA:2268:A:C2	2.41	0.73
1:QA:1106:G:C2'	3:QC:172:ARG:NE	2.48	0.73
3:XC:14:ILE:HD11	14:XN:57:ARG:NH2	2.02	0.73
13:XM:86:CYS:HB2	19:XS:73:GLU:OE1	1.89	0.73
1:QA:1106:G:H1'	3:QC:172:ARG:CZ	2.18	0.73
1:QA:986:A:C4'	19:QS:55:LYS:HG3	2.18	0.73
1:QA:959:A:H62	19:QS:79:THR:H	1.17	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
1:QA:1360:A:H1'	14:QN:17:LYS:HE2	1.65	0.73
1:QA:959:A:H62	19:QS:79:THR:HG23	1.53	0.73
34:RA:1049:C:N3	40:RH:2:SER:CB	2.52	0.73
1:XA:1315:U:O3'	14:XN:17:LYS:NZ	2.21	0.73
1:XA:1217:C:H5''	14:XN:12:ARG:HH12	1.53	0.73
34:YA:2053:G:O6	34:YA:2614:A:H2	1.71	0.73
1:QA:1106:G:C2'	3:QC:172:ARG:CD	2.67	0.72
1:QA:975:A:C2'	14:QN:32:SER:HA	2.19	0.72
34:YA:2046:G:C2	34:YA:2623:G:N1	2.57	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:11:VAL:HG23	17:XQ:29:HIS:CD2	2.24	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:QA:948:C:C5'	13:QM:101:GLN:HG3	2.07	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:XA:948:C:OP2	13:XM:106:ASN:CG	2.28	0.72
1:QA:1307:U:O5'	13:QM:99:ARG:NH1	2.21	0.72
1:QA:1049:U:H5	14:QN:3:ARG:HB3	0.92	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
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:QA:667:G:C4'	15:QO:51:HIS:CE1	2.72	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
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:1375:A:H4'	7:XG:28:ASN:CG	2.09	0.72
1:XA:1187:G:N2	14:XN:60:SER:CB	2.52	0.72
34:YA:919:G:C4	34:YA:2268:A:N6	2.58	0.72
1:QA:1235:U:O3'	21:QU:10:ARG:CD	2.38	0.72
1:QA:959:A:C6	19:QS:77:THR:O	2.42	0.72
34:RA:11:G:H22	34:RA:2627:G:H5''	1.53	0.72
1:XA:1320:C:H41	19:XS:37:ARG:CB	1.87	0.72
1:XA:1228:C:H41	13:XM:104:ARG:CG	2.02	0.72
34:YA:2056:G:O6	34:YA:2577:A:N9	2.22	0.72
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:XA:322:C:H4'	20:XT:23:ARG:HG2	1.72	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:983:A:H5'	14:QN:2:ALA:CB	2.10	0.71
1:QA:1188:A:C3'	14:QN:58:LYS:HZ1	2.02	0.71
1:QA:617:G:H4'	16:QP:44:THR:CB	2.20	0.71
28:R4:6:HIS:CE1	39:RG:66:GLN:OE1	2.43	0.71
4:XD:89:THR:OG1	5:XE:97:GLY:O	2.03	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:QA:624:C:H4'	16:QP:10:GLY:C	2.11	0.71
1:XA:1375:A:H4'	7:XG:28:ASN:OD1	1.90	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
34:YA:911:A:C2	45:YQ:9:TYR:CG	2.79	0.71
1:QA:642:A:H1'	8:QH:114:THR:C	2.11	0.71
1:QA:948:C:OP1	13:QM:101:GLN:HB3	1.88	0.71
1:QA:1280:A:N3	10:QJ:41:PRO:HD3	2.06	0.71
1:QA:975:A:O2'	14:QN:32:SER:HA	1.91	0.71
45:RQ:65:PHE:HB2	45:RQ:105:GLU:HB2	1.72	0.71
1:XA:1229:A:H62	13:XM:104:ARG:NE	1.88	0.71
1:XA:974:A:C1'	14:XN:31:ARG:HD3	2.19	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:1313:U:C5	19:QS:4:SER:HB2	2.26	0.71
1:QA:978:A:H61	1:QA:1316:G:H1'	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1307:U:OP2	13:QM:99:ARG:CG	2.38	0.70
1:QA:974:A:P	14:QN:29:ARG:HE	2.07	0.70
1:QA:761:G:H5'	17:QQ:100:LYS:HZ1	1.55	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: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:XA:974:A:N3	14:XN:31:ARG:NH1	2.39	0.70
1:QA:666:G:H21	15:QO:51:HIS:HB2	1.56	0.70
1:QA:583:A:H4'	17:QQ:91:ARG:HD3	1.73	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
10:QJ:47:PHE:HE2	14:QN:34:TYR:HB3	1.55	0.70
1:QA:974:A:C4'	14:QN:31:ARG:HB3	2.22	0.70
12:QL:7:ILE:HD13	17:QQ:32:TYR:CD1	2.22	0.70
1:QA:956:U:C4'	19:QS:83:HIS:HA	2.20	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
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:1106:G:C1'	3:QC:172:ARG:CZ	2.67	0.70
1:QA:1106:G:C4'	3:QC:172:ARG:CD	2.68	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:YA:2623:G:HO2'	34:YA:2825:C:HO2'	1.39	0.70
3:QC:22:TRP:CA	10:XJ:93:GLY:HA2	2.22	0.70
1:XA:1111:A:H2'	3:XC:179:ARG:HH22	1.56	0.70
1:XA:910:C:OP2	12:XL:21:LYS:NZ	2.20	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:1309:G:H5''	13:QM:77:ASN:HD22	1.51	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:1186:G:N2	14:QN:61:TRP:C	2.35	0.70
1:XA:1330:U:H5''	13:XM:24:GLY:C	2.11	0.70
2:QB:178:ARG:HB3	8:QH:71:GLY:C	2.13	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:2045:C:N3	34:YA:2624:G:N1	2.39	0.70
34:YA:685:A:H5''	34:YA:788:A:H62	1.56	0.70
1:QA:1360:A:N6	14:QN:18:VAL:HG21	2.07	0.69
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
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:1320:C:N3	19:QS:37:ARG:CA	2.48	0.69
1:QA:583:A:H4'	17:QQ:91:ARG:CD	2.22	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:195:ALA:O	6:XF:17:SER:HA	1.93	0.69
4:QD:57:ARG:NH2	5:QE:107:ARG:HH11	1.91	0.69
1:XA:1059:C:C5	3:XC:2:GLY:CA	2.75	0.69
1:XA:991:U:H3'	1:XA:1212:U:H3	1.58	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1229:A:N1	13:QM:104:ARG:CZ	2.55	0.69
1:QA:413:G:H21	1:QA:428:G:H1'	1.57	0.69
12:QL:104:VAL:O	12:QL:105:TYR:HD2	1.68	0.69
1:QA:1014:A:OP1	19:QS:32:LYS:HE2	1.92	0.69
24:R0:74:ARG:NH2	34:RA:2334:G:O6	2.26	0.69
1:QA:1160:G:C4'	2:QB:132:LYS:HE2	2.22	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
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: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
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
4:QD:196:LEU:HA	6:XF:16:GLN:HB3	1.73	0.68
10:QJ:47:PHE:CE2	14:QN:37:PHE:CD2	2.82	0.68
1:QA:1236:A:C5'	21:QU:10:ARG:HH11	2.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:XN:16:PHE:CB	2.00	0.68
34:YA:2046:G:N2	34:YA:2623:G:N3	2.41	0.68
42:RN:16:ILE:HB	42:RN:54:VAL:HG12	1.75	0.68
1:QA:186(B):C:N1	20:QT:85:MET:HE2	2.09	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:1359:C:P	14:QN:22:THR:CG2	2.82	0.68
1:QA:976:G:P	14:QN:32:SER:H	2.17	0.68
10:QJ:47:PHE:CZ	14:QN:36:PHE:HB2	2.24	0.68
1:QA:975:A:H3'	14:QN:32:SER:HA	1.76	0.68
34:YA:1204:A:H2	34:YA:1241:A:H61	1.42	0.68
7:QG:16:LEU:HD23	9:QI:42:ARG:HG2	1.66	0.68
1:QA:958:A:H1'	19:QS:55:LYS:CD	2.10	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
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:1316:G:O4'	14:XN:17:LYS:NZ	2.20	0.67
1:XA:254:G:H5'	17:XQ:66:SER:OG	1.94	0.67
1:XA:62:U:H1'	1:XA:379:C:H1'	1.76	0.67
1:XA:539:A:P	12:XL:114:LYS:HD2	2.34	0.67
1:XA:1358:U:O3'	14:XN:22:THR:OG1	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:860:U:H2'	34:YA:861:A:H8	1.58	0.67
1:XA:1128:C:O2'	1:XA:1146:A:N6	2.27	0.67
1:QA:1373:G:P	9:QI:11:LYS:HZ1	2.18	0.67
32:R8:31:HIS:CE1	34:RA:2421:G:N7	2.63	0.67
1:XA:979:C:N4	14:XN:18:VAL:HG23	2.08	0.67
1:XA:754:C:H6	15:XO:69:TYR:CZ	2.12	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: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
1:QA:1203:C:OP2	14:QN:3:ARG:CD	2.42	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
6:XF:89:MET:CE	18:XR:76:LEU:HD13	2.25	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:2429:G:N7	44:RP:56:SER:OG	2.27	0.67
34:RA:1649:G:O2'	46:RR:107:ASP:OD1	2.04	0.67
1:XA:1255:G:H1	1:XA:1282:C:H42	1.43	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:QA:1314:C:H5	19:QS:6:LYS:HE3	1.58	0.67
1:QA:186(K):G:C8	17:QQ:63:ARG:NH2	2.57	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
54:RZ:52:SER:O	54:RZ:54:HIS:N	2.28	0.67
1:XA:1319:A:OP2	19:XS:3:ARG:CZ	2.42	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
6:XF:99:ALA:H	18:XR:29:PHE:H	1.41	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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: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
1:QA:974:A:OP1	14:QN:29:ARG:HD2	1.95	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:XA:1160:G:O4'	2:XB:132:LYS:CE	2.41	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
7:XG:16:LEU:HD22	9:XI:45:ALA:HB2	1.75	0.67
1:QA:1106:G:C4'	3:QC:172:ARG:NE	2.57	0.66
1:QA:1373:G:P	9:QI:11:LYS:NZ	2.68	0.66
1:QA:1158:C:C4'	2:QB:133:LYS:HZ1	1.98	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
6:XF:94:GLN:CD	18:XR:32:ARG:HH11	1.99	0.66
1:XA:1320:C:H1'	19:XS:70:LYS:HD3	1.60	0.66
34:YA:94:G:O6	55:YA:3185:MG:MG	1.37	0.66
28:Y4:7:PRO:HG3	39:YG:62:LEU:HA	1.77	0.66
53:YY:79:CYS:SG	57:YY:201:ZN:ZN	1.84	0.66
1:QA:1484:C:HO2'	34:RA:1960:A:HO2'	1.42	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
25:R1:78:LYS:HZ3	34:RA:270(T):G:H1'	1.60	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:664:G:N2	1:XA:726:C:O2'	2.25	0.66
1:XA:186(B):C:C2	20:XT:105:SER:HB2	2.30	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:2440:C:H5''	34:RA:2587:A:H4'	1.77	0.66
34:RA:379:G:H1	34:RA:395:U:H3	1.44	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: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:980:C:C6	14:QN:19:ARG:CG	2.68	0.66
1:QA:972:C:OP2	10:QJ:57:LYS:CD	2.44	0.66
1:XA:749:C:H2'	1:XA:750:G:H8	1.59	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
1:XA:1301:U:O3'	13:XM:17:VAL:HG23	1.96	0.66
32:Y8:42:ARG:NH1	34:YA:2349:G:OP2	2.28	0.66
1:XA:702:A:C6	34:YA:1848:A:C2	2.83	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
3:XC:23:TYR:CE2	10:XJ:95:GLU:CB	2.77	0.66
1:XA:1059:C:C5	3:XC:2:GLY:HA2	2.31	0.66
34:YA:2343:C:O2'	34:YA:2373:G:O2'	2.14	0.66
34:YA:2056:G:O6	34:YA:2577:A:C8	2.49	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
6:XF:99:ALA:C	18:XR:28:GLU:HA	2.10	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
1:XA:51:A:N3	1:XA:353:A:C6	2.64	0.66
6:XF:100:ASN:CB	18:XR:27:GLY:C	2.64	0.66
1:XA:974:A:C8	14:XN: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1541:U:OP2	2:QB:23:ARG:CZ	2.44	0.65
1:QA:1099:G:OP2	2:QB:96:ARG:HD3	1.93	0.65
1:QA:1060:C:H4'	10:QJ:52:GLY:HA2	1.77	0.65
1:QA:1317:C:OP1	14:QN:16:PHE:CE2	2.47	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:1227:A:OP1	13:XM:96:LEU:CD2	2.40	0.65
1:XA:186(B):C:O2	20:XT:105:SER:N	2.29	0.65
1:XA:6:G:H4'	1:XA:298:A:H4'	1.78	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:1377:A:O2'	1:QA:1379:G:O6	2.12	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
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:2150:U:H2'	34:YA:2151:G:C8	2.31	0.65
34:YA:1216:G:OP1	49:YU:11:ARG:NH2	2.26	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: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
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.45	0.65
34:YA:1088:A:H4'	34:YA:1089:G:H8	1.61	0.65
34:RA:1044:G:O2'	34:RA:1047:G:O2'	2.15	0.65
34:RA:2483:C:N3	45:RQ:124:LYS:NZ	2.44	0.65
34:RA:445:C:OP1	49:RU:2:PRO:HA	1.96	0.65
40:RH:89:ILE:HD11	40:RH:131:VAL:HG22	1.76	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
1:XA:1202:G:O2'	14:YN:28:GLY:O	2.14	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:QA:634:C:H2'	1:QA:635:G:C8	2.32	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:1238:A:H2'	1:XA:1239:A:C8	2.32	0.65
1:XA:636:U:H3'	1:XA:637:G:H8	1.62	0.65
34:YA:2080:G:C2	34:YA:2241:A:N3	2.64	0.65
29:Y5:52:TYR:OH	34:YA:2883:A:OP1	2.06	0.65
1:XA:1463:C:H4'	48:YT:112:ARG:HH21	1.62	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: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
1:XA:376:G:H4'	16:XP:5:ARG:HH11	1.61	0.65
34:YA:2238:G:N2	34:YA:2238:G:OP1	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
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
3:QC:79:ARG:HH21	11:XK:105:VAL:H	1.44	0.65
10:XJ:62:HIS:HD2	14:XN:59:ALA:HB1	1.62	0.65
6:XF:99:ALA:CB	18:XR:29:PHE:CD1	2.75	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: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
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
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
2:QB:177:ALA:HB1	2:QB:182:ILE:HB	1.78	0.64
7:QG:16:LEU:HD22	9:QI:42:ARG:HA	1.78	0.64
1:QA:1203:C:OP2	14:QN:3:ARG:HD2	1.96	0.64
4:XD:20:TYR:HA	4:XD:26:CYS:SG	2.37	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:XA:107:G:O6	20:XT:15:ARG:CZ	2.43	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
2:QB:132:LYS:HA	2:QB:135:GLN:HB2	1.78	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: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
1:XA:585:G:OP1	17:XQ:37:LYS:HE2	1.98	0.64
34:YA:2402:C:H1'	34:YA:2403:C:H5	1.63	0.64
34:YA:788:A:OP1	34:YA:791:C:N4	2.28	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
2:QB:178:ARG:O	8:QH:71:GLY:CA	2.45	0.64
7:QG:16:LEU:CD2	9:QI:42:ARG:CB	2.75	0.64
1:QA:1378:C:P	7:QG:7:ALA:CB	2.75	0.64
41:RI:92:VAL:HB	41:RI:120:ILE:HB	1.80	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
1:XA:406:G:H2'	1:XA:407:G:H8	1.63	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: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:1203:C:P	14:QN:3:ARG:HD2	2.37	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:XG:16:LEU:CD2	9:XI:44:VAL:CG2	2.65	0.64
1:XA:657:G:H21	15:XO:22:THR:HG23	1.63	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:65:U:H2'	22:XV:66:A:H8	1.62	0.64
22:XV:8:U:O4	22:XV:14:A:N7	2.31	0.64
1:QA:1236:A:P	21:QU:10:ARG:HH11	2.20	0.64
1:QA:666:G:H5'	1:QA:726:C:H1'	1.80	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
4:QD:18:LYS:HG3	4:QD:33:MET:HG3	1.78	0.63
1:QA:1125:U:C4	10:QJ:73:ASP:OD1	2.51	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
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: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
1:QA:986:A:H1'	19:QS:54:GLY:C	2.17	0.63
1:QA:675:A:H1'	11:QK:116:HIS:HB2	1.80	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
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
1:XA:718:G:O4'	11:XK:117:ASN:HB2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:QA:186(B):C:C1'	20:QT:85:MET:HE2	2.29	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:1566:A:C2	36:RD:214:TRP:CE2	2.86	0.63
34:RA:23:G:N2	51:RW:77:ASP:OD1	2.30	0.63
1:XA:1004:A:N1	1:XA:1025:U:H4'	2.12	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:8:A:N1	4:XD:209:ARG:CZ	2.61	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:1853:A:N3	34:YA:2233:U:O2'	2.29	0.63
34:YA:784:A:N6	34:YA:2072:G:O2'	2.32	0.63
1:QA:109:A:H62	1:QA:324:G:H21	1.45	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
1:QA:741:G:O5'	15:QO:39:LEU:CD1	2.46	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
34:RA:581:C:H2'	34:RA:582:G:C8	2.34	0.63
34:RA:508:G:O6	51:RW:9:TYR:CD1	2.52	0.63
1:XA:1071:C:OP1	5:XE:27:ARG:NH2	2.31	0.63
1:XA:1240:U:H1'	7:XG:38:LEU:CG	2.22	0.63
1:XA:865:A:N3	1:XA:918:A:O2'	2.30	0.63
1:XA:1106:G:H4'	3:XC:172:ARG:HG2	1.80	0.63
1:QA:1313:U:H3'	19:QS:6:LYS:HZ2	0.80	0.63
1:QA:54:C:H42	1:QA:357:G:H1	1.46	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:948:C:OP2	13:QM:106:ASN:HB2	1.98	0.63
28:R4:26:SER:HG	39:RG:143:GLU:CD	1.97	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
3:QC:79:ARG:NH2	11:XK:105:VAL:N	2.46	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
3:QC:23:TYR:HB2	10:QJ:94:VAL:CA	2.28	0.63
1:QA:1318:A:C6	14:QN:16:PHE:CD1	2.87	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:1126:U:O2	10:QJ:38:ILE:HD12	1.98	0.63
1:QA:953:G:O6	13:QM:104:ARG:NH1	2.32	0.63
1:QA:194:C:H4'	20:QT:68:LYS:HE2	1.79	0.63
34:RA:2250:G:N3	45:RQ:82:ARG:HG3	2.14	0.63
15:QO:89:GLY:C	34:RA:716:A:OP1	2.36	0.63
1:XA:1226:C:OP1	13:XM:91:ARG:NH1	2.31	0.63
1:XA:373:A:O2'	1:XA:451:A:N7	2.32	0.63
34:YA:2118:U:H3	34:YA:2148:G:H4'	1.64	0.63
34:YA:2099:U:N3	34:YA:2190:G:N1	1.97	0.63
1:QA:677:U:H3	1:QA:713:G:H1	1.47	0.62
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.32	0.62
1:QA:953:G:C6	13:QM:104:ARG:NH1	2.67	0.62
1:QA:667:G:N3	15:QO:49:ASP:OD1	2.32	0.62
1:QA:186(B):C:H5'	20:QT:82:SER:HA	1.81	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: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
1:QA:62:U:H1'	1:QA:379:C:H1'	1.80	0.62
1:QA:9:G:C5'	5:QE:122:GLU:OE2	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1229:A:N6	13:XM:104:ARG:CD	2.62	0.62
1:XA:346:G:OP1	48:YT:41:ARG:NH2	2.31	0.62
6:XF:99:ALA:N	18:XR:29:PHE:O	2.32	0.62
1:QA:1313:U:C5	19:QS:4:SER:CB	2.81	0.62
1:QA:1246:C:N4	21:QU:26:LYS:HB2	2.12	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
1:QA:1188:A:C3'	14:QN:58:LYS:HZ2	2.12	0.62
11:QK:71:LYS:HZ2	34:RA:2146:C:N4	1.94	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
3:QC:79:ARG:HH21	11:XK:105:VAL:N	1.98	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:1124:G:O5'	10:XJ:36:GLY:N	2.33	0.62
1:XA:619:U:C5'	4:XD:131:ARG:HH21	2.12	0.62
1:XA:979:C:N3	14:XN:19:ARG:NE	2.26	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
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:2051:A:C2	34:YA:2614:A:C5	2.88	0.62
34:YA:629:G:N3	34:YA:639:U:O2'	2.30	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:855:G:N2	1:XA:1539:C:OP1	2.33	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:2751:G:N1	40:RH:3:ARG:HB2	2.15	0.62
34:RA:2630:G:H21	34:RA:2892:A:H1'	1.65	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
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
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
16:QP:53:VAL:HG12	16:QP:79:VAL:HG12	1.82	0.61
1:QA:1221:G:H5'	19:QS:36:ARG:NH1	2.14	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:2056:G:N7	34:YA:2577:A:C5	2.67	0.61
34:YA:300:A:OP1	53:YY:86:ARG:NH2	2.33	0.61
38:YF:160:ASN:HB3	38:YF:163:VAL:HG12	1.81	0.61
1:QA:976:G:H21	1:QA:1362(B):C:H2'	1.66	0.61
1:QA:69:G:H1'	1:QA:152:A: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:YN:60:SER:OG	2.33	0.61
21:XU:3:LYS:HG2	21:XU:14:TRP:CG	2.36	0.61
34:YA:2822:G:O2'	34:YA:2825:C:N4	2.34	0.61
34:YA:17:G:H21	34:YA:554:U:H5'	1.64	0.61
50:YV:72:VAL:HB	50:YV:85:LYS:HB3	1.82	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
1:QA:538:G:C5'	12:QL:115:LYS:HG2	2.27	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H6	1:XA:355:C:O5'	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
10:QJ:49:VAL:HA	14:QN:34:TYR:OH	2.01	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
36:RD:96:HIS:HE1	36:RD:102:LYS:HE2	1.64	0.61
34:RA:2313:C:H5''	39:RG:91:ARG:HH21	1.65	0.61
11:QK:71:LYS:HZ3	34:RA:2146:C:N4	1.92	0.61
34:RA:81:G:HO2'	34:RA:295:G:HO2'	1.48	0.61
1:XA:1302:U:C2	13:XM:27:LYS:HE2	2.36	0.61
1:XA:666:G:H5'	1:XA:726:C:H1'	1.82	0.61
34:YA:1333:C:H2'	34:YA:1334:G:H8	1.65	0.61
25:Y1:43:TYR:HD2	34:YA:2230:G:H5''	1.66	0.61
34:YA:199:A:N1	34:YA:2434:A:C2	2.68	0.61
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
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: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: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:1358:U:H5	14:YN:35:ARG:HE	1.48	0.61
34:YA:2471:C:N4	34:YA:2476:A:O2'	2.34	0.61
34:YA:2046:G:C2	34:YA:2623:G:C4	2.89	0.61
34:YA:554:U:H2'	34:YA:556:G:C8	2.36	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: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
1:QA:1358:U:C3'	14:QN:22:THR:HG21	2.30	0.61
34:RA:1490:A:O2'	36:RD:99:ASP:OD1	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
10:XJ:10:GLY:HA3	10:XJ:16:LEU:CD2	2.22	0.61
1:XA:263:A:P	20:XT:79:ARG:HE	2.24	0.61
1:QA:1150:U:O2	10:QJ:39:PRO:HG2	2.00	0.60
1:QA:1107:C:H5'	3:QC:173:VAL:H	1.65	0.60
1:QA:948:C:OP2	13:QM:106:ASN:CB	2.49	0.60
1:QA:1321:C:C4	19:QS:36:ARG:NH1	2.69	0.60
34:RA:1019:U:H2'	34:RA:1020:A:H8	1.66	0.60
34:RA:626:U:H5'	34:RA:627:A:H5'	1.81	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:1318:A:C6	14:QN:16:PHE:CG	2.89	0.60
1:QA:667:G:N2	15:QO:49:ASP:OD1	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
34:RA:2296:U:OP2	47:RS:9:ARG:NH1	2.34	0.60
48:RT:77:PRO:HG2	48:RT:80:SER:HB3	1.82	0.60
1:XA:528:C:H41	12:XL:49:ASN:CG	2.04	0.60
1:XA:901:A:O5'	1:XA:901:A:H8	1.84	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:XA:538:G:P	12:XL:115:LYS:HB2	2.41	0.60
1:XA:1320:C:C6	19:XS:70:LYS:HD3	2.35	0.60
1:QA:1320:C:H5'	19:QS:70:LYS:HE3	1.83	0.60
1:QA:1376:U:C4	7:QG:10:ARG:NH1	2.68	0.60
1:QA:595:G:H1'	1:QA:596:C:H5	1.65	0.60
5:QE:80:ILE:CD1	8:QH:104:ARG:HH12	2.14	0.60
1:QA:1359:C:H5	14:QN:35:ARG:CZ	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:1059:C:H5	3:XC:2:GLY:HA3	1.64	0.60
1:XA:975:A:C2	14:XN:34:TYR:HE1	2.19	0.60
34:YA:2069:G:C2	34:YA:2443:C:N3	2.69	0.60
34:YA:508:G:O6	51:YW:9:TYR:CE1	2.55	0.60
39:YG:16:ARG:NH2	39:YG:28:VAL:O	2.35	0.60
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.02	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1604:C:H2'	34:RA:1605:C:H6	1.66	0.60
34:RA:642:G:H4'	34:RA:2349:G:H4'	1.83	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:1110:A:N1	3:QC:177:THR:HG22	2.16	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
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:QA:980:C:C2	14:QN:19:ARG:C	2.70	0.60
1:XA:595:G:H1	1:XA:641:U:HO2'	1.49	0.60
34:YA:2051:A:N1	34:YA:2614:A:C5	2.69	0.60
34:YA:458:G:N2	34:YA:470:A:OP2	2.34	0.60
51:YW:6:ILE:HG12	51:YW:104:THR:HG23	1.83	0.60
1:QA:1106:G:HO2'	3:QC:172:ARG:HD2	1.56	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
34:RA:1999:C:H2'	34:RA:2000:G:H8	1.67	0.60
34:RA:299:A:N1	34:RA:322:A:O2'	2.29	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: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
34:YA:690:G:O2'	36:YD:43:ARG:NH1	2.30	0.60
51:YW:30:GLU:O	51:YW:34:ASN:ND2	2.35	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
1:QA:980:C:C4'	14:QN:19:ARG:NE	2.62	0.60
1:QA:7:G:O2'	5:QE:121:LYS:HB2	2.01	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
2:QB:197:VAL:C	8:QH:68:ARG:HH22	2.03	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:QA:609:A:C5'	16:QP:9:PHE:CD1	2.85	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
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.01	0.60
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.84	0.60
1:XA:983:A:H5'	14:XN:2:ALA:HB3	1.84	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
34:RA:2094:G:H1'	34:RA:2198:A:H61	1.67	0.60
28:R4:5:ILE:O	39:RG:67:LYS:CG	2.50	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:H8	1:XA:900:A:O5'	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:1307:U:OP2	13:QM:99:ARG:CB	2.50	0.59
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
7:QG:133:GLY:HA2	7:QG:136:LYS:HE2	1.83	0.59
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
1:QA:1123:A:O2'	10:QJ:36:GLY:C	2.41	0.59
34:RA:1370:C:HO2'	34:RA:1811:G:HO2'	1.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:979:C:H42	14:XN:18:VAL:HG23	1.66	0.59
1:XA:972:C:O2'	10:XJ:55:LYS:HB2	2.02	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:1220:G:H21	19:QS:54:GLY:HA2	1.66	0.59
1:QA:564:C:C6	17:QQ:31:LEU:HD21	2.37	0.59
3:QC:91:LEU:HD12	3:QC:101:LEU:HD11	1.85	0.59
1:QA:1106:G:C3'	3:QC:172:ARG:HG3	2.24	0.59
32:R8:56:GLU:HA	32:R8:59:LYS:HE2	1.83	0.59
34:RA:1141:U:P	42:RN:25:ARG:HH21	2.25	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
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: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
1:XA:974:A:OP1	14:XN:31:ARG:HB2	2.02	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:1187:G:O2'	14:QN:60:SER:HA	2.03	0.59
1:QA:1118:C:C5'	9:QI:9:ARG:NH1	2.66	0.59
40:RH:89:ILE:HD11	40:RH:131:VAL:CG2	2.32	0.59
1:XA:398:C:H2'	1:XA:399:G:H8	1.67	0.59
1:XA:51:A:C2	1:XA:353:A:N1	2.70	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
1:XA:1049:U:HO2'	14:XN:2:ALA:N	2.00	0.59
34:YA:2712(A):U:H2'	34:YA:2712(B):A:H2'	1.83	0.59
37:YE:143:ASN:N	37:YE:143:ASN:OD1	2.35	0.59
1:QA:1170:A:H5'	2:QB:140:HIS:CE1	2.37	0.59
3:QC:23:TYR:N	10:QJ:93:GLY:C	2.55	0.59
1:QA:1186:G:N2	14:QN:61:TRP:CA	2.66	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:643:C:H2'	1:QA:644:G:C8	2.38	0.59
1:QA:68:G:H22	1:QA:101:A:H2	1.49	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: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
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
32:Y8:31:HIS:CD2	34:YA:2421:G:O6	2.56	0.59
34:YA:2647:U:H2'	34:YA:2648:C:H6	1.67	0.59
34:YA:956:G:H2'	34:YA:957:A:H2'	1.82	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:1251:A:H2'	1:QA:1252:A:C8	2.37	0.59
1:QA:1318:A:N6	14:QN:16:PHE:CB	2.65	0.59
1:QA:1304:G:H1'	1:QA:1334:G:H1	1.67	0.59
1:QA:974:A:OP1	14:QN:29:ARG:CD	2.51	0.59
4:QD:98:GLU:OE1	4:QD:103:ASN:ND2	2.36	0.59
1:QA:1248:A:N6	21:QU:26:LYS:HD2	2.17	0.59
34:RA:1996:C:H5	43:RO:32:TYR:HH	1.50	0.59
34:RA:674:G:O2'	38:RF:67:GLN:OE1	2.18	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
34:YA:2867:G:HO2'	34:YA:2868:A:H8	1.51	0.59
54:YZ:151:HIS:HB3	54:YZ:170:THR:HA	1.85	0.59
1:QA:1097:C:H5'	2:QB:140:HIS:NE2	2.18	0.59
1:QA:986:A:H1'	19:QS:55:LYS:CA	2.27	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
34:RA:746:A:O2'	34:RA:2611:U:O2'	2.18	0.59
28:R4:27:THR:CG2	39:RG:62:LEU:O	2.51	0.59
43:RO:88:ASN:ND2	43:RO:90:GLN:OE1	2.36	0.59
34:RA:2250:G:C5	45:RQ:82:ARG:HD2	2.37	0.59
33:Y9:14:CYS:HA	33:Y9:27:CYS:HB2	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:727:A:C2	36:YD:9:TYR:CD2	2.89	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:QA:740:U:O3'	15:QO:39:LEU:HG	2.03	0.59
1:XA:979:C:OP1	1:XA:1223:C:N4	2.35	0.59
1:XA:960:U:H5	19:XS:78:ARG:HG2	1.67	0.59
38:YF:168:ARG:HG2	38:YF:175:THR:HG21	1.84	0.59
1:QA:730:G:C5	1:QA:731:G:H1'	2.38	0.58
1:QA:642:A:C1'	8:QH:115:SER:HA	2.33	0.58
25:R1:78:LYS:HZ2	34:RA:270(S):G:H21	1.50	0.58
1:XA:1004:A:N6	1:XA:1025:U:O3'	2.36	0.58
1:XA:1318:A:H62	14:YN: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:571:U:H5''	1:XA:819:A:C4	2.38	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
1:XA:702:A:N1	34:YA:1848:A:C6	2.71	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
10:QJ:47:PHE:CE1	14:QN:36:PHE:CB	2.81	0.58
1:QA:1306:A:OP2	21:QU:5:ASP:HA	2.03	0.58
40:RH:152:ARG:HG2	40:RH:153:LYS:HG2	1.84	0.58
34:RA:1996:C:H5	43:RO:32:TYR:OH	1.86	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
4:QD:20:TYR:CZ	6:XF:14:LEU:HA	2.38	0.58
2:QB:181:PHE:CE2	8:QH:70:GLN:HG2	2.38	0.58
1:XA:1105:A:H2'	1:XA:1106:G:C8	2.37	0.58
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:QA:44:G:OP2	16:QP:12:LYS:CE	2.52	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
1:QA:954:G:N3	19:QS:83:HIS:CE1	2.67	0.58
27:R3:17:LYS:HG3	34:RA:969:U:OP1	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:379:C:H2'	1:XA:380:G:H8	1.69	0.58
1:XA:1193:G:O2'	5:XE:21:ALA:O	2.21	0.58
1:XA:974:A:H1'	14:XN:31:ARG:HH11	1.59	0.58
34:YA:1418:G:H2'	34:YA:1579:A:H61	1.66	0.58
34:YA:747:U:C4	34:YA:2613:U:C4	2.92	0.58
37:YE:128:SER:OG	37:YE:129:HIS:N	2.35	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
1:QA:974:A:H5'	14:QN:31:ARG:CB	2.15	0.58
2:QB:78:GLN:O	2:QB:94:ASN:ND2	2.37	0.58
7:QG:16:LEU:HD21	9:QI:42:ARG:CD	2.23	0.58
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.30	0.58
34:RA:987:G:O2'	34:RA:1000:A:N3	2.33	0.58
34:RA:1076:C:H2'	34:RA:1077:A:H4'	1.86	0.58
34:RA:1024:G:O2'	34:RA:1144:G:O2'	2.22	0.58
34:RA:1226:G:OP1	50:RV:69:LYS:NZ	2.24	0.58
34:RA:191:A:H1'	34:RA:679:C:H1'	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
5:XE:18:ARG:NH1	5:XE:25:ARG:O	2.36	0.58
1:XA:1535:C:N4	23:XX:10:G:C2	2.69	0.58
34:YA:1061:U:C6	34:YA:1062:G:H5''	2.35	0.58
36:YD:35:LYS:H	36:YD:64:ILE:HG12	1.68	0.58
4:QD:59:ARG:HH12	4:QD:66:ARG:HH22	1.51	0.58
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.35	0.58
1:QA:980:C:C2'	14:QN:19:ARG:HG2	2.23	0.58
34:RA:1297:C:H2'	34:RA:1298:C:H6	1.68	0.58
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
4:QD:34:GLU:OE1	6:XF:57:GLN:NE2	2.36	0.58
34:YA:1457:A:C2	34:YA:2703:C:N4	2.71	0.58
1:QA:1097:C:O2'	1:QA:1169:A:N3	2.34	0.58
1:QA:1278:U:H5''	1:QA:1279:A:C8	2.38	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
1:XA:1330:U:H5''	13:XM:24:GLY:CA	2.33	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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:974:A:N9	14:QN:31:ARG:CZ	2.67	0.58
34:RA:1011:G:HO2'	34:RA:1012:U:HO2'	1.51	0.58
34:RA:1930:G:H2'	34:RA:1968:G:H1	1.68	0.58
1:QA:1484:C:O2'	34:RA:1960:A:O2'	2.20	0.58
34:RA:605:C:H1'	34:RA:657:U:H1'	1.85	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:412:A:C2	4:XD:35:ARG:CD	2.81	0.58
1:XA:15:G:H1	1:XA:920:U:H3	1.50	0.58
11:XK:15:ALA:HA	11:XK:77:MET:HA	1.86	0.58
1:QA:1313:U:H5	19:QS:4:SER:CB	2.17	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
3:QC:22:TRP:C	10:QJ:93:GLY:HA2	2.23	0.58
1:XA:1270:C:H2'	1:XA:1271:G:C8	2.39	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
17:XQ:99:SER:OG	17:XQ:100:LYS:N	2.37	0.58
1:XA:1318:A:O3'	19:XS:11:VAL:HG21	2.00	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:1028(B):C:H2'	1:QA:1028(C):C:H5	1.69	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1110:A:N6	3:QC:176:HIS:HB2	2.19	0.57
1:QA:1080:A:H4'	5:QE:16:THR:HG21	1.86	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
34:YA:2710:C:H2'	34:YA:2711:A:C8	2.38	0.57
34:YA:656:G:H2'	34:YA:657:U:C6	2.40	0.57
27:Y3:42:ALA:O	34:YA:851:U:O2'	2.20	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:1364:U:O4'	21:QU:14:TRP:CZ2	2.57	0.57
1:QA:937:A:H2'	1:QA:1379:G:H21	1.68	0.57
1:QA:608:A:H3'	1:QA:609:A:H8	1.69	0.57
1:QA:1108:G:O3'	3:QC:176:HIS:HD2	1.87	0.57
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.68	0.57
1:QA:1114:C:C1'	14:QN:60:SER:O	2.51	0.57
33:R9:6:SER:HA	34:RA:1031:G:H4'	1.86	0.57
19:QS:61:TYR:OH	34:RA:888:C:OP2	2.21	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:1728:G:H8	34:YA:1732:A:H62	1.50	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
1:QA:1158:C:C5'	2:QB:133:LYS:HZ1	2.17	0.57
1:QA:1320:C:N4	19:QS:37:ARG:CA	2.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:968:A:N7	1:QA:1062:U:O2'	2.31	0.57
3:QC:23:TYR:CG	10:QJ:95:GLU:N	2.72	0.57
1:QA:1176:A:OP1	9:QI:97:LYS:HE2	2.04	0.57
33:R9:19:ARG:NH2	34:RA:2754:U:O3'	2.36	0.57
34:RA:1216:G:OP1	49:RU:11:ARG:NH2	2.31	0.57
34:RA:511:U:H4'	34:RA:1235:G:H4'	1.86	0.57
40:RH:149:ARG:HA	40:RH:162:ILE:HD11	1.85	0.57
34:RA:2394:C:OP1	44:RP:63:PRO:HD2	2.03	0.57
1:XA:111:G:O5'	1:XA:111:G:H8	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
13:XM:84:ILE:HG23	19:XS:66:MET:HE1	1.85	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: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
1:QA:1219:U:C2'	19:QS:34:TRP:CE3	2.87	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
32:R8:46:ARG:NH1	34:RA:630:G:OP1	2.37	0.57
1:XA:375:U:H6	1:XA:375:U:H5''	1.68	0.57
1:XA:6:G:N3	1:XA:6:G:H2'	2.20	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
1:XA:669:U:C1'	15:XO:46:HIS:HE1	2.18	0.57
34:YA:2044:C:N4	34:YA:2625:G:N1	2.51	0.57
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
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.16	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:1204:A:H1'	34:RA:1206:G:C8	2.39	0.57
34:RA:662:G:OP1	44:RP:15:ARG:NH1	2.37	0.57
45:RQ:12:GLN:HB2	45:RQ:73:PRO:HD2	1.87	0.57
1:XA:1320:C:C2	19:XS:36:ARG:O	2.57	0.57
1:XA:401:C:H2'	1:XA:402:G:C8	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1320:C:N3	19:XS:36:ARG:C	2.58	0.57
1:XA:1320:C:C2'	19:XS:70:LYS:HD2	2.33	0.57
34:YA:1566:A:C2	36:YD:214:TRP:CE3	2.88	0.57
34:YA:2070:G:N2	34:YA:2442:C:N3	2.40	0.57
34:YA:184:C:O2'	34:YA:217:G:N3	2.35	0.57
34:YA:2085:C:C2	34:YA:2235:G:C2	2.91	0.57
34:YA:2051:A:N1	34:YA:2614:A:N3	2.52	0.57
34:YA:828:U:H4'	34:YA:831:G:N1	2.20	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
26:R2:4:SER:OG	26:R2:5:GLU:N	2.37	0.57
34:RA:1854:A:H62	34:RA:1888:G:H8	1.51	0.57
34:RA:1216:G:OP2	49:RU:12:ARG:NH2	2.36	0.57
1:XA:1251:A:O2'	1:XA:1369:C:O3'	2.21	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
2:XB:115:LEU:HD12	2:XB:145:LEU:HB3	1.86	0.57
3:XC:22:TRP:C	10:XJ:93:GLY:HA2	2.25	0.57
1:XA:1296:C:H5'	13:XM:14:ARG:NH2	2.20	0.57
1:XA:741:G:OP1	15:XO:35:ARG:NE	2.38	0.57
1:XA:1318:A:O3'	19:XS:11:VAL:CG2	2.50	0.57
34:YA:2049:G:N2	34:YA:2620:C:O2	2.36	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:270(P):U:C4	41:YI:52:ARG:NE	2.69	0.57
34:YA:86:C:OP1	53:YY:33:LYS:NZ	2.37	0.57
2:QB:219:VAL:HA	2:QB:222:ILE:HD12	1.84	0.57
2:QB:74:LYS:HG3	2:QB:77:ALA:HB3	1.87	0.57
4:QD:9:CYS:SG	4:QD:22:LYS:NZ	2.71	0.57
1:QA:1306:A:OP2	21:QU:5:ASP:CA	2.53	0.57
34:RA:2094:G:P	41:RI:22:LYS:HE3	2.44	0.57
34:RA:1889:A:N1	34:RA:2234:G:H1'	2.19	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
1:QA:248:C:H2'	1:QA:249:U:C6	2.40	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
13:XM:11:ARG:O	13:XM:13:LYS:NZ	2.35	0.57
12:XL:11:VAL:HG23	17:XQ:29:HIS:NE2	2.19	0.57
1:XA:1495:U:HO2'	34:YA:1919:A:H2	1.53	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
10:XJ:53:PRO:C	14:XN:41:ARG:HH21	2.08	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:1414:U:H2'	1:QA:1415:G:C8	2.40	0.56
1:QA:69:G:H1'	1:QA:152:A:C2	2.40	0.56
2:QB:87:ARG:NH1	2:QB:220:ASP:OD2	2.38	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
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
1:XA:978:A:C5	14:XN:18:VAL:HG21	2.40	0.56
30:Y6:3:SER:OG	30:Y6:4:GLU:N	2.37	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
4:QD:166:LYS:O	36:YD:135:PHE:HE1	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1047:G:O2'	1:QA:1215:G:O2'	2.22	0.56
1:QA:689:C:H4'	1:QA:705:U:H1'	1.86	0.56
9:QI:67:GLY:O	9:QI:73:GLN:NE2	2.38	0.56
1:QA:1243:C:H5'	21:QU:9:ARG:HG3	1.87	0.56
34:RA:1338:G:O6	52:RX:62:LYS:NZ	2.36	0.56
33:R9:19:ARG:NH2	34:RA:2754:U:O2'	2.33	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:1331:G:O6	21:QU:7:ARG:HB2	2.05	0.56
34:RA:1248:G:C2	49:RU:3:ARG:HD2	2.40	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
53:RY:30:VAL:HG12	53:RY:37:VAL:HG23	1.87	0.56
1:XA:1028(H):G:H2'	1:XA:1028(I):G:C8	2.39	0.56
1:XA:1126:U:H3'	1:XA:1127:G:H8	1.69	0.56
1:XA:899:C:H2'	1:XA:899:C:O2	2.05	0.56
8:XH:73:ASP:OD1	8:XH:75:ARG:NH1	2.38	0.56
34:YA:270(C):A:H61	34:YA:270(Z):G:H1'	1.69	0.56
45:YQ:24:GLY:H	45:YQ:101:ARG:HD2	1.70	0.56
53:YY:76:CYS:HB3	53:YY:79:CYS:SG	2.45	0.56
1:QA:1041:A:H2'	1:QA:1042:G:C8	2.40	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
1:QA:1280:A:N3	10:QJ:41:PRO:CD	2.68	0.56
1:XA:1105:A:H2'	1:XA:1106:G:H8	1.71	0.56
1:XA:1184:G:H2'	1:XA:1185:G:H8	1.70	0.56
29:Y5:57:VAL:O	46:YR:33:ARG:NH2	2.30	0.56
34:YA:2096:U:H3	34:YA:2193:G:H22	1.53	0.56
32:Y8:31:HIS:HD2	34:YA:2421:G:O6	1.88	0.56
34:YA:2647:U:H2'	34:YA:2648:C:C6	2.39	0.56
34:YA:1566:A:C6	36:YD:214:TRP:CZ3	2.92	0.56
34:YA:2511:U:O2'	37:YE:138:PRO:O	2.22	0.56
37:YE:49:LEU:HD22	37:YE:81:ILE:HD11	1.85	0.56
46:YR:14:SER:OG	46:YR:15:SER:N	2.38	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
45:RQ:138:ASP:O	45:RQ:141:GLN:NE2	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:962:C:H2'	1:XA:963:G:H8	1.71	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
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:2250:G:H21	34:YA:2250:G:P	2.27	0.56
34:YA:2049:G:C2	34:YA:2620:C:N3	2.72	0.56
1:QA:1358:U:H5'	14:QN:35:ARG:N	2.06	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
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: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
1:XA:323:U:H3'	1:XA:324:G:C8	2.40	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
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:1270:C:O2'	1:XA:1314:C:OP1	2.24	0.56
1:XA:114:U:H1'	1:XA:353:A:H1'	1.86	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
3:QC:23:TYR:H	10:QJ:93:GLY:C	2.09	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:1123:A:O3'	10:XJ:36:GLY:CA	2.49	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:728:A:C6	15:XO:54:ARG:CD	2.88	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:943:U:O2'	1:XA:1232:U:OP2	2.23	0.56
1:XA:1312:G:H3'	19:XS:6:LYS:HZ3	0.75	0.56
1:XA:1503:A:N6	1:XA:1532:U:H1'	2.21	0.56
1:XA:501:C:H2'	1:XA:502:G:C8	2.41	0.56
1:XA:989:C:H2'	1:XA:990:C:C6	2.40	0.56
1:XA:1377:A:C2	7:XG:8:GLU:O	2.59	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:1834:U:H1'	34:RA:1969:A:H2'	1.87	0.56
34:RA:659:C:H2'	34:RA:660:G:C8	2.41	0.56
1:XA:458(B):G:H1'	1:XA:458(F):A:H61	1.71	0.56
1:XA:12:U:H4'	1:XA:526:C:H4'	1.87	0.56
28:Y4:6:HIS:CE1	39:YG:67:LYS:H	2.24	0.56
24:Y0:19:LYS:NZ	34:YA:2261:C:OP1	2.31	0.56
1:QA:1086:U:H2'	1:QA:1087:G:H8	1.71	0.55
1:QA:129(B):G:H4'	1:QA:130:A:H5''	1.88	0.55
1:QA:1369:C:H2'	1:QA:1370:G:C8	2.42	0.55
3:QC:22:TRP:HA	10:QJ:93:GLY:HA3	1.84	0.55
3:QC:5:ILE:HD12	14:QN:49:HIS:NE2	2.21	0.55
23:QX:8:A:H2'	23:QX:9:G:H8	1.71	0.55
34:RA:2328:A:H2'	34:RA:2329:G:C8	2.41	0.55
34:RA:319:C:H2'	34:RA:320:A:C8	2.42	0.55
42:RN:22:THR:OG1	42:RN:23:LEU:N	2.39	0.55
1:XA:686:U:O4	1:XA:703:G:O2'	2.20	0.55
29:Y5:48:GLU:OE2	51:YW:37:ARG:NH1	2.24	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2059:A:N1	34:YA:2503:A:C5	2.74	0.55
34:YA:597:U:H2'	34:YA:598:G:C8	2.41	0.55
1:QA:741:G:O5'	15:QO:39:LEU:HD11	2.06	0.55
1:QA:265:G:H5'	17:QQ:64:PRO:O	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
34:RA:372:G:HO2'	34:RA:400:G:H1	1.55	0.55
43:RO:106:LEU:HB3	43:RO:111:PHE:HB2	1.87	0.55
43:RO:14:THR:HG21	43:RO:86:ILE:HD12	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: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
1:XA:192:U:H4'	20:XT:57:ARG:HD3	1.87	0.55
1:XA:107:G:H4'	1:XA:378:G:H5''	1.88	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
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:310:G:OP2	16:QP:27:LYS:CD	2.52	0.55
1:QA:66:G:H8	1:QA:66:G:P	2.29	0.55
4:QD:11:LEU:HD13	4:QD:66:ARG:HD2	1.88	0.55
34:RA:1380:G:H1'	34:RA:1569:A:H61	1.71	0.55
1:XA:1358:U:H6	1:XA:1358:U:O5'	1.89	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
31:Y7:5:TRP:CZ3	34:YA:686:G:N7	2.74	0.55
34:YA:1030:G:OP2	45:YQ:128:LYS:NZ	2.27	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
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
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
35:RB:74:U:H1'	54:RZ:34:ASN:HD21	1.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:974:A:N9	14:YN:31:ARG:CZ	2.70	0.55
24:Y0:16:SER:HB3	34:YA:2262:U:H5	1.70	0.55
34:YA:468:G:H5'	38:YF:60:SER:HB2	1.88	0.55
34:YA:192:C:H1'	34:YA:800:A:H62	1.71	0.55
1:QA:791:G:N1	1:QA:1498:U:OP1	2.38	0.55
1:QA:546:G:H4'	1:QA:548:G:H4'	1.89	0.55
1:QA:925:G:H1'	1:QA:1502:A:C4	2.42	0.55
4:QD:57:ARG:NH1	5:QE:107:ARG:CD	2.70	0.55
1:QA:1124:G:C5'	10:QJ:36:GLY:H	2.20	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: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:1791:A:N6	34:YA:1828:G:O2'	2.36	0.55
34:YA:746:A:H3'	34:YA:2612:C:H5	1.71	0.55
34:YA:270(P):U:C4	41:YI:52:ARG:CZ	2.90	0.55
34:YA:828:U:O2'	34:YA:831:G:O6	2.17	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
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:68:HIS:CD2	10:XJ:68:HIS:N	2.75	0.55
10:XJ:47:PHE:CE2	14:YN:37:PHE:CZ	2.94	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
34:YA:34:C:N4	34:YA:454:A:O2'	2.38	0.55
41:YI:130:TYR:HB3	41:YI:136:VAL:HG13	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1218:C:H2'	1:QA:1219:U:H6	1.72	0.55
1:QA:1014:A:C1'	19:QS:34:TRP:CD2	2.90	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: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
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:68(Q):C:H2'	1:XA:68(R):U:H6	1.72	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:1462:C:H4'	34:RA:2703:C:H5'	1.89	0.55
34:RA:644:A:C2	34:RA:2369:A:H1'	2.42	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:1300:G:H1'	1:XA:1301:U:C6	2.42	0.55
1:XA:1359:C:N4	14:YN:35:ARG:NE	2.54	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
7:XG:29:LYS:HE2	7:XG:102:ARG:HB3	1.89	0.55
34:YA:1872:A:C5	34:YA:1878:G:H1'	2.41	0.55
34:YA:2056:G:C6	34:YA:2577:A:N9	2.75	0.55
34:YA:236:C:H2'	34:YA:237:C:C6	2.42	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
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
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.80	0.55
1:QA:625:G:H5'	16:QP:10:GLY:N	2.21	0.55
34:RA:1299:G:H22	34:RA:1640:C:H5'	1.71	0.55
34:RA:2476:A:H2'	34:RA:2477:C:C6	2.42	0.55
34:RA:831:G:N2	44:RP:53:GLY:O	2.40	0.55
34:RA:1826:G:H4'	36:RD:242:ARG:HH21	1.72	0.55
53:RY:6:HIS:O	53:RY:97:ARG:NH2	2.39	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1440(K):C:HO2'	1:XA:1440(L):G:H21	1.54	0.55
3:XC:23:TYR:HB2	10:XJ:93:GLY:C	2.27	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:2134:A:H1'	34:YA:2158:A:N3	2.22	0.55
34:YA:2080:G:N1	34:YA:2241:A:C2	2.74	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:1253:G:P	10:QJ:44:VAL:HG23	2.46	0.54
1:QA:29:G:HO2'	1:QA:295:C:HO2'	1.47	0.54
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
2:QB:130:ARG:O	2:QB:135:GLN:NE2	2.37	0.54
34:RA:1999:C:H1'	34:RA:2687:U:H1'	1.89	0.54
34:RA:459:U:H2'	34:RA:460:A:H8	1.72	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: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
1:XA:745:C:H5''	1:XA:851:G:H1'	1.87	0.54
30:Y6:40:CYS:HB3	30:Y6:43:CYS:HB3	1.88	0.54
34:YA:2056:G:C4	34:YA:2577:A:C6	2.95	0.54
34:YA:1493:C:C4	34:YA:2210:G:C4	2.95	0.54
34:YA:1456:G:N1	34:YA:2703:C:N4	2.18	0.54
34:YA:482:A:H1'	34:YA:498:G:N2	2.22	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
8:QH:64:LYS:HG2	8:QH:79:VAL:HG11	1.90	0.54
3:QC:5:ILE:HD12	14:QN:49:HIS:CD2	2.42	0.54
1:QA:1221:G:P	19:QS:36:ARG:CZ	2.95	0.54
1:QA:954:G:H21	19:QS:83:HIS:CE1	2.23	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
14:XN:23:ARG:NH1	14:XN:24:CYS:O	2.40	0.54
34:YA:390:A:N1	44:YP:71:VAL:HG21	2.22	0.54
1:QA:974:A:OP2	14:QN:29:ARG:HG3	2.03	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:21:ARG:NH2	10:QJ:15:THR:HG21	2.22	0.54
1:QA:309:G:C5'	16:QP:27:LYS:HE2	2.27	0.54
34:RA:2789:C:H1'	34:RA:2892:A:H2	1.72	0.54
34:RA:2312:U:O2'	39:RG:40:ASN:OD1	2.20	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
40:YH:2:SER:OG	40:YH:2:SER:O	2.24	0.54
34:YA:2275:C:O2	45:YQ:83:MET:CG	2.55	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
1:QA:957:U:H5'	19:QS:81:ARG:CB	2.37	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
1:QA:625:G:C5'	16:QP:9:PHE:HB3	2.36	0.54
1:XA:1396:A:H2	5:XE:19:MET:HG3	1.72	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
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:111:G:O2'	1:QA:389:A:O2'	2.23	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
1:QA:624:C:H4'	16:QP:10:GLY:O	2.07	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
1:QA:981:U:H5''	14:QN:6:LEU:CD2	2.35	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:XA:1226:C:H3'	13:XM:103:THR:OG1	2.07	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: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
1:QA:980:C:C4'	14:QN:19:ARG:HH21	2.16	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
28:R4:34:GLU:OE1	39:RG:113:ARG:NE	2.40	0.54
50:RV:62:LEU:HB2	50:RV:93:GLU:HG3	1.88	0.54
3:XC:14:ILE:HG22	3:XC:15:THR:HG23	1.88	0.54
1:XA:421:U:H4'	3:XC:192:THR:HG22	1.88	0.54
3:XC:22:TRP:HA	10:XJ:93:GLY:CA	2.38	0.54
1:XA:1315:U:O3'	14:YN:17:LYS:HE2	1.68	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
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
30:Y6:46:HIS:ND1	34:YA:2371:G:O2'	2.37	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:979:C:OP1	1:QA:1223:C:N4	2.41	0.54
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.89	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
33:R9:25:VAL:HB	33:R9:34:GLN:HB2	1.90	0.54
30:R6:46:HIS:ND1	34:RA:2371:G:O2'	2.28	0.54
46:RR:33:ARG:NH2	46:RR:115:GLU:OE1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:XB:192:SER:OG	2:XB:193:ASP:N	2.40	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
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
27:R3:13:ILE:HG21	34:RA:988:A:N6	2.23	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
6:XF:89:MET:HE3	18:XR:76:LEU:HD13	1.90	0.54
22:XV:75:C:OP1	25:Y1:30:VAL:HG22	2.08	0.54
34:YA:2240:C:H2'	34:YA:2241:A:C8	2.43	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
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
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
34:RA:247:G:H4'	34:RA:386:G:C4	2.43	0.54
1:XA:1253:G:N3	1:XA:1254:C:C5	2.76	0.54
1:XA:702:A:C6	34:YA:1848:A:C4	2.96	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:197:A:C5	34:YA:2430:A:H2	2.09	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:1305:G:O2'	1:QA:1332:A:N7	2.36	0.53
1:QA:1286:A:N6	1:QA:1355:G:OP1	2.41	0.53
9:QI:71:SER:HA	9:QI:74:ILE:HG12	1.90	0.53
1:QA:1280:A:N9	10:QJ:41:PRO:HD2	2.22	0.53
3:QC:23:TYR:CE1	10:QJ:9:ARG:C	2.82	0.53
34:RA:2750:A:P	40:RH:59:ARG:HH12	2.31	0.53
34:RA:685:A:C2	34:RA:787:U:H1'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:RI:83:ALA:HA	41:RI:89:TYR:CD2	2.43	0.53
53:RY:19:LYS:HZ1	53:RY:20:TYR:HE2	1.47	0.53
1:XA:1230:C:N3	13:XM:102:ARG:NH1	2.55	0.53
1:XA:1304:G:C5'	1:XA:1304:G:H8	2.06	0.53
1:XA:1320:C:N3	19:XS:37:ARG:N	2.56	0.53
1:XA:51:A:C4	1:XA:353:A:C5	2.96	0.53
34:YA:911:A:C2	45:YQ:9:TYR:CD1	2.96	0.53
1:QA:1126:U:H5	1:QA:1148:U:H3	1.56	0.53
1:QA:137:C:H1'	16:QP:63:GLY:CA	2.29	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.72	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
4:QD:98:GLU:HA	4:QD:103:ASN:HD22	1.73	0.53
1:QA:1080:A:P	5:QE:14:ARG:HH22	2.31	0.53
3:QC:23:TYR:CZ	10:QJ:9:ARG:O	2.61	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:1502:A:H5'	1:XA:1504:G:N7	2.24	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:68(B):G:H1	1:XA:68(Z):C:H42	1.56	0.53
23:XX:6:G:H2'	23:XX:7:G:C8	2.44	0.53
34:YA:2074:U:HO2'	34:YA:2597:G:HO2'	1.55	0.53
34:YA:2391:G:H1'	34:YA:2429:G:H21	1.72	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
34:YA:2319:G:O6	47:YS:3:ARG:O	2.25	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
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
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
1:XA:232:G:H1'	1:XA:262:A:N1	2.24	0.53
1:XA:34:C:H2'	1:XA:35:G:C8	2.43	0.53
1:XA:8:A:N6	4:XD:209:ARG:CA	2.72	0.53
1:XA:948:C:P	13:XM:106:ASN:HB3	2.48	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:1360:A:H1'	14:XN:17:LYS:HG3	1.89	0.53
1:XA:107:G:O6	20:XT:15:ARG:NH2	2.41	0.53
30:Y6:35:GLU:OE2	30:Y6:50:ARG:NH1	2.42	0.53
34:YA:2092:U:O4	34:YA:2228:G:O6	2.26	0.53
34:YA:820:A:H1'	34:YA:943:U:H1'	1.90	0.53
54:YZ:129:SER:OG	54:YZ:132:ASN:OD1	2.24	0.53
3:QC:88:ARG:HG2	3:QC:101:LEU:HD13	1.90	0.53
4:QD:205:GLU:HG2	5:QE:100:VAL:C	2.27	0.53
3:QC:23:TYR:CD1	10:QJ:9:ARG:O	2.60	0.53
27:R3:45:GLY:HA3	34:RA:852:G:H5'	1.89	0.53
34:RA:668:G:H2'	34:RA:670:A:H62	1.74	0.53
32:R8:25:MET:CE	44:RP:64:LYS:HD2	2.38	0.53
34:RA:631:A:H5'	44:RP:65:ARG:HG2	1.90	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
4:QD:196:LEU:CA	6:XF:16:GLN:HG2	2.27	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:Y9:29:ASN:ND2	33:Y9:32:HIS:CD2	2.77	0.53
33:Y9:6:SER:HB3	34:YA:2466:C:H5''	1.89	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: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
1:QA:691:G:O6	11:QK:52:GLY:HA2	2.08	0.53
1:QA:986:A:O4'	19:QS:55:LYS:HA	2.08	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:1305:G:N7	1:XA:1331:G:O6	2.41	0.53
1:XA:976:G:H21	1:XA:1362(B):C:H2'	1.73	0.53
1:XA:901:A:C5	1:XA:902:G:H1'	2.44	0.53
4:QD:20:TYR:CE2	6:XF:14:LEU:HA	2.43	0.53
34:YA:222:A:HO2'	34:YA:420:C:HO2'	1.56	0.53
34:YA:685:A:H5''	34:YA:788:A:N6	2.23	0.53
47:YS:26:LEU:HB3	47:YS:87:PHE:HA	1.90	0.53
1:QA:1187:G:N2	14:QN:60:SER:OG	2.42	0.53
1:QA:740:U:O3'	15:QO:39:LEU:CG	2.56	0.53
3:QC:29:TYR:CE1	14:QN:54:PRO:HG2	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:185:ASP:OD1	38:RF:188:ARG:NH1	2.42	0.53
38:RF:107:LYS:HE3	38:RF:207:GLY:H	1.73	0.53
45:RQ:81:VAL:O	45:RQ:82:ARG:NE	2.34	0.53
34:YA:2071:A:H2'	34:YA:2072:G:C8	2.44	0.53
34:YA:1457:A:N1	34:YA:2703:C:N4	2.57	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
41:YI:68:LEU:HA	41:YI:71:ILE:HG22	1.90	0.53
1:QA:1048:G:OP1	14:QN:4:LYS:CE	2.56	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
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: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
34:RA:642:G:H21	34:RA:646:A:H2	1.56	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
34:YA:1061:U:H4'	34:YA:1070:A:H1'	1.90	0.53
34:YA:288:C:H2'	34:YA:289:A:H8	1.73	0.53
31:Y7:37:LYS:HE3	34:YA:458:G:C5	2.44	0.53
34:YA:882:G:H2'	34:YA:883:G:H8	1.74	0.53
40:YH:103:LEU:HB3	40:YH:115:VAL:HG22	1.91	0.53
1:QA:1318:A:H62	14:QN:16:PHE:HB3	1.74	0.53
1:QA:797:C:H2'	1:QA:798:G:H8	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1279:A:O2'	1:XA:1282:C:N4	2.42	0.53
1:XA:1260:C:O2'	1:XA:1283:G:O2'	2.23	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:699:A:O3'	34:YA:1554:A:N6	2.42	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
34:YA:793:A:OP2	34:YA:2071:A:O2'	2.27	0.53
1:QA:1314:C:C5	19:QS:6:LYS:CE	2.92	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
7:QG:16:LEU:CD2	9:QI:42:ARG:CA	2.87	0.53
1:QA:1331:G:P	13:QM:24:GLY:H	2.32	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
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
42:RN:39:ARG:NH1	42:RN:48:MET:SD	2.82	0.53
28:Y4:11:PRO:HA	28:Y4:25:TYR:HA	1.90	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
34:YA:758:C:H2'	34:YA:759:G:H8	1.73	0.53
43:YO:120:GLU:OE1	48:YT:67:SER:OG	2.28	0.53
26:Y2:29:LYS:NZ	52:YX:6:ASP:OD2	2.32	0.53
1:QA:1223:C:P	19:QS:78:ARG:CZ	2.93	0.52
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:589:C:H2'	34:RA:590:A:C8	2.44	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: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
34:YA:1500:G:O2'	36:YD:100:GLY:O	2.27	0.52
36:YD:17:THR:HB	36:YD:205:VAL:H	1.74	0.52
1:QA:1305:G:H2'	1:QA:1331:G:C2	2.43	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
10:QJ:33:GLN:O	10:QJ:76:ASN:ND2	2.43	0.52
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.49	0.52
19:QS:4:SER:OG	19:QS:5:LEU:N	2.41	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
34:RA:390:A:H1'	34:RA:391:G:C8	2.44	0.52
1:XA:1216:G:C5'	14:XN:5:ALA:HB2	2.40	0.52
1:XA:1440(F):G:N2	1:XA:1440(P):A:H1'	2.24	0.52
1:XA:129(B):G:H1'	1:XA:186(J):U:H2'	1.92	0.52
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
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
34:YA:2479:G:OP1	34:YA:2537:U:O2'	2.25	0.52
31:Y7:37:LYS:CG	34:YA:458:G:C8	2.93	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
1:QA:855:G:H21	1:QA:1539:C:H5''	1.74	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:RH:125:VAL:O	40:RH:125:VAL:HG22	2.08	0.52
34:RA:1252:G:H21	49:RU:33:ARG:NH2	2.07	0.52
54:RZ:27:VAL:HG22	54:RZ:85:HIS:HE1	1.74	0.52
1:XA:1500:A:H5''	1:XA:1508:G:H5'	1.92	0.52
1:XA:608:A:C3'	1:XA:609:A:H8	2.22	0.52
1:XA:860:A:H3'	1:XA:861:G:H8	1.74	0.52
3:XC:32:LEU:O	3:XC:59:ARG:NH2	2.42	0.52
1:XA:974:A:OP2	14:XN:31:ARG:HB2	2.08	0.52
6:XF:50:TYR:HE1	18:XR:77:GLY:O	1.67	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
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
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
1:XA:1301:U:HO2'	13:XM:17:VAL:HG21	1.67	0.52
18:XR:47:THR:HG22	18:XR:85:LEU:HD13	1.91	0.52
13:XM:84:ILE:CD1	19:XS:65:ASN:CG	2.61	0.52
1:XA:960:U:C5	19:XS:78:ARG:HG2	2.45	0.52
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
34:RA:137(B):G:H21	52:RX:41:ASN:HD21	1.57	0.52
34:RA:1567:A:C8	36:RD:84:TYR:HE2	2.27	0.52
34:RA:787:U:H5''	34:RA:788:A:H5'	1.91	0.52
24:R0:7:LEU:HD12	45:RQ:83:MET:SD	2.50	0.52
1:XA:1300:G:N1	1:XA:1334:G:C5	2.78	0.52
1:XA:908:A:H2'	1:XA:909:A:C8	2.45	0.52
34:YA:2757:A:N1	40:YH:67:LEU:HD13	2.24	0.52
1:QA:186(Q):U:H2'	1:QA:191:G:C8	2.45	0.52
1:QA:28:G:N3	1:QA:296:U:H4'	2.24	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:YN:34:TYR:CE1	2.97	0.52
7:XG:18:TYR:OH	7:XG:47:CYS:SG	2.64	0.52
1:XA:1540:U:C2	23:XX:6:G:N2	2.78	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
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
1:QA:973:G:H4'	14:QN:29:ARG:NH2	2.22	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
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
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
34:YA:410:G:C2	34:YA:2407:G:N7	2.78	0.52
26:Y2:48:HIS:CG	34:YA:96:G:H4'	2.45	0.52
1:QA:1162:C:H2'	1:QA:1163:C:C6	2.44	0.52
1:QA:994:A:C8	1:QA:1216:G:H1'	2.45	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:1108:G:O3'	3:QC:176:HIS:CD2	2.63	0.52
1:QA:1279:A:H2	10:QJ:43:ARG:HH12	1.57	0.52
1:QA:946:A:P	13:QM:114:ARG:HH21	2.30	0.52
10:QJ:47:PHE:HD2	14:QN:34:TYR:CD2	2.28	0.52
1:QA:1304:G:H5''	21:QU:10:ARG:NH2	2.24	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
34:RA:323:G:C2	34:RA:333:G:H1'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:RF:65:TRP:NE1	38:RF:73:ALA:O	2.42	0.52
35:RB:55:U:O3'	39:RG:27:ASN:ND2	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:C6	1:XA:899:C:P	3.03	0.52
1:XA:974:A:P	14:XN:29:ARG:CZ	2.98	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
1:XA:1124:G:P	10:XJ:36:GLY:HA3	2.50	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
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
1:QA:1251:A:N1	1:QA:1354:C:O2'	2.35	0.52
1:QA:675:A:H61	1:QA:715:A:H61	1.57	0.52
4:QD:122:ARG:NH1	4:QD:122:ARG:O	2.43	0.52
1:QA:1357:A:C5'	10:QJ:45:ARG:HH12	2.22	0.52
34:RA:2306:C:H2'	34:RA:2307:G:N2	2.25	0.52
34:RA:1567:A:C8	36:RD:84:TYR:CE2	2.98	0.52
28:R4:7:PRO:CG	39:RG:61:ALA:HB1	2.30	0.52
35:RB:104:A:OP1	54:RZ:72:ARG:NH1	2.43	0.52
1:XA:1440(K):C:HO2'	1:XA:1440(L):G:N2	2.07	0.52
1:XA:191:G:O2'	20:XT:103:GLY:N	2.43	0.52
2:XB:43:ASP:O	2:XB:47:THR:OG1	2.23	0.52
4:XD:187:ARG:NH1	4:XD:188:LEU:O	2.43	0.52
1:XA:8:A:H62	4:XD:208:SER:C	2.13	0.52
1:XA:1440(N):G:P	20:XT:35:THR:HG21	2.46	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:N2	34:YA:1801:G:OP1	2.32	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:718:G:C1'	11:XK:117:ASN:HB2	2.40	0.52
34:YA:197:A:C8	34:YA:2430:A:H2	2.27	0.52
41:YI:20:ASP:N	41:YI:20:ASP:OD2	2.43	0.52
34:YA:389:G:H22	44:YP:72:PRO:HD3	1.75	0.52
