



# Full wwPDB X-ray Structure Validation Report ⓘ

Oct 4, 2023 – 12:14 PM 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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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) : 2.35.1

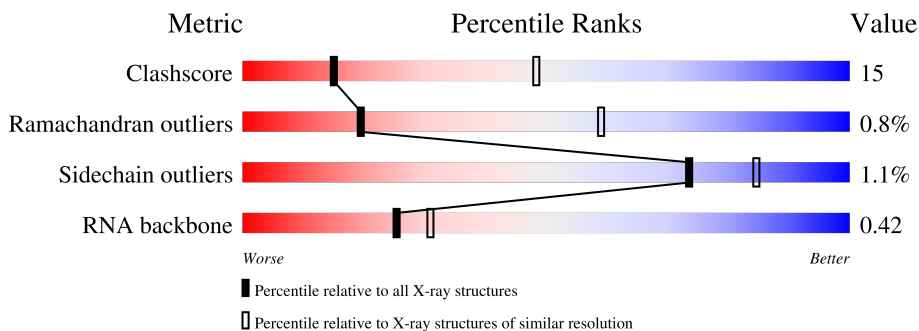
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 4.14 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
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 of the lower bar indicate the fraction of residues that contain outliers for  $\geq 3$ , 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	24% (green), 48% (yellow), 23% (orange), 5% (red), 0% (grey)
1	XA	1521	28% (green), 44% (yellow), 21% (orange), 7% (red), 0% (grey)
2	QB	256	64% (green), 28% (yellow), 8% (grey)
2	XB	256	69% (green), 23% (yellow), 8% (grey)
3	QC	239	61% (green), 25% (yellow), 14% (grey)
3	XC	239	67% (green), 18% (yellow), 14% (grey)










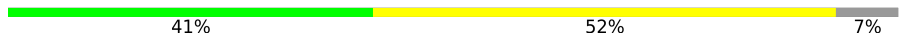


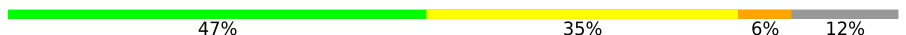
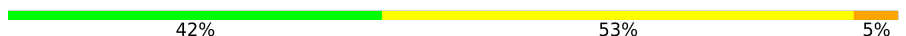










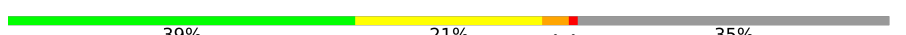
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Mol	Chain	Length	Quality of chain
4	QD	209	 73% 25%
4	XD	209	 72% 25%
5	QE	162	 67% 25% 7%
5	XE	162	 69% 24% 7%
6	QF	101	 81% 19%
6	XF	101	 64% 36%
7	QG	156	 80% 19%
7	XG	156	 78% 22%
8	QH	138	 72% 28%
8	XH	138	 76% 23%
9	QI	128	 59% 22% 18%
9	XI	128	 67% 16% 16%
10	QJ	105	 50% 45% 6%
10	XJ	105	 50% 37% 9%
11	QK	129	 75% 17% 8%
11	XK	129	 72% 17% 10%
12	QL	132	 70% 23% 5%
12	XL	132	 67% 23% 8%
13	QM	126	 55% 37% 9%
13	XM	126	 59% 31% 10%
14	QN	61	 43% 51% 5%
14	XN	61	 41% 48% 10%
15	QO	89	 74% 25%
15	XO	89	 79% 19%
16	QP	88	 66% 30% 5%

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Mol	Chain	Length	Quality of chain
16	XP	88	 72% 24% 5%
17	QQ	105	 77% 18% 5%
17	XQ	105	 76% 19% 5%
18	QR	88	 68% 11% 20%
18	XR	88	 52% 27% 20%
19	QS	93	 57% 31% 11%
19	XS	93	 63% 27% 10%
20	QT	106	 68% 24% 7%
20	XT	106	 62% 27% 7%
21	QU	27	 41% 52% 7%
21	XU	27	 81% 7% 7%
22	QV	77	 61% 26% 12%
22	XV	77	 47% 35% 6%
23	QX	19	 42% 53% 5%
23	XX	19	 42% 32% 21% 5%
24	R0	85	 81% 13% 5%
24	Y0	85	 81% 15% 5%
25	R1	98	 77% 20% 5%
25	Y1	98	 82% 13% 5%
26	R2	72	 81% 15% 5%
26	Y2	72	 81% 14% 6%
27	R3	60	 75% 23% 5%
27	Y3	60	 73% 25% 5%
28	R4	71	 46% 17% 37%
28	Y4	71	 39% 21% 35%

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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	69% 29% ..
42	RN	140	84% 14% ..
42	YN	140	77% 21% .
43	RO	122	74% 26% ..
43	YO	122	82% 18% ..
44	RP	150	73% 27% .
44	YP	150	71% 27% .
45	RQ	141	72% 28% ..
45	YQ	141	72% 27% .
46	RR	118	69% 29% ..
46	YR	118	75% 24% ..
47	RS	112	76% 23% .
47	YS	112	79% 19% ...
48	RT	146	74% 20% 6% ..
48	YT	146	66% 28% 6% ..
49	RU	118	70% 26% ..
49	YU	118	83% 14% ..
50	RV	101	76% 24% ..
50	YV	101	80% 20% ..
51	RW	113	78% 22% ..
51	YW	113	78% 22% ..
52	RX	96	81% 15% .
52	YX	96	80% 16% .
53	RY	110	75% 19% ..
53	YY	110	76% 20% ..

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Mol	Chain	Length	Quality of chain
54	RZ	206	
54	YZ	206	

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
55	MG	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
			Total	C	N	O	P			
1	QA	1511	Total 32469	C 14453	N 6011	O 10495	P 1510	0	0	0
1	XA	1515	Total 32551	C 14490	N 6022	O 10525	P 1514	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
2	QB	235	Total 1907	C 1217	N 342	O 343	S 5	0	0	0
2	XB	236	Total 1915	C 1223	N 343	O 344	S 5	0	0	0

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

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

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

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

- 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
			Total	C	N	O	S			
10	XJ	96	777	487	153	136	1	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
11	QK	119	885	549	168	165	3	0	0	0
11	XK	116	864	537	164	160	3	0	0	0

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
12	QL	125	975	614	196	164	1	0	0	0
12	XL	122	956	603	193	159	1	0	0	0

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

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

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

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	S			
15	QO	88	734	459	147	126	2	0	0	0
15	XO	87	729	457	146	124	2	0	0	0

- 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
			Total	C	N	O			
21	QU	25	217	134	52	31	0	0	0
21	XU	25	217	134	52	31	0	0	0

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

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

- Molecule 23 is a RNA chain called mRNA.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- 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
			Total	C	N	O	S			
42	YN	138	1104	712	206	182	4	0	0	0

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

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

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

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

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

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

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

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

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

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



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

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

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

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

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

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

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

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

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

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

- 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	QE	1	Total	Mg	0	0
			1	1		
55	QF	1	Total	Mg	0	0
			1	1		
55	QH	2	Total	Mg	0	0
			2	2		
55	QL	2	Total	Mg	0	0
			2	2		
55	R0	2	Total	Mg	0	0
			2	2		
55	R3	1	Total	Mg	0	0
			1	1		
55	R8	2	Total	Mg	0	0
			2	2		
55	RA	432	Total	Mg	0	0
			432	432		
55	RD	1	Total	Mg	0	0
			1	1		
55	RE	4	Total	Mg	0	0
			4	4		
55	RF	2	Total	Mg	0	0
			2	2		
55	RN	1	Total	Mg	0	0
			1	1		
55	RO	1	Total	Mg	0	0
			1	1		

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

- Molecule 56 is IRON/SULFUR CLUSTER (three-letter code: SF4) (formula: Fe<sub>4</sub>S<sub>4</sub>).



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		

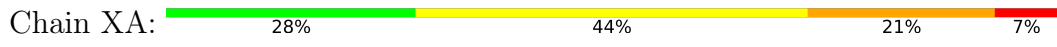
- Molecule 57 is ZINC ION (three-letter code: ZN) (formula: Zn).

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

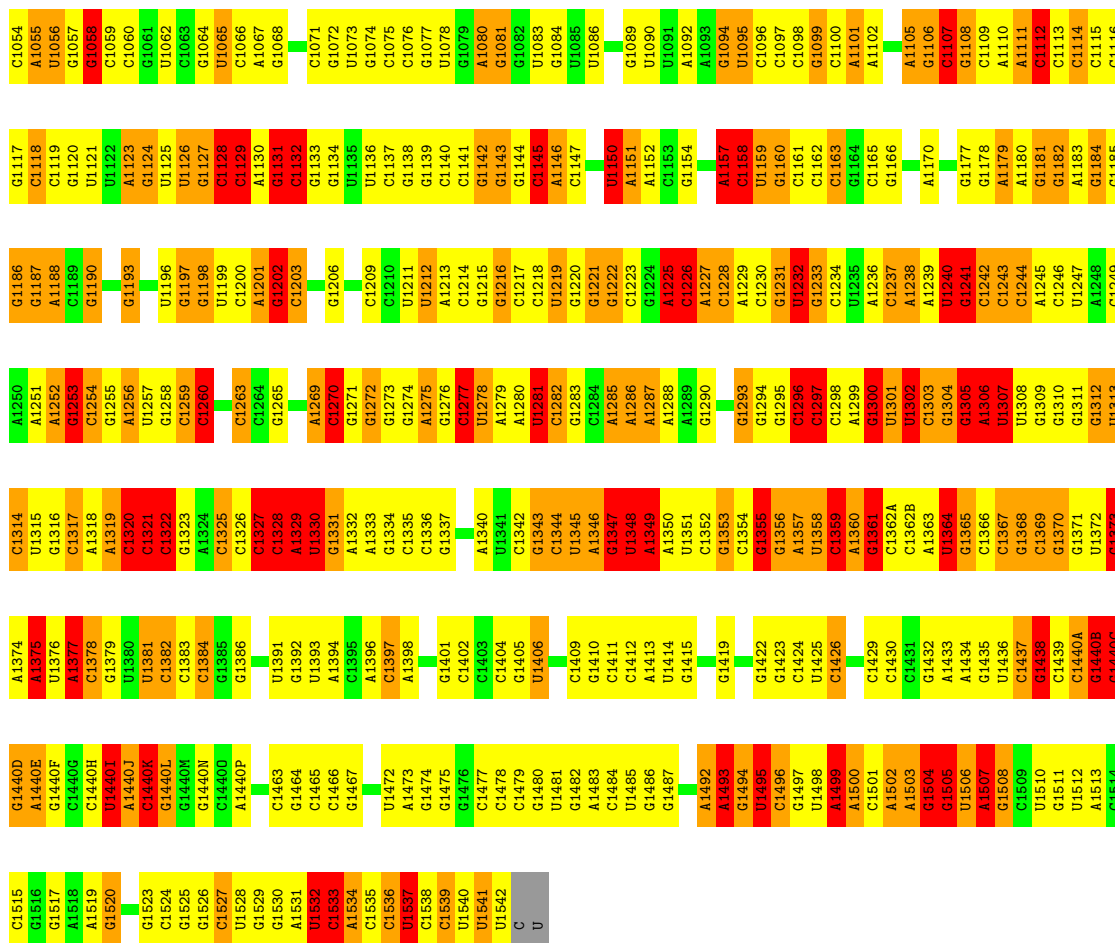


A1534	G686	G749	C811	G951	G1013	G1079	G1143	G1214	G1274	G1334	A1396	U1472	A1534
C1535	U686	G750	C812	U952	A1014	A1080	G1144	G1215	A1275	C1335	C1397	A1473	C1535
U1536	A687	G751	U884	G953	A1015	G1081	C1145	C1216	A1276	C1336	A1398	G1474	G1536
U1537	G688	G752	G885	G954	A1016	G1082	A1146	G1217	C1277	G1337	C1399	G1475	U1537
C1538	C689	A753	U886	U955	A1017	U1083	U1147	U1218	U1278	G1400	G1401	G1476	C1538
U1540	G690	G754	A889	U956	A1018	U1084	U1148	U1219	A1279	G1401	G1402	C1477	C1539
U1541	G691	G755	G890	U957	A1019	G1085	U1149	G1220	A1280	A1340	C1403	C1478	U1541
U1542	U692	C756	U891	A958	G1020	G1086	U1150	G1221	C1282	C1342	C1404	C1479	U1542
C	G693	U757	A919	A959	U1025	U1088	A1151	G1222	G1283	G1343	G1405	C1480	C
U	U694	G758	U820	A960	G1026	A1092	C1153	G1224	C1284	G1344	U1406	G1481	U
A1483	A696	G760	G822	G962	C1028A	A1093	G1154	G1225	A1285	A1345	C1407	A1483	A1483
C1484	U697	G761	G823	G963	U1028B	G1094	G1155	C1226	A1286	G1346	C1408	C1484	C1484
U1485	G698	C762	C824	G966	C1028C	U1095	A1157	A1227	A1287	U1347	C1409	U1485	U1485
G1486	G699	G763	G825	G967	G1028D	U1096	C1158	A1228	A1288	A1348	C1410	G1486	G1486
G1487	G700	G764	G826	G968	U1028E	C1097	C1159	A1229	A1289	A1349	G1411	G1487	G1487
C1490	C701	G765	U827	U905	G1028F	G1098	U1159	A1230	G1290	U1350	C1412	C1490	C1490
G1491	A702	A766	A828	G906	A1028G	G1099	G1160	C1230	U1291	U1351	C1413	G1491	G1491
A1492	G703	A767	G829	G907	G1028H	C1100	G1161	G1231	G1292	G1352	U1414	A1492	A1492
G1493	A704	A768	G830	A908	G1028I	C1101	C1162	U1232	U1293	G1353	G1415	G1493	G1493
A1494	U705	U769	U831	A909	C972	A1102	G1163	C1233	G1294	G1354	G1416	A1494	A1494
G1495	A706	G770	U832	G973	C1037	C1103	A1169	U1234	G1295	G1355	G1417	G1495	G1495
G1496	C707	G771	C833	A974	U1038	G1104	A1170	U1235	C1296	G1356	G1418	G1496	G1496
U1497	C708	U772	U834	A975	A1039	A1105	A1171	C1237	G1297	U1357	G1419	U1497	U1497
A1498	G709	G773	G837	G976	U1040	G1106	G1175	A1238	C1298	C1358	C1422	A1498	A1498
A1499	G710	G774	G837	A977	A1041	C1107	A1176	A1239	A1299	A1360	G1422	A1499	A1499
A1500	G711	G775	G838A	A978	G1042	G1108	G1177	U1240	G1300	G1361	G1427	A1500	A1500
C1501	A712	G776	U838B	G979	C1043	G1109	G1178	U1241	U1301	C1362A	U1427	C1501	C1501
A1502	G713	U777	C838C	C980	A1044	A1110	A1179	C1242	U1302	C1362B	A1428	A1502	A1502
C1503	G714	G778	U838D	A918	A1045	A1111	A1180	A1243	C1303	C1363	C1429	A1503	C1503
G1504	A715	A779	U838E	A919	C1045	A1112	A1181	G1244	G1304	U1364	G1504	G1504	G1504
G1505	A716	U781	C848	U920	U1046	C1113	G1182	A1245	G1305	U1365	G1505	G1505	G1505
U1506	C717	U782	C849	U921	G1047	C1114	G1183	A1246	G1306	C1366	G1506	U1506	U1506
A1507	U718	U783	C851	G922	U1048	C1115	A1184	U1247	U1307	C1367	G1507	A1507	A1507
G1508	G719	G784	G852	G925	U1049	G1116	G1185	U1248	U1308	C1368	G1508	G1508	G1508
C1509	U720	U785	G853	G926	A1050	C1117	G1186	C1249	G1309	C1369	G1509	C1509	C1509
U1510	G721	G786	G854	G927	C1051	C1118	G1187	A1250	G1310	U1370	G1510	U1510	U1510
G1511	G722	A787	G855	G928	U1052	C1119	A1188	A1251	G1311	G1371	G1511	G1511	G1511
U1512	U723	U788	G856	G929	C1054	G1120	C1189	A1252	G1312	U1372	U1512	U1512	U1512
C1513	G724	U789	C857	U930	U1055	G1121	G1190	G1253	U1313	G1373	A1513	A1513	A1513
A1514	U725	A790	G861	G931	U1056	A1123	A1191	C1254	C1314	A1374	G1440B	C1514	C1514
C1515	C726	G791	C862	C932	G1060	G1124	G1192	G1255	U1315	A1375	G1440C	C1515	C1515
G1516	A728	U793	U863	G933	G1061	U1125	G1193	A1256	G1316	U1376	G1440D	C1516	C1516
A1518	A729	A794	U864	A935	U1062	U1126	U1196	U1257	C1317	A1377	A1440E	A1518	A1518
A1519	G730	C795	A865	C936	C1063	G1127	G1197	G1258	A1318	C1378	C1440H	A1519	A1519
U1520	A731	U796	C866	C937	G1064	C1128	U1198	C1259	A1319	U1379	U1440I	A1520	A1520
U1522	C732	C797	C867	A938	U1065	A1130	U1199	C1260	C1320	U1440J	C1440K	U1522	U1522
G1523	U736	U798	G867	C938	U1066	G1131	C1200	C1261	C1321	C1382	C1440L	G1523	G1523
C1524	A737	G799	U870	U939	C1066	C1132	A1201	C1262	C1322	C1383	C1440L	C1524	C1524
G1525	U801	U800	U871	G940	C1069	G1133	C1202	C1263	A1323	C1384	C1440L	G1525	G1525
G1526	C739	A802	U872	G941	U1070	U1134	A1204	C1264	A1324	C1385	C1440L	G1526	G1526
U1528	G803	G803	A873	G942	G1071	U1135	U1205	G1265	C1325	C1386	C1440P	U1528	U1528
G1463	U740	U804	G874	U943	G1072	U1136	C1206	C1267	C1327	C1387	C1440P	G1463	G1463
U1464	G741	U805	C875	G944	G1073	U1137	G1207	C1268	C1328	U1390	C1463	U1464	U1464
G1465	G742	C806	C876	G945	U1074	G1138	G1207	A1269	A1329	U1391	G1465	G1465	G1465
A1531	U743	C806	C877	G947	G1075	G1139	C1210	C1270	U1330	G1392	G1465	G1465	G1465
U1532	C744	A807	C878	G948	C1076	C1140	U1211	G1271	A1331	U1393	U1466	U1532	U1532
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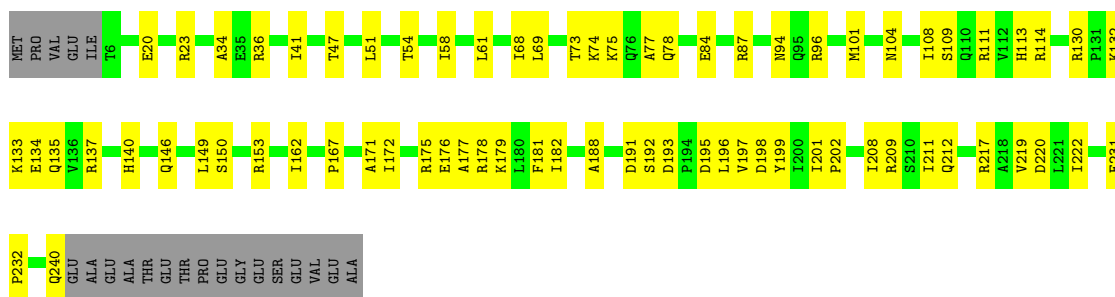
• Molecule 1: 16S rRNA



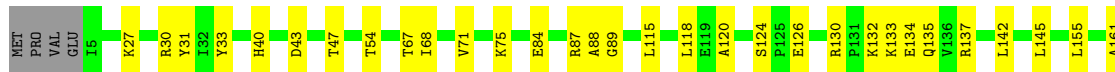




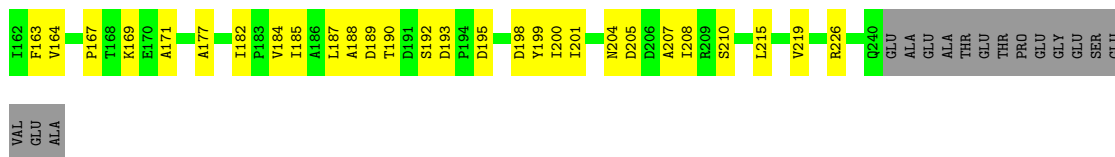
• Molecule 2: 30S ribosomal protein S2



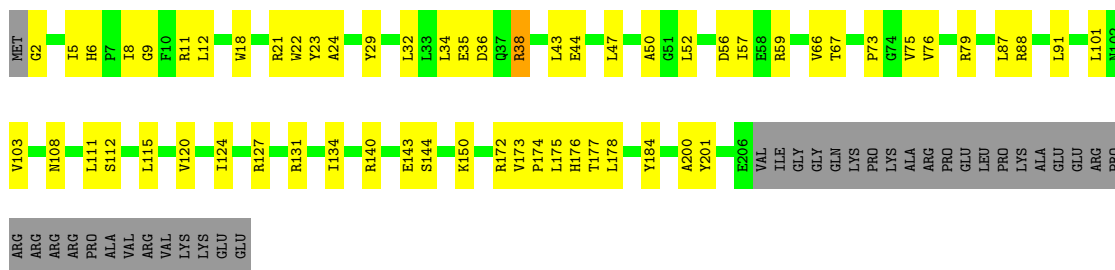
• Molecule 2: 30S ribosomal protein S2



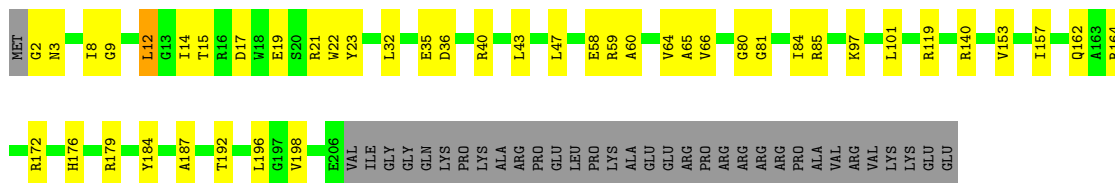




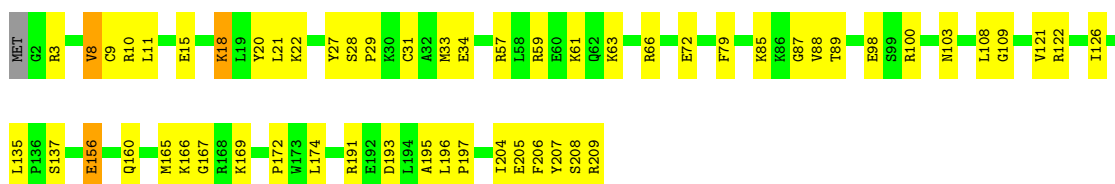
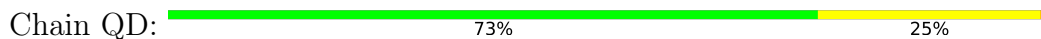
• Molecule 3: 30S ribosomal protein S3



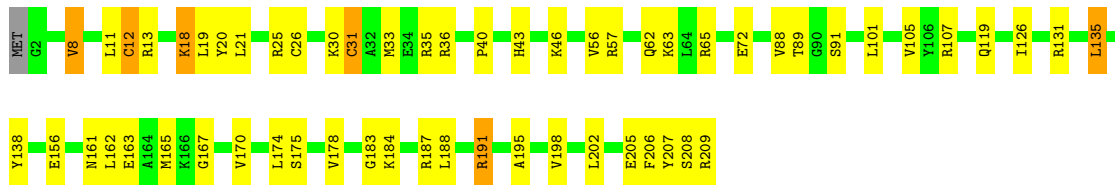
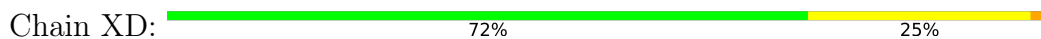
• Molecule 3: 30S ribosomal protein S3



• Molecule 4: 30S ribosomal protein S4

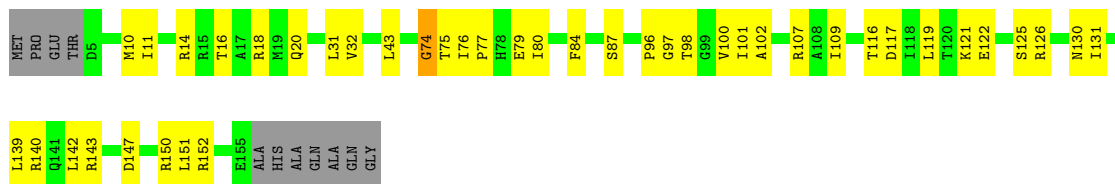


• Molecule 4: 30S ribosomal protein S4



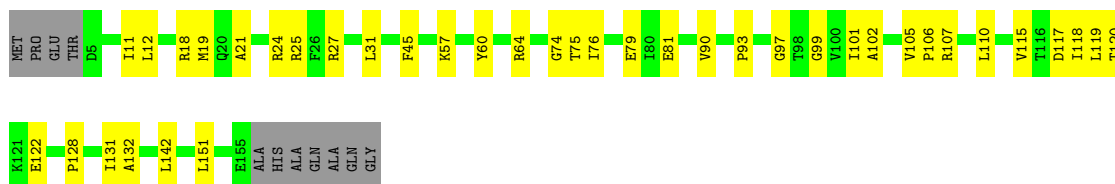
• Molecule 5: 30S ribosomal protein S5

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%




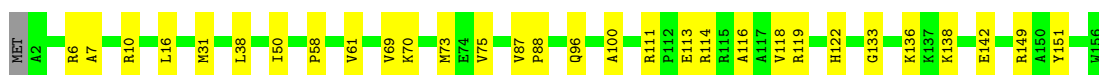
• Molecule 6: 30S ribosomal protein S6

Chain XF:  64% 36%




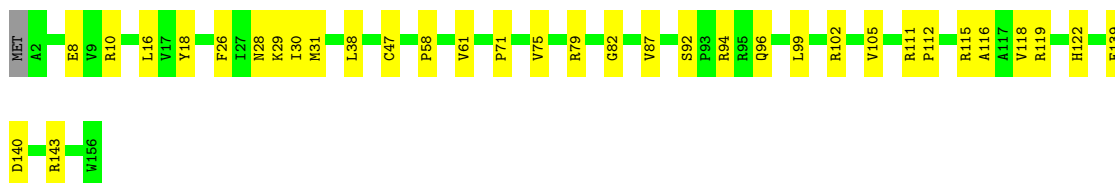
• Molecule 7: 30S ribosomal protein S7

Chain QG:  80% 19%



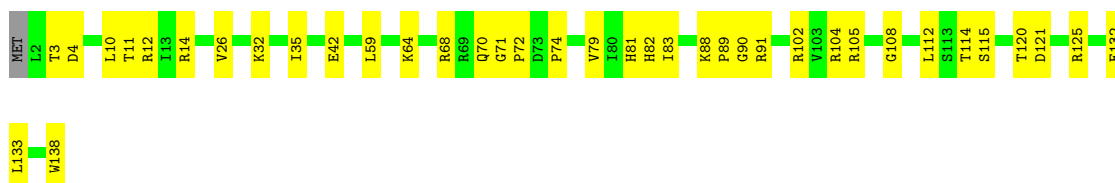
• Molecule 7: 30S ribosomal protein S7

Chain XG:  78% 22%




- Molecule 8: 30S ribosomal protein S8

Chain QH:  72% 28%



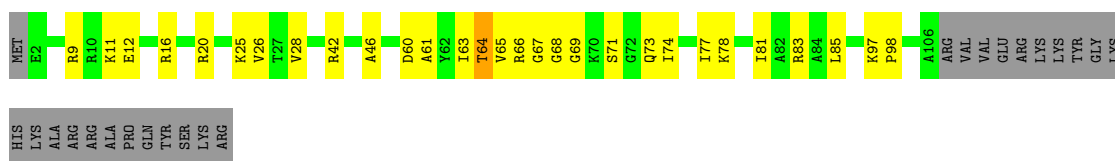
- Molecule 8: 30S ribosomal protein S8

Chain XH:  76% 23%



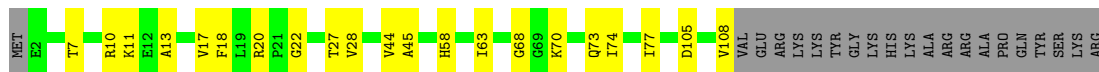
- Molecule 9: 30S ribosomal protein S9

Chain QI:  59% 22% 18%



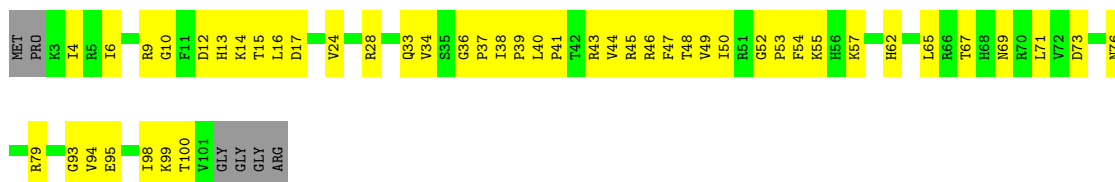
- Molecule 9: 30S ribosomal protein S9

Chain XI:  67% 16% 16%



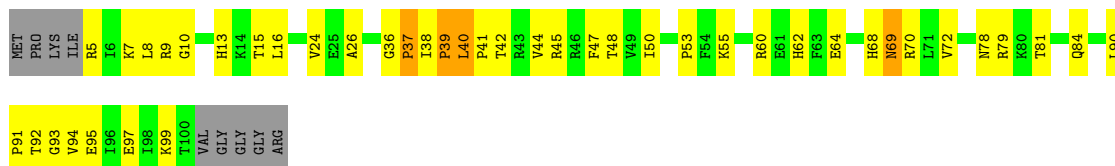
- Molecule 10: 30S ribosomal protein S10

Chain QJ:  50% 45% 6%

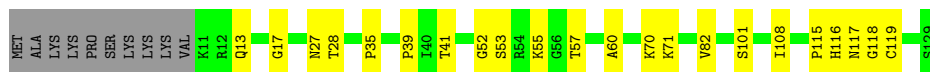
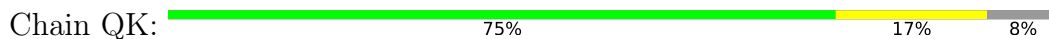


- Molecule 10: 30S ribosomal protein S10

Chain XJ:  50% 37% 9%



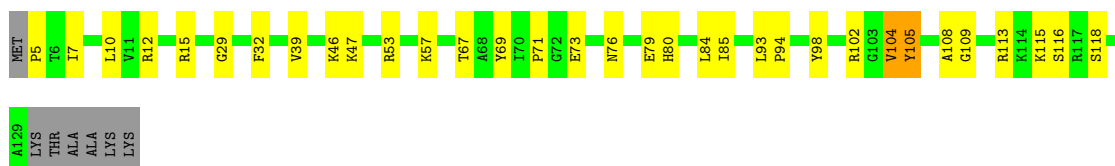
• Molecule 11: 30S ribosomal protein S11



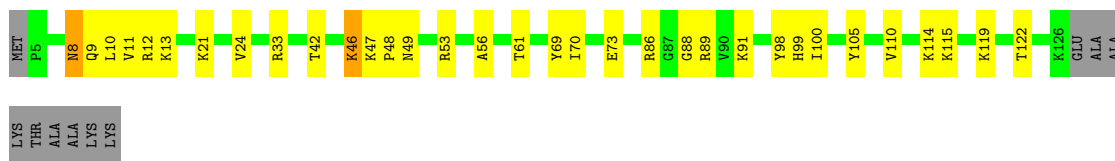
• Molecule 11: 30S ribosomal protein S11



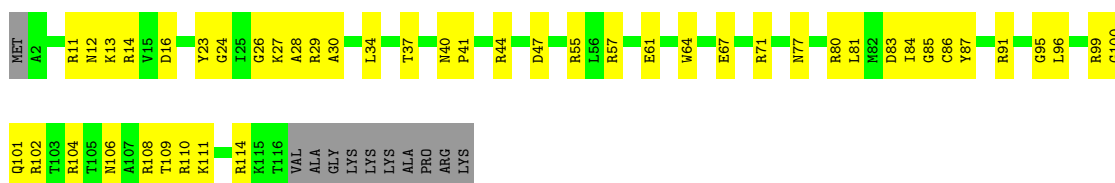
• Molecule 12: 30S ribosomal protein S12



• Molecule 12: 30S ribosomal protein S12

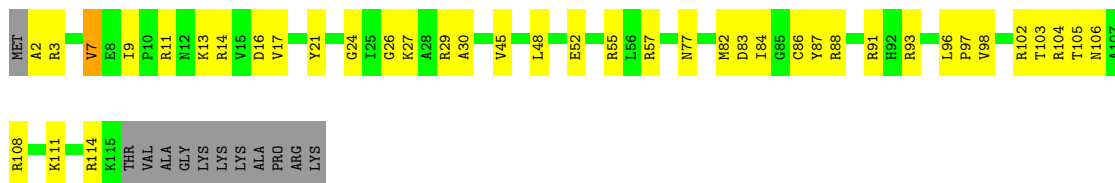


• Molecule 13: 30S ribosomal protein S13



- Molecule 13: 30S ribosomal protein S13

Chain XM:  59% 31% 10%



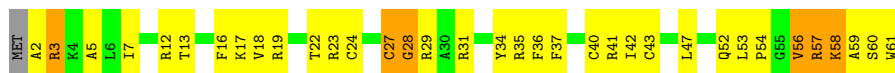
- Molecule 14: 30S ribosomal protein S14 type Z

Chain QN:  43% 51% 5%



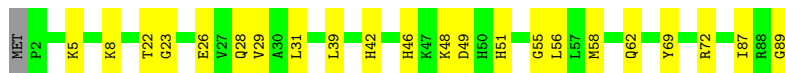
- Molecule 14: 30S ribosomal protein S14 type Z

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%

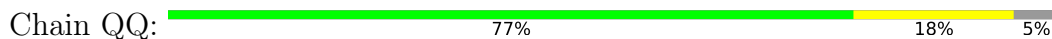


- Molecule 16: 30S ribosomal protein S16

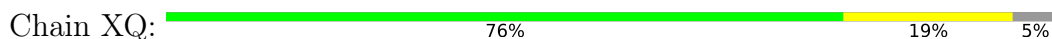
Chain XP:  72% 24% 5%



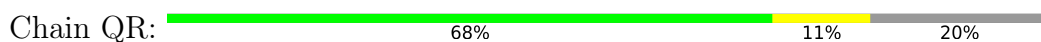
- Molecule 17: 30S ribosomal protein S17



- 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

Chain XT: 62% 27% 7%



- Molecule 21: 30S ribosomal protein Thx

Chain QU: 41% 52% 7%



- Molecule 21: 30S ribosomal protein Thx

Chain XU: 81% 7% 7%



- Molecule 22: tRNA(Pro)

Chain QV: 61% 26% 12%



- Molecule 22: tRNA(Pro)

Chain XV: 47% 35% 6% 12%



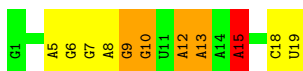
- Molecule 23: mRNA

Chain QX: 42% 53% 5%

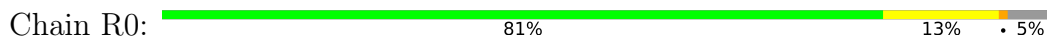


- Molecule 23: mRNA

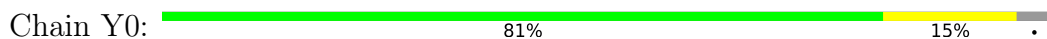
Chain XX: 42% 32% 21% 5%



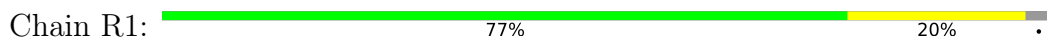
- Molecule 24: 50S ribosomal protein L27



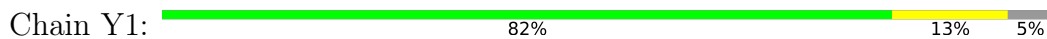
- Molecule 24: 50S ribosomal protein L27



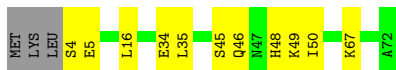
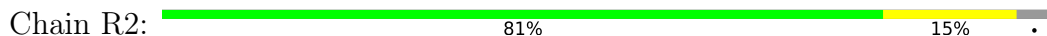
- Molecule 25: 50S ribosomal protein L28



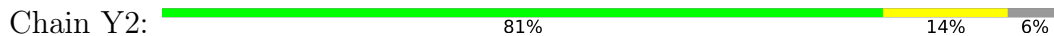
- Molecule 25: 50S ribosomal protein L28



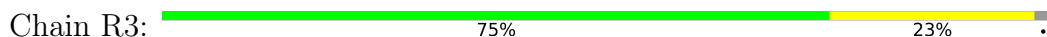
- Molecule 26: 50S ribosomal protein L29



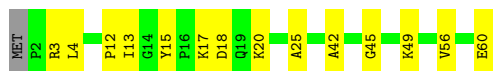
- Molecule 26: 50S ribosomal protein L29



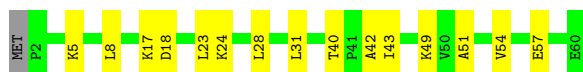
- Molecule 27: 50S ribosomal protein L30



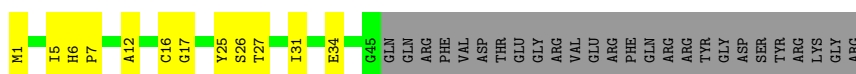




- Molecule 27: 50S ribosomal protein L30



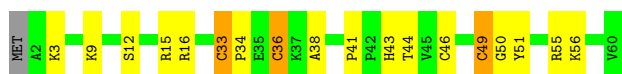
- Molecule 28: 50S ribosomal protein L31



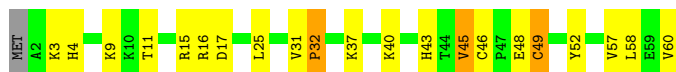
- Molecule 28: 50S ribosomal protein L31



- Molecule 29: 50S ribosomal protein L32



- Molecule 29: 50S ribosomal protein L32



- Molecule 30: 50S ribosomal protein L33



- Molecule 30: 50S ribosomal protein L33

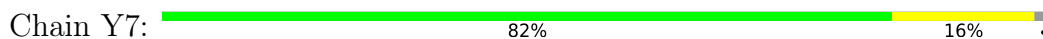




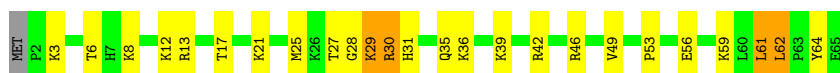
- Molecule 31: 50S ribosomal protein L34



- Molecule 31: 50S ribosomal protein L34



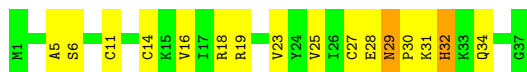
- Molecule 32: 50S ribosomal protein L35



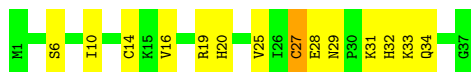
- Molecule 32: 50S ribosomal protein L35



- Molecule 33: 50S ribosomal protein L36



- Molecule 33: 50S ribosomal protein L36

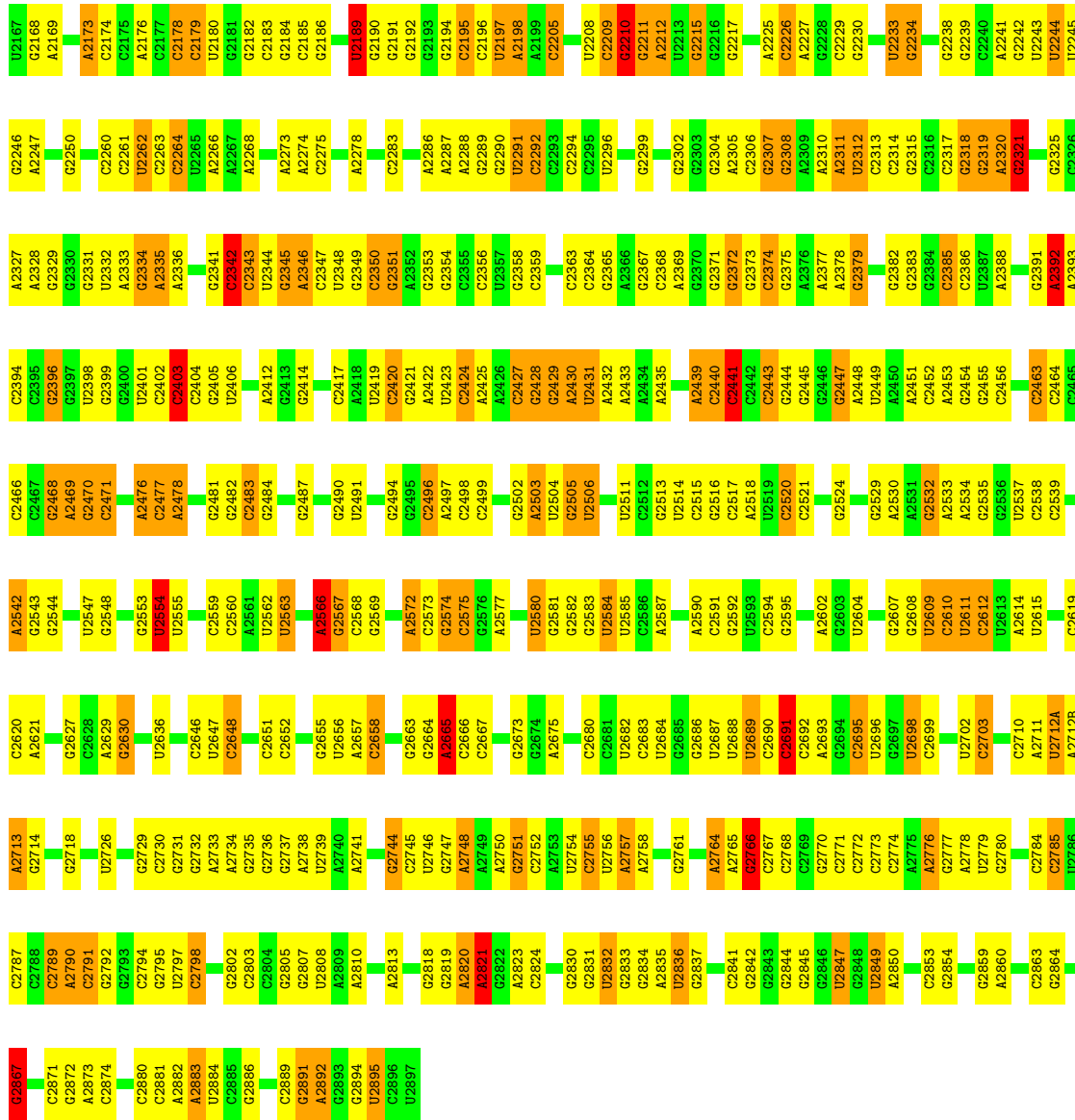


- Molecule 34: 23S rRNA

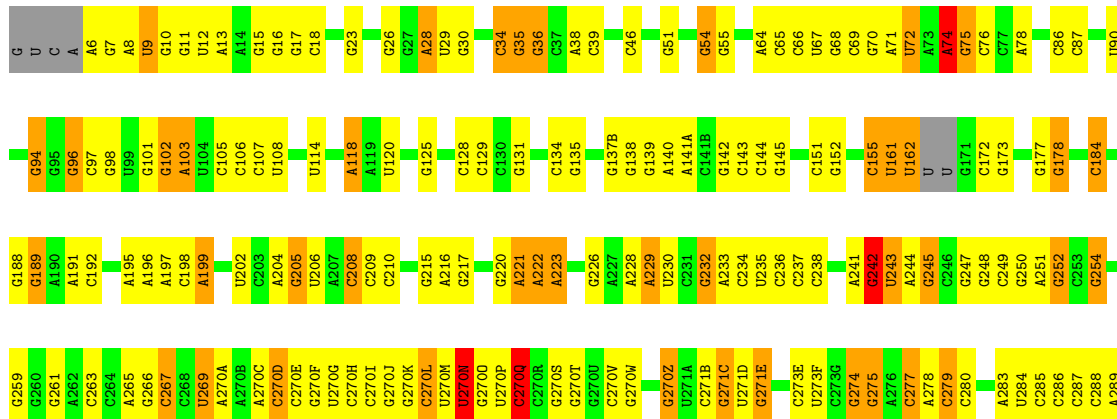


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C2021	A1932	A1848	C1674	A1598	C1528	G1455	G1299	G1219	C1147
U2022	U1933	G1849	G1675	C1600	U1529	A1460	U1300	G1219	G1148
G2023	G1935	A1850	A1676	A1603	A1529	C1461	A1301	A1220	C1149
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C2025	U1937	A1853	G1681	C1605	G1534	C1463	A1302	C1222	C1146
U2026	A1938	G1854	U1681	G1606	U1535	C1464	A1303	C1222	C1146
G2027	U1939	A1854	C1686	C1607	A1536	G1465	G1303	C1222	C1147
U2028	U1940	U1777	G1687	C1608	C1537	G1466	G1304	C1225	A1148
G2029	U1940	A1780	U1688	A1608	C1538	C1467	C1304	G1226	G1150
A2030	C1947	C1761	A1689	A1609	U1539	C1468	A1308	G1235	G1151
G2031	G1948	G1762	U1689	A1610	C1539	C1469	G1309	G1236	C1152
A2032	U1951	A1763	A1690	C1611	U1541	A1471	G1310	A1237	C1153
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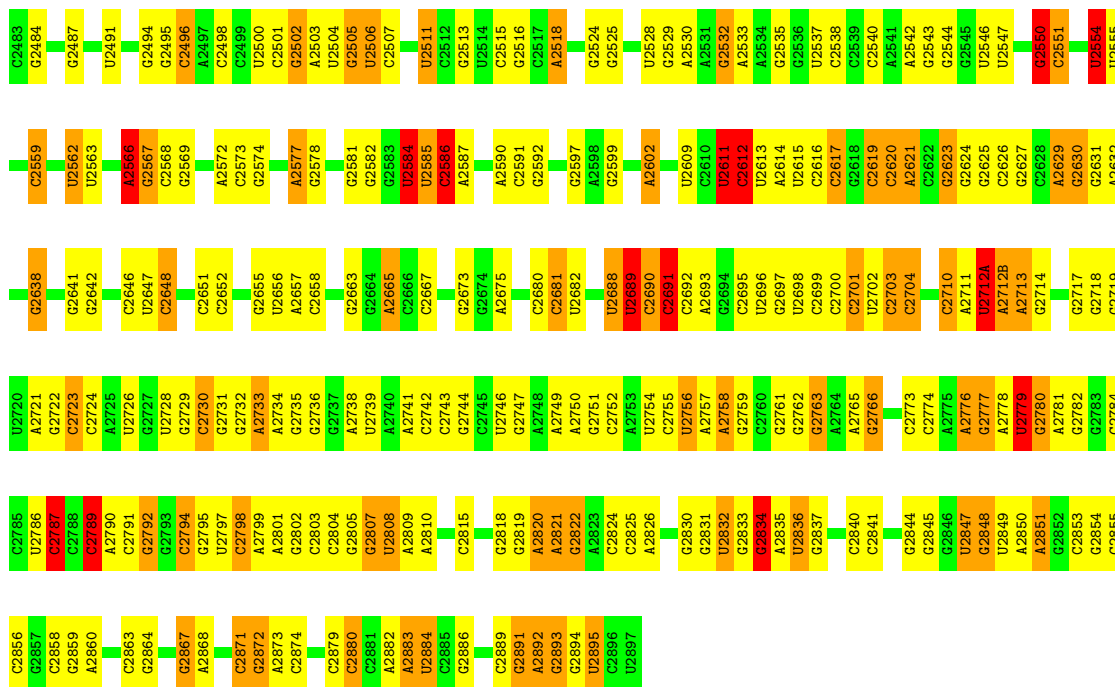


● Molecule 34: 23S rRNA



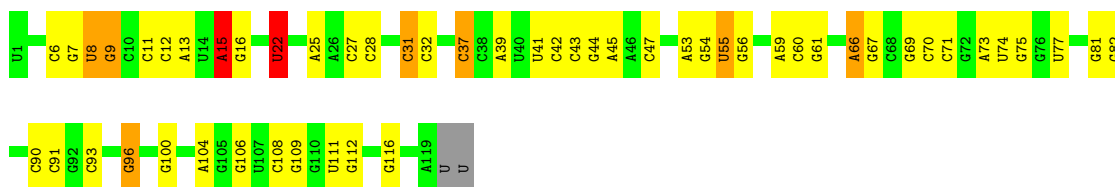


A1353 A1354 A1359 A1360 A1361 A1362 A1363 A1364 A1367 A1368 A1370 A1372 A1375 A1376 A1377 A1378 A1379 A1380 A1384 A1385 A1386 A1387 A1388 A1391 A1392 A1393 A1394 A1395 A1396 A1397 A1398 A1400 A1401 A1401 A1402 A1403 A1404 A1405 A1406 A1407 A1408 A1409 A1410 A1411 A1412 A1415 A1416 A1417 A1418 A1419 A1420	G1421 A1427 G1428 G1429 G1430 U1431 U1432 U1433 C1437 A1444B C1445 C1446 C1447 G1448 A1449A G1449B U1454 A1454 G1455 G1456 A1457 C1458 G1459 A1460 A1461 C1464 G1465 G1466 C1467 C1468 G1469 A1470 G1471 A1471 A1472 G1475 C1476 A1477 G1478 G1479 G1480 U1482 G1483 G1484 G1485 G1486 G1487 A1490 A1490 A1493 A1494 A1495 A1496 U1497 C1498	C1499 G1500 C1501 C1502 U1503 C1504 C1505 C1506 U1507 A1508 A1509 A1510 A1511 G1512 A1512 C1513 U1514 U1515 U1516 G1521 G1522 U1523 G1524 A1528 A1529 C1533 G1534 U1535 A1536 C1537 G1538 G1539 G1540 U1541 G1542 A1543 C1544 C1544 A1545A A1545B C1546 C1547 C1548 C1549 A1554 G1555 C1556 C1557 A1558 G1559 G1560 G1561 G1562 G1563 C1564 A1565 A1566 A1567	G1568 A1569 A1570 A1571 A1572 G1573 C1574 C1575 U1576 A1577 U1578 A1579 A1580 G1581 A1582 A1583 A1585 A1586 A1587 C1588 C1598 G1600 A1607 A1608 A1609 A1610 A1611 G1612 C1613 A1614 A1615 A1616 C1617 A1618 G1633 C1640 C1638 U1639 C1640 A1641 C1644 G1645 G1646 G1647 G1648 G1649 G1650 C1651 C1652 A1653 A1654 A1654	A1655 C1656 C1657 C1658 G1659 C1660 G1661 C1662 C1663 G1664 G1665 A1666 G1667 C1670 U1671 C1672 U1673 G1674 C1675 A1676 C1686 G1687 A1689 A1690 U1693 G1694 G1695 A1698 G1699 A1700 A1701 G1702 C1708 U1709 C1711 G1718 G1725 G1728 A1729 U1730 G1731 A1732 G1733 C1734 G1735 G1741 C1742 G1743 G1750 G1835	G1753 C1754 G1755 A1762 G1763 G1764 C1771 G1772 A1773 C1774 U1775 G1776 U1777 U1778 U1779 G1780 A1781 C1782 A1783 A1784 A1787 C1788 A1789 A1790 A1791 U1794 C1795 U1796 C1797 G1798 G1799 C1800 A1801 A1802 A1803 A1812 G1813 G1816 G1817 U1818 U1819 U1820 A1825 G1826 C1827 G1828 A1829 C1830 G1831 A1834 G1835	C1836 C1837 C1838 C1843 C1844 A1847 A1848 G1849 G1850 A1853 A1854 G1857 G1858 U1859 G1870 A1871 G1872 G1873 G1874 G1875 C1876 A1877 A1878 C1879 C1880 C1881 C1882 A1883 A1884 A1885 G1888 A1889 C1893 C1894 G1895 G1896 A1897 A1900 G1903 G1906 G1907 C1908 C1909 G1910 A1913 C1914 U1915 A1918 A1919 G1920 U1923 C1924 G1925 U1926	A1927 A1928 G1929 G1930 A1931 A1932 A1936 A1937 A1938 A1939 U1940 C1941 U1944 C1947 G1948 U1949 G1950 U1951 A1952 A1953 G1954 U1955 U1956 C1957 C1958 G1959 C2001 G2002 G2003 G2004 C2003 C2004	C2008 G2009 G2010 U2011 G2012 A2013 A2014 A2015 A2019 A2020 A2020 C2021 U1940 C1941 U1944 C2025 C2026 G2027 U2028 A2031 G2032 C2033 A2033 G2034 G2035 C2036 G2037 G2038 C2039 C2040 C2043 C2044 G2045 G2046 U2047 G2048 G2049 C2050 A2051 G2052 G2053 A2054 C2055 G2055 A2059 A2060 G2061 A2062 C2063 C2064 C2065 C2066 G2069 G2070 G2071 G2072 C2073	U2074 U2075 U2076 A2077 C2078 U2079 G2080 C2081 A2082 C2083 C2084 C2085 U2086 G2087 G2088 U2089 G2090 U2091 U2092 G2093 G2094 C2095 U2096 C2097 U2098 U2099 G2100 G2101 U2102 C2103 G2104 C2105 G2106 C2107 C2108 U2109 G2110 C2111 G2112 U2113 A2114 G2115 G2116 U2117 A2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125 A2126 G2127 C2128 C2129 U2130 G2131 U2132 G2133	A2134 A2135 C2136 C2137 C2138 C2139 C2140 G2141 C2142 C2143 U2144 C2145 C2146 G2147 G2148 G2149 U2150 G2151 G2152 G2153 G2154 G2155 G2156 G2157 G2158 G2159 G2160 C2161 G2162 C2163 G2164 G2165 G2166 U2167 G2168 A2169 A2170 A2171 U2172 A2173 C2174 C2175 A2176 C2179 G2180 G2181 G2182 C2183 G2184 C2185 G2186 G2187 C2188 G2189 G2190 G2191 G2192 G2193 G2194	C2195 G2196 U2197 C2198 A2199 C2200 G2201 U2202 C2203 G2204 G2205 G2206 G2207 G2208 G2209 G2210 G2211 G2212 U2213 G2215 A2225 G2226 A2227 G2228 G2229 G2230 G2231 U2232 G2233 G2234 G2235 G2236 G2237 G2238 G2239 G2240 G2241 G2242 U2245 G2246 A2247 G2248 U2249 G2250 G2251 G2252 C2261 U2262 C2263 C2264 U2265 A2266 A2267 A2268 G2271 G2272 A2273 A2274 G2275 A2278 G2279	G2280 C2283 C2284 A2286 A2287 A2288 G2289 C2290 G2291 G2292 G2293 C2294 C2295 C2296 G2299 G2300 A2305 C2306 G2307 G2308 A2309 A2310 G2311 G2312 C2313 C2314 G2315 G2316 C2317 C2318 G2319 A2320 G2321 A2322 G2323 G2324 G2325 G2326 G2327 G2328 G2329 C2330 G2331 G2332 G2333 G2334 G2335 G2336 G2337 G2338 G2339 G2340 G2341 G2342 G2343 G2344 G2345 A2346 G2347 G2348 G2349 G2350	G2349 C2350 G2353 G2354 G2355 G2356 G2357 G2358 C2359 G2362 A2363 C2364 C2368 G2369 G2370 G2371 G2372 C2373 C2374 A2377 A2378 G2379 C2380 G2381 G2382 G2383 G2384 G2385 A2388 G2391 G2392 A2393 C2394 G2396 G2400 U2401 C2402 G2403 U2406 G2407 U2408 G2409 G2410 G2413 G2414 G2417 A2418 U2419 G2420	G2421 A2422 G2423 G2424 A2425 A2426 G2427 G2428 G2429 A2430 U2431 A2432 A2433 A2434 A2435 G2436 G2437 G2438 A2439 C2440 C2441 C2442 C2443 G2444 G2445 G2446 G2447 A2448 U2449 G2450 A2451 G2452 A2453 G2454 G2455 U2456 U2457 G2458 A2459 U2460 U2462 G2465 C2466 C2467 A2468 G2470 C2471 G2472 U2473 G2474 C2475 A2476 G2479 C2480 G2481 G2482
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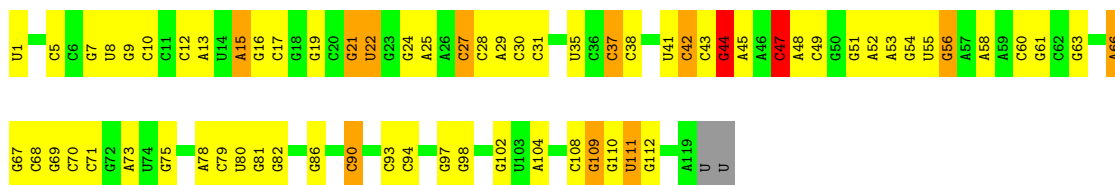
- Molecule 35: 5S rRNA

Chain RB: 55% 36% 6% ..