45:YQ:21:THR:OG1	45:YQ:22:LYS:N	2.42	0.52
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
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
33:R9:27:CYS:SG	33:R9:28:GLU:N	2.83	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
34:RA:990:A:H1'	34:RA:1156:A:N3	2.25	0.51
42:RN:35:ARG:HG3	42:RN:37:LYS:HG2	1.91	0.51
1:XA:1382:C:O5'	1:XA:1382:C:H6	1.93	0.51
1:XA:322:C:H5''	20:XT:23:ARG:HE	1.75	0.51
1:XA:974:A:N9	14:YN:31:ARG:CD	2.63	0.51
8:XH:121:ASP:N	8:XH:121:ASP:OD1	2.42	0.51
34:YA:1849:G:H2'	34:YA:1850:G:H8	1.75	0.51
34:YA:199:A:C5	34:YA:2434:A:N1	2.77	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
34:YA:564:C:N4	34:YA:573:G:OP1	2.37	0.51
1:QA:1315:U:H2'	1:QA:1316:G:H8	1.75	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
4:QD:15:GLU:OE2	4:QD:66:ARG:NH2	2.42	0.51
1:QA:1360:A:H4'	14:QN:17:LYS:HZ2	1.74	0.51
1:QA:974:A:C4'	14:QN:31:ARG:CB	2.87	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:1294:G:H2'	1:XA:1295:G:H8	1.76	0.51
1:XA:1252:A:C2	1:XA:1355:G:H1'	2.41	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
34:YA:1418:G:H2'	34:YA:1579:A:N6	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:414:C:O3'	34:YA:1878:G:N2	2.44	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: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
29:Y5:48:GLU:CD	51:YW:37:ARG:HH12	2.09	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
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
41:RI:83:ALA:C	41:RI:89:TYR:CD2	2.83	0.51
53:RY:76:CYS:HB2	53:RY:99:CYS:SG	2.51	0.51
1:XA:1129:C:H1'	1:XA:1132:C:C5	2.45	0.51
1:XA:1259:C:O2'	1:XA:1283:G:N2	2.42	0.51
1:XA:406:G:H2'	1:XA:407:G:C8	2.45	0.51
3:QC:79:ARG:CD	11:XK:104:GLN:HG3	2.40	0.51
12:XL:10:LEU:HD23	17:XQ:32:TYR:CZ	2.44	0.51
10:XJ:64:GLU:O	14:XN:56:VAL:HG22	2.11	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: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
34:YA:1971:A:C4	36:YD:241:PRO:HB3	2.45	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
35:YB:104:A:OP1	54:YZ:72:ARG:NH1	2.42	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
1:QA:269:C:H2'	1:QA:270:A:C8	2.45	0.51
1:QA:45:U:H3	1:QA:396:G:H1	1.58	0.51
1:QA:981:U:H5'	14:QN:6:LEU:HD23	1.92	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: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
34:RA:242:G:N2	34:RA:254:G:H2'	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:307:G:H21	34:RA:330:A:N6	2.09	0.51
34:RA:220:G:H22	34:RA:427:U:H2'	1.75	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
41:RI:86:THR:HA	41:RI:123:LEU:CB	2.40	0.51
1:XA:375:U:C5'	1:XA:375:U:H6	2.23	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
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
38:YF:198:ALA:HA	38:YF:201:VAL:HG12	1.91	0.51
1:QA:986:A:H2'	1:QA:987:G:C8	2.46	0.51
1:QA:608:A:O2'	16:QP:9:PHE:CE1	2.62	0.51
25:R1:10:LYS:NZ	25:R1:65:SER:OG	2.41	0.51
28:R4:26:SER:OG	28:R4:27:THR:N	2.43	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
34:RA:414:C:H2'	34:RA:415:A:H8	1.75	0.51
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:1279:A:HO2'	1:XA:1281:U:H5	1.59	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:2105:C:H2'	34:YA:2106:G:C8	2.46	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
1:QA:1142:G:C2	1:QA:1143:G:H1'	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: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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:992:C:H2'	34:YA:993:G:H8	1.76	0.51
38:YF:63:LYS:NZ	38:YF:75:HIS:O	2.33	0.51
53:YY:76:CYS:SG	53:YY:79:CYS:SG	3.08	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
1:QA:770:C:H2'	1:QA:771: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
34:RA:1914:C:H2'	34:RA:1915:U:O4'	2.10	0.51
34:RA:191:A:H2'	34:RA:192:C:C6	2.45	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:1305:G:N2	1:XA:1331:G:C8	2.79	0.51
1:XA:1422:G:H4'	43:YO:48:PRO:HB3	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
11:XK:109:VAL:HA	18:XR:86:VAL:HA	1.93	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
34:YA:36:G:H4'	34:YA:451:C:C2	2.45	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:1391:U:H2'	1:QA:1392:G:C8	2.46	0.51
1:QA:770:C:H2'	1:QA:771:G:H8	1.76	0.51
1:QA:186(A):C:H1'	20:QT:81:LYS:HE3	1.92	0.51
28:R4:7:PRO:HG3	39:RG:61:ALA:CB	2.27	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
34:RA:414:C:H2'	34:RA:415:A:C8	2.46	0.51
34:RA:36:G:H4'	34:RA:451:C:C2	2.45	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
50:RV:8:GLY:O	50:RV:10:LYS:NZ	2.42	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:1347:G:H22	1:XA:1373:G:H2'	1.76	0.51
1:XA:398:C:H2'	1:XA:399:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:38:ILE:HD12	8:XH:41:ARG:HH21	1.76	0.51
1:XA:1313:U:H5	19:XS:6:LYS:HZ1	1.57	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
42:YN:97:ARG:HA	42:YN:100:GLU:HB2	1.92	0.51
38:YF:34:TRP:CD2	44:YP:8:PRO:HB3	2.46	0.51
34:YA:1454:U:H5	46:YR:73:VAL:CG1	2.24	0.51
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.46	0.51
1:QA:126:G:O2'	1:QA:634:C:O2'	2.21	0.51
1:QA:65:U:H2'	1:QA:381:C:C5	2.45	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:1216:G:H5''	14:XM:5:ALA:HB2	1.92	0.51
1:XA:1230:C:C4	13:XM:102:ARG:NH1	2.77	0.51
1:XA:186(K):G:O6	1:XA:264:U:H5''	2.11	0.51
1:XA:435:C:H2'	1:XA:436:C:H6	1.76	0.51
1:XA:401:C:H1'	1:XA:622:A:H1'	1.93	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
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.92	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
29:Y5:3:LYS:HB2	34:YA:2577:A:C1'	2.40	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
1:QA:231:G:H2'	1:QA:232:G:H8	1.75	0.51
1:QA:34:C:H2'	1:QA:35:G:C8	2.45	0.51
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.93	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:1700:A:H3'	34:YA:1701:A:H8	1.76	0.51
34:YA:2250:G:N2	34:YA:2250:G:OP2	2.35	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1038:C:H2'	1:QA:1039:C:H6	1.76	0.50
1:QA:447:G:H2'	1:QA:485:G:N2	2.26	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
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.58	0.50
1:QA:617:G:H4'	16:QP:44:THR:OG1	2.11	0.50
1:QA:1318:A:C4	19:QS:37:ARG:CZ	2.93	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
47:RS:35:ILE:HD11	47:RS:97:ARG:HD2	1.92	0.50
1:XA:1068:G:N2	1:XA:1108:G:H1'	2.25	0.50
1:XA:140:A:H2'	1:XA:141:A:C8	2.45	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
1:XA:708:C:P	11:XK:85:ARG:HH12	2.28	0.50
34:YA:1316:U:H2'	34:YA:1317:A:C8	2.46	0.50
34:YA:137(B):G:H2'	34:YA:139:G:N7	2.26	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:824:A:O2'	34:YA:2358:G:O6	2.17	0.50
34:YA:2532:G:O2'	34:YA:2657:A:N1	2.36	0.50
34:YA:86:C:H2'	34:YA:87:C:C6	2.46	0.50
1:QA:266:G:O2'	1:QA:268:C:OP2	2.24	0.50
1:QA:112:G:H22	1:QA:315:A:H2	1.59	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:R8:30:ARG:O	32:R8:30:ARG:HG2	2.12	0.50
32:R8:8:LYS:HB3	32:R8:12:LYS:HE3	1.94	0.50
34:RA:1150:C:H2'	34:RA:1151:G:C8	2.46	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:65:C:H2'	34:RA:66:C:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:24:U:H2'	1:XA:25:C:H6	1.76	0.50
2:XB:167:PRO:O	2:XB:171:ALA:HB2	2.11	0.50
4:XD:107:ARG:HB3	4:XD:174:LEU:HD11	1.93	0.50
4:XD:19:LEU:HB3	4:XD:21:LEU:HD23	1.92	0.50
1:XA:1533:C:C4	23:XX:13:A:N1	2.79	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
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
1:QA:1145:C:O2'	1:QA:1146:A:N7	2.43	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
7:QG:111:ARG:NH1	7:QG:113:GLU:OE1	2.43	0.50
12:QL:39:VAL:HG12	12:QL:57:LYS:HG2	1.93	0.50
11:QK:108:ILE:CG2	18:QR:88:LYS:OXT	2.60	0.50
20:QT:67:ALA:O	20:QT:73:HIS:ND1	2.39	0.50
34:RA:1116:C:H2'	34:RA:1117:G:C8	2.46	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
39:RG:121:ASN:O	39:RG:131:TYR:OH	2.26	0.50
7:XG:111:ARG:HD3	7:XG:112:PRO:HD2	1.93	0.50
1:XA:1539:C:C2	23:XX:7:G:N1	2.79	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:XA:702:A:N1	34:YA:1848:A:C5	2.79	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
1:QA:107:G:H3'	1:QA:108:G:N2	2.24	0.50
1:QA:10:A:H2'	1:QA:11:G:C8	2.46	0.50
1:QA:1302:U:P	13:QM:27:LYS:HE2	2.51	0.50
1:QA:757:U:H1'	1:QA:879:C:H1'	1.93	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:OG1	38:RF:100:THR:O	2.30	0.50
49:RU:90:VAL:HG13	50:RV:39:LEU:HD22	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
34:YA:390:A:H1'	34:YA:391:G:C8	2.47	0.50
40:YH:85:LYS:HB3	40:YH:133:VAL:HG13	1.92	0.50
1:QA:1222:G:O3'	19:QS:78:ARG:CZ	2.60	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
2:QB:111:ARG:HH11	2:QB:114:ARG:HH12	1.60	0.50
1:QA:6:G:N3	5:QE:119:LEU:HD11	2.27	0.50
20:QT:66:ALA:O	20:QT:71:THR:OG1	2.28	0.50
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
53:RY:19:LYS:NZ	53:RY:20:TYR:CE2	2.71	0.50
1:XA:1306:A:OP2	1:XA:1331:G:N2	2.33	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:767:A:H2'	1:XA:768:A:C8	2.46	0.50
1:XA:981:U:H6	1:XA:981:U:O5'	1.94	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
1:XA:986:A:C1'	19:XS:52:TYR:OH	2.58	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
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
22:XV:19:G:C5	34:YA:2111:C:H4'	2.46	0.50
31:Y7:37:LYS:CE	34:YA:458:G:C5	2.95	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: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
1:QA:22:G:H4'	1:QA:885:G:C8	2.47	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1347:G:C8	9:XI:108:VAL:C	2.85	0.50
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.26	0.50
1:XA:728:A:C5	15:XO:54:ARG:CD	2.95	0.50
1:XA:656:C:O2'	15:XO:28:GLN:NE2	2.45	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:1510:U:H3	1:QA:1525:G:H1	1.59	0.50
1:QA:17:U:H2'	1:QA:18:C:C6	2.46	0.50
1:QA:1368:G:OP1	10:QJ:62:HIS:CD2	2.64	0.50
34:RA:2025:C:H2'	34:RA:2026:C:C6	2.47	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
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
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
13:XM:82:MET:O	13:XM:93:ARG:NH2	2.43	0.50
10:XJ:62:HIS:HD2	14:XN:59:ALA:CB	2.24	0.50
1:XA:754:C:C6	15:XO:69:TYR:CE2	2.95	0.50
20:XT:75:ASN:OD1	20:XT:75:ASN:N	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:1315:U:H2'	1:QA:1316:G:C8	2.47	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
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
34:RA:288:C:H2'	34:RA:289:A:H8	1.76	0.50
36:RD:126:GLN:O	36:RD:129:ASN:ND2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:895:G:O2'	17:XQ:100:LYS:HD2	2.11	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
34:YA:959:A:N3	34:YA:2457:U:O2'	2.44	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
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
1:QA:1491:G:C5'	12:QL:46:LYS:HG2	2.41	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: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
34:RA:1638:C:O2	34:RA:2698:U:O2'	2.30	0.50
34:RA:828:U:O2'	34:RA:831:G:O6	2.26	0.50
42:RN:9:VAL:HG11	42:RN:39:ARG:HH12	1.77	0.50
1:XA:1040:U:H2'	1:XA:1041:A:C8	2.47	0.50
1:XA:879:C:H2'	1:XA:880:C:C6	2.46	0.50
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.28	0.50
1:XA:1358:U:H5'	14:XN:35:ARG:N	2.27	0.50
30:Y6:23:THR:OG1	30:Y6:24:GLU:N	2.42	0.50
34:YA:2124:G:C2	34:YA:2125:G:H1'	2.46	0.50
34:YA:2100:G:C6	34:YA:2190:G:C4	3.00	0.50
34:YA:2097:C:C2	34:YA:2193:G:C2	3.00	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
34:YA:69:C:H2'	34:YA:70:G:H8	1.77	0.50
43:YO:63:VAL:HG12	43:YO:106:LEU:HD21	1.93	0.50
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
1:QA:625:G:H4'	16:QP:16:HIS:HB3	1.93	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:1494:A:H2	34:RA:1579:A:H1'	1.76	0.49
34:RA:2273:A:H2'	34:RA:2274:A:C8	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:659:C:H2'	34:RA:660:G:H8	1.77	0.49
34:RA:1818:U:H5	36:RD:157:ARG:HH21	1.60	0.49
1:XA:1304:G:H2'	1:XA:1333:A:H61	1.78	0.49
1:XA:413:G:H1'	1:XA:428:G:N2	2.27	0.49
5:XE:81:GLU:HG2	5:XE:90:VAL:HG23	1.94	0.49
1:XA:948:C:OP2	13:XM:106:ASN:CB	2.60	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
34:YA:922:U:H2'	34:YA:923:C:C6	2.47	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
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:62:U:H2'	1:QA:63:C:C6	2.47	0.49
1:QA:980:C:H4'	14:QN:19:ARG:CZ	2.42	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:186(C):C:H2'	1:XA:186(D):G:C8	2.47	0.49
1:XA:8:A:N6	4:XD:209:ARG:N	2.57	0.49
6:XF:89:MET:HE1	18:XR:76:LEU:HB2	1.94	0.49
8:XH:19:VAL:HG23	8:XH:21:LYS:HG3	1.95	0.49
7:XG:16:LEU:HD21	9:XI:45:ALA:N	2.27	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:2090:G:C2	34:YA:2230:G:C4	2.97	0.49
27:Y3:24:LYS:NZ	34:YA:933:A:OP1	2.38	0.49
54:YZ:6:LYS:NZ	54:YZ:43:GLU:OE1	2.39	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
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
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:265:A:H2'	34:RA:266:G:H4'	1.93	0.49
34:RA:2735:G:N2	34:RA:2770:G:H1'	2.28	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1481:U:H2'	1:XA:1482:G:C8	2.47	0.49
1:XA:658:G:H1'	15:XO:22:THR:HG21	1.93	0.49
1:XA:581:G:N2	1:XA:759:A:OP2	2.38	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:2261:C:H1'	34:YA:2388:A:H1'	1.94	0.49
34:YA:270(P):U:N3	41:YI:52:ARG:NH2	2.60	0.49
35:YB:44:G:O2'	35:YB:47:C:N4	2.44	0.49
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:975:G:N2	34:RA:1156:A:O2'	2.45	0.49
34:RA:922:U:H2'	34:RA:923:C:C6	2.47	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: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
1:XA:412:A:C2	4:XD:35:ARG:HB3	2.47	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: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
1:QA:5:U:O4	4:QD:87:GLY:N	2.42	0.49
34:RA:2103:C:H2'	34:RA:2104:G:C8	2.48	0.49
31:R7:35:ARG:NH1	34:RA:54:G:O2'	2.39	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:974:A:C5	14:XN:31:ARG:CZ	2.95	0.49
32:Y8:10:ALA:O	32:Y8:14:VAL:HB	2.13	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
34:YA:971:C:O2'	34:YA:983:A:N3	2.38	0.49
37:YE:1:MET:N	37:YE:83:ASP:O	2.36	0.49
1:QA:1255:G:H1	1:QA:1282:C:H42	1.61	0.49
1:QA:975:A:N6	10:QJ:48:THR:HG1	2.05	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
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
34:RA:1161:C:H2'	34:RA:1162:G:C8	2.47	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: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
34:RA:444:C:H2'	34:RA:445:C:C6	2.48	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:178:C:H2'	1:XA:179:A:H8	1.76	0.49
1:XA:51:A:C5	1:XA:353:A:C2	3.01	0.49
1:XA:536:C:H2'	1:XA:537:G:C8	2.48	0.49
1:XA:60:A:H2	1:XA:378:G:H1'	1.77	0.49
4:QD:20:TYR:CZ	6:XF:14:LEU:C	2.85	0.49
6:XF:91:VAL:HB	18:XR:34:TYR:OH	2.12	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
29:Y5:9:LYS:NZ	34:YA:2019:A:N7	2.59	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
36:YD:97:TYR:HB2	36:YD:101:GLU:O	2.13	0.49
34:YA:2751:G:N7	40:YH:2:SER:OG	2.45	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: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
5:QE:151:LEU:HD12	8:QH:79:VAL:HG12	1.94	0.49
1:QA:1313:U:C2'	19:QS:6:LYS:NZ	2.74	0.49
33:R9:11:CYS:SG	33:R9:14:CYS:N	2.85	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1283:G:H1'	34:RA:1329:U:O2	2.13	0.49
34:RA:896:A:H5''	54:RZ:146:ILE:HG22	1.94	0.49
1:XA:1305:G:C4	1:XA:1331:G:N1	2.81	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
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
1:XA:1536:C:O2	23:XX:10:G:N2	2.44	0.49
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: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
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
2:QB:178:ARG:NH2	2:QB:198:ASP:OD1	2.39	0.49
20:QT:56:MET:HG3	20:QT:84:LEU:HD21	1.94	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:2581:G:OP2	34:RA:2581:G:N2	2.46	0.49
34:RA:2532:G:O2'	34:RA:2657:A:N1	2.44	0.49
34:RA:318:C:H2'	34:RA:319:C:C6	2.48	0.49
1:XA:308:C:H2'	1:XA:309:G:H5'	1.94	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
1:XA:1187:G:N3	14:XN:61:TRP:O	2.46	0.49
20:XT:41:ILE:HD13	20:XT:87:LYS:HG2	1.95	0.49
1:XA:132:C:OP1	20:XT:75:ASN:ND2	2.46	0.49
31:Y7:37:LYS:CE	34:YA:458:G:C4	2.95	0.49
34:YA:1028:A:N6	34:YA:1125:G:H2'	2.28	0.49
34:YA:911:A:N1	45:YQ:9:TYR:CG	2.80	0.49
34:YA:662:G:H5''	44:YP:17:LYS:HG2	1.93	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:861:G:HO2'	1:XA:874:G:HO2'	1.49	0.49
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
24:Y0:11:ARG:O	24:Y0:14:ARG:NH2	2.43	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
28:Y4:38:LYS:HE2	39:YG:112:PRO:HG3	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
1:QA:1160:G:H5'	2:QB:132:LYS:HZ1	1.78	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
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
1:XA:1047:G:O2'	1:XA:1215:G:O2'	2.16	0.49
1:XA:107:G:H3'	1:XA:108:G:N2	2.26	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
1:XA:68(J):G:H1	1:XA:68(R):U:H3	1.60	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
1:XA:1226:C:H3'	13:XM:103:THR:CB	2.43	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
34:YA:448:U:C4	34:YA:583:G:H1'	2.48	0.49
1:QA:1244:C:H2'	1:QA:1245:A:C8	2.48	0.48
1:QA:1372:U:H5''	9:QI:69:GLY:CA	2.43	0.48
1:QA:1108:G:P	3:QC:175:LEU:H	2.29	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1248:A:N6	21:QU:26:LYS:CD	2.56	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:1118:C:H1'	1:XA:1179:A:C5	2.48	0.48
1:XA:1251:A:H2'	1:XA:1252:A:C8	2.48	0.48
1:XA:518:C:H2'	1:XA:530:G:N3	2.27	0.48
10:XJ:48:THR:O	14:XN:34:TYR:OH	2.29	0.48
1:XA:1223:C:OP1	19:XS:78:ARG:NH2	2.46	0.48
32:Y8:2:PRO:N	34:YA:591:C:O2	2.45	0.48
33:Y9:14:CYS:HB3	33:Y9:27:CYS:HB2	1.95	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
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
32:Y8:13:ARG:HD2	44:YP:61:ARG:HE	1.78	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:QI:83:ARG:NH1	2.72	0.48
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.46	0.48
1:QA:1219:U:H1'	19:QS:34:TRP:CZ3	2.48	0.48
33:R9:23:VAL:HG21	34:RA:1032:A:O2'	2.13	0.48
34:RA:1482:U:H3	34:RA:1512:G:H1	1.61	0.48
34:RA:1394:U:H4'	34:RA:1603:A:H4'	1.93	0.48
34:RA:1759:A:H1'	34:RA:2711:A:C2	2.47	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
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
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
1:XA:1533:C:H5	23:XX:13:A:H61	1.61	0.48
34:YA:1479:G:H1	34:YA:1514:U:H3	1.61	0.48
34:YA:236:C:H2'	34:YA:237:C:H6	1.78	0.48
34:YA:2832:U:H1'	34:YA:2834:G:C4	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:910:A:N3	34:YA:2264:C:O2'	2.42	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
1:QA:1141:C:H2'	1:QA:1142:G:C8	2.47	0.48
1:QA:1014:A:N3	1:QA:1219:U:H1'	2.27	0.48
1:QA:1226:C:O5'	13:QM:91:ARG:NH1	2.44	0.48
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.94	0.48
1:QA:875:C:O2'	8:QH:14:ARG:HD2	2.13	0.48
5:QE:152:ARG:HG2	8:QH:42:GLU:O	2.14	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
34:RA:1173:G:O2'	34:RA:1175:U:O4'	2.30	0.48
24:R0:43:THR:CG2	34:RA:2336:A:H61	2.26	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
34:RA:436:C:H2'	34:RA:438:G:C8	2.48	0.48
34:RA:27:G:N2	34:RA:513:A:OP2	2.44	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
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:89:MET:HE1	18:XR:76:LEU:HD13	1.92	0.48
15:XO:10:LYS:HA	15:XO:13:GLN:HG2	1.95	0.48
6:XF:94:GLN:NE2	18:XR:32:ARG:HH11	2.11	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
47:YS:4:LEU:HD22	47:YS:8:GLU:CD	2.34	0.48
48:YT:31:SER:OG	48:YT:85:LYS:NZ	2.44	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
1:QA:22:G:H2'	1:QA:23:C:C6	2.48	0.48
4:QD:79:PHE:HE1	4:QD:204:ILE:HD13	1.77	0.48
1:QA:1187:G:H1'	14:QN:61:TRP:N	2.28	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:83:ASP:O	19:QS:66:MET:HE3	2.13	0.48
1:QA:957:U:H5'	19:QS:81:ARG:HB2	1.93	0.48
34:RA:118:A:N3	34:RA:178:G:H1'	2.29	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
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
34:RA:29:U:H2'	34:RA:30:G:C8	2.49	0.48
34:RA:834:C:H2'	34:RA:835:A:H8	1.78	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:1010:A:H1'	34:YA:1153:C:H1'	1.95	0.48
34:YA:65:C:H2'	34:YA:66:C:H6	1.78	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:1522:U:H2'	1:QA:1523:G:C8	2.48	0.48
1:QA:620:C:H1'	4:QD:135:LEU:HG	1.96	0.48
5:QE:102:ALA:O	5:QE:107:ARG:NH2	2.45	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
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:1004:A:C2	1:XA:1024:G:H2'	2.49	0.48
1:XA:1319:A:N6	1:XA:1361:G:H1'	2.29	0.48
1:XA:1310:G:H1	1:XA:1327:C:H5	1.61	0.48
1:XA:1472:U:H2'	1:XA:1473:A:C8	2.49	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
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:HH11	10:XJ:9:ARG:HG2	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
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
48:YT:52:ILE:HG13	48:YT:61:PHE:HB3	1.96	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
1:QA:626:U:O3'	16:QP:38:TYR:CD1	2.66	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
38:RF:48:THR:OG1	38:RF:48:THR:O	2.32	0.48
44:RP:106:LEU:HD13	44:RP:112:LEU:HD13	1.95	0.48
46:RR:26:LYS:O	46:RR:30:THR:OG1	2.24	0.48
1:XA:1159:U:C6	1:XA:1182:G:H2'	2.49	0.48
1:XA:1316:G:H4'	14:XN:17:LYS:HG2	0.64	0.48
1:XA:1351:U:H2'	1:XA:1352:C:H6	1.78	0.48
1:XA:186(Q):U:H2'	1:XA:191:G:C8	2.48	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:2113:U:C5	34:YA:2114:A:H1'	2.48	0.48
34:YA:629:G:H1'	34:YA:639:U:H1'	1.96	0.48
1:QA:1106:G:O3'	3:QC:172:ARG:CB	2.56	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
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
34:RA:1732:A:H3'	34:RA:1733:G:H8	1.77	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:2751:G:C6	40:RH:3:ARG:HB2	2.47	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:112:G:H22	1:XA:315:A:H2	1.60	0.48
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.49	0.48
1:XA:186(B):C:H2'	1:XA:186(C):C:C6	2.48	0.48
1:XA:68(H):G:C5	1:XA:68(I):G:H1'	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:856:C:H2'	1:XA:857:C:C6	2.49	0.48
4:XD:91:SER:HB2	4:XD:191:ARG:HD2	1.95	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
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
34:YA:305:U:H2'	34:YA:306:U:C6	2.49	0.48
46:YR:3:HIS:O	46:YR:5:LYS:N	2.47	0.48
1:QA:1530:G:H2'	1:QA:1531:A:H8	1.78	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
13:QM:26:GLY:O	13:QM:30:ALA:CB	2.62	0.48
1:QA:1318:A:C4	19:QS:37:ARG:NH2	2.78	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:46:GLU:HB2	40:RH:49:VAL:HG23	1.95	0.48
40:RH:43:VAL:HG23	40:RH:52:VAL:HG12	1.95	0.48
1:XA:1409:C:H2'	1:XA:1410:G:C8	2.49	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
4:XD:57:ARG:HH12	5:XE:107:ARG:CZ	2.27	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
13:XM:84:ILE:HD12	19:XS:65:ASN:OD1	2.13	0.48
1:XA:1312:G:H2'	19:XS:6:LYS:HZ2	1.77	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: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
2:QB:47:THR:HG23	2:QB:202:PRO:HG2	1.96	0.48
10:QJ:4:ILE:HG12	10:QJ:100:THR:HG22	1.95	0.48
34:RA:1403:C:H5''	34:RA:1471:A:H1'	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1454:U:OP1	46:RR:77:ARG:NH1	2.45	0.48
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: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: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:1397:C:OP2	5:XE:24:ARG:NH2	2.40	0.48
1:XA:669:U:O4'	15:XO:46:HIS:HE1	1.97	0.48
10:XJ:78:ASN:HB2	10:XJ:81:THR:HG23	1.96	0.48
1:XA:1229:A:H62	13:XM:104:ARG:HB3	1.79	0.48
25:Y1:83:GLU:HG3	25:Y1:85:LEU:H	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:2097:C:H2'	34:YA:2098:U:H6	1.79	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
37:YE:117:MET:HA	37:YE:122:PHE:H	1.79	0.48
37:YE:37:ARG:O	37:YE:45:THR:HA	2.13	0.48
39:YG:68:PRO:HB3	39:YG:92:VAL:HB	1.95	0.48
34:YA:1952:A:P	43:YO:44:LYS:HZ3	2.35	0.48
45:YQ:35:VAL:HG12	45:YQ:102:VAL:HG22	1.94	0.48
53:YY:11:ASP:N	53:YY:11:ASP:OD1	2.43	0.48
1:QA:1069:C:H1'	1:QA:1191:A:H2	1.77	0.48
1:QA:1407:C:H2'	1:QA:1408:A:H8	1.79	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:1318:A:N6	14:QN:16:PHE:CG	2.82	0.48
18:QR:59:SER:OG	18:QR:60:ALA:N	2.46	0.48
1:QA:986:A:N9	19:QS:54:GLY:O	2.47	0.48
34:RA:1213:A:H1'	34:RA:1238:G:N3	2.28	0.48
34:RA:153:C:H2'	34:RA:154:G:C8	2.49	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
34:RA:433:C:H2'	34:RA:434:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:62:U:H2'	1:XA:63:C:C6	2.49	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: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
34:YA:1050:A:N7	34:YA:2751:G:C4	2.80	0.48
34:YA:917:A:H3'	34:YA:918:A:C8	2.49	0.48
40:YH:70:THR:O	40:YH:74:ASN:ND2	2.47	0.48
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:74:GLY:O	5:QE:116:THR:OG1	2.31	0.47
5:QE:84:PHE:N	5:QE:87:SER:O	2.45	0.47
1:QA:1253:G:C5'	10:QJ:44:VAL:H	2.24	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
25:R1:78:LYS:NZ	34:RA:270(S):G:H21	2.10	0.47
31:R7:24:THR:HG23	31:R7:27:GLY:H	1.79	0.47
34:RA:1367:A:C5	34:RA:1368:G:H1'	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:65:C:H2'	34:RA:66:C:C6	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:HA	42:RN:60:ILE:HD12	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
34:YA:685:A:O2'	34:YA:773:U:O4	2.25	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
1:QA:401:C:H2'	1:QA:402:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:QE:79:GLU:CD	8:QH:102:ARG:HH12	2.18	0.47
1:QA:562:C:H1'	12:QL:15:ARG:HD2	1.95	0.47
29:R5:12:SER:O	29:R5:16:ARG:HB2	2.14	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
34:RA:558:G:H2'	34:RA:559:G:H8	1.79	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
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
1:XA:1187:G:N9	14:XN:61:TRP:O	2.42	0.47
34:YA:2150:U:H2'	34:YA:2151:G:H8	1.76	0.47
34:YA:2115:G:H4'	34:YA:2166:G:H4'	1.96	0.47
34:YA:270(A):A:C2	34:YA:366:C:H4'	2.50	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:1320:C:N3	19:QS:36:ARG:C	2.67	0.47
1:QA:1534:A:N3	23:QX:12:A:N6	2.55	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:658:G:H5''	15:QO:31:LEU:CD1	2.44	0.47
4:QD:108:LEU:HD22	4:QD:174:LEU:HD13	1.96	0.47
9:QI:20:ARG:HG3	9:QI:60:ASP:HB2	1.96	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:678:C:H2'	34:RA:679:C:H6	1.79	0.47
37:RE:105:THR:OG1	37:RE:199:ARG:NH1	2.47	0.47
1:QA:345:C:H5'	48:RT:41:ARG:NH1	2.29	0.47
1:XA:1319:A:H61	1:XA:1361:G:H1'	1.79	0.47
1:XA:708:C:H2'	1:XA:709:G:C8	2.49	0.47
4:XD:175:SER:O	4:XD:183:GLY:HA2	2.15	0.47
4:QD:169:LYS:HE2	6:XF:82:ARG:HH22	1.79	0.47
7:XG:99:LEU:HD12	7:XG:102:ARG:HD2	1.96	0.47
26:Y2:4:SER:OG	26:Y2:5:GLU:N	2.39	0.47
25:Y1:39:LYS:NZ	34:YA:205:G:O6	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2110:G:OP1	34:YA:2111:C:N4	2.47	0.47
34:YA:2046:G:N1	34:YA:2623:G:C5	2.80	0.47
34:YA:2795:G:O2'	34:YA:2799:A:N6	2.47	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
1:QA:1307:U:H5''	13:QM:99:ARG:NE	2.29	0.47
1:QA:233:C:O2'	1:QA:264:U:N3	2.47	0.47
1:QA:1123:A:O2'	10:QJ:37:PRO:N	2.47	0.47
1:QA:1307:U:P	13:QM:99:ARG:CB	3.03	0.47
16:QP:40:ASP:OD1	16:QP:43:LYS:N	2.46	0.47
34:RA:1022:G:N2	34:RA:1023:U:O4	2.47	0.47
34:RA:990:A:C6	34:RA:1186:G:H1'	2.50	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
38:RF:102:PRO:HB2	38:RF:105:VAL:HG23	1.95	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:372:C:N4	1:XA:389:A:N7	2.61	0.47
1:XA:296:U:H1'	1:XA:556:C:H1'	1.95	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
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
1:XA:1318:A:O3'	19:XS:11:VAL:CG1	2.62	0.47
13:XM:84:ILE:O	19:XS:74:PHE:CE1	2.62	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:223:A:H1'	34:YA:407:G:H21	1.79	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
34:YA:685:A:C2	34:YA:787:U:H1'	2.49	0.47
34:YA:270(Q):C:H1'	41:YI:50:ARG:HH22	1.79	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
1:QA:297:G:H4'	1:QA:557:G:O2'	2.14	0.47
1:QA:956:U:O2'	19:QS:80:TYR:C	2.52	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1112:C:N3	3:QC:178:LEU:CD1	2.78	0.47
11:QK:17:GLY:HA2	11:QK:35:PRO:HD3	1.97	0.47
13:QM:16:ASP:N	13:QM:16:ASP:OD1	2.44	0.47
32:R8:42:ARG:HD2	34:RA:2350:C:C5'	2.44	0.47
34:RA:1592:C:H2'	34:RA:1593:G:C8	2.50	0.47
34:RA:1339:G:N2	34:RA:1603:A:N3	2.62	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
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
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: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:747:U:H5	34:YA:2613:U:C4	2.30	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
34:YA:624:C:H2'	34:YA:625:G:H8	1.79	0.47
1:QA:711:G:H2'	1:QA:712:A:C8	2.50	0.47
1:QA:9:G:H2'	1:QA:10:A:C8	2.49	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:619:G:H3'	34:RA:620:G:H21	1.79	0.47
34:RA:602:G:H1'	34:RA:656:G:N2	2.30	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:1143:G:H2'	1:XA:1144:G:C8	2.49	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:H6	3:XC:179:ARG:HH21	1.51	0.47
1:XA:1112:C:C1'	3:XC:179:ARG:NE	2.67	0.47
13:XM:83:ASP:OD2	13:XM:84:ILE:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:XN:23:ARG:NH1	14:XN:28:GLY:HA2	2.29	0.47
15:XO:39:LEU:HG	15:XO:56:LEU:HD12	1.96	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
34:YA:363(B):A:H2'	34:YA:363(C):G:C8	2.50	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: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:269:C:H2'	1:QA:270:A:H8	1.80	0.47
1:QA:66:G:H1'	1:QA:173:U:H2'	1.97	0.47
1:QA:1280:A:C2	10:QJ:41:PRO:HD3	2.49	0.47
10:QJ:50:ILE:HD13	14:QN:41:ARG:NH1	2.18	0.47
1:QA:667:G:C2	15:QO:49:ASP:OD1	2.68	0.47
1:QA:926:G:N2	23:QX:18:C:OP2	2.45	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:2468:G:N2	34:RA:2468:G:OP2	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:HD2	54:RZ:182:LYS:HA	1.75	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
1:XA:1269:A:N1	1:XA:1312:G:O2'	2.41	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: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
4:XD:175:SER:HB3	4:XD:184:LYS:HB3	1.96	0.47
29:Y5:3:LYS:HD3	34:YA:2577:A:H5'	1.97	0.47
34:YA:1529:A:H61	34:YA:1542:G:H1'	1.78	0.47
34:YA:1332:G:N2	34:YA:1609:A:O2'	2.48	0.47
34:YA:1796:U:H2'	34:YA:1797:C:C6	2.49	0.47
34:YA:2316:C:H2'	34:YA:2317:C:H6	1.79	0.47
34:YA:413:C:H2'	34:YA:414:C:C6	2.49	0.47
34:YA:624:C:H2'	34:YA:625:G:C8	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:603:A:H5''	34:YA:655:A:H61	1.80	0.47
34:YA:998:C:H2'	34:YA:999:U:O4'	2.14	0.47
29:Y5:58:LEU:HD23	46:YR:113:LEU:HD11	1.96	0.47
34:YA:536:A:OP1	49:YU:53:ARG:NH1	2.47	0.47
1:QA:1397:C:H4'	1:QA:1398:A:C8	2.50	0.47
1:QA:833:U:H2'	1:QA:834:C:C6	2.49	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:35:G:O2'	12:QL:118:SER:O	2.20	0.47
17:QQ:62:SER:OG	17:QQ:72:ARG:NE	2.47	0.47
17:QQ:83:ASP:OD1	17:QQ:83:ASP:N	2.47	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:508:G:C6	51:RW:9:TYR:CE1	3.03	0.47
1:XA:595:G:N1	1:XA:641:U:O2'	2.47	0.47
1:XA:893:C:H2'	1:XA:894:G:C8	2.50	0.47
4:XD:208:SER:OG	5:XE:101:ILE:HD12	2.14	0.47
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.62	0.47
34:YA:151:C:H2'	34:YA:152:G:H8	1.79	0.47
34:YA:2115:G:H22	34:YA:2163:C:H3'	1.78	0.47
34:YA:320:A:N3	38:YF:169:ASN:ND2	2.62	0.47
34:YA:816:C:H2'	34:YA:817:C:C6	2.50	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:229:U:H2'	1:QA:230:G:H8	1.78	0.47
1:QA:1099:G:OP2	2:QB:96:ARG:NH1	2.48	0.47
1:QA:8:A:C4	4:QD:209:ARG:O	2.68	0.47
1:QA:626:U:O3'	16:QP:38:TYR:CE1	2.68	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
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:2208:U:O2'	36:RD:150:LYS:O	2.32	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:1512:U:H3	1:XA:1523:G:H1	1.63	0.47
1:XA:789:U:H2'	1:XA:791:G:N7	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:961:U:O2	1:XA:1201:A:N6	2.47	0.47
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.79	0.47
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.96	0.47
1:XA:826:C:H4'	8:XH:12:ARG:HG3	1.97	0.47
7:XG:16:LEU:HD21	9:XI:44:VAL:C	2.34	0.47
1:XA:1187:G:N2	14:XN:60:SER:HB2	2.26	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:749:C:H5'	34:YA:1271:G:H1'	1.96	0.47
34:YA:1838:C:N4	34:YA:1899:G:O4'	2.48	0.47
1:XA:702:A:C6	34:YA:1848:A:N3	2.83	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
34:YA:671:C:H2'	34:YA:672:C:H6	1.79	0.47
34:YA:860:U:C5	34:YA:2268:A:N7	2.83	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:1109:C:H3'	1:QA:1110:A:H8	1.79	0.47
1:QA:1065:U:C4	1:QA:1190:G:H1'	2.49	0.47
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.49	0.47
1:QA:337:C:H2'	1:QA:338:A:C8	2.50	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
1:QA:986:A:C5'	19:QS:55:LYS:HG3	2.44	0.47
1:QA:1222:G:O3'	19:QS:78:ARG:NH2	2.48	0.47
1:QA:106:C:C5	20:QT:15:ARG:NH1	2.83	0.47
1:QA:1236:A:P	21:QU:10:ARG:HD3	2.55	0.47
34:RA:1011:G:O2'	34:RA:1012:U:O2'	2.28	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:N3	34:RA:2346:A:H5''	2.30	0.47
34:RA:2691:C:H2'	34:RA:2692:C:C6	2.50	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:482:A:H1'	34:RA:498:G:N2	2.30	0.47
34:RA:478:A:N6	34:RA:500:G:O2'	2.47	0.47
49:RU:6:THR:HG21	49:RU:10:ARG:HH12	1.80	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:RW:68:ARG:NH2	51:RW:109:GLU:OE2	2.48	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
1:XA:831:U:H2'	1:XA:832:C:C6	2.50	0.47
28:Y4:23:GLU:O	28:Y4:25:TYR:N	2.46	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
34:YA:619:G:H3'	34:YA:620:G:H21	1.79	0.47
41:YI:88:ILE:HG22	41:YI:90:GLY:H	1.80	0.47
1:QA:1108:G:OP1	3:QC:174:PRO:HA	2.14	0.47
1:QA:115:G:H21	1:QA:117:G:H1	1.62	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
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:830:G:H2'	1:QA:831:U:C6	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
1:QA:742:G:H4'	15:QO:58:MET:SD	2.55	0.47
34:RA:577:G:O2'	34:RA:1254:A:OP1	2.30	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:H8	34:RA:2751:G:P	2.37	0.47
34:RA:303:U:H2'	34:RA:304:G:C8	2.50	0.47
34:RA:181:A:H1'	34:RA:435:C:H5'	1.96	0.47
34:RA:611:C:H2'	34:RA:612:G:H8	1.80	0.47
1:XA:1318:A:O2'	19:XS:11:VAL:HG13	2.09	0.47
1:XA:1253:G:N3	1:XA:1355:G:O2'	2.46	0.47
1:XA:324:G:P	20:XT:70:SER:HG	2.38	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
31:Y7:12:ARG:NH1	34:YA:686:G:O6	2.47	0.47
38:YF:157:VAL:HG13	38:YF:194:MET:HB3	1.97	0.47
1:QA:1195:C:H6	1:QA:1196:U:H4'	1.79	0.46
1:QA:815:A:N6	1:QA:1509:C:H1'	2.30	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:97:U:H2'	1:QA:99:C:C2	2.50	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:QI:26:VAL:HG12	9:QI:61:ALA:HB3	1.97	0.46
13:QM:108:ARG:HA	13:QM:111:LYS:HB2	1.97	0.46
1:QA:1309:G:C4'	13:QM:77:ASN:HD21	2.24	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: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:191:A:H2'	34:RA:192:C:H6	1.78	0.46
34:RA:2100:G:H1	34:RA:2189:U:H3	1.64	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:2841:C:H2'	34:RA:2842:G:C8	2.51	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
34:RA:2198:A:H5'	41:RI:33:ARG:HH12	1.79	0.46
1:QA:1422:G:H5'	43:RO:48:PRO:HG3	1.97	0.46
34:RA:2393:A:H4'	44:RP:61:ARG:O	2.15	0.46
35:RB:93:C:H5''	54:RZ:20:ARG:HH21	1.80	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
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
4:XD:18:LYS:HZ3	4:XD:33:MET:HG3	1.80	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
1:XA:978:A:H62	14:XN:18:VAL:CG2	2.28	0.46
34:YA:144:C:H2'	34:YA:145:G:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2011:U:OP2	51:YW:16:LYS:NZ	2.35	0.46
34:YA:2863:C:H2'	34:YA:2864:G:H8	1.80	0.46
34:YA:504:U:H5''	34:YA:505:A:H5'	1.98	0.46
38:YF:12:LEU:HB3	38:YF:126:VAL:HG12	1.96	0.46
1:QA:625:G:H5''	16:QP:9:PHE:HB3	1.97	0.46
1:QA:705:U:H3'	1:QA:706:A:C8	2.50	0.46
1:QA:758:G:H8	1:QA:758:G:O5'	1.99	0.46
1:QA:757:U:H5''	1:QA:822:C:O2'	2.15	0.46
1:QA:955:U:H2'	1:QA:956:U:O4'	2.15	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
1:QA:1313:U:C2'	19:QS:6:LYS:HZ3	2.25	0.46
34:RA:1853:A:H2'	34:RA:1854:A:C8	2.49	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
35:RB:74:U:H1'	54:RZ:34:ASN:ND2	2.29	0.46
34:RA:2417:C:OP1	44:RP:64:LYS:NZ	2.49	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:YN:35:ARG:NE	2.13	0.46
1:XA:1495:U:O2'	1:XA:1496:C:H5'	2.16	0.46
1:XA:376:G:OP1	16:XP:67:THR:CG2	2.34	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
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
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
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:1524:C:H2'	1:QA:1525:G:C8	2.50	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
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
1:QA:1150:U:C2	10:QJ:39:PRO:HG2	2.50	0.46
1:QA:980:C:H6	14:QN:19:ARG:HG3	1.63	0.46
1:QA:1203:C:H5'	14:QN:3:ARG:HD2	1.97	0.46
1:QA:1188:A:C5'	14:QN:58:LYS:HZ1	2.25	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:QP:21:VAL:HG23	16:QP:33:ILE:HB	1.96	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
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
32:R8:46:ARG:NH1	34:RA:631:A:OP2	2.48	0.46
34:RA:464:U:N3	34:RA:684:G:O2'	2.46	0.46
40:RH:126:PRO:HG2	40:RH:130:ARG:HG3	1.96	0.46
40:RH:123:PHE:HE2	40:RH:133:VAL:HG22	1.80	0.46
46:RR:28:LEU:HD23	46:RR:48:VAL:HG21	1.98	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
1:XA:891:U:H2'	1:XA:892:A:C8	2.49	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
1:XA:926:G:N2	23:XX:18:C:OP2	2.48	0.46
34:YA:2102:U:H2'	34:YA:2103:C:C6	2.49	0.46
22:XV:56:C:N4	34:YA:2112:G:O6	2.48	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
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:192:C:H1'	34:YA:800:A:N6	2.31	0.46
34:YA:920:G:H2'	34:YA:921:G:C8	2.51	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
2:QB:197:VAL:O	8:QH:68:ARG:NH1	2.49	0.46
1:QA:1330:U:H5''	13:QM:24:GLY:HA2	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
32:R8:13:ARG:HD2	44:RP:61:ARG:HE	1.80	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:184:C:O2'	34:RA:217:G:N3	2.40	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
32:R8:8:LYS:HG3	34:RA:246:C:N4	2.31	0.46
34:RA:2647:U:H2'	34:RA:2648:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2819:G:H2'	34:RA:2821:A:N7	2.30	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
38:RF:24:LEU:HD12	38:RF:115:ALA:HB2	1.96	0.46
46:RR:35:THR:OG1	46:RR:35:THR:O	2.33	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
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
2:XB:188:ALA:HB3	2:XB:200:ILE:HD11	1.97	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
41:YI:72:LEU:HD12	41:YI:138:ILE:HD12	1.97	0.46
34:YA:1454:U:H5	46:YR:73:VAL:HG12	1.80	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
1:QA:877:C:H5''	8:QH:88:LYS:CD	2.46	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
1:QA:44:G:OP2	16:QP:12:LYS:HD3	2.15	0.46
1:QA:617:G:H21	16:QP:14:ASN:HD22	1.63	0.46
1:QA:309:G:C5'	16:QP:27:LYS:HZ3	2.29	0.46
1:QA:986:A:C4	19:QS:54:GLY:O	2.68	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:186(B):C:N1	20:QT:85:MET:CE	2.76	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:1662:C:H1'	34:RA:2687:U:H5''	1.97	0.46
34:RA:2844:G:H3'	34:RA:2845:G:H8	1.81	0.46
34:RA:532:A:O2'	34:RA:2021:C:N4	2.47	0.46
34:RA:917:A:H3'	34:RA:918:A:H8	1.79	0.46
34:RA:675:A:C2'	38:RF:67:GLN:HE22	2.28	0.46
41:RI:88:ILE:HG22	41:RI:90:GLY:N	2.31	0.46
38:RF:34:TRP:HB2	44:RP:6:LEU:HB3	1.98	0.46
1:XA:1016:A:H1'	1:XA:1218:C:O2	2.16	0.46
1:XA:115:G:H1'	1:XA:116:A:OP2	2.15	0.46
1:XA:1301:U:O3'	13:XM:17:VAL:CG2	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:777:A:H2'	1:XA:778:G:O4'	2.15	0.46
7:XG:75:VAL:HA	7:XG:87:VAL:O	2.16	0.46
1:XA:754:C:C6	15:XO:69:TYR:CZ	2.98	0.46
31:Y7:3:ARG:NE	34:YA:1613:G:O2'	2.45	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
34:YA:247:G:H4'	34:YA:386:G:C4	2.50	0.46
32:Y8:4:MET:HG2	34:YA:592:G:O2'	2.16	0.46
52:YX:64:LYS:HZ2	52:YX:73:ARG:HE	1.63	0.46
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.50	0.46
1:QA:1440(O):C:H2'	1:QA:1440(P):A:C8	2.51	0.46
1:QA:757:U:H2'	1:QA:758:G:O4'	2.16	0.46
1:QA:975:A:C2	14:QN:34:TYR:HD1	2.29	0.46
16:QP:59:TRP:HA	16:QP:62:VAL:HG22	1.97	0.46
1:QA:761:G:C5'	17:QQ:100:LYS:HZ3	2.20	0.46
34:RA:1026:U:H1'	34:RA:1027:A:H5''	1.98	0.46
33:R9:18:ARG:HD3	34:RA:1034:G:H4'	1.97	0.46
34:RA:1689:A:H62	34:RA:1698:A:H2	1.64	0.46
34:RA:910:A:H2'	34:RA:911:A:C8	2.50	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:113:G:H2'	1:XA:114:U:C6	2.50	0.46
1:XA:1304:G:C5'	1:XA:1304:G:C8	2.85	0.46
1:XA:1270:C:H4'	1:XA:1314:C:H5'	1.98	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:59:A:N3	1:XA:59:A:H2'	2.31	0.46
1:XA:713:G:H2'	1:XA:714:G:C8	2.51	0.46
2:XB:118:LEU:HB3	2:XB:142:LEU:HD13	1.98	0.46
1:XA:1375:A:C4'	7:XG:28:ASN:OD1	2.62	0.46
34:YA:1454:U:OP1	46:YR:77:ARG:NE	2.35	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
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:1566:A:N6	36:YD:214:TRP:CH2	2.83	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:1004:A:N6	1:QA:1025:U:O3'	2.49	0.46
1:QA:1260:C:O2'	1:QA:1283:G:O2'	2.34	0.46
1:QA:955:U:H2'	19:QS:83:HIS:HA	1.97	0.46
10:QJ:50:ILE:HG12	14:QN:41:ARG:HE	1.71	0.46
1:QA:1359:C:OP2	14:QN:35:ARG:NH1	2.49	0.46
34:RA:1791:A:N6	34:RA:1828:G:O2'	2.41	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:817:C:HO2'	34:RA:932:G:N2	2.13	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: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
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
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: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
34:YA:259:G:H21	34:YA:621:A:H1'	1.81	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:1382:C:H2'	1:QA:1383:C:O4'	2.16	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: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)
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: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: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: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:68(G):C:H2'	1:XA:68(H):G:C8	2.50	0.46
1:XA:718:G:H3'	1:XA:719:C:C6	2.51	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
1:XA:728:A:N7	15:XO:54:ARG:CD	2.78	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
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
1:QA:106:C:H2'	1:QA:107:G:H8	1.81	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
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: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
4:QD:22:LYS:HG3	56:QD:301:SF4:S1	2.56	0.46
3:QC:22:TRP:CA	10:QJ:93:GLY:CA	2.84	0.46
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.47	0.46
1:QA:568:G:N7	12:QL:5:PRO:HD3	2.31	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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1657:C:O3'	37:RE:133:LYS:HG2	2.16	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:1157:A:C2	1:XA:1181:G:H1'	2.51	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
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
1:XA:1312:G:C2'	19:XS:6:LYS:NZ	2.68	0.46
20:XT:11:SER:OG	20:XT:11:SER:O	2.28	0.46
34:YA:98:G:H1'	34:YA:103:A:H1'	1.98	0.46
34:YA:2688:U:H1'	34:YA:2721:A:N6	2.31	0.46
34:YA:442:G:N2	38:YF:48:THR:OG1	2.48	0.46
31:Y7:35:ARG:NH1	34:YA:54:G:O2'	2.38	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:521:G:OP1	12:QL:73:GLU:HA	2.16	0.46
1:QA:18:C:H42	1:QA:917:G:H1	1.64	0.46
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.97	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
2:QB:178:ARG:HH21	8:QH:70:GLN:HA	1.81	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
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:N	38:RF:182:ASN:OD1	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:1410:G:H2'	1:XA:1411:C:C6	2.50	0.46
1:XA:663:A:H2'	1:XA:664:G:C8	2.51	0.46
1:XA:697:U:H1'	1:XA:786:G:H1'	1.97	0.46
2:XB:27:LYS:HD2	2:XB:193:ASP:HB2	1.97	0.46
9:XI:7:THR:O	9:XI:7:THR:OG1	2.31	0.46
10:XJ:50:ILE:CD1	14:XN:41:ARG:NH1	2.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:53:ARG:HB3	12:XL:69:TYR:HE1	1.79	0.46
1:XA:739:C:P	15:XO:2:PRO:HD3	2.56	0.46
1:XA:669:U:H1'	15:XO:46:HIS:CE1	2.50	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:1493:C:N4	34:YA:2210:G:N9	2.61	0.46
34:YA:1380:G:O2'	34:YA:1569:A:N6	2.49	0.46
34:YA:1645:G:H5''	34:YA:1646:C:H5'	1.98	0.46
34:YA:1493:C:C6	34:YA:2210:G:C6	3.04	0.46
34:YA:2291:U:H2'	34:YA:2292:C:C6	2.51	0.46
34:YA:2043:C:N4	34:YA:2625:G:H1	2.13	0.46
34:YA:2801:A:C5	34:YA:2802:G:H1'	2.51	0.46
34:YA:691:C:H2'	34:YA:692:C:C6	2.50	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: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
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:957:U:O2'	19:QS:79:THR:C	2.53	0.45
2:QB:73:THR:O	2:QB:75:LYS:NZ	2.50	0.45
7:QG:70:LYS:HB2	7:QG:96:GLN:HB3	1.98	0.45
3:QC:5:ILE:CG2	14:QN:45:ARG:NH2	2.78	0.45
1:QA:956:U:C5'	19:QS:83:HIS:HA	2.46	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: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
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
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:1242:C:H4'	1:XA:1303:C:H4'	1.98	0.45
1:XA:1439:C:H2'	1:XA:1440(A):C:H6	1.81	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: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:974:A:O5'	14:XN:31:ARG:HD3	2.16	0.45
6:XF:94:GLN:NE2	18:XR:32:ARG:NH1	2.65	0.45
1:XA:1318:A:O3'	19:XS:11:VAL:HG11	2.15	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
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
48:YT:16:ARG:HH21	48:YT:81:PRO:HA	1.80	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
1:QA:235:C:O2'	17:QQ:4:LYS:HE3	2.17	0.45
1:QA:64:G:H1'	1:QA:67:C:H41	1.81	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
1:QA:659:U:OP1	15:QO:8:LYS:HD3	2.16	0.45
8:QH:91:ARG:NE	17:QQ:32:TYR:O	2.41	0.45
34:RA:2320:A:N6	34:RA:2333:A:H2'	2.31	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
1:XA:320:C:H2'	1:XA:321:A:H8	1.82	0.45
1:XA:109:A:C8	1:XA:326:G:H2'	2.51	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
9:XI:28:VAL:HG12	9:XI:63:ILE:HB	1.98	0.45
6:XF:100:ASN:O	18:XR:28:GLU:HG3	2.15	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: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
1:QA:345:C:H1'	1:QA:346:G:C2	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:1173:G:H1'	34:RA:1175:U:O2	2.16	0.45
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1307:U:H2'	1:XA:1308:U:C6	2.51	0.45
1:XA:715:A:H2'	1:XA:716:A:C8	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
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:195:A:H2'	34:YA:198:C:H42	1.80	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
34:YA:376:C:H2'	34:YA:377:C:C6	2.51	0.45
34:YA:191:A:H1'	34:YA:679:C:H1'	1.97	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: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:1359:C:C6	14:QN:35:ARG:CZ	3.00	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
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
1:QA:1307:U:OP1	13:QM:99:ARG:HB2	2.16	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:20:C:OP1	49:RU:22:LYS:NZ	2.28	0.45
34:RA:2692:C:O2	34:RA:2847:U:O2'	2.29	0.45
34:RA:2754:U:HO2'	34:RA:2756:U:P	2.39	0.45
34:RA:347:A:H2'	34:RA:348:G:C8	2.52	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
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:309:G:O4'	1:XA:608:A:C2	2.70	0.45
1:XA:68(I):G:N2	1:XA:68(S):C:N3	2.65	0.45
2:XB:207:ALA:O	2:XB:210:SER:OG	2.28	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
17:XQ:34:LYS:NZ	17:XQ:35:VAL:O	2.46	0.45
34:YA:1040:C:H2'	34:YA:1041:C:C6	2.51	0.45
34:YA:106:C:H2'	34:YA:107:C:C6	2.52	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:235:C:H2'	1:QA:236:G:C8	2.52	0.45
1:QA:958:A:N7	19:QS:79:THR:CG2	2.80	0.45
1:QA:403:C:H4'	4:QD:122:ARG:HD3	1.97	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
1:QA:186(A):C:O2'	20:QT:85:MET:SD	2.59	0.45
28:R4:1:MET:HE2	39:RG:98:ARG:NH1	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:124:GLU:O	40:RH:124:GLU:HG3	2.17	0.45
40:RH:98:LEU:CG	40:RH:125:VAL:CG1	2.91	0.45
43:RO:63:VAL:HB	43:RO:102:VAL:HG13	1.98	0.45
1:XA:1028(B):C:H2'	1:XA:1028(C):C:H5	1.81	0.45
1:XA:1405:G:H2'	1:XA:1406:U:H6	1.81	0.45
1:XA:1505:G:C1'	23:XX:15:A:H2	2.29	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:68(N):U:H2'	1:XA:68(O):U:O4'	2.16	0.45
1:XA:718:G:H3'	1:XA:719:C:H6	1.81	0.45
4:XD:162:LEU:HD12	4:XD:178:VAL:HG13	1.98	0.45
1:XA:1081:G:OP1	5:XE:18:ARG:HB3	2.17	0.45
6:XF:36:ARG:NH2	6:XF:38:GLU:OE2	2.49	0.45
1:XA:1124:G:O5'	10:XJ:36:GLY:CA	2.65	0.45
12:XL:110:VAL:H	12:XL:122:THR:HG22	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1360:A:C1'	14:YN:17:LYS:HG3	2.46	0.45
25:Y1:40:ARG:HG2	25:Y1:41:ARG:H	1.81	0.45
29:Y5:32:PRO:N	29:Y5:32:PRO:C	2.61	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
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
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: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
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:950:U:OP2	13:QM:102:ARG:HD2	2.17	0.45
2:QB:193:ASP:OD2	2:QB:193:ASP:N	2.50	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
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: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
34:RA:996:A:H2'	34:RA:997:G:C8	2.51	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:HA	50:RV:68:LYS:HD2	1.69	0.45
1:XA:116:A:C8	1:XA:116:A:O5'	2.70	0.45
1:XA:1117:G:H21	1:XA:1180:A:H1'	1.81	0.45
1:XA:321:A:H4'	1:XA:1436:U:H5'	1.97	0.45
1:XA:156:G:H2'	1:XA:157:G:H8	1.81	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
4:XD:30:LYS:HB3	4:XD:35:ARG:HH22	1.81	0.45
7:XG:79:ARG:HH21	7:XG:82:GLY:HA2	1.82	0.45
10:XJ:53:PRO:HB3	14:YN:42:ILE:CG1	2.39	0.45
34:YA:2019:A:H2	34:YA:2035:G:H22	1.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:415:A:C2	34:YA:2409:G:C2	3.04	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
34:YA:834:C:H2'	34:YA:835:A:H8	1.82	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:1110:A:H62	3:QC:176:HIS:HB2	1.81	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
10:QJ:99:LYS:HD3	10:QJ:99:LYS:HA	1.79	0.45
13:QM:91:ARG:HD2	13:QM:96:LEU:HB3	1.98	0.45
20:QT:58:LYS:O	20:QT:61:SER:OG	2.26	0.45
27:R3:18:ASP:N	27:R3:18:ASP:OD1	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:2572:A:OP1	34:RA:2574:G:O2'	2.31	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
34:RA:64:A:H2'	34:RA:65:C:O4'	2.17	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: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
29:Y5:9:LYS:NZ	34:YA:2019:A:C8	2.83	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: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
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
34:YA:2880:C:H1'	46:YR:92:GLY:O	2.17	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:1310:G:H2'	1:QA:1311:G:C8	2.51	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
3:QC:23:TYR:OH	10:QJ:9:ARG:HB3	2.17	0.45
4:QD:85:LYS:HD2	4:QD:85:LYS:HA	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: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
34:RA:270(T):G:H2'	34:RA:270(U):G:H8	1.82	0.45
34:RA:33:U:O4	34:RA:446:G:O2'	2.31	0.45
34:RA:863:A:OP1	45:RQ:21:THR:OG1	2.14	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
34:RA:994:C:OP1	49:RU:53:ARG:NH2	2.50	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
4:XD:43:HIS:HB3	4:XD:46:LYS:HD2	1.98	0.45
10:XJ:47:PHE:CZ	14:XN:36:PHE:HB3	2.51	0.45
3:XC:60:ALA:CB	10:XJ:91:PRO:HG2	2.45	0.45
33:Y9:25:VAL:HG22	33:Y9:34:GLN:HB3	1.98	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:574:C:C5	34:YA:2054:A:H4'	2.52	0.45
34:YA:2098:U:O2	34:YA:2191:G:N2	2.49	0.45
34:YA:2581:G:OP2	34:YA:2581:G:N2	2.50	0.45
34:YA:686:G:N2	34:YA:788:A:H61	2.15	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
1:QA:953:G:C5	13:QM:104:ARG:CZ	2.96	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.81	0.45
1:QA:1360:A:C2'	14:QN:17:LYS:HZ1	2.30	0.45
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.98	0.45
22:QV:74:C:H5''	25:R1:23:LYS:HG3	1.98	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
34:RA:459:U:H2'	34:RA:460:A:C8	2.50	0.45
38:RF:187:VAL:HG23	44:RP:3:LEU:HD22	1.97	0.45
42:RN:28:THR:O	42:RN:32:THR:OG1	2.24	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: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
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
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: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:40:C:H2'	1:QA:41:G:C8	2.52	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
13:QM:83:ASP:O	19:QS:66:MET:CE	2.65	0.45
19:QS:79:THR:O	19:QS:79:THR:OG1	2.35	0.45