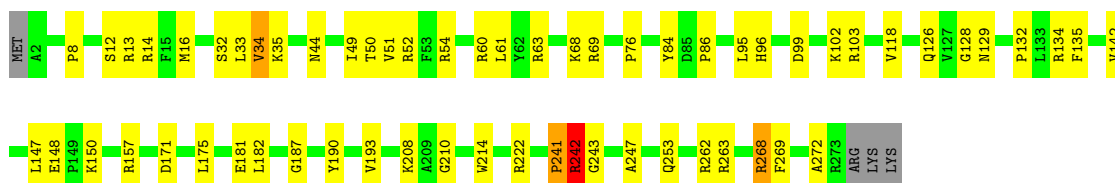
- Molecule 35: 5S rRNA

Chain YB: 43% 45% 9% ..



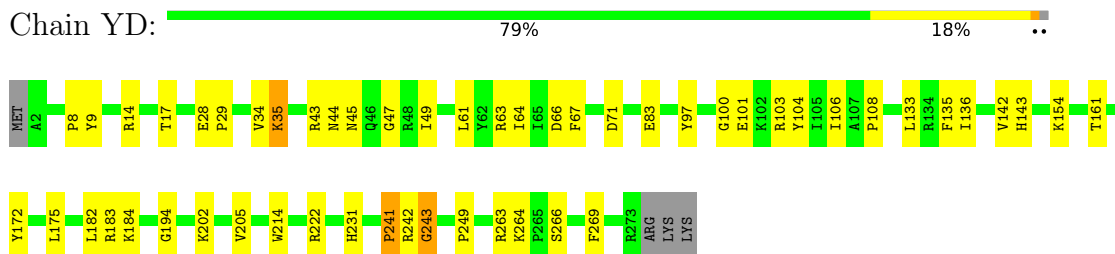
- Molecule 36: 50S ribosomal protein L2

Chain RD: 76% 21% ..

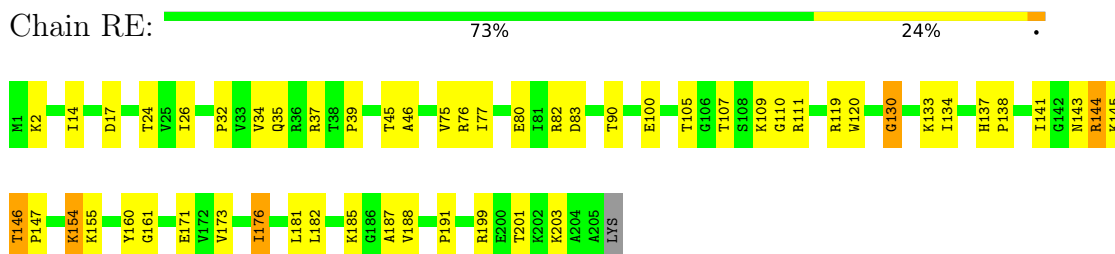




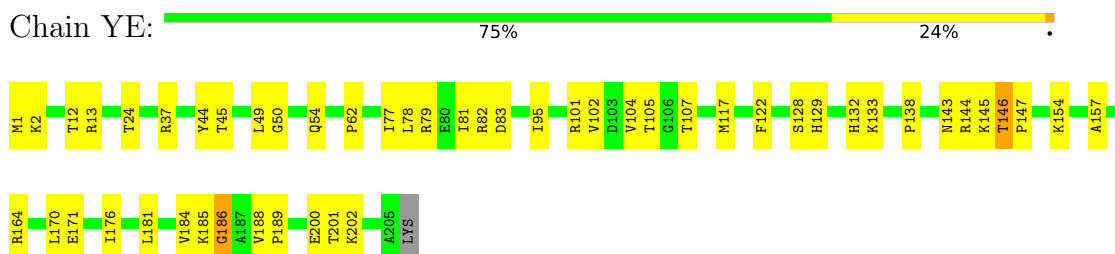
- Molecule 36: 50S ribosomal protein L2



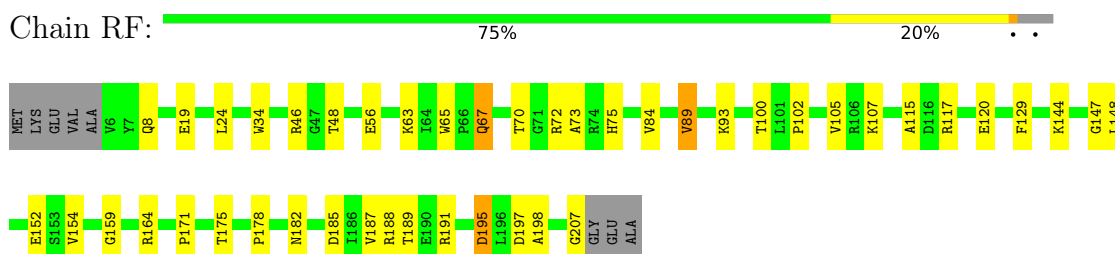
- Molecule 37: 50S ribosomal protein L3



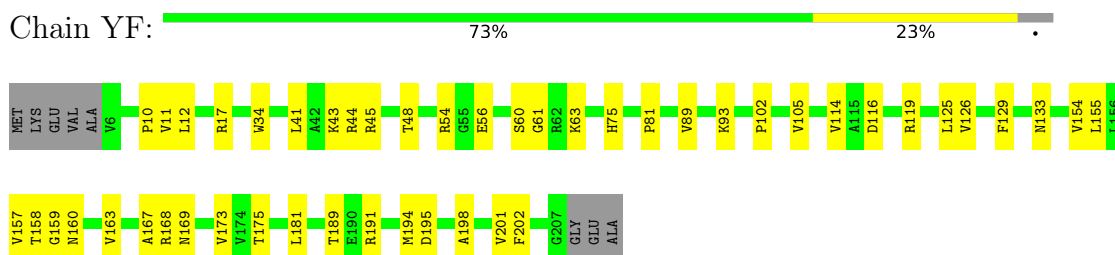
- Molecule 37: 50S ribosomal protein L3



- Molecule 38: 50S ribosomal protein L4

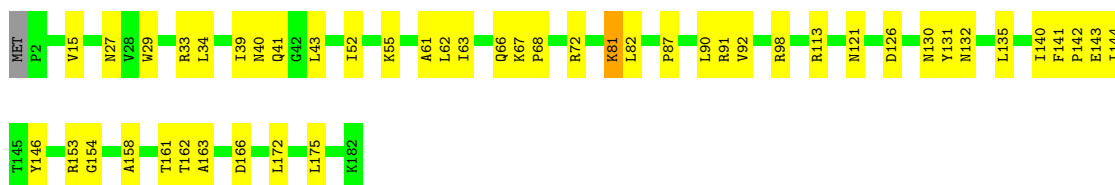


- Molecule 38: 50S ribosomal protein L4




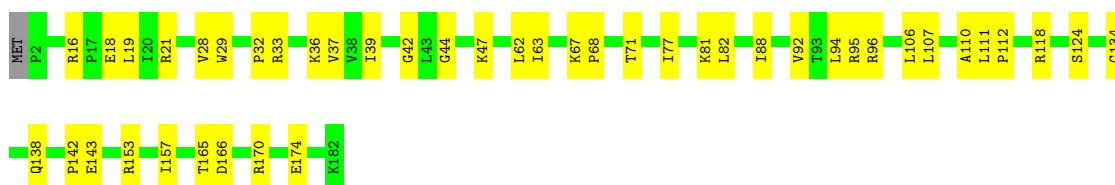
- Molecule 39: 50S ribosomal protein L5

Chain RG:  74% 25% ..



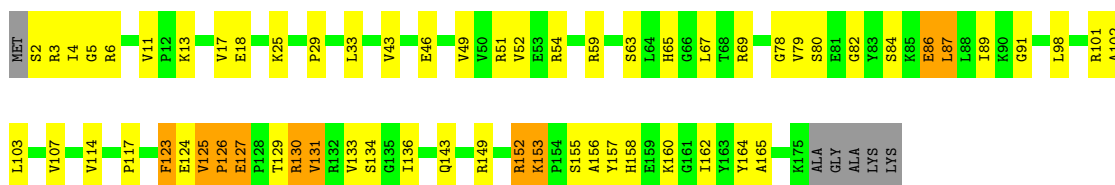
- Molecule 39: 50S ribosomal protein L5

Chain YG:  75% 24% .




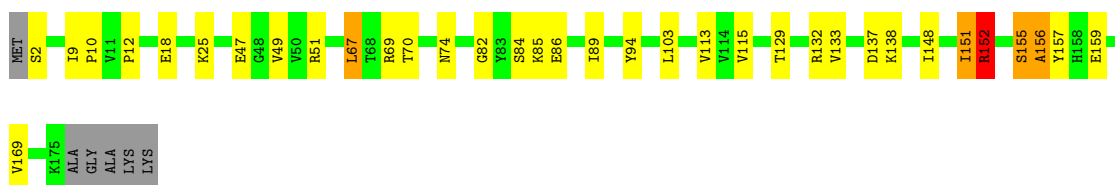
- Molecule 40: 50S ribosomal protein L6

Chain RH:  62% 29% 6% .



- Molecule 40: 50S ribosomal protein L6

Chain YH:  77% 17% . . .

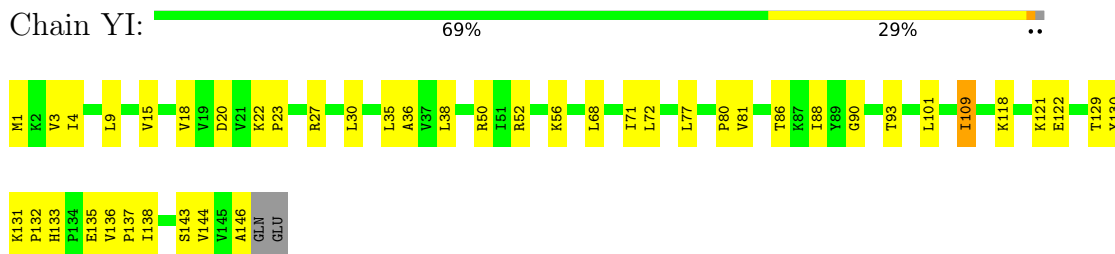


- Molecule 41: 50S ribosomal protein L9

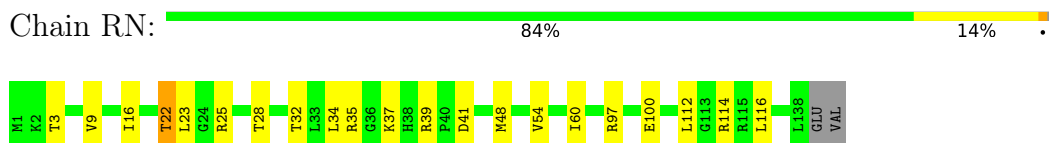
Chain RI:  72% 24% . .



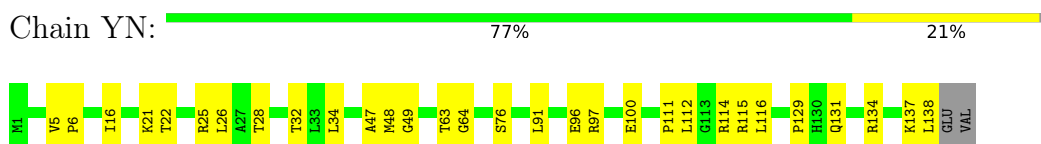
- Molecule 41: 50S ribosomal protein L9



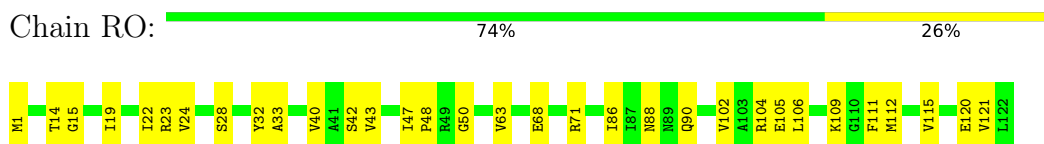
- Molecule 42: 50S ribosomal protein L13



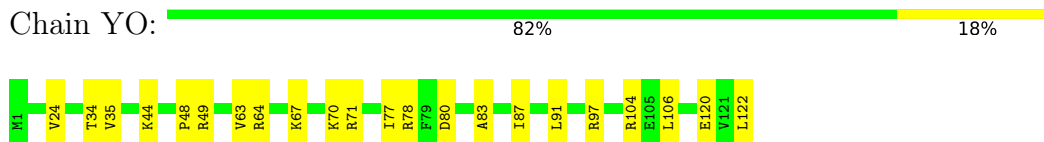
- Molecule 42: 50S ribosomal protein L13



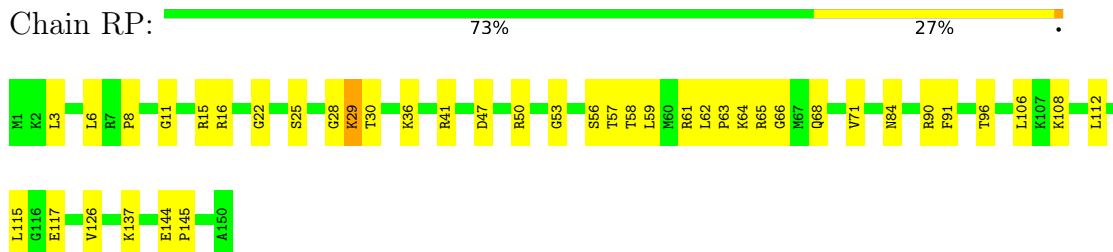
- Molecule 43: 50S ribosomal protein L14



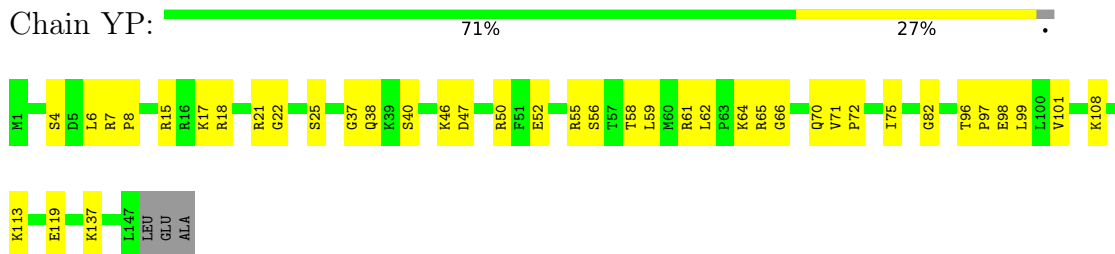
- Molecule 43: 50S ribosomal protein L14



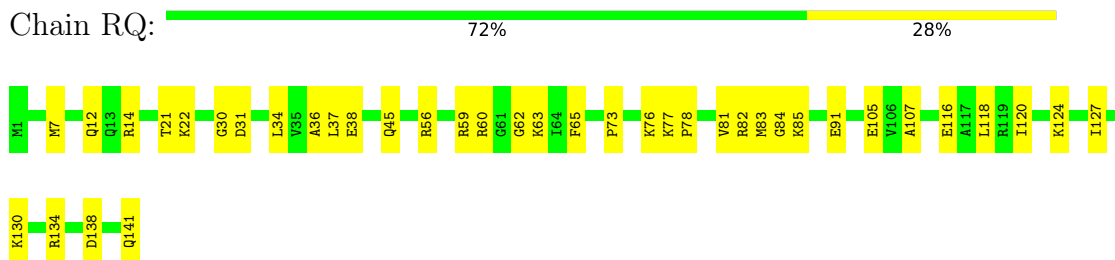
- Molecule 44: 50S ribosomal protein L15



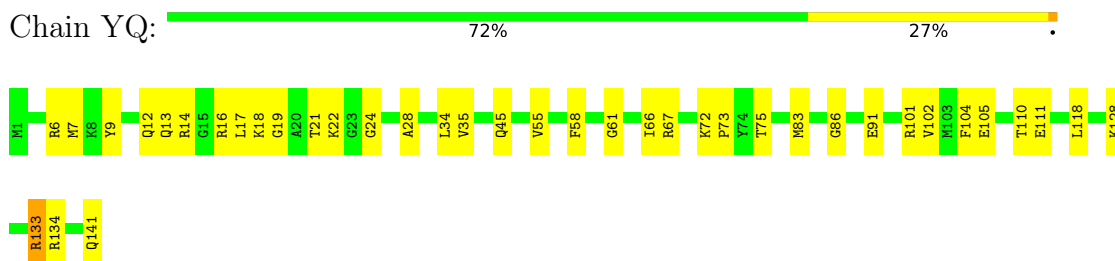
- Molecule 44: 50S ribosomal protein L15



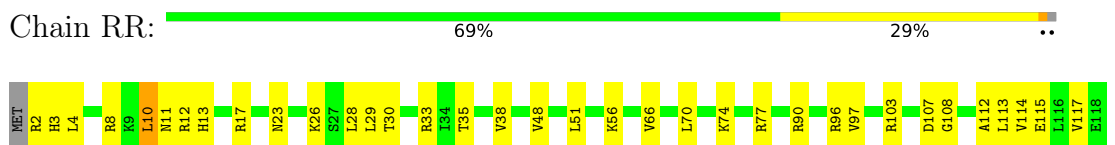
- Molecule 45: 50S ribosomal protein L16



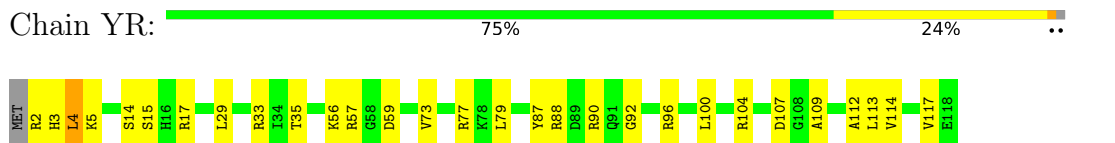
- Molecule 45: 50S ribosomal protein L16



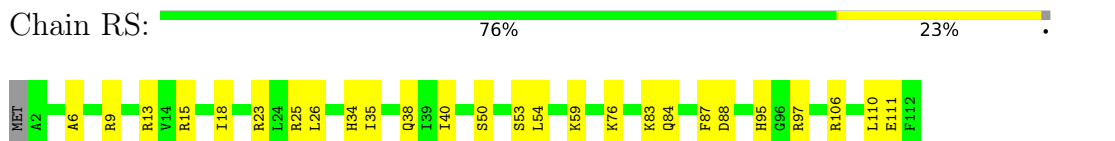
- Molecule 46: 50S ribosomal protein L17




- Molecule 46: 50S ribosomal protein L17



- Molecule 47: 50S ribosomal protein L18



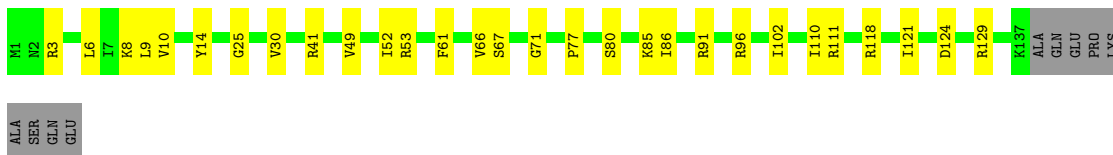
- Molecule 47: 50S ribosomal protein L18

Chain YS:  79% 19% ...



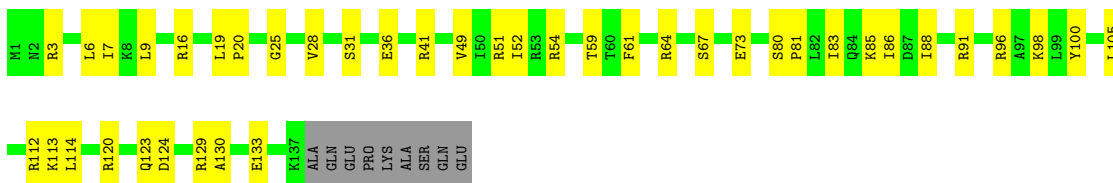
- Molecule 48: 50S ribosomal protein L19

Chain RT:  74% 20% 6%



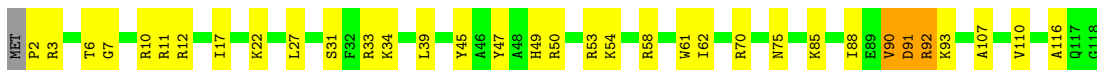
- Molecule 48: 50S ribosomal protein L19

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% ..




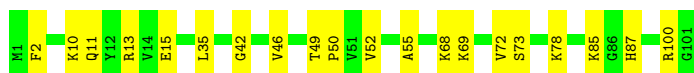
- Molecule 50: 50S ribosomal protein L21

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%




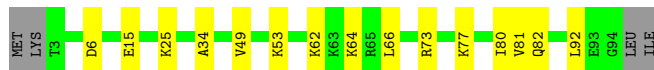
- Molecule 52: 50S ribosomal protein L23

Chain RX:  81% 15%




- Molecule 52: 50S ribosomal protein L23

Chain YX:  80% 16%




- Molecule 53: 50S ribosomal protein L24

Chain RY:  75% 19%



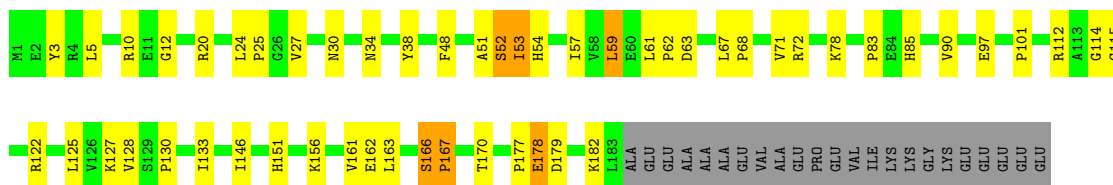
- Molecule 53: 50S ribosomal protein L24

Chain YY:  76% 20%



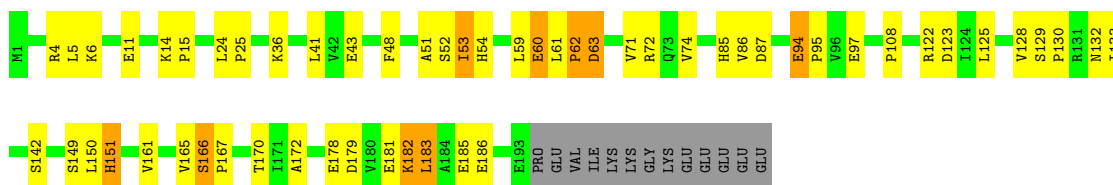
- Molecule 54: 50S ribosomal protein L25

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, $\alpha$ , $\beta$ , $\gamma$	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
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	1.35 (at 4.14Å)	Xtrriage
Refinement program	PHENIX 1.15.2_3472	Depositor
R, $R_{free}$	0.248 , 0.294	Depositor
Wilson B-factor (Å <sup>2</sup> )	171.1	Xtrriage
Anisotropy	0.389	Xtrriage
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.39$ , $\langle L^2 \rangle = 0.22$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
Total number of atoms	291185	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	247.0	wwPDB-VP

Xtrriage'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.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical 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 i

### 5.1 Standard geometry i

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	C2-N1-C1'	5.32	124.66	118.80
22	XV	56	C	C6-N1-C2	-5.32	118.17	120.30
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 [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	QA	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
1:QA:1106:G:H4'	3:QC:172:ARG:CG	1.21	1.57
34:YA:919:G:C6	34:YA:2268:A:N1	1.69	1.57
10:QJ:47:PHE:HZ	14:QN:36:PHE:CB	1.17	1.56
7:QG:16:LEU:HD21	9:QI:42:ARG:CG	1.21	1.55
1:XA:1240:U:C1'	7:XG:38:LEU:HD11	1.16	1.55
1:XA:1190:G:C5'	3:XC:176:HIS:HE1	1.13	1.54
1:XA:1318:A:C2'	19:XS:11:VAL:HG21	1.37	1.53
1:QA:1221:G:C4'	19:QS:36:ARG:NH2	1.68	1.53
1:XA:1318:A:N6	14:XN:16:PHE:CG	1.76	1.52
34:YA:2070:G:N2	34:YA:2442:C:C2	1.77	1.51
6:XF:100:ASN:HD22	18:XR:27:GLY:CA	1.17	1.51
1:XA:1190:G:C5'	3:XC:176:HIS:CE1	1.88	1.49
1:QA:980:C:H1'	14:QN:19:ARG:CG	1.05	1.49
1:QA:1302:U:C1'	13:QM:27:LYS:HE3	1.02	1.49
1:QA:1236:A:C4'	21:QU:10:ARG:NH1	1.70	1.48
1:XA:1228:C:C5	13:XM:104:ARG:HA	1.45	1.48
1:XA:1240:U:H1'	7:XG:38:LEU:CD1	1.40	1.48
1:QA:1360:A:H1'	14:QN:17:LYS:CE	1.44	1.47
11:XK:91:ARG:NE	18:XR:88:LYS:NZ	1.61	1.46
1:XA:1320:C:N4	19:XS:37:ARG:HB3	1.27	1.46
1:QA:1123:A:H4'	10:QJ:37:PRO:CD	1.44	1.45
40:RH:98:LEU:CD2	40:RH:125:VAL:HG11	1.44	1.45
34:YA:2090:G:N1	34:YA:2230:G:C6	1.84	1.44
34:RA:2751:G:C4	40:RH:3:ARG:HB3	1.52	1.44
29:Y5:32:PRO:N	29:Y5:32:PRO:CA	1.69	1.44
30:R6:16:CYS:SG	30:R6:16:CYS:CB	2.06	1.43
1:QA:1158:C:H4'	2:QB:133:LYS:NZ	1.30	1.43
4:QD:57:ARG:NH2	5:QE:107:ARG:HD3	1.17	1.43
1:QA:1100:C:N4	2:QB:96:ARG:HH22	1.14	1.42
1:QA:1221:G:O2'	19:QS:77:THR:CG2	1.65	1.42
1:QA:974:A:C8	14:QN:31:ARG:NH1	1.81	1.42
1:XA:1318:A:O2'	19:XS:11:VAL:CG2	1.65	1.42
3:QC:23:TYR:CD2	10:QJ:95:GLU:HB2	1.55	1.41
34:YA:1127:A:N3	34:YA:2518:A:N7	1.67	1.41
1:XA:1318:A:C6	14:XN:16:PHE:CD1	2.08	1.41
1:QA:1179:A:C5'	9:QI:83:ARG:HH22	1.32	1.41
1:QA:1188:A:H4'	14:QN:58:LYS:NZ	1.30	1.41
1:QA:657:G:O2'	15:QO:28:GLN:CG	1.68	1.40
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:1187:G:C1'	14:YN:61:TRP:O	1.68	1.40
1:XA:1318:A:C3'	19:XS:11:VAL:HG21	1.50	1.40
34:YA:919:G:C6	34:YA:2268:A:C6	2.09	1.40
6:XF:100:ASN:ND2	18:XR:27:GLY:HA2	1.15	1.39
1:QA:1309:G:H5''	13:QM:77:ASN:ND2	1.38	1.38
34:YA:2082:A:H62	34:YA:2237:G:N2	1.20	1.38
1:QA:980:C:C2	14:QN:19:ARG:O	1.76	1.37
10:QJ:50:ILE:CG1	14:QN:41:ARG:CD	2.01	1.37
1:QA:1106:G:C1'	3:QC:172:ARG:NE	1.84	1.37
4:QD:197:PRO:CD	6:XF:16:GLN:CB	1.94	1.36
1:XA:675:A:C2	11:XK:118:GLY:HA2	1.60	1.36
1:XA:1542:U:O3'	2:XB:169:LYS:NZ	1.58	1.36
13:QM:84:ILE:O	19:QS:74:PHE:CE2	1.76	1.35
1:QA:1360:A:C1'	14:QN:17:LYS:CE	2.01	1.35
14:QN:24:CYS:SG	14:QN:40:CYS:CB	2.14	1.35
1:QA:948:C:H5''	13:QM:101:GLN:CG	1.55	1.35
1:QA:1313:U:H3'	19:QS:6:LYS:NZ	1.04	1.34
7:QG:16:LEU:CD2	9:QI:42:ARG:CG	1.87	1.34
1:QA:980:C:C1'	14:QN:19:ARG:CG	1.85	1.34
1:XA:1316:G:H4'	14:YN:17:LYS:CG	1.49	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:YN: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:YN:17:LYS:O	1.82	1.32
1:QA:1179:A:H5''	9:QI:83:ARG:NH2	1.41	1.31
4:QD:197:PRO:HD3	6:XF:16:GLN:CB	1.05	1.31
10:QJ:50:ILE:HG12	14:QN:41:ARG:CD	1.59	1.31
1:QA:1320:C:N4	19:QS:37:ARG:HG2	1.42	1.31
1:XA:1305:G:C5	1:XA:1331:G:C6	2.18	1.31
1:QA:1330:U:O4	21:QU:7:ARG:NH1	1.60	1.31
1:QA:1376:U:O4	7:QG:10:ARG:NH2	1.61	1.30
1:XA:1187:G:C2'	14:YN: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:979:C:N4	14:QN:19:ARG:HB2	1.46	1.29
1:QA:1378:C:OP2	7:QG:7:ALA:HB1	1.16	1.29
1:XA:1318:A:H4'	19:XS:11:VAL:CG2	1.63	1.29
1:XA:675:A:H2	11:XK:118:GLY:CA	1.44	1.29
1:XA:1320:C:C1'	19:XS:70:LYS:HD2	1.59	1.29
21:XU:3:LYS:HD3	21:XU:14:TRP:CE3	1.67	1.29
1:QA:986:A:H1'	19:QS:54:GLY:O	1.33	1.28
1:XA:1318:A:C4'	19:XS:11:VAL:CG2	2.12	1.28
34:YA:1127:A:C2	34:YA:2518:A:N7	1.95	1.28
1:XA:1228:C:N4	13:XM:104:ARG:HG2	1.49	1.28
1:QA:1223:C:P	19:QS:78:ARG:NH2	2.07	1.28
1:XA:1226:C:H2'	13:XM:103:THR:OG1	1.12	1.28
1:QA:974:A:P	14:QN:29:ARG:NE	2.06	1.28
34:YA:1566:A:C2	36:YD:214:TRP:CD2	2.21	1.28
34:YA:2052:G:N2	34:YA:2617:C:O2	1.61	1.28
6:XF:94:GLN:OE1	18:XR:32:ARG:CD	1.81	1.27
1:XA:1316:G:C4'	14:XN:17:LYS:HG2	1.60	1.27
1:QA:1106:G:H1'	3:QC:172:ARG:NE	1.45	1.27
1:XA:1229:A:N6	13:XM:104:ARG:HE	1.32	1.27
34:YA:2046:G:C2	34:YA:2623:G:C2	2.22	1.27
1:QA:1307:U:P	13:QM:99:ARG:HG3	1.75	1.26
1:QA:974:A:C5	14:QN:31:ARG:NH1	2.02	1.26
34:RA:2751:G:C5	40:RH:3:ARG:HB3	1.67	1.26
1:XA:1318:A:C6	14:XN:16:PHE:CG	2.18	1.26
1:QA:1221:G:H4'	19:QS:36:ARG:NH2	0.93	1.26
1:QA:1317:C:OP1	14:QN:16:PHE:HD2	1.13	1.26
1:XA:1228:C:C4	13:XM:104:ARG:HG2	1.69	1.26
1:QA:986:A:O2'	19:QS:55:LYS:O	1.52	1.26
1:QA:1320:C:H42	19:QS:37:ARG:CG	1.46	1.26
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:1100:C:H41	2:QB:96:ARG:NH2	1.32	1.25
1:QA:1106:G:O2'	3:QC:172:ARG:CD	1.85	1.25
1:XA:1230:C:H41	13:XM:105:THR:CB	1.47	1.25
6:XF:94:GLN:OE1	18:XR:32:ARG:HD3	1.08	1.25

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:978:A:N6	14:QN:18:VAL:HG21	1.52	1.25
1:QA:1309:G:C5'	13:QM:77:ASN:ND2	1.98	1.25
34:YA:2090:G:C2	34:YA:2230:G:C6	2.23	1.25
1:QA:980:C:O2	14:QN:19:ARG:O	1.52	1.24
1:XA:1320:C:C5	19:XS:37:ARG:HA	1.71	1.24
13:QM:86:CYS:SG	19:QS:73:GLU:OE2	1.95	1.24
34:YA:2049:G:N2	34:YA:2620:C:C2	2.05	1.24
1:QA:607:A:C2	16:QP:31:LYS:HA	1.73	1.24
1:QA:972:C:OP1	10:QJ:57:LYS:CD	1.85	1.24
1:QA:1317:C:OP1	14:QN:16:PHE:CD2	1.91	1.24
40:RH:98:LEU:HD21	40:RH:125:VAL:CG1	1.66	1.24
12:QL:104:VAL:O	12:QL:105:TYR:CD2	1.90	1.23
3:QC:23:TYR:HB2	10:QJ:93:GLY:O	1.39	1.23
1:XA:1318:A:C4	14:YN:16:PHE:CE1	2.27	1.23
40:RH:103:LEU:HD11	40:RH:123:PHE:CZ	1.72	1.23
1:XA:1312:G:C3'	19:XS:6:LYS:NZ	1.98	1.23
6:XF:99:ALA:O	18:XR:28:GLU:HA	1.10	1.23
34:YA:919:G:O6	34:YA:2268:A:N1	1.59	1.22
3:QC:23:TYR:HB2	10:QJ:93:GLY:C	1.59	1.22
1:QA:669:U:H1'	15:QO:46:HIS:CE1	1.73	1.22
1:QA:1240:U:C6	7:QG:38:LEU:HD13	1.71	1.22
1:QA:1347:G:O6	9:QI:11:LYS:HD3	1.35	1.21
1:XA:1240:U:C1'	7:XG:38:LEU:CD1	2.06	1.21
12:QL:7:ILE:CD1	17:QQ:32:TYR:CD1	2.22	1.21
1:XA:1318:A:C4'	19:XS:11:VAL:HG21	1.68	1.21
1:XA:1377:A:N6	7:XG:10:ARG:CG	2.03	1.21
3:QC:23:TYR:CE2	10:QJ:95:GLU:HB2	1.74	1.21
1:XA:1305:G:O2'	1:XA:1332:A:N6	1.72	1.21
4:QD:57:ARG:CZ	5:QE:107:ARG:HD3	1.70	1.21
34:RA:2751:G:N7	40:RH:2:SER:O	1.73	1.21
1:XA:1190:G:H5'	3:XC:176:HIS:ND1	1.56	1.21
1:QA:959:A:N6	19:QS:79:THR:N	1.89	1.20
1:QA:973:G:O3'	14:QN:29:ARG:NH2	1.75	1.20
1:QA:1049:U:C5	14:QN:3:ARG:CB	2.23	1.20
1:XA:376:G:OP1	16:XP:67:THR:HG21	1.39	1.20
31:Y7:37:LYS:NZ	34:YA:469:G:O6	1.72	1.20
34:YA:1566:A:C2	36:YD:214:TRP:CE2	2.30	1.20
34:YA:270(P):U:O4	41:YI:52:ARG:NE	1.74	1.20
1:XA:1377:A:N6	7:XG:10:ARG:HG2	1.56	1.20
1:XA:1230:C:H41	13:XM:105:THR:CG2	1.53	1.20
1:QA:974:A:N7	14:QN:31:ARG:NH1	1.87	1.19

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1108:G:OP1	3:QC:175:LEU:N	1.74	1.19
1:XA:1320:C:C4	19:XS:37:ARG:CA	2.24	1.19
34:YA:2090:G:N1	34:YA:2230:G:O6	1.70	1.19
4:QD:197:PRO:CD	6:XF:16:GLN:HB2	1.63	1.19
34:YA:2081:C:O2	34:YA:2239:G:N2	1.75	1.19
1:XA:421:U:O4'	3:XC:192:THR:HG21	1.38	1.19
1:XA:1059:C:OP2	3:XC:2:GLY:CA	1.91	1.19
1:XA:1320:C:C4	19:XS:37:ARG:HA	1.77	1.18
34:YA:2045:C:C2	34:YA:2624:G:N2	2.11	1.18
1:QA:959:A:H61	19:QS:78:ARG:HA	1.03	1.18
1:QA:1106:G:O2'	3:QC:172:ARG:HD2	1.05	1.18
1:QA:1179:A:C5'	9:QI:83:ARG:NH2	1.97	1.18
1:XA:1318:A:C6	14:XN:16:PHE:CE1	2.27	1.18
1:XA:1312:G:H3'	19:XS:6:LYS:NZ	1.19	1.17
1:XA:1305:G:C6	1:XA:1331:G:C6	2.31	1.17
1:QA:1123:A:C4'	10:QJ:37:PRO:CD	2.23	1.17
34:YA:2082:A:N6	34:YA:2237:G:N3	1.93	1.17
10:QJ:50:ILE:HG12	14:QN:41:ARG:NE	1.60	1.16
1:XA:1226:C:C2'	13:XM:103:THR:OG1	1.91	1.16
4:QD:88:VAL:HG22	5:QE:96:PRO:O	1.45	1.16
34:YA:1127:A:H2	34:YA:2518:A:C5	1.37	1.16
1:QA:979:C:C4	14:QN:19:ARG:HD2	1.81	1.16
1:QA:1152:A:OP1	10:QJ:13:HIS:NE2	1.76	1.16
1:XA:1305:G:C6	1:XA:1331:G:O6	1.99	1.16
34:YA:919:G:N1	34:YA:2268:A:N1	1.87	1.16
1:XA:1230:C:H41	13:XM:105:THR:HB	1.07	1.15
1:XA:1230:C:N4	13:XM:105:THR:CG2	2.07	1.15
1:XA:1312:G:C3'	19:XS:6:LYS:HZ2	1.55	1.15
1:XA:1320:C:N3	19:XS:36:ARG:HG3	1.59	1.15
1:QA:956:U:O3'	19:QS:80:TYR:O	1.65	1.15
1:QA:1320:C:N3	19:QS:37:ARG:HA	1.59	1.15
4:QD:205:GLU:OE2	5:QE:100:VAL:CG1	1.95	1.15
1:QA:669:U:C1'	15:QO:46:HIS:HE1	1.58	1.14
1:QA:1186:G:N2	14:QN:61:TRP:O	1.79	1.14
1:XA:107:G:O6	20:XT:15:ARG:NE	1.80	1.14
1:XA:1229:A:OP2	13:XM:105:THR:HA	1.47	1.14
1:QA:959:A:N6	19:QS:79:THR:H	1.42	1.14
1:QA:1541:U:P	2:QB:23:ARG:HH21	1.70	1.14
1:XA:1228:C:C6	13:XM:104:ARG:HA	1.81	1.14
34:YA:1050:A:C8	34:YA:2751:G:C4	2.34	1.14
1:QA:974:A:C4	14:QN:31:ARG:NH1	2.13	1.14

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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:1456:G:H1	34:YA:2703:C:N4	1.46	1.14
34:YA:2048:G:C2	34:YA:2621:A:C2	2.37	1.14
1:QA:1229:A:H61	13:QM:104:ARG:CZ	1.60	1.13
1:QA:1188:A:C4'	14:QN:58:LYS:NZ	2.10	1.13
1:QA:959:A:H61	19:QS:78:ARG:CA	1.59	1.13
1:XA:1318:A:N1	14:YN:16:PHE:CE2	2.16	1.13
1:XA:1359:C:P	14:YN:22:THR:OG1	2.06	1.13
1:XA:1229:A:N6	13:XM:104:ARG:NE	1.94	1.12
1:XA:1230:C:H42	13:XM:102:ARG:NH1	1.43	1.13
34:YA:2090:G:N2	34:YA:2230:G:C5	2.15	1.13
1:QA:624:C:O3'	16:QP:10:GLY:HA2	1.44	1.12
1:QA:1367:C:C4'	10:QJ:48:THR:HG21	1.79	1.12
11:QK:71:LYS:NZ	34:RA:2146:C:H41	1.46	1.12
1:XA:1377:A:N6	7:YG:10:ARG:CD	1.97	1.12
4:QD:89:THR:OG1	5:QE:97:GLY:O	1.67	1.12
1:XA:1359:C:OP1	14:YN:22:THR:OG1	1.66	1.12
1:XA:1440(N):G:OP1	20:XT:35:THR:HG21	1.50	1.12
1:QA:974:A:C5'	14:QN:31:ARG:HB3	1.79	1.12
1:QA:1240:U:H2'	7:QG:38:LEU:HD11	1.28	1.12
1:XA:1318:A:N6	14:YN:16:PHE:CD1	2.12	1.12
34:YA:1127:A:C2	34:YA:2518:A:C6	2.36	1.12
1:QA:972:C:OP1	10:QJ:57:LYS:HD2	0.94	1.12
6:XF:100:ASN:ND2	18:XR:27:GLY:CA	1.83	1.12
1:QA:954:G:C2	19:QS:83:HIS:HE1	1.67	1.11
1:QA:1229:A:OP1	13:QM:108:ARG:NH2	1.80	1.11
1:QA:1360:A:N7	14:QN:18:VAL:HA	1.49	1.11
3:QC:79:ARG:NE	11:XK:104:GLN:HG3	1.65	1.11
1:XA:974:A:P	14:YN:31:ARG:HB2	1.90	1.11
3:QC:79:ARG:NH2	11:XK:104:GLN:HA	1.64	1.11
34:RA:2751:G:C4	40:RH:3:ARG:CB	2.32	1.11
1:XA:1187:G:H1'	14:YN:61:TRP:O	1.33	1.11
1:XA:1318:A:O2'	19:XS:11:VAL:HG21	1.33	1.11
1:QA:1123:A:C4'	10:QJ:37:PRO:HD3	1.81	1.11
34:YA:2082:A:N6	34:YA:2237:G:H21	1.48	1.11
1:QA:957:U:H4'	19:QS:79:THR:O	1.41	1.10
1:QA:1320:C:C4	19:QS:37:ARG:HA	1.85	1.10
1:XA:1320:C:N4	19:XS:37:ARG:CB	2.14	1.10
1:QA:538:G:H3'	12:QL:115:LYS:HZ2	1.12	1.10
1:QA:1253:G:OP1	10:QJ:44:VAL:CB	1.98	1.10
1:QA:980:C:C6	14:QN:19:ARG:HG3	1.85	1.10

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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
7:QG:16:LEU:CD2	9:QI:42:ARG:HG3	1.80	1.10
1:XA:1188:A:H1'	14:YN:60:SER:HA	1.26	1.10
1:QA:981:U:C5'	14:QN:21:TYR:OH	1.98	1.09
45:RQ:59:ARG:HA	54:RZ:179:ASP:OD2	1.51	1.09
1:XA:1228:C:C5	13:XM:104:ARG:CA	2.35	1.09
1:XA:1318:A:C4	14:YN:16:PHE:CZ	2.39	1.09
34:YA:2080:G:C2	34:YA:2241:A:C2	2.39	1.09
3:QC:23:TYR:N	10:QJ:93:GLY:HA2	1.65	1.09
34:YA:2046:G:C4	34:YA:2623:G:N2	2.20	1.09
1:XA:1320:C:C1'	19:XS:70:LYS:HD3	1.83	1.09
1:QA:949:A:OP1	13:QM:101:GLN:HA	1.52	1.09
12:QL:7:ILE:HD11	17:QQ:32:TYR:HB3	1.28	1.09
14:YN:56:VAL:HG13	14:YN:57:ARG:H	1.01	1.09
34:YA:919:G:C5	34:YA:2268:A:N6	2.20	1.09
1:QA:974:A:N9	14:QN:31:ARG:NH1	2.01	1.08
1:QA:983:A:H5'	14:QN:2:ALA:HB2	1.15	1.08
1:QA:1150:U:H1'	10:QJ:39:PRO:HG2	1.10	1.08
34:RA:2751:G:N3	40:RH:3:ARG:CG	2.16	1.08
1:XA:1112:C:O4'	3:XC:179:ARG:NH2	1.86	1.08
1:XA:1377:A:P	7:XG:94:ARG:NH2	2.25	1.08
34:YA:2043:C:N4	34:YA:2777:G:N1	2.01	1.08
34:YA:2090:G:C6	34:YA:2230:G:O6	2.05	1.08
1:QA:948:C:H5''	13:QM:101:GLN:HG3	1.14	1.08
3:QC:23:TYR:H	10:QJ:93:GLY:HA2	1.03	1.08
12:QL:7:ILE:HD11	17:QQ:32:TYR:CB	1.83	1.08
1:QA:1219:U:O2'	19:QS:34:TRP:CE3	2.04	1.08
11:XK:91:ARG:HH21	18:XR:88:LYS:HD2	1.13	1.08
3:QC:23:TYR:CE2	10:QJ:95:GLU:CB	2.35	1.08
10:QJ:50:ILE:HD11	14:QN:41:ARG:HD2	1.31	1.08
1:XA:1318:A:N6	14:YN:16:PHE:CB	2.17	1.08
1:XA:1318:A:C2	14:YN:16:PHE:CZ	2.42	1.08
1:XA:1320:C:H1'	19:XS:70:LYS:HD2	1.26	1.08
10:QJ:49:VAL:CG2	14:QN:41:ARG:HB2	1.84	1.08
1:XA:186(B):C:O2	20:XT:105:SER:HB2	1.49	1.08
10:XJ:40:LEU:HB3	10:XJ:41:PRO:CD	1.84	1.08
10:QJ:50:ILE:HD11	14:QN:41:ARG:NH1	1.67	1.07
1:QA:1320:C:O2	19:QS:36:ARG:O	1.71	1.07
1:QA:1358:U:O3'	14:QN:22:THR:HG21	1.53	1.07
6:XF:99:ALA:O	18:XR:28:GLU:CA	2.02	1.07
34:YA:918:A:N7	34:YA:2268:A:N6	2.01	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2048:G:N1	34:YA:2621:A:C2	2.20	1.07
1:QA:1100:C:C5	2:QB:96:ARG:NH2	2.21	1.07
1:QA:974:A:O5'	14:QN:31:ARG:HB2	1.53	1.07
1:QA:978:A:H62	14:QN:18:VAL:CG2	1.66	1.07
1:XA:702:A:N6	34:YA:1848:A:C2	2.22	1.07
1:QA:1240:U:N3	7:QG:38:LEU:HB3	1.40	1.07
1:XA:1318:A:C6	14:YN:16:PHE:CD2	2.43	1.07
13:XM:84:ILE:HD11	19:XS:65:ASN:CG	1.73	1.07
34:YA:945:A:N6	34:YA:2448:A:N6	1.61	1.07
34:YA:1127:A:H2	34:YA:2518:A:C4	1.72	1.07
1:QA:972:C:P	10:QJ:57:LYS:CD	2.42	1.06
1:XA:741:G:P	15:XO:35:ARG:NH2	2.26	1.06
1:XA:1377:A:C6	7:XG:10:ARG:CG	2.38	1.06
4:XD:18:LYS:NZ	4:XD:31:CYS:SG	2.26	1.06
1:QA:1280:A:H5''	10:QJ:40:LEU:HD23	1.30	1.06
14:YN:27:CYS:SG	14:YN:28:GLY:N	2.28	1.06
1:QA:1253:G:P	10:QJ:44:VAL:CB	2.43	1.06
1:QA:1253:G:OP1	10:QJ:44:VAL:HB	1.54	1.06
1:QA:1318:A:N3	19:QS:37:ARG:CZ	2.17	1.06
4:QD:197:PRO:HD3	6:XF:16:GLN:HB3	1.06	1.06
34:YA:2046:G:C6	34:YA:2623:G:N1	2.24	1.06
1:QA:657:G:O2'	15:QO:28:GLN:HG2	0.88	1.06
1:QA:1160:G:O4'	2:QB:132:LYS:HE3	1.54	1.06
1:QA:1229:A:N6	13:QM:104:ARG:HG3	1.69	1.06
1:QA:1367:C:H4'	10:QJ:48:THR:HG21	1.06	1.06
1:XA:1318:A:C4'	19:XS:11:VAL:HG23	1.82	1.06
1:QA:1152:A:OP1	10:QJ:13:HIS:CE1	2.09	1.06
34:YA:2044:C:C4	34:YA:2625:G:N2	2.23	1.06
1:QA:538:G:H3'	12:QL:115:LYS:NZ	1.71	1.05
10:QJ:45:ARG:HG2	14:QN:36:PHE:CZ	1.69	1.05
1:XA:1317:C:C5	14:YN:16:PHE:CD1	2.27	1.05
10:XJ:10:GLY:HA3	10:XJ:16:LEU:HD21	1.36	1.05
10:QJ:50:ILE:HG13	14:QN:41:ARG:HD3	1.34	1.05
1:XA:737:A:OP1	6:XF:92:LYS:NZ	1.87	1.05
1:QA:1253:G:O5'	10:QJ:44:VAL:HB	1.57	1.05
12:QL:7:ILE:HD11	17:QQ:32:TYR:CG	1.90	1.05
1:XA:1319:A:OP2	19:XS:3:ARG:NE	1.88	1.05
1:QA:974:A:H5'	14:QN:31:ARG:HB3	1.33	1.05
1:QA:1179:A:H5'	9:QI:83:ARG:HH22	1.17	1.05
40:RH:87:LEU:O	40:RH:131:VAL:HG23	1.54	1.05
1:XA:1304:G:H5''	1:XA:1304:G:H8	1.16	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2070:G:N2	34:YA:2442:C:N1	2.04	1.05
1:QA:1320:C:C2	19:QS:36:ARG:O	2.10	1.05
2:QB:196:LEU:HA	8:QH:74:PRO:HG3	1.37	1.05
1:XA:1309:G:C4'	13:XM:77:ASN:ND2	2.20	1.05
10:XJ:16:LEU:HB3	10:XJ:70:ARG:NH1	1.71	1.05
34:YA:1392:A:N6	52:YX:15:GLU:OE2	1.89	1.05
1:QA:669:U:H1'	15:QO:46:HIS:HE1	0.89	1.04
1:QA:876:G:H1'	8:QH:11:THR:HG21	1.40	1.04
1:QA:1221:G:C5'	19:QS:36:ARG:NH2	2.19	1.04
1:QA:607:A:N1	16:QP:31:LYS:HA	1.72	1.04
1:QA: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:1566:A:N1	36:YD:214:TRP:CE2	2.26	1.04
34:YA:2099:U:O2	34:YA:2190:G:N2	1.91	1.04
1:XA:280:C:N3	17:XQ:39:SER:N	2.03	1.04
1:XA:1320:C:H1'	19:XS:70:LYS:CD	1.77	1.04
1:QA:973:G:O3'	14:QN:29:ARG:CZ	2.05	1.04
1:XA:974:A:O5'	14:XN:31:ARG:HB3	1.55	1.04
34:YA:2108:C:H42	34:YA:2182:G:N2	1.55	1.04
1:QA:948:C:H5''	13:QM:101:GLN:HG2	1.40	1.03
1:QA:972:C:OP2	10:QJ:57:LYS:HG3	1.58	1.03
1:QA:1357:A:H5'	10:QJ:45:ARG:NH2	1.73	1.03
1:XA:191:G:O2'	20:XT:101:GLY:O	1.74	1.03
1:XA:1190:G:H5''	3:XC:176:HIS:HE1	0.88	1.03
1:XA:1318:A:H4'	19:XS:11:VAL:HG23	1.08	1.03
1:XA:1225:A:H1'	19:XS:78:ARG:HE	1.18	1.03
6:XF:91:VAL:HG21	18:XR:34:TYR:CE1	1.92	1.03
1:QA:981:U:H4'	14:QN:21:TYR:OH	1.22	1.03
1:XA:1227:A:OP1	13:XM:96:LEU:HD21	1.59	1.03
1:XA:1318:A:C2	14:XN:16:PHE:CE2	2.46	1.03
11:XK:91:ARG:HE	18:XR:88:LYS:NZ	1.31	1.03
34:YA:2082:A:N6	34:YA:2237:G:N2	2.03	1.03
1:QA:1313:U:C5	19:QS:6:LYS:HE2	1.92	1.03
1:XA:186(B):C:O2	20:XT:105:SER:CB	2.07	1.03
3:XC:23:TYR:CE2	10:XJ:95:GLU:HB2	1.94	1.03
13:XM:84:ILE:HG13	19:XS:65:ASN:O	1.58	1.03
34:YA:1127:A:N3	34:YA:2518:A:C8	2.27	1.03
1:QA:979:C:C2	14:QN:19:ARG:HD2	1.93	1.02
1:QA:1106:G:O4'	3:QC:172:ARG:NE	1.92	1.02
1:QA:1226:C:OP1	13:QM:87:TYR:OH	1.75	1.02
3:QC:23:TYR:CD2	10:QJ:95:GLU:CB	2.42	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1372:U:OP1	9:XI:68:GLY:HA2	1.58	1.02
1:QA:1100:C:N4	2:QB:96:ARG:NH2	1.97	1.02
1:XA:1318:A:N7	14:YN:16:PHE:CE1	2.27	1.02
1: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:1309:G:C5'	13:XM:77:ASN:ND2	2.23	1.02
1:XA:1318:A:C5	14:YN:16:PHE:CZ	2.46	1.02
1:XA:1318:A:O2'	19:XS:11:VAL:HG22	1.58	1.02
13:XM:84:ILE:HG22	19:XS:74:PHE:CZ	1.94	1.02
1:QA:309:G:H5''	16:QP:27:LYS:HE2	1.41	1.02
7:QG:16:LEU:HD22	9:QI:42:ARG:CG	1.90	1.02
1:QA:657:G:C2'	15:QO:28:GLN:HG2	1.86	1.01
1:QA:668:G:H4'	15:QO:48:LYS:O	1.58	1.01
1:XA:1305:G:H2'	1:XA:1331:G:N2	1.74	1.01
34:YA:197:A:C4	34:YA:2430:A:C2	2.47	1.01
1:QA:953:G:C5	13:QM:104:ARG:NH2	2.27	1.01
34:YA:2051:A:C2	34:YA:2614:A:C2	2.47	1.01
1:XA:1377:A:OP1	7:XG:94:ARG:NH2	1.93	1.01
6:XF:99:ALA:HB3	18:XR:29:PHE:CD1	1.96	1.01
34:YA:2056:G:C6	34:YA:2577:A:C4	2.48	1.01
34:YA:2082:A:N6	34:YA:2237:G:C2	2.26	1.01
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
26:R2:48:HIS:HE2	26:R2:49:LYS:HE2	1.21	1.01
1:XA:974:A:C8	14:YN:31:ARG:CD	2.44	1.01
34:YA:1050:A:C8	34:YA:2751:G:C5	2.49	1.00
34:YA:2046:G:N3	34:YA:2623:G:C2	2.29	1.00
34:YA:2311:A:H1'	39:YG:88:ILE:HD12	1.41	1.00
1:QA:980:C:H1'	14:QN:19:ARG:CD	1.90	1.00
1:QA:1123:A:C4'	10:QJ:37:PRO:HD2	1.91	1.00
10:QJ:47:PHE:CZ	14:QN:36:PHE:CB	2.06	1.00
1:XA:719:C:O2	18:XR:50:ILE:HD12	1.60	1.00
1:QA:986:A:C1'	19:QS:55:LYS:HA	1.91	1.00
3:QC:23:TYR:CE1	10:QJ:9:ARG:O	2.14	1.00
26:R2:48:HIS:NE2	26:R2:49:LYS:HE2	1.74	1.00
1:QA:1367:C:H4'	10:QJ:48:THR:CG2	1.92	1.00

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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:740:U:H4'	15:QO:39:LEU:HG	1.44	1.00
1:QA:1186:G:H21	14:QN:61:TRP:C	1.65	1.00
1:QA:1229:A:N6	13:QM:104:ARG:CG	2.25	1.00
13:QM:84:ILE:O	19:QS:74:PHE:CZ	2.15	0.99
1:XA:1160:G:O4'	2:XB:132:LYS:HE3	1.62	0.99
1:QA:980:C:C1'	14:QN:19:ARG:HG3	1.89	0.99
1:QA:1360:A:N7	14:QN:18:VAL:CA	2.12	0.99
34:YA:2090:G:C2	34:YA:2230:G:C5	2.51	0.99
1:XA:1059:C:OP2	3:XC:2:GLY:HA2	1.60	0.99
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:919:G:C6	34:YA:2268:A:N6	2.29	0.99
34:YA:1782:C:N4	34:YA:2587:A:C2	2.31	0.99
34:YA:2059:A:N1	34:YA:2503:A:C6	2.31	0.99
1:QA:1158:C:C4'	2:QB:133:LYS:NZ	2.25	0.99
10:QJ:50:ILE:CD1	14:QN:41:ARG:CD	2.41	0.99
10:QJ:50:ILE:CD1	14:QN:41:ARG:HD2	1.92	0.99
1:QA:1313:U:H3'	19:QS:6:LYS:HZ3	1.20	0.98
1:XA:1228:C:O5'	13:XM:108:ARG:NH2	1.95	0.98
1:XA:1230:C:N4	13:XM:102:ARG:HH12	1.60	0.98
1:QA:1302:U:H1'	13:QM:27:LYS:HE3	1.38	0.98
1:XA:1320:C:C4	19:XS:37:ARG:CB	2.44	0.98
1:QA:667:G:H4'	15:QO:51:HIS:CE1	1.96	0.98
1:QA:1188:A:C4'	14:QN:58:LYS:HZ1	1.73	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:1221:G:OP1	19:QS:36:ARG:NH1	1.96	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1229:A:N6	13:QM:104:ARG:NE	2.10	0.98
1:QA:1318:A:N3	19:QS:37:ARG:NH1	2.10	0.98
3:QC:23:TYR:H	10:QJ:93:GLY:CA	1.75	0.98
34:YA:197:A:C5	34:YA:2430:A:C2	2.52	0.98
34:YA:2108:C:H42	34:YA:2182:G:H22	1.09	0.98
1:XA:1318:A:N3	19:XS:37:ARG:NH1	2.11	0.98
1:QA:1372:U:OP1	9:QI: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:1150:U:C1'	10:QJ:39:PRO:HG2	1.95	0.97
1:QA:1158:C:C4'	2:QB:133:LYS:HZ2	1.78	0.97
1:QA:1226:C:H5'	13:QM:91:ARG:HH12	1.26	0.96
1:XA:1228:C:H5	13:XM:104:ARG:HA	1.23	0.96
1:XA:1112:C:H1'	3:XC:179:ARG:NE	1.80	0.96
11:XK:110:ASP:HB3	18:XR:85:LEU:O	1.65	0.96
1:QA:1152:A:P	10:QJ:13:HIS:CE1	2.51	0.96
33:R9:19:ARG:NE	34:RA:2756:U:OP2	1.97	0.96
1:XA:1124:G:H4'	10:XJ:36:GLY:H	1.30	0.96
11:XK:116:HIS:NE2	18:XR:82:THR:HB	1.80	0.96
34:YA:1174:A:N6	55:YA:3192:MG:MG	1.21	0.96
1:QA:957:U:O2'	19:QS:79:THR:O	1.83	0.96
30:R6:13:CYS:SG	30:R6:14:THR:N	2.39	0.96
1:XA:1305:G:O2'	1:XA:1332:A:C6	2.18	0.96
1:XA:1318:A:O2'	19:XS:11:VAL:CG1	2.14	0.96
29:Y5:43:HIS:CD2	34:YA:2884:U:H5	1.83	0.96
34:YA:747:U:O4	34:YA:2613:U:N3	1.98	0.96
34:YA:2054:A:H62	34:YA:2577:A:H61	1.06	0.96
1:QA:761:G:H5'	17:QQ:100:LYS:NZ	1.81	0.96
1:QA:1099:G:OP2	2:QB:96:ARG:CD	2.13	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:974:A:O5'	14:YN:31:ARG:CB	2.13	0.96
1:XA:974:A:C1'	14:YN:31:ARG:HH11	1.77	0.96
1:XA:1360:A:C8	14:YN: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:675:A:H2	11:QK:118:GLY:HA2	1.29	0.95
1:QA:880:C:H5''	12:QL:12:ARG:NH2	1.80	0.95
13:QM:86:CYS:HB2	19:QS:69:HIS:CE1	1.99	0.95
1:XA:1318:A:C6	14:YN: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:YN:31:ARG:NH1	2.35	0.95
1:QA:957:U:C2'	19:QS:79:THR:O	2.15	0.95
1:QA:982:U:H5''	14:QN:6:LEU:CG	1.96	0.95
1:QA:1347:G:O6	9:QI:11:LYS:CD	2.15	0.95
1:QA:1099:G:P	2:QB:96:ARG:HD2	2.05	0.95
1:XA:1226:C:H2'	13:XM:103:THR:HG1	1.30	0.95
1:XA:1318:A:N6	14:YN:16:PHE:HB3	1.80	0.95
10:XJ:37:PRO:HB3	10:XJ:72:VAL:HG22	1.46	0.95
34:YA:1050:A:H8	34:YA:2751:G:C4	1.84	0.95
1:QA:1360:A:O4'	14:QN:17:LYS:NZ	2.00	0.94
1:XA:1230:C:H42	13:XM:102:ARG:HH12	1.00	0.94
1:QA:974:A:C5'	14:QN:31:ARG:CB	2.44	0.94
1:QA:986:A:C1'	19:QS:54:GLY:O	2.15	0.94
34:YA:2046:G:C6	34:YA:2623:G:C6	2.55	0.94
1:XA:1320:C:C5	19:XS:37:ARG:CA	2.44	0.94
1:XA:1320:C:C4	19:XS:37:ARG:HB3	2.00	0.94
1:QA:986:A:H1'	19:QS:55:LYS:HA	1.46	0.94
1:QA:1160:G:H5'	2:QB:132:LYS:HE2	1.48	0.94
1:QA:1223:C:OP1	19:QS:78:ARG:NH2	1.98	0.94
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:1188:A:C1'	14:YN:60:SER:HA	1.98	0.94
1:XA:1230:C:N4	13:XM:105:THR:HB	1.82	0.94
1:XA:1318:A:N1	14:YN:16:PHE:CD2	2.36	0.94
1:XA:1377:A:C6	7:XG:10:ARG:HG2	2.02	0.94
34:YA:2046:G:N1	34:YA:2623:G:C6	2.35	0.94
1:XA:1228:C:N4	13:XM:104:ARG:CG	2.29	0.94
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD2	1.49	0.94
1:QA:626:U:H4'	16:QP:38:TYR:CD2	2.02	0.94
1:QA:1099:G:OP2	2:QB:96:ARG:HD2	1.68	0.94
1:QA:1150:U:O2	10:QJ:39:PRO:HG3	1.68	0.94
10:QJ:50:ILE:CD1	14:QN:41:ARG:CZ	2.45	0.94
7:XG:16:LEU:CD2	9:XI:44:VAL:HG23	1.98	0.94
1:QA:1229:A:C6	13:QM:104:ARG:NE	2.35	0.94
1:QA:1229:A:H62	13:QM:104:ARG:HG3	1.28	0.94
28:R4:26:SER:OG	39:RG:143:GLU:OE2	1.84	0.94
22:XV:8:U:H3	22:XV:14:A:N6	1.65	0.94
1:QA:1236:A:C5'	21:QU:10:ARG:NH1	2.30	0.94
4:QD:197:PRO:CD	6:XF:16:GLN:HB3	1.78	0.94
34:RA:2680:C:OP2	37:RE:111:ARG:NH2	2.01	0.94
1:QA:1313:U:O4	19:QS:4:SER:HB2	1.68	0.93
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:YN: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:YN: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:YN:31:ARG:CZ	2.52	0.93
1:QA:956:U:O2'	19:QS:80:TYR:O	1.87	0.93
10:QJ:50:ILE:HD11	14:QN:41:ARG:HH11	1.23	0.93
34:YA:919:G:N1	34:YA:2268:A:C2	2.35	0.93
34:YA:1493:C:N4	34:YA:2210:G:C8	2.37	0.93
1:QA:958:A:N6	19:QS:77:THR:O	2.01	0.93
1:QA:1014:A:O4'	19:QS:34:TRP:CD1	2.22	0.93
1:QA:1360:A:O4'	14:QN:17:LYS:HE3	1.66	0.93
33:R9:31:LYS:HE2	34:RA:2478:A:H5'	1.47	0.93
4:QD:205:GLU:HG2	5:QE:100:VAL:O	1.68	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1217:C:OP1	14:YN: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:948:C:C5'	13:QM:101:GLN:CG	2.47	0.92
1:QA:959:A:N6	19:QS:78:ARG:HA	1.83	0.92
10:QJ:50:ILE:CD1	14:QN:41:ARG:NH1	2.31	0.92
34:YA:2054:A:H62	34:YA:2577:A:N6	1.67	0.92
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:979:C:H2'	14:QN:19:ARG:CZ	1.99	0.92
1:QA:980:C:O4'	14:QN:19:ARG:NE	2.01	0.92
1:QA:1221:G:H4'	19:QS:36:ARG:HH21	1.29	0.92
1:QA:1541:U:P	2:QB:23:ARG:NH2	2.43	0.91
1:XA:974:A:C8	14:YN: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
1:QA:1188:A:H4'	14:QN:58:LYS:HZ3	1.14	0.91
1:QA:1357:A:H5'	10:QJ:45:ARG:CZ	1.99	0.91
3:QC:23:TYR:N	10:QJ:93:GLY:CA	2.32	0.91
34:YA:2069:G:N2	34:YA:2443:C:C2	2.38	0.91
1:QA:954:G:C2	19:QS:83:HIS:CE1	2.58	0.91
1:QA:954:G:N2	19:QS:83:HIS:CE1	2.38	0.91
34:YA:491:G:O6	51:YW:49:LYS:NZ	2.02	0.91
1:QA:983:A:C5'	14:QN:2:ALA:HB2	1.99	0.91
1:QA:975:A:N6	10:QJ:48:THR:OG1	2.02	0.91
10:QJ:50:ILE:HD11	14:QN:41:ARG:CD	2.01	0.91
1:XA:1309:G:H4'	13:XM:77:ASN:HD21	1.35	0.91
34:YA:2045:C:C2	34:YA:2624:G:C2	2.58	0.91
1:QA:1313:U:C6	19:QS:6:LYS:HE2	2.05	0.91
4:QD:196:LEU:O	6:XF:16:GLN:NE2	1.81	0.91
14:YN:56:VAL:HG13	14:YN:57:ARG:N	1.85	0.91
1:XA:675:A:N3	11:XK:118:GLY:CA	2.33	0.91
1:XA:1309:G:H5'	13:XM:77:ASN:ND2	1.86	0.91
11:XK:109:VAL:HG22	18:XR:86:VAL:HG23	1.52	0.91
1:QA:1150:U:O2'	10:QJ:39:PRO:HB2	1.70	0.91
1:XA:51:A:C4	1:XA:353:A:C6	2.59	0.91

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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:538:G:H5''	12:QL:115:LYS:HG2	1.53	0.90
1:QA:609:A:H5'	16:QP:9:PHE:CE1	2.06	0.90
1:QA:1100:C:C4	2:QB:96:ARG:NH2	2.39	0.90
1:XA:974:A:P	14:YN:31:ARG:CB	2.59	0.90
34:YA:2059:A:C2	34:YA:2503:A:C6	2.59	0.90
34:YA:2081:C:N3	34:YA:2239:G:N1	2.19	0.90
1:QA:1014:A:P	19:QS:32:LYS:HE2	2.11	0.90
34:YA:1456:G:H1	34:YA:2703:C:H42	0.98	0.90
34:YA:2093:G:H21	34:YA:2198:A:N6	1.68	0.90
1:QA:972:C:P	10:QJ:57:LYS:CG	2.58	0.90
1:QA:1235:U:O3'	21:QU:10:ARG:HD2	1.70	0.90
1:XA:528:C:N4	12:XL:49:ASN:OD1	2.05	0.90
4:QD:57:ARG:HH22	5:QE:107:ARG:CD	1.79	0.90
33:R9:23:VAL:HG11	34:RA:1032:A:H4'	1.51	0.90
1:XA:978:A:N7	14:YN:18:VAL:HG21	1.85	0.90
1:QA:1372:U:P	9:QI:68:GLY:HA2	2.11	0.90
25:R1:90:ILE:HA	25:R1:94:LEU:CD1	2.00	0.90
1:XA:1230:C:N4	13:XM:105:THR:HG22	1.87	0.90
34:YA:2046:G:N1	34:YA:2623:G:N1	2.20	0.90
34:YA:2043:C:N4	34:YA:2777:G:C2	2.25	0.90
1:QA:583:A:H4'	17:QQ:91:ARG:CG	2.01	0.90
1:XA:1305:G:N1	1:XA:1331:G:N7	2.19	0.90
1:XA:1318:A:N7	14:YN:16:PHE:CD1	2.40	0.90
34:YA:919:G:C2	34:YA:2268:A:C6	2.59	0.90
1:QA:1111:A:N1	3:QC:177:THR:HA	1.87	0.90
1:QA:1160:G:H5'	2:QB:132:LYS:CE	2.01	0.90
1:QA:1253:G:P	10:QJ:44:VAL:CG2	2.60	0.90
34:YA:2045:C:N3	34:YA:2624:G:C2	2.39	0.90
10:QJ:49:VAL:HG22	14:QN:41:ARG:HB2	1.52	0.89
1:XA:675:A:N3	11:XK:118:GLY:HA3	1.87	0.89
1:XA:1059:C:OP2	3:XC:2:GLY:C	2.10	0.89
1:XA:1318:A:C6	14:YN:16:PHE:CE2	2.60	0.89
1:QA:1320:C:N3	19:QS:36:ARG:O	2.05	0.89
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)
1:QA:1357:A:H5'	10:QJ:45:ARG:HH22	1.31	0.89
7:QG:16:LEU:HD22	9:QI:42:ARG:HG3	1.45	0.89
1:QA:676:A:H4'	11:QK:115:PRO:HB3	1.53	0.89
1:QA:960:U:O4	19:QS:78:ARG:HB3	1.71	0.89
1:QA:1123:A:H4'	10:QJ:37:PRO:HD3	0.90	0.89
1:QA:1358:U:H5''	14:QN:35:ARG:N	1.86	0.89
1:QA:253:U:OP1	17:QQ:67:LYS:NZ	2.06	0.89
1:QA:979:C:N3	14:QN:19:ARG:CD	2.33	0.89
1:XA:1225:A:H1'	19:XS:78:ARG:NE	1.87	0.89
28:R4:34:GLU:OE1	39:RG:113:ARG:CZ	2.21	0.89
41:RI:83:ALA:O	41:RI:89:TYR:CZ	2.26	0.89
1:XA:1188:A:H1'	14:YN: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:1112:C:C1'	3:XC:179:ARG:NH2	2.35	0.89
1:XA:1190:G:H5''	3:XC:176:HIS:CE1	1.76	0.89
43:YO:34:THR:HG22	43:YO:35:VAL:H	1.33	0.89
1:QA:982:U:H5''	14:QN:6:LEU:HG	1.55	0.88
1:XA:728:A:H62	15:XO:54:ARG:HD3	1.34	0.88
1:QA:668:G:C4'	15:QO:48:LYS:O	2.20	0.88
1:QA:1253:G:OP1	10:QJ:44:VAL:CG2	2.20	0.88
1:QA:1280:A:C4	10:QJ:41:PRO:HD3	2.08	0.88
1:QA:1359:C:OP1	14:QN:22:THR:HG22	1.73	0.88
1:QA:1360:A:C1'	14:QN:17:LYS:NZ	2.37	0.88
1:QA:1357:A:H5'	10:QJ:45:ARG:NH1	1.89	0.88
2:QB:197:VAL:O	8:QH:68:ARG:NH2	2.06	0.88
3:XC:21:ARG:HG3	10:XJ:92:THR:O	1.74	0.88
1:XA:1254:C:OP1	10:XJ:45:ARG:HD3	1.73	0.88
1:XA:1318:A:C1'	19:XS:11:VAL:HG21	2.04	0.88
10:XJ:47:PHE:HZ	14:YN:36:PHE:CD2	1.90	0.88
1:XA:1228:C:OP1	13:XM:108:ARG:CZ	2.22	0.88
1:QA:1309:G:H5''	13:QM:77:ASN:HD21	1.20	0.88
4:QD:88:VAL:HG13	5:QE:97:GLY:CA	2.03	0.88
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:948:C:C5'	13:QM:101:GLN:HG2	2.04	0.87
1:QA:1131:G:H1	1:QA:1143:G:H21	1.22	0.87
1:XA:1318:A:C2'	19:XS:11:VAL:CG2	2.28	0.87
1:QA:310:G:OP1	16:QP:27:LYS:HD3	1.74	0.87
1:QA:957:U:C1'	19:QS:79:THR:O	2.22	0.87
1:QA:980:C:N1	14:QN:19:ARG:CG	2.36	0.87
34:YA:2053:G:N2	34:YA:2617:C:C2	2.43	0.87
34:YA:2126:A:H61	34:YA:2163:C:H1'	1.37	0.87
1:QA:1307:U:P	13:QM:99:ARG:CG	2.63	0.87
1:QA:1309:G:H5'	13:QM:77:ASN:ND2	1.87	0.87
1:XA:539:A:OP1	12:XL:114:LYS:HD2	1.75	0.87
11:XK:91:ARG:NH2	18:XR:88:LYS:HD2	1.88	0.87
1:QA:958:A:OP1	19:QS:79:THR:CG2	2.18	0.87
1:QA:1374:A:O2'	7:QG:31:MET:SD	2.31	0.87
1:XA:1228:C:H3'	13:XM:104:ARG:O	1.74	0.87
34:YA:389:G:N1	44:YP:71:VAL:HG12	1.90	0.87
1:QA:1358:U:C5'	14:QN:35:ARG:N	2.37	0.86
3:QC:79:ARG:CZ	11:XK:104:GLN:HA	2.04	0.86
1:XA:881:G:OP2	12:XL:9:GLN:NE2	2.08	0.86
21:XU:3:LYS:CD	21:XU:14:TRP:CE3	2.57	0.86
1:QA:880:C:H5''	12:QL:12:ARG:HH21	1.35	0.86
7:XG:16:LEU:HD23	9:XI:44:VAL:CG2	2.05	0.86
1:QA:676:A:H1'	11:QK:118:GLY:HA3	1.55	0.86
10:QJ:49:VAL:HG23	14:QN:41:ARG:HB2	1.55	0.86
34:RA:1411:C:H42	34:RA:1591:G:H1	1.20	0.86
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:YN:56:VAL:CG1	14:YN: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:1150:U:O2	10:QJ:39:PRO:CG	2.23	0.86
1:QA:1220:G:H21	19:QS:54:GLY:CA	1.87	0.86
1:QA:1313:U:C3'	19:QS:6:LYS:HZ3	1.74	0.86
1:XA:1187:G:H2'	14:YN: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:YN: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:954:G:N2	19:QS:83:HIS:HE1	1.72	0.85
1:QA:959:A:H61	19:QS:78:ARG:C	1.80	0.85
1:QA:1307:U:OP2	13:QM:99:ARG:HG3	1.76	0.85
10:QJ:45:ARG:CG	14:QN:36:PHE:CZ	2.55	0.85
1:QA:1230:C:N4	13:QM:104:ARG:HD3	1.90	0.85
1:XA:1374:A:O2'	7:YG:31:MET:CE	2.23	0.85
1:QA:625:G:H4'	16:QP:16:HIS:CB	2.06	0.85
4:QD:20:TYR:OH	6:XF:14:LEU:CA	2.25	0.85
4:QD:61:LYS:HE2	4:QD:206:PHE:CE2	2.11	0.85
34:YA:443:A:N7	38:YF:45:ARG:HD3	1.90	0.85
1:QA:617:G:O2'	16:QP:44:THR:HG21	1.77	0.85
1:QA:975:A:C2	14:QN:34:TYR:CD1	2.64	0.85
1:XA:309:G:O2'	1:XA:607:A:N1	2.10	0.85
34:YA:389:G:N2	44:YP:71:VAL:HG12	1.90	0.85
1:QA:1081:G:H5''	5:QE:18:ARG:HD2	1.59	0.85
1:QA:1179:A:H5'	9:QI:83:ARG:NH2	1.79	0.85
1:QA:1360:A:H1'	14:QN:17:LYS:HE3	0.85	0.85
1:XA:393:A:OP1	16:XP:13:HIS:NE2	2.08	0.85
1:XA:1228:C:C5	13:XM:104:ARG:HG2	2.12	0.84
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:YN:16:PHE:CD1	1.91	0.84
1:QA:656:C:H4'	15:QO:62:GLN:NE2	1.90	0.84
1:QA:979:C:H42	14:QN:19:ARG:HB2	1.42	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1235:U:O2'	21:QU:3:LYS:HG3	1.77	0.84
1:QA:1307:U:O5'	13:QM:99:ARG:HG3	1.77	0.84
4:XD:205:GLU:OE1	5:XE:107:ARG:NH1	2.09	0.84
32:Y8:12:LYS:NZ	34:YA:247:G:O6	2.10	0.84
1:QA:972:C:P	10:QJ:57:LYS:HG3	2.17	0.84
11:XK:91:ARG:HE	18:XR:88:LYS:CE	1.89	0.84
34:YA:2048:G:N2	34:YA:2621:A:N3	2.26	0.84
1:QA:1106:G:C2'	3:QC:172:ARG:HE	1.89	0.84
34:RA:2751:G:C2	40:RH:3:ARG:CB	2.59	0.84
1:XA:1377:A:OP2	7:XG:94:ARG:NH2	2.09	0.84
1:XA:1305:G:C6	1:XA:1331:G:C5	2.65	0.84
11:QK:13:GLN:HG3	34:RA:2141:G:H5''	1.60	0.84
1:XA:974:A:C1'	14:XN:31:ARG:NH1	2.41	0.84
1:XA:1230:C:N4	13:XM:105:THR:HG21	1.93	0.84
1:QA:1150:U:H1'	10:QJ:39:PRO:CG	2.02	0.84
5:QE:77:PRO:O	8:QH:105:ARG:HD3	1.77	0.84
40:RH:103:LEU:CD1	40:RH:123:PHE:CZ	2.61	0.84
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
1:QA:958:A:OP1	19:QS:79:THR:HG21	1.76	0.84
1:QA:1307:U:C5'	13:QM:99:ARG:HG3	2.08	0.84
3:QC:22:TRP:HA	10:QJ:93:GLY:CA	2.07	0.84
28:R4:31:ILE:HG21	39:RG:142:PRO:HB2	1.58	0.84
1:XA:186(A):C:O2'	20:XT:85:MET:SD	2.35	0.84
1:XA:1217:C:P	14:XN:5:ALA:HB1	2.18	0.84
34:YA:2082:A:H62	34:YA:2237:G:H21	0.86	0.84
1:QA:718:G:O5'	11:QK:117:ASN:OD1	1.96	0.83
34:YA:389:G:H1	44:YP:71:VAL:HG12	1.42	0.83
1:QA:974:A:OP2	14:QN:29:ARG:CD	2.25	0.83
1:XA:1376:U:C4	7:XG:10:ARG:NE	2.46	0.83
34:YA:1127:A:C2	34:YA:2518:A:C8	2.65	0.83
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:747:U:C5	34:YA:2613:U:C4	2.65	0.83
34:YA:1127:A:N1	34:YA:2518:A:C6	2.45	0.83
34:YA:1456:G:N2	34:YA:2703:C:N3	2.24	0.83
1:QA:1358:U:H5'	14:QN:35:ARG:H	1.41	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1318:A:N3	14:YN: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:YN:42:ILE:HG12	1.58	0.83
34:YA:747:U:C5	34:YA:2613:U:O4	2.32	0.83
34:YA:2044:C:C4	34:YA:2625:G:C2	2.66	0.83
34:YA:2048:G:C6	34:YA:2621:A:N1	2.46	0.83
1:QA:948:C:P	13:QM:106:ASN:O	2.36	0.83
1:QA:1106:G:H1'	3:QC:172:ARG:HE	0.68	0.83
1:QA:1108:G:P	3:QC:174:PRO:HA	2.19	0.83
1:QA:1253:G:OP1	10:QJ:44:VAL:HG21	1.79	0.83
1:QA:520:A:O2'	12:QL:73:GLU:OE2	1.97	0.83
1:QA:669:U:C1'	15:QO:46:HIS:CE1	2.45	0.83
1:QA:1248:A:H62	21:QU:26:LYS:HD2	1.44	0.83
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:309:G:H5''	16:QP:27:LYS:CE	2.09	0.82
1:QA:980:C:H4'	14:QN:19:ARG:NH2	1.94	0.82
1:QA:1243:C:H5''	21:QU:9:ARG:HG3	1.59	0.82
34:YA:2045:C:N3	34:YA:2624:G:N2	2.26	0.82
34:YA:2078:C:N4	34:YA:2238:G:O6	2.11	0.82
1:QA:1187:G:C2	14:QN:60:SER:OG	2.32	0.82
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:974:A:N9	14:YN:31:ARG:HD3	1.92	0.82
1:XA:1377:A:P	7:XG:94:ARG:HH22	1.97	0.82
1:QA:44:G:OP2	16:QP:12:LYS:NZ	2.13	0.82
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:980:C:N1	14:QN:19:ARG:HG2	1.94	0.82
1:QA:1114:C:H1'	14:QN:60:SER:O	1.78	0.82
1:QA:1307:U:C5'	13:QM:99:ARG:CG	2.57	0.82
34:YA:2046:G:C4	34:YA:2623:G:C2	2.65	0.82
34:YA:2070:G:C2	34:YA:2442:C:N3	2.46	0.82
34:YA:2097:C:N3	34:YA:2192:G:O6	2.11	0.82
1:QA:980:C:C4'	14:QN:19:ARG:HE	1.93	0.82
1:XA:619:U:H5'	4:XD:131:ARG:HH21	1.44	0.82
4:QD:57:ARG:HH22	5:QE:107:ARG:HD3	1.01	0.82
1:QA:1049:U:H5	14:QN:3:ARG:CB	1.71	0.82
1:QA:1223:C:OP2	19:QS:78:ARG:NH2	2.12	0.82
1:QA:1313:U:C4	19:QS:4:SER:HB2	2.15	0.82
10:QJ:47:PHE:CE2	14:QN:37:PHE:HD2	1.98	0.82
1:QA:310:G:OP2	16:QP:27:LYS:HD3	1.78	0.82
1:QA:1221:G:C4'	19:QS:36:ARG:HH21	1.87	0.82
1:XA:986:A:H1'	19:XS:52:TYR:OH	1.80	0.81
1:QA:49:U:H3	1:QA:362:G:H1'	1.44	0.81
4:QD:204:ILE:HG21	5:QE:98:THR:O	1.80	0.81
11:QK:71:LYS:NZ	34:RA:2146:C:N4	2.28	0.81
34:RA:2751:G:C8	40:RH:2:SER:O	2.33	0.81
1:XA:1305:G:C2	1:XA:1331:G:C5	2.68	0.81
3:XC:23:TYR:HE2	10:XJ:95:GLU:HB2	1.45	0.81
34:YA:918:A:C5	34:YA:2268:A:N6	2.47	0.81
1:QA:9:G:H5''	5:QE:122:GLU:OE2	1.81	0.81
29:R5:9:LYS:NZ	34:RA:2019:A:N7	2.29	0.81
34:YA:2090:G:N2	34:YA:2230:G:C4	2.48	0.81
1:XA:1320:C:C6	19:XS:37:ARG:HA	2.16	0.81
1:QA:1243:C:C5'	21:QU:9:ARG:HG3	2.09	0.81
34:YA:389:G:C2	44:YP:71:VAL:HG12	2.15	0.81
3:QC:23:TYR:CE2	10:QJ:95:GLU:HB3	2.15	0.81
34:RA:1294:U:O2'	46:RR:23:ASN:OD1	1.98	0.81
34:YA:199:A:C6	34:YA:2434:A:N1	2.49	0.81
34:YA:919:G:C2	34:YA:2268:A:C5	2.69	0.81
1:XA:6:G:N2	5:XE:119:LEU:HD11	1.96	0.81
40:YH:9:ILE:CG2	40:YH:49:VAL:HB	2.11	0.81
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)
1:QA:1358:U:O3'	14:QN:22:THR:CG2	2.27	0.80
4:QD:204:ILE:HG22	5:QE:98:THR:O	1.81	0.80
1:QA:957:U:H5'	19:QS:81:ARG:HG3	1.60	0.80
1:QA:1188:A:O3'	14:QN:58:LYS:NZ	2.13	0.80
1:QA:1248:A:H62	21:QU:26:LYS:CD	1.94	0.80
4:QD:61:LYS:HE2	4:QD:206:PHE:HE2	1.45	0.80
40:RH:98:LEU:HD21	40:RH:125:VAL:HG11	0.81	0.80
15:XO:88:ARG:NH1	34:YA:713:G:OP2	2.13	0.80
34:YA:389:G:H22	44:YP:71:VAL:HG12	1.44	0.80
1:QA:277:C:OP1	17:QQ:68:ARG:NH2	2.15	0.80
1:QA:1106:G:C5'	3:QC:172:ARG:HG3	2.11	0.80
34:YA:814:C:H41	44:YP:25:SER:HA	1.46	0.80
1:QA:1160:G:C5'	2:QB:132:LYS:HE2	2.10	0.80
1:XA:1318:A:O2'	19:XS:11:VAL:CB	2.30	0.80
34:YA:2090:G:C2	34:YA:2230:G:N1	2.48	0.80
1:XA:1315:U:O3'	14:XN:17:LYS:CE	2.28	0.80
13:XM:84:ILE:HG22	19:XS:74:PHE:CE1	2.14	0.80
1:QA:1357:A:H5''	10:QJ:45:ARG:HH22	1.45	0.80
1:QA:1360:A:C8	14:QN:18:VAL:HA	2.16	0.80
34:YA:2044:C:N3	34:YA:2625:G:N2	2.30	0.80
34:YA:2048:G:C6	34:YA:2621:A:C2	2.69	0.80
40:RH:89:ILE:CD1	40:RH:131:VAL:HG22	2.12	0.80
41:RI:84:GLY:HA3	41:RI:89:TYR:OH	1.82	0.80
34:YA:2051:A:C2	34:YA:2614:A:N1	2.50	0.80
1:QA:1307:U:H5''	13:QM:99:ARG:CG	2.11	0.80
34:YA:1614:A:N6	51:YW:91:GLY:HA2	1.97	0.80
34:YA:2051:A:C2	34:YA:2614:A:C6	2.70	0.80
1:QA:656:C:H4'	15:QO:62:GLN:HE22	1.45	0.80
1:QA:981:U:C5'	14:QN:6:LEU:CD2	2.60	0.80
1:QA:1179:A:H5''	9:QI:83:ARG:HH22	1.06	0.80
4:QD:205:GLU:CD	5:QE:100:VAL:CG1	2.50	0.80
10:QJ:50:ILE:CD1	14:QN:41:ARG:NE	2.44	0.80
34:YA:2087:G:C6	34:YA:2233:U:C2	2.70	0.80
1:QA:1320:C:C4'	19:QS:70:LYS:HG3	2.13	0.79
13:QM:84:ILE:CG2	19:QS:69:HIS:CE1	2.65	0.79
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: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1106:G:H4'	3:QC:172:ARG:CD	2.13	0.79
1:QA:1204:A:OP1	14:QN:3:ARG:NH2	2.13	0.79
1:QA:1321:C:N3	19:QS:36:ARG:NH1	2.30	0.79
1:XA:1188:A:O2'	14:YN:58:LYS:HE3	1.82	0.79
1:XA:1240:U:C2'	7:YG: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
1:QA:981:U:H5'	14:QN:21:TYR:OH	1.80	0.79
1:QA:1221:G:C2'	19:QS:77:THR:HG21	2.10	0.79
1:QA:1223:C:P	19:QS:78:ARG:HH21	1.91	0.79
3:QC:22:TRP:HA	10:QJ:93:GLY:HA2	1.65	0.79
34:RA:508:G:O6	51:RW:9:TYR:CE1	2.35	0.79
1:XA:1318:A:O3'	19:XS:11:VAL:CB	2.31	0.79
1:QA:742:G:C5'	15:QO:58:MET:SD	2.71	0.79
1:QA:1355:G:H1	1:QA:1367:C:H5	1.29	0.79
2:QB:178:ARG:NE	8:QH:71:GLY:O	2.16	0.79
4:QD:18:LYS:NZ	56:QD:301:SF4:S4	2.55	0.79
34:RA:2751:G:N3	40:RH:3:ARG:CB	2.42	0.79
1:XA:1124:G:H4'	10:XJ:36:GLY:N	1.97	0.79
34:YA:2088:G:N1	34:YA:2232:U:O2	2.15	0.79
1:QA:875:C:O2'	8:QH:14:ARG:NH1	2.15	0.79
1:XA:1254:C:H5''	10:XJ:45:ARG:CZ	2.13	0.79
6:XF:100:ASN:HB2	18:XR:28:GLU:N	1.97	0.79
22:XV:19:G:N7	34:YA:2112:G:N7	2.31	0.79
29:Y5:9:LYS:NZ	34:YA:2019:A:OP2	2.15	0.79
1:QA:957:U:C3'	19:QS:79:THR:O	2.31	0.78
4:QD:57:ARG:CZ	5:QE:107:ARG:CD	2.55	0.78
10:QJ:49:VAL:HG23	14:QN:41:ARG:CB	2.14	0.78
1:XA:1313:U:C4	19:XS:4:SER:OG	2.36	0.78
1:XA:1320:C:N1	19:XS:70:LYS:HD3	1.99	0.78

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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: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
1:QA:1309:G:H5'	13:QM:77:ASN:CG	2.02	0.78
34:YA:199:A:C6	34:YA:2434:A:C6	2.71	0.78
13:QM:84:ILE:HG13	19:QS:74:PHE:HZ	1.49	0.78
1:XA:1377:A:P	7:XG:94:ARG:HH21	2.03	0.78
1:QA:624:C:C3'	16:QP:10:GLY:HA2	2.13	0.78
19:QS:61:TYR:CE1	34:RA:888:C:OP2	2.36	0.78
34:RA:2250:G:C4	45:RQ:82:ARG:HG3	2.17	0.78
1:XA:1237:C:O2'	1:XA:1300:G:N2	2.16	0.78
1:XA:1318:A:N1	14:YN:16:PHE:CZ	2.50	0.78
1:XA:1377:A:C6	7:XG:10:ARG:CD	2.65	0.78
13:XM:84:ILE:CG2	19:XS:74:PHE:CZ	2.66	0.78
34:YA:747:U:C4	34:YA:2613:U:N3	2.52	0.78
1:QA:1109:C:P	3:QC:176:HIS:CD2	2.77	0.78
34:RA: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:1566:A:C6	36:YD:214:TRP:CH2	2.72	0.78
34:YA:2108:C:N4	34:YA:2182:G:N2	2.29	0.78
1:QA:1124:G:O5'	10:QJ:36:GLY:N	2.16	0.78
28:R4:5:ILE:O	39:RG:67:LYS:HG3	1.83	0.78
1:XA:728:A:N6	15:XO:54:ARG:CD	2.47	0.78
34:YA:1050:A:N7	34:YA:2751:G:C2	2.52	0.78
1:QA:1109:C:P	3:QC:176:HIS:HD2	2.07	0.78
1:XA:675:A:N3	11:XK:118:GLY:HA2	1.98	0.78
1:XA:1321:C:H5'	1:XA:1322:C:H5''	1.66	0.78
1:QA:957:U:H5'	19:QS:81:ARG:CG	2.14	0.78
40:RH:98:LEU:CD2	40:RH:125:VAL:CG1	2.41	0.78
1:XA:1229:A:H62	13:XM:104:ARG:HE	1.32	0.78
1:QA:1179:A:H5'	9:QI:83:ARG:HH12	1.49	0.78
1:QA:1236:A:H4'	21:QU:10:ARG:CZ	2.09	0.78
1:QA:1360:A:C4'	14:QN:17:LYS:HZ2	1.97	0.78
19:QS:61:TYR:CZ	34:RA:888:C:OP2	2.37	0.78
29:R5:3:LYS:HG2	34:RA:2611:U:C4	2.19	0.78
1:XA:728:A:C8	15:XO:54:ARG:CZ	2.67	0.78
1:XA:1112:C:H1'	3:XC:179:ARG:CZ	2.13	0.78

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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:8:A:C6	4:XD:209:ARG:HA	2.19	0.78
1:XA:740:U:OP2	15:XO:2:PRO:HB3	1.83	0.78
1:QA:979:C:H2'	14:QN:19:ARG:NH2	1.98	0.77
1:QA:1226:C:H5'	13:QM:91:ARG:NH1	1.98	0.77
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:979:C:C4	14:QN:19:ARG:CD	2.67	0.77
1:QA:1236:A:O5'	21:QU:10:ARG:NH1	2.11	0.77
1:QA:1253:G:H5'	10:QJ:44:VAL:H	1.50	0.77
1:QA:1302:U:OP2	13:QM:27:LYS:HE2	1.85	0.77
28:R4:31:ILE:HG23	39:RG:142:PRO:O	1.85	0.77
34:RA:1534:G:H2'	34:RA:1535:U:H4'	1.66	0.77
1:QA:740:U:C4'	15:QO:39:LEU:HG	2.15	0.77
1:QA:1331:G:N1	21:QU:5:ASP:OD1	2.18	0.77
1:XA:957:U:H4'	19:XS:79:THR:OG1	1.85	0.77
34:YA:270(P):U:C4	41:YI:52:ARG:NH2	2.52	0.77
34:YA:919:G:N1	34:YA:2268:A:C5	2.53	0.77
12:QL:7:ILE:CD1	17:QQ:32:TYR:CG	2.59	0.77
13:QM:84:ILE:HG13	19:QS:74:PHE:CZ	2.19	0.77
1:XA:367:U:H5'	1:XA:394:G:H21	1.50	0.77
1:XA:1152:A:H5''	10:XJ:13:HIS:NE2	2.00	0.77
1:QA:1125:U:N3	10:QJ:73:ASP:OD1	2.18	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1305:G:H4'	1:QA:1332:A:H62	1.50	0.77
1:QA:1313:U:C6	19:QS:6:LYS:CE	2.68	0.77
34:RA:586:A:H5'	38:RF:89:VAL:HG21	1.67	0.77
34:RA:2294:C:OP2	47:RS:13:ARG:NH2	2.17	0.77
1:XA:1357:A:OP1	14:YN:35:ARG:NH1	2.08	0.77
1:XA:1377:A:C5	7:XG:10:ARG:HD2	2.20	0.77
29:Y5:43:HIS:CD2	34:YA:2884:U:C5	2.72	0.77
1:QA:978:A:H62	14:QN:18:VAL:HG21	0.72	0.77
1:QA:1378:C:OP2	7:QG:7:ALA:HB2	1.80	0.77
1:XA:1058:G:O5'	3:XC:2:GLY:N	2.18	0.77
1:QA:974:A:OP1	14:QN:29:ARG:CZ	2.34	0.76
1:QA:980:C:C1'	14:QN:19:ARG:NE	2.46	0.76
1:QA:1330:U:C4	21:QU:7:ARG:NH1	2.53	0.76
3:QC:79:ARG:NH2	11:XK:105:VAL:H	1.82	0.76
10:QJ:50:ILE:CG1	14:QN:41:ARG:HD2	2.04	0.76
34:RA:1789:A:OP1	36:RD:222:ARG:HG3	1.84	0.76
1:XA:1318:A:O3'	19:XS:11:VAL:HB	1.84	0.76
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:1240:U:H3	7:QG:38:LEU:HB3	1.49	0.76
1:QA:1360:A:N6	14:QN:18:VAL:CG2	2.29	0.76
50:RV:45:THR:O	50:RV:45:THR:HG22	1.83	0.76
34:YA:442:G:H1'	38:YF:48:THR:HG21	1.67	0.76
34:YA:2095:C:O2	34:YA:2194:G:N2	2.15	0.76
1:QA:1236:A:O4'	21:QU:10:ARG:NH1	2.17	0.76
41:RI:92:VAL:O	41:RI:120:ILE:HB	1.85	0.76
1:XA:634:C:H2'	1:XA:635:G:H8	1.50	0.76
34:YA:2069:G:C2	34:YA:2443:C:C2	2.73	0.76
54:YZ:183:LEU:HD23	54:YZ:183:LEU:O	1.85	0.76
25:R1:90:ILE:HA	25:R1:94:LEU:HD12	1.67	0.76
1:QA:761:G:H5'	17:QQ:100:LYS:HZ3	1.49	0.76
1:QA:1240:U:N3	7:QG:38:LEU:CB	2.30	0.76
1:QA:1358:U:H4'	14:QN:33:VAL:O	1.86	0.76
1:XA:1503:A:O2'	23:XX:15:A:N6	2.19	0.76
11:XK:91:ARG:CG	18:XR:88:LYS:NZ	2.48	0.76
1:QA:1152:A:OP1	10:QJ:13:HIS:CD2	2.38	0.76
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
1:QA:1179:A:H5'	9:QI:83:ARG:NH1	2.01	0.76
1:QA:1320:C:O4'	19:QS:70:LYS:HG3	1.84	0.76
2:QB:178:ARG:O	8:QH:72:PRO:HD3	1.86	0.76
1:QA:624:C:O3'	16:QP:10:GLY:CA	2.30	0.76
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:2054:A:C2	34:YA:2616:C:N3	2.54	0.75
34:YA:2088:G:C2	34:YA:2232:U:O2	2.39	0.75
34:RA:1049:C:N3	40:RH:2:SER:HB3	2.01	0.75
1:QA:1203:C:H5'	14:QN:3:ARG:NH1	2.01	0.75
10:QJ:79:ARG:NH1	10:QJ:79:ARG:O	2.20	0.75
34:RA:2751:G:C4	40:RH:3:ARG:CG	2.68	0.75
1:XA:1318:A:N6	14:XN:16:PHE:CD2	2.48	0.75
1:XA:1320:C:C4	19:XS:37:ARG:N	2.55	0.75
1:QA:739:C:O2'	15:QO:42:HIS:CG	2.40	0.75
10:QJ:50:ILE:HD11	14:QN:41:ARG:CZ	2.12	0.75
41:RI:92:VAL:HB	41:RI:120:ILE:CG2	2.16	0.75
1:XA:728:A:N6	15:XO:54:ARG:HD3	2.00	0.75
3:XC:23:TYR:CD2	10:XJ:95:GLU:HG3	2.22	0.75
34:YA:2053:G:O6	34:YA:2614:A:C2	2.40	0.75
34:YA:2131:G:H4'	34:YA:2132:U:H4'	1.69	0.75
34:RA:2471:C:N4	34:RA:2476:A:O2'	2.20	0.75
1:XA:1360:A:H1'	14:XN:17:LYS:CD	2.16	0.75
33:Y9:27:CYS:SG	33:Y9:29:ASN:N	2.58	0.75
33:Y9:29:ASN:ND2	33:Y9:32:HIS:NE2	2.35	0.75
32:R8:35:GLN:NE2	32:R8:36:LYS:HE2	2.02	0.75
1:XA:1312:G:C2'	19:XS:6:LYS:HZ2	1.98	0.75
34:YA:919:G:C6	34:YA:2268:A:C2	2.69	0.75
34:YA:2087:G:O6	34:YA:2233:U:N3	2.20	0.75
1:QA:959:A:N6	19:QS:78:ARG:C	2.38	0.75
4:QD:205:GLU:OE1	5:QE:107:ARG:NH1	2.20	0.75
1:XA:501:C:H1'	1:XA:549:C:H1'	1.69	0.75
1:XA:974:A:OP2	14:XN:29:ARG:NE	2.20	0.75
1:QA:986:A:O2'	19:QS:55:LYS:C	2.25	0.74
1:QA:1188:A:H4'	14:QN:58:LYS:HZ2	1.52	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:831:G:O2'	44:YP:38:GLN:OE1	2.04	0.74
34:YA:918:A:N6	34:YA:2268:A:N6	2.33	0.74
1:QA:9:G:P	5:QE:122:GLU:HG2	2.26	0.74
34:YA:727:A:H2	36:YD:9:TYR:CD2	2.05	0.74
1:QA:981:U:H5'	14:QN:6:LEU:CD2	2.16	0.74
1:QA:1222:G:H5'	19:QS:77:THR:OG1	1.86	0.74
1:QA:1229:A:N1	13:QM:104:ARG:NE	2.34	0.74
1:QA:1357:A:H5'	10:QJ:45:ARG:HH12	1.51	0.74
1:QA:1360:A:N9	14:QN:17:LYS:HE3	2.01	0.74
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:954:G:N3	19:QS:83:HIS:HE1	1.84	0.74
1:QA:1229:A:H62	13:QM:104:ARG:CG	1.96	0.74
1:QA:1357:A:C5'	10:QJ:45:ARG:NH2	2.39	0.74
4:QD:88:VAL:HG13	5:QE:97:GLY:HA3	1.70	0.74
1:XA:8:A:C5	4:XD:209:ARG:HA	2.23	0.74
1:XA:1240:U:H1'	7:XG:38:LEU:HD11	0.74	0.74
1:XA:1377:A:N6	7:XG:10:ARG:HD2	2.03	0.74
34:YA:1338:G:N7	52:YX:62:LYS:NZ	2.35	0.74
1:QA:642:A:C8	8:QH:115:SER:HA	2.21	0.74
1:QA:922:G:H4'	5:QE:20:GLN:HA	1.70	0.74
10:QJ:45:ARG:HG2	14:QN:36:PHE:CE2	2.21	0.74
1:XA:1252:A:H2	1:XA:1355:G:H1'	1.53	0.74
1:XA:1318:A:C5	14:XN:16:PHE:HE1	1.95	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:959:A:N6	19:QS:78:ARG:CA	2.45	0.73
1:QA:980:C:N1	14:QN:19:ARG:HG3	1.99	0.73
1:QA:982:U:O5'	14:QN:6:LEU:CD2	2.30	0.73
1:QA:981:U:O3'	14:QN:23:ARG:NH2	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1376:U:C4	7:QG:10:ARG:NH2	2.34	0.73
11:XK:109:VAL:HG22	18:XR:86:VAL:CG2	2.18	0.73
1:QA:862:C:H1'	1:QA:874:G:H5''	1.68	0.73
4:QD:20:TYR:OH	6:XF:14:LEU:HA	1.87	0.73
1:XA:595:G:H1'	1:XA:596:C:H5	1.52	0.73
10:XJ:47:PHE:CZ	14:YN:36:PHE:CD2	2.75	0.73
34:YA:2046:G:C5	34:YA:2623:G:N1	2.55	0.73
1:QA:979:C:C4	14:QN:19:ARG:HB2	2.22	0.73
1:QA:1179:A:H5'	9:QI:83:ARG:CZ	2.18	0.73
28:R4:27:THR:HG21	39:RG:62:LEU:O	1.88	0.73
1:XA:1440(N):G:OP1	20:XT:35:THR:CG2	2.35	0.73
1:QA:982:U:C5'	14:QN:6:LEU:CG	2.62	0.73
1:QA:1219:U:O2'	19:QS:34:TRP:HE3	1.62	0.73
1:XA:1537:U:H3	23:XX:9:G:H1	1.37	0.73
7:XG:16:LEU:HD21	9:XI:44:VAL:HG23	1.69	0.73
34:YA:34:C:H41	34:YA:447:A:H61	1.37	0.73
34:YA:1061:U:H6	34:YA:1062:G:H5''	1.54	0.73
1:QA:609:A:C5'	16:QP:9:PHE:CE1	2.72	0.73
1:QA:642:A:H1'	8:QH:114:THR:O	1.88	0.73
1:QA:979:C:C2	14:QN:19:ARG:CD	2.70	0.73
11:XK:110:ASP:CB	18:XR:85:LEU:O	2.34	0.73
34:YA:919:G:O6	34:YA:2268:A:C2	2.41	0.73
34:YA:1456:G:N2	34:YA:2704:C:C2	2.55	0.73
1:QA:1106:G:C2'	3:QC:172:ARG:NE	2.48	0.73
3:XC:14:ILE:HD11	14:YN:57:ARG:NH2	2.02	0.73
13:XM:86:CYS:HB2	19:XS:73:GLU:OE1	1.89	0.73
1:QA:959:A:H62	19:QS:79:THR:H	1.17	0.73
1:QA:986:A:C4'	19:QS:55:LYS:HG3	2.18	0.73
1:QA:1106:G:H1'	3:QC:172:ARG:CZ	2.18	0.73
34:RA:1510:A:O2'	34:RA:1511:A:N7	2.22	0.73
34:RA:2751:G:C2	40:RH:3:ARG:HB2	2.24	0.73
32:Y8:8:LYS:NZ	34:YA:243:U:OP1	2.22	0.73
1:QA:959:A:H62	19:QS:79:THR:HG23	1.53	0.73
1:QA:1360:A:H1'	14:QN:17:LYS:HE2	1.65	0.73
34:RA:1049:C:N3	40:RH:2:SER:CB	2.52	0.73
1:XA:1217:C:H5''	14:YN:12:ARG:HH12	1.53	0.73
1:XA:1315:U:O3'	14:YN:17:LYS:NZ	2.21	0.73
34:YA:2053:G:O6	34:YA:2614:A:H2	1.71	0.73
1:QA:975:A:C2'	14:QN:32:SER:HA	2.19	0.72
1:QA:1106:G:C2'	3:QC:172:ARG:CD	2.67	0.72
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:948:C:C5'	13:QM:101:GLN:HG3	2.07	0.72
1:QA:958:A:C1'	19:QS:55:LYS:HD2	2.19	0.72
2:QB:172:ILE:O	2:QB:176:GLU:HB2	1.88	0.72
1:XA:1238:A:H2'	1:XA:1239:A:H8	1.55	0.72
1:XA:1305:G:O6	1:XA:1331:G:O6	2.05	0.72
10:XJ:40:LEU:HB3	10:XJ:41:PRO:HD3	1.71	0.72
27:R3:25:ALA:HB2	34:RA:849:A:H2	1.55	0.72
34:RA:2483:C:C2	45:RQ:124:LYS:NZ	2.57	0.72
1:XA:948:C:OP2	13:XM:106:ASN:CG	2.28	0.72
1:XA:1318:A:O2'	19:XS:11:VAL:HG11	1.90	0.72
1:QA:1049:U:H5	14:QN:3:ARG:HB3	0.92	0.72
1:QA:1307:U:O5'	13:QM:99:ARG:NH1	2.21	0.72
3:QC:79:ARG:NH2	11:XK:104:GLN:CA	2.48	0.72
13:XM:84:ILE:CD1	19:XS:65:ASN:OD1	2.37	0.72
1:QA:657:G:O2'	15:QO:28:GLN:HG3	1.86	0.72
1:QA:667:G:C4'	15:QO:51:HIS:CE1	2.72	0.72
10:QJ:49:VAL:CG2	14:QN:41:ARG:CB	2.66	0.72
12:QL:7:ILE:CD1	17:QQ:32:TYR:HD1	1.93	0.72
1:XA:1107:C:OP1	3:XC:172:ARG:NE	2.22	0.72
1:XA:1226:C:O2'	1:XA:1227:A:N7	2.23	0.72
34:YA:2048:G:N1	34:YA:2621:A:N1	2.38	0.72
4:QD:197:PRO:CG	6:XF:16:GLN:HB2	2.18	0.72
30:R6:23:THR:HG21	34:RA:2286:A:H61	1.55	0.72
1:XA:1187:G:N2	14:XN:60:SER:CB	2.52	0.72
1:XA:1375:A:H4'	7:XG:28:ASN:CG	2.09	0.72
34:YA:919:G:C4	34:YA:2268:A:N6	2.58	0.72
1:QA:959:A:C6	19:QS:77:THR:O	2.42	0.72
1:QA:1235:U:O3'	21:QU:10:ARG:CD	2.38	0.72
34:RA:11:G:H22	34:RA:2627:G:H5''	1.53	0.72
1:XA:1228:C:H41	13:XM:104:ARG:CG	2.02	0.72
1:XA:1320:C:H41	19:XS:37:ARG:CB	1.87	0.72
31:Y7:37:LYS:HE2	34:YA:458:G:C8	2.25	0.72
31:Y7:37:LYS:HE2	34:YA:458:G:N9	2.05	0.72
34:YA:2056:G:O6	34:YA:2577:A:N9	2.22	0.72
1:QA:761:G:C5'	17:QQ:100:LYS:NZ	2.52	0.72
1:QA:955:U:O2'	19:QS:83:HIS:CB	2.38	0.72
35:YB:48:A:OP2	47:YS:30:ARG:NH2	2.23	0.72
1:QA:974:A:OP2	14:QN:29:ARG:HG2	1.90	0.71
3:QC:23:TYR:HE2	10:QJ:95:GLU:OE1	1.73	0.71
1:XA:981:U:H5''	1:XA:982:U:H2'	1.71	0.71