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:1470:G:O2'	34:RA:1522:G:O6	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:242:G:N2	34:RA:243:U:O4	2.50	0.45
34:RA:2250:G:O2'	34:RA:2496:C:OP1	2.23	0.45
34:RA:363(C):G:H2'	34:RA:363(D):G:H8	1.82	0.45
40:RH:126:PRO:HG2	40:RH:130:ARG:CG	2.46	0.45
40:RH:86:GLU:O	40:RH:164:TYR:HB2	2.17	0.45
41:RI:80:PRO:HB2	41:RI:146:ALA:HB2	1.97	0.45
41:RI:79:ILE:HG23	41:RI:142:VAL:HA	1.99	0.45
47:RS:23:ARG:NH2	47:RS:111:GLU:OE1	2.49	0.45
1:XA:1305:G:C2	1:XA:1331:G:C4	3.04	0.45
1:XA:539:A:H2'	1:XA:540:G:C8	2.52	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
15:XO:64:ARG:HH12	15:XO:68:ARG:HH22	1.63	0.45
6:XF:91:VAL:CB	18:XR:34:TYR:OH	2.64	0.45
33:Y9:27:CYS:SG	33:Y9:29:ASN:HB3	2.57	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
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
31:Y7:37:LYS:CE	34:YA:458:G:C8	2.99	0.45
34:YA:779:U:H2'	34:YA:780:G:H8	1.81	0.45
43:YO:78:ARG:NE	48:YT:73:GLU:OE1	2.47	0.45
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
1:QA:738:C:H2'	1:QA:739:C:C6	2.52	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
1:QA:973:G:C2'	14:QN:29:ARG:NH1	2.68	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
34:RA:2567:G:H2'	34:RA:2568:C:C6	2.52	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
36:RD:61:LEU:HA	36:RD:61:LEU:HD23	1.83	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
37:RE:32:PRO:HA	37:RE:90:THR:HA	1.99	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:1369:C:H2'	1:XA:1370:G:C8	2.53	0.44
1:XA:1378:C:OP1	1:XA:1378:C:C5	2.70	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:696:A:H61	1:XA:797:C:HO2'	1.65	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
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
1:XA:1360:A:N3	14:XN:17:LYS:HG3	2.29	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:2453:A:H2'	34:YA:2454:G:C8	2.52	0.44
34:YA:2059:A:C6	34:YA:2503:A:C2	3.05	0.44
34:YA:2779:U:H5'	34:YA:2779:U:O2	2.16	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
1:QA:1229:A:H2'	1:QA:1230:C:H6	1.82	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:1320:C:N4	19:QS:37:ARG:HD2	2.27	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
28:R4:34:GLU:OE1	39:RG:113:ARG:HD3	2.17	0.44
48:RT:25:GLY:H	48:RT:49:VAL:HG13	1.82	0.44
54:RZ:97:GLU:HB3	54:RZ:125:LEU:HD11	2.00	0.44
1:XA:1305:G:H4'	1:XA:1332:A:H61	1.83	0.44
1:XA:975:A:O4'	1:XA:1365:G:N2	2.49	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
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:62:U:H2'	1:XA:63:C:H6	1.82	0.44
1:XA:765:G:N1	1:XA:812:C:O2'	2.45	0.44
1:XA:899:C:C5	1:XA:899:C:OP1	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
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
34:YA:1362:C:H2'	34:YA:1363:C:C6	2.53	0.44
34:YA:575:A:OP2	34:YA:2055:C:N4	2.40	0.44
32:Y8:2:PRO:O	34:YA:666:G:N2	2.49	0.44
34:YA:787:U:H5''	34:YA:788:A:H5'	1.99	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:1085:U:H3'	1:QA:1086:U:C5	2.53	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: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
1:QA:877:C:O3'	8:QH:88:LYS:HD2	2.17	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: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
34:RA:579:G:O2'	34:RA:2019:A:OP1	2.28	0.44
34:RA:407:G:H2'	34:RA:408:G:H8	1.82	0.44
34:RA:883:G:H2'	34:RA:884:C:H6	1.82	0.44
54:RZ:115:GLY:H	54:RZ:177:PRO:HG3	1.83	0.44
1:XA:1065:U:O2	1:XA:1067:A:N6	2.51	0.44
1:XA:1014:A:H1'	1:XA:1219:U:O2'	2.18	0.44
1:XA:1374:A:O2'	7:XG:31:MET:HE3	2.13	0.44
1:XA:1378:C:OP1	1:XA:1378:C:C6	2.70	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
34:YA:1149:G:H2'	34:YA:1150:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1367:A:C5	34:YA:1368:G:H1'	2.52	0.44
34:YA:2133:G:H1'	34:YA:2158:A:N6	2.32	0.44
34:YA:2096:U:H3	34:YA:2193:G:H1	1.63	0.44
34:YA:2316:C:H2'	34:YA:2317:C:C6	2.52	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:2546:U:H5''	34:YA:2547:U:H5'	2.00	0.44
34:YA:971:C:H2'	34:YA:972:G:O4'	2.17	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:1114:C:O2	14:QN:61:TRP:HA	2.18	0.44
1:QA:1331:G:OP1	13:QM:23:TYR:CD2	2.70	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:1318:A:C2	19:QS:37:ARG:NH1	2.84	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
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
39:RG:81:LYS:HA	39:RG:81:LYS:HD2	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: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:H2'	1:XA:1157:A:N3	2.32	0.44
1:XA:1405:G:H2'	1:XA:1406:U:C6	2.52	0.44
1:XA:592:G:H2'	1:XA:593:G:C8	2.52	0.44
1:XA:8:A:C2	4:XD:209:ARG:NH1	2.85	0.44
4:XD:57:ARG:NH2	4:XD:205:GLU:OE1	2.51	0.44
1:XA:1309:G:O4'	13:XM:77:ASN:ND2	2.49	0.44
1:XA:1541:U:C2	23:XX:5:A:H2	2.34	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:Y8:30:ARG:HE	44:YP:62:LEU:HD12	1.81	0.44
34:YA:1028:A:H61	34:YA:1125:G:H2'	1.83	0.44
34:YA:1178:C:H2'	34:YA:1179:C:C6	2.53	0.44
34:YA:222:A:H61	34:YA:232:G:H1'	1.82	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: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
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
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.99	0.44
1:QA:856:C:H4'	23:QX:7:G:H21	1.83	0.44
25:R1:29:GLY:O	34:RA:2396:G:O2'	2.36	0.44
32:R8:17:THR:OG1	32:R8:21:LYS:O	2.31	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: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
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
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
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.49	0.44
1:XA:978:A:H62	14:XN:18:VAL:HG21	1.83	0.44
26:Y2:58:ALA:O	26:Y2:62:THR:OG1	2.30	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:O5'	34:YA:2108:C:C6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:303:U:H2'	34:YA:304:G:C8	2.51	0.44
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
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: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
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
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
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
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
40:RH:4:ILE:HD12	40:RH:6:ARG:HB2	1.99	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
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:H6	1:XA:936:C:H3'	1.82	0.44
1:XA:951:G:O3'	1:XA:972:C:N4	2.50	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
27:Y3:31:LEU:HD12	34:YA:1157:G:O2'	2.16	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2587:A:H8	34:YA:2587:A:O5'	2.00	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
53:YY:28:LYS:N	53:YY:38:ILE:O	2.45	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
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
8:QH:82:HIS:N	8:QH:138:TRP:OXT	2.41	0.44
1:QA:669:U:O4'	15:QO:46:HIS:CE1	2.69	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:144:C:H2'	34:RA:145:G:H8	1.83	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
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
39:RG:135:LEU:HD11	39:RG:140:ILE:HD11	2.00	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
1:XA:193:C:H2'	1:XA:194:C:C6	2.52	0.44
1:XA:130:A:H1'	1:XA:263:A:O2'	2.17	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
34:YA:1162:G:H2'	34:YA:1163:G:C8	2.53	0.44
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
29:Y5:17:ASP:HB3	34:YA:16:G:OP1	2.18	0.44
34:YA:1991:U:H2'	34:YA:1992:G:H5''	2.00	0.44
34:YA:210:C:H4'	34:YA:1367:A:H1'	2.00	0.44
34:YA:2124:G:H3'	34:YA:2125:G:H8	1.82	0.44
34:YA:2099:U:C4	34:YA:2190:G:N1	2.82	0.44
34:YA:2246:G:H2'	34:YA:2247:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:YA:524:U:H2'	34:YA:525:U:C6	2.53	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:1092:A:C2	1:QA:1110:A:H5'	2.52	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
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:1108:G:OP2	3:QC:174:PRO:HA	2.18	0.44
6:QF:14:LEU:HD12	6:QF:18:GLN:CD	2.38	0.44
7:QG:116:ALA:HA	7:QG:119:ARG:HE	1.82	0.44
3:QC:23:TYR:N	10:QJ:93:GLY:O	2.51	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
31:R7:34:ARG:NH1	34:RA:466:A:OP1	2.50	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:1240:U:C2'	7:XG:38:LEU:HD12	2.45	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:986:A:H1'	19:XS:52:TYR:HH	1.80	0.44
1:XA:974:A:P	14:XN:29:ARG:NE	2.90	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:417:C:O2	34:YA:2407:G:C6	2.71	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
34:YA:625:G:H2'	34:YA:626:U:C6	2.53	0.44
44:YP:21:ARG:HB3	44:YP:22:GLY:H	1.67	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: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
1:QA:181:G:H4'	1:QA:182:U:H5'	1.99	0.44
1:QA:373:A:N1	1:QA:391:G:O2'	2.48	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:863:U:HO2'	1:QA:865:A:H62	1.62	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:1358:U:H3'	14:QN:35:ARG:HD2	1.99	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
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
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: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
1:XA:150:C:H2'	1:XA:151:A:O4'	2.18	0.44
1:XA:817:C:O2'	1:XA:1527:C:O3'	2.35	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: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
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
24:Y0:38:VAL:HG22	24:Y0:59:LEU:HB2	1.98	0.44
34:YA:2090:G:C4	34:YA:2230:G:N1	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
43:YO:44:LYS:HD3	43:YO:44:LYS:HA	1.72	0.44
32:Y8:7:HIS:HD2	44:YP:50:ARG:HH21	1.64	0.44
51:YW:35:ILE:O	51:YW:39:THR:OG1	2.27	0.44
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.99	0.43
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
33:R9:23:VAL:HG22	34:RA:1032:A:O2'	2.17	0.43
34:RA:1400:G:H2'	34:RA:1401:G:C8	2.53	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
34:RA:714:U:H1'	34:RA:717:G:N7	2.33	0.43
27:R3:45:GLY:HA3	34:RA:851:U:O3'	2.18	0.43
34:RA:97:C:H2'	34:RA:98:G:C8	2.53	0.43
41:RI:79:ILE:HD12	41:RI:80:PRO:HD2	2.00	0.43
35:RB:9:G:OP1	47:RS:15:ARG:NH1	2.51	0.43
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.53	0.43
1:XA:411:A:H2'	1:XA:413:G:C8	2.53	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:643:C:H2'	1:XA:644:G:H8	1.82	0.43
1:XA:878:G:H5'	8:XH:89:PRO:HG2	2.00	0.43
11:XK:110:ASP:O	18:XR:85:LEU:N	2.51	0.43
1:XA:1230:C:C4	13:XM:105:THR:HB	2.49	0.43
1:XA:658:G:H1'	15:XO:22:THR:HG23	1.99	0.43
20:XT:100:ILE:HG23	20:XT:102:GLY:H	1.81	0.43
30:Y6:29:ASN:ND2	34:YA:2286:A:OP1	2.51	0.43
30:Y6:3:SER:HB3	30:Y6:6:ARG:HB3	2.00	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
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:274:G:H2'	34:YA:275:G:H8	1.83	0.43
34:YA:2853:C:H2'	34:YA:2854:G:C8	2.53	0.43
34:YA:519:U:H2'	34:YA:520:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1327:C:H4'	21:QU:20:LYS:NZ	2.33	0.43
1:QA:444:C:H2'	1:QA:445:G:C8	2.53	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
1:QA:608:A:C1'	16:QP:32:TYR:CE1	2.99	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: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: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
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:1826:G:H4'	36:RD:242:ARG:NH2	2.32	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:1271:G:H2'	1:XA:1272:G:C8	2.53	0.43
1:XA:158:G:H2'	1:XA:159:G:C8	2.53	0.43
1:XA:936:C:H3'	1:XA:936:C:C6	2.52	0.43
1:XA:9:G:OP1	5:XE:122:GLU:HB2	2.17	0.43
1:XA:1059:C:C6	3:XC:2:GLY:HA2	2.51	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: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:2692:C:O2	34:YA:2847:U:O2'	2.26	0.43
34:YA:2751:G:O6	40:YH:2:SER:OG	2.35	0.43
34:YA:462:C:H2'	34:YA:463:G:C8	2.52	0.43
41:YI:101:LEU:HD11	41:YI:109:ILE:HD13	2.00	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:563:A:HO2'	1:QA:566:G:HO2'	1.59	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
5:QE:100:VAL:O	5:QE:107:ARG:NH1	2.48	0.43
5:QE:43:LEU:HD13	5:QE:109:ILE:HD11	1.99	0.43
29:R5:12:SER:O	29:R5:16:ARG:CB	2.67	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
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
49:RU:92:ARG:HD2	50:RV:11:GLN:HG3	1.99	0.43
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.53	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
3:QC:79:ARG:CZ	11:XK:104:GLN:HG3	2.41	0.43
14:YN:13:THR:OG1	14:YN:13:THR:O	2.36	0.43
34:YA:1230:C:H2'	34:YA:1231:G:C8	2.53	0.43
34:YA:1375:C:H2'	34:YA:1376:C:H6	1.83	0.43
34:YA:143:C:H2'	34:YA:144:C:C6	2.53	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:1311:G:H21	34:YA:1603:A:H62	1.67	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:242:G:N2	34:YA:254:G:H2'	2.33	0.43
37:YE:37:ARG:NH1	37:YE:44:TYR:OH	2.48	0.43
39:YG:124:SER:OG	39:YG:124:SER:O	2.35	0.43
39:YG:165:THR:OG1	39:YG:166:ASP:N	2.52	0.43
34:YA:2751:G:C5	40:YH:2:SER:O	2.71	0.43
41:YI:81:VAL:HG11	41:YI:88:ILE:HD13	1.99	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
1:QA:24:U:H2'	1:QA:25:C:H6	1.83	0.43
1:QA:36:C:H2'	1:QA:37:U:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:645:C:H2'	1:QA:646:U:C6	2.53	0.43
3:QC:6:HIS:HE1	3:QC:8:ILE:HD12	1.82	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: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
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:81:G:O2'	34:RA:295:G:O2'	2.23	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: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
1:XA:355:C:H1'	1:XA:388:G:H1'	2.00	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
22:XV:20:G:N2	22:XV:60:U:H3	2.17	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:208:C:H2'	34:YA:209:C:C6	2.53	0.43
34:YA:2179:C:H2'	34:YA:2180:U:C6	2.53	0.43
34:YA:1782:C:H41	34:YA:2587:A:H2	1.62	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
33:Y9:33:LYS:NZ	34:YA:2743:C:OP1	2.43	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: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
1:QA:218:C:H2'	1:QA:219:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1112:C:N3	3:QC:178:LEU:HD12	2.33	0.43
10:QJ:28:ARG:HE	10:QJ:34:VAL:HG12	1.83	0.43
1:QA:1014:A:H1'	19:QS:34:TRP:CD2	2.54	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
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
40:RH:80:SER:OG	40:RH:80:SER:O	2.31	0.43
46:RR:35:THR:HG22	46:RR:113:LEU:HD13	2.01	0.43
1:XA:1524:C:H2'	1:XA:1525:G:C8	2.53	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
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
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
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
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
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
32:Y8:18:ALA:HB2	34:YA:628:G:H5''	2.01	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
44:YP:97:PRO:O	44:YP:98:GLU:HG3	2.18	0.43
1:QA:1004:A:C2	1:QA:1024:G:H2'	2.51	0.43
1:QA:130:A:H4'	1:QA:186(K):G:C4	2.53	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
34:RA:300:A:OP2	53:RY:84:ARG:NH1	2.52	0.43
36:RD:171:ASP:N	36:RD:171:ASP:OD1	2.48	0.43
38:RF:34:TRP:CE3	44:RP:8:PRO:HB3	2.53	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: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
1:XA:404:U:H2'	1:XA:405:U:C6	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: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
34:YA:416:C:N3	34:YA:2407:G:O6	2.51	0.43
34:YA:273(E):C:H2'	34:YA:273(F):U:C6	2.54	0.43
44:YP:64:LYS:O	44:YP:66:GLY:N	2.51	0.43
34:YA:296:C:O3'	53:YY:95:LYS:NZ	2.51	0.43
1:QA:1190:G:H4'	3:QC:176:HIS:CE1	2.54	0.43
1:QA:25:C:H2'	1:QA:26:A:C8	2.54	0.43
1:QA:296:U:H2'	1:QA:297:G:C8	2.54	0.43
1:QA:60:A:H2	1:QA:378:G:H1'	1.84	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:918:A:H2'	1:QA:919:A:C8	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:HD3	7:QG:6:ARG:HA	1.75	0.43
1:QA:948:C:OP2	13:QM:106:ASN:O	2.36	0.43
1:QA:740:U:O2'	15:QO:39:LEU:HD11	2.18	0.43
15:QO:5:LYS:HB2	15:QO:5:LYS:HE2	1.90	0.43
19:QS:39:THR:HG22	19:QS:41:VAL:HG22	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:986:A:C2'	19:QS:55:LYS:HA	2.46	0.43
34:RA:134:C:H2'	34:RA:135:G:C8	2.54	0.43
34:RA:1467:C:C5	34:RA:1546:C:H2'	2.54	0.43
34:RA:1952:A:N3	34:RA:2560:C:O2'	2.41	0.43
34:RA:807:U:O2'	34:RA:2060:A:N1	2.48	0.43
34:RA:206:U:H2'	34:RA:207:A:C8	2.50	0.43
32:R8:31:HIS:HE1	34:RA:2421:G:N7	2.14	0.43
34:RA:2736:G:H2'	34:RA:2737:G:C8	2.54	0.43
34:RA:39:C:H2'	34:RA:40:C:C6	2.54	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
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: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
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
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: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
34:YA:2023:G:H8	34:YA:2023:G:P	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
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:263:C:H1'	34:YA:430:G:H1'	2.00	0.43
34:YA:1800:C:OP2	36:YD:183:ARG:NH1	2.52	0.43
40:YH:152:ARG:HD3	40:YH:152:ARG:HA	1.80	0.43
53:YY:76:CYS:CB	53:YY:79:CYS:SG	3.07	0.43
1:QA:1123:A:H2'	1:QA:1124:G:C4	2.53	0.43
1:QA:1107:C:O2'	1:QA:1191:A:O2'	2.29	0.43
1:QA:1260:C:HO2'	1:QA:1283:G:HO2'	1.63	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:QM:95:GLY:HA2	13:QM:110:ARG:HH21	1.83	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
26:R2:16:LEU:H	26:R2:67:LYS:NZ	2.16	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: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: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:259:G:H2'	34:RA:260:G:H8	1.84	0.43
34:RA:2737:G:H2'	34:RA:2738:A:H8	1.84	0.43
34:RA:285:C:H2'	34:RA:286:C:C6	2.52	0.43
34:RA:29:U:H5''	49:RU:7:GLY:HA2	2.00	0.43
34:RA:624:C:H2'	34:RA:625:G:H8	1.83	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: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
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:C3'	1:XA:936:C:C6	3.01	0.43
1:XA:950:U:H3	1:XA:1231:G:H1	1.65	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
6:XF:62:TRP:CD1	18:XR:35:ARG:NH2	2.87	0.43
34:YA:1181:C:H2'	34:YA:1182:A:C8	2.54	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:1662:C:H2'	34:YA:1663:C:C6	2.53	0.43
34:YA:2346:A:H5''	34:YA:2346:A:N3	2.34	0.43
34:YA:2044:C:C2	34:YA:2625:G:N2	2.87	0.43
34:YA:2735:G:H2'	34:YA:2736:G:C8	2.54	0.43
34:YA:679:C:H2'	34:YA:680:G:C8	2.53	0.43
35:YB:37:C:O2	47:YS:95:HIS:NE2	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1377:A:H2'	1:QA:1377:A:N3	2.34	0.43
1:QA:1099:G:O5'	2:QB:96:ARG:HD2	2.19	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
1:QA:1221:G:O4'	19:QS:36:ARG:NH2	2.43	0.43
34:RA:1044:G:H1'	34:RA:1048:A:C4	2.54	0.43
34:RA:121:G:H4'	34:RA:149:A:H5'	1.99	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
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:69:C:H2'	34:RA:70:G:H8	1.83	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: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:YN:53:LEU:HD12	14:YN:54:PRO:HD2	2.01	0.43
17:XQ:21:VAL:N	17:XQ:42:TYR:O	2.40	0.43
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:1204:A:H1'	34:YA:1206:G:N9	2.34	0.43
34:YA:511:U:H4'	34:YA:1235:G:H4'	2.01	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
34:YA:363(A):G:H2'	34:YA:363(B):A:C8	2.54	0.43
48:YT:16:ARG:NH2	48:YT:83:ILE:O	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:YZ:48:PHE:HA	54:YZ:51:ALA:HB3	2.00	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:137:C:H2'	1:QA:138:G:C8	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
1:QA:359:U:H2'	1:QA:360:A:C8	2.49	0.43
6:QF:78:GLU:HA	6:QF:81:ILE:HG12	2.01	0.43
11:QK:101:SER:OG	11:QK:101:SER:O	2.30	0.43
13:QM:29:ARG:HH21	13:QM:64:TRP:HE1	1.67	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:530:G:N3	34:RA:2021:C:H1'	2.34	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:746:A:H3'	34:RA:2612:C:C5	2.53	0.43
34:RA:288:C:H2'	34:RA:289:A:C8	2.53	0.43
34:RA:740:U:H2'	34:RA:741:G:C8	2.54	0.43
45:RQ:77:LYS:NZ	45:RQ:84:GLY:O	2.40	0.43
34:RA:494:G:OP1	51:RW:8:ARG:NH1	2.52	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
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
1:XA:787:A:H2'	1:XA:788:U:C6	2.54	0.43
1:XA:577:G:H1'	1:XA:816:A:H2'	2.00	0.43
1:XA:996:A:H2'	1:XA:997:U:H6	1.84	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
32:Y8:56:GLU:OE1	32:Y8:59:LYS:NZ	2.36	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
34:YA:436:C:H2'	34:YA:438:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:1437:C:H2'	1:QA:1438:G:H8	1.83	0.42
1:QA:186(H):C:H1'	1:QA:186(L):G:N2	2.34	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:563:A:O2'	1:QA:566:G:O2'	2.29	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
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
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
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
37:RE:120:TRP:CD2	37:RE:155:LYS:HB3	2.54	0.42
28:R4:34:GLU:OE1	39:RG:113:ARG:CD	2.66	0.42
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:1049:U:OP1	14:XN:3:ARG:NH2	2.52	0.42
1:XA:107:G:C2	1:XA:108:G:H1'	2.54	0.42
1:XA:1217:C:P	14:XN:5:ALA:CB	2.98	0.42
1:XA:7:G:H5'	1:XA:298:A:H5'	2.00	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: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:585:G:N3	1:XA:879:C:H4'	2.34	0.42
11:XK:54:ARG:O	11:XK:57:THR:OG1	2.31	0.42
1:XA:1361:G:C4	14:XN:18:VAL:HG12	2.54	0.42
33:Y9:10:ILE:N	33:Y9:14:CYS:SG	2.84	0.42
34:YA:1069:A:H2'	34:YA:1073:A:N7	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1278:A:H2'	34:YA:1279:G:C8	2.54	0.42
34:YA:151:C:H2'	34:YA:152:G:C8	2.52	0.42
34:YA:1535:U:C4	34:YA:1537:C:H1'	2.54	0.42
34:YA:270(V):C:H2'	34:YA:270(W):G:C8	2.53	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
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
54:YZ:85:HIS:NE2	54:YZ:87:ASP:OD1	2.52	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
1:QA:781:A:H4'	1:QA:1522:U:O2'	2.19	0.42
1:QA:157:G:H2'	1:QA:158:G:C8	2.54	0.42
13:QM:28:ALA:CB	21:QU:21:TYR:OH	2.68	0.42
1:QA:323:U:H4'	20:QT:19:SER:HA	2.01	0.42
34:RA:1711:C:H2'	34:RA:1712:C:C6	2.54	0.42
34:RA:825:C:H4'	34:RA:2428:G:N7	2.34	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
34:RA:807:U:H2'	34:RA:808:G:C8	2.54	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:1305:G:C6	1:XA:1331:G:N7	2.81	0.42
1:XA:518:C:H5	1:XA:529:G:H3'	1.83	0.42
1:XA:68(P):A:C5	1:XA:68(Q):C:H1'	2.54	0.42
10:XJ:62:HIS:NE2	14:XN:61:TRP:HE3	2.16	0.42
32:Y8:4:MET:HG3	32:Y8:61:LEU:HD11	2.01	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:67:U:H2'	34:YA:68:G:H8	1.83	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:1086:U:H3	1:QA:1099:G:H1	1.65	0.42
1:QA:125:U:H2'	1:QA:126:G:C8	2.55	0.42
1:QA:1530:G:H2'	1:QA:1531:A:C8	2.54	0.42
1:QA:45:U:H4'	1:QA:306:G:N2	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:832:C:H2'	1:QA:833:U:C6	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
1:QA:1186:G:C2	14:QN:61:TRP:O	2.66	0.42
17:QQ:45:HIS:H	17:QQ:72:ARG:HA	1.84	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:237:C:H2'	34:RA:238:C:C6	2.54	0.42
34:RA:828:U:H4'	34:RA:831:G:C2	2.54	0.42
37:RE:109:LYS:HG2	37:RE:191:PRO:HB3	2.00	0.42
34:RA:2658:C:H5''	40:RH:158:HIS:NE2	2.34	0.42
34:RA:636:G:C4	44:RP:115:LEU:HD11	2.54	0.42
1:XA:1439:C:H2'	1:XA:1440(A):C:C6	2.54	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
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
1:XA:1376:U:C5	7:XG:10:ARG:HD3	2.53	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
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
34:YA:945:A:H62	34:YA:2448:A:N6	1.74	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
40:YH:159:GLU:HG2	40:YH:169:VAL:HG21	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:445:G:H2'	1:QA:446:G:C8	2.52	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
1:QA:972:C:OP2	10:QJ:57:LYS:HE3	2.20	0.42
22:QV:50:G:H2'	22:QV:51:A:H8	1.85	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
25:R1:2:SER:N	34:RA:1364:G:OP2	2.52	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
34:RA:245:G:N2	34:RA:384:U:O2'	2.37	0.42
24:R0:29:GLN:HG3	34:RA:923:C:H4'	2.01	0.42
34:RA:949:C:H2'	34:RA:950:G:C8	2.54	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:1055:A:H2'	1:XA:1056:U:O4'	2.18	0.42
1:XA:133:U:H6	1:XA:133:U:O5'	2.03	0.42
1:XA:741:G:P	15:XO:35:ARG:HH21	1.54	0.42
33:Y9:6:SER:O	33:Y9:6:SER:OG	2.35	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:OP2	34:YA:2014:A:H8	2.03	0.42
34:YA:2452:C:H2'	34:YA:2453:A:C8	2.54	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
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
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: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:172:PRO:HG3	6:XF:28:ARG:HH12	1.84	0.42
4:QD:59:ARG:HH12	4:QD:66:ARG:NH2	2.16	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:N	13:QM:47:ASP:OD1	2.48	0.42
1:QA:1014:A:N9	19:QS:34:TRP:NE1	2.50	0.42
34:RA:1123:C:H2'	34:RA:1124:C:H6	1.85	0.42
34:RA:941:A:O2'	34:RA:1190:G:O3'	2.30	0.42
34:RA:528:A:C2	34:RA:2042:A:H2'	2.55	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:1084:G:H21	1:XA:1102:A:H62	1.67	0.42
1:XA:1259:C:HO2'	1:XA:1283:G:H21	1.65	0.42
1:XA:1305:G:H4'	1:XA:1332:A:N6	2.34	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:757:U:H2'	1:XA:758:G:O4'	2.18	0.42
1:XA:714:G:H1'	1:XA:777:A:C8	2.55	0.42
1:XA:821:G:H2'	1:XA:822:C:O4'	2.19	0.42
1:XA:948:C:OP2	13:XM:106:ASN:OD1	2.36	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
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
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
35:YB:44:G:H1'	35:YB:47:C:H42	1.83	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: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
1:QA:21:G:H2'	1:QA:22:G:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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:262:A:H2'	34:RA:263:C:O4'	2.19	0.42
34:RA:2841:C:H2'	34:RA:2842:G:H8	1.84	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
36:RD:142:VAL:HG23	36:RD:193:VAL:HA	2.02	0.42
36:RD:32:SER:C	36:RD:34:VAL:H	2.23	0.42
45:RQ:7:MET:N	45:RQ:7:MET:SD	2.90	0.42
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
1:XA:186(Q):U:O2	20:XT:105:SER:OG	2.37	0.42
2:XB:87:ARG:HH21	2:XB:219:VAL:HG13	1.84	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
2:XB:195:ASP:O	8:XH:74:PRO:HG2	2.20	0.42
1:XA:972:C:C2'	10:XJ:55:LYS:HB2	2.49	0.42
18:XR:85:LEU:HA	18:XR:85:LEU:HD12	1.83	0.42
11:XK:108:ILE:O	18:XR:87:ARG:HA	2.19	0.42
34:YA:128:C:H2'	34:YA:129:C:C6	2.54	0.42
34:YA:1556:C:H2'	34:YA:1557:C:C6	2.54	0.42
34:YA:1303:G:H1'	34:YA:1641:A:C2	2.55	0.42
34:YA:676:A:C8	34:YA:2070:G:H1'	2.55	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:65:C:H2'	34:YA:66:C:C6	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
38:YF:114:VAL:HG11	38:YF:202:PHE:CZ	2.55	0.42
34:YA:1012:U:O4	42:YN:25:ARG:HD3	2.19	0.42
44:YP:82:GLY:HA2	44:YP:113:LYS:O	2.18	0.42
1:QA:943:U:O2'	1:QA:1232:U:OP2	2.36	0.42
1:QA:1466:C:H2'	1:QA:1467:G:O4'	2.19	0.42
1:QA:320:C:N4	1:QA:329:A:OP2	2.52	0.42
1:QA:34:C:H2'	1:QA:35:G:H8	1.83	0.42
1:QA:740:U:O4'	15:QO:42:HIS:CD2	2.73	0.42
1:QA:821:G:P	1:QA:821:G:H8	2.43	0.42
1:QA:21:G:H1'	1:QA:915:A:N1	2.34	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
12:QL:57:LYS:HA	12:QL:67:THR:HA	2.00	0.42
34:RA:1041:C:H2'	34:RA:1042:G:C8	2.51	0.42
34:RA:105:C:H2'	34:RA:106:C:C6	2.54	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:189:G:H2'	34:RA:205:G:N2	2.34	0.42
34:RA:2065:C:H1'	34:RA:2449:U:H3	1.84	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
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:920:U:O2'	1:XA:1081:G:O2'	2.36	0.42
1:XA:111:G:C8	1:XA:111:G:O5'	2.70	0.42
1:XA:1330:U:C5'	13:XM:24:GLY:O	2.68	0.42
1:XA:926:G:H2'	1:XA:1505:G:N2	2.35	0.42
1:XA:373:A:HO2'	1:XA:374:A:H5'	1.84	0.42
1:XA:474:G:H2'	1:XA:475:G:C8	2.55	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1869:G:H2'	34:YA:1871:A:N7	2.35	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:2072:G:N1	34:YA:2438:U:C2	2.88	0.42
34:YA:270(S):G:H2'	34:YA:270(T):G:H8	1.85	0.42
34:YA:2855:C:H2'	34:YA:2856:C:C6	2.54	0.42
34:YA:584:C:OP2	49:YU:10:ARG:NH2	2.53	0.42
34:YA:654(B):G:H2'	34:YA:654(C):C:C6	2.55	0.42
34:YA:603:A:O4'	34:YA:655:A:N6	2.52	0.42
34:YA:673:C:H2'	34:YA:674:G:C8	2.55	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: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
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:8:A:C8	4:QD:209:ARG:O	2.72	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
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:1572:A:H2'	34:RA:1573:G:C8	2.55	0.42
34:RA:191:A:N6	34:RA:206:U:O2	2.53	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
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
1:XA:1253:G:N1	1:XA:1254:C:N4	2.67	0.42
1:XA:1512:U:H2'	1:XA:1513:A:C8	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:1329:A:H4'	13:XM:29:ARG:CZ	2.50	0.42
1:XA:1313:U:C5	19:XS:4:SER:OG	2.72	0.42
1:XA:1311:G:H3'	19:XS:5:LEU:HD11	1.31	0.42
30:Y6:40:CYS:HB3	30:Y6:43:CYS:CB	2.50	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: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:N2	34:YA:2468:G:OP2	2.51	0.42
34:YA:2554:U:H2'	34:YA:2555:U:C6	2.55	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
37:YE:102:VAL:HG23	37:YE:200:GLU:HA	2.02	0.42
45:YQ:110:THR:OG1	45:YQ:111:GLU:N	2.53	0.42
46:YR:87:TYR:OH	46:YR:117:VAL:O	2.31	0.42
48:YT:6:LEU:HA	48:YT:9:LEU:HB2	2.02	0.42
1:QA:129(A):U:H4'	1:QA:130:A:OP1	2.18	0.42
1:QA:1373:G:P	9:QI:11:LYS:HZ2	2.41	0.42
1:QA:1509:C:H2'	1:QA:1510:U:H6	1.85	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
4:QD:18:LYS:HG2	4:QD:18:LYS:HZ2	1.69	0.42
2:QB:197:VAL:C	8:QH:68:ARG:NH2	2.70	0.42
1:QA:1313:U:C4'	19:QS:6:LYS:HZ3	2.29	0.42
33:R9:29:ASN:HB3	33:R9:32:HIS:CD2	2.55	0.42
34:RA:1444(B):A:H1'	34:RA:1460:A:N3	2.35	0.42
34:RA:2651:C:H2'	34:RA:2652:C:H6	1.84	0.42
34:RA:1629:U:O2	34:RA:2698:U:H4'	2.20	0.42
34:RA:26:G:H1'	34:RA:515:A:H61	1.85	0.42
34:RA:2784:C:H2'	34:RA:2785:C:C6	2.55	0.42
34:RA:27:G:H1'	34:RA:513:A:H61	1.84	0.42
34:RA:2859:G:H2'	34:RA:2860:A:C8	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:804:A:H2'	34:RA:806:C:C4	2.55	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
34:RA:389:G:H1	44:RP:71:VAL:HG12	1.84	0.42
34:RA:1654:A:OP1	46:RR:2:ARG:HD3	2.20	0.42
1:XA:1359:C:H4'	1:XA:1362(A):C:N4	2.35	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
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: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
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
36:YD:45:ASN:O	36:YD:47:GLY:N	2.52	0.42
49:YU:94:ASN:HD22	49:YU:94:ASN:C	2.22	0.42
1:QA:1085:U:H3'	1:QA:1086:U:C6	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:5:U:H4'	1:QA:6:G:C8	2.55	0.42
6:QF:50:TYR:CZ	18:QR:77:GLY:HA2	2.55	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
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: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
1:XA:390:C:H6	1:XA:390:C:O5'	2.03	0.42
1:XA:56:U:H2'	1:XA:57:G:C8	2.55	0.42
4:XD:105:VAL:HG21	4:XD:126:ILE:HD13	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:1187:G:C4	14:XN:61:TRP:O	2.73	0.42
1:XA:728:A:C8	15:XO:54:ARG:NH1	2.84	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
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
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: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: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
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
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.20	0.41
7:QG:75:VAL:HG12	7:QG:88:PRO:HB3	2.01	0.41
1:QA:1124:G:C4'	10:QJ:36:GLY:H	2.33	0.41
1:QA:1220:G:N2	19:QS:54:GLY:HA2	2.33	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:1062:G:N7	34:RA:1088:A:O2'	2.44	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
1:QA:1483:A:H1'	34:RA:1948:G:H1'	2.02	0.41
34:RA:2538:C:H2'	34:RA:2539:C:C6	2.55	0.41
34:RA:557:U:H2'	34:RA:558:G:C8	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:XA:167:G:H2'	1:XA:168:G:H8	1.85	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:664:G:N3	1:XA:726:C:H4'	2.35	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
1:XA:1229:A:OP2	13:XM:104:ARG:O	2.37	0.41
1:XA:1188:A:H4'	14:YN:59:ALA:O	2.19	0.41
19:XS:30:LEU:HD13	19:XS:48:THR:HG23	2.01	0.41
32:Y8:60:LEU:HA	32:Y8:60:LEU:HD12	1.82	0.41
34:YA:1510:A:N3	34:YA:1510:A:H2'	2.33	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
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
36:YD:66:ASP:OD1	36:YD:103:ARG:NH1	2.53	0.41
36:YD:83:GLU:OE1	36:YD:104:TYR:OH	2.31	0.41
34:YA:1675:C:O2	37:YE:128:SER:OG	2.37	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:1310:G:H2'	1:QA:1311:G:H8	1.84	0.41
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:715:A:OP1	1:QA:805:C:O2'	2.31	0.41
9:QL:77:ILE:O	9:QL:81:ILE:HG12	2.20	0.41
26:R2:45:SER:OG	26:R2:46:GLN:N	2.53	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:172:C:H2'	34:RA:173:G:C8	2.55	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:242:G:H22	34:RA:254:G:H2'	1.84	0.41
34:RA:2773:C:H2'	34:RA:2774:C:C6	2.55	0.41
34:RA:676:A:C2	34:RA:677:A:C8	3.09	0.41
34:RA:2751:G:N1	40:RH:3:ARG:CB	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:RU:107:ALA:HA	49:RU:110:VAL:HG12	2.01	0.41
1:XA:1376:U:C4	7:XG:10:ARG:CD	3.02	0.41
1:XA:260:G:H2'	1:XA:261:U:C6	2.56	0.41
1:XA:355:C:C6	1:XA:355:C:O5'	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
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: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:279:C:H2'	34:YA:280:C:C6	2.55	0.41
34:YA:2819:G:H2'	34:YA:2821:A:N7	2.35	0.41
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
37:YE:201:THR:OG1	37:YE:202:LYS:N	2.53	0.41
37:YE:24:THR:HG22	37:YE:186:GLY:H	1.84	0.41
44:YP:15:ARG:HA	44:YP:15:ARG:HD3	1.85	0.41
44:YP:47:ASP:OD2	44:YP:50:ARG:NH1	2.53	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:1418:A:H1'	34:RA:1959:G:H1'	2.02	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:99:C:H2'	1:QA:101:A:C8	2.55	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: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
34:RA:49:A:H61	34:RA:177:G:H2'	1.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:523:C:H5''	34:RA:541:C:O2'	2.19	0.41
34:RA:628:G:O2'	34:RA:651:G:O2'	2.34	0.41
45:RQ:116:GLU:O	45:RQ:120:ILE:HG12	2.20	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
1:XA:1347:G:HO2'	1:XA:1373:G:H1	1.67	0.41
1:XA:196:A:N3	1:XA:222:U:H1'	2.35	0.41
1:XA:59:A:H1'	1:XA:354:G:N2	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
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
1:XA:913:A:OP1	12:XL:91:LYS:HE2	2.21	0.41
13:XM:3:ARG:HD3	13:XM:3:ARG:HA	1.96	0.41
14:YN:24:CYS:SG	14:YN:40:CYS:N	2.93	0.41
29:Y5:25:LEU:HG	51:YW:19:LEU:HD12	2.03	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
34:YA:222:A:N6	34:YA:232:G:H1'	2.34	0.41
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
41:YI:121:LYS:HA	41:YI:121:LYS:HD3	1.67	0.41
41:YI:50:ARG:HA	41:YI:50:ARG:HD3	1.80	0.41
34:YA:911:A:N1	45:YQ:9:TYR:HB3	2.35	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
54:YZ:185:GLU:O	54:YZ:186:GLU:C	2.58	0.41
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.56	0.41
1:QA:108:G:OP2	1:QA:108:G:N2	2.49	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
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
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
1:QA:974:A:P	14:QN:31:ARG:HB2	2.56	0.41
29:R5:33:CYS:SG	29:R5:46:CYS:HB2	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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: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
36:RD:268:ARG:HG3	36:RD:269:PHE:CD2	2.55	0.41
34:RA:2748:A:O2'	40:RH:63:SER:O	2.20	0.41
34:RA:2250:G:C2	45:RQ:82:ARG:HG3	2.55	0.41
46:RR:13:HIS:O	46:RR:17:ARG:HB2	2.20	0.41
50:RV:32:THR:O	50:RV:32:THR:OG1	2.37	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
1:XA:762:C:H2'	1:XA:763:G:C8	2.55	0.41
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	2.02	0.41
1:XA:657:G:O2'	15:XO:23:GLY:HA2	2.20	0.41
22:XV:70:C:O2'	34:YA:1893:C:O2'	2.30	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
34:YA:409:C:H2'	34:YA:410:G:H8	1.85	0.41
34:YA:840:C:H2'	34:YA:841:A:C8	2.55	0.41
34:YA:919:G:N1	34:YA:2268:A:C4	2.88	0.41
34:YA:822:U:C5	34:YA:944:G:H1'	2.55	0.41
37:YE:132:HIS:CD2	37:YE:132:HIS:O	2.73	0.41
1:QA:1314:C:C5	19:QS:6:LYS:NZ	2.89	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
4:QD:169:LYS:CG	6:XF:82:ARG:HH22	2.33	0.41
4:QD:28:SER:HA	4:QD:29:PRO:HD3	1.96	0.41
13:QM:77:ASN:O	13:QM:81:LEU:HG	2.21	0.41
1:QA:1187:G:N2	14:QN:60:SER:HG	2.16	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2544:G:H1'	34:RA:2646:C:H4'	2.02	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
44:RP:137:LYS:HD3	44:RP:137:LYS:HA	1.85	0.41
45:RQ:34:LEU:HD13	45:RQ:118:LEU:HD12	2.03	0.41
34:RA:957:A:OP1	45:RQ:76:LYS:HG2	2.21	0.41
53:RY:99:CYS:HB3	53:RY:102:CYS:H	1.85	0.41
1:XA:1466:C:H2'	1:XA:1467:G:O4'	2.21	0.41
1:XA:40:C:H2'	1:XA:41:G:H8	1.86	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: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:172:C:H2'	34:YA:173:G:C8	2.55	0.41
34:YA:1790:C:H2'	34:YA:1791:A:C5	2.56	0.41
34:YA:270(D):C:H2'	34:YA:270(E):C:C6	2.55	0.41
34:YA:2742:C:H2'	34:YA:2743:C:C6	2.56	0.41
34:YA:372:G:HO2'	34:YA:400:G:H1	1.59	0.41
34:YA:804:A:H2'	34:YA:806:C:C4	2.55	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: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:186(A):C:C1'	20:QT:81:LYS:HE3	2.50	0.41
1:QA:870:U:H4'	1:QA:871:U:H3'	2.03	0.41
1:QA:80:G:N2	1:QA:89:U:H1'	2.35	0.41
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	2.03	0.41
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.03	0.41
1:QA:553:A:O2'	12:QL:29:GLY:O	2.35	0.41
34:RA:1588:C:H2'	34:RA:1589:C:C6	2.56	0.41
1:QA:1494:G:H4'	34:RA:1913:A:N7	2.35	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
34:RA:576:U:H2'	34:RA:577:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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: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
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
4:XD:161:ASN:O	4:XD:165:MET:HB2	2.21	0.41
14:YN:47:LEU:HD22	14:YN:52:GLN:HB2	2.02	0.41
1:XA:254:G:OP2	17:XQ:67:LYS:HB3	2.20	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
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
35:YB:15:A:H1'	35:YB:109:G:C5	2.56	0.41
35:YB:37:C:N3	35:YB:48:A:O2'	2.50	0.41
42:YN:5:VAL:HA	42:YN:6:PRO:HD3	1.93	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:N3	1:QA:1202:G:H2'	2.36	0.41
1:QA:1409:C:H2'	1:QA:1410:G:C8	2.55	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
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:R5:51: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:272:G:H2'	34:RA:273(A):G:H8	1.86	0.41
29:R5:43:HIS:NE2	34:RA:2884:U:OP2	2.50	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:1004:A:H2	1:XA:1024:G:H2'	1.85	0.41
1:XA:1259:C:HO2'	1:XA:1283:G:N2	2.17	0.41
1:XA:130:A:OP2	17:XQ:63:ARG:HD3	2.20	0.41
1:XA:1349:A:H2'	1:XA:1350:A:O4'	2.20	0.41
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
1:XA:990:C:H2'	1:XA:991:U:O4'	2.20	0.41
6:XF:22:GLU:OE2	6:XF:84:ASN:ND2	2.40	0.41
1:XA:587:G:O2'	8:XH:3:THR:HA	2.20	0.41
10:XJ:16:LEU:HD22	10:XJ:94:VAL:HG22	2.02	0.41
1:XA:658:G:C1'	15:XO:22:THR:OG1	2.68	0.41
29:Y5:11:THR:HG23	29:Y5:15:ARG:HD2	2.02	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:1130:U:C2	34:YA:2025:C:H5''	2.55	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
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
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:HA	50:YV:68:LYS:HD3	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:958:A:N6	19:QS:77:THR:C	2.71	0.41
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:73:PRO:HA	3:QC:76:VAL:HG22	2.01	0.41
4:QD:27:TYR:O	6:XF:13:ASN:ND2	2.54	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
28:R4:26:SER:OG	39:RG:143:GLU:CD	2.52	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: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
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:1695:G:H1'	36:RD:8:PRO:O	2.20	0.41
46:RR:96:ARG:HB2	46:RR:117:VAL:HG12	2.02	0.41
1:XA:1124:G:H4'	10:XJ:36:GLY:CA	2.51	0.41
1:XA:954:G:H22	1:XA:1228:C:H42	1.67	0.41
1:XA:125:U:H2'	1:XA:126:G:C8	2.56	0.41
1:XA:1440(I):U:H4'	1:XA:1440(J):A:C6	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
2:XB:193:ASP:OD2	2:XB:193:ASP:N	2.41	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
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:CD1	10:XJ:40:LEU:N	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
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
34:YA:312:G:H4'	34:YA:331:A:N3	2.35	0.41
34:YA:7:G:H2'	34:YA:8:A:C8	2.55	0.41
4:QD:166:LYS:HG2	36:YD:135:PHE:CZ	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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:573:A:H2'	1:QA:574:A:C8	2.55	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
3:QC:36:ASP:OD1	3:QC:59:ARG:NH2	2.53	0.41
5:QE:11:ILE:HG21	5:QE:31:LEU:HD23	2.02	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
32:R8:3:LYS:H	32:R8:3:LYS:HG2	1.71	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:2085:C:H4'	36:RD:262:ARG:NH2	2.35	0.41
34:RA:2470:G:OP1	45:RQ:56:ARG:NH2	2.48	0.41
34:RA:47:C:H2'	34:RA:48:G:H8	1.86	0.41
39:RG:141:PHE:HB2	39:RG:144:ILE:HD13	2.03	0.41
41:RI:14:ASP:HB3	41:RI:15:VAL:H	1.65	0.41
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.56	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
12:XL:56:ALA:HB2	12:XL:70:ILE:HD11	2.03	0.41
1:XA:668:G:O2'	15:XO:46:HIS:ND1	2.47	0.41
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	2.03	0.41
1:XA:1320:C:N4	19:XS:37:ARG:N	2.69	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
34:YA:1050:A:N7	34:YA:2751:G:N3	2.67	0.41
34:YA:1914:C:H2'	34:YA:1915:U:O4'	2.21	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:2059:A:C6	34:YA:2503:A:C6	3.05	0.41
34:YA:459:U:H2'	34:YA:460:A:H8	1.85	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:923:C:H2'	34:YA:924:C:C6	2.56	0.41
40:YH:86:GLU:H	40:YH:86:GLU:HG2	1.51	0.41
44:YP:6:LEU:HA	44:YP:6:LEU:HD23	1.90	0.41
48:YT:19:LEU:HA	48:YT:20:PRO:HD3	1.91	0.41
52:YX:92:LEU:HD23	52:YX:92:LEU:HA	1.86	0.41
1:QA:1407:C:H2'	1:QA:1408:A:C8	2.56	0.41
1:QA:488:C:H2'	1:QA:489:C:C6	2.56	0.41
1:QA:619:U:H2'	1:QA:620:C:C6	2.56	0.41
1:QA:955:U:C2'	19:QS:83:HIS:CA	2.95	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:79:ARG:CZ	11:XK:104:GLN:CA	2.88	0.41
13:QM:40:ASN:HA	13:QM:41:PRO:HD3	1.92	0.41
34:RA:1303:G:H5'	34:RA:1642:G:H21	1.85	0.41
34:RA:1991:U:H2'	34:RA:1992:G:H5''	2.03	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:2428:G:O2'	44:RP:56:SER:OG	2.36	0.41
34:RA:2440:C:H2'	34:RA:2441:C:H4'	2.03	0.41
34:RA:2497:A:H1'	34:RA:2498:C:H5	1.86	0.41
34:RA:256:A:H2'	34:RA:257:A:C8	2.56	0.41
34:RA:2764:A:H2'	34:RA:2766:G:C8	2.56	0.41
34:RA:456:C:C5	52:RX:69:TYR:CE1	3.09	0.41
34:RA:455:C:N3	34:RA:472:A:H2'	2.36	0.41
34:RA:923:C:H2'	34:RA:924:C:C6	2.55	0.41
34:RA:863:A:O2'	35:RB:100:G:N3	2.49	0.41
28:R4:27:THR:HG21	39:RG:62:LEU:HD13	2.03	0.41
40:RH:123:PHE:HA	40:RH:123:PHE:HD2	1.77	0.41
34:RA:2470:G:P	45:RQ:56:ARG:HH21	2.43	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
2:XB:40:HIS:HB2	2:XB:190:THR:HG21	2.01	0.41
14:XN:56:VAL:CG1	14:XN:57:ARG:N	2.59	0.41
18:XR:30:ASP:OD2	18:XR:33:ASP:N	2.54	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:1510:A:O2'	34:YA:1512:G:N7	2.50	0.41
34:YA:2134:A:H1'	34:YA:2158:A:C2	2.56	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
34:YA:375:C:H2'	34:YA:376:C:C6	2.56	0.41
34:YA:558:G:H2'	34:YA:559:G:H8	1.85	0.41
34:YA:748:G:OP1	51:YW:88:ARG:NH2	2.40	0.41
35:YB:111:U:H2'	35:YB:112:G:H8	1.85	0.41
36:YD:61:LEU:HA	36:YD:61:LEU:HD23	1.94	0.41
37:YE:154:LYS:HD2	37:YE:154:LYS:HA	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YF:157:VAL:HG21	38:YF:181:LEU:HD13	2.03	0.41
34:YA:558:G:P	42:YN:111:PRO:HD2	2.61	0.41
52:YX:34:ALA:O	52:YX:77:LYS:NZ	2.54	0.41
45:YQ:55:VAL:HG13	54:YZ:178:GLU:HB3	2.03	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: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:10:A:H2'	1:QA:11:G:H8	1.85	0.41
1:QA:1298:C:H2'	1:QA:1298:C:H6	1.55	0.41
1:QA:411:A:H2'	1:QA:413:G:C8	2.55	0.41
1:QA:65:U:O4'	1:QA:199:G:O2'	2.31	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
3:QC:23:TYR:CD1	10:QJ:10:GLY:HA2	2.56	0.41
12:QL:93:LEU:HA	12:QL:94:PRO:HD3	1.96	0.41
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.39	0.41
25:R1:86:SER:O	25:R1:88:LYS:N	2.53	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
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
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
44:RP:28:GLY:C	44:RP:30:THR:H	2.24	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
34:RA:1011:G:OP2	49:RU:70:ARG:NH2	2.54	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:1165:C:H2'	1:XA:1166:G:C8	2.55	0.41
1:XA:1314:C:O5'	1:XA:1314:C:H6	2.04	0.41
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.85	0.41
1:XA:171:A:H2'	1:XA:172:A:C8	2.56	0.41
1:XA:22:G:H4'	1:XA:885:G: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:528:C:N4	12:XL:49:ASN:CG	2.70	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:90:LEU:HA	10:XJ:90:LEU:HD12	1.90	0.41
19:XS:19:VAL:HA	19:XS:22:LEU:HB2	2.01	0.41
34:YA:1123:C:H2'	34:YA:1124:C:C6	2.56	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
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
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
34:YA:1252:G:N2	49:YU:33:ARG:HD3	2.36	0.41
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
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
1:QA:542:G:P	4:QD:10:ARG:HH12	2.44	0.40
1:QA:296:U:O2'	1:QA:556:C:O2	2.27	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
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:2469:A:H2	34:RA:2481:G:H21	1.69	0.40
34:RA:271(B):C:O2	34:RA:272:G:H1'	2.20	0.40
34:RA:2790:A:H2	34:RA:2791:C:H2'	1.86	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
34:RA:2820:A:C5	46:RR:4:LEU:HD12	2.56	0.40
49:RU:34:LYS:HD3	49:RU:34:LYS:HA	1.72	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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:XP:72:ARG:HA	16:XP:75:ARG:HG2	2.03	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: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:2859:G:H2'	34:YA:2860:A:C8	2.56	0.40
34:YA:1174:A:H61	55:YA:3192:MG:MG	1.10	0.40
34:YA:363(D):G:H2'	34:YA:363(E):G:H8	1.85	0.40
34:YA:71:A:H5''	34:YA:72:U:H3'	2.02	0.40
36:YD:172:TYR:HB3	36:YD:184:LYS:HG2	2.04	0.40
37:YE:12:THR:HG23	37:YE:13:ARG:N	2.36	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: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
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
4:QD:205:GLU:CD	5:QE:107:ARG:NH1	2.74	0.40
12:QL:32:PHE:HB3	12:QL:84:LEU:HD21	2.03	0.40
17:QQ:75:ARG:HD2	17:QQ:75:ARG:HA	1.88	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
34:RA:234:C:H2'	34:RA:235:U:H6	1.86	0.40
24:R0:60:PHE:CZ	34:RA:2365:G:H4'	2.56	0.40
34:RA:997:G:O5'	49:RU:58:ARG:NH1	2.55	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: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
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
2:XB:134:GLU:HG3	2:XB:137:ARG:NE	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:HE3	27:Y3:17:LYS:HB2	1.88	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
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
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
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:1049:U:H5''	1:QA:1050:G:C8	2.55	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:95:G:H2'	1:QA:96:G:C8	2.56	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
1:QA:1123:A:C1'	10:QJ:37:PRO:HD2	2.50	0.40
1:QA:955:U:C2'	19:QS:83:HIS:HA	2.52	0.40
34:RA:1186:G:H2'	34:RA:1187:G:O4'	2.21	0.40
34:RA:151:C:H2'	34:RA:152:G:H8	1.86	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
24:R0:43:THR:HG21	34:RA:2336:A:H61	1.85	0.40
34:RA:2348:U:H2'	34:RA:2349:G:C8	2.56	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:729:G:P	36:RD:208:LYS:HZ3	2.45	0.40
47:RS:59:LYS:HA	47:RS:59:LYS:HD2	1.94	0.40
53:RY:47:LYS:HD2	53:RY:47:LYS:HA	1.94	0.40
1:XA:68(A):G:H22	1:XA:101:A:H2	1.68	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:1359:C:H4'	1:XA:1362(A):C:H42	1.86	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
8:XH:34:GLU:O	8:XH:38:ILE:HG12	2.22	0.40
11:XK:51:LYS:HB2	11:XK:51:LYS:HE2	1.93	0.40
12:XL:70:ILE:HG13	12:XL:100:ILE:HG13	2.03	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
34:YA:2292:C:H2'	34:YA:2293:C:C6	2.56	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
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
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:1002:G:H3'	1:QA:1003:G:H8	1.85	0.40
1:QA:107:G:H4'	1:QA:378:G:H4'	2.02	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
1:QA:44:G:OP1	16:QP:12:LYS:CD	2.64	0.40
1:QA:477:G:H2'	1:QA:478:A:C8	2.56	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
1:QA:668:G:O4'	15:QO:48:LYS:O	2.39	0.40
16:QP:14:ASN:OD1	16:QP:16:HIS:NE2	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2019:A:H2	34:RA:2035:G:H22	1.68	0.40
34:RA:1853:A:N1	34:RA:2087:G:H1'	2.36	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
34:RA:413:C:H2'	34:RA:414:C:H6	1.86	0.40
34:RA:67:U:H2'	34:RA:68:G:H8	1.87	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
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:HA	53:RY:67:LEU:HD23	1.96	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
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
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
1:XA:280:C:N4	17:XQ:39:SER:H	2.15	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:1689:A:H2'	34:YA:1690:A:C8	2.56	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: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
34:YA:2043:C:H42	34:YA:2625:G:H1	1.69	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:1820:U:N3	36:YD:202:LYS:HD2	2.37	0.40
38:YF:195:ASP:N	38:YF:195:ASP:OD1	2.47	0.40
34:YA:390:A:C6	44:YP:71:VAL:HG21	2.57	0.40
34:YA:1754:C:H5''	48:YT:113:LYS:HD3	2.03	0.40
50:YV:100:ARG:HB2	50:YV:100:ARG:HE	1.70	0.40
53:YY:39:VAL:HG23	53:YY:42:VAL:HB	2.02	0.40
54:YZ:128:VAL:HG22	54:YZ:161:VAL:HG22	2.03	0.40
54:YZ:24:LEU:HA	54:YZ:25:PRO:HD3	1.87	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:QA:277:C:P	17:QQ:68:ARG:HH21	2.44	0.40
1:QA:957:U:P	19:QS:80:TYR:O	2.77	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: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:151:C:H2'	34:RA:152:G:C8	2.57	0.40
34:RA:1853:A:N3	34:RA:2233:U:O2'	2.49	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
34:RA:969:U:H2'	34:RA:970:C:C6	2.56	0.40
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: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:978:A:HO2'	1:XA:1322:C:N4	2.19	0.40
1:XA:1332:A:H3'	1:XA:1333:A:H8	1.87	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
4:XD:202:LEU:HA	4:XD:205:GLU:HB2	2.03	0.40
8:XH:81:HIS:ND1	8:XH:138:TRP:O	2.33	0.40
6:XF:7:ASN:HD21	18:XR:35:ARG:CZ	2.34	0.40
25:Y1:41:ARG:NH2	34:YA:1365:A:O5'	2.40	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:XV:19:G:C8	34:YA:2112:G:N7	2.88	0.40
34:YA:2429:G:N7	44:YP:56:SER:OG	2.35	0.40
34:YA:197:A:C6	34:YA:2430:A:C2	3.08	0.40
34:YA:2591:C:H2'	34:YA:2592:G:C8	2.56	0.40
34:YA:1456:G:C2	34:YA:2704:C:N3	2.89	0.40
34:YA:270(S):G:H2'	34:YA:270(T):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
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
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
6:QF:14:LEU:CA	4:XD:20:TYR:OH[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%)	34	71
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%)	29	67
4	XD	206/209 (99%)	194 (94%)	11 (5%)	1 (0%)	29	67
5	QE	149/162 (92%)	134 (90%)	14 (9%)	1 (1%)	22	61
5	XE	149/162 (92%)	140 (94%)	8 (5%)	1 (1%)	22	61
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
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%)	15	53
10	XJ	94/105 (90%)	87 (93%)	5 (5%)	2 (2%)	7	38
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%)	19	59
12	XL	120/132 (91%)	99 (82%)	21 (18%)	0	100	100
13	QM	113/126 (90%)	96 (85%)	16 (14%)	1 (1%)	17	55
13	XM	112/126 (89%)	100 (89%)	11 (10%)	1 (1%)	17	55
14	QN	58/61 (95%)	50 (86%)	7 (12%)	1 (2%)	9	43
14	XN	58/61 (95%)	49 (84%)	7 (12%)	2 (3%)	3	29
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
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%)	4	31
20	XT	97/106 (92%)	84 (87%)	10 (10%)	3 (3%)	4	31
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