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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:YN: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:322:C:H4'	20:XT:23:ARG:HG2	1.72	0.71
1:XA:1228:C:C4	13:XM:104:ARG:CG	2.63	0.71
3:XC:14:ILE:HD11	14:YN:57:ARG:HH22	1.52	0.71
1:QA:1128:C:O2'	1:QA:1146:A:N6	2.23	0.71
1:XA:1228:C:C5	13:XM:104:ARG:CG	2.73	0.71
1:QA:617:G:H4'	16:QP:44:THR:CB	2.20	0.71
1:QA:983:A:H5'	14:QN:2:ALA:CB	2.10	0.71
1:QA:1188:A:C3'	14:QN:58:LYS:HZ1	2.02	0.71
28:R4:6:HIS:CE1	39:RG:66:GLN:OE1	2.43	0.71
1:XA:1229:A:H61	13:XM:104:ARG:NE	1.87	0.71
4:XD:89:THR:OG1	5:XE:97:GLY:O	2.03	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:624:C:H4'	16:QP:10:GLY:C	2.11	0.71
1:QA:980:C:C1'	14:QN:19:ARG:CD	2.61	0.71
1:XA:1375:A:H4'	7:XG:28:ASN:OD1	1.90	0.71
34:YA:911:A:C2	45:YQ:9:TYR:CG	2.79	0.71
34:YA:2054:A:H2	34:YA:2616:C:C2	2.07	0.71
34:YA:2056:G:C6	34:YA:2577:A:C5	2.79	0.71
1:QA: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:975:A:O2'	14:QN:32:SER:HA	1.91	0.71
1:QA:1280:A:N3	10:QJ:41:PRO:HD3	2.06	0.71
45:RQ:65:PHE:HB2	45:RQ:105:GLU:HB2	1.72	0.71
1:XA:974:A:C1'	14:YN:31:ARG:HD3	2.19	0.71
1:XA:1229:A:H62	13:XM:104:ARG:NE	1.88	0.71
6:XF:97:PHE:O	18:XR:30:ASP:HA	1.91	0.71
34:YA:2620:C:O2'	37:YE:157:ALA:O	2.08	0.71
1:QA:978:A:H61	1:QA:1316:G:H1'	1.54	0.71
1:QA:1313:U:C5	19:QS:4:SER:HB2	2.26	0.71

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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:761:G:H5'	17:QQ:100:LYS:HZ1	1.55	0.70
1:QA:974:A:P	14:QN:29:ARG:HE	2.07	0.70
1:QA:1307:U:OP2	13:QM:99:ARG:CG	2.38	0.70
1:QA:1320:C:N4	19:QS:37:ARG:HA	2.04	0.70
1:XA:974:A:H1'	14:XN:31:ARG:NH1	2.04	0.70
1:XA:974:A:N3	14:XN:31:ARG:NH1	2.39	0.70
1:XA:1377:A:C6	7:XG:10:ARG:HG3	2.25	0.70
3:XC:23:TYR:HD2	10:XJ:95:GLU:HG3	1.56	0.70
1:QA:583:A:H4'	17:QQ:91:ARG:HD3	1.73	0.70
1:QA:666:G:H21	15:QO:51:HIS:HB2	1.56	0.70
34:RA:839:U:H1'	34:RA:1191:G:H1'	1.73	0.70
1:XA:403:C:H42	55:XA:1688:MG:MG	0.96	0.70
1:XA:974:A:N9	14:XN:31:ARG:NH1	2.39	0.70
1:XA:1059:C:OP2	3:XC:2:GLY:N	2.24	0.70
34:YA:2087:G:C6	34:YA:2233:U:N3	2.59	0.70
1:QA:956:U:C4'	19:QS:83:HIS:HA	2.20	0.70
1:QA:974:A:C4'	14:QN:31:ARG:HB3	2.22	0.70
10:QJ:47:PHE:HE2	14:QN:34:TYR:HB3	1.55	0.70
12:QL:7:ILE:HD13	17:QQ:32:TYR:CD1	2.22	0.70
34:YA:508:G:O6	51:YW:9:TYR:CD1	2.45	0.70
1:QA:186(K):G:N7	17:QQ:63:ARG:CZ	2.54	0.70
41:RI:83:ALA:O	41:RI:89:TYR:CE1	2.45	0.70
2:XB:120:ALA:O	2:XB:124:SER:HB2	1.92	0.70
10:XJ:37:PRO:HB3	10:XJ:72:VAL:CG2	2.21	0.70
1:QA:1253:G:H4'	10:QJ:44:VAL:O	1.89	0.70
1:QA:1290:G:O6	21:QU:26:LYS:HE3	1.91	0.70
34:RA:998:C:OP2	49:RU:58:ARG:NH1	2.25	0.70
4:XD:57:ARG:HB3	4:XD:206:PHE:HB2	1.72	0.70
31:Y7:33:ARG:NH1	34:YA:467:G:OP1	2.24	0.70
1:QA:813:U:H2'	1:QA:814:A:H8	1.57	0.70
1:QA:1080:A:OP1	5:QE:14:ARG:NH2	2.24	0.70
1:QA:1106:G:C4'	3:QC:172:ARG:CD	2.68	0.70
1:QA:1106:G:C1'	3:QC:172:ARG:CZ	2.67	0.70

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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:QJ:93:GLY:HA2	2.22	0.70
1:XA:910:C:OP2	12:XL:21:LYS:NZ	2.20	0.70
1:XA:1111:A:H2'	3:XC:179:ARG:HH22	1.56	0.70
10:XJ:24:VAL:HG21	10:XJ:37:PRO:HG3	1.74	0.70
30:Y6:6:ARG:NH1	34:YA:2285:C:OP2	2.24	0.70
1:QA:186(K):G:H1	1:QA:264:U:H5''	1.56	0.70
1:QA:949:A:OP1	13:QM:101:GLN:CA	2.37	0.70
1:QA:975:A:H2	14:QN:34:TYR:CD1	2.08	0.70
1:QA:1186:G:N2	14:QN:61:TRP:C	2.35	0.70
1:QA:1309:G:H5''	13:QM:77:ASN:HD22	1.51	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:685:A:H5''	34:YA:788:A:H62	1.56	0.70
34:YA:2045:C:N3	34:YA:2624:G:N1	2.39	0.70
1:QA:1106:G:O4'	3:QC:172:ARG:CZ	2.40	0.69
1:QA:1307:U:H5''	13:QM:99:ARG:HG2	1.74	0.69
1:QA:1360:A:N6	14:QN:18:VAL:HG21	2.07	0.69
34:RA:685:A:H5''	34:RA:788:A:H62	1.56	0.69
1:XA:1059:C:O2'	10:XJ:53:PRO:HD3	1.91	0.69
3:XC:23:TYR:CD2	10:XJ:95:GLU:CB	2.75	0.69
3:XC:23:TYR:N	10:XJ:93:GLY:HA2	2.06	0.69
34:YA:2046:G:N2	34:YA:2623:G:C4	2.60	0.69
1:QA:583:A:H4'	17:QQ:91:ARG:CD	2.22	0.69
1:QA:1320:C:N3	19:QS:37:ARG:CA	2.48	0.69
35:RB:37:C:O2	47:RS:95:HIS:NE2	2.25	0.69
1:QA:1320:C:H42	19:QS:37:ARG:HG2	0.62	0.69
1:QA:1376:U:C5	7:QG:10:ARG:NH1	2.61	0.69
2:QB:54:THR:HG22	2:QB:199:TYR:HB3	1.74	0.69
4:QD:57:ARG:NH2	5:QE:107:ARG:HH11	1.91	0.69
4:QD:195:ALA:O	6:XF:17:SER:HA	1.93	0.69
1:XA:991:U:H3'	1:XA:1212:U:H3	1.58	0.69
1:XA:1059:C:C5	3:XC:2:GLY:CA	2.75	0.69
1:XA:1318:A:C8	14:XN:16:PHE:CE1	2.79	0.69
34:YA:2080:G:N2	34:YA:2241:A:C4	2.61	0.69
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:YN: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:413:G:H21	1:QA:428:G:H1'	1.57	0.69
1:QA:1014:A:OP1	19:QS:32:LYS:HE2	1.92	0.69
1:QA:1229:A:N1	13:QM:104:ARG:CZ	2.55	0.69
12:QL:104:VAL:O	12:QL:105:TYR:HD2	1.68	0.69
24:R0:74:ARG:NH2	34:RA:2334:G:O6	2.26	0.69
1:QA:838(B):U:H4'	1:QA:838(C):C:C5	2.28	0.69
1:QA:956:U:O2'	19:QS:80:TYR:CD1	2.46	0.69
1:QA:1160:G:C4'	2:QB:132:LYS:HE2	2.22	0.69
1:QA:1313:U:C6	19:QS:6:LYS:NZ	2.60	0.69
1:QA:1329:A:N6	21:QU:7:ARG:NH2	2.41	0.69
4:QD:61:LYS:CE	4:QD:206:PHE:CE2	2.75	0.69
10:QJ:50:ILE:HG13	14:QN:41:ARG:CD	1.97	0.69
13:QM:86:CYS:HB2	19:QS:69:HIS:ND1	2.07	0.69
1:XA:51:A:C6	1:XA:353:A:C2	2.81	0.69
1:XA:1152:A:C5'	10:XJ:13:HIS:CD2	2.76	0.69
34:YA:747:U:O4	34:YA:2613:U:C2	2.46	0.69
1:QA:186(K):G:N7	17:QQ:63:ARG:NH1	2.41	0.69
1:QA:972:C:O5'	10:QJ:57:LYS:HB2	1.92	0.69
1:QA:1229:A:P	13:QM:108:ARG:HH22	2.10	0.69
34:RA:2453:A:H2'	34:RA:2454:G:H8	1.57	0.69
34:YA:2098:U:H1'	34:YA:2192:G:N2	2.08	0.69
36:YD:35:LYS:HB2	36:YD:63:ARG:HA	1.76	0.69
1:QA:1236:A:C5'	21:QU:10:ARG:HH11	2.03	0.68
4:QD:196:LEU:HA	6:XF:16:GLN:HB3	1.73	0.68
10:QJ:47:PHE:CE2	14:QN:37:PHE:CD2	2.82	0.68
36:RD:8:PRO:HB3	36:RD:14:ARG:HB3	1.75	0.68
1:XA:1228:C:C6	13:XM:104:ARG:CA	2.71	0.68
34:RA:859:G:H21	34:RA:2268:A:H2	1.41	0.68
3:XC:43:LEU:O	3:XC:47:LEU:HB2	1.94	0.68

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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:XM: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:975:A:H3'	14:QN:32:SER:HA	1.76	0.68
1:QA:976:G:P	14:QN:32:SER:H	2.17	0.68
1:QA:1359:C:P	14:QN:22:THR:CG2	2.82	0.68
10:QJ:47:PHE:CZ	14:QN:36:PHE:HB2	2.24	0.68
34:YA:1204:A:H2	34:YA:1241:A:H61	1.42	0.68
1:QA:958:A:H1'	19:QS:55:LYS:CD	2.10	0.68
7:QG:16:LEU:HD23	9:QI:42:ARG:HG2	1.66	0.68
34:YA:2097:C:O2	34:YA:2192:G:N1	2.24	0.68
34:YA:2229:C:H2'	34:YA:2230:G:H8	1.58	0.68
1:QA:947:G:OP1	13:QM:108:ARG:HB2	1.94	0.67
1:QA:1359:C:C5	14:QN:35:ARG:CZ	2.77	0.67
38:RF:154:VAL:HG12	38:RF:191:ARG:HB2	1.77	0.67
1:XA:62:U:H1'	1:XA:379:C:H1'	1.76	0.67
1:XA:254:G:H5'	17:XQ:66:SER:OG	1.94	0.67
1:XA:539:A:P	12:XL:114:LYS:HD2	2.34	0.67
1:XA:1316:G:O4'	14:XM:17:LYS:NZ	2.20	0.67
1:XA:1358:U:O3'	14:XM: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:754:C:H6	15:XO:69:TYR:CZ	2.12	0.67
1:XA:979:C:N4	14:YN:18:VAL:HG23	2.08	0.67
34:YA:270(P):U:O4	41:YI:52:ARG:CZ	2.42	0.67
34:YA:1566:A:N3	36:YD:214:TRP:CD2	2.60	0.67
1:QA:675:A:O2'	11:QK:116:HIS:N	2.27	0.67
1:QA:1253:G:OP2	10:QJ:44:VAL:HG23	1.94	0.67
10:QJ:47:PHE:CE2	14:QN:34:TYR:HB3	2.29	0.67
12:QL:7:ILE:HD13	17:QQ:32:TYR:HD1	1.59	0.67
1:XA:107:G:H3'	1:XA:108:G:H21	1.59	0.67
1:XA:1318:A:C8	14:YN:16:PHE:HE1	2.11	0.67
31:Y7:37:LYS:HE2	34:YA:458:G:C4	2.28	0.67
1:QA:1203:C:OP2	14:QN:3:ARG:CD	2.42	0.67
1:QA:1253:G:OP1	10:QJ:44:VAL:CG1	2.42	0.67
4:QD:3:ARG:HH22	4:QD:100:ARG:HH22	1.42	0.67
34:RA:1614:A:N6	51:RW:91:GLY:HA2	2.09	0.67
34:RA:1700:A:H3'	34:RA:1701:A:H8	1.60	0.67
6:XF:89:MET:CE	18:XR:76:LEU:HD13	2.25	0.67
10:XJ:50:ILE:HD11	14:YN:41:ARG:CZ	2.24	0.67
21:XU:3:LYS:HG2	21:XU:14:TRP:HB2	1.76	0.67
42:YN:131:GLN:OE1	42:YN:134:ARG:NH2	2.27	0.67
34:RA:1649:G:O2'	46:RR:107:ASP:OD1	2.04	0.67
34:RA:2429:G:N7	44:RP:56:SER:OG	2.27	0.67
1:XA:974:A:H5'	14:YN:31:ARG:HB3	1.73	0.67
1:XA:1059:C:C5	3:XC:2:GLY:HA3	2.30	0.67
1:XA:1255:G:H1	1:XA:1282:C:H42	1.43	0.67
1:QA:186(K):G:C8	17:QQ:63:ARG:NH2	2.57	0.67
1:QA:1314:C:H5	19:QS:6:LYS:HE3	1.58	0.67
2:QB:178:ARG:O	8:QH:71:GLY:HA2	1.95	0.67
3:QC:23:TYR:CA	10:QJ:93:GLY:O	2.43	0.67
5:QE:139:LEU:HA	5:QE:142:LEU:HD12	1.77	0.67
10:QJ:47:PHE:CZ	14:QN:37:PHE:CD2	2.82	0.67
41:RI:92:VAL:HB	41:RI:120:ILE:HG21	1.74	0.67
54:RZ:52:SER:O	54:RZ:54:HIS:N	2.28	0.67
1:XA:373:A:O2'	1:XA:451:A:N6	2.26	0.67
1:XA:936:C:H2'	1:XA:937:A:H8	1.59	0.67
1:XA:1319:A:OP2	19:XS:3:ARG:CZ	2.42	0.67
6:XF:99:ALA:H	18:XR:29:PHE:H	1.41	0.67

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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:974:A:OP1	14:QN:29:ARG:HD2	1.95	0.67
1:QA:1230:C:H42	13:QM:104:ARG:HD3	1.55	0.67
1:QA:1541:U:OP2	2:QB:23:ARG:NH2	2.28	0.67
40:RH:101:ARG:HH12	40:RH:123:PHE:H	1.43	0.67
1:XA:1360:A:H1'	14:YN:17:LYS:CG	2.25	0.67
34:YA:1248:G:C2	49:YU:3:ARG:HD2	2.30	0.67
1:XA:421:U:O4'	3:XC:192:THR:CG2	2.30	0.67
1:XA:974:A:OP1	14:YN:31:ARG:HD2	1.95	0.67
1:XA:1160:G:O4'	2:XB:132:LYS:CE	2.41	0.67
7:XG:16:LEU:HD22	9:XI:45:ALA:HB2	1.75	0.67
1:QA:1106:G:C4'	3:QC:172:ARG:NE	2.57	0.66
1:QA:1158:C:C4'	2:QB:133:LYS:HZ1	1.98	0.66
1:QA:1373:G:P	9:QI:11:LYS:NZ	2.68	0.66
4:QD:31:CYS:SG	4:QD:33:MET:HB2	2.35	0.66
14:QN:24:CYS:SG	14:QN:40:CYS:CA	2.81	0.66
1:XA:1320:C:H1'	19:XS:70:LYS:HD3	1.60	0.66
6:XF:94:GLN:CD	18:XR:32:ARG:HH11	1.99	0.66
28:Y4:7:PRO:HG3	39:YG:62:LEU:HA	1.77	0.66
34:YA:94:G:O6	55:YA:3185:MG:MG	1.37	0.66
53:YY:79:CYS:SG	57:YY:201:ZN:ZN	1.84	0.66
1:QA:1160:G:C4'	2:QB:132:LYS:CE	2.72	0.66
1:QA:1484:C:HO2'	34:RA:1960:A:HO2'	1.42	0.66
25:R1:78:LYS:HZ3	34:RA:270(T):G:H1'	1.60	0.66
32:R8:39:LYS:NZ	34:RA:2365:G:O6	2.20	0.66
10:XJ:50:ILE:HD11	14:YN:41:ARG:NH1	2.10	0.66
34:YA:410:G:N2	34:YA:2407:G:C5	2.63	0.66
1:QA:625:G:O2'	16:QP:16:HIS:ND1	2.27	0.66
1:QA:981:U:H5''	14:QN:6:LEU:HD21	1.77	0.66
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:186(B):C:C2	20:XT:105:SER:HB2	2.30	0.66
1:XA:664:G:N2	1:XA:726:C:O2'	2.25	0.66
24:Y0:33:ALA:O	34:YA:2353:G:O2'	2.12	0.66
1:QA:1360:A:C4'	14:QN:17:LYS:NZ	2.56	0.66
34:RA:379:G:H1	34:RA:395:U:H3	1.44	0.66
34:RA:2440:C:H5''	34:RA:2587:A:H4'	1.77	0.66
35:RB:116:G:H4'	47:RS:54:LEU:HD22	1.76	0.66
1:XA:1059:C:H5	3:XC:2:GLY:CA	2.08	0.66
10:XJ:37:PRO:HG2	10:XJ:37:PRO:O	1.96	0.66
34:YA:1044:G:O2'	34:YA:1047:G:O2'	2.13	0.66
1:XA:1253:G:C6	1:XA:1254:C:N4	2.64	0.66
3:XC:60:ALA:HB1	10:XJ:91:PRO:HG2	1.78	0.66
1:QA:310:G:P	16:QP:27:LYS:CD	2.67	0.66
1:QA:972:C:OP2	10:QJ:57:LYS:CD	2.44	0.66
1:QA:980:C:C6	14:QN:19:ARG:CG	2.68	0.66
1:XA:702:A:C6	34:YA:1848:A:C2	2.83	0.66
1:XA:749:C:H2'	1:XA:750:G:H8	1.59	0.66
1:XA:1301:U:O3'	13:XM:17:VAL:HG23	1.96	0.66
2:XB:185:ILE:HG22	2:XB:199:TYR:HB2	1.78	0.66
9:XI:18:PHE:HB3	9:XI:20:ARG:HH12	1.60	0.66
10:XJ:16:LEU:HB3	10:XJ:70:ARG:HH12	1.60	0.66
32:Y8:42:ARG:NH1	34:YA:2349:G:OP2	2.28	0.66
34:YA:886:C:O2'	34:YA:889:C:N4	2.26	0.66
1:QA:1010:G:H2'	1:QA:1011:G:H8	1.59	0.66
1:XA:1059:C:C5	3:XC:2:GLY:HA2	2.31	0.66
3:XC:23:TYR:CE2	10:XJ:95:GLU:CB	2.77	0.66
34:YA:2056:G:O6	34:YA:2577:A:C8	2.49	0.66
34:YA:2343:C:O2'	34:YA:2373:G:O2'	2.14	0.66
1:QA:1240:U:O2	7:QG:38:LEU:HA	1.95	0.66
34:RA:248:G:C4	34:RA:2431:U:H4'	2.31	0.66
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
1:XA:974:A:C8	14:YN:31:ARG:HD2	2.30	0.66
6:XF:100:ASN:CB	18:XR:27:GLY:C	2.64	0.66
34:YA:199:A:C6	34:YA:2434:A:C2	2.83	0.66
34:YA:2051:A:C2	34:YA:2614:A:C4	2.84	0.66
40:YH:84:SER:HB2	40:YH:132:ARG:HD2	1.78	0.66
1:QA:1060:C:H4'	10:QJ:52:GLY:HA2	1.77	0.65
1:QA:1099:G:OP2	2:QB:96:ARG:HD3	1.93	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1317:C:OP1	14:QN:16:PHE:CE2	2.47	0.65
1:QA:1541:U:OP2	2:QB:23:ARG:CZ	2.44	0.65
2:QB:167:PRO:O	2:QB:171:ALA:HB2	1.96	0.65
2:QB:181:PHE:CD2	8:QH:70:GLN:HG2	2.31	0.65
34:RA:1333:C:H2'	34:RA:1334:G:H8	1.61	0.65
51:RW:88:ARG:HB2	51:RW:92:ARG:HB3	1.77	0.65
1:XA:6:G:H4'	1:XA:298:A:H4'	1.78	0.65
1:XA:186(B):C:O2	20:XT:105:SER:N	2.29	0.65
1:XA:1227:A:OP1	13:XM:96:LEU:CD2	2.40	0.65
3:XC:60:ALA:CB	10:XJ:91:PRO:HD2	2.26	0.65
1:QA:1307:U:C5'	13:QM:99:ARG:HG2	2.26	0.65
41:RI:83:ALA:O	41:RI:89:TYR:CE2	2.48	0.65
1:XA:658:G:H1'	15:XO:22:THR:CG2	2.26	0.65
34:YA:184:C:H1'	34:YA:217:G:H1'	1.78	0.65
1:QA:192:U:H2'	1:QA:193:C:H6	1.62	0.65
1:QA:740:U:O3'	15:QO:39:LEU:HD12	1.96	0.65
1:QA:1377:A:O2'	1:QA:1379:G:O6	2.12	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:XN:3:ARG:HB3	14:XN:3:ARG:CZ	2.26	0.65
34:YA:1216:G:OP1	49:YU:11:ARG:NH2	2.26	0.65
34:YA:2150:U:H2'	34:YA:2151:G:C8	2.31	0.65
3:XC:23:TYR:HB2	10:XJ:93:GLY:O	1.97	0.65
35:YB:90:C:OP2	45:YQ:16:ARG:NH1	2.30	0.65
1:QA:607:A:N1	16:QP:31:LYS:CA	2.54	0.65
29:R5:3:LYS:O	34:RA:2056:G:N2	2.19	0.65
38:RF:147:GLY:O	38:RF:191:ARG:NH1	2.29	0.65
1:XA:1305:G:H21	1:XA:1331:G:H3'	1.59	0.65
1:XA:1329:A:N7	21:XU:7:ARG:NH2	2.45	0.65
1:XA:1375:A:H3'	1:XA:1376:U:H6	1.60	0.65
1:XA:1422:G:H5'	43:YO:48:PRO:HG3	1.78	0.65
10:XJ:62:HIS:CD2	14:XN:59:ALA:HB1	2.31	0.65
34:YA:1088:A:H4'	34:YA:1089:G:H8	1.61	0.65
34:RA:445:C:OP1	49:RU:2:PRO:HA	1.96	0.65
34:RA:1044:G:O2'	34:RA:1047:G:O2'	2.15	0.65
34:RA:2483:C:N3	45:RQ:124:LYS:NZ	2.44	0.65
40:RH:89:ILE:HD11	40:RH:131:VAL:HG22	1.76	0.65
1:XA:1202:G:O2'	14:XN:28:GLY:O	2.14	0.65
1:XA:1278:U:H4'	1:XA:1279:A:C5	2.32	0.65
8:XH:14:ARG:HB3	8:XH:83:ILE:HD11	1.78	0.65

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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:634:C:H2'	1:QA:635:G:C8	2.32	0.65
1:QA:1314:C:OP2	19:QS:6:LYS:NZ	2.24	0.65
1:QA:1318:A:N6	14:QN:16:PHE:HB3	2.11	0.65
34:RA:1152:C:H2'	34:RA:1153:C:H6	1.61	0.65
50:RV:62:LEU:HD11	50:RV:95:LEU:HB2	1.77	0.65
1:XA:636:U:H3'	1:XA:637:G:H8	1.62	0.65
1:XA:1238:A:H2'	1:XA:1239:A:C8	2.32	0.65
1:XA:1463:C:H4'	48:YT:112:ARG:HH21	1.62	0.65
29:Y5:52:TYR:OH	34:YA:2883:A:OP1	2.06	0.65
34:YA:2080:G:C2	34:YA:2241:A:N3	2.64	0.65
1:QA:1014:A:C8	19:QS:34:TRP:CE2	2.76	0.65
1:QA:1220:G:H21	19:QS:54:GLY:HA3	1.61	0.65
1:XA:376:G:H4'	16:XP:5:ARG:HH11	1.61	0.65
1:XA:1150:U:H2'	1:XA:1151:A:C8	2.32	0.65
1:XA:1377:A:C6	7:XG:10:ARG:HD2	2.32	0.65
34:YA:2238:G:OP1	34:YA:2238:G:N2	2.30	0.65
47:YS:106:ARG:HB2	47:YS:110:LEU:HD23	1.78	0.65
1:QA:1307:U:H3'	13:QM:99:ARG:NH2	2.11	0.65
3:QC:79:ARG:HH21	11:XK:105:VAL:H	1.44	0.65
54:RZ:10:ARG:HD2	54:RZ:38:TYR:HB3	1.79	0.65
1:XA:1253:G:C2	1:XA:1254:C:C4	2.85	0.65
1:XA:1253:G:N1	1:XA:1254:C:C4	2.65	0.65
6:XF:99:ALA:CB	18:XR:29:PHE:CD1	2.75	0.65
10:XJ:62:HIS:HD2	14:YN:59:ALA:HB1	1.62	0.65
11:XK:91:ARG:CG	18:XR:88:LYS:HZ1	2.09	0.65
34:YA:2049:G:N2	34:YA:2620:C:N3	2.44	0.65
1:QA:876:G:C1'	8:QH:11:THR:HG21	2.24	0.65
1:QA:1221:G:H5'	19:QS:36:ARG:NH2	2.08	0.65
1:QA:1299:A:H2'	1:QA:1301:U:H1'	1.79	0.65
1:QA:1541:U:OP1	2:QB:23:ARG:NH2	2.29	0.65
4:QD:121:VAL:HG22	4:QD:126:ILE:HG13	1.79	0.65
37:RE:75:VAL:HG23	37:RE:76:ARG:HG2	1.79	0.65
1:XA:1123:A:H4'	10:XJ:37:PRO:HD2	1.79	0.65
34:YA:1566:A:C2	36:YD:214:TRP:NE1	2.65	0.65
1:QA:981:U:H5''	1:QA:982:U:H2'	1.77	0.64
1:QA:1203:C:OP2	14:QN:3:ARG:HD2	1.96	0.64
2:QB:177:ALA:HB1	2:QB:182:ILE:HB	1.78	0.64
7:QG:16:LEU:HD22	9:QI:42:ARG:HA	1.78	0.64
1:XA:412:A:N3	4:XD:35:ARG:HD3	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1124:G:C4'	10:XJ:36:GLY:H	2.05	0.64
4:XD:20:TYR:HA	4:XD:26:CYS:SG	2.37	0.64
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:YN: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:585:G:OP1	17:XQ:37:LYS:HE2	1.98	0.64
1:XA:1286:A:N6	1:XA:1355:G:OP1	2.30	0.64
1:XA:1319:A:OP2	19:XS:3:ARG:CD	2.46	0.64
34:YA:788:A:OP1	34:YA:791:C:N4	2.28	0.64
34:YA:2402:C:H1'	34:YA:2403:C:H5	1.63	0.64
1:QA:237:C:H2'	1:QA:238:G:H8	1.62	0.64
1:QA:979:C:O2	14:QN:19:ARG:NH1	2.30	0.64
1:QA:1378:C:P	7:QG:7:ALA:CB	2.75	0.64
2:QB:178:ARG:O	8:QH:71:GLY:CA	2.45	0.64
7:QG:16:LEU:CD2	9:QI:42:ARG:CB	2.75	0.64
41:RI:92:VAL:HB	41:RI:120:ILE:HB	1.80	0.64
1:XA:406:G:H2'	1:XA:407:G:H8	1.63	0.64
1:XA:1059:C:OP2	3:XC:3:ASN:N	2.29	0.64
1:XA:1239:A:N1	1:XA:1297:C:H1'	2.12	0.64
1:XA:1359:C:C5	14:YN:35:ARG:HD3	2.33	0.64
9:XI:17:VAL:HG12	9:XI:63:ILE:HD12	1.80	0.64
34:YA:1448:G:O2'	34:YA:1528:A:N6	2.31	0.64
1:QA:1249:C:N4	1:QA:1288:A:OP2	2.30	0.64
1:QA:1368:G:O3'	10:QJ:46:ARG:NH2	2.30	0.64
6:XF: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)
1:XA:657:G:H21	15:XO:22:THR:HG23	1.63	0.64
7:XG:16:LEU:CD2	9:XI:44:VAL:CG2	2.65	0.64
34:YA:2291:U:H1'	34:YA:2374:C:H1'	1.80	0.64
1:QA:1048:G:OP1	14:QN:4:LYS:HE3	1.98	0.64
1:QA:1221:G:O2'	19:QS:77:THR:CB	2.44	0.64
1:QA:1229:A:N6	13:QM:104:ARG:CD	2.61	0.64
4:QD:20:TYR:CG	6:XF:15:ASP:HB3	2.33	0.64
10:XJ:62:HIS:CE1	14:YN:61:TRP:HE3	2.16	0.64
22:XV:8:U:O4	22:XV:14:A:N7	2.31	0.64
22:XV:65:U:H2'	22:XV:66:A:H8	1.62	0.64
1:QA:666:G:H5'	1:QA:726:C:H1'	1.80	0.64
1:QA:1236:A:P	21:QU:10:ARG:HH11	2.20	0.64
1:QA:1320:C:N4	19:QS:37:ARG:CB	2.61	0.64
1:QA:1320:C:C5'	19:QS:70:LYS:HG3	2.27	0.64
1:XA:824:C:H2'	1:XA:825:G:C8	2.33	0.64
34:YA:1226:G:OP1	50:YV:69:LYS:NZ	2.26	0.64
34:YA:2377:A:O2'	47:YS:111:GLU:O	2.14	0.64
1:QA:1125:U:C4	10:QJ:73:ASP:OD1	2.51	0.63
4:QD:18:LYS:HG3	4:QD:33:MET:HG3	1.78	0.63
13:QM:86:CYS:HB2	19:QS:69:HIS:HE1	1.61	0.63
34:RA:2789:C:H1'	34:RA:2892:A:C2	2.33	0.63
36:RD:60:ARG:HD3	36:RD:86:PRO:HB2	1.80	0.63
40:RH:6:ARG:HH22	40:RH:54:ARG:HD3	1.62	0.63
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:675:A:H1'	11:QK:116:HIS:HB2	1.80	0.63
1:QA:986:A:H1'	19:QS:54:GLY:C	2.17	0.63
1:QA:1141:C:H2'	1:QA:1142:G:H8	1.63	0.63
1:QA:1229:A:C6	13:QM:104:ARG:CZ	2.79	0.63
1:QA:1251:A:O2'	1:QA:1369:C:O3'	2.16	0.63
1:QA:1342:C:H2'	1:QA:1343:G:H8	1.63	0.63
33:R9:23:VAL:HG21	34:RA:1032:A:C1'	2.24	0.63
34:RA:2250:G:C6	45:RQ:82:ARG:HD2	2.32	0.63
40:RH:78:GLY:HA2	40:RH:82:GLY:HA3	1.79	0.63
41:RI:84:GLY:HA3	41:RI:89:TYR:CZ	2.33	0.63
45:RQ:81:VAL:HG12	45:RQ:82:ARG:HG2	1.80	0.63
1:XA:718:G:O4'	11:XK:117:ASN:HB2	1.98	0.63
2:XB:54:THR:HG22	2:XB:199:TYR:HB3	1.81	0.63
3:XC:60:ALA:HB1	10:XJ:91:PRO:CG	2.29	0.63

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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:186(B):C:C1'	20:QT:85:MET:HE2	2.29	0.63
1:QA:564:C:H5'	17:QQ:32:TYR:CE1	2.33	0.63
1:QA:975:A:H3'	14:QN:32:SER:CA	2.28	0.63
32:R8:35:GLN:HE22	32:R8:36:LYS:HE2	1.62	0.63
54:RZ:52:SER:O	54:RZ:54:HIS:ND1	2.32	0.63
1:XA:1228:C:P	13:XM:108:ARG:NH2	2.72	0.63
1:XA:1532:U:H2'	1:XA:1534:A:H2	1.64	0.63
6:XF:91:VAL:HG11	18:XR:34:TYR:HE1	1.63	0.63
34:YA:2250:G:O2'	34:YA:2496:C:OP1	2.16	0.63
1:QA:1005:A:H4'	1:QA:1037:C:H1'	1.79	0.63
5:QE:140:ARG:O	5:QE:143:ARG:NH1	2.32	0.63
34:RA:23:G:N2	51:RW:77:ASP:OD1	2.30	0.63
34:RA:1566:A:C2	36:RD:214:TRP:CE2	2.86	0.63
1:XA:8:A:N1	4:XD:209:ARG:CZ	2.61	0.63
1:XA:662:G:H2'	1:XA:663:A:C8	2.33	0.63
1:XA:728:A:C6	15:XO:54:ARG:HD2	2.34	0.63
1:XA:1004:A:N1	1:XA:1025:U:H4'	2.12	0.63
1:XA:1318:A:H62	14:XN:16:PHE:HB3	1.62	0.63
32:Y8:22:VAL:HB	32:Y8:53:PRO:HB3	1.80	0.63
34:YA:784:A:N6	34:YA:2072:G:O2'	2.32	0.63
34:YA:1853:A:N3	34:YA:2233:U:O2'	2.29	0.63
1:QA:109:A:H62	1:QA:324:G:H21	1.45	0.63
1:QA:741:G:O5'	15:QO:39:LEU:CD1	2.46	0.63
1:QA:766:A:H61	1:QA:1511:G:H1'	1.62	0.63
1:QA:948:C:OP1	13:QM:106:ASN:O	2.15	0.63
1:QA:974:A:OP1	14:QN:29:ARG:NE	2.30	0.63
21:QU:12:LYS:HB3	21:QU:22:ARG:HD2	1.81	0.63
1:XA:1005:A:H4'	1:XA:1037:C:H1'	1.81	0.63
17:XQ:29:HIS:HB3	17:XQ:33:GLY:H	1.64	0.63
44:YP:4:SER:O	44:YP:7:ARG:NH2	2.32	0.63
34:RA:508:G:O6	51:RW:9:TYR:CD1	2.52	0.63
34:RA:581:C:H2'	34:RA:582:G:C8	2.34	0.63
1:XA:865:A:N3	1:XA:918:A:O2'	2.30	0.63
1:XA:1071:C:OP1	5:XE:27:ARG:NH2	2.31	0.63
1:XA:1106:G:H4'	3:XC:172:ARG:HG2	1.80	0.63
1:XA:1240:U:H1'	7:XG:38:LEU:CG	2.22	0.63
1:QA:54:C:H42	1:QA:357:G:H1	1.46	0.63
1:QA:948:C:OP2	13:QM:106:ASN:HB2	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1313:U:H3'	19:QS:6:LYS:HZ2	0.80	0.63
3:QC:79:ARG:NH2	11:XK:105:VAL:N	2.46	0.63
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
34:YA:392:C:H5''	34:YA:409:C:H5''	1.80	0.63
1:QA:1186:G:N2	14:QN:61:TRP:HA	2.13	0.63
1:QA:1318:A:C6	14:QN:16:PHE:CD1	2.87	0.63
3:QC:23:TYR:HB2	10:QJ:94:VAL:CA	2.28	0.63
37:RE:109:LYS:HE3	37:RE:191:PRO:HA	1.79	0.63
11:XK:110:ASP:CA	18:XR:85:LEU:O	2.46	0.63
34:YA:197:A:N9	34:YA:2430:A:H2	1.96	0.63
1:QA:194:C:H4'	20:QT:68:LYS:HE2	1.79	0.63
1:QA:953:G:O6	13:QM:104:ARG:NH1	2.32	0.63
1:QA:1126:U:O2	10:QJ:38:ILE:HD12	1.98	0.63
15:QO:89:GLY:C	34:RA:716:A:OP1	2.36	0.63
34:RA:2250:G:N3	45:RQ:82:ARG:HG3	2.14	0.63
1:XA:373:A:O2'	1:XA:451:A:N7	2.32	0.63
1:XA:1226:C:OP1	13:XM:91:ARG:NH1	2.31	0.63
34:YA:2099:U:N3	34:YA:2190:G:N1	1.97	0.63
34:YA:2118:U:H3	34:YA:2148:G:H4'	1.64	0.63
1:QA:186(B):C:H5'	20:QT:82:SER:HA	1.81	0.62
1:QA:667:G:N3	15:QO:49:ASP:OD1	2.32	0.62
1:QA:677:U:H3	1:QA:713:G:H1	1.47	0.62
1:QA:953:G:C6	13:QM:104:ARG:NH1	2.67	0.62
2:QB:195:ASP:O	8:QH:68:ARG:NH2	2.32	0.62
34:RA:137(B):G:N3	52:RX:41:ASN:ND2	2.47	0.62
1:XA:1198:G:H2'	1:XA:1199:U:C6	2.34	0.62
1:XA:1305:G:C2	1:XA:1331:G:N7	2.67	0.62
4:XD:8:VAL:HA	4:XD:11:LEU:HD13	1.81	0.62
34:YA:2054:A:N6	34:YA:2577:A:H61	1.87	0.62
1:QA:9:G:C5'	5:QE:122:GLU:OE2	2.47	0.62
1:QA:62:U:H1'	1:QA:379:C:H1'	1.80	0.62
1:QA:1229:A:P	13:QM:108:ARG:HH21	2.21	0.62
1:QA:1320:C:H5'	19:QS:70:LYS:HG3	1.80	0.62
10:QJ:53:PRO:HA	14:QN:42:ILE:HD11	1.81	0.62
1:XA:51:A:N3	1:XA:353:A:N6	2.48	0.62
34:YA:67:U:H3	34:YA:74:A:H2	1.46	0.62
1:QA:740:U:O3'	15:QO:39:LEU:CD1	2.46	0.62
34:RA:229:A:H4'	34:RA:230:U:H5'	1.81	0.62

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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:346:G:OP1	48:YT:41:ARG:NH2	2.31	0.62
1:XA:1229:A:N6	13:XM:104:ARG:CD	2.62	0.62
6:XF:99:ALA:N	18:XR:29:PHE:O	2.32	0.62
1:QA:1246:C:N4	21:QU:26:LYS:HB2	2.12	0.62
1:QA:1313:U:C5	19:QS:4:SER:CB	2.81	0.62
1:XA:740:U:OP1	15:XO:2:PRO:HA	2.00	0.62
11:XK:116:HIS:CD2	18:XR:81:PHE:HB3	2.34	0.62
24:Y0:72:ARG:HE	24:Y0:75:LEU:HD12	1.64	0.62
54:YZ:52:SER:O	54:YZ:54:HIS:N	2.32	0.62
1:QA:1188:A:C3'	14:QN:58:LYS:HZ2	2.12	0.62
3:QC:79:ARG:HH21	11:XK:105:VAL:N	1.98	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
25:Y1:45:ASN:HA	34:YA:2230:G:H1'	1.80	0.62
1:QA:359:U:H2'	1:QA:360:A:H8	1.64	0.62
53:RY:99:CYS:CB	53:RY:103:GLY:H	2.12	0.62
1:XA:619:U:C5'	4:XD:131:ARG:HH21	2.12	0.62
1:XA:979:C:N3	14:YN:19:ARG:NE	2.26	0.62
1:XA:1124:G:O5'	10:XJ:36:GLY:N	2.33	0.62
34:YA:2072:G:C2	34:YA:2438:U:O2	2.53	0.62
34:YA:2787:C:H1'	37:YE:62:PRO:HG3	1.80	0.62
34:YA:2848:G:O2'	34:YA:2867:G:N2	2.32	0.62
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:YN:61:TRP:CE3	2.87	0.62
34:YA:629:G:N3	34:YA:639:U:O2'	2.30	0.62
34:YA:2051:A:C2	34:YA:2614:A:C5	2.88	0.62
1:QA:658:G:H2'	1:QA:659:U:C6	2.35	0.62
1:QA:989:C:H2'	1:QA:990:C:C6	2.35	0.62
1:QA:1114:C:O2	14:QN:60:SER:O	2.18	0.62
1:QA:1364:U:O4'	21:QU:14:TRP:HZ2	1.83	0.62
34:RA:71:A:H5''	34:RA:72:U:H3'	1.81	0.62
1:XA:1228:C:OP1	13:XM:108:ARG:NH1	2.32	0.62
32:Y8:11:LYS:HB3	32:Y8:60:LEU:HD11	1.81	0.62
32:R8:42:ARG:HD2	34:RA:2350:C:O5'	2.00	0.62
34:RA:820:A:H1'	34:RA:943:U:H1'	1.81	0.62

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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:2630:G:H21	34:RA:2892:A:H1'	1.65	0.62
34:RA:2751:G:N1	40:RH:3:ARG:HB2	2.15	0.62
32:Y8:25:MET:HG2	44:YP:65:ARG:HH12	1.64	0.62
34:YA:2054:A:H2	34:YA:2616:C:O2	1.82	0.62
36:YD:264:LYS:HG2	36:YD:266:SER:H	1.64	0.62
34:RA:749:C:H5'	34:RA:1271:G:H1'	1.81	0.61
47:RS:83:LYS:HG3	47:RS:84:GLN:HG3	1.81	0.61
54:RZ:72:ARG:NH2	54:RZ:97:GLU:O	2.33	0.61
6:XF:99:ALA:CB	18:XR:29:PHE:CE1	2.83	0.61
1:QA:625:G:O2'	16:QP:16:HIS:CG	2.53	0.61
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
1:QA:1221:G:H5'	19:QS:36:ARG:NH1	2.14	0.61
16:QP:53:VAL:HG12	16:QP:79:VAL:HG12	1.82	0.61
27:R3:12:PRO:HB2	27:R3:20:LYS:HD3	1.82	0.61
37:RE:141:ILE:O	37:RE:154:LYS:NZ	2.33	0.61
11:XK:110:ASP:O	18:XR:84:LYS:HB2	2.01	0.61
34:YA:300:A:OP1	53:YY:86:ARG:NH2	2.33	0.61
34:YA:2056:G:N7	34:YA:2577:A:C5	2.67	0.61
38:YF:160:ASN:HB3	38:YF:163:VAL:HG12	1.81	0.61
1:QA:69:G:H1'	1:QA:152:A:H2	1.66	0.61
1:QA:976:G:H21	1:QA:1362(B):C:H2'	1.66	0.61
34:RA:1041:C:H2'	34:RA:1042:G:H8	1.64	0.61
44:RP:47:ASP:OD2	44:RP:50:ARG:NH2	2.33	0.61
1:XA:1187:G:N2	14:YN:60:SER:OG	2.33	0.61
21:XU:3:LYS:HG2	21:XU:14:TRP:CG	2.36	0.61
34:YA:17:G:H21	34:YA:554:U:H5'	1.64	0.61
34:YA:2822:G:O2'	34:YA:2825:C:N4	2.34	0.61
50:YV:72:VAL:HB	50:YV:85:LYS:HB3	1.82	0.61
1:QA:538:G:C5'	12:QL:115:LYS:HG2	2.27	0.61
1:QA:856:C:H2'	1:QA:857:C:H6	1.64	0.61
7:QG:118:VAL:O	7:QG:122:HIS:ND1	2.32	0.61
10:QJ:47:PHE:CE1	14:QN:37:PHE:CE2	2.88	0.61

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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:O5'	1:XA:355:C:H6	1.84	0.61
10:XJ:7:LYS:HE2	10:XJ:9:ARG:HG3	1.83	0.61
16:XP:6:LEU:HB2	16:XP:17:TYR:HB3	1.82	0.61
34:YA:2820:A:H1'	46:YR:3:HIS:ND1	2.15	0.61
1:QA:311:C:OP1	16:QP:26:ARG:NH1	2.33	0.61
1:QA:609:A:H5'	16:QP:9:PHE:HE1	1.64	0.61
10:QJ:49:VAL:HA	14:QN:34:TYR:OH	2.01	0.61
34:RA:2313:C:H5''	39:RG:91:ARG:HH21	1.65	0.61
36:RD:96:HIS:HE1	36:RD:102:LYS:HE2	1.64	0.61
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:666:G:H5'	1:XA:726:C:H1'	1.82	0.61
1:XA:1302:U:C2	13:XM:27:LYS:HE2	2.36	0.61
25:Y1:43:TYR:HD2	34:YA:2230:G:H5''	1.66	0.61
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
34:YA:1333:C:H2'	34:YA:1334:G:H8	1.65	0.61
42:YN:112:LEU:O	42:YN:116:LEU:HB2	1.99	0.61
1:QA:953:G:C4	13:QM:104:ARG:NH2	2.69	0.61
1:XA:413:G:H1'	1:XA:428:G:H21	1.66	0.61
1:XA:702:A:H3'	1:XA:703:G:H8	1.66	0.61
1:XA:1124:G:C5'	10:XJ:36:GLY:H	2.14	0.61
1:XA:1330:U:H5''	13:XM:24:GLY:HA2	1.81	0.61
1:XA:1358:U:H5	14:YN:35:ARG:HE	1.48	0.61
34:YA:554:U:H2'	34:YA:556:G:C8	2.36	0.61
34:YA:2046:G:C2	34:YA:2623:G:C4	2.89	0.61
34:YA:2471:C:N4	34:YA:2476:A:O2'	2.34	0.61
41:YI:30:LEU:HB3	41:YI:36:ALA:HB3	1.80	0.61
54:YZ:181:GLU:O	54:YZ:182:LYS:O	2.19	0.61
1:QA:1358:U:C3'	14:QN:22:THR:HG21	2.30	0.61
1:QA:1491:G:H5''	12:QL:46:LYS:HG2	1.82	0.61
13:QM:57:ARG:O	13:QM:61:GLU:HB2	2.01	0.61
34:RA:1490:A:O2'	36:RD:99:ASP:OD1	2.19	0.61

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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
1:XA:263:A:P	20:XT:79:ARG:HE	2.24	0.61
10:XJ:10:GLY:HA3	10:XJ:16:LEU:CD2	2.22	0.61
1:QA:948:C:OP2	13:QM:106:ASN:CB	2.49	0.60
1:QA:1107:C:H5''	3:QC:173:VAL:H	1.65	0.60
1:QA:1150:U:O2	10:QJ:39:PRO:HG2	2.00	0.60
1:QA:1321:C:C4	19:QS:36:ARG:NH1	2.69	0.60
34:RA:626:U:H5'	34:RA:627:A:H5''	1.81	0.60
34:RA:1019:U:H2'	34:RA:1020:A:H8	1.66	0.60
35:RB:22:U:H3	35:RB:61:G:H1	1.49	0.60
1:XA:728:A:N7	15:XO:54:ARG:NE	2.49	0.60
34:YA:2046:G:N1	34:YA:2623:G:C2	2.62	0.60
1:QA:667:G:N2	15:QO:49:ASP:OD1	2.34	0.60
1:QA:1318:A:C6	14:QN:16:PHE:CG	2.89	0.60
34:RA:2296:U:OP2	47:RS:9:ARG:NH1	2.34	0.60
39:RG:72:ARG:HA	39:RG:87:PRO:HA	1.82	0.60
46:RR:74:LYS:HD3	46:RR:77:ARG:HH21	1.66	0.60
48:RT:77:PRO:HG2	48:RT:80:SER:HB3	1.82	0.60
1:XA:528:C:H41	12:XL:49:ASN:CG	2.04	0.60
1:XA:538:G:P	12:XL:115:LYS:HB2	2.41	0.60
1:XA:901:A:O5'	1:XA:901:A:H8	1.84	0.60
1:XA:1320:C:C6	19:XS:70:LYS:HD3	2.35	0.60
11:XK:109:VAL:HA	18:XR:86:VAL:HG23	1.83	0.60
12:XL:10:LEU:HB3	17:XQ:32:TYR:CE2	2.36	0.60
1:QA:595:G:H1'	1:QA:596:C:H5	1.65	0.60
1:QA:1320:C:H5'	19:QS:70:LYS:HE3	1.83	0.60
1:QA:1359:C:H5	14:QN:35:ARG:CZ	2.14	0.60
1:QA:1376:U:C4	7:QG:10:ARG:NH1	2.68	0.60
5:QE:80:ILE:CD1	8:QH:104:ARG:HH12	2.14	0.60
33:R9:18:ARG:HD2	34:RA:1034:G:H5'	1.83	0.60
34:RA:1700:A:H3'	34:RA:1701:A:C8	2.36	0.60
34:RA:2144:U:H4'	34:RA:2145:C:H5	1.66	0.60
1:XA:975:A:C2	14:XN:34:TYR:HE1	2.19	0.60
1:XA:1059:C:H5	3:XC:2:GLY:HA3	1.64	0.60
34:YA:508:G:O6	51:YW:9:TYR:CE1	2.55	0.60
34:YA:2069:G:C2	34:YA:2443:C:N3	2.69	0.60
39:YG:16:ARG:NH2	39:YG:28:VAL:O	2.35	0.60
1:QA:740:U:C3'	15:QO:39:LEU:HG	2.32	0.60
1:QA:1221:G:H5'	19:QS:36:ARG:HH12	1.65	0.60
11:QK:108:ILE:HG21	18:QR:88:LYS:OXT	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:642:G:H4'	34:RA:2349:G:H4'	1.83	0.60
34:RA:1604:C:H2'	34:RA:1605:C:H6	1.66	0.60
3:XC:23:TYR:CD2	10:XJ:95:GLU:CG	2.84	0.60
11:XK:17:GLY:HA2	11:XK:35:PRO:HD3	1.83	0.60
34:YA:1252:G:N2	49:YU:33:ARG:HH11	1.99	0.60
1:QA:667:G:H4'	15:QO:51:HIS:HE1	1.62	0.60
1:QA:982:U:C5'	14:QN:6:LEU:HD21	2.31	0.60
1:QA:1110:A:N1	3:QC:177:THR:HG22	2.16	0.60
34:RA:331:A:N6	34:RA:1210:A:OP2	2.34	0.60
34:RA:758:C:H2'	34:RA:759:G:H8	1.65	0.60
41:RI:92:VAL:HB	41:RI:120:ILE:CB	2.30	0.60
4:XD:25:ARG:NE	4:XD:30:LYS:O	2.33	0.60
37:YE:1:MET:HG3	37:YE:200:GLU:HG2	1.82	0.60
44:YP:58:THR:O	44:YP:61:ARG:NH2	2.34	0.60
1:QA:662:G:H2'	1:QA:663:A:C8	2.37	0.60
1:QA:810:C:H1'	1:QA:899:C:H41	1.66	0.60
1: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:458:G:N2	34:YA:470:A:OP2	2.34	0.60
34:YA:2051:A:N1	34:YA:2614:A:C5	2.69	0.60
51:YW:6:ILE:HG12	51:YW:104:THR:HG23	1.83	0.60
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:299:A:N1	34:RA:322:A:O2'	2.29	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
1:XA:1360:A:N9	14:YN:17:LYS:HG3	2.17	0.60
3:XC:9:GLY:HA2	3:XC:12:LEU:HD13	1.83	0.60
34:YA:690:G:O2'	36:YD:43:ARG:NH1	2.30	0.60
34:YA:1094:U:H1'	34:YA:1097:U:H5	1.67	0.60
34:YA:2140:C:H2'	34:YA:2141:G:H8	1.66	0.60
51:YW:30:GLU:O	51:YW:34:ASN:ND2	2.35	0.60
1:QA:7:G:O2'	5:QE:121:LYS:HB2	2.01	0.60
1:QA:980:C:C4'	14:QN:19:ARG:NE	2.62	0.60
1:QA:1312:G:OP1	19:QS:5:LEU:O	2.20	0.60
1:QA:1329:A:N6	21:QU:7:ARG:HH22	1.99	0.60
2:XB:126:GLU:OE2	2:XB:130:ARG:NH1	2.34	0.60
4:XD:13:ARG:HG3	4:XD:40:PRO:HD3	1.84	0.60
34:YA:2080:G:N3	34:YA:2241:A:C2	2.69	0.60
34:YA:2515:C:H2'	34:YA:2516:G:H8	1.66	0.60
1:QA:609:A:C5'	16:QP:9:PHE:CD1	2.85	0.60