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
25	R1	93/98 (95%)	76 (82%)	17 (18%)	0	100	100
25	Y1	91/98 (93%)	78 (86%)	12 (13%)	1 (1%)	14	51
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%)	1	12
29	R5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	8	41
29	Y5	57/60 (95%)	49 (86%)	7 (12%)	1 (2%)	8	41
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%)	4	30
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
36	RD	270/276 (98%)	244 (90%)	24 (9%)	2 (1%)	22	61
36	YD	270/276 (98%)	241 (89%)	28 (10%)	1 (0%)	34	71
37	RE	203/206 (98%)	159 (78%)	39 (19%)	5 (2%)	5	35
37	YE	203/206 (98%)	162 (80%)	39 (19%)	2 (1%)	15	53
38	RF	200/210 (95%)	183 (92%)	15 (8%)	2 (1%)	15	53
38	YF	200/210 (95%)	183 (92%)	16 (8%)	1 (0%)	29	67
39	RG	179/182 (98%)	150 (84%)	28 (16%)	1 (1%)	25	64
39	YG	179/182 (98%)	152 (85%)	27 (15%)	0	100	100
40	RH	172/180 (96%)	145 (84%)	24 (14%)	3 (2%)	9	43
40	YH	172/180 (96%)	147 (86%)	21 (12%)	4 (2%)	6	37
41	RI	144/148 (97%)	114 (79%)	24 (17%)	6 (4%)	3	25
41	YI	144/148 (97%)	118 (82%)	22 (15%)	4 (3%)	5	33
42	RN	136/140 (97%)	122 (90%)	13 (10%)	1 (1%)	22	61