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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
2:QB:197:VAL:C	8:QH:68:ARG:HH22	2.03	0.60
41:RI:83:ALA:CB	41:RI:88:ILE:HA	2.31	0.60
46:RR:97:VAL:HG22	46:RR:114:VAL:HG12	1.84	0.60
1:XA:68(Q):C:H2'	1:XA:68(R):U:C6	2.37	0.60
1:XA:983:A:H5'	14:YN:2:ALA:HB3	1.84	0.60
2:XB:67:THR:HG21	2:XB:155:LEU:HG	1.84	0.60
2:XB:163:PHE:HA	2:XB:185:ILE:O	2.01	0.60
34:YA:662:G:OP1	44:YP:15:ARG:NH1	2.34	0.60
47:YS:4:LEU:HD11	47:YS:12:PHE:HE2	1.67	0.60
4:QD:88:VAL:CG2	5:QE:96:PRO:O	2.35	0.60
10:QJ:6:ILE:HG22	10:QJ:98:ILE:HG22	1.84	0.60
28:R4:5:ILE:O	39:RG:67:LYS:CG	2.50	0.60
34:RA:2094:G:H1'	34:RA:2198:A:H61	1.67	0.60
45:RQ:21:THR:HB	54:RZ:78:LYS:HE3	1.83	0.60
1:XA:757:U:H1'	1:XA:879:C:H1'	1.83	0.60
1:XA:900:A:O5'	1:XA:900:A:H8	1.85	0.60
34:YA:2090:G:O6	34:YA:2230:G:O6	2.20	0.60
38:YF:11:VAL:HG22	38:YF:125:LEU:HB2	1.84	0.60
40:YH:89:ILE:O	40:YH:129:THR:OG1	2.19	0.60
1:QA:676:A:N3	11:QK:119:CYS:SG	2.72	0.59
1:QA:947:G:OP2	13:QM:106:ASN:OD1	2.19	0.59
1:QA:980:C:H5''	1:QA:981:U:H5	1.67	0.59
1:QA:1307:U:OP2	13:QM:99:ARG:CB	2.50	0.59
7:QG:133:GLY:HA2	7:QG:136:LYS:HE2	1.83	0.59
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:YN: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:1123:A:O2'	10:QJ:36:GLY:C	2.41	0.59
1:QA:1372:U:H5''	9:QI:69:GLY:HA3	1.84	0.59
34:RA:698:C:O2'	34:RA:734:A:N6	2.33	0.59
34:RA:1370:C:HO2'	34:RA:1811:G:HO2'	1.47	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:972:C:O2'	10:XJ:55:LYS:HB2	2.02	0.59
1:XA:979:C:H42	14:XN:18:VAL:HG23	1.66	0.59
1:XA:983:A:H5'	14:XN:2:ALA:CB	2.31	0.59
34:YA:1152:C:H2'	34:YA:1153:C:H6	1.67	0.59
53:YY:79:CYS:HB2	53:YY:81:LYS:HG2	1.82	0.59
1:QA:564:C:C6	17:QQ:31:LEU:HD21	2.37	0.59
1:QA:1106:G:C3'	3:QC:172:ARG:HG3	2.24	0.59
1:QA:1220:G:H21	19:QS:54:GLY:HA2	1.66	0.59
3:QC:91:LEU:HD12	3:QC:101:LEU:HD11	1.85	0.59
32:R8:56:GLU:HA	32:R8:59:LYS:HE2	1.83	0.59
34:RA:788:A:OP1	34:RA:791:C:N4	2.34	0.59
34:RA:955:C:OP1	45:RQ:85:LYS:NZ	2.32	0.59
34:RA:1141:U:P	42:RN:25:ARG:HH21	2.25	0.59
37:RE:201:THR:HG22	37:RE:203:LYS:H	1.66	0.59
41:RI:83:ALA:HA	41:RI:89:TYR:H	1.67	0.59
1:XA:974:A:OP1	14:XN:31:ARG:HB2	2.02	0.59
1:XA:1068:G:H22	1:XA:1108:G:H1'	1.68	0.59
1:XA:1117:G:N2	1:XA:1180:A:N3	2.50	0.59
5:XE:79:GLU:HG3	5:XE:93:PRO:HD2	1.84	0.59
34:YA:1546:C:H5'	34:YA:1547:C:H5'	1.85	0.59
34:YA:2063:C:O2	34:YA:2450:A:N1	2.35	0.59
1:QA:1118:C:C5'	9:QI:9:ARG:NH1	2.66	0.59
1:QA:1187:G:O2'	14:QN:60:SER:HA	2.03	0.59
40:RH:89:ILE:HD11	40:RH:131:VAL:CG2	2.32	0.59
1:XA:51:A:C2	1:XA:353:A:N1	2.70	0.59
1:XA:398:C:H2'	1:XA:399:G:H8	1.67	0.59
1:XA:662:G:H2'	1:XA:663:A:H8	1.66	0.59
1:XA:1049:U:HO2'	14:XN:2:ALA:N	2.00	0.59
13:XM:3:ARG:O	13:XM:57:ARG:NH2	2.35	0.59
34:YA:2712(A):U:H2'	34:YA:2712(B):A:H2'	1.83	0.59
37:YE:143:ASN:OD1	37:YE:143:ASN:N	2.35	0.59
1:QA:1170:A:H5'	2:QB:140:HIS:CE1	2.37	0.59
1:QA:1186:G:N2	14:QN:61:TRP:CA	2.66	0.59
3:QC:23:TYR:N	10:QJ:93:GLY:C	2.55	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:68:G:H22	1:QA:101:A:H2	1.49	0.59
1:QA:643:C:H2'	1:QA:644:G:C8	2.38	0.59
10:QJ:45:ARG:HB3	10:QJ:65:LEU:HB3	1.85	0.59
10:QJ:47:PHE:CZ	14:QN:36:PHE:CG	2.90	0.59
34:RA:184:C:H1'	34:RA:217:G:H1'	1.84	0.59
34:RA:2744:G:N2	40:RH:143:GLN:OE1	2.36	0.59
1:XA:165:C:H2'	1:XA:166:G:C8	2.38	0.59
1:XA:838(B):U:H4'	1:XA:838(C):C:C6	2.37	0.59
1:XA:1305:G:H2'	1:XA:1331:G:C2	2.36	0.59
1:XA:1318:A:C2	19:XS:37:ARG:NH1	2.71	0.59
32:Y8:31:HIS:CD2	34:YA:2421:G:O6	2.56	0.59
34:YA:956:G:H2'	34:YA:957:A:H2'	1.82	0.59
34:YA:2647:U:H2'	34:YA:2648:C:H6	1.67	0.59
36:YD:61:LEU:O	36:YD:63:ARG:NH1	2.36	0.59
41:YI:9:LEU:HD21	41:YI:35:LEU:HD12	1.84	0.59
1:QA:974:A:OP1	14:QN:29:ARG:CD	2.51	0.59
1:QA:1248:A:N6	21:QU:26:LYS:HD2	2.17	0.59
1:QA:1251:A:H2'	1:QA:1252:A:C8	2.37	0.59
1:QA:1304:G:H1'	1:QA:1334:G:H1	1.67	0.59
1:QA:1318:A:N6	14:QN:16:PHE:CB	2.65	0.59
4:QD:98:GLU:OE1	4:QD:103:ASN:ND2	2.36	0.59
34:RA:674:G:O2'	38:RF:67:GLN:OE1	2.18	0.59
34:RA:1996:C:H5	43:RO:32:TYR:HH	1.50	0.59
41:RI:93:THR:O	41:RI:97:ILE:HG13	2.03	0.59
46:RR:51:LEU:HG	46:RR:66:VAL:HG23	1.85	0.59
32:Y8:2:PRO:HA	34:YA:591:C:H1'	1.84	0.59
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:986:A:H1'	19:QS:55:LYS:CA	2.27	0.59
1:QA:1097:C:H5'	2:QB:140:HIS:NE2	2.18	0.59
1:QA:1228:C:C5'	13:QM:111:LYS:NZ	2.42	0.59
1:QA:1320:C:H41	19:QS:37:ARG:HD2	1.68	0.59
28:R4:27:THR:CG2	39:RG:62:LEU:O	2.51	0.59
34:RA:746:A:O2'	34:RA:2611:U:O2'	2.18	0.59
34:RA:2250:G:C5	45:RQ:82:ARG:HD2	2.37	0.59
43:RO:88:ASN:ND2	43:RO:90:GLN:OE1	2.36	0.59
33:Y9:14:CYS:HA	33:Y9:27:CYS:HB2	1.84	0.59

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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:740:U:O3'	15:QO:39:LEU:HG	2.03	0.59
1:QA:1376:U:H2'	1:QA:1377:A:C8	2.38	0.59
4:QD:88:VAL:HG13	5:QE:97:GLY:HA2	1.85	0.59
1:XA:960:U:H5	19:XS:78:ARG:HG2	1.67	0.59
1:XA:979:C:OP1	1:XA:1223:C:N4	2.35	0.59
38:YF:168:ARG:HG2	38:YF:175:THR:HG21	1.84	0.59
1:QA:642:A:C1'	8:QH:115:SER:HA	2.33	0.58
1:QA:730:G:C5	1:QA:731:G:H1'	2.38	0.58
25:R1:78:LYS:HZ2	34:RA:270(S):G:H21	1.50	0.58
1:XA:571:U:H5''	1:XA:819:A:C4	2.38	0.58
1:XA:702:A:N1	34:YA:1848:A:C6	2.71	0.58
1:XA:1004:A:N6	1:XA:1025:U:O3'	2.36	0.58
1:XA:1318:A:H62	14: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:1541:U:N3	23:XX:5:A:C2	2.71	0.58
25:Y1:2:SER:N	34:YA:1364:G:N7	2.50	0.58
31:Y7:34:ARG:NH1	34:YA:466:A:OP1	2.36	0.58
34:YA:1582:C:H2'	34:YA:1583:A:H8	1.68	0.58
34:YA:2275:C:O2	45:YQ:83:MET:HG2	2.02	0.58
1:QA:123:C:H2'	1:QA:124:G:H8	1.67	0.58
1:QA:280:C:O2	17:QQ:40:LYS:NZ	2.30	0.58
1:QA:1306:A:OP2	21:QU:5:ASP:HA	2.03	0.58
10:QJ:47:PHE:CE1	14:QN:36:PHE:CB	2.81	0.58
34:RA:1996:C:H5	43:RO:32:TYR:OH	1.86	0.58
40:RH:152:ARG:HG2	40:RH:153:LYS:HG2	1.84	0.58
1:XA:1345:U:C4	1:XA:1377:A:H1'	2.38	0.58
1:QA:107:G:OP1	1:QA:325:A:N6	2.36	0.58
1:QA:936:C:H2'	1:QA:937:A:C8	2.39	0.58
2:QB:181:PHE:CE2	8:QH:70:GLN:HG2	2.38	0.58
4:QD:20:TYR:CZ	6:XF:14:LEU:HA	2.38	0.58
1:XA:59:A:H3'	1:XA:331:G:H22	1.67	0.58
1:XA:974:A:C8	14:YN:31:ARG:NE	2.71	0.58
1:XA:1105:A:H2'	1:XA:1106:G:C8	2.37	0.58
1:QA:44:G:OP2	16:QP:12:LYS:CE	2.52	0.58
1:QA:954:G:N3	19:QS:83:HIS:CE1	2.67	0.58
3:QC:108:ASN:ND2	3:QC:144:SER:OG	2.36	0.58
7:QG:16:LEU:HD22	9:QI:42:ARG:CA	2.33	0.58
10:QJ:53:PRO:CA	14:QN:42:ILE:HD11	2.33	0.58
13:QM:86:CYS:CB	19:QS:69:HIS:HE1	2.14	0.58
27:R3:17:LYS:HG3	34:RA:969:U:OP1	2.02	0.58

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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:974:A:H1'	14:YN:31:ARG:HH11	1.59	0.58
1:XA:1193:G:O2'	5:XE:21:ALA:O	2.21	0.58
34:YA:747:U:C4	34:YA:2613:U:C4	2.92	0.58
34:YA:1418:G:H2'	34:YA:1579:A:H61	1.66	0.58
37:YE:128:SER:OG	37:YE:129:HIS:N	2.35	0.58
1:QA:739:C:O2'	15:QO:42:HIS:ND1	2.30	0.58
1:QA:974:A:H5'	14:QN:31:ARG:CB	2.15	0.58
1:QA:1253:G:O5'	10:QJ:44:VAL:CB	2.42	0.58
1:QA:1353:G:OP1	21:QU:13:ILE:HG21	2.03	0.58
2:QB:78:GLN:O	2:QB:94:ASN:ND2	2.37	0.58
7:QG:16:LEU:HD21	9:QI:42:ARG:CD	2.23	0.58
34:RA:191:A:H1'	34:RA:679:C:H1'	1.86	0.58
34:RA:987:G:O2'	34:RA:1000:A:N3	2.33	0.58
34:RA:1024:G:O2'	34:RA:1144:G:O2'	2.22	0.58
34:RA:1076:C:H2'	34:RA:1077:A:H4'	1.86	0.58
34:RA:1226:G:OP1	50:RV:69:LYS:NZ	2.24	0.58
38:RF:148:LEU:HD13	38:RF:191:ARG:HH11	1.68	0.58
1:XA:1318:A:C1'	19:XS:11:VAL:CG2	2.71	0.58
1:XA:1535:C:N4	23:XX:10:G:C2	2.69	0.58
5:XE:18:ARG:NH1	5:XE:25:ARG:O	2.36	0.58
34:YA:1061:U:C6	34:YA:1062:G:H5''	2.35	0.58
36:YD:35:LYS:H	36:YD:64:ILE:HG12	1.68	0.58
1:QA:980:C:C2'	14:QN:19:ARG:HG2	2.23	0.58
4:QD:34:GLU:OE1	6:XF:57:GLN:NE2	2.36	0.58
4:QD:59:ARG:HH12	4:QD:66:ARG:HH22	1.51	0.58
5:QE:75:THR:OG1	5:QE:76:ILE:N	2.35	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
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: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
1:XA:1330:U:H5''	13:XM:24:GLY:CA	2.33	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:974:A:N9	14:QN:31:ARG:CZ	2.67	0.58
1:QA:1186:G:H22	14:QN:61:TRP:HA	1.69	0.58
1:QA:1238:A:H2'	1:QA:1239:A:C8	2.38	0.58
1:QA:1484:C:O2'	34:RA:1960:A:O2'	2.20	0.58
34:RA:605:C:H1'	34:RA:657:U:H1'	1.85	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:XA:15:G:H1	1:XA:920:U:H3	1.50	0.58
1:XA:412:A:C2	4:XD:35:ARG:CD	2.81	0.58
1:XA:1286:A:H2'	1:XA:1287:A:H4'	1.85	0.58
1:XA:1296:C:C5'	13:XM:14:ARG:NH2	2.63	0.58
11:XK:15:ALA:HA	11:XK:77:MET:HA	1.86	0.58
1:QA:6:G:C2	5:QE:119:LEU:HD11	2.39	0.58
1:QA:974:A:C8	14:QN:31:ARG:HD2	2.35	0.58
1:QA:1313:U:H5	19:QS:4:SER:CB	2.17	0.58
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:1318:A:O3'	19:XS:11:VAL:HG21	2.00	0.58
1:XA:1343:G:H2'	1:XA:1344:C:C6	2.39	0.58
1:XA:1376:U:O4	7:XG:10:ARG:NE	2.37	0.58
17:XQ:99:SER:OG	17:XQ:100:LYS:N	2.37	0.58
19:XS:63:THR:OG1	19:XS:65:ASN:OD1	2.21	0.58
34:YA:577:G:O2'	34:YA:1254:A:OP1	2.21	0.58
34:YA:727:A:C2	36:YD:9:TYR:CE2	2.92	0.58
1:QA:19:C:OP1	5:QE:130:ASN:ND2	2.36	0.58
1:QA:25:C:H5'	1:QA:524:G:H1'	1.86	0.58
1:QA:689:C:OP2	11:QK:55:LYS:NZ	2.35	0.58
1:QA:741:G:P	15:QO:39:LEU:CD1	2.90	0.58
1:QA:1028(B):C:H2'	1:QA:1028(C):C:H5	1.69	0.58
1:QA:1371:G:OP1	9:QI:12:GLU:HG2	2.04	0.58
10:QJ:40:LEU:HD11	10:QJ:71:LEU:HB2	1.86	0.58
30:R6:16:CYS:SG	30:R6:42:TRP:HB2	2.44	0.58
34:RA:259:G:H21	34:RA:621:A:H8	1.52	0.58
41:RI:83:ALA:CA	41:RI:89:TYR:CD2	2.86	0.58
43:RO:1:MET:HB2	43:RO:32:TYR:HB3	1.84	0.58
53:RY:99:CYS:HB2	53:RY:103:GLY:N	2.18	0.58
1:XA:1306:A:H1'	1:XA:1332:A:C6	2.39	0.58
1:XA:1375:A:H3'	1:XA:1376:U:C6	2.37	0.58

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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:1080:A:H4'	5:QE:16:THR:HG21	1.86	0.57
1:QA:1110:A:N6	3:QC:176:HIS:HB2	2.19	0.57
6:QF:23:LYS:NZ	6:QF:42:GLU:OE1	2.36	0.57
7:QG:50:ILE:HG12	7:QG:61:VAL:HG11	1.86	0.57
34:RA:992:C:OP1	49:RU:47:TYR:OH	2.18	0.57
39:RG:15:VAL:HG22	39:RG:175:LEU:HD22	1.86	0.57
41:RI:115:ALA:HB2	41:RI:131:LYS:HE3	1.85	0.57
54:RZ:30:ASN:HB3	54:RZ:90:VAL:HG22	1.86	0.57
1:XA:719:C:O2	18:XR:50:ILE:CD1	2.45	0.57
40:YH:9:ILE:HD12	40:YH:51:ARG:HG2	1.85	0.57
41:YI:3:VAL:HG12	41:YI:38:LEU:HA	1.85	0.57
34:RA:1689:A:OP2	34:RA:1698:A:N6	2.37	0.57
37:RE:26:ILE:HG23	37:RE:182:LEU:HB3	1.86	0.57
1:XA:766:A:H61	1:XA:1511:G:H1'	1.67	0.57
8:XH:11:THR:O	8:XH:15:ASN:ND2	2.38	0.57
20:XT:30:LYS:HA	20:XT:33:ILE:HD12	1.86	0.57
27:Y3:42:ALA:O	34:YA:851:U:O2'	2.20	0.57
34:YA:656:G:H2'	34:YA:657:U:C6	2.40	0.57
34:YA:2710:C:H2'	34:YA:2711:A:C8	2.38	0.57
46:YR:56:LYS:O	46:YR:88:ARG:NH2	2.36	0.57
48:YT:36:GLU:OE1	48:YT:41:ARG:NH1	2.37	0.57
1:QA:608:A:H3'	1:QA:609:A:H8	1.69	0.57
1:QA:937:A:H2'	1:QA:1379:G:H21	1.68	0.57
1:QA:1108:G:O3'	3:QC:176:HIS:HD2	1.87	0.57
1:QA:1114:C:C1'	14:QN:60:SER:O	2.51	0.57
1:QA:1364:U:O4'	21:QU:14:TRP:CZ2	2.57	0.57
12:QL:113:ARG:HH21	12:QL:116:SER:HB2	1.68	0.57
19:QS:61:TYR:OH	34:RA:888:C:OP2	2.21	0.57
33:R9:6:SER:HA	34:RA:1031:G:H4'	1.86	0.57
34:RA:1247:A:OP2	44:RP:15:ARG:NH2	2.38	0.57
49:RU:6:THR:OG1	49:RU:7:GLY:N	2.37	0.57
1:XA:1112:C:C1'	3:XC:179:ARG:CZ	2.79	0.57
1:XA:1313:U:O4	19:XS:4:SER:OG	2.22	0.57
1:XA:1539:C:H2'	1:XA:1540:U:C6	2.39	0.57
34:YA:307:G:H21	34:YA:330:A:H62	1.51	0.57
34:YA:664:C:OP1	44:YP:18:ARG:NH1	2.37	0.57
34:YA:1728:G:H8	34:YA:1732:A:H62	1.50	0.57
1:QA:968:A:N7	1:QA:1062:U:O2'	2.31	0.57
1:QA:1158:C:C5'	2:QB:133:LYS:HZ1	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1176:A:OP1	9:QI:97:LYS:HE2	2.04	0.57
1:QA:1320:C:N4	19:QS:37:ARG:CA	2.68	0.57
3:QC:23:TYR:CG	10:QJ:95:GLU:N	2.72	0.57
33:R9:19:ARG:NH2	34:RA:2754:U:O3'	2.36	0.57
34:RA:511:U:H4'	34:RA:1235:G:H4'	1.86	0.57
34:RA:1216:G:OP1	49:RU:11:ARG:NH2	2.31	0.57
34:RA:2394:C:OP1	44:RP:63:PRO:HD2	2.03	0.57
40:RH:149:ARG:HA	40:RH:162:ILE:HD11	1.85	0.57
1:XA:111:G:H8	1:XA:111:G:O5'	1.87	0.57
5:XE:11:ILE:HG21	5:XE:105:VAL:HG22	1.86	0.57
13:XM:3:ARG:HH12	13:XM:11:ARG:HH21	1.51	0.57
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:1219:U:C2'	19:QS:34:TRP:CE3	2.87	0.57
1:QA:1242:C:H4'	1:QA:1303:C:H4'	1.86	0.57
10:QJ:47:PHE:CZ	14:QN:37:PHE:HD2	2.21	0.57
32:R8:46:ARG:NH1	34:RA:630:G:OP1	2.37	0.57
34:RA:2006:C:O2'	34:RA:2823:A:N3	2.35	0.57
34:RA:2419:U:H2'	34:RA:2420:C:H6	1.69	0.57
1:XA:6:G:N3	1:XA:6:G:H2'	2.20	0.57
1:XA:375:U:H5''	1:XA:375:U:H6	1.68	0.57
1:XA:669:U:C1'	15:XO:46:HIS:HE1	2.18	0.57
1:XA:730:G:C5	1:XA:731:G:H1'	2.40	0.57
3:XC:17:ASP:OD1	3:XC:21:ARG:NH2	2.37	0.57
6:XF:62:TRP:CD1	18:XR:35:ARG:NH1	2.72	0.57
34:YA:2044:C:N4	34:YA:2625:G:N1	2.51	0.57
1:QA:1073:U:O2'	2:QB:104:ASN:OD1	2.16	0.57
1:QA:1300:G:H1'	1:QA:1303:C:H42	1.70	0.57
1:QA:1320:C:N4	19:QS:37:ARG:CD	2.66	0.57
3:QC:23:TYR:HE1	10:QJ:10:GLY:HA2	1.66	0.57
13:QM:91:ARG:HD2	13:QM:96:LEU:HD22	1.87	0.57
34:RA:662:G:OP1	44:RP:15:ARG:NH1	2.37	0.57
34:RA:1204:A:H1'	34:RA:1206:G:C8	2.39	0.57
45:RQ:12:GLN:HB2	45:RQ:73:PRO:HD2	1.87	0.57
1:XA:401:C:H2'	1:XA:402:G:C8	2.40	0.57
1:XA:1320:C:N3	19:XS:36:ARG:C	2.58	0.57
1:XA:1320:C:C2	19:XS:36:ARG:O	2.57	0.57
1:XA:1320:C:C2'	19:XS:70:LYS:HD2	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:XH:8:ASP:OD2	8:XH:12:ARG:NH2	2.37	0.57
9:XI:10:ARG:HG3	9:XI:11:LYS:HG2	1.86	0.57
34:YA:184:C:O2'	34:YA:217:G:N3	2.35	0.57
34:YA:828:U:H4'	34:YA:831:G:N1	2.20	0.57
34:YA:1566:A:C2	36:YD:214:TRP:CE3	2.88	0.57
34:YA:2051:A:N1	34:YA:2614:A:N3	2.52	0.57
34:YA:2070:G:N2	34:YA:2442:C:N3	2.40	0.57
34:YA:2085:C:C2	34:YA:2235:G:C2	2.91	0.57
1:QA:1160:G:C4'	2:QB:132:LYS:HE3	2.35	0.57
3:QC:5:ILE:HG21	14:QN:45:ARG:NH2	2.19	0.57
4:QD:167:GLY:O	4:QD:169:LYS:NZ	2.36	0.57
4:QD:193:ASP:HA	6:XF:24:GLU:OE1	2.05	0.57
26:R2:4:SER:OG	26:R2:5:GLU:N	2.37	0.57
34:RA:1216:G:OP2	49:RU:12:ARG:NH2	2.36	0.57
34:RA:1854:A:H62	34:RA:1888:G:H8	1.51	0.57
1:XA:292:G:C5	1:XA:293:G:H1'	2.40	0.57
1:XA:590:C:OP1	8:XH:29:SER:HA	2.03	0.57
1:XA:728:A:H62	15:XO:54:ARG:CD	2.05	0.57
1:XA:741:G:OP1	15:XO:35:ARG:NE	2.38	0.57
1:XA:1251:A:O2'	1:XA:1369:C:O3'	2.21	0.57
1:XA:1296:C:H5'	13:XM:14:ARG:NH2	2.20	0.57
1:XA:1318:A:O3'	19:XS:11:VAL:CG2	2.50	0.57
2:XB:115:LEU:HD12	2:XB:145:LEU:HB3	1.86	0.57
3:XC:22:TRP:C	10:XJ:93:GLY:HA2	2.25	0.57
34:YA:86:C:OP1	53:YY:33:LYS:NZ	2.37	0.57
34:YA:270(P):U:C4	41:YI:52:ARG:NE	2.69	0.57
34:YA:617:G:OP2	38:YF:43:LYS:NZ	2.31	0.57
34:YA:639:U:H2'	34:YA:640:C:C6	2.40	0.57
34:YA:2049:G:N2	34:YA:2620:C:O2	2.36	0.57
1:QA:1306:A:OP2	21:QU:5:ASP:CA	2.53	0.57
2:QB:74:LYS:HG3	2:QB:77:ALA:HB3	1.87	0.57
2:QB:219:VAL:HA	2:QB:222:ILE:HD12	1.84	0.57
4:QD:9:CYS:SG	4:QD:22:LYS:NZ	2.71	0.57
34:RA:1889:A:N1	34:RA:2234:G:H1'	2.19	0.57
34:RA:2094:G:P	41:RI:22:LYS:HE3	2.44	0.57
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:248:C:H2'	1:QA:249:U:C6	2.40	0.57
1:QA:1226:C:C5'	13:QM:91:ARG:NH1	2.59	0.57
1:QA:1253:G:OP1	10:QJ:44:VAL:HG11	2.05	0.57
34:RA:2130:U:O2'	34:RA:2133:G:O2'	2.22	0.57
34:RA:2291:U:H2'	34:RA:2292:C:C6	2.40	0.57
1:XA:269:C:H2'	1:XA:270:A:C8	2.40	0.57
1:XA:401:C:H2'	1:XA:402:G:H8	1.69	0.57
1:XA:1495:U:HO2'	34:YA:1919:A:H2	1.53	0.57
12:XL:11:VAL:HG23	17:XQ:29:HIS:NE2	2.19	0.57
13:XM:11:ARG:O	13:XM:13:LYS:NZ	2.35	0.57
34:YA:1566:A:N3	36:YD:214:TRP:CG	2.73	0.57
36:YD:184:LYS:HB3	36:YD:269:PHE:HB3	1.86	0.57
1:QA:1119:C:H2'	1:QA:1120:G:H8	1.69	0.57
1:QA:1253:G:O2'	1:QA:1356:G:O2'	2.20	0.57
4:QD:166:LYS:O	36:YD:135:PHE:CE1	2.58	0.57
34:RA:2039:C:H2'	34:RA:2040:C:H6	1.70	0.57
1:XA:1300:G:C2	1:XA:1334:G:C6	2.93	0.57
10:XJ:53:PRO:C	14:YN: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:69:G:H1'	1:QA:152:A:C2	2.40	0.56
1:QA:1414:U:H2'	1:QA:1415:G:C8	2.40	0.56
2:QB:87:ARG:NH1	2:QB:220:ASP:OD2	2.38	0.56
4:QD:166:LYS:O	36:YD:135:PHE:HE1	1.87	0.56
10:QJ:47:PHE:CD1	14:QN:37:PHE:HE2	2.22	0.56
31:R7:9:ARG:NE	34:RA:1310:G:OP2	2.38	0.56
34:RA:2751:G:N7	40:RH:2:SER:OG	2.37	0.56
40:RH:29:PRO:HD2	40:RH:79:VAL:HB	1.86	0.56
44:RP:58:THR:O	44:RP:61:ARG:NH2	2.38	0.56
54:RZ:127:LYS:HB3	54:RZ:162:GLU:HB2	1.86	0.56
1:XA:978:A:C5	14:YN:18:VAL:HG21	2.40	0.56
1:XA:1123:A:H1'	10:XJ:38:ILE:CG2	2.35	0.56
1:XA:1278:U:H5''	1:XA:1279:A:C8	2.39	0.56
1:XA:1537:U:O2	23:XX:9:G:N2	2.38	0.56
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:689:C:H4'	1:QA:705:U:H1'	1.86	0.56
1:QA:1047:G:O2'	1:QA:1215:G:O2'	2.22	0.56
1:QA:1243:C:H5'	21:QU:9:ARG:HG3	1.87	0.56
9:QI:67:GLY:O	9:QI:73:GLN:NE2	2.38	0.56
33:R9:19:ARG:NH2	34:RA:2754:U:O2'	2.33	0.56
34:RA:1338:G:O6	52:RX:62:LYS:NZ	2.36	0.56
1:XA:51:A:O4'	1:XA:353:A:N7	2.38	0.56
1:XA:1228:C:H5	13:XM:103:THR:O	1.87	0.56
34:YA:917:A:H3'	34:YA:918:A:H8	1.70	0.56
1:QA:975:A:C2	14:QN:34:TYR:CE1	2.93	0.56
1:QA:1014:A:O4'	19:QS:34:TRP:CG	2.58	0.56
1:QA:1041:A:H2'	1:QA:1042:G:C8	2.40	0.56
1:QA:1280:A:N3	10:QJ:41:PRO:CD	2.68	0.56
1:QA:1331:G:O6	21:QU:7:ARG:HB2	2.05	0.56
1:QA:1342:C:H2'	1:QA:1343:G:C8	2.39	0.56
9:QI:64:THR:OG1	9:QI:66:ARG:NH1	2.37	0.56
34:RA:644:A:H2	34:RA:2369:A:H1'	1.71	0.56
34:RA:824:A:H1'	34:RA:2358:G:N7	2.20	0.56
34:RA:1248:G:C2	49:RU:3:ARG:HD2	2.40	0.56
53:RY:30:VAL:HG12	53:RY:37:VAL:HG23	1.87	0.56
1:XA:899:C:O2	1:XA:899:C:H2'	2.05	0.56
1:XA:1028(H):G:H2'	1:XA:1028(I):G:C8	2.39	0.56
1:XA:1105:A:H2'	1:XA:1106:G:H8	1.71	0.56
1:XA:1126:U:H3'	1:XA:1127:G:H8	1.69	0.56
1:XA:1184:G:H2'	1:XA:1185:G:H8	1.70	0.56
8:XH:73:ASP:OD1	8:XH:75:ARG:NH1	2.38	0.56
29:Y5:57:VAL:O	46:YR:33:ARG:NH2	2.30	0.56
32:Y8:31:HIS:HD2	34:YA:2421:G:O6	1.88	0.56
34:YA:270(C):A:H61	34:YA:270(Z):G:H1'	1.69	0.56
34:YA:1566:A:C6	36:YD:214:TRP:CZ3	2.92	0.56
34:YA:2096:U:H3	34:YA:2193:G:H22	1.53	0.56
34:YA:2511:U:O2'	37:YE:138:PRO:O	2.22	0.56
34:YA:2647:U:H2'	34:YA:2648:C:C6	2.39	0.56
37:YE:49:LEU:HD22	37:YE:81:ILE:HD11	1.85	0.56
45:YQ:24:GLY:H	45:YQ:101:ARG:HD2	1.70	0.56
46:YR:14:SER:OG	46:YR:15:SER:N	2.38	0.56
53:YY:76:CYS:HB3	53:YY:79:CYS:SG	2.45	0.56
33:R9:23:VAL:HG11	34:RA:1032:A:C4'	2.31	0.56
34:RA:383:U:H2'	34:RA:385:C:H5	1.71	0.56
34:RA:887:A:H1'	34:RA:889:C:C5	2.40	0.56
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:962:C:H2'	1:XA:963:G:H8	1.71	0.56
1:XA:1028(H):G:H2'	1:XA:1028(I):G:H8	1.70	0.56
1:XA:1077:G:N2	1:XA:1080:A:OP2	2.37	0.56
11:XK:91:ARG:HH21	18:XR:88:LYS:CD	2.03	0.56
34:YA:515:A:H1'	34:YA:581:C:H1'	1.88	0.56
1:QA:1189:C:O2'	3:QC:176:HIS:ND1	2.39	0.56
30:R6:52:VAL:HG22	30:R6:53:LYS:H	1.70	0.56
34:RA:2114:A:H3'	34:RA:2114:A:N3	2.20	0.56
34:RA:2140:C:H2'	34:RA:2141:G:H8	1.70	0.56
37:RE:39:PRO:HD3	37:RE:45:THR:HG22	1.87	0.56
1:XA:674:G:H2'	1:XA:675:A:C8	2.40	0.56
8:XH:32:LYS:HA	8:XH:35:ILE:HD12	1.86	0.56
34:YA:1802:A:H2'	34:YA:1803:A:C8	2.41	0.56
34:YA:2049:G:C2	34:YA:2620:C:N3	2.72	0.56
34:YA:2250:G:H21	34:YA:2250:G:P	2.27	0.56
1:QA:788:U:H3	1:QA:792:A:H2'	1.68	0.56
1:QA:865:A:N3	1:QA:918:A:O2'	2.35	0.56
1:QA:1358:U:H5'	14:QN:35:ARG:N	2.06	0.56
10:QJ:47:PHE:CE1	14:QN:36:PHE:HB3	2.19	0.56
31:R7:29:LYS:HA	31:R7:32:LYS:HG3	1.88	0.56
34:RA:83:G:N2	34:RA:103:A:OP2	2.39	0.56
37:RE:34:VAL:HG21	37:RE:77:ILE:HD11	1.88	0.56
1:XA:323:U:H3'	1:XA:324:G:C8	2.40	0.56
1:XA:1141:C:H2'	1:XA:1142:G:H8	1.71	0.56
1:XA:1305:G:C5	1:XA:1331:G:C5	2.92	0.56
34:YA:554:U:H2'	34:YA:556:G:H8	1.71	0.56
34:YA:958:U:OP2	45:YQ:14:ARG:NH1	2.39	0.56
33:R9:23:VAL:CG2	34:RA:1032:A:O2'	2.54	0.56
34:RA:1565:C:H1'	34:RA:1566:A:H8	1.70	0.56
38:RF:117:ARG:NH1	38:RF:120:GLU:OE2	2.38	0.56
38:RF:195:ASP:N	38:RF:195:ASP:OD1	2.37	0.56
1:XA:114:U:H1'	1:XA:353:A:H1'	1.86	0.56
1:XA:1270:C:O2'	1:XA:1314:C:OP1	2.24	0.56
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:728:A:C6	15:XO:54:ARG:CD	2.88	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1123:A:O3'	10:XJ:36:GLY:CA	2.49	0.56
34:YA:1493:C:C6	34:YA:2210:G:C5	2.94	0.56
34:YA:2097:C:C2	34:YA:2193:G:N2	2.73	0.56
34:YA:2134:A:H3'	34:YA:2135:A:H8	1.71	0.56
42:YN:63:THR:OG1	42:YN:64:GLY:N	2.39	0.56
54:YZ:52:SER:O	54:YZ:54:HIS:ND1	2.38	0.56
1:QA:377:G:H2'	1:QA:378:G:C8	2.41	0.56
1:QA:1313:U:C1'	19:QS:6:LYS:HZ3	2.18	0.56
32:R8:25:MET:HG3	44:RP:64:LYS:HB3	1.87	0.56
1:XA:501:C:H2'	1:XA:502:G:C8	2.41	0.56
1:XA:943:U:O2'	1:XA:1232:U:OP2	2.23	0.56
1:XA:989:C:H2'	1:XA:990:C:C6	2.40	0.56
1:XA:1312:G:H3'	19:XS:6:LYS:HZ3	0.75	0.56
1:XA:1377:A:C2	7:XG:8:GLU:O	2.59	0.56
1:XA:1503:A:N6	1:XA:1532:U:H1'	2.21	0.56
31:Y7:8:ASN:ND2	34:YA:770:G:OP1	2.38	0.56
34:YA:2051:A:C2	34:YA:2614:A:N3	2.73	0.56
43:YO:34:THR:CG2	43:YO:35:VAL:H	2.12	0.56
7:QG:16:LEU:HD11	9:QI:42:ARG:HH11	1.69	0.56
8:QH:12:ARG:HD2	8:QH:26:VAL:HG12	1.88	0.56
10:QJ:24:VAL:HG21	10:QJ:37:PRO:HG3	1.87	0.56
12:QL:71:PRO:O	12:QL:102:ARG:NH1	2.39	0.56
13:QM:85:GLY:O	19:QS:74:PHE:HD2	1.89	0.56
25:R1:90:ILE:CA	25:R1:94:LEU:HD12	2.34	0.56
34:RA:659:C:H2'	34:RA:660:G:C8	2.41	0.56
34:RA:1834:U:H1'	34:RA:1969:A:H2'	1.87	0.56
1:XA:12:U:H4'	1:XA:526:C:H4'	1.87	0.56
1:XA:458(B):G:H1'	1:XA:458(F):A:H61	1.71	0.56
24:Y0:19:LYS:NZ	34:YA:2261:C:OP1	2.31	0.56
28:Y4:6:HIS:CE1	39:YG:67:LYS:H	2.24	0.56
1:QA:129(B):G:H4'	1:QA:130:A:H5''	1.88	0.55
1:QA:1086:U:H2'	1:QA:1087:G:H8	1.71	0.55
1:QA:1369:C:H2'	1:QA:1370:G:C8	2.42	0.55
3:QC:5:ILE:HD12	14:QN:49:HIS:NE2	2.21	0.55
3:QC:22:TRP:HA	10:QJ:93:GLY:HA3	1.84	0.55
23:QX:8:A:H2'	23:QX:9:G:H8	1.71	0.55
34:RA:319:C:H2'	34:RA:320:A:C8	2.42	0.55
34:RA:2328:A:H2'	34:RA:2329:G:C8	2.41	0.55
42:RN:22:THR:OG1	42:RN:23:LEU:N	2.39	0.55
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:597:U:H2'	34:YA:598:G:C8	2.41	0.55
34:YA:2059:A:N1	34:YA:2503:A:C5	2.74	0.55
1:QA:265:G:H5'	17:QQ:64:PRO:O	2.06	0.55
1:QA:741:G:O5'	15:QO:39:LEU:HD11	2.06	0.55
34:RA:372:G:HO2'	34:RA:400:G:H1	1.55	0.55
34:RA:1380:G:O2'	34:RA:1569:A:N6	2.39	0.55
34:RA:2747:G:O6	34:RA:2755:C:H5''	2.06	0.55
43:RO:14:THR:HG21	43:RO:86:ILE:HD12	1.87	0.55
43:RO:106:LEU:HB3	43:RO:111:PHE:HB2	1.87	0.55
44:RP:90:ARG:HG3	44:RP:91:PHE:HD1	1.71	0.55
53:RY:47:LYS:NZ	53:RY:48:ALA:O	2.37	0.55
1:XA:107:G:H4'	1:XA:378:G:H5''	1.88	0.55
1:XA:192:U:H4'	20:XT:57:ARG:HD3	1.87	0.55
1:XA:686:U:O2'	1:XA:703:G:N2	2.40	0.55
1:XA:1228:C:C5	13:XM:103:THR:O	2.59	0.55
1:XA:1228:C:H5	13:XM:104:ARG:CA	1.98	0.55
1:XA:1318:A:H1'	19:XS:37:ARG:NH2	2.21	0.55
34:YA:2108:C:N4	34:YA:2182:G:H22	1.91	0.55
34:YA:2882:A:OP1	46:YR:96:ARG:NH1	2.39	0.55
1:QA:66:G:P	1:QA:66:G:H8	2.29	0.55
1:QA:310:G:OP2	16:QP:27:LYS:CD	2.52	0.55
4:QD:11:LEU:HD13	4:QD:66:ARG:HD2	1.88	0.55
34:RA:1380:G:H1'	34:RA:1569:A:H61	1.71	0.55
1:XA:8:A:N6	4:XD:209:ARG:HA	2.21	0.55
1:XA:261:U:C5	20:XT:79:ARG:CZ	2.88	0.55
1:XA:1358:U:O5'	1:XA:1358:U:H6	1.89	0.55
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
35:RB:74:U:H1'	54:RZ:34:ASN:HD21	1.71	0.55
40:RH:33:LEU:HD11	40:RH:136:ILE:HG13	1.87	0.55
41:RI:86:THR:O	41:RI:122:GLU:HG2	2.05	0.55
1:XA:974:A:N9	14:XN:31:ARG:CZ	2.70	0.55
1:XA:1048:G:H2'	1:XA:1050:G:C8	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1305:G:C2	1:XA:1331:G:C8	2.95	0.55
24:Y0:16:SER:HB3	34:YA:2262:U:H5	1.70	0.55
34:YA:192:C:H1'	34:YA:800:A:H62	1.71	0.55
34:YA:468:G:H5''	38:YF:60:SER:HB2	1.88	0.55
1:QA:546:G:H4'	1:QA:548:G:H4'	1.89	0.55
1:QA:791:G:N1	1:QA:1498:U:OP1	2.38	0.55
1:QA:925:G:H1'	1:QA:1502:A:C4	2.42	0.55
1:QA:1124:G:C5'	10:QJ:36:GLY:H	2.20	0.55
4:QD:57:ARG:NH1	5:QE:107:ARG:CD	2.70	0.55
13:QM:11:ARG:HG3	13:QM:12:ASN:H	1.71	0.55
33:R9:14:CYS:HA	33:R9:27:CYS:HB2	1.88	0.55
34:RA: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:XN:17:LYS:CG	2.31	0.55
1:XA:1473:A:H2'	1:XA:1474:G:C8	2.42	0.55
1:XA:1485:U:H2'	1:XA:1486:G:C8	2.41	0.55
3:XC:23:TYR:HD2	10:XJ:95:GLU:CB	2.19	0.55
34:YA:270(P):U:C4	41:YI:52:ARG:CZ	2.90	0.55
34:YA:746:A:H3'	34:YA:2612:C:H5	1.71	0.55
34:YA:828:U:O2'	34:YA:831:G:O6	2.17	0.55
34:YA:1791:A:N6	34:YA:1828:G:O2'	2.36	0.55
42:YN:129:PRO:O	42:YN:134:ARG:NH1	2.33	0.55
43:YO:87:ILE:HD12	43:YO:91:LEU:HA	1.89	0.55
48:YT:3:ARG:HG3	48:YT:6:LEU:HB2	1.89	0.55
1:QA:1000:A:H2'	1:QA:1001:G:C8	2.41	0.55
1:QA:1204:A:P	14:QN:3:ARG:NH2	2.79	0.55
1:QA:1239:A:H2	1:QA:1296:C:H5	1.53	0.55
13:QM:67:GLU:OE1	13:QM:71:ARG:NH1	2.40	0.55
26:R2:35:LEU:HD23	26:R2:50:ILE:HG12	1.88	0.55
31:R7:23:ARG:O	31:R7:28:ARG:NH1	2.40	0.55
43:RO:112:MET:HA	43:RO:115:VAL:HG22	1.87	0.55
47:RS:106:ARG:HA	47:RS:110:LEU:HD21	1.87	0.55
1:XA:1123:A:H2'	1:XA:1124:G:C4	2.41	0.55
10:XJ:47:PHE:CE2	14:XN:37:PHE:CZ	2.94	0.55
10:XJ:68:HIS:CD2	10:XJ:68:HIS:N	2.75	0.55
34:YA:34:C:N4	34:YA:454:A:O2'	2.38	0.55
34:YA:1566:A:H2	36:YD:214:TRP:NE1	2.03	0.55
34:YA:2377:A:H2'	34:YA:2378:A:C8	2.42	0.55
41:YI:130:TYR:HB3	41:YI:136:VAL:HG13	1.86	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1014:A:C1'	19:QS:34:TRP:CD2	2.90	0.55
1:QA:1218:C:H2'	1:QA:1219:U:H6	1.72	0.55
34:RA:318:C:H2'	34:RA:319:C:H6	1.71	0.55
38:RF:117:ARG:NH2	38:RF:189:THR:O	2.40	0.55
1:XA:68(Q):C:H2'	1:XA:68(R):U:H6	1.72	0.55
1:XA:186(L):G:H2'	1:XA:186(M):G:C8	2.42	0.55
1:XA:288:A:H2'	1:XA:289:G:H4'	1.87	0.55
1:XA:1162:C:H2'	1:XA:1163:C:C6	2.41	0.55
1:XA:1228:C:C5	13:XM:104:ARG:CB	2.89	0.55
34:YA:2229:C:H2'	34:YA:2230:G:C8	2.41	0.55
1:QA:1320:C:H42	19:QS:37:ARG:CB	2.18	0.55
1:QA:1376:U:C4	7:QG:10:ARG:CZ	2.90	0.55
4:QD:20:TYR:CZ	6:XF:14:LEU:CA	2.90	0.55
34:RA:644:A:C2	34:RA:2369:A:H1'	2.42	0.55
34:RA:1462:C:H4'	34:RA:2703:C:H5'	1.89	0.55
40:RH:86:GLU:HG3	40:RH:165:ALA:HB3	1.89	0.55
43:RO:19:ILE:HG22	43:RO:43:VAL:HG12	1.88	0.55
1:XA:405:U:H5''	1:XA:495:A:H2	1.71	0.55
1:XA:481:G:O2'	1:XA:483:C:N4	2.40	0.55
1:XA:1300:G:H1'	1:XA:1301:U:C6	2.42	0.55
1:XA:1359:C:N4	14:XM:35:ARG:NE	2.54	0.55
7:XG:29:LYS:HE2	7:XG:102:ARG:HB3	1.89	0.55
34:YA:236:C:H2'	34:YA:237:C:C6	2.42	0.55
34:YA:1872:A:C5	34:YA:1878:G:H1'	2.41	0.55
34:YA:2056:G:C6	34:YA:2577:A:N9	2.75	0.55
34:YA:2692:C:H2'	34:YA:2693:A:H8	1.72	0.55
1:QA:856:C:H2'	1:QA:857:C:C6	2.42	0.55
1:QA:1049:U:C4	14:QN:3:ARG:CB	2.77	0.55
1:QA:1221:G:H5'	19:QS:36:ARG:CZ	2.37	0.55
1:QA:1314:C:C5	19:QS:6:LYS:HE3	2.39	0.55
34:RA:1528:A:H2'	34:RA:1529:A:C8	2.42	0.55
1:XA:1229:A:H62	13:XM:104:ARG:CD	2.20	0.55
21:XU:3:LYS:HG2	21:XU:14:TRP:CB	2.36	0.55
43:YO:104:ARG:NH2	48:YT:36:GLU:OE2	2.36	0.55
1:QA:625:G:H5'	16:QP:10:GLY:N	2.21	0.55
14:QN:24:CYS:SG	14:QN:40:CYS:N	2.80	0.55
34:RA:831:G:N2	44:RP:53:GLY:O	2.40	0.55
34:RA:1299:G:H22	34:RA:1640:C:H5'	1.71	0.55
34:RA:1826:G:H4'	36:RD:242:ARG:HH21	1.72	0.55
34:RA:2476:A:H2'	34:RA:2477:C:C6	2.42	0.55
53:RY:6:HIS:O	53:RY:97:ARG:NH2	2.39	0.55

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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:2080:G:N1	34:YA:2241:A:C2	2.74	0.55
34:YA:2134:A:H1'	34:YA:2158:A:N3	2.22	0.55
34:YA:2506:U:H2'	34:YA:2507:C:H6	1.72	0.55
38:YF:56:GLU:OE2	38:YF:93:LYS:NZ	2.36	0.55
53:YY:83:THR:HG21	53:YY:99:CYS:SG	2.48	0.55
1:QA: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
1:QA:1253:G:P	10:QJ:44:VAL:HG23	2.46	0.54
2:QB:130:ARG:O	2:QB:135:GLN:NE2	2.37	0.54
34:RA:459:U:H2'	34:RA:460:A:H8	1.72	0.54
34:RA:1999:C:H1'	34:RA:2687:U:H1'	1.89	0.54
43:RO:104:ARG:NH2	43:RO:121:VAL:O	2.40	0.54
45:RQ:45:GLN:NE2	45:RQ:91:GLU:O	2.40	0.54
45:RQ:62:GLY:O	54:RZ:178:GLU:OE1	2.25	0.54
1:XA:745:C:H5''	1:XA:851:G:H1'	1.87	0.54
1:XA:941:G:O2'	1:XA:1350:A:OP1	2.24	0.54
1:XA:1541:U:O2	23:XX:5:A:C2	2.60	0.54
30:Y6:40:CYS:HB3	30:Y6:43:CYS:HB3	1.88	0.54
34:YA:482:A:H1'	34:YA:498:G:N2	2.22	0.54
34:YA:1456:G:N1	34:YA:2703:C:N4	2.18	0.54
34:YA:1493:C:C4	34:YA:2210:G:C4	2.95	0.54
34:YA:2056:G:C4	34:YA:2577:A:C6	2.95	0.54
41:YI:129:THR:HA	41:YI:137:PRO:HA	1.89	0.54
45:YQ:134:ARG:NH2	54:YZ:122:ARG:HD2	2.21	0.54
1:QA:954:G:H21	19:QS:83:HIS:CE1	2.23	0.54
1:QA:1221:G:P	19:QS:36:ARG:CZ	2.95	0.54
3:QC:5:ILE:HD12	14:QN:49:HIS:CD2	2.42	0.54
8:QH:64:LYS:HG2	8:QH:79:VAL:HG11	1.90	0.54
34:RA:504:U:H5''	34:RA:505:A:H5'	1.88	0.54
34:RA:747:U:H3'	34:RA:2612:C:H41	1.71	0.54
47:RS:34:HIS:ND1	47:RS:53:SER:OG	2.40	0.54
1:XA:1505:G:H5'	1:XA:1506:U:C6	2.43	0.54
2:XB:187:LEU:HA	2:XB:201:ILE:HB	1.90	0.54
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:309:G:C5'	16:QP:27:LYS:HE2	2.27	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:974:A:OP2	14:QN:29:ARG:HG3	2.03	0.54
3:QC:21:ARG:NH2	10:QJ:15:THR:HG21	2.22	0.54
34:RA:2312:U:O2'	39:RG:40:ASN:OD1	2.20	0.54
34:RA:2789:C:H1'	34:RA:2892:A:H2	1.72	0.54
43:RO:22:ILE:HB	43:RO:40:VAL:HG13	1.89	0.54
45:RQ:138:ASP:HB2	54:RZ:122:ARG:NH2	2.23	0.54
1:XA:1221:G:OP1	19:XS:36:ARG:HD3	2.07	0.54
33:Y9:16:VAL:HG12	33:Y9:25:VAL:HG12	1.88	0.54
34:YA:1275:A:O2'	34:YA:1645:G:N3	2.41	0.54
34:YA:1826:G:H4'	36:YD:242:ARG:NH2	2.22	0.54
34:YA:2275:C:O2	45:YQ:83:MET:CG	2.55	0.54
40:YH:2:SER:O	40:YH:2:SER:OG	2.24	0.54
1:QA:625:G:C5'	16:QP:9:PHE:HB3	2.36	0.54
1:QA:957:U:H5'	19:QS:81:ARG:CB	2.37	0.54
1:QA:1004:A:H2	1:QA:1024:G:H2'	1.71	0.54
1:QA:1060:C:C5	3:QC:2:GLY:HA3	2.42	0.54
5:QE:80:ILE:HD13	8:QH:104:ARG:HH12	1.73	0.54
12:QL:53:ARG:HB3	12:QL:69:TYR:HE1	1.73	0.54
1:XA:335:C:H2'	1:XA:336:C:C6	2.41	0.54
1:XA:379:C:H2'	1:XA:380:G:C8	2.43	0.54
1:XA:1112:C:C1'	3:XC:179:ARG:HE	2.18	0.54
1:XA:1396:A:H2	5:XE:19:MET:HG3	1.72	0.54
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:624:C:H4'	16:QP:10:GLY:O	2.07	0.54
1:QA:981:U:H5''	14:QN:6:LEU:CD2	2.35	0.54
1:QA:1229:A:H61	13:QM:104:ARG:NH1	2.02	0.54
1:QA:1279:A:OP2	10:QJ:9:ARG:NH1	2.37	0.54
6:QF:97:PHE:CD2	18:QR:31:LEU:HD13	2.43	0.54
10:QJ:40:LEU:HD13	10:QJ:69:ASN:HB3	1.90	0.54
34:RA:1225:C:O2'	50:RV:86:GLY:N	2.34	0.54
34:RA:1445:C:H2'	34:RA:1446:C:H6	1.72	0.54
34:RA:2185:C:H2'	34:RA:2186:G:C8	2.42	0.54
34:RA:2312:U:H2'	34:RA:2313:C:H6	1.72	0.54
34:RA:2520:C:H2'	34:RA:2521:C:H6	1.72	0.54
37:RE:2:LYS:NZ	37:RE:100:GLU:OE2	2.40	0.54
51:RW:67:ASP:N	51:RW:67:ASP:OD1	2.39	0.54
54:RZ:128:VAL:HG23	54:RZ:161:VAL:HG12	1.88	0.54