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
42	YN	136/140 (97%)	123 (90%)	12 (9%)	1 (1%)	22	61
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%)	7	40
44	YP	145/150 (97%)	116 (80%)	28 (19%)	1 (1%)	22	61
45	RQ	139/141 (99%)	120 (86%)	18 (13%)	1 (1%)	22	61
45	YQ	139/141 (99%)	111 (80%)	27 (19%)	1 (1%)	22	61
46	RR	115/118 (98%)	103 (90%)	12 (10%)	0	100	100
46	YR	115/118 (98%)	104 (90%)	10 (9%)	1 (1%)	17	55
47	RS	109/112 (97%)	95 (87%)	14 (13%)	0	100	100
47	YS	109/112 (97%)	95 (87%)	13 (12%)	1 (1%)	17	55
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%)	5	34
49	YU	115/118 (98%)	109 (95%)	6 (5%)	0	100	100
50	RV	99/101 (98%)	87 (88%)	11 (11%)	1 (1%)	15	53
50	YV	99/101 (98%)	90 (91%)	8 (8%)	1 (1%)	15	53
51	RW	111/113 (98%)	104 (94%)	7 (6%)	0	100	100
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%)	6	37
54	YZ	191/206 (93%)	145 (76%)	39 (20%)	7 (4%)	3	28
All	All	11368/12128 (94%)	10080 (89%)	1202 (11%)	86 (1%)	19	59

All (86) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
12	QL	105	TYR
20	QT	75	ASN
32	R8	30	ARG

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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%)	200 (98%)	3 (2%)	65	79
2	XB	204/220 (93%)	204 (100%)	0	100	100
3	QC	159/188 (85%)	157 (99%)	2 (1%)	69	82
3	XC	159/188 (85%)	157 (99%)	2 (1%)	69	82
4	QD	180/181 (99%)	179 (99%)	1 (1%)	86	92
4	XD	180/181 (99%)	178 (99%)	2 (1%)	73	84
5	QE	116/123 (94%)	116 (100%)	0	100	100
5	XE	116/123 (94%)	115 (99%)	1 (1%)	78	88
6	QF	90/90 (100%)	90 (100%)	0	100	100
6	XF	90/90 (100%)	89 (99%)	1 (1%)	73	84
7	QG	126/127 (99%)	126 (100%)	0	100	100
7	XG	126/127 (99%)	126 (100%)	0	100	100
8	QH	118/119 (99%)	117 (99%)	1 (1%)	81	89
8	XH	118/119 (99%)	118 (100%)	0	100	100
9	QI	79/99 (80%)	77 (98%)	2 (2%)	47	68
9	XI	81/99 (82%)	80 (99%)	1 (1%)	71	83
10	QJ	89/92 (97%)	89 (100%)	0	100	100
10	XJ	86/92 (94%)	84 (98%)	2 (2%)	50	70
11	QK	90/99 (91%)	89 (99%)	1 (1%)	73	84
11	XK	88/99 (89%)	87 (99%)	1 (1%)	73	84
12	QL	104/109 (95%)	104 (100%)	0	100	100
12	XL	103/109 (94%)	100 (97%)	3 (3%)	42	64
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%)	48 (98%)	1 (2%)	55	73
14	XN	49/50 (98%)	47 (96%)	2 (4%)	30	56