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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
1:XA:1226:C:H3'	13:XM:103:THR:OG1	2.07	0.54
4:XD:57:ARG:HH12	5:XE:107:ARG:NH1	2.06	0.54
8:XH:86:ILE:HD11	8:XH:136:GLU:HG2	1.89	0.54
34:YA:319:C:H2'	34:YA:320:A:C8	2.43	0.54
39:YG:19:LEU:HD23	39:YG:32:PRO:HD2	1.89	0.54
54:YZ:149:SER:OG	54:YZ:150:LEU:N	2.40	0.54
1:QA:980:C:C4'	14:QN:19:ARG:HH21	2.16	0.54
1:QA:1014:A:OP1	19:QS:32:LYS:CE	2.56	0.54
1:QA:1414:U:H2'	1:QA:1415:G:H8	1.71	0.54
9:QI:46:ALA:HA	9:QI:78:LYS:HB3	1.88	0.54
28:R4:34:GLU:OE1	39:RG:113:ARG:NE	2.40	0.54
34:RA:1638:C:H1'	34:RA:2698:U:H1'	1.90	0.54
34:RA:2212:A:H1'	34:RA:2215:G:C4	2.43	0.54
50:RV:62:LEU:HB2	50:RV:93:GLU:HG3	1.88	0.54
1:XA:421:U:H4'	3:XC:192:THR:HG22	1.88	0.54
1:XA:1315:U:O3'	14:XN:17:LYS:HE2	1.68	0.54
3:XC:14:ILE:HG22	3:XC:15:THR:HG23	1.88	0.54
3:XC:22:TRP:HA	10:XJ:93:GLY:CA	2.38	0.54
34:YA:2108:C:C4	34:YA:2182:G:N2	2.76	0.54
51:YW:69:LEU:HD13	51:YW:107:LEU:HD23	1.89	0.54
1:QA:1198:G:H2'	1:QA:1199:U:C6	2.42	0.54
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:243:A:H2	1:QA:282:A:H62	1.56	0.54
1:QA:413:G:H1'	1:QA:428:G:H21	1.72	0.54
1:QA:769:G:H4'	1:QA:1513:A:H4'	1.89	0.54
1:QA:979:C:OP1	1:QA:1223:C:N4	2.41	0.54
30:R6:46:HIS:ND1	34:RA:2371:G:O2'	2.28	0.54
33:R9:25:VAL:HB	33:R9:34:GLN:HB2	1.90	0.54
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
27:R3:13:ILE:HG21	34:RA:988:A:N6	2.23	0.54
34:RA:30:G:O2'	34:RA:1214:A:N3	2.38	0.54
34:RA:1397:U:OP2	34:RA:1398:C:N4	2.37	0.54
34:RA:2210:G:OP1	36:RD:68:LYS:NZ	2.41	0.54
1:XA:1181:G:C2	1:XA:1182:G:H1'	2.43	0.54
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:358:U:H2'	34:YA:359:A:H8	1.72	0.54
34:YA:451:C:N4	34:YA:454:A:OP2	2.35	0.54
34:YA:2240:C:H2'	34:YA:2241:A:C8	2.43	0.54
45:YQ:45:GLN:NE2	45:YQ:91:GLU:O	2.40	0.54
1:QA:1360:A:C1'	14:QN:17:LYS:HZ1	2.19	0.54
3:QC:11:ARG:NH2	3:QC:177:THR:O	2.40	0.54
34:RA:247:G:H4'	34:RA:386:G:C4	2.43	0.54
34:RA:1275:A:O2'	34:RA:1645:G:N3	2.41	0.54
34:RA:1936:A:OP2	34:RA:1961:C:N4	2.41	0.54
1:XA:702:A:C6	34:YA:1848:A:C4	2.96	0.54
1:XA:1253:G:N3	1:XA:1254:C:C5	2.76	0.54
34:YA:197:A:C5	34:YA:2430:A:H2	2.09	0.54
34:YA:1086:A:O2'	34:YA:1103:A:N6	2.36	0.54
34:YA:1363:C:H2'	34:YA:1364:G:H8	1.73	0.54
54:YZ:108:PRO:HA	54:YZ:142:SER:HA	1.88	0.54
1:QA:1010:G:H2'	1:QA:1011:G:C8	2.42	0.53
1:QA:1280:A:N9	10:QJ:41:PRO:HD2	2.22	0.53
1:QA:1286:A:N6	1:QA:1355:G:OP1	2.41	0.53
1:QA:1305:G:O2'	1:QA:1332:A:N7	2.36	0.53
3:QC:23:TYR:CE1	10:QJ:9:ARG:C	2.82	0.53
9:QI:71:SER:HA	9:QI:74:ILE:HG12	1.90	0.53
34:RA:685:A:C2	34:RA:787:U:H1'	2.43	0.53
34:RA:2750:A:P	40:RH:59:ARG:HH12	2.31	0.53

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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:51:A:C4	1:XA:353:A:C5	2.96	0.53
1:XA:1230:C:N3	13:XM:102:ARG:NH1	2.55	0.53
1:XA:1304:G:H8	1:XA:1304:G:C5'	2.06	0.53
1:XA:1320:C:N3	19:XS:37:ARG:N	2.56	0.53
34:YA:911:A:C2	45:YQ:9:TYR:CD1	2.96	0.53
1:QA:137:C:H1'	16:QP:63:GLY:CA	2.29	0.53
1:QA:445:G:H2'	1:QA:446:G:H8	1.74	0.53
1:QA:699:C:H2'	1:QA:700:G:C8	2.43	0.53
1:QA:1080:A:P	5:QE:14:ARG:HH22	2.31	0.53
1:QA:1126:U:H5	1:QA:1148:U:H3	1.56	0.53
1:QA:1522:U:H2'	1:QA:1523:G:H8	1.72	0.53
3:QC:23:TYR:CZ	10:QJ:9:ARG:O	2.61	0.53
4:QD:98:GLU:HA	4:QD:103:ASN:HD22	1.73	0.53
27:R3:49:LYS:NZ	34:RA:851:U:OP1	2.38	0.53
34:RA:863:A:O3'	35:RB:100:G:N2	2.39	0.53
1:XA:68(B):G:H1	1:XA:68(Z):C:H42	1.56	0.53
1:XA:130:A:H4'	1:XA:186(K):G:C4	2.42	0.53
1:XA:592:G:H2'	1:XA:593:G:H8	1.73	0.53
1:XA:1502:A:H5'	1:XA:1504:G:N7	2.24	0.53
23:XX:6:G:H2'	23:XX:7:G:C8	2.44	0.53
34:YA:345:A:O2'	34:YA:347:A:N6	2.40	0.53
34:YA:746:A:O2'	34:YA:2611:U:O2'	2.18	0.53
34:YA:998:C:OP2	49:YU:58:ARG:NH1	2.41	0.53
34:YA:2074:U:HO2'	34:YA:2597:G:HO2'	1.55	0.53
34:YA:2319:G:O6	47:YS:3:ARG:O	2.25	0.53
34:YA:2391:G:H1'	34:YA:2429:G:H21	1.72	0.53
1:QA:237:C:H2'	1:QA:238:G:C8	2.43	0.53
1:QA:372:C:N4	1:QA:389:A:N7	2.56	0.53
1:QA:1048:G:OP1	14:QN:4:LYS:HB3	2.07	0.53
1:QA:1293:G:H2'	1:QA:1294:G:C8	2.43	0.53
28:R4:1:MET:N	35:RB:39:A:N1	2.57	0.53
29:R5:36:CYS:SG	29:R5:49:CYS:HB3	2.49	0.53
34:RA:551:G:H5'	34:RA:1220:A:H1'	1.90	0.53
36:RD:44:ASN:N	36:RD:44:ASN:OD1	2.41	0.53
47:RS:18:ILE:HD13	47:RS:88:ASP:HA	1.90	0.53
1:XA:8:A:N6	4:XD:209:ARG:CA	2.72	0.53
1:XA:34:C:H2'	1:XA:35:G:C8	2.43	0.53
1:XA:107:G:O6	20:XT:15:ARG:NH2	2.41	0.53
1:XA:232:G:H1'	1:XA:262:A:N1	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:948:C:P	13:XM:106:ASN:HB3	2.48	0.53
1:XA:1360:A:H1'	14:YN:17:LYS:HG3	1.89	0.53
4:XD:57:ARG:NH2	5:XE:107:ARG:HD3	2.23	0.53
6:XF:99:ALA:O	18:XR:28:GLU:CG	2.56	0.53
30:Y6:35:GLU:OE2	30:Y6:50:ARG:NH1	2.42	0.53
34:YA:820:A:H1'	34:YA:943:U:H1'	1.90	0.53
34:YA:2092:U:O4	34:YA:2228:G:O6	2.26	0.53
54:YZ:129:SER:OG	54:YZ:132:ASN:OD1	2.24	0.53
3:QC:23:TYR:CD1	10:QJ:9:ARG:O	2.60	0.53
3:QC:88:ARG:HG2	3:QC:101:LEU:HD13	1.90	0.53
4:QD:196:LEU:CA	6:XF:16:GLN:HG2	2.27	0.53
4:QD:205:GLU:HG2	5:QE:100:VAL:C	2.27	0.53
27:R3:45:GLY:HA3	34:RA:852:G:H5'	1.89	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
34:RA:668:G:H2'	34:RA:670:A:H62	1.74	0.53
1:XA:261:U:C5	20:XT:79:ARG:NH2	2.76	0.53
1:XA:652:U:O4	1:XA:752:G:O2'	2.26	0.53
1:XA:796:C:H2'	1:XA:797:C:H6	1.73	0.53
7:XG:71:PRO:O	7:XG:96:GLN:NE2	2.41	0.53
16:XP:37:GLY:HA3	16:XP:50:LYS:O	2.08	0.53
33:Y9:6:SER:HB3	34:YA:2466:C:H5''	1.89	0.53
33:Y9:29:ASN:ND2	33:Y9:32:HIS:CD2	2.77	0.53
34:YA:2228:G:OP1	36:YD:263:ARG:NH2	2.41	0.53
45:YQ:28:ALA:N	45:YQ:105:GLU:OE2	2.41	0.53
1:QA:691:G:O6	11:QK:52:GLY:HA2	2.08	0.53
1:QA:986:A:O4'	19:QS:55:LYS:HA	2.08	0.53
1:QA:1302:U:C1'	13:QM:27:LYS:CE	1.95	0.53
1:QA:1306:A:OP2	21:QU:5:ASP:HB2	2.08	0.53
4:QD:20:TYR:CE2	6:XF:14:LEU:HA	2.43	0.53
46:RR:56:LYS:NZ	46:RR:90:ARG:O	2.41	0.53
51:RW:14:PRO:HG2	51:RW:78:GLU:HG3	1.90	0.53
1:XA:901:A:C5	1:XA:902:G:H1'	2.44	0.53
1:XA:976:G:H21	1:XA:1362(B):C:H2'	1.73	0.53
1:XA:1305:G:N7	1:XA:1331:G:O6	2.41	0.53
34:YA: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:740:U:O3'	15:QO:39:LEU:CG	2.56	0.53
1:QA:1187:G:N2	14:QN:60:SER:OG	2.42	0.53
3:QC:29:TYR:CE1	14:QN:54:PRO:HG2	2.39	0.53

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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:107:LYS:HE3	38:RF:207:GLY:H	1.73	0.53
38:RF:185:ASP:OD1	38:RF:188:ARG:NH1	2.42	0.53
45:RQ:81:VAL:O	45:RQ:82:ARG:NE	2.34	0.53
34:YA:389:G:H1	44:YP:71:VAL:H	1.57	0.53
34:YA:749:C:H4'	34:YA:1271:G:N3	2.23	0.53
34:YA:1457:A:N1	34:YA:2703:C:N4	2.57	0.53
34:YA:2071:A:H2'	34:YA:2072:G:C8	2.44	0.53
41:YI:68:LEU:HA	41:YI:71:ILE:HG22	1.90	0.53
1:QA:539:A:OP2	12:QL:115:LYS:HD3	2.08	0.53
1:QA:878:G:H5''	8:QH:90:GLY:N	2.23	0.53
1:QA:973:G:C4'	14:QN:29:ARG:NH2	2.53	0.53
1:QA:1048:G:OP1	14:QN:4:LYS:CE	2.56	0.53
4:QD:205:GLU:CG	5:QE:100:VAL:O	2.48	0.53
27:R3:12:PRO:HA	27:R3:15:TYR:HD2	1.73	0.53
30:R6:9:LEU:HD13	30:R6:51:GLU:HB2	1.90	0.53
34:RA:642:G:H21	34:RA:646:A:H2	1.56	0.53
34:RA:1815:A:OP2	36:RD:54:ARG:NH2	2.42	0.53
34:RA:2345:G:H1'	34:RA:2382:G:H5'	1.91	0.53
1:XA:481:G:N3	1:XA:482:A:N6	2.56	0.53
1:XA:539:A:OP1	12:XL:114:LYS:CD	2.52	0.53
1:XA:1106:G:H5'	3:XC:172:ARG:CG	2.38	0.53
31:Y7:37:LYS:HE3	34:YA:458:G:C5	2.44	0.53
34:YA:288:C:H2'	34:YA:289:A:H8	1.73	0.53
34:YA:882:G:H2'	34:YA:883:G:H8	1.74	0.53
34:YA:1061:U:H4'	34:YA:1070:A:H1'	1.90	0.53
40:YH:103:LEU:HB3	40:YH:115:VAL:HG22	1.91	0.53
1:QA:797:C:H2'	1:QA:798:G:H8	1.74	0.53
1:QA:1318:A:H62	14:QN:16:PHE:HB3	1.74	0.53
7:QG:114:ARG:O	7:QG:119:ARG:NH2	2.42	0.53
14:QN:24:CYS:HB2	14:QN:28:GLY:H	1.73	0.53
25:R1:41:ARG:NH2	34:RA:1365:A:O4'	2.40	0.53
34:RA:2107:C:H2'	34:RA:2108:C:C6	2.44	0.53
34:RA:2698:U:H2'	34:RA:2699:C:C6	2.43	0.53
37:RE:171:GLU:HB3	37:RE:185:LYS:HE2	1.90	0.53
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:1260:C:O2'	1:XA:1283:G:O2'	2.23	0.53
1:XA:1279:A:O2'	1:XA:1282:C:N4	2.42	0.53
34:YA:699:A:O3'	34:YA:1554:A:N6	2.42	0.53
34:YA:793:A:OP2	34:YA:2071:A:O2'	2.27	0.53
34:YA:1050:A:C8	34:YA:2751:G:N3	2.76	0.53
34:YA:1266:G:C8	51:YW:15:ARG:NH2	2.76	0.53
34:YA:1999:C:H2'	34:YA:2000:G:H8	1.74	0.53
34:YA:2317:C:H3'	34:YA:2318:G:H21	1.74	0.53
1:QA:160:A:H1'	1:QA:344:A:C5	2.45	0.53
1:QA:861:G:HO2'	1:QA:874:G:HO2'	1.57	0.53
1:QA:1314:C:C5	19:QS:6:LYS:CE	2.92	0.53
1:QA:1331:G:P	13:QM:24:GLY:H	2.32	0.53
7:QG:16:LEU:CD2	9:QI:42:ARG:CA	2.87	0.53
34:RA:477:A:N6	34:RA:500:G:O2'	2.42	0.53
34:RA:828:U:H4'	34:RA:831:G:N1	2.24	0.53
34:RA:1935:G:H1'	34:RA:1964:G:N2	2.24	0.53
34:RA:2094:G:OP1	41:RI:22:LYS:CE	2.54	0.53
42:RN:39:ARG:NH1	42:RN:48:MET:SD	2.82	0.53
26:Y2:29:LYS:NZ	52:YX:6:ASP:OD2	2.32	0.53
28:Y4:11:PRO:HA	28:Y4:25:TYR:HA	1.90	0.53
34:YA:758:C:H2'	34:YA:759:G:H8	1.73	0.53
34:YA:1958:C:H2'	34:YA:1959:G:H8	1.74	0.53
34:YA:2630:G:N3	34:YA:2892:A:O2'	2.42	0.53
43:YO:120:GLU:OE1	48:YT:67:SER:OG	2.28	0.53
1:QA:643:C:O2'	8:QH:132:GLU:OE1	2.24	0.52
1:QA:675:A:O2'	11:QK:115:PRO:HA	2.09	0.52
1:QA:1223:C:P	19:QS:78:ARG:CZ	2.93	0.52
34:RA:589:C:H2'	34:RA:590:A:C8	2.44	0.52
34:RA:1028:A:H2'	34:RA:1029:A:C8	2.44	0.52
34:RA:1668:A:H2	34:RA:1675:C:H41	1.56	0.52
34:RA:2133:G:N2	34:RA:2157:G:H2'	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2291:U:H1'	34:RA:2374:C:H1'	1.91	0.52
46:RR:103:ARG:NH1	46:RR:108:GLY:O	2.40	0.52
50:RV:76:LYS:HB2	50:RV:81:TYR:HB3	1.90	0.52
1:XA:1282:C:H2'	1:XA:1283:G:O4'	2.09	0.52
1:XA:1378:C:O2	1:XA:1378:C:H2'	2.09	0.52
1:XA:1505:G:H5'	1:XA:1506:U:H6	1.74	0.52
1:XA:1510:U:H2'	1:XA:1511:G:C8	2.44	0.52
10:XJ:64:GLU:O	14:YN:56:VAL:CG2	2.57	0.52
34:YA:1500:G:O2'	36:YD:100:GLY:O	2.27	0.52
34:YA:2453:A:H2'	34:YA:2454:G:H8	1.73	0.52
34:YA:2626:C:H2'	34:YA:2627:G:C8	2.44	0.52
36:YD:17:THR:HB	36:YD:205:VAL:H	1.74	0.52
1:QA:677:U:H1'	11:QK:119:CYS:SG	2.49	0.52
1:QA:762:C:H2'	1:QA:763:G:H8	1.75	0.52
1:QA:985:C:H2'	1:QA:986:A:C8	2.44	0.52
1:QA:1305:G:H2'	1:QA:1331:G:C2	2.43	0.52
10:QJ:33:GLN:O	10:QJ:76:ASN:ND2	2.43	0.52
19:QS:4:SER:OG	19:QS:5:LEU:N	2.41	0.52
34:RA:390:A:H1'	34:RA:391:G:C8	2.44	0.52
34:RA:2006:C:H2'	34:RA:2007:C:C6	2.44	0.52
34:RA:2377:A:H2'	34:RA:2378:A:C8	2.44	0.52
34:RA:2729:G:H1'	37:RE:187:ALA:HB2	1.91	0.52
1:XA:129(B):G:H1'	1:XA:186(J):U:H2'	1.92	0.52
1:XA:422:C:H1'	1:XA:423:G:N1	2.25	0.52
1:XA:520:A:C2	1:XA:536:C:H1'	2.44	0.52
1:XA:1216:G:C5'	14:YN:5:ALA:HB2	2.40	0.52
1:XA:1440(F):G:N2	1:XA:1440(P):A:H1'	2.24	0.52
31:Y7:37:LYS:CG	34:YA:458:G:C8	2.93	0.52
34:YA:1094:U:H1'	34:YA:1097:U:C5	2.44	0.52
34:YA:1728:G:H2'	34:YA:1731:G:O6	2.09	0.52
34:YA:2479:G:OP1	34:YA:2537:U:O2'	2.25	0.52
1:QA:217:C:H2'	1:QA:218:C:C6	2.45	0.52
1:QA:825:G:H2'	1:QA:826:C:C6	2.45	0.52
1:QA:855:G:H21	1:QA:1539:C:H5''	1.74	0.52
1:QA:1028(H):G:H2'	1:QA:1028(I):G:C8	2.45	0.52
1:QA:1048:G:OP1	14:QN:4:LYS:CB	2.56	0.52
2:QB:209:ARG:NH1	2:QB:240:GLN:OE1	2.43	0.52
29:R5:46:CYS:HB3	29:R5:49:CYS:SG	2.50	0.52
34:RA:1252:G:H21	49:RU:33:ARG:CZ	2.22	0.52
34:RA:1252:G:H21	49:RU:33:ARG:NH2	2.07	0.52
34:RA:2245:U:H5'	34:RA:2246:G:H5'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2695:C:H2'	34:RA:2696:U:H6	1.74	0.52
40:RH:125:VAL:HG22	40:RH:125:VAL:O	2.08	0.52
54:RZ:27:VAL:HG22	54:RZ:85:HIS:HE1	1.74	0.52
1:XA:608:A:C3'	1:XA:609:A:H8	2.22	0.52
1:XA:860:A:H3'	1:XA:861:G:H8	1.74	0.52
1:XA:974:A:OP2	14:XN:31:ARG:HB2	2.08	0.52
1:XA:1500:A:H5''	1:XA:1508:G:H5'	1.92	0.52
3:XC:32:LEU:O	3:XC:59:ARG:NH2	2.42	0.52
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
1:XA:960:U:C5	19:XS:78:ARG:HG2	2.45	0.52
1:XA:1301:U:HO2'	13:XM:17:VAL:HG21	1.67	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
13:XM:84:ILE:CD1	19:XS:65:ASN:CG	2.61	0.52
18:XR:47:THR:HG22	18:XR:85:LEU:HD13	1.91	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
24:R0:7:LEU:HD12	45:RQ:83:MET:SD	2.50	0.52
34:RA:137(B):G:H21	52:RX:41:ASN:HD21	1.57	0.52
34:RA:787:U:H5''	34:RA:788:A:H5'	1.91	0.52
34:RA:1567:A:C8	36:RD:84:TYR:HE2	2.27	0.52
1:XA:908:A:H2'	1:XA:909:A:C8	2.45	0.52
1:XA:1300:G:N1	1:XA:1334:G:C5	2.78	0.52
34:YA:2757:A:N1	40:YH:67:LEU:HD13	2.24	0.52
1:QA:28:G:N3	1:QA:296:U:H4'	2.24	0.52
1:QA:186(Q):U:H2'	1:QA:191:G:C8	2.45	0.52
1:QA:543:C:OP2	4:QD:10:ARG:NH2	2.41	0.52
1:QA:637:G:H2'	1:QA:638:G:C8	2.44	0.52
1:QA:983:A:O4'	14:QN:2:ALA:HB3	2.10	0.52
29:R5:33:CYS:N	29:R5:38:ALA:O	2.28	0.52

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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
1:XA:1540:U:C2	23:XX:6:G:N2	2.78	0.52
7:XG:18:TYR:OH	7:XG:47:CYS:SG	2.64	0.52
34:YA:2085:C:N3	34:YA:2235:G:C2	2.78	0.52
47:YS:61:ASN:ND2	47:YS:64:GLU:OE1	2.42	0.52
1:QA:123:C:H2'	1:QA:124:G:C8	2.44	0.52
1:QA:718:G:C5'	11:QK:117:ASN:OD1	2.58	0.52
1:QA:973:G:H4'	14:QN:29:ARG:NH2	2.22	0.52
7:QG:111:ARG:HH11	7:QG:119:ARG:HA	1.73	0.52
12:QL:85:ILE:HD11	12:QL:98:TYR:HB3	1.92	0.52
34:RA:144:C:H2'	34:RA:145:G:C8	2.45	0.52
34:RA:225:A:N6	34:RA:419:C:O2'	2.43	0.52
48:RT:30:VAL:HG12	48:RT:86:ILE:HG23	1.92	0.52
1:XA:1253:G:O3'	10:XJ:45:ARG:CD	2.58	0.52
5:XE:76:ILE:HB	5:XE:142:LEU:HD21	1.92	0.52
22:XV:1:C:H2'	22:XV:2:G:H8	1.75	0.52
26:Y2:48:HIS:CG	34:YA:96:G:H4'	2.45	0.52
34:YA:410:G:C2	34:YA:2407:G:N7	2.78	0.52
34:YA:2168:G:N2	34:YA:2170:A:H62	2.07	0.52
34:YA:2311:A:N7	39:YG:44:GLY:HA3	2.25	0.52
1:QA:310:G:OP1	16:QP:27:LYS:CD	2.52	0.52
1:QA:377:G:H2'	1:QA:378:G:H8	1.75	0.52
1:QA:797:C:H2'	1:QA:798:G:C8	2.45	0.52
1:QA:946:A:P	13:QM:114:ARG:HH21	2.30	0.52
1:QA:994:A:C8	1:QA:1216:G:H1'	2.45	0.52
1:QA:1108:G:O3'	3:QC:176:HIS:CD2	2.63	0.52
1:QA:1162:C:H2'	1:QA:1163:C:C6	2.44	0.52
1:QA:1279:A:H2	10:QJ:43:ARG:HH12	1.57	0.52
1:QA:1304:G:H5''	21:QU:10:ARG:NH2	2.24	0.52
10:QJ:47:PHE:HD2	14:QN:34:TYR:CD2	2.28	0.52
34:RA:323:G:C2	34:RA:333:G:H1'	2.45	0.52
34:RA:1752:C:H2'	34:RA:1753:G:C8	2.45	0.52
34:RA:1938:A:C6	34:RA:2590:A:H1'	2.45	0.52
34:RA:2730:C:H2'	34:RA:2731:G:C8	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:RB:55:U:O3'	39:RG:27:ASN:ND2	2.42	0.52
38:RF:65:TRP:NE1	38:RF:73:ALA:O	2.42	0.52
48:RT:6:LEU:HA	48:RT:9:LEU:HB2	1.91	0.52
1:XA:770:C:H2'	1:XA:771:G:H8	1.75	0.52
1:XA:899:C:P	1:XA:899:C:C6	3.03	0.52
1:XA:974:A:P	14:YN:29:ARG:CZ	2.98	0.52
1:XA:1124:G:P	10:XJ:36:GLY:HA3	2.50	0.52
5:XE:110:LEU:HD13	5:XE:118:ILE:HG21	1.90	0.52
7:XG:92:SER:O	7:XG:96:GLN:HB2	2.10	0.52
34:YA:28:A:N6	34:YA:512:G:H1'	2.25	0.52
34:YA:586:A:H5'	38:YF:89:VAL:HG21	1.91	0.52
34:YA:1608:A:O2'	34:YA:1611:C:N4	2.43	0.52
34:YA:2054:A:C2	34:YA:2616:C:O2	2.62	0.52
34:YA:2185:C:H2'	34:YA:2186:G:C8	2.45	0.52
34:YA:2577:A:H2'	34:YA:2614:A:H62	1.75	0.52
1:QA:675:A:H61	1:QA:715:A:H61	1.57	0.52
1:QA:1251:A:N1	1:QA:1354:C:O2'	2.35	0.52
1:QA:1357:A:C5'	10:QJ:45:ARG:HH12	2.22	0.52
4:QD:122:ARG:NH1	4:QD:122:ARG:O	2.43	0.52
28:R4:7:PRO:CG	39:RG:61:ALA:HB1	2.30	0.52
34:RA:1567:A:C8	36:RD:84:TYR:CE2	2.98	0.52
34:RA:2306:C:H2'	34:RA:2307:G:N2	2.25	0.52
35:RB:104:A:OP1	54:RZ:72:ARG:NH1	2.43	0.52
1:XA:8:A:H62	4:XD:208:SER:C	2.13	0.52
1:XA:191:G:O2'	20:XT:103:GLY:N	2.43	0.52
1:XA:1440(K):C:HO2'	1:XA:1440(L):G:N2	2.07	0.52
1:XA:1440(N):G:P	20:XT:35:THR:HG21	2.46	0.52
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
32:Y8:49:VAL:HG23	32:Y8:53:PRO:HD3	1.91	0.52
34:YA:10:G:N2	34:YA:2629:A:C2	2.78	0.52
34:YA:1801:G:OP1	34:YA:1801:G:N2	2.32	0.52
1:QA:520:A:C2'	12:QL:73:GLU:OE2	2.57	0.52
1:QA:959:A:H62	19:QS:79:THR:CG2	2.23	0.52
1:QA:986:A:O2'	19:QS:55:LYS:HA	2.10	0.52
1:QA:1160:G:H5'	2:QB:132:LYS:NZ	2.25	0.52
1:QA:1203:C:H5'	14:QN:3:ARG:HH11	1.74	0.52
2:QB:61:LEU:HD21	2:QB:68:ILE:HD11	1.91	0.52
24:R0:66:VAL:O	24:R0:81:VAL:HA	2.10	0.52
35:RB:116:G:H4'	47:RS:54:LEU:CD2	2.39	0.52
44:RP:84:ASN:ND2	44:RP:117:GLU:OE2	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:718:G:C1'	11:XK:117:ASN:HB2	2.40	0.52
1:XA:1033:G:H2'	1:XA:1034:G:C8	2.44	0.52
1:XA:1123:A:H1'	10:XJ:38:ILE:HG22	1.92	0.52
1:XA:1244:C:H2'	1:XA:1245:A:C8	2.45	0.52
34:YA:197:A:C8	34:YA:2430:A:H2	2.27	0.52
34:YA:389:G:H22	44:YP:72:PRO:HD3	1.75	0.52
41:YI:20:ASP:OD2	41:YI:20:ASP:N	2.43	0.52
45:YQ:21:THR:OG1	45:YQ:22:LYS:N	2.42	0.52
1:QA:164:U:H2'	1:QA:165:C:C6	2.45	0.51
1:QA:186(C):C:H1'	20:QT:89:ARG:HH22	1.75	0.51
1:QA:1240:U:H2'	7:QG:38:LEU:CD1	2.16	0.51
1:QA:1304:G:H1'	1:QA:1334:G:N1	2.25	0.51
33:R9:27:CYS:SG	33:R9:28:GLU:N	2.83	0.51
34:RA:990:A:H1'	34:RA:1156:A:N3	2.25	0.51
34:RA:2102:U:H2'	34:RA:2103:C:H6	1.75	0.51
34:RA:2836:U:H2'	34:RA:2837:G:C8	2.44	0.51
42:RN:35:ARG:HG3	42:RN:37:LYS:HG2	1.91	0.51
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
1:XA:1382:C:O5'	1:XA:1382:C:H6	1.93	0.51
8:XH:121:ASP:OD1	8:XH:121:ASP:N	2.42	0.51
34:YA:199:A:C5	34:YA:2434:A:N1	2.77	0.51
34:YA:564:C:N4	34:YA:573:G:OP1	2.37	0.51
34:YA:1849:G:H2'	34:YA:1850:G:H8	1.75	0.51
34:YA:2070:G:H2'	34:YA:2071:A:C8	2.44	0.51
34:YA:2417:C:OP1	44:YP:64:LYS:NZ	2.43	0.51
1:QA:749:C:H2'	1:QA:750:G:H8	1.74	0.51
1:QA:960:U:O4	19:QS:78:ARG:CB	2.52	0.51
1:QA:974:A:C4'	14:QN:31:ARG:CB	2.87	0.51
1:QA:1315:U:H2'	1:QA:1316:G:H8	1.75	0.51
1:QA:1360:A:H4'	14:QN:17:LYS:HZ2	1.74	0.51
4:QD:15:GLU:OE2	4:QD:66:ARG:NH2	2.42	0.51
34:RA:1768:U:H2'	34:RA:1769:G:C8	2.45	0.51
34:RA:1992:G:N2	34:RA:1996:C:O2'	2.43	0.51
34:RA:2086:U:H2'	34:RA:2087:G:C8	2.45	0.51
43:RO:23:ARG:NH2	43:RO:28:SER:O	2.43	0.51
1:XA:186(B):C:O2'	20:XT:104:LEU:HD11	2.09	0.51
1:XA:619:U:O4'	4:XD:131:ARG:NH2	2.42	0.51
1:XA:1252:A:C2	1:XA:1355:G:H1'	2.41	0.51
1:XA:1294:G:H2'	1:XA:1295:G:H8	1.76	0.51
29:Y5:48:GLU:CD	51:YW:37:ARG:HH12	2.09	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:1418:G:H2'	34:YA:1579:A:N6	2.25	0.51
34:YA:1999:C:H2'	34:YA:2000:G:C8	2.45	0.51
34:YA:2044:C:N4	34:YA:2625:G:C2	2.77	0.51
34:YA:2847:U:OP1	48:YT:98:LYS:NZ	2.41	0.51
36:YD:8:PRO:HB3	36:YD:14:ARG:HG2	1.92	0.51
1:QA:617:G:H21	16:QP:14:ASN:ND2	2.08	0.51
1:QA:741:G:O5'	15:QO:39:LEU:HD12	2.07	0.51
3:QC:79:ARG:CD	11:XK:104:GLN:HG3	2.40	0.51
5:QE: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:406:G:H2'	1:XA:407:G:C8	2.45	0.51
1:XA:1129:C:H1'	1:XA:1132:C:C5	2.45	0.51
1:XA:1259:C:O2'	1:XA:1283:G:N2	2.42	0.51
10:XJ:64:GLU:O	14:XN:56:VAL:HG22	2.11	0.51
12:XL:10:LEU:HD23	17:XQ:32:TYR:CZ	2.44	0.51
16:XP:4:ILE:HB	16:XP:66:PRO:HB3	1.92	0.51
30:Y6:34:LEU:N	30:Y6:51:GLU:OE1	2.44	0.51
34:YA:1297:C:H2'	34:YA:1298:C:H6	1.74	0.51
34:YA:1971:A:C4	36:YD:241:PRO:HB3	2.45	0.51
34:YA:2049:G:N2	34:YA:2620:C:N1	2.53	0.51
34:YA:2641:G:H5''	42:YN:76:SER:HB3	1.93	0.51
35:YB:104:A:OP1	54:YZ:72:ARG:NH1	2.42	0.51
37:YE:78:LEU:HG	37:YE:79:ARG:HD2	1.91	0.51
45:YQ:67:ARG:O	45:YQ:101:ARG:NH2	2.44	0.51
48:YT:19:LEU:HD22	48:YT:86:ILE:HD12	1.92	0.51
1:QA:45:U:H3	1:QA:396:G:H1	1.58	0.51
1:QA:269:C:H2'	1:QA:270:A:C8	2.45	0.51
1:QA:981:U:H5'	14:QN:6:LEU:HD23	1.92	0.51
1:QA:1137:C:H4'	1:QA:1138:G:C2	2.46	0.51
1:QA:1309:G:H2'	1:QA:1310:G:C8	2.45	0.51
2:QB:84:GLU:OE2	2:QB:87:ARG:NH2	2.43	0.51
18:QR:30:ASP:HB3	18:QR:33:ASP:HB2	1.92	0.51
34:RA:220:G:H22	34:RA:427:U:H2'	1.75	0.51
34:RA:242:G:N2	34:RA:254:G:H2'	2.25	0.51
34:RA:307:G:H21	34:RA:330:A:N6	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:633:A:H1'	34:RA:2403:C:H4'	1.91	0.51
34:RA:679:C:H2'	34:RA:680:G:C8	2.46	0.51
34:RA:1546:C:H5'	34:RA:1547:C:H5'	1.91	0.51
34:RA:1660:C:H2'	34:RA:1661:G:H8	1.75	0.51
41:RI:86:THR:HA	41:RI:123:LEU:CB	2.40	0.51
1:XA:375:U:H6	1:XA:375:U:C5'	2.23	0.51
34:YA:414:C:H2'	34:YA:415:A:C8	2.45	0.51
34:YA:882:G:H2'	34:YA:883:G:C8	2.45	0.51
34:YA:1252:G:H21	49:YU:33:ARG:HD3	1.76	0.51
34:YA:2443:C:H2'	34:YA:2444:G:H8	1.76	0.51
34:YA:2690:C:N4	34:YA:2713:A:N3	2.58	0.51
38:YF:198:ALA:HA	38:YF:201:VAL:HG12	1.91	0.51
1:QA:608:A:O2'	16:QP:9:PHE:CE1	2.62	0.51
1:QA:986:A:H2'	1:QA:987:G:C8	2.46	0.51
25:R1:10:LYS:NZ	25:R1:65:SER:OG	2.41	0.51
28:R4:26:SER:OG	28:R4:27:THR:N	2.43	0.51
34:RA:414:C:H2'	34:RA:415:A:H8	1.75	0.51
34:RA:2575:C:H5'	37:RE:144:ARG:HG3	1.91	0.51
34:RA:2647:U:H2'	34:RA:2648:C:H6	1.76	0.51
40:RH:103:LEU:CG	40:RH:123:PHE:CE1	2.94	0.51
41:RI:86:THR:HA	41:RI:123:LEU:HB2	1.92	0.51
47:RS:26:LEU:O	47:RS:88:ASP:HB3	2.10	0.51
1:XA:123:C:H2'	1:XA:124:G:H8	1.76	0.51
1:XA:784:C:H2'	1:XA:785:G:C8	2.46	0.51
1:XA:1279:A:HO2'	1:XA:1281:U:H5	1.59	0.51
3:XC:58:GLU:HB2	3:XC:65:ALA:HB3	1.92	0.51
34:YA:544:C:H3'	34:YA:545:G:H8	1.75	0.51
34:YA:863:A:H2'	34:YA:864:G:H8	1.75	0.51
34:YA:2105:C:H2'	34:YA:2106:G:C8	2.46	0.51
1:QA:637:G:H2'	1:QA:638:G:H8	1.76	0.51
1:QA:908:A:H2'	1:QA:909:A:C8	2.45	0.51
1:QA:1142:G:C2	1:QA:1143:G:H1'	2.46	0.51
1:QA:1203:C:OP2	14:QN:3:ARG:HD3	2.11	0.51
34:RA:1057:A:H62	34:RA:1087:G:P	2.32	0.51
40:RH:103:LEU:HG	40:RH:123:PHE:CE1	2.46	0.51
41:RI:94:ALA:HA	41:RI:97:ILE:HD12	1.93	0.51
1:XA:1512:U:H2'	1:XA:1513:A:H8	1.76	0.51
5:XE:102:ALA:HB1	5:XE:106:PRO:HG2	1.93	0.51
7:XG:58:PRO:HA	7:XG:61:VAL:HG12	1.92	0.51
34:YA:992:C:H2'	34:YA:993:G:H8	1.76	0.51
34:YA:1576:U:H2'	34:YA:1577:C:H6	1.76	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2090:G:C6	34:YA:2230:G:N1	2.78	0.51
38:YF:63:LYS:NZ	38:YF:75:HIS:O	2.33	0.51
53:YY:76:CYS:SG	53:YY:79:CYS:SG	3.08	0.51
1:QA:770:C:H2'	1:QA:771:G:C8	2.46	0.51
1:QA:1112:C:O2	3:QC:178:LEU:HB2	2.10	0.51
1:QA:1292:U:H2'	1:QA:1293:G:C8	2.46	0.51
4:QD:57:ARG:HH22	5:QE:107:ARG:CG	2.23	0.51
5:QE:10:MET:HA	5:QE:32:VAL:HG12	1.93	0.51
30:R6:6:ARG:NH1	30:R6:24:GLU:OE2	2.43	0.51
34:RA:191:A:H2'	34:RA:192:C:C6	2.45	0.51
34:RA:1914:C:H2'	34:RA:1915:U:O4'	2.10	0.51
45:RQ:21:THR:OG1	45:RQ:22:LYS:N	2.43	0.51
53:RY:67:LEU:HD22	53:RY:71:LYS:HD2	1.91	0.51
1:XA:554:C:H2'	1:XA:555:C:C6	2.46	0.51
1:XA:636:U:H3'	1:XA:637:G:C8	2.45	0.51
1:XA:838(B):U:H4'	1:XA:838(C):C:C5	2.45	0.51
1:XA:977:A:O3'	1:XA:980:C:N4	2.41	0.51
1:XA:1305:G:N2	1:XA:1331:G:C8	2.79	0.51
1:XA:1422:G:H4'	43:YO:48:PRO:HB3	1.91	0.51
11:XK:109:VAL:HA	18:XR:86:VAL:HA	1.93	0.51
34:YA:36:G:H4'	34:YA:451:C:C2	2.45	0.51
34:YA:197:A:C5	34:YA:2430:A:N3	2.79	0.51
34:YA:2046:G:O6	34:YA:2623:G:O6	2.29	0.51
36:YD:108:PRO:HB3	36:YD:143:HIS:CE1	2.46	0.51
52:YX:25:LYS:HA	52:YX:81:VAL:O	2.11	0.51
1:QA:186(A):C:H1'	20:QT:81:LYS:HE3	1.92	0.51
1:QA:770:C:H2'	1:QA:771:G:H8	1.76	0.51
1:QA:1391:U:H2'	1:QA:1392:G:C8	2.46	0.51
28:R4:7:PRO:HG3	39:RG:61:ALA:CB	2.27	0.51
34:RA:36:G:H4'	34:RA:451:C:C2	2.45	0.51
34:RA:414:C:H2'	34:RA:415:A:C8	2.46	0.51
34:RA:1019:U:H2'	34:RA:1020:A:C8	2.43	0.51
34:RA:2289:G:H1'	34:RA:2346:A:H2	1.75	0.51
37:RE:110:GLY:HA2	37:RE:161:GLY:HA3	1.93	0.51
47:RS:6:ALA:HA	47:RS:9:ARG:HG2	1.92	0.51
48:RT:3:ARG:HG3	48:RT:6:LEU:HB2	1.92	0.51
50:RV:8:GLY:O	50:RV:10:LYS:NZ	2.42	0.51
1:XA:398:C:H2'	1:XA:399:G:C8	2.45	0.51
1:XA:1303:C:O2	1:XA:1303:C:H2'	2.11	0.51
1:XA:1305:G:N7	1:XA:1331:G:C6	2.75	0.51
1:XA:1313:U:H5	19:XS:6:LYS:HZ1	1.57	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1347:G:H22	1:XA:1373:G:H2'	1.76	0.51
8:XH:38:ILE:HD12	8:XH:41:ARG:HH21	1.76	0.51
34:YA:1454:U:H5	46:YR:73:VAL:CG1	2.24	0.51
34:YA:2071:A:H2	34:YA:2441:C:C2	2.28	0.51
34:YA:2085:C:N3	34:YA:2235:G:N2	2.58	0.51
34:YA:2099:U:O4	34:YA:2190:G:C6	2.64	0.51
38:YF:34:TRP:CD2	44:YP:8:PRO:HB3	2.46	0.51
42:YN:97:ARG:HA	42:YN:100:GLU:HB2	1.92	0.51
1:QA:65:U:H2'	1:QA:381:C:C5	2.45	0.51
1:QA:126:G:O2'	1:QA:634:C:O2'	2.21	0.51
1:QA:1131:G:H2'	1:QA:1132:C:C6	2.46	0.51
3:QC:34:LEU:O	3:QC:38:ARG:NE	2.43	0.51
8:QH:32:LYS:HA	8:QH:35:ILE:HD12	1.92	0.51
12:QL:10:LEU:HB3	17:QQ:32:TYR:OH	2.10	0.51
12:QL:46:LYS:HD2	12:QL:47:LYS:HB2	1.93	0.51
34:RA:1794:U:H2'	34:RA:1795:C:C6	2.45	0.51
1:XA:186(K):G:O6	1:XA:264:U:H5''	2.11	0.51
1:XA:401:C:H1'	1:XA:622:A:H1'	1.93	0.51
1:XA:435:C:H2'	1:XA:436:C:H6	1.76	0.51
1:XA:757:U:O2'	1:XA:879:C:O2	2.27	0.51
1:XA:1190:G:C4'	3:XC:176:HIS:CE1	2.83	0.51
1:XA:1216:G:H5''	14:XN:5:ALA:HB2	1.92	0.51
1:XA:1230:C:C4	13:XM:102:ARG:NH1	2.77	0.51
6:XF:9:VAL:HB	6:XF:87:ARG:HB2	1.92	0.51
29:Y5:3:LYS:HB2	34:YA:2577:A:C1'	2.40	0.51
34:YA:1416:G:H2'	34:YA:1417:C:C6	2.46	0.51
34:YA:1820:U:C2	36:YD:202:LYS:HB3	2.46	0.51
1:QA:34:C:H2'	1:QA:35:G:C8	2.45	0.51
1:QA:231:G:H2'	1:QA:232:G:H8	1.75	0.51
1:QA:1131:G:H1	1:QA:1143:G:N2	2.01	0.51
1:QA:1203:C:C5'	14:QN:3:ARG:HD2	2.41	0.51
3:QC:150:LYS:HB3	3:QC:201:TYR:HB2	1.93	0.51
32:R8:21:LYS:HE3	34:RA:651:G:OP2	2.11	0.51
42:RN:39:ARG:NH2	42:RN:41:ASP:OD1	2.44	0.51
44:RP:57:THR:OG1	44:RP:58:THR:N	2.44	0.51
1:XA:148:G:H2'	1:XA:149:A:C8	2.45	0.51
1:XA:878:G:H2'	1:XA:879:C:C6	2.46	0.51
10:XJ:26:ALA:O	10:XJ:84:GLN:NE2	2.43	0.51
34:YA:140:A:H1'	34:YA:1409:C:H5'	1.93	0.51
34:YA:291:C:H2'	34:YA:292:C:H6	1.76	0.51
34:YA:389:G:H1	44:YP:71:VAL:CG1	2.16	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:659:C:H2'	34:YA:660:G:H8	1.76	0.51
34:YA:1700:A:H3'	34:YA:1701:A:H8	1.76	0.51
34:YA:2250:G:OP2	34:YA:2250:G:N2	2.35	0.51
38:YF:154:VAL:HG22	38:YF:191:ARG:HB2	1.93	0.51
41:YI:1:MET:HG2	41:YI:23:PRO:HB3	1.92	0.51
1:QA:447:G:H2'	1:QA:485:G:N2	2.26	0.50
1:QA:617:G:H4'	16:QP:44:THR:OG1	2.11	0.50
1:QA:702:A:H3'	1:QA:703:G:H8	1.75	0.50
1:QA:815:A:H1'	1:QA:1527:C:H1'	1.93	0.50
1:QA:920:U:H2'	1:QA:921:U:C6	2.46	0.50
1:QA:1038:C:H2'	1:QA:1039:C:H6	1.76	0.50
1:QA:1318:A:C4	19:QS:37:ARG:CZ	2.93	0.50
2:QB:178:ARG:CD	8:QH:71:GLY:O	2.58	0.50
34:RA:2853:C:H2'	34:RA:2854:G:C8	2.46	0.50
36:RD:147:LEU:HD12	36:RD:148:GLU:HG3	1.93	0.50
36:RD:175:LEU:O	36:RD:182:LEU:HA	2.12	0.50
39:RG:52:ILE:HG22	39:RG:55:LYS:HD2	1.92	0.50
47:RS:35:ILE:HD11	47:RS:97:ARG:HD2	1.92	0.50
1:XA:140:A:H2'	1:XA:141:A:C8	2.45	0.50
1:XA:708:C:P	11:XK:85:ARG:HH12	2.28	0.50
1:XA:1068:G:N2	1:XA:1108:G:H1'	2.25	0.50
1:XA:1505:G:H1'	23:XX:15:A:C2	2.46	0.50
9:XI:22:GLY:N	9:XI:58:HIS:O	2.37	0.50
34:YA:86:C:H2'	34:YA:87:C:C6	2.46	0.50
34:YA:137(B):G:H2'	34:YA:139:G:N7	2.26	0.50
34:YA:824:A:O2'	34:YA:2358:G:O6	2.17	0.50
34:YA:1316:U:H2'	34:YA:1317:A:C8	2.46	0.50
34:YA:1999:C:H5''	34:YA:2723:C:O2'	2.11	0.50
34:YA:2071:A:H2'	34:YA:2072:G:H8	1.76	0.50
34:YA:2312:U:H2'	34:YA:2313:C:H6	1.76	0.50
34:YA:2532:G:O2'	34:YA:2657:A:N1	2.36	0.50
1:QA:112:G:H22	1:QA:315:A:H2	1.59	0.50
1:QA:266:G:O2'	1:QA:268:C:OP2	2.24	0.50
2:QB:208:ILE:O	2:QB:212:GLN:HB2	2.12	0.50
20:QT:71:THR:OG1	20:QT:72:LEU:N	2.43	0.50
32:R8:8:LYS:HB3	32:R8:12:LYS:HE3	1.94	0.50
32:R8:30:ARG:O	32:R8:30:ARG:HG2	2.12	0.50
34:RA:65:C:H2'	34:RA:66:C:H6	1.76	0.50
34:RA:380:U:H2'	34:RA:381:G:C8	2.47	0.50
34:RA:639:U:H2'	34:RA:640:C:C6	2.46	0.50
34:RA:1150:C:H2'	34:RA:1151:G:C8	2.46	0.50

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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
1:XA:1533:C:C4	23:XX:13:A:N1	2.79	0.50
2:XB:167:PRO:O	2:XB:171:ALA:HB2	2.11	0.50
4:XD:19:LEU:HB3	4:XD:21:LEU:HD23	1.92	0.50
4:XD:107:ARG:HB3	4:XD:174:LEU:HD11	1.93	0.50
34:YA:659:C:H2'	34:YA:660:G:C8	2.47	0.50
34:YA:1113:U:H5'	40:YH:2:SER:HB3	1.93	0.50
34:YA:1479:G:N7	34:YA:1510:A:N6	2.59	0.50
34:YA:1582:C:H2'	34:YA:1583:A:C8	2.46	0.50
34:YA:2056:G:N7	34:YA:2577:A:C6	2.79	0.50
34:YA:2691:C:H2'	34:YA:2692:C:C6	2.46	0.50
34:YA:2747:G:O6	34:YA:2755:C:H5''	2.12	0.50
1:QA:877:C:H2'	1:QA:878:G:C8	2.47	0.50
1:QA:979:C:N4	14:QN:19:ARG:CB	2.42	0.50
1:QA:1145:C:O2'	1:QA:1146:A:N7	2.43	0.50
7:QG:111:ARG:NH1	7:QG:113:GLU:OE1	2.43	0.50
11:QK:108:ILE:CG2	18:QR:88:LYS:OXT	2.60	0.50
12:QL:39:VAL:HG12	12:QL:57:LYS:HG2	1.93	0.50
20:QT:67:ALA:O	20:QT:73:HIS:ND1	2.39	0.50
34:RA:597:U:H2'	34:RA:598:G:C8	2.45	0.50
34:RA:686:G:N2	34:RA:788:A:H61	2.10	0.50
34:RA:997:G:H3'	49:RU:58:ARG:HH12	1.76	0.50
34:RA:1116:C:H2'	34:RA:1117:G:C8	2.46	0.50
39:RG:121:ASN:O	39:RG:131:TYR:OH	2.26	0.50
1:XA:702:A:N1	34:YA:1848:A:C5	2.79	0.50
1:XA:1539:C:C2	23:XX:7:G:N1	2.79	0.50
7:XG:111:ARG:HD3	7:XG:112:PRO:HD2	1.93	0.50
34:YA:389:G:N2	44:YP:71:VAL:CG1	2.69	0.50
34:YA:589:C:H2'	34:YA:590:A:C8	2.46	0.50
34:YA:1093:G:H21	34:YA:1098:A:H62	1.59	0.50
34:YA:1827:C:H5'	34:YA:1971:A:H4'	1.94	0.50
1:QA:10:A:H2'	1:QA:11:G:C8	2.46	0.50
1:QA:107:G:H3'	1:QA:108:G:N2	2.24	0.50
1:QA:757:U:H1'	1:QA:879:C:H1'	1.93	0.50
1:QA:1302:U:P	13:QM:27:LYS:HE2	2.51	0.50
4:QD:205:GLU:HB3	5:QE:107:ARG:HH12	1.77	0.50
32:R8:64:TYR:HB3	34:RA:625:G:P	2.51	0.50
34:RA:1796:U:H2'	34:RA:1797:C:C6	2.47	0.50
34:RA:2144:U:H2'	34:RA:2146:C:C5	2.47	0.50
38:RF:100:THR: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:390:A:H1'	34:YA:391:G:C8	2.47	0.50
34:YA:1853:A:N1	34:YA:2087:G:H1'	2.27	0.50
34:YA:2807:G:H1	34:YA:2892:A:H62	1.60	0.50
40:YH:85:LYS:HB3	40:YH:133:VAL:HG13	1.92	0.50
1:QA:6:G:N3	5:QE:119:LEU:HD11	2.27	0.50
1:QA:37:U:H2'	1:QA:38:G:H8	1.76	0.50
1:QA:760:G:H3'	1:QA:761:G:H8	1.76	0.50
1:QA:1222:G:O3'	19:QS:78:ARG:CZ	2.60	0.50
2:QB:111:ARG:HH11	2:QB:114:ARG:HH12	1.60	0.50
20:QT:66:ALA:O	20:QT:71:THR:OG1	2.28	0.50
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:767:A:H2'	1:XA:768:A:C8	2.46	0.50
1:XA:981:U:O5'	1:XA:981:U:H6	1.94	0.50
1:XA:986:A:C1'	19:XS:52:TYR:OH	2.58	0.50
1:XA:1305:G:N2	1:XA:1331:G:H3'	2.26	0.50
1:XA:1305:G:C1'	1:XA:1332:A:H62	2.24	0.50
1:XA:1306:A:OP2	1:XA:1331:G:N2	2.33	0.50
3:XC:157:ILE:HD12	3:XC:164:ARG:HG3	1.93	0.50
10:XJ:42:THR:HG22	10:XJ:44:VAL:HG22	1.92	0.50
19:XS:12:ASP:HB2	19:XS:37:ARG:HE	1.77	0.50
22:XV:19:G:C5	34:YA:2111:C:H4'	2.46	0.50
29:Y5:9:LYS:HE2	34:YA:2019:A:N7	2.26	0.50
30:Y6:21:TYR:OH	32:Y8:36:LYS:O	2.28	0.50
31:Y7:37:LYS:CE	34:YA:458:G:C5	2.95	0.50
34:YA:1295:C:H2'	34:YA:1296:G:H8	1.76	0.50
34:YA:1570:A:H2'	34:YA:1571:A:C8	2.47	0.50
49:YU:43:GLY:HA3	50:YV:73:SER:HB3	1.93	0.50
53:YY:28:LYS:NZ	53:YY:64:GLU:OE2	2.35	0.50
1:QA:22:G:H4'	1:QA:885:G:C8	2.47	0.50
1:QA:1253:G:C4'	10:QJ:44:VAL:O	2.58	0.50
1:QA:1323:G:N2	1:QA:1361:G:O2'	2.39	0.50
3:QC:57:ILE:HG22	3:QC:66:VAL:HG22	1.93	0.50
10:QJ:47:PHE:CE1	14:QN:36:PHE:CG	2.99	0.50
34:RA:990:A:N6	34:RA:1186:G:H1'	2.26	0.50