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
15	QO	79/80 (99%)	77 (98%)	2 (2%)	47	68
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%)	53	71
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%)	73 (100%)	0	100	100
20	QT	76/82 (93%)	75 (99%)	1 (1%)	69	82
20	XT	76/82 (93%)	76 (100%)	0	100	100
21	QU	20/22 (91%)	19 (95%)	1 (5%)	24	51
21	XU	20/22 (91%)	19 (95%)	1 (5%)	24	51
24	R0	65/67 (97%)	64 (98%)	1 (2%)	65	79
24	Y0	65/67 (97%)	65 (100%)	0	100	100
25	R1	80/83 (96%)	78 (98%)	2 (2%)	47	68
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%)	63 (98%)	1 (2%)	62	79
27	R3	51/52 (98%)	51 (100%)	0	100	100
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%)	49	68
29	R5	51/52 (98%)	50 (98%)	1 (2%)	55	73
29	Y5	51/52 (98%)	48 (94%)	3 (6%)	19	47
30	R6	51/52 (98%)	49 (96%)	2 (4%)	32	57
30	Y6	51/52 (98%)	49 (96%)	2 (4%)	32	57
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

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
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%)	42	64
36	RD	214/218 (98%)	212 (99%)	2 (1%)	78	88
36	YD	214/218 (98%)	214 (100%)	0	100	100
37	RE	165/166 (99%)	161 (98%)	4 (2%)	49	68
37	YE	165/166 (99%)	163 (99%)	2 (1%)	71	83
38	RF	161/166 (97%)	158 (98%)	3 (2%)	57	74
38	YF	161/166 (97%)	161 (100%)	0	100	100
39	RG	155/156 (99%)	155 (100%)	0	100	100
39	YG	155/156 (99%)	154 (99%)	1 (1%)	86	92
40	RH	145/148 (98%)	137 (94%)	8 (6%)	21	49
40	YH	145/148 (98%)	143 (99%)	2 (1%)	67	80
41	RI	122/124 (98%)	121 (99%)	1 (1%)	81	89
41	YI	122/124 (98%)	118 (97%)	4 (3%)	38	61
42	RN	117/119 (98%)	116 (99%)	1 (1%)	78	88
42	YN	117/119 (98%)	115 (98%)	2 (2%)	60	78
43	RO	100/100 (100%)	100 (100%)	0	100	100
43	YO	100/100 (100%)	98 (98%)	2 (2%)	55	73
44	RP	116/116 (100%)	115 (99%)	1 (1%)	78	88
44	YP	114/116 (98%)	114 (100%)	0	100	100
45	RQ	111/111 (100%)	111 (100%)	0	100	100
45	YQ	111/111 (100%)	110 (99%)	1 (1%)	78	88
46	RR	100/101 (99%)	99 (99%)	1 (1%)	76	86
46	YR	100/101 (99%)	99 (99%)	1 (1%)	76	86
47	RS	87/88 (99%)	87 (100%)	0	100	100
47	YS	87/88 (99%)	85 (98%)	2 (2%)	50	70
48	RT	120/127 (94%)	117 (98%)	3 (2%)	47	68
48	YT	120/127 (94%)	118 (98%)	2 (2%)	60	78
49	RU	93/94 (99%)	93 (100%)	0	100	100
49	YU	93/94 (99%)	91 (98%)	2 (2%)	52	70