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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:656:C:O2'	15:XO:28:GLN:NE2	2.45	0.50
1:XA:728:A:C5	15:XO:54:ARG:CD	2.95	0.50
1:XA:1347:G:C8	9:XI:108:VAL:C	2.85	0.50
1:XA:1347:G:N2	1:XA:1373:G:H2'	2.26	0.50
20:XT:74:LYS:O	20:XT:76:ALA:N	2.44	0.50
38:YF:10:PRO:HB3	38:YF:17:ARG:HH21	1.76	0.50
40:YH:113:VAL:HG11	40:YH:151:ILE:HD12	1.94	0.50
52:YX:53:LYS:HG2	52:YX:82:GLN:HB3	1.93	0.50
1:QA:17:U:H2'	1:QA:18:C:C6	2.46	0.50
1:QA:1368:G:OP1	10:QJ:62:HIS:CD2	2.64	0.50
1:QA:1510:U:H3	1:QA:1525:G:H1	1.59	0.50
32:R8:39:LYS:NZ	34:RA:2365:G:C6	2.77	0.50
34:RA:276:A:O2'	34:RA:278:A:OP2	2.28	0.50
34:RA:2025:C:H2'	34:RA:2026:C:C6	2.47	0.50
36:RD:69:ARG:NH1	36:RD:128:GLY:O	2.42	0.50
43:RO:71:ARG:NE	43:RO:105:GLU:OE2	2.36	0.50
1:XA:45:U:H3	1:XA:396:G:H1	1.59	0.50
1:XA:754:C:C6	15:XO:69:TYR:CE2	2.95	0.50
3:XC:21:ARG:HH11	10:XJ:15:THR:HG21	1.75	0.50
10:XJ:40:LEU:CB	10:XJ:41:PRO:CD	2.68	0.50
10:XJ:62:HIS:HD2	14:XN:59:ALA:CB	2.24	0.50
13:XM:82:MET:O	13:XM:93:ARG:NH2	2.43	0.50
20:XT:75:ASN:N	20:XT:75:ASN:OD1	2.44	0.50
33:Y9:27:CYS:HB3	33:Y9:32:HIS:HB2	1.94	0.50
34:YA:1041:C:H2'	34:YA:1042:G:H8	1.77	0.50
34:YA:1359:A:N6	34:YA:1372:U:H3	2.10	0.50
34:YA:1604:C:H2'	34:YA:1605:C:H6	1.76	0.50
34:YA:2125:G:N1	34:YA:2172:U:OP1	2.29	0.50
37:YE:101:ARG:NE	37:YE:171:GLU:OE2	2.41	0.50
1:QA:1170:A:H5'	2:QB:140:HIS:HE1	1.73	0.50
1:QA:1253:G:OP2	10:QJ:44:VAL:CG2	2.58	0.50
1:QA:1315:U:H2'	1:QA:1316:G:C8	2.47	0.50
34:RA:288:C:H2'	34:RA:289:A:H8	1.76	0.50
34:RA:2030:A:H4'	34:RA:2031:A:C8	2.46	0.50
34:RA:2153:G:H2'	34:RA:2154:G:C8	2.46	0.50
36:RD:126:GLN:O	36:RD:129:ASN:ND2	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:895:G:O2'	17:XQ:100:LYS:HD2	2.11	0.50
1:XA:979:C:H5''	1:XA:1221:G:C8	2.47	0.50
2:XB:118:LEU:HD23	2:XB:142:LEU:HB2	1.94	0.50
4:XD:88:VAL:HG13	5:XE:97:GLY:HA3	1.94	0.50
34:YA:959:A:N3	34:YA:2457:U:O2'	2.44	0.50
34:YA:1150:C:H2'	34:YA:1151:G:C8	2.47	0.50
34:YA:1176:G:H3'	34:YA:1177:A:C8	2.47	0.50
34:YA:1918:A:O2'	34:YA:1920:C:N4	2.44	0.50
34:YA:2563:U:H1'	34:YA:2566:A:N6	2.27	0.50
51:YW:86:LEU:HD22	51:YW:96:ILE:HD11	1.93	0.50
1:QA:982:U:C5'	14:QN:6:LEU:CD2	2.89	0.50
1:QA:1491:G:C5'	12:QL:46:LYS:HG2	2.41	0.50
2:QB:146:GLN:HG3	2:QB:153:ARG:HH2	1.77	0.50
12:QL:104:VAL:O	12:QL:105:TYR:CG	2.57	0.50
34:RA:828:U:O2'	34:RA:831:G:O6	2.26	0.50
34:RA:1057:A:N6	34:RA:1087:G:OP1	2.45	0.50
34:RA:1408:C:H2'	34:RA:1409:C:C6	2.47	0.50
34:RA:1638:C:O2	34:RA:2698:U:O2'	2.30	0.50
34:RA:1771:C:H2'	34:RA:1772:G:C8	2.47	0.50
34:RA:2695:C:H2'	34:RA:2696:U:C6	2.47	0.50
42:RN:9:VAL:HG11	42:RN:39:ARG:HH12	1.77	0.50
1:XA:879:C:H2'	1:XA:880:C:C6	2.46	0.50
1:XA:1040:U:H2'	1:XA:1041:A:C8	2.47	0.50
1:XA:1358:U:H5'	14:YN:35:ARG:N	2.27	0.50
8:XH:21:LYS:O	8:XH:65:TYR:OH	2.28	0.50
30:Y6:23:THR:OG1	30:Y6:24:GLU:N	2.42	0.50
34:YA:69:C:H2'	34:YA:70:G:H8	1.77	0.50
34:YA:2097:C:C2	34:YA:2193:G:C2	3.00	0.50
34:YA:2100:G:C6	34:YA:2190:G:C4	3.00	0.50
34:YA:2124:G:C2	34:YA:2125:G:H1'	2.46	0.50
34:YA:2275:C:O2	45:YQ:83:MET:SD	2.69	0.50
34:YA:2698:U:H2'	34:YA:2699:C:C6	2.47	0.50
43:YO:63:VAL:HG12	43:YO:106:LEU:HD21	1.93	0.50
1:QA:625:G:H4'	16:QP:16:HIS:HB3	1.93	0.49
1:QA:1094:G:H4'	1:QA:1095:U:H5	1.76	0.49
1:QA:1100:C:H5	2:QB:96:ARG:HH21	1.46	0.49
4:QD:57:ARG:NH2	5:QE:107:ARG:NH1	2.59	0.49
24:R0:23:VAL:HG21	34:RA:857:C:H4'	1.93	0.49
24:R0:72:ARG:HE	24:R0:75:LEU:HD12	1.76	0.49
34:RA:659:C:H2'	34:RA:660:G:H8	1.77	0.49
34:RA:1494:A:H2	34:RA:1579:A:H1'	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1818:U:H5	36:RD:157:ARG:HH21	1.60	0.49
34:RA:2273:A:H2'	34:RA:2274:A:C8	2.46	0.49
1:XA:413:G:H1'	1:XA:428:G:N2	2.27	0.49
1:XA:948:C:OP2	13:XM:106:ASN:CB	2.60	0.49
1:XA:1304:G:H2'	1:XA:1333:A:H61	1.78	0.49
5:XE:81:GLU:HG2	5:XE:90:VAL:HG23	1.94	0.49
34:YA:922:U:H2'	34:YA:923:C:C6	2.47	0.49
34:YA:1127:A:N1	34:YA:2518:A:N6	2.60	0.49
34:YA:1870:C:H2'	34:YA:1871:A:O4'	2.12	0.49
1:QA:62:U:H2'	1:QA:63:C:C6	2.47	0.49
1:QA:248:C:H2'	1:QA:249:U:H6	1.77	0.49
1:QA:584:G:H2'	1:QA:585:G:C8	2.46	0.49
1:QA:980:C:H4'	14:QN:19:ARG:CZ	2.42	0.49
1:QA:1181:G:C2	1:QA:1182:G:H1'	2.47	0.49
1:QA:1221:G:C5'	19:QS:36:ARG:CZ	2.89	0.49
34:RA:345:A:N3	34:RA:346:A:N6	2.61	0.49
34:RA:458:G:H1'	34:RA:459:U:H5	1.77	0.49
1:XA:8:A:N6	4:XD:209:ARG:N	2.57	0.49
1:XA:186(C):C:H2'	1:XA:186(D):G:C8	2.47	0.49
6:XF:89:MET:HE1	18:XR:76:LEU:HB2	1.94	0.49
7:XG:16:LEU:HD21	9:XI:45:ALA:N	2.27	0.49
8:XH:19:VAL:HG23	8:XH:21:LYS:HG3	1.95	0.49
27:Y3:24:LYS:NZ	34:YA:933:A:OP1	2.38	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
54:YZ:6:LYS:NZ	54:YZ:43:GLU:OE1	2.39	0.49
1:QA:538:G:C3'	12:QL:115:LYS:NZ	2.60	0.49
1:QA:608:A:C1'	16:QP:32:TYR:HE1	2.22	0.49
1:QA:958:A:C8	19:QS:79:THR:HG21	2.46	0.49
1:QA:1153:C:H2'	1:QA:1154:G:C8	2.47	0.49
5:QE:77:PRO:O	8:QH:105:ARG:CD	2.56	0.49
34:RA:265:A:H2'	34:RA:266:G:H4'	1.93	0.49
34:RA:358:U:H2'	34:RA:359:A:C8	2.48	0.49
34:RA:380:U:H2'	34:RA:381:G:H8	1.76	0.49
34:RA:1476:C:H2'	34:RA:1477:A:C8	2.47	0.49
34:RA:2006:C:H2'	34:RA:2007:C:H6	1.77	0.49
34:RA:2183:C:H2'	34:RA:2184:G:C8	2.48	0.49
34:RA:2735:G:N2	34:RA:2770:G:H1'	2.28	0.49
1:XA:581:G:N2	1:XA:759:A:OP2	2.38	0.49
1:XA:658:G:H1'	15:XO:22:THR:HG21	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1249:C:N4	1:XA:1288:A:OP2	2.45	0.49
1:XA:1382:C:H2'	1:XA:1383:C:C6	2.47	0.49
1:XA:1481:U:H2'	1:XA:1482:G:C8	2.47	0.49
7:XG:115:ARG:HB2	7:XG:118:VAL:HG12	1.94	0.49
7:XG:140:ASP:OD2	7:XG:143:ARG:NH1	2.45	0.49
13:XM:88:ARG:HD2	13:XM:98:VAL:HB	1.95	0.49
33:Y9:27:CYS:SG	33:Y9:28:GLU:N	2.84	0.49
34:YA:270(P):U:N3	41:YI:52:ARG:NH2	2.60	0.49
34:YA:2261:C:H1'	34:YA:2388:A:H1'	1.94	0.49
35:YB:44:G:O2'	35:YB:47:C:N4	2.44	0.49
1:QA:186(E):C:H2'	1:QA:186(F):C:C6	2.46	0.49
1:QA:676:A:H2	1:QA:714:G:H1	1.60	0.49
1:QA:953:G:N7	13:QM:104:ARG:NH2	2.40	0.49
4:QD:61:LYS:HD3	4:QD:206:PHE:CD2	2.46	0.49
4:QD:205:GLU:HB3	5:QE:107:ARG:NH1	2.27	0.49
5:QE:87:SER:OG	5:QE:125:SER:OG	2.27	0.49
19:QS:10:PHE:HZ	19:QS:15:LEU:HD11	1.76	0.49
25:R1:90:ILE:HA	25:R1:94:LEU:CG	2.42	0.49
34:RA:922:U:H2'	34:RA:923:C:C6	2.47	0.49
34:RA:975:G:N2	34:RA:1156:A:O2'	2.45	0.49
40:RH:89:ILE:HD12	40:RH:131:VAL:HG22	1.94	0.49
45:RQ:36:ALA:HB1	45:RQ:127:ILE:HG21	1.94	0.49
1:XA:412:A:C2	4:XD:35:ARG:HB3	2.47	0.49
1:XA:1233:G:H21	1:XA:1364:U:H3	1.60	0.49
3:XC:19:GLU:O	3:XC:40:ARG:NH2	2.44	0.49
34:YA:1062:G:N2	34:YA:1077:A:N1	2.61	0.49
34:YA:2008:C:H2'	34:YA:2009:G:C8	2.48	0.49
1:QA:5:U:O4	4:QD:87:GLY:N	2.42	0.49
1:QA:192:U:H2'	1:QA:193:C:C6	2.46	0.49
1:QA:422:C:H1'	1:QA:423:G:N1	2.28	0.49
1:QA:891:U:H2'	1:QA:892:A:H8	1.78	0.49
1:QA:893:C:H2'	1:QA:894:G:C8	2.48	0.49
1:QA:922:G:N3	1:QA:1398:A:H2	2.10	0.49
31:R7:35:ARG:NH1	34:RA:54:G:O2'	2.39	0.49
34:RA:2103:C:H2'	34:RA:2104:G:C8	2.48	0.49
50:RV:45:THR:O	50:RV:45:THR:CG2	2.55	0.49
1:XA:25:C:H41	1:XA:559:A:H61	1.58	0.49
1:XA:407:G:C1'	4:XD:119:GLN:HE22	2.26	0.49
1:XA:692:U:H5'	1:XA:797:C:H5'	1.94	0.49
1:XA:891:U:H2'	1:XA:892:A:H8	1.76	0.49
1:XA:974:A:O5'	14:XN: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:YN:31:ARG:CZ	2.95	0.49
32:Y8:10:ALA:O	32:Y8:14:VAL:HB	2.13	0.49
34:YA:971:C:O2'	34:YA:983:A:N3	2.38	0.49
34:YA:1566:A:C4	36:YD:214:TRP:CE3	3.00	0.49
34:YA:2090:G:C2	34:YA:2230:G:C2	3.00	0.49
37:YE:1:MET:N	37:YE:83:ASP:O	2.36	0.49
1:QA:137:C:C1'	16:QP:63:GLY:HA3	2.32	0.49
1:QA:959:A:N6	19:QS:77:THR:O	2.45	0.49
1:QA:975:A:N6	10:QJ:48:THR:HG1	2.05	0.49
1:QA:1255:G:H1	1:QA:1282:C:H42	1.61	0.49
3:QC:35:GLU:HA	3:QC:38:ARG:HH21	1.77	0.49
4:QD:20:TYR:CZ	6:XF:14:LEU:C	2.85	0.49
10:QJ:47:PHE:CZ	14:QN:37:PHE:CE2	3.00	0.49
25:R1:61:ARG:NH2	34:RA:1364:G:OP2	2.41	0.49
29:R5:9:LYS:NZ	34:RA:2019:A:OP2	2.31	0.49
34:RA:444:C:H2'	34:RA:445:C:C6	2.48	0.49
34:RA:1161:C:H2'	34:RA:1162:G:C8	2.47	0.49
34:RA:2085:C:H4'	36:RD:262:ARG:HH21	1.76	0.49
34:RA:2692:C:H2'	34:RA:2693:A:H8	1.77	0.49
39:RG:135:LEU:O	39:RG:154:GLY:HA3	2.13	0.49
51:RW:22:ASP:OD1	51:RW:25:ARG:NH1	2.45	0.49
1:XA:51:A:C5	1:XA:353:A:C2	3.01	0.49
1:XA:60:A:H2	1:XA:378:G:H1'	1.77	0.49
1:XA:178:C:H2'	1:XA:179:A:H8	1.76	0.49
1:XA:536:C:H2'	1:XA:537:G:C8	2.48	0.49
6:XF:91:VAL:HB	18:XR:34:TYR:OH	2.12	0.49
29:Y5:9:LYS:NZ	34:YA:2019:A:N7	2.59	0.49
34:YA:1028:A:H2'	34:YA:1029:A:C8	2.48	0.49
34:YA:1923:U:H2'	34:YA:1924:C:C6	2.48	0.49
34:YA:2081:C:C2	34:YA:2239:G:N2	2.58	0.49
34:YA:2186:G:H2'	34:YA:2187:G:C8	2.47	0.49
34:YA:2751:G:N7	40:YH:2:SER:OG	2.45	0.49
36:YD:97:TYR:HB2	36:YD:101:GLU:O	2.13	0.49
1:QA:162:A:C5	1:QA:163:C:H1'	2.48	0.49
1:QA:165:C:H2'	1:QA:166:G:C8	2.47	0.49
1:QA:986:A:C2	19:QS:52:TYR:HE1	2.31	0.49
1:QA:1096:C:H2'	1:QA:1097:C:C6	2.47	0.49
1:QA:1306:A:OP2	21:QU:5:ASP:CB	2.60	0.49
1:QA:1313:U:C2'	19:QS:6:LYS:NZ	2.74	0.49
5:QE:151:LEU:HD12	8:QH:79:VAL:HG12	1.94	0.49
33:R9:11:CYS:SG	33:R9:14:CYS:N	2.85	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:896:A:H5''	54:RZ:146:ILE:HG22	1.94	0.49
34:RA:1283:G:H1'	34:RA:1329:U:O2	2.13	0.49
1:XA:657:G:O4'	15:XO:28:GLN:NE2	2.45	0.49
1:XA:974:A:O4'	14:YN:31:ARG:CD	2.53	0.49
1:XA:1106:G:H5'	3:XC:172:ARG:HD2	1.95	0.49
1:XA:1305:G:C4	1:XA:1331:G:N1	2.81	0.49
1:XA:1536:C:O2	23:XX:10:G:N2	2.44	0.49
6:XF:61:LEU:HD23	6:XF:63:TYR:HE2	1.77	0.49
19:XS:40:ILE:HD13	19:XS:71:LEU:HD21	1.95	0.49
26:Y2:16:LEU:O	26:Y2:67:LYS:NZ	2.45	0.49
34:YA:1771:C:H2'	34:YA:1772:G:C8	2.48	0.49
34:YA:2092:U:OP2	41:YI:27:ARG:NH2	2.43	0.49
34:YA:2153:G:H2'	34:YA:2154:G:C8	2.47	0.49
34:YA:2781:A:H5''	34:YA:2782:G:H5'	1.95	0.49
44:YP:52:GLU:OE1	44:YP:55:ARG:NH1	2.45	0.49
1:QA:739:C:O2	15:QO:42:HIS:CE1	2.66	0.49
1:QA:940:C:H2'	1:QA:941:G:C8	2.48	0.49
1:QA:1238:A:H2'	1:QA:1239:A:H8	1.77	0.49
1:QA:1253:G:O5'	10:QJ:44:VAL:O	2.30	0.49
1:QA:1313:U:O4	19:QS:4:SER:CB	2.52	0.49
1:QA:1481:U:H2'	1:QA:1482:G:C8	2.48	0.49
2:QB:178:ARG:NH2	2:QB:198:ASP:OD1	2.39	0.49
20:QT:56:MET:HG3	20:QT:84:LEU:HD21	1.94	0.49
34:RA:318:C:H2'	34:RA:319:C:C6	2.48	0.49
34:RA:1566:A:N1	36:RD:214:TRP:CE2	2.81	0.49
34:RA:2291:U:O3'	34:RA:2379:G:N2	2.46	0.49
34:RA:2532:G:O2'	34:RA:2657:A:N1	2.44	0.49
34:RA:2581:G:N2	34:RA:2581:G:OP2	2.46	0.49
1:XA:132:C:OP1	20:XT:75:ASN:ND2	2.46	0.49
1:XA:308:C:H2'	1:XA:309:G:H5'	1.94	0.49
1:XA:1187:G:N3	14:YN:61:TRP:O	2.46	0.49
7:XG:118:VAL:HG22	7:XG:122:HIS:CE1	2.48	0.49
13:XM:91:ARG:NE	13:XM:97:PRO:O	2.46	0.49
20:XT:41:ILE:HD13	20:XT:87:LYS:HG2	1.95	0.49
31:Y7:37:LYS:CE	34:YA:458:G:C4	2.95	0.49
34:YA:662:G:H5''	44:YP:17:LYS:HG2	1.93	0.49
34:YA:911:A:N1	45:YQ:9:TYR:CG	2.80	0.49
34:YA:1028:A:N6	34:YA:1125:G:H2'	2.28	0.49
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:669:U:H1'	15:XO:46:HIS:HE1	1.77	0.49
1:XA:861:G:HO2'	1:XA:874:G:HO2'	1.49	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
28:Y4:38:LYS:HE2	39:YG:112:PRO:HG3	1.94	0.49
34:YA:1128:A:H1'	34:YA:1129:A:C4	2.47	0.49
34:YA:1657:C:H2'	34:YA:1658:C:C6	2.47	0.49
34:YA:1794:U:H2'	34:YA:1795:C:C6	2.48	0.49
34:YA:2119:A:H61	34:YA:2168:G:H1	1.61	0.49
34:YA:2391:G:C6	34:YA:2427:C:H1'	2.48	0.49
45:YQ: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:500:G:H1'	34:RA:505:A:H61	1.78	0.49
34:RA:534:U:HO2'	49:RU:49:HIS:CG	2.30	0.49
34:RA:1070:A:O2'	34:RA:1097:U:O3'	2.30	0.49
34:RA:1802:A:N1	34:RA:1822:G:H1'	2.28	0.49
34:RA:2563:U:H1'	34:RA:2566:A:N6	2.28	0.49
1:XA:68(J):G:H1	1:XA:68(R):U:H3	1.60	0.49
1:XA:107:G:H3'	1:XA:108:G:N2	2.26	0.49
1:XA:1047:G:O2'	1:XA:1215:G:O2'	2.16	0.49
1:XA:1226:C:H3'	13:XM:103:THR:CB	2.43	0.49
1:XA:1227:A:H5''	13:XM:111:LYS:HE2	1.95	0.49
1:XA:1414:U:H2'	1:XA:1415:G:H8	1.78	0.49
4:XD:56:VAL:HG13	4:XD:57:ARG:HD2	1.94	0.49
6:XF:100:ASN:ND2	18:XR:26:LEU:O	2.44	0.49
34:YA:448:U:C4	34:YA:583:G:H1'	2.48	0.49
34:YA:1174:A:H2'	34:YA:1175:U:H4'	1.95	0.49
34:YA:1221:C:H2'	34:YA:1222:C:H6	1.78	0.49
34:YA:2002:G:H2'	34:YA:2003:G:H8	1.78	0.49
1:QA:1108:G:P	3:QC:175:LEU:H	2.29	0.48
1:QA:1244:C:H2'	1:QA:1245:A:C8	2.48	0.48
1:QA:1248:A:N6	21:QU:26:LYS:CD	2.56	0.48
1:QA:1372:U:H5''	9:QI:69:GLY:CA	2.43	0.48
3:QC:47:LEU:HD11	3:QC:87:LEU:HD21	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:QT:54:LYS:HE3	20:QT:100:ILE:HG21	1.95	0.48
34:RA:554:U:H2'	34:RA:556:G:C8	2.47	0.48
53:RY:15:VAL:HA	53:RY:72:VAL:HA	1.94	0.48
54:RZ:163:LEU:HD22	54:RZ:167:PRO:HG3	1.95	0.48
1:XA:518:C:H2'	1:XA:530:G:N3	2.27	0.48
1:XA:1118:C:H1'	1:XA:1179:A:C5	2.48	0.48
1:XA:1223:C:OP1	19:XS:78:ARG:NH2	2.46	0.48
1:XA:1251:A:H2'	1:XA:1252:A:C8	2.48	0.48
10:XJ:48:THR:O	14:XN:34:TYR:OH	2.29	0.48
32:Y8:2:PRO:N	34:YA:591:C:O2	2.45	0.48
32:Y8:13:ARG:HD2	44:YP:61:ARG:HE	1.78	0.48
33:Y9:14:CYS:HB3	33:Y9:27:CYS:HB2	1.95	0.48
33:Y9:19:ARG:HG3	34:YA:2756:U:H5''	1.94	0.48
34:YA:1141:U:P	42:YN:25:ARG:HH21	2.36	0.48
34:YA:1667:G:O2'	34:YA:1991:U:O4	2.30	0.48
34:YA:2691:C:O3'	34:YA:2871:C:H4'	2.12	0.48
54:YZ:24:LEU:HD23	54:YZ:41:LEU:HG	1.94	0.48
1:QA:447:G:H2'	1:QA:485:G:H22	1.78	0.48
1:QA:936:C:H2'	1:QA:937:A:H8	1.78	0.48
1:QA:973:G:H5''	1:QA:974:A:H3'	1.95	0.48
1:QA:1179:A:C5'	9:QI:83:ARG:NH1	2.72	0.48
1:QA:1219:U:H1'	19:QS:34:TRP:CZ3	2.48	0.48
17:QQ:66:SER:O	17:QQ:70:ARG:NH1	2.46	0.48
33:R9:23:VAL:HG21	34:RA:1032:A:O2'	2.13	0.48
34:RA:363(B):A:H2'	34:RA:363(C):G:C8	2.49	0.48
34:RA:441:U:O2	38:RF:46:ARG:NH2	2.46	0.48
34:RA:685:A:H5''	34:RA:788:A:N6	2.25	0.48
34:RA:687:C:N3	34:RA:787:U:H4'	2.28	0.48
34:RA:1394:U:H4'	34:RA:1603:A:H4'	1.93	0.48
34:RA:1482:U:H3	34:RA:1512:G:H1	1.61	0.48
34:RA:1759:A:H1'	34:RA:2711:A:C2	2.47	0.48
43:RO:120:GLU:OE1	48:RT:67:SER:OG	2.24	0.48
1:XA:24:U:H2'	1:XA:25:C:C6	2.49	0.48
1:XA:590:C:OP1	8:XH:29:SER:HB2	2.14	0.48
1:XA:1533:C:H5	23:XX:13:A:H61	1.61	0.48
4:XD:72:GLU:OE2	4:XD:207:TYR:OH	2.19	0.48
6:XF:82:ARG:HB3	6:XF:85:VAL:HG12	1.95	0.48
21:XU:3:LYS:CD	21:XU:14:TRP:CZ3	2.93	0.48
34:YA:236:C:H2'	34:YA:237:C:H6	1.78	0.48
34:YA:910:A:N3	34:YA:2264:C:O2'	2.42	0.48
34:YA:1479:G:H1	34:YA:1514:U:H3	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2832:U:H1'	34:YA:2834:G:C4	2.48	0.48
36:YD:108:PRO:HB3	36:YD:143:HIS:HE1	1.77	0.48
41:YI:129:THR:HG22	41:YI:137:PRO:HB3	1.95	0.48
1:QA:875:C:O2'	8:QH:14:ARG:HD2	2.13	0.48
1:QA:1014:A:N3	1:QA:1219:U:H1'	2.27	0.48
1:QA:1141:C:H2'	1:QA:1142:G:C8	2.47	0.48
1:QA:1226:C:O5'	13:QM:91:ARG:NH1	2.44	0.48
1:QA:1280:A:C5'	10:QJ:40:LEU:CD2	2.80	0.48
1:QA:1314:C:P	19:QS:6:LYS:HZ2	2.34	0.48
2:QB:69:LEU:HB3	2:QB:162:ILE:HG22	1.94	0.48
5:QE:152:ARG:HG2	8:QH:42:GLU:O	2.14	0.48
24:R0:43:THR:CG2	34:RA:2336:A:H61	2.26	0.48
34:RA:27:G:N2	34:RA:513:A:OP2	2.44	0.48
34:RA:436:C:H2'	34:RA:438:G:C8	2.48	0.48
34:RA:523:C:O2	34:RA:553:U:O2'	2.30	0.48
34:RA:568:U:OP1	44:RP:36:LYS:HD2	2.13	0.48
34:RA:1173:G:O2'	34:RA:1175:U:O4'	2.30	0.48
34:RA:2594:C:H2'	34:RA:2595:G:C8	2.47	0.48
34:RA:2831:G:H1'	34:RA:2883:A:H2'	1.95	0.48
35:RB:15:A:H5'	35:RB:16:G:C8	2.47	0.48
40:RH:3:ARG:HG3	40:RH:3:ARG:O	2.13	0.48
40:RH:3:ARG:HH12	40:RH:5:GLY:HA2	1.77	0.48
1:XA:201(C):U:H4'	1:XA:216:G:N2	2.28	0.48
1:XA:447:G:H2'	1:XA:485:G:N2	2.28	0.48
1:XA:673:G:H2'	1:XA:674:G:C8	2.48	0.48
4:XD:63:LYS:HD2	4:XD:198:VAL:HG12	1.95	0.48
6:XF:89:MET:HE1	18:XR:76:LEU:HD13	1.92	0.48
6:XF:94:GLN:NE2	18:XR:32:ARG:HH11	2.11	0.48
15:XO:10:LYS:HA	15:XO:13:GLN:HG2	1.95	0.48
34:YA:2037:G:H2'	34:YA:2038:G:C8	2.49	0.48
34:YA:2140:C:H2'	34:YA:2141:G:C8	2.48	0.48
34:YA:2152:G:H2'	34:YA:2153:G:C8	2.48	0.48
34:YA:2590:A:H2'	34:YA:2591:C:C6	2.48	0.48
35:YB:12:C:O4'	35:YB:15:A:N6	2.46	0.48
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:22:G:H2'	1:QA:23:C:C6	2.48	0.48
1:QA:957:U:H5'	19:QS:81:ARG:HB2	1.93	0.48
1:QA:1187:G:H1'	14:QN:61:TRP:N	2.28	0.48
1:QA:1229:A:OP2	13:QM:108:ARG:NH2	2.40	0.48
1:QA:1286:A:H2'	1:QA:1287:A:H4'	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:QD:79:PHE:HE1	4:QD:204:ILE:HD13	1.77	0.48
13:QM:83:ASP:O	19:QS:66:MET:HE3	2.13	0.48
34:RA:29:U:H2'	34:RA:30:G:C8	2.49	0.48
34:RA:118:A:N3	34:RA:178:G:H1'	2.29	0.48
34:RA:243:U:H2'	34:RA:244:A:H8	1.78	0.48
34:RA:270(S):G:H2'	34:RA:270(T):G:C8	2.49	0.48
34:RA:834:C:H2'	34:RA:835:A:H8	1.78	0.48
34:RA:2142:C:H2'	34:RA:2143:C:C6	2.48	0.48
34:RA:2211:G:N2	34:RA:2212:A:H2	2.11	0.48
43:RO:15:GLY:O	43:RO:47:ILE:N	2.45	0.48
53:RY:76:CYS:SG	53:RY:79:CYS:CA	2.94	0.48
1:XA:222:U:H2'	1:XA:223:U:C6	2.49	0.48
1:XA:522:C:H1'	1:XA:536:C:H5''	1.94	0.48
1:XA:689:C:H4'	1:XA:705:U:H1'	1.94	0.48
1:XA:988:G:N2	1:XA:1016:A:O2'	2.47	0.48
5:XE:60:TYR:OH	5:XE:64:ARG:NH2	2.47	0.48
16:XP:40:ASP:HB3	16:XP:48:TRP:HB2	1.94	0.48
34:YA:65:C:H2'	34:YA:66:C:H6	1.78	0.48
34:YA:1010:A:H1'	34:YA:1153:C:H1'	1.95	0.48
41:YI:77:LEU:HD13	41:YI:101:LEU:HB3	1.96	0.48
54:YZ:130:PRO:HA	54:YZ:133:ILE:HD11	1.96	0.48
1:QA:18:C:H4'	1:QA:1078:U:O2	2.14	0.48
1:QA:620:C:H1'	4:QD:135:LEU:HG	1.96	0.48
1:QA:947:G:OP1	13:QM:108:ARG:CB	2.61	0.48
1:QA:974:A:OP1	14:QN:29:ARG:NH1	2.46	0.48
1:QA:1522:U:H2'	1:QA:1523:G:C8	2.48	0.48
5:QE:102:ALA:O	5:QE:107:ARG:NH2	2.45	0.48
34:RA:141(A):A:H8	34:RA:1595:G:H21	1.61	0.48
34:RA:414:C:O2	34:RA:1864:U:O2'	2.21	0.48
34:RA:589:C:H2'	34:RA:590:A:H8	1.79	0.48
34:RA:1266:G:N7	51:RW:15:ARG:NH1	2.62	0.48
1:XA:156:G:H2'	1:XA:157:G:C8	2.48	0.48
1:XA:859:A:H2'	1:XA:860:A:O4'	2.13	0.48
1:XA:1004:A:C2	1:XA:1024:G:H2'	2.49	0.48
1:XA:1310:G:H1	1:XA:1327:C:H5	1.61	0.48
1:XA:1319:A:N6	1:XA:1361:G:H1'	2.29	0.48
1:XA:1472:U:H2'	1:XA:1473:A:C8	2.49	0.48
3:XC:153:VAL:HB	3:XC:196:LEU:HD21	1.95	0.48
4:XD:20:TYR:HD1	4:XD:26:CYS:HB3	1.78	0.48
6:XF:5:GLU:HA	6:XF:63:TYR:O	2.14	0.48
10:XJ:9:ARG:HG2	10:XJ:9:ARG:HH11	1.78	0.48

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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:956:G:OP2	45:YQ:14:ARG:NH2	2.46	0.48
34:YA:1657:C:H4'	37:YE:133:LYS:HB3	1.95	0.48
34:YA:2084:C:H2'	34:YA:2085:C:C6	2.48	0.48
34:YA:2094:G:OP1	41:YI:22:LYS:HD2	2.12	0.48
48:YT:52:ILE:HG13	48:YT:61:PHE:HB3	1.96	0.48
1:QA:626:U:O3'	16:QP:38:TYR:CD1	2.66	0.48
1:QA:1151:A:O2'	10:QJ:13:HIS:HB2	2.13	0.48
1:QA:1270:C:O2'	1:QA:1313:U:O3'	2.30	0.48
34:RA:1073:A:H3'	34:RA:1074:G:H8	1.79	0.48
34:RA:1518:C:H2'	34:RA:1519:G:C8	2.49	0.48
38:RF:48:THR:O	38:RF:48:THR:OG1	2.32	0.48
38:RF:159:GLY:O	38:RF:164:ARG:NH2	2.41	0.48
44:RP:106:LEU:HD13	44:RP:112:LEU:HD13	1.95	0.48
46:RR:26:LYS:O	46:RR:30:THR:OG1	2.24	0.48
1:XA:186(Q):U:H2'	1:XA:191:G:C8	2.48	0.48
1:XA:1159:U:C6	1:XA:1182:G:H2'	2.49	0.48
1:XA:1316:G:H4'	14:YN:17:LYS:HG2	0.64	0.48
1:XA:1351:U:H2'	1:XA:1352:C:H6	1.78	0.48
17:XQ:66:SER:H	17:XQ:69:LYS:HB3	1.78	0.48
19:XS:36:ARG:HB2	19:XS:72:GLY:HA3	1.94	0.48
34:YA:629:G:H1'	34:YA:639:U:H1'	1.96	0.48
34:YA:2113:U:C5	34:YA:2114:A:H1'	2.48	0.48
1:QA:155:C:H2'	1:QA:156:G:C8	2.48	0.48
1:QA:490:G:H2'	1:QA:491:G:C8	2.48	0.48
1:QA:608:A:O2'	16:QP:9:PHE:HE1	1.95	0.48
1:QA:986:A:O2'	19:QS:55:LYS:CA	2.60	0.48
1:QA:1106:G:O3'	3:QC:172:ARG:CB	2.56	0.48
1:QA:1278:U:H4'	1:QA:1279:A:C4	2.49	0.48
1:QA:1318:A:N3	19:QS:37:ARG:NH2	2.59	0.48
34:RA:813:U:C5	44:RP:25:SER:HB3	2.49	0.48
34:RA:851:U:H2'	34:RA:852:G:C8	2.48	0.48
34:RA:1732:A:H3'	34:RA:1733:G:H8	1.77	0.48
34:RA:2751:G:C6	40:RH:3:ARG:HB2	2.47	0.48
53:RY:13:VAL:HA	53:RY:74:PRO:HA	1.96	0.48
54:RZ:61:LEU:HD23	54:RZ:67:LEU:HD23	1.94	0.48
1:XA:68(H):G:C5	1:XA:68(I):G:H1'	2.49	0.48
1:XA:112:G:H22	1:XA:315:A:H2	1.60	0.48
1:XA:186(B):C:H2'	1:XA:186(C):C:C6	2.48	0.48
1:XA:856:C:H2'	1:XA:857:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1391:U:H2'	1:XA:1392:G:C8	2.49	0.48
4:XD:91:SER:HB2	4:XD:191:ARG:HD2	1.95	0.48
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:305:U:H2'	34:YA:306:U:C6	2.49	0.48
34:YA:1753:G:H2'	34:YA:1755:A:N7	2.28	0.48
34:YA:2053:G:C2	34:YA:2617:C:N3	2.82	0.48
34:YA:2314:C:H2'	34:YA:2315:G:C8	2.49	0.48
34:YA:2688:U:H1'	34:YA:2721:A:H61	1.78	0.48
46:YR:3:HIS:O	46:YR:5:LYS:N	2.47	0.48
1:QA:308:C:H2'	1:QA:309:G:C8	2.49	0.48
1:QA:624:C:H4'	16:QP:11:SER:HB3	1.96	0.48
1:QA:667:G:H2'	1:QA:668:G:C8	2.49	0.48
1:QA:695:A:OP2	11:QK:53:SER:HB3	2.14	0.48
1:QA:1318:A:C4	19:QS:37:ARG:NH2	2.78	0.48
1:QA:1530:G:H2'	1:QA:1531:A:H8	1.78	0.48
13:QM:26:GLY:O	13:QM:30:ALA:CB	2.62	0.48
34:RA:985:C:H2'	34:RA:986:C:C6	2.49	0.48
39:RG:126:ASP:OD1	39:RG:130:ASN:N	2.43	0.48
40:RH:43:VAL:HG23	40:RH:52:VAL:HG12	1.95	0.48
40:RH:46:GLU:HB2	40:RH:49:VAL:HG23	1.95	0.48
1:XA:263:A:H2'	1:XA:264:U:C5	2.49	0.48
1:XA:647:C:H2'	1:XA:648:A:C8	2.49	0.48
1:XA:784:C:H2'	1:XA:785:G:H8	1.79	0.48
1:XA:967:C:H5'	1:XA:968:A:H2'	1.96	0.48
1:XA:1312:G:H2'	19:XS:6:LYS:HZ2	1.77	0.48
1:XA:1409:C:H2'	1:XA:1410:G:C8	2.49	0.48
4:XD:57:ARG:HH12	5:XE:107:ARG:CZ	2.27	0.48
13:XM:84:ILE:HD12	19:XS:65:ASN:OD1	2.13	0.48
16:XP:6:LEU:HD13	16:XP:17:TYR:CG	2.49	0.48
17:XQ:83:ASP:N	17:XQ:83:ASP:OD1	2.40	0.48
20:XT:73:HIS:HB3	20:XT:74:LYS:H	1.47	0.48
34:YA:389:G:H22	44:YP:71:VAL:CG1	2.19	0.48
34:YA:860:U:H2'	34:YA:861:A:C8	2.43	0.48
1:QA:43:C:OP1	16:QP:13:HIS:HD2	1.97	0.48
1:QA:643:C:H2'	1:QA:644:G:H8	1.77	0.48
2:QB:47:THR:HG23	2:QB:202:PRO:HG2	1.96	0.48
2:QB:179:LYS:HA	8:QH:72:PRO:HG3	1.96	0.48
2:QB:197:VAL:O	8:QH:68:ARG:CZ	2.60	0.48
10:QJ:4:ILE:HG12	10:QJ:100:THR:HG22	1.95	0.48
34:RA:270(V):C:H2'	34:RA:270(W):G:C8	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:558:G:H2'	34:RA:559:G:C8	2.49	0.48
34:RA:1403:C:H5''	34:RA:1471:A:H1'	1.96	0.48
34:RA:1454:U:OP1	46:RR:77:ARG:NH1	2.45	0.48
34:RA:1607:C:H41	34:RA:1621:U:H3'	1.79	0.48
34:RA:1662:C:H2'	34:RA:1663:C:C6	2.49	0.48
34:RA:2210:G:H5'	34:RA:2211:G:C5	2.49	0.48
34:RA:2241:A:H2'	34:RA:2242:G:C8	2.49	0.48
34:RA:2553:G:C2	34:RA:2583:G:H1'	2.49	0.48
34:RA:2657:A:O3'	40:RH:160:LYS:NZ	2.46	0.48
1:XA:106:C:H2'	1:XA:107:G:C8	2.49	0.48
1:XA:669:U:O4'	15:XO:46:HIS:HE1	1.97	0.48
1:XA:1229:A:H62	13:XM:104:ARG:HB3	1.79	0.48
1:XA:1397:C:OP2	5:XE:24:ARG:NH2	2.40	0.48
10:XJ:78:ASN:HB2	10:XJ:81:THR:HG23	1.96	0.48
25:Y1:83:GLU:HG3	25:Y1:85:LEU:H	1.78	0.48
34:YA:29:U:H2'	34:YA:30:G:C8	2.49	0.48
34:YA:356:G:H2'	34:YA:357:A:C8	2.49	0.48
34:YA:410:G:N2	34:YA:2407:G:N7	2.62	0.48
34:YA:828:U:H4'	34:YA:831:G:C6	2.49	0.48
34:YA:920:G:H2'	34:YA:921:G:H8	1.78	0.48
34:YA:1162:G:H2'	34:YA:1163:G:H8	1.79	0.48
34:YA:1223:C:H2'	34:YA:1224:G:C8	2.49	0.48
34:YA:1952:A:P	43:YO:44:LYS:HZ3	2.35	0.48
34:YA:2097:C:H2'	34:YA:2098:U:H6	1.79	0.48
37:YE:37:ARG:O	37:YE:45:THR:HA	2.13	0.48
37:YE:117:MET:HA	37:YE:122:PHE:H	1.79	0.48
39:YG:68:PRO:HB3	39:YG:92:VAL:HB	1.95	0.48
45:YQ:35:VAL:HG12	45:YQ:102:VAL:HG22	1.94	0.48
53:YY:11:ASP:OD1	53:YY:11:ASP:N	2.43	0.48
1:QA:625:G:HO2'	16:QP:16:HIS:CE1	2.30	0.48
1:QA:695:A:H61	1:QA:786:G:H21	1.61	0.48
1:QA:986:A:N9	19:QS:54:GLY:O	2.47	0.48
1:QA:1069:C:H1'	1:QA:1191:A:H2	1.77	0.48
1:QA:1318:A:N6	14:QN:16:PHE:CG	2.82	0.48
1:QA:1407:C:H2'	1:QA:1408:A:H8	1.79	0.48
18:QR:59:SER:OG	18:QR:60:ALA:N	2.46	0.48
34:RA:153:C:H2'	34:RA:154:G:C8	2.49	0.48
34:RA:433:C:H2'	34:RA:434:U:C6	2.49	0.48
34:RA:1213:A:H1'	34:RA:1238:G:N3	2.28	0.48
34:RA:2343:C:H2'	34:RA:2344:U:C6	2.49	0.48
34:RA:2710:C:H2'	34:RA:2711:A:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:62:U:H2'	1:XA:63:C:C6	2.49	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:1256:A:N7	1:XA:1278:U:H5'	2.29	0.48
1:XA:1434:A:H61	1:XA:1467:G:H1'	1.79	0.48
2:XB:30:ARG:NH1	2:XB:31:TYR:OH	2.46	0.48
9:XI:73:GLN:O	9:XI:77:ILE:HG12	2.14	0.48
34:YA:917:A:H3'	34:YA:918:A:C8	2.49	0.48
34:YA:1050:A:N7	34:YA:2751:G:C4	2.80	0.48
34:YA:2097:C:N3	34:YA:2192:G:C6	2.82	0.48
34:YA:2546:U:H4'	34:YA:2566:A:H2	1.79	0.48
34:YA:2695:C:H2'	34:YA:2696:U:C6	2.49	0.48
40:YH:70:THR:O	40:YH:74:ASN:ND2	2.47	0.48
1:QA:1253:G:C5'	10:QJ:44:VAL:H	2.24	0.47
1:QA:1300:G:H1'	1:QA:1303:C:N4	2.29	0.47
1:QA:1309:G:H4'	13:QM:77:ASN:HD21	1.77	0.47
5:QE: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
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:65:C:H2'	34:RA:66:C:C6	2.49	0.47
34:RA:137(B):G:N2	52:RX:41:ASN:HD21	2.12	0.47
34:RA:514:A:H2'	34:RA:515:A:C8	2.48	0.47
34:RA:657:U:H2'	34:RA:658:C:C6	2.48	0.47
34:RA:1367:A:C5	34:RA:1368:G:H1'	2.49	0.47
35:RB:8:U:H3	35:RB:112:G:H1	1.61	0.47
41:RI:51:ILE:HA	41:RI:54:GLN:HG2	1.95	0.47
42:RN:60:ILE:HD12	42:RN:60:ILE:HA	1.81	0.47
1:XA:1106:G:C5'	3:XC:172:ARG:HG2	2.44	0.47
1:XA:1376:U:H2'	1:XA:1377:A:C8	2.48	0.47
13:XM:14:ARG:HG2	13:XM:16:ASP:H	1.79	0.47
20:XT:61:SER:OG	20:XT:62:LEU:N	2.47	0.47
34:YA:685:A:O2'	34:YA:773:U:O4	2.25	0.47
34:YA:1930:G:H2'	34:YA:1968:G:H1	1.78	0.47
34:YA:2199:A:N1	34:YA:2226:C:N4	2.57	0.47
34:YA:2641:G:H2'	34:YA:2642:G:H8	1.79	0.47
1:QA:401:C:H2'	1:QA:402:G:C8	2.50	0.47
1:QA:562:C:H1'	12:QL:15:ARG:HD2	1.95	0.47
1:QA:949:A:OP1	13:QM:100:GLY:O	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:953:G:C6	13:QM:104:ARG:CZ	2.97	0.47
1:QA:1129:C:H1'	1:QA:1132:C:C5	2.49	0.47
1:QA:1253:G:C5'	10:QJ:44:VAL:O	2.62	0.47
5:QE:79:GLU:CD	8:QH:102:ARG:HH12	2.18	0.47
29:R5:12:SER:O	29:R5:16:ARG:HB2	2.14	0.47
34:RA:558:G:H2'	34:RA:559:G:H8	1.79	0.47
34:RA:1681:G:HO2'	34:RA:1762:A:HO2'	1.57	0.47
34:RA:2197:U:H1'	34:RA:2198:A:C8	2.49	0.47
34:RA:2233:U:H2'	34:RA:2234:G:C8	2.48	0.47
47:RS:26:LEU:HB3	47:RS:87:PHE:HA	1.96	0.47
48:RT:91:ARG:NH2	48:RT:124:ASP:OD2	2.47	0.47
49:RU:17:ILE:HG13	49:RU:39:LEU:HD12	1.95	0.47
1:XA:822:C:H2'	1:XA:823:G:C8	2.49	0.47
1:XA:1187:G:N9	14:YN:61:TRP:O	2.42	0.47
2:XB:71:VAL:HB	2:XB:164:VAL:HG12	1.96	0.47
13:XM:84:ILE:CG2	19:XS:74:PHE:HZ	2.21	0.47
34:YA:270(A):A:C2	34:YA:366:C:H4'	2.50	0.47
34:YA:2115:G:H4'	34:YA:2166:G:H4'	1.96	0.47
34:YA:2150:U:H2'	34:YA:2151:G:H8	1.76	0.47
37:YE:102:VAL:O	37:YE:170:LEU:N	2.45	0.47
39:YG:107:LEU:HA	39:YG:111:LEU:HD12	1.95	0.47
1:QA:186(B):C:H2'	1:QA:186(C):C:O4'	2.15	0.47
1:QA:258:G:OP1	20:QT:87:LYS:NZ	2.48	0.47
1:QA:345:C:H5'	48:RT:41:ARG:NH1	2.29	0.47
1:QA:658:G:H5''	15:QO:31:LEU:CD1	2.44	0.47
1:QA: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
4:QD:108:LEU:HD22	4:QD:174:LEU:HD13	1.96	0.47
4:QD:169:LYS:HE2	6:XF:82:ARG:HH22	1.79	0.47
9:QI:20:ARG:HG3	9:QI:60:ASP:HB2	1.96	0.47
34:RA:678:C:H2'	34:RA:679:C:H6	1.79	0.47
34:RA:1568:G:OP1	36:RD:63:ARG:NH1	2.34	0.47
34:RA:2081:C:H2'	34:RA:2082:A:H8	1.80	0.47
34:RA:2373:G:H2'	34:RA:2374:C:C6	2.49	0.47
37:RE:105:THR:OG1	37:RE:199:ARG:NH1	2.47	0.47
1:XA:708:C:H2'	1:XA:709:G:C8	2.49	0.47
1:XA:1319:A:H61	1:XA:1361:G:H1'	1.79	0.47
4:XD:175:SER:O	4:XD:183:GLY:HA2	2.15	0.47
7:XG:99:LEU:HD12	7:XG:102:ARG:HD2	1.96	0.47
25:Y1:39:LYS:NZ	34:YA:205:G:O6	2.44	0.47
26:Y2:4:SER:OG	26:Y2:5:GLU:N	2.39	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:389:G:N1	44:YP:71:VAL:CG1	2.69	0.47
34:YA:996:A:O4'	50:YV:10:LYS:HG2	2.14	0.47
34:YA:2046:G:N1	34:YA:2623:G:C5	2.80	0.47
34:YA:2110:G:OP1	34:YA:2111:C:N4	2.47	0.47
34:YA:2795:G:O2'	34:YA:2799:A:N6	2.47	0.47
1:QA:233:C:O2'	1:QA:264:U:N3	2.47	0.47
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
1:QA:1307:U:H5''	13:QM:99:ARG:NE	2.29	0.47
16:QP:40:ASP:OD1	16:QP:43:LYS:N	2.46	0.47
31:R7:39:ARG:NH1	34:RA:459:U:OP2	2.47	0.47
34:RA:521:G:H2'	34:RA:522:G:C8	2.49	0.47
34:RA:521:G:H2'	34:RA:522:G:H8	1.79	0.47
34:RA:679:C:H2'	34:RA:680:G:H8	1.78	0.47
34:RA:990:A:C6	34:RA:1186:G:H1'	2.50	0.47
34:RA:1022:G:N2	34:RA:1023:U:O4	2.47	0.47
38:RF:102:PRO:HB2	38:RF:105:VAL:HG23	1.95	0.47
1:XA:296:U:H1'	1:XA:556:C:H1'	1.95	0.47
1:XA:372:C:N4	1:XA:389:A:N7	2.61	0.47
1:XA:608:A:C2'	1:XA:609:A:H8	2.27	0.47
1:XA:718:G:H1	18:XR:74:ARG:HH12	1.62	0.47
1:XA:1217:C:H5''	14:YN:12:ARG:NH1	2.26	0.47
1:XA:1253:G:O3'	10:XJ:45:ARG:HD2	2.14	0.47
1:XA:1318:A:O3'	19:XS:11:VAL:CG1	2.62	0.47
3:XC:23:TYR:CD2	10:XJ:95:GLU:N	2.82	0.47
11:XK:109:VAL:CA	18:XR:86:VAL:HG23	2.43	0.47
13:XM:84:ILE:O	19:XS:74:PHE:CE1	2.62	0.47
34:YA:223:A:H1'	34:YA:407:G:H21	1.79	0.47
34:YA:270(Q):C:H1'	41:YI:50:ARG:HH22	1.79	0.47
34:YA:685:A:C2	34:YA:787:U:H1'	2.49	0.47
34:YA:1050:A:H1'	34:YA:2751:G:C8	2.49	0.47
34:YA:1068:G:N2	34:YA:1096:A:O5'	2.42	0.47
34:YA:2054:A:N1	34:YA:2616:C:N3	2.62	0.47
34:YA:2312:U:H4'	39:YG:71:THR:OG1	2.14	0.47
34:YA:2577:A:H2'	34:YA:2614:A:N6	2.30	0.47
50:YV:13:ARG:NH1	50:YV:15:GLU:OE2	2.45	0.47
50:YV:52:VAL:HG21	50:YV:55:ALA:HB3	1.95	0.47
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:1339:G:N2	34:RA:1603:A:N3	2.62	0.47
34:RA:1592:C:H2'	34:RA:1593:G:C8	2.50	0.47
1:XA:186(K):G:C6	1:XA:264:U:H5''	2.49	0.47
1:XA:600:C:H2'	1:XA:601:C:C6	2.49	0.47
1:XA:613:C:H2'	1:XA:614:A:C8	2.50	0.47
1:XA:813:U:H2'	1:XA:814:A:H8	1.80	0.47
1:XA:1132:C:H2'	1:XA:1133:G:C8	2.50	0.47
1:XA:1463:C:H2'	1:XA:1464:G:H8	1.79	0.47
2:XB:204:ASN:OD1	2:XB:205:ASP:N	2.48	0.47
27:Y3:18:ASP:OD1	27:Y3:18:ASP:N	2.46	0.47
34:YA:624:C:H2'	34:YA:625:G:H8	1.79	0.47
34:YA:747:U:H5	34:YA:2613:U:C4	2.30	0.47
34:YA:1035:U:H2'	34:YA:1036:G:C8	2.50	0.47
34:YA:1043:C:H2'	34:YA:1044:G:H8	1.79	0.47
34:YA:1445:C:H2'	34:YA:1446:C:C6	2.49	0.47
34:YA:1476:C:H2'	34:YA:1477:A:C8	2.49	0.47
34:YA:2181:G:H2'	34:YA:2182:G:C8	2.49	0.47
34:YA:2722:G:H5''	34:YA:2820:A:N7	2.30	0.47
34:YA:2893:G:O2'	34:YA:2894:G:N2	2.47	0.47
1:QA:9:G:H2'	1:QA:10:A:C8	2.49	0.47
1:QA:711:G:H2'	1:QA:712:A:C8	2.50	0.47
8:QH:120:THR:OG1	8:QH:121:ASP:N	2.47	0.47
12:QL:5:PRO:HG2	12:QL:10:LEU:HD21	1.96	0.47
23:QX:3:C:H2'	23:QX:4:A:C8	2.49	0.47
34:RA:270(D):C:H2'	34:RA:270(E):C:C6	2.50	0.47
34:RA:436:C:H2'	34:RA:438:G:H8	1.79	0.47
34:RA:602:G:H1'	34:RA:656:G:N2	2.30	0.47
34:RA:619:G:H3'	34:RA:620:G:H21	1.79	0.47
34:RA:863:A:H2'	34:RA:864:G:C8	2.49	0.47
34:RA:863:A:H2'	34:RA:864:G:H8	1.80	0.47
1:XA:376:G:H4'	16:XP:5:ARG:NH1	2.28	0.47
1:XA:708:C:H2'	1:XA:709:G:H8	1.80	0.47
1:XA:908:A:H2'	1:XA:909:A:H8	1.80	0.47
1:XA:1112:C:C1'	3:XC:179:ARG:NE	2.67	0.47
1:XA:1112:C:H6	3:XC:179:ARG:HH21	1.51	0.47
1:XA:1143:G:H2'	1:XA:1144:G:C8	2.49	0.47
13:XM:83:ASP:OD2	13:XM:84:ILE:N	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:YN:23:ARG:NH1	14:YN:28:GLY:HA2	2.29	0.47
15:XO:39:LEU:HG	15:XO:56:LEU:HD12	1.96	0.47
34:YA:363(B):A:H2'	34:YA:363(C):G:C8	2.50	0.47
34:YA:1400:G:H2'	34:YA:1401:G:C8	2.49	0.47
34:YA:1947:C:H2'	34:YA:1948:G:H8	1.79	0.47
34:YA:2008:C:H2'	34:YA:2009:G:H8	1.78	0.47
34:YA:2245:U:H5'	34:YA:2246:G:H5''	1.97	0.47
34:YA:2443:C:H2'	34:YA:2444:G:C8	2.49	0.47
36:YD:35:LYS:HG3	36:YD:63:ARG:HG3	1.96	0.47
37:YE:105:THR:HG21	37:YE:164:ARG:HH21	1.78	0.47
47:YS:25:ARG:HG3	47:YS:88:ASP:HB2	1.96	0.47
1:QA:35:G:O2'	12:QL:118:SER:O	2.20	0.47
1:QA:66:G:H1'	1:QA:173:U:H2'	1.97	0.47
1:QA:269:C:H2'	1:QA:270:A:H8	1.80	0.47
1:QA:667:G:C2	15:QO:49:ASP:OD1	2.68	0.47
1:QA:833:U:H2'	1:QA:834:C:C6	2.49	0.47
1:QA:926:G:N2	23:QX:18:C:OP2	2.45	0.47
1:QA:932:C:H2'	1:QA:933:G:C8	2.49	0.47
1:QA:960:U:H2'	1:QA:1225:A:N6	2.30	0.47
1:QA:1253:G:H5'	10:QJ:44:VAL:N	2.23	0.47
1:QA:1278:U:H4'	1:QA:1279:A:C5	2.49	0.47
1:QA:1280:A:C2	10:QJ:41:PRO:HD3	2.49	0.47
1:QA:1397:C:H4'	1:QA:1398:A:C8	2.50	0.47
10:QJ:50:ILE:HD13	14:QN:41:ARG:NH1	2.18	0.47
17:QQ:62:SER:OG	17:QQ:72:ARG:NE	2.47	0.47
17:QQ:83:ASP:N	17:QQ:83:ASP:OD1	2.47	0.47
34:RA:508:G:C6	51:RW:9:TYR:CE1	3.03	0.47
34:RA:2008:C:H2'	34:RA:2009:G:C8	2.49	0.47
34:RA:2102:U:H2'	34:RA:2103:C:C6	2.50	0.47
34:RA:2319:G:N1	34:RA:2334:G:OP2	2.45	0.47
34:RA:2392:A:H2	34:RA:2424:C:H42	1.61	0.47
34:RA:2468:G:OP2	34:RA:2468:G:N2	2.41	0.47
34:RA:2503:A:O2'	34:RA:2505:G:OP2	2.29	0.47
34:RA:2658:C:H5''	40:RH:158:HIS:CD2	2.49	0.47
52:RX:64:LYS:HD2	52:RX:73:ARG:HH12	1.77	0.47
54:RZ:182:LYS:HA	54:RZ:182:LYS:HD2	1.75	0.47
1:XA:413:G:H4'	1:XA:414:A:H5''	1.97	0.47
1:XA:539:A:H2'	1:XA:540:G:H8	1.80	0.47
1:XA:595:G:N1	1:XA:641:U:O2'	2.47	0.47
1:XA:608:A:H2'	1:XA:609:A:O4'	2.15	0.47
1:XA:656:C:H2'	1:XA:657:G:H8	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:893:C:H2'	1:XA:894:G:C8	2.50	0.47
1:XA:1084:G:H21	1:XA:1102:A:N6	2.13	0.47
1:XA:1141:C:H2'	1:XA:1142:G:C8	2.50	0.47
1:XA:1269:A:N1	1:XA:1312:G:O2'	2.41	0.47
4:XD:62:GLN:HE22	4:XD:65:ARG:HH21	1.62	0.47
4:XD:175:SER:HB3	4:XD:184:LYS:HB3	1.96	0.47
4:XD:208:SER:OG	5:XE:101:ILE:HD12	2.14	0.47
29:Y5:3:LYS:HD3	34:YA:2577:A:H5'	1.97	0.47
29:Y5:58:LEU:HD23	46:YR:113:LEU:HD11	1.96	0.47
34:YA:151:C:H2'	34:YA:152:G:H8	1.79	0.47
34:YA:320:A:N3	38:YF:169:ASN:ND2	2.62	0.47
34:YA:413:C:H2'	34:YA:414:C:C6	2.49	0.47
34:YA:536:A:OP1	49:YU:53:ARG:NH1	2.47	0.47
34:YA:603:A:H5''	34:YA:655:A:H61	1.80	0.47
34:YA:624:C:H2'	34:YA:625:G:C8	2.50	0.47
34:YA:816:C:H2'	34:YA:817:C:C6	2.50	0.47
34:YA:998:C:H2'	34:YA:999:U:O4'	2.14	0.47
34:YA:1332:G:N2	34:YA:1609:A:O2'	2.48	0.47
34:YA:1529:A:H61	34:YA:1542:G:H1'	1.78	0.47
34:YA:1796:U:H2'	34:YA:1797:C:C6	2.49	0.47
34:YA:2115:G:H22	34:YA:2163:C:H3'	1.78	0.47
34:YA:2316:C:H2'	34:YA:2317:C:H6	1.79	0.47
39:YG:63:ILE:HG22	39:YG:143:GLU:HB2	1.95	0.47
45:YQ:75:THR:HB	45:YQ:86:GLY:HA3	1.96	0.47
1:QA:8:A:C4	4:QD:209:ARG:O	2.68	0.47
1:QA:229:U:H2'	1:QA:230:G:H8	1.78	0.47
1:QA:626:U:O3'	16:QP:38:TYR:CE1	2.68	0.47
1:QA:1099:G:OP2	2:QB:96:ARG:NH1	2.48	0.47
34:RA:251:A:C4	34:RA:252:G:H1'	2.50	0.47
34:RA:730:C:H2'	34:RA:731:C:H6	1.80	0.47
34:RA:1141:U:H1'	34:RA:1142(B):A:C5	2.49	0.47
34:RA:1189:A:C2	34:RA:1190:G:H1'	2.50	0.47
34:RA:1375:C:H2'	34:RA:1376:C:H6	1.78	0.47
34:RA:2084:C:H2'	34:RA:2085:C:H6	1.79	0.47
34:RA:2208:U:O2'	36:RD:150:LYS:O	2.32	0.47
34:RA:2244:U:H2'	34:RA:2245:U:C6	2.50	0.47
34:RA:2262:U:H2'	34:RA:2263:C:C6	2.50	0.47
40:RH:6:ARG:HE	40:RH:65:HIS:HB3	1.80	0.47
1:XA:106:C:H2'	1:XA:107:G:H8	1.80	0.47
1:XA:702:A:C6	34:YA:1848:A:N3	2.83	0.47
1:XA:789:U:H2'	1:XA:791:G:N7	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:826:C:H4'	8:XH:12:ARG:HG3	1.97	0.47
1:XA:961:U:O2	1:XA:1201:A:N6	2.47	0.47
1:XA:1187:G:N2	14:YN:60:SER:HB2	2.26	0.47
1:XA:1512:U:H3	1:XA:1523:G:H1	1.63	0.47
2:XB:84:GLU:HG3	2:XB:215:LEU:HB3	1.96	0.47
2:XB:184:VAL:HG23	2:XB:198:ASP:H	1.79	0.47
7:YG:16:LEU:HD21	9:XI:44:VAL:C	2.34	0.47
27:Y3:51:ALA:HA	27:Y3:54:VAL:HG12	1.95	0.47
33:Y9:14:CYS:CA	33:Y9:27:CYS:HB2	2.44	0.47
34:YA:671:C:H2'	34:YA:672:C:H6	1.79	0.47
34:YA:749:C:H5'	34:YA:1271:G:H1'	1.96	0.47
34:YA:860:U:C5	34:YA:2268:A:N7	2.83	0.47
34:YA:1838:C:N4	34:YA:1899:G:O4'	2.48	0.47
34:YA:1853:A:H2'	34:YA:1854:A:C8	2.49	0.47
34:YA:2197:U:H1'	34:YA:2198:A:C8	2.50	0.47
35:YB:24:G:O6	35:YB:56:G:O2'	2.26	0.47
40:YH:18:GLU:HB3	40:YH:25:LYS:HG2	1.97	0.47
45:YQ:55:VAL:HG22	54:YZ:178:GLU:HG2	1.97	0.47
47:YS:11:LYS:HG3	47:YS:15:ARG:HE	1.80	0.47
1:QA:106:C:C5	20:QT:15:ARG:NH1	2.83	0.47
1:QA:337:C:H2'	1:QA:338:A:C8	2.50	0.47
1:QA:986:A:C5'	19:QS:55:LYS:HG3	2.44	0.47
1:QA:1065:U:C4	1:QA:1190:G:H1'	2.49	0.47
1:QA:1109:C:H3'	1:QA:1110:A:H8	1.79	0.47
1:QA:1222:G:O3'	19:QS:78:ARG:NH2	2.48	0.47
1:QA:1236:A:P	21:QU:10:ARG:HD3	2.55	0.47
1:QA:1427:U:H2'	1:QA:1428:A:C8	2.49	0.47
3:QC:50:ALA:HB2	3:QC:75:VAL:HB	1.96	0.47
13:QM:26:GLY:O	13:QM:30:ALA:HB2	2.15	0.47
15:QO:26:GLU:HA	15:QO:29:VAL:HG12	1.97	0.47
34:RA:305:U:H2'	34:RA:306:U:C6	2.50	0.47
34:RA:442:G:H1'	38:RF:48:THR:HG21	1.96	0.47
34:RA:478:A:N6	34:RA:500:G:O2'	2.47	0.47
34:RA:482:A:H1'	34:RA:498:G:N2	2.30	0.47
34:RA: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:H5''	34:RA:2346:A:N3	2.30	0.47
34:RA:2691:C:H2'	34:RA:2692:C:C6	2.50	0.47
49:RU:6:THR:HG21	49:RU:10:ARG:HH12	1.80	0.47