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
50	RV	82/82 (100%)	82 (100%)	0	100	100
50	YV	82/82 (100%)	80 (98%)	2 (2%)	49	68
51	RW	92/92 (100%)	91 (99%)	1 (1%)	73	84
51	YW	92/92 (100%)	92 (100%)	0	100	100
52	RX	74/78 (95%)	71 (96%)	3 (4%)	30	56
52	YX	74/78 (95%)	72 (97%)	2 (3%)	44	66
53	RY	88/91 (97%)	88 (100%)	0	100	100
53	YY	88/91 (97%)	87 (99%)	1 (1%)	73	84
54	RZ	162/179 (90%)	162 (100%)	0	100	100
54	YZ	167/179 (93%)	165 (99%)	2 (1%)	71	83
All	All	9610/10066 (96%)	9507 (99%)	103 (1%)	73	84

All (103) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	QB	36	ARG
2	QB	149	LEU
2	QB	217	ARG
3	QC	38	ARG
3	QC	127	ARG
4	QD	18	LYS
8	QH	59	LEU
9	QI	64	THR
9	QI	85	LEU
11	QK	41	THR
14	QN	43	CYS
15	QO	22	THR
15	QO	87	ILE
20	QT	73	HIS
21	QU	6	ARG
24	R0	14	ARG
25	R1	73	LEU
25	R1	92	LYS
29	R5	36	CYS
30	R6	13	CYS
30	R6	23	THR
36	RD	242	ARG
36	RD	268	ARG

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Mol	Chain	Res	Type
37	RE	107	THR
37	RE	144	ARG
37	RE	154	LYS
37	RE	176	ILE
38	RF	89	VAL
38	RF	144	LYS
38	RF	195	ASP
40	RH	17	VAL
40	RH	69	ARG
40	RH	123	PHE
40	RH	125	VAL
40	RH	127	GLU
40	RH	129	THR
40	RH	130	ARG
40	RH	131	VAL
41	RI	81	VAL
42	RN	34	LEU
44	RP	16	ARG
46	RR	10	LEU
48	RT	85	LYS
48	RT	111	ARG
48	RT	129	ARG
51	RW	52	GLU
52	RX	16	LYS
52	RX	27	THR
52	RX	76	ARG
3	XC	12	LEU
3	XC	162	GLN
4	XD	135	LEU
4	XD	191	ARG
5	XE	12	LEU
6	XF	80	ARG
9	XI	27	THR
10	XJ	8	LEU
10	XJ	69	ASN
11	XK	117	ASN
12	XL	8	ASN
12	XL	89	ARG
12	XL	105	TYR
14	XN	3	ARG
14	XN	27	CYS
17	XQ	50	LYS

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Mol	Chain	Res	Type
17	XQ	74	LEU
21	XU	3	LYS
26	Y2	47	ASN
28	Y4	16	CYS
29	Y5	37	LYS
29	Y5	40	LYS
29	Y5	45	VAL
30	Y6	13	CYS
30	Y6	43	CYS
33	Y9	27	CYS
37	YE	107	THR
37	YE	184	VAL
39	YG	118	ARG
40	YH	67	LEU
40	YH	69	ARG
41	YI	56	LYS
41	YI	86	THR
41	YI	93	THR
41	YI	118	LYS
42	YN	96	GLU
42	YN	115	ARG
43	YO	24	VAL
43	YO	49	ARG
45	YQ	133	ARG
46	YR	2	ARG
47	YS	4	LEU
47	YS	110	LEU
48	YT	105	LEU
48	YT	129	ARG
49	YU	92	ARG
49	YU	94	ASN
50	YV	46	VAL
50	YV	78	LYS
52	YX	49	VAL
52	YX	66	LEU
53	YY	79	CYS
54	YZ	63	ASP
54	YZ	165	VAL

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (40) such sidechains are listed below:

Mol	Chain	Res	Type
3	QC	6	HIS
3	QC	176	HIS
4	QD	103	ASN
4	QD	123	HIS
7	QG	64	GLN
12	QL	9	GLN
13	QM	77	ASN
15	QO	62	GLN
16	QP	13	HIS
16	QP	14	ASN
19	QS	69	HIS
24	R0	12	ASN
25	R1	47	GLN
32	R8	31	HIS
32	R8	35	GLN
36	RD	253	GLN
38	RF	67	GLN
39	RG	132	ASN
42	RN	101	HIS
47	RS	38	GLN
52	RX	41	ASN
3	XC	162	GLN
3	XC	176	HIS
4	XD	116	GLN
4	XD	119	GLN
4	XD	123	HIS
6	XF	7	ASN
6	XF	57	GLN
6	XF	100	ASN
10	XJ	62	HIS
11	XK	117	ASN
12	XL	8	ASN
13	XM	77	ASN
14	XN	49	HIS
15	XO	28	GLN
28	Y4	6	HIS
29	Y5	22	HIS
37	YE	132	HIS
44	YP	70	GLN
50	YV	11	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	QA	1509/1521 (99%)	531 (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	2878/2905 (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	9187/9288 (98%)	2544 (27%)	125 (1%)

All (2544) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
34	RA	55	G
34	RA	64	A
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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	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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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:

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Mol	Chain	Res	Type
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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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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 monosaccharides 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	QD	301	4	0,12,12	0.00	-	-		
56	SF4	XD	301	4	0,12,12	0.00	-	-		

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	QD	301	4	-	-	0/6/5/5
56	SF4	XD	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

EDS failed to run properly - this section is therefore empty.

6.2 Non-standard residues in protein, DNA, RNA chains

EDS failed to run properly - this section is therefore empty.

6.3 Carbohydrates

EDS failed to run properly - this section is therefore empty.

6.4 Ligands

EDS failed to run properly - this section is therefore empty.

6.5 Other polymers

EDS failed to run properly - this section is therefore empty.