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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:831:U:H2'	1:XA:832:C:C6	2.50	0.47
1:XA:1096:C:H2'	1:XA:1097:C:C6	2.49	0.47
1:XA:1294:G:H2'	1:XA:1295:G:C8	2.49	0.47
1:XA:1305:G:C4	1:XA:1331:G:C5	3.03	0.47
28:Y4:23:GLU:O	28:Y4:25:TYR:N	2.46	0.47
34:YA:619:G:H3'	34:YA:620:G:H21	1.79	0.47
34:YA:1050:A:C8	34:YA:2751:G:C6	3.02	0.47
34:YA:1050:A:N7	34:YA:2751:G:N1	2.63	0.47
34:YA:1417:C:H2'	34:YA:1418:G:O4'	2.15	0.47
34:YA:2047:U:H2'	34:YA:2048:G:C8	2.49	0.47
34:YA:2406:U:C4	44:YP:75:ILE:HD11	2.50	0.47
34:YA:2804:C:H2'	34:YA:2805:G:C8	2.50	0.47
41:YI:88:ILE:HG22	41:YI:90:GLY:H	1.80	0.47
1:QA:115:G:H21	1:QA:117:G:H1	1.62	0.47
1:QA:625:G:H5'	16:QP:9:PHE:HB3	1.97	0.47
1:QA:673:G:H2'	1:QA:674:G:C8	2.49	0.47
1:QA:742:G:H4'	15:QO:58:MET:SD	2.55	0.47
1:QA:830:G:H2'	1:QA:831:U:C6	2.50	0.47
1:QA:1108:G:OP1	3:QC:174:PRO:HA	2.14	0.47
1:QA:1179:A:H2'	1:QA:1180:A:C8	2.50	0.47
1:QA:1352:C:H2'	1:QA:1353:G:C8	2.50	0.47
2:QB:134:GLU:HA	2:QB:137:ARG:HG2	1.96	0.47
4:QD:156:GLU:O	4:QD:160:GLN:N	2.48	0.47
34:RA:181:A:H1'	34:RA:435:C:H5'	1.96	0.47
34:RA:303:U:H2'	34:RA:304:G:C8	2.50	0.47
34:RA:577:G:O2'	34:RA:1254:A:OP1	2.30	0.47
34:RA:611:C:H2'	34:RA:612:G:H8	1.80	0.47
34:RA:1728:G:H8	34:RA:1732:A:H62	1.61	0.47
34:RA:2036:C:H2'	34:RA:2037:G:H8	1.79	0.47
34:RA:2710:C:H2'	34:RA:2711:A:H8	1.79	0.47
34:RA:2751:G:P	34:RA:2751:G:H8	2.37	0.47
1:XA:34:C:H2'	1:XA:35:G:H8	1.80	0.47
1:XA:324:G:P	20:XT:70:SER:HG	2.38	0.47
1:XA:444:C:H2'	1:XA:445:G:C8	2.50	0.47
1:XA:649:G:H2'	1:XA:650:G:C8	2.49	0.47
1:XA:657:G:H21	15:XO:22:THR:CG2	2.27	0.47
1:XA:1253:G:N3	1:XA:1355:G:O2'	2.46	0.47
1:XA:1318:A:O2'	19:XS:11:VAL:HG13	2.09	0.47
11:XK:31:THR:HA	11:XK:42:TRP:HA	1.97	0.47
19:XS:4:SER:HB2	19:XS:7:LYS:HG2	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:Y7:12:ARG:NH1	34:YA:686:G:O6	2.47	0.47
33:Y9:31:LYS:HE2	34:YA:2528:U:H5'	1.97	0.47
34:YA:1154:G:OP2	49:YU:58:ARG:NH2	2.48	0.47
34:YA:2059:A:C2	34:YA:2503:A:N1	2.83	0.47
34:YA:2738:A:H2	34:YA:2766:G:H22	1.62	0.47
38:YF:157:VAL:HG13	38:YF:194:MET:HB3	1.97	0.47
1:QA:97:U:H2'	1:QA:99:C:C2	2.50	0.46
1:QA:233:C:H2'	1:QA:234:C:H6	1.80	0.46
1:QA:806:C:H2'	1:QA:807:A:C8	2.50	0.46
1:QA:815:A:N6	1:QA:1509:C:H1'	2.30	0.46
1:QA:1195:C:H6	1:QA:1196:U:H4'	1.79	0.46
1:QA:1309:G:C4'	13:QM:77:ASN:HD21	2.24	0.46
1:QA:1422:G:H5'	43:RO:48:PRO:HG3	1.97	0.46
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
25:R1:2:SER:O	25:R1:61:ARG:NH1	2.47	0.46
25:R1:90:ILE:HA	25:R1:94:LEU:HD11	1.92	0.46
34:RA:191:A:H2'	34:RA:192:C:H6	1.78	0.46
34:RA:1266:G:H1'	34:RA:1267:U:H5	1.80	0.46
34:RA:1569:A:H5'	36:RD:61:LEU:HD11	1.97	0.46
34:RA:2100:G:H1	34:RA:2189:U:H3	1.64	0.46
34:RA:2198:A:H5'	41:RI:33:ARG:HH12	1.79	0.46
34:RA:2260:C:HO2'	34:RA:2388:A:HO2'	1.58	0.46
34:RA:2308:G:H22	34:RA:2311:A:H2	1.63	0.46
34:RA:2351:G:H1'	34:RA:2367:G:H22	1.80	0.46
34:RA:2393:A:H4'	44:RP:61:ARG:O	2.15	0.46
34:RA:2841:C:H2'	34:RA:2842:G:C8	2.51	0.46
35:RB:93:C:H5''	54:RZ:20:ARG:HH21	1.80	0.46
37:RE:24:THR:HG21	37:RE:188:VAL:HG22	1.97	0.46
40:RH:11:VAL:HG12	40:RH:13:LYS:HG2	1.97	0.46
1:XA:186(B):C:O2	20:XT:105:SER:CA	2.62	0.46
1:XA:421:U:H4'	3:XC:192:THR:CG2	2.43	0.46
1:XA:978:A:H62	14:XN:18:VAL:CG2	2.28	0.46
1:XA:1057:G:H3'	1:XA:1058:G:H8	1.80	0.46
1:XA:1309:G:H2'	1:XA:1310:G:C8	2.50	0.46
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
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:504:U:H5''	34:YA:505:A:H5'	1.98	0.46
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
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:757:U:H5''	1:QA:822:C:O2'	2.15	0.46
1:QA:758:G:H8	1:QA:758:G:O5'	1.99	0.46
1:QA:955:U:H2'	1:QA:956:U:O4'	2.15	0.46
1:QA:1313:U:C2'	19:QS:6:LYS:HZ3	2.25	0.46
9:QI:28:VAL:HA	9:QI:63:ILE:HB	1.97	0.46
10:QJ:12:ASP:O	10:QJ:16:LEU:HB3	2.16	0.46
34:RA:301:G:P	53:RY:84:ARG:HH22	2.38	0.46
34:RA:358:U:H2'	34:RA:359:A:H8	1.80	0.46
34:RA:1853:A:H2'	34:RA:1854:A:C8	2.49	0.46
34:RA:2417:C:OP1	44:RP:64:LYS:NZ	2.49	0.46
35:RB:74:U:H1'	54:RZ:34:ASN:ND2	2.29	0.46
1:XA:60:A:C2	1:XA:378:G:H1'	2.50	0.46
1:XA:191:G:N2	20:XT:103:GLY:O	2.27	0.46
1:XA:376:G:OP1	16:XP:67:THR:CG2	2.34	0.46
1:XA:1142:G:H3'	1:XA:1143:G:H8	1.80	0.46
1:XA:1303:C:H3'	1:XA:1304:G:C8	2.51	0.46
1:XA:1359:C:H41	14:XN:35:ARG:NE	2.13	0.46
1:XA:1495:U:O2'	1:XA:1496:C:H5'	2.16	0.46
34:YA:380:U:H2'	34:YA:381:G:C8	2.50	0.46
34:YA:475:U:H4'	34:YA:510:C:H5'	1.97	0.46
34:YA:671:C:H2'	34:YA:672:C:C6	2.49	0.46
34:YA:1466:G:H3'	34:YA:1547:C:H41	1.80	0.46
34:YA:2045:C:H2'	34:YA:2046:G:H8	1.81	0.46
34:YA:2142:C:H2'	34:YA:2143:C:C6	2.51	0.46
42:YN:16:ILE:HG21	42:YN:26:LEU:HD11	1.97	0.46
44:YP:98:GLU:HA	44:YP:101:VAL:HG12	1.96	0.46
1:QA:417:C:H2'	1:QA:418:C:C6	2.50	0.46
1:QA:866:C:H4'	1:QA:919:A:H5'	1.97	0.46
1:QA:980:C:H6	14:QN:19:ARG:HG3	1.63	0.46
1:QA:1150:U:C2	10:QJ:39:PRO:HG2	2.50	0.46
1:QA:1188:A:C5'	14:QN:58:LYS:HZ1	2.25	0.46
1:QA:1203:C:H5'	14:QN:3:ARG:HD2	1.97	0.46
1:QA:1524:C:H2'	1:QA:1525:G:C8	2.50	0.46
3:QC:66:VAL:HB	3:QC:101:LEU:HG	1.98	0.46
8:QH:121:ASP:OD2	8:QH:125:ARG:NH1	2.48	0.46

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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
32:R8:46:ARG:NH1	34:RA:631:A:OP2	2.48	0.46
34:RA:456:C:C5	52:RX:69:TYR:CZ	3.03	0.46
34:RA:462:C:H2'	34:RA:463:G:C8	2.51	0.46
34:RA:464:U:N3	34:RA:684:G:O2'	2.46	0.46
34:RA:1827:C:OP2	36:RD:222:ARG:NH1	2.49	0.46
34:RA:2031:A:N3	34:RA:2455:G:O2'	2.43	0.46
34:RA:2447:G:H1	34:RA:2451:A:H62	1.63	0.46
40:RH:123:PHE:HE2	40:RH:133:VAL:HG22	1.80	0.46
40:RH:126:PRO:HG2	40:RH:130:ARG:HG3	1.96	0.46
46:RR:28:LEU:HD23	46:RR:48:VAL:HG21	1.98	0.46
1:XA:891:U:H2'	1:XA:892:A:C8	2.49	0.46
1:XA:926:G:N2	23:XX:18:C:OP2	2.48	0.46
1:XA:1351:U:H2'	1:XA:1352:C:C6	2.50	0.46
1:XA:1392:G:H2'	1:XA:1393:U:C6	2.50	0.46
12:XL:8:ASN:O	12:XL:12:ARG:HB2	2.15	0.46
16:XP:20:VAL:HG12	16:XP:35:LYS:HA	1.97	0.46
22:XV:56:C:N4	34:YA:2112:G:O6	2.48	0.46
34:YA:192:C:H1'	34:YA:800:A:N6	2.31	0.46
34:YA:383:U:H2'	34:YA:385:C:C5	2.50	0.46
34:YA:553:U:H2'	34:YA:554:U:C6	2.51	0.46
34:YA:920:G:H2'	34:YA:921:G:C8	2.51	0.46
34:YA:2102:U:H2'	34:YA:2103:C:C6	2.49	0.46
34:YA:2688:U:H2'	34:YA:2719:G:N2	2.30	0.46
34:YA:2831:G:H1'	34:YA:2883:A:H2'	1.98	0.46
38:YF:60:SER:OG	38:YF:61:GLY:N	2.49	0.46
1:QA:341:C:H2'	1:QA:342:C:C6	2.50	0.46
1:QA:404:U:H5'	4:QD:122:ARG:HG2	1.97	0.46
1:QA:657:G:H21	15:QO:23:GLY:HA3	1.80	0.46
1:QA:668:G:H1'	15:QO:49:ASP:HB2	1.97	0.46
1:QA:1330:U:H5''	13:QM:24:GLY:HA2	1.97	0.46
2:QB:197:VAL:O	8:QH:68:ARG:NH1	2.49	0.46
32:R8:8:LYS:HG3	34:RA:246:C:N4	2.31	0.46
32:R8:13:ARG:HD2	44:RP:61:ARG:HE	1.80	0.46
34:RA:184:C:O2'	34:RA:217:G:N3	2.40	0.46
34:RA:413:C:H2'	34:RA:414:C:C6	2.49	0.46
34:RA:839:U:H2'	34:RA:840:C:C6	2.50	0.46
34:RA:1058:G:H2'	34:RA:1059:G:C8	2.50	0.46
34:RA:1802:A:H2'	34:RA:1803:A:C8	2.50	0.46
34:RA:1940:U:OP1	34:RA:1965:C:N4	2.48	0.46
34:RA:2291:U:H2'	34:RA:2292:C:H6	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2443:C:H2'	34:RA:2444:G:C8	2.50	0.46
34:RA:2647:U:H2'	34:RA:2648:C:C6	2.50	0.46
34:RA:2819:G:H2'	34:RA:2821:A:N7	2.30	0.46
38:RF:24:LEU:HD12	38:RF:115:ALA:HB2	1.96	0.46
46:RR:35:THR:O	46:RR:35:THR:OG1	2.33	0.46
1:XA:665:A:N3	1:XA:732:C:H2'	2.30	0.46
1:XA:768:A:H1'	1:XA:1512:U:H1'	1.98	0.46
1:XA:951:G:H2'	1:XA:952:U:C6	2.51	0.46
1:XA:1131:G:H2'	1:XA:1132:C:C6	2.49	0.46
1:XA:1330:U:H5''	13:XM:24:GLY:O	2.14	0.46
1:XA:1479:C:H2'	1:XA:1480:G:C8	2.50	0.46
2:XB:188:ALA:HB3	2:XB:200:ILE:HD11	1.97	0.46
34:YA:270(E):C:H2'	34:YA:270(F):G:C8	2.51	0.46
34:YA:514:A:H2'	34:YA:515:A:C8	2.50	0.46
34:YA:839:U:H1'	34:YA:1191:G:H1'	1.96	0.46
34:YA:1454:U:H5	46:YR:73:VAL:HG12	1.80	0.46
41:YI:72:LEU:HD12	41:YI:138:ILE:HD12	1.97	0.46
1:QA:44:G:OP2	16:QP:12:LYS:HD3	2.15	0.46
1:QA:186(B):C:N1	20:QT:85:MET:CE	2.76	0.46
1:QA:309:G:C5'	16:QP:27:LYS:HZ3	2.29	0.46
1:QA:617:G:H21	16:QP:14:ASN:HD22	1.63	0.46
1:QA:877:C:H5''	8:QH:88:LYS:CD	2.46	0.46
1:QA:958:A:C4	19:QS:55:LYS:HB2	2.51	0.46
1:QA:958:A:H61	19:QS:77:THR:HB	1.80	0.46
1:QA:986:A:C4	19:QS:54:GLY:O	2.68	0.46
1:QA:1347:G:O2'	1:QA:1373:G:N1	2.44	0.46
1:QA:1514:C:H2'	1:QA:1515:C:C6	2.51	0.46
3:QC:9:GLY:HA3	14:QN:49:HIS:O	2.16	0.46
5:QE:98:THR:N	5:QE:117:ASP:OD1	2.40	0.46
34:RA:532:A:O2'	34:RA:2021:C:N4	2.47	0.46
34:RA:675:A:C2'	38:RF:67:GLN:HE22	2.28	0.46
34:RA:917:A:H3'	34:RA:918:A:H8	1.79	0.46
34:RA:1662:C:H1'	34:RA:2687:U:H5''	1.97	0.46
34:RA:2037:G:H2'	34:RA:2038:G:C8	2.50	0.46
34:RA:2398:U:H2'	34:RA:2399:G:C8	2.51	0.46
34:RA:2844:G:H3'	34:RA:2845:G:H8	1.81	0.46
38:RF:34:TRP:HB2	44:RP:6:LEU:HB3	1.98	0.46
41:RI:88:ILE:HG22	41:RI:90:GLY:N	2.31	0.46
1:XA:115:G:H1'	1:XA:116:A:OP2	2.15	0.46
1:XA:163:C:H2'	1:XA:164:U:C6	2.51	0.46
1:XA:320:C:H2'	1:XA:321:A:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:754:C:C6	15:XO:69:TYR:CZ	2.98	0.46
1:XA:777:A:H2'	1:XA:778:G:O4'	2.15	0.46
1:XA:1016:A:H1'	1:XA:1218:C:O2	2.16	0.46
1:XA:1301:U:O3'	13:XM:17:VAL:CG2	2.64	0.46
7:XG:75:VAL:HA	7:XG:87:VAL:O	2.16	0.46
31:Y7:3:ARG:NE	34:YA:1613:G:O2'	2.45	0.46
32:Y8:4:MET:HG2	34:YA:592:G:O2'	2.16	0.46
34:YA:247:G:H4'	34:YA:386:G:C4	2.50	0.46
34:YA:2232:U:H2'	34:YA:2233:U:C6	2.50	0.46
34:YA:2855:C:H2'	34:YA:2856:C:H6	1.80	0.46
52:YX:64:LYS:HZ2	52:YX:73:ARG:HE	1.63	0.46
1:QA:757:U:H2'	1:QA:758:G:O4'	2.16	0.46
1:QA:761:G:C5'	17:QQ:100:LYS:HZ3	2.20	0.46
1:QA:975:A:C2	14:QN:34:TYR:HD1	2.29	0.46
1:QA:1241:G:H2'	1:QA:1242:C:C6	2.50	0.46
1:QA:1440(O):C:H2'	1:QA:1440(P):A:C8	2.51	0.46
16:QP:59:TRP:HA	16:QP:62:VAL:HG22	1.97	0.46
33:R9:18:ARG:HD3	34:RA:1034:G:H4'	1.97	0.46
34:RA:910:A:H2'	34:RA:911:A:C8	2.50	0.46
34:RA:1026:U:H1'	34:RA:1027:A:H5''	1.98	0.46
34:RA:1689:A:H62	34:RA:1698:A:H2	1.64	0.46
37:RE:14:ILE:HD11	37:RE:173:VAL:HG11	1.97	0.46
52:RX:72:LYS:NZ	52:RX:73:ARG:O	2.38	0.46
1:XA:59:A:N3	1:XA:59:A:H2'	2.31	0.46
1:XA:113:G:H2'	1:XA:114:U:C6	2.50	0.46
1:XA:713:G:H2'	1:XA:714:G:C8	2.51	0.46
1:XA:1270:C:H4'	1:XA:1314:C:H5'	1.98	0.46
1:XA:1304:G:C8	1:XA:1304:G:C5'	2.85	0.46
1:XA:1327:C:H2'	1:XA:1328:C:C6	2.51	0.46
1:XA:1367:C:H4'	10:XJ:48:THR:HG21	1.98	0.46
1:XA:1375:A:C4'	7:XG:28:ASN:OD1	2.62	0.46
2:XB:118:LEU:HB3	2:XB:142:LEU:HD13	1.98	0.46
34:YA:523:C:O2	34:YA:553:U:O2'	2.34	0.46
34:YA:851:U:H2'	34:YA:852:G:C8	2.50	0.46
34:YA:1454:U:OP1	46:YR:77:ARG:NE	2.35	0.46
34:YA:1566:A:N6	36:YD:214:TRP:CH2	2.83	0.46
34:YA:1772:G:N2	34:YA:1774:C:H5'	2.31	0.46
34:YA:2069:G:C2	34:YA:2443:C:O2	2.68	0.46
34:YA:2439:A:H1'	34:YA:2587:A:H5'	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:YF:41:LEU:HA	38:YF:44:ARG:HG2	1.98	0.46
40:YH:89:ILE:HD11	40:YH:94:TYR:HB3	1.98	0.46
1:QA:955:U:H2'	19:QS:83:HIS:HA	1.97	0.46
1:QA:1004:A:N6	1:QA:1025:U:O3'	2.49	0.46
1:QA:1260:C:O2'	1:QA:1283:G:O2'	2.34	0.46
1:QA:1359:C:OP2	14:QN:35:ARG:NH1	2.49	0.46
10:QJ:50:ILE:HG12	14:QN:41:ARG:HE	1.71	0.46
34:RA:212:G:H2'	34:RA:213:A:C8	2.50	0.46
34:RA:244:A:C2	34:RA:245:G:H1'	2.51	0.46
34:RA:303:U:H2'	34:RA:304:G:H8	1.81	0.46
34:RA:598:G:H5'	44:RP:11:GLY:HA3	1.97	0.46
34:RA:817:C:HO2'	34:RA:932:G:N2	2.13	0.46
34:RA:1791:A:N6	34:RA:1828:G:O2'	2.41	0.46
42:RN:3:THR:HG21	49:RU:61:TRP:HE1	1.79	0.46
52:RX:90:GLU:HA	52:RX:93:GLU:HG2	1.97	0.46
54:RZ:67:LEU:HD13	54:RZ:68:PRO:HD2	1.96	0.46
1:XA:160:A:H2'	1:XA:161:A:O4'	2.15	0.46
1:XA:186(O):U:H2'	1:XA:186(P):G:C8	2.51	0.46
1:XA:620:C:C1'	4:XD:135:LEU:HD13	2.46	0.46
1:XA:674:G:H2'	1:XA:675:A:H8	1.81	0.46
1:XA:702:A:H3'	1:XA:703:G:C8	2.48	0.46
1:XA:896:C:H2'	1:XA:897:C:H6	1.81	0.46
1:XA:1124:G:H2'	1:XA:1145:C:N3	2.30	0.46
1:XA:1228:C:OP1	13:XM:108:ARG:NH2	2.49	0.46
8:XH:86:ILE:HD12	8:XH:135:CYS:HA	1.97	0.46
10:XJ:40:LEU:HD13	10:XJ:70:ARG:HA	1.98	0.46
26:Y2:28:LYS:HD3	26:Y2:28:LYS:HA	1.77	0.46
34:YA:259:G:H21	34:YA:621:A:H1'	1.81	0.46
34:YA:2064:C:H1'	34:YA:2450:A:C2	2.51	0.46
34:YA:2730:C:H2'	34:YA:2731:G:C8	2.50	0.46
34:YA:2820:A:C6	46:YR:4:LEU:HD11	2.50	0.46
42:YN:47:ALA:HB2	42:YN:112:LEU:HD11	1.98	0.46
43:YO:80:ASP:OD2	48:YT:64:ARG:NH2	2.48	0.46
1:QA:140:A:H2'	1:QA:141:A:C8	2.51	0.46
1:QA:260:G:H2'	1:QA:261:U:C6	2.51	0.46
1:QA:414:A:H3'	1:QA:415:A:H8	1.80	0.46
1:QA:687:A:O2'	1:QA:701:C:N4	2.48	0.46
1:QA: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
1:QA:1382:C:H2'	1:QA:1383:C:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:236:C:H2'	34:RA:237:C:C6	2.51	0.46
34:RA:270(G):U:H2'	34:RA:270(H):C:C6	2.51	0.46
34:RA:1147:C:H2'	34:RA:1148:A:C8	2.51	0.46
34:RA:1332:G:N2	34:RA:1609:A:O2'	2.49	0.46
34:RA:1853:A:H2'	34:RA:1854:A:H8	1.81	0.46
34:RA:1927:A:H2'	34:RA:1928:A:C8	2.51	0.46
34:RA:2574:G:H1'	37:RE:143:ASN:HB3	1.97	0.46
38:RF:56:GLU:OE2	38:RF:93:LYS:NZ	2.49	0.46
40:RH:84:SER:HA	40:RH:134:SER:HA	1.97	0.46
1:XA:68(G):C:H2'	1:XA:68(H):G:C8	2.50	0.46
1:XA:370:C:H2'	1:XA:371:G:C8	2.50	0.46
1:XA:445:G:H2'	1:XA:446:G:C8	2.51	0.46
1:XA:718:G:H3'	1:XA:719:C:C6	2.51	0.46
1:XA:728:A:N7	15:XO:54:ARG:CD	2.78	0.46
1:XA:745:C:H1'	1:XA:836:G:H1'	1.98	0.46
1:XA:948:C:OP1	13:XM:106:ASN:HB3	2.16	0.46
11:XK:108:ILE:O	18:XR:87:ARG:CA	2.64	0.46
33:Y9:20:HIS:CE1	34:YA:2756:U:H3'	2.51	0.46
34:YA:842:G:H2'	34:YA:843:G:H8	1.80	0.46
34:YA:1468:C:H2'	34:YA:1469:A:C8	2.51	0.46
34:YA:2096:U:H3	34:YA:2193:G:N2	2.13	0.46
34:YA:2232:U:H2'	34:YA:2233:U:H6	1.81	0.46
34:YA:2533:A:OP1	34:YA:2665:A:O2'	2.33	0.46
1:QA:106:C:H2'	1:QA:107:G:H8	1.81	0.46
1:QA:346:G:OP1	48:RT:41:ARG:NH2	2.48	0.46
1:QA:500:G:H1'	1:QA:547:A:N1	2.31	0.46
1:QA:568:G:N7	12:QL:5:PRO:HD3	2.31	0.46
1:QA:730:G:N3	1:QA:765:G:H4'	2.31	0.46
1:QA:1106:G:C4'	3:QC:172:ARG:CG	2.15	0.46
1:QA:1109:C:H3'	1:QA:1110:A:C8	2.51	0.46
1:QA:1131:G:H2'	1:QA:1132:C:H6	1.81	0.46
1:QA:1307:U:H5''	13:QM:99:ARG:CZ	2.46	0.46
3:QC:22:TRP:CA	10:QJ:93:GLY:CA	2.84	0.46
4:QD:22:LYS:HG3	56:QD:301:SF4:S1	2.56	0.46
11:QK:27:ASN:OD1	11:QK:28:THR:N	2.47	0.46
33:R9:11:CYS:N	33:R9:14:CYS:SG	2.83	0.46
34:RA:1351:C:H2'	34:RA:1352:U:C6	2.51	0.46
34:RA:1657:C:O3'	37:RE:133:LYS:HG2	2.16	0.46
34:RA:1952:A:OP1	43:RO:42:SER:OG	2.32	0.46
34:RA:2036:C:H2'	34:RA:2037:G:C8	2.51	0.46
34:RA:2260:C:O2'	34:RA:2388:A:O2'	2.28	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2757:A:N1	40:RH:67:LEU:HD13	2.31	0.46
35:RB:31:C:H4'	39:RG:29:TRP:CH2	2.51	0.46
51:RW:86:LEU:HD22	51:RW:96:ILE:HD11	1.98	0.46
1:XA:450:G:H5''	1:XA:451:A:H3'	1.98	0.46
1:XA:996:A:H2'	1:XA:997:U:C6	2.51	0.46
1:XA:1157:A:C2	1:XA:1181:G:H1'	2.51	0.46
1:XA:1312:G:C2'	19:XS:6:LYS:NZ	2.68	0.46
5:XE:151:LEU:O	8:XH:64:LYS:NZ	2.49	0.46
13:XM:45:VAL:HG23	13:XM:48:LEU:HD12	1.98	0.46
20:XT:11:SER:O	20:XT:11:SER:OG	2.28	0.46
31:Y7:35:ARG:NH1	34:YA:54:G:O2'	2.38	0.46
34:YA:98:G:H1'	34:YA:103:A:H1'	1.98	0.46
34:YA:442:G:N2	38:YF:48:THR:OG1	2.48	0.46
34:YA:2688:U:H1'	34:YA:2721:A:N6	2.31	0.46
40:YH:137:ASP:OD2	40:YH:138:LYS:N	2.48	0.46
43:YO:64:ARG:HB2	43:YO:83:ALA:HB3	1.98	0.46
48:YT:91:ARG:NH2	48:YT:124:ASP:OD2	2.48	0.46
1:QA:18:C:H42	1:QA:917:G:H1	1.64	0.46
1:QA:521:G:OP1	12:QL:73:GLU:HA	2.16	0.46
2:QB:101:MET:HA	2:QB:108:ILE:HG13	1.97	0.46
2:QB:178:ARG:HH21	8:QH:70:GLN:HA	1.81	0.46
3:QC:184:TYR:HA	3:QC:200:ALA:O	2.15	0.46
4:QD:57:ARG:HB3	4:QD:206:PHE:HB2	1.97	0.46
4:QD:72:GLU:OE2	4:QD:207:TYR:OH	2.29	0.46
6:QF:33:TYR:OH	6:QF:78:GLU:OE1	2.30	0.46
16:QP:4:ILE:HD13	16:QP:21:VAL:HG12	1.97	0.46
18:QR:74:ARG:HD3	18:QR:81:PHE:HA	1.98	0.46
34:RA:1539:G:H2'	34:RA:1540:G:C8	2.51	0.46
34:RA:1689:A:H2'	34:RA:1690:A:C8	2.51	0.46
34:RA:2318:G:OP2	34:RA:2318:G:N2	2.48	0.46
34:RA:2530:A:O2'	34:RA:2534:A:N6	2.48	0.46
34:RA:2554:U:H2'	34:RA:2555:U:C6	2.51	0.46
38:RF:182:ASN:OD1	38:RF:182:ASN:N	2.46	0.46
49:RU:45:TYR:O	49:RU:49:HIS:ND1	2.49	0.46
1:XA:129(B):G:H4'	1:XA:130:A:H5''	1.98	0.46
1:XA:663:A:H2'	1:XA:664:G:C8	2.51	0.46
1:XA:669:U:H1'	15:XO:46:HIS:CE1	2.50	0.46
1:XA:697:U:H1'	1:XA:786:G:H1'	1.97	0.46
1:XA:739:C:P	15:XO:2:PRO:HD3	2.56	0.46
1:XA:1410:G:H2'	1:XA:1411:C:C6	2.50	0.46
2:XB:27:LYS:HD2	2:XB:193:ASP:HB2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:XI:7:THR:O	9:XI:7:THR:OG1	2.31	0.46
10:XJ:50:ILE:CD1	14:YN:41:ARG:NH1	2.79	0.46
12:XL:53:ARG:HB3	12:XL:69:TYR:HE1	1.79	0.46
22:XV:50:G:H2'	22:XV:51:A:H8	1.81	0.46
32:Y8:34:TRP:HD1	34:YA:2420:C:OP1	1.98	0.46
34:YA:691:C:H2'	34:YA:692:C:C6	2.50	0.46
34:YA:1380:G:O2'	34:YA:1569:A:N6	2.49	0.46
34:YA:1493:C:N4	34:YA:2210:G:N9	2.61	0.46
34:YA:1493:C:C6	34:YA:2210:G:C6	3.04	0.46
34:YA:1645:G:H5''	34:YA:1646:C:H5'	1.98	0.46
34:YA:2043:C:N4	34:YA:2625:G:H1	2.13	0.46
34:YA:2291:U:H2'	34:YA:2292:C:C6	2.51	0.46
34:YA:2801:A:C5	34:YA:2802:G:H1'	2.51	0.46
45:YQ:133:ARG:HG3	45:YQ:134:ARG:H	1.80	0.46
54:YZ:74:VAL:HG22	54:YZ:86:VAL:HG23	1.97	0.46
1:QA:538:G:H2'	1:QA:539:A:C8	2.51	0.45
1:QA:612:C:H2'	1:QA:613:C:C6	2.51	0.45
1:QA:784:C:H2'	1:QA:785:G:C8	2.51	0.45
1:QA:956:U:C5'	19:QS:83:HIS:HA	2.46	0.45
1:QA:957:U:O2'	19:QS:79:THR:C	2.53	0.45
1:QA:1294:G:H2'	1:QA:1295:G:H8	1.81	0.45
1:QA:1359:C:H4'	1:QA:1362(A):C:N4	2.31	0.45
2:QB:73:THR:O	2:QB:75:LYS:NZ	2.50	0.45
3:QC:5:ILE:CG2	14:QN:45:ARG:NH2	2.78	0.45
7:QG:70:LYS:HB2	7:QG:96:GLN:HB3	1.98	0.45
32:R8:13:ARG:HG2	44:RP:63:PRO:HB3	1.98	0.45
32:R8:29:LYS:O	32:R8:31:HIS:N	2.46	0.45
34:RA:689:A:H2'	34:RA:690:G:C8	2.51	0.45
34:RA:748:G:OP1	51:RW:88:ARG:NH2	2.40	0.45
34:RA:956:G:H2'	34:RA:957:A:H2'	1.98	0.45
34:RA:1102:C:H2'	34:RA:1103:A:H8	1.81	0.45
34:RA:2081:C:H2'	34:RA:2082:A:C8	2.51	0.45
37:RE:46:ALA:HB1	37:RE:80:GLU:HG2	1.99	0.45
46:RR:38:VAL:HG12	46:RR:112:ALA:HB2	1.96	0.45
49:RU:27:LEU:HD22	49:RU:31:SER:HB2	1.97	0.45
1:XA:376:G:H1	1:XA:387:U:H3	1.64	0.45
1:XA:445:G:H2'	1:XA:446:G:H8	1.80	0.45
1:XA:858:G:H3'	1:XA:869:G:H1	1.81	0.45
1:XA:974:A:O5'	14:YN:31:ARG:HD3	2.16	0.45
1:XA:983:A:H2	1:XA:984:C:C6	2.33	0.45
1:XA:1242:C:H4'	1:XA:1303:C:H4'	1.98	0.45

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:715:A:H2'	1:XA:716:A:C8	2.51	0.45
1:XA:1307:U:H2'	1:XA:1308:U:C6	2.51	0.45
2:XB:68:ILE:HG22	2:XB:161:ALA:HB3	1.98	0.45
4:XD:21:LEU:N	4:XD:26:CYS:SG	2.89	0.45
5:XE:101:ILE:O	5:XE:120:THR:OG1	2.30	0.45
12:XL:46:LYS:HG3	12:XL:48:PRO:HD2	1.98	0.45
34:YA:191:A:H1'	34:YA:679:C:H1'	1.97	0.45
34:YA:195:A:H2'	34:YA:198:C:H42	1.80	0.45
34:YA:376:C:H2'	34:YA:377:C:C6	2.51	0.45
34:YA:1173:G:H4'	34:YA:1174:A:C8	2.51	0.45
34:YA:1399:C:H2'	34:YA:1400:G:C8	2.52	0.45
34:YA:2010:G:H5''	51:YW:42:ARG:HB2	1.98	0.45
34:YA:2077:A:C5	34:YA:2435:A:C5	3.04	0.45
34:YA:2439:A:N7	34:YA:2586:C:H4'	2.31	0.45
34:YA:2630:G:H2'	34:YA:2631:G:C8	2.52	0.45
34:YA:2773:C:H2'	34:YA:2774:C:H6	1.81	0.45
34:YA:2809:A:H2'	34:YA:2810:A:C8	2.52	0.45
34:YA:2844:G:H3'	34:YA:2845:G:H8	1.81	0.45
44:YP:96:THR:HG22	44:YP:99:LEU:HD22	1.98	0.45
54:YZ:149:SER:OG	54:YZ:172:ALA:O	2.27	0.45
1:QA:730:G:N2	1:QA:765:G:H5''	2.32	0.45
1:QA:967:C:H5'	1:QA:968:A:C4	2.51	0.45
1:QA:1038:C:H2'	1:QA:1039:C:C6	2.52	0.45
1:QA:1071:C:H2'	1:QA:1072:G:C8	2.51	0.45
1:QA:1307:U:OP1	13:QM:99:ARG:HB2	2.16	0.45
1:QA:1359:C:C6	14:QN:35:ARG:CZ	3.00	0.45
2:QB:178:ARG:NH1	2:QB:196:LEU:O	2.49	0.45
4:QD:208:SER:HB2	5:QE:101:ILE:CD1	2.42	0.45
12:QL:7:ILE:CD1	17:QQ:32:TYR:HB3	2.20	0.45
24:R0:34:GLY:HA3	34:RA:2353:G:H1'	1.98	0.45
34:RA:20:C:OP1	49:RU:22:LYS:NZ	2.28	0.45
34:RA:347:A:H2'	34:RA:348:G:C8	2.52	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
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:68(I):G:N2	1:XA:68(S):C:N3	2.65	0.45
1:XA:309:G:O4'	1:XA:608:A:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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:106:C:H2'	34:YA:107:C:C6	2.52	0.45
34:YA:1040:C:H2'	34:YA:1041:C:C6	2.51	0.45
34:YA:1153:C:H5'	49:YU:76:TYR:HE2	1.82	0.45
34:YA:1535:U:N3	34:YA:1537:C:H1'	2.32	0.45
34:YA:2025:C:H2'	34:YA:2026:C:C6	2.51	0.45
34:YA:2044:C:N3	34:YA:2625:G:N3	2.62	0.45
34:YA:2368:C:H2'	34:YA:2369:A:C8	2.52	0.45
34:YA:2641:G:H2'	34:YA:2642:G:C8	2.51	0.45
34:YA:2692:C:H2'	34:YA:2693:A:C8	2.51	0.45
41:YI:4:ILE:HG22	41:YI:18:VAL:HB	1.98	0.45
1:QA:186(A):C:O2'	20:QT:85:MET:SD	2.59	0.45
1:QA:235:C:H2'	1:QA:236:G:C8	2.52	0.45
1:QA:403:C:H4'	4:QD:122:ARG:HD3	1.97	0.45
1:QA:958:A:N7	19:QS:79:THR:CG2	2.80	0.45
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
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:98:LEU:CG	40:RH:125:VAL:CG1	2.91	0.45
40:RH:124:GLU:HG3	40:RH:124:GLU:O	2.17	0.45
43:RO:63:VAL:HB	43:RO:102:VAL:HG13	1.98	0.45
1:XA:68(N):U:H2'	1:XA:68(O):U:O4'	2.16	0.45
1:XA:341:C:H2'	1:XA:342:C:C6	2.52	0.45
1:XA:601:C:H2'	1:XA:602:A:C8	2.52	0.45
1:XA:718:G:H3'	1:XA:719:C:H6	1.81	0.45
1:XA:1028(B):C:H2'	1:XA:1028(C):C:H5	1.81	0.45
1:XA:1081:G:OP1	5:XE:18:ARG:HB3	2.17	0.45
1:XA:1124:G:O5'	10:XJ:36:GLY:CA	2.65	0.45
1:XA:1360:A:C1'	14:XN:17:LYS:HG3	2.46	0.45
1:XA:1405:G:H2'	1:XA:1406:U:H6	1.81	0.45
1:XA:1505:G:C1'	23:XX:15:A:H2	2.29	0.45
4:XD:162:LEU:HD12	4:XD:178:VAL:HG13	1.98	0.45
6:XF:36:ARG:NH2	6:XF:38:GLU:OE2	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:XL:110:VAL:H	12:XL:122:THR:HG22	1.82	0.45
25:Y1:40:ARG:HG2	25:Y1:41:ARG:H	1.81	0.45
29:Y5:32:PRO:N	29:Y5:32:PRO:C	2.61	0.45
34:YA:286:C:H2'	34:YA:287:C:C6	2.52	0.45
34:YA:834:C:H2'	34:YA:835:A:C8	2.51	0.45
34:YA:1165:U:H2'	34:YA:1166:C:C6	2.52	0.45
34:YA:2031:A:N3	34:YA:2455:G:O2'	2.43	0.45
34:YA:2696:U:H2'	34:YA:2697:G:C8	2.51	0.45
36:YD:133:LEU:HD23	36:YD:136:ILE:HD12	1.98	0.45
39:YG:138:GLN:OE1	39:YG:153:ARG:N	2.43	0.45
40:YH:10:PRO:O	40:YH:49:VAL:HA	2.17	0.45
43:YO:104:ARG:N	43:YO:122:LEU:O	2.49	0.45
49:YU:17:ILE:HG13	49:YU:32:PHE:HE1	1.82	0.45
1:QA:194:C:H4'	20:QT:68:LYS:CE	2.47	0.45
1:QA:451:A:N6	1:QA:480:U:H2'	2.32	0.45
1:QA:677:U:N1	11:QK:119:CYS:SG	2.90	0.45
1:QA:684:A:H1'	11:QK:39:PRO:HD2	1.99	0.45
1:QA:950:U:OP2	13:QM:102:ARG:HD2	2.17	0.45
1:QA:1094:G:H4'	1:QA:1095:U:C5	2.51	0.45
1:QA:1331:G:OP2	13:QM:24:GLY:N	2.34	0.45
2:QB:193:ASP:OD2	2:QB:193:ASP:N	2.50	0.45
16:QP:55:ARG:HD2	16:QP:55:ARG:HA	1.79	0.45
25:R1:90:ILE:CA	25:R1:94:LEU:CD1	2.84	0.45
31:R7:18:PHE:HB2	31:R7:43:THR:HG21	1.99	0.45
34:RA:996:A:H2'	34:RA:997:G:C8	2.51	0.45
34:RA:1048:A:H2	34:RA:1112:G:H21	1.63	0.45
34:RA:2071:A:H2'	34:RA:2072:G:C8	2.52	0.45
36:RD:132:PRO:HA	36:RD:190:TYR:HA	1.99	0.45
48:RT:102:ILE:HD12	48:RT:110:ILE:HD12	1.99	0.45
50:RV:68:LYS:HD2	50:RV:68:LYS:HA	1.69	0.45
1:XA:116:A:C8	1:XA:116:A:O5'	2.70	0.45
1:XA:156:G:H2'	1:XA:157:G:H8	1.81	0.45
1:XA:321:A:H4'	1:XA:1436:U:H5'	1.97	0.45
1:XA:634:C:H2'	1:XA:635:G:C8	2.40	0.45
1:XA:722:A:H4'	1:XA:723:U:C4	2.52	0.45
1:XA:730:G:N2	1:XA:765:G:H5''	2.32	0.45
1:XA:1117:G:H21	1:XA:1180:A:H1'	1.81	0.45
4:XD:30:LYS:HB3	4:XD:35:ARG:HH22	1.81	0.45
7:XG:79:ARG:HH21	7:XG:82:GLY:HA2	1.82	0.45
10:XJ:53:PRO:HB3	14:XN:42:ILE:CG1	2.39	0.45
34:YA:415:A:C2	34:YA:2409:G:C2	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:834:C:H2'	34:YA:835:A:H8	1.82	0.45
34:YA:2019:A:H2	34:YA:2035:G:H22	1.65	0.45
34:YA:2044:C:C5	34:YA:2625:G:N2	2.83	0.45
34:YA:2638:G:OP1	37:YE:82:ARG:NH2	2.49	0.45
34:YA:2700:C:H2'	34:YA:2701:C:C6	2.51	0.45
36:YD:71:ASP:HB2	36:YD:103:ARG:HH12	1.82	0.45
51:YW:46:PHE:O	51:YW:50:VAL:HG23	2.16	0.45
1:QA:158:G:H2'	1:QA:159:G:C8	2.52	0.45
1:QA:646:U:H2'	1:QA:647:C:C6	2.52	0.45
1:QA:950:U:H2'	1:QA:951:G:C8	2.51	0.45
1:QA:1110:A:H62	3:QC:176:HIS:HB2	1.81	0.45
10:QJ:99:LYS:HA	10:QJ:99:LYS:HD3	1.79	0.45
13:QM:91:ARG:HD2	13:QM:96:LEU:HB3	1.98	0.45
20:QT:58:LYS:O	20:QT:61:SER:OG	2.26	0.45
27:R3:18:ASP:OD1	27:R3:18:ASP:N	2.48	0.45
29:R5:41:PRO:O	29:R5:44:THR:OG1	2.27	0.45
32:R8:31:HIS:CD2	34:RA:2422:A:N6	2.83	0.45
34:RA:64:A:H2'	34:RA:65:C:O4'	2.17	0.45
34:RA:270(E):C:H2'	34:RA:270(F):G:C8	2.52	0.45
34:RA:2572:A:OP1	34:RA:2574:G:O2'	2.31	0.45
34:RA:2795:G:H2'	34:RA:2798:C:H5	1.82	0.45
50:RV:14:VAL:HB	50:RV:96:ILE:HG12	1.98	0.45
1:XA:102:G:N3	1:XA:151:A:H2	2.15	0.45
1:XA:364:A:H2'	1:XA:365:U:C2	2.51	0.45
1:XA:824:C:H2'	1:XA:825:G:H8	1.79	0.45
3:XC:21:ARG:NH1	10:XJ:15:THR:HG21	2.31	0.45
7:XG:26:PHE:O	7:XG:30:ILE:HG12	2.17	0.45
29:Y5:9:LYS:NZ	34:YA:2019:A:C8	2.83	0.45
34:YA:321:G:C4	34:YA:341:G:H4'	2.51	0.45
34:YA:839:U:H2'	34:YA:840:C:C6	2.52	0.45
34:YA:1083:U:O2	34:YA:1085:A:H3'	2.16	0.45
34:YA:1221:C:H2'	34:YA:1222:C:C6	2.52	0.45
34:YA:1445:C:H2'	34:YA:1446:C:H6	1.81	0.45
34:YA:2080:G:C6	34:YA:2241:A:N1	2.85	0.45
34:YA:2184:G:H2'	34:YA:2185:C:C6	2.51	0.45
34:YA:2263:C:H2'	34:YA:2264:C:C6	2.52	0.45
34:YA:2345:G:N3	34:YA:2381:C:H2'	2.31	0.45
34:YA:2880:C:H1'	46:YR:92:GLY:O	2.17	0.45
35:YB:90:C:H5'	45:YQ:18:LYS:HA	1.99	0.45
38:YF:155:LEU:HB2	38:YF:189:THR:HG21	1.99	0.45
42:YN:137:LYS:HD3	42:YN:138:LEU:HG	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
48:YT:54:ARG:HA	48:YT:59:THR:HG23	1.99	0.45
1:QA:435:C:H2'	1:QA:436:C:C6	2.51	0.45
1:QA:565:U:H3'	1:QA:566:G:H2'	1.99	0.45
1:QA:762:C:H2'	1:QA:763:G:C8	2.52	0.45
1:QA:987:G:H2'	1:QA:988:G:H8	1.82	0.45
1:QA:996:A:H2'	1:QA:997:U:C6	2.52	0.45
1:QA:1310:G:H2'	1:QA:1311:G:C8	2.51	0.45
3:QC:23:TYR:OH	10:QJ:9:ARG:HB3	2.17	0.45
4:QD:85:LYS:HA	4:QD:85:LYS:HD2	1.73	0.45
10:QJ:47:PHE:CE2	14:QN:34:TYR:CB	2.97	0.45
31:R7:6:GLN:O	34:RA:686:G:H8	2.00	0.45
34:RA:33:U:O4	34:RA:446:G:O2'	2.31	0.45
34:RA:270(T):G:H2'	34:RA:270(U):G:H8	1.82	0.45
34:RA:863:A:OP1	45:RQ:21:THR:OG1	2.14	0.45
34:RA:994:C:OP1	49:RU:53:ARG:NH2	2.50	0.45
34:RA:1463:C:H2'	34:RA:1464:C:H6	1.81	0.45
34:RA:1947:C:H2'	34:RA:1948:G:C8	2.52	0.45
34:RA:2010:G:H5''	51:RW:42:ARG:HB2	1.98	0.45
34:RA:2419:U:H2'	34:RA:2420:C:C6	2.49	0.45
34:RA:2514:U:H2'	34:RA:2515:C:C6	2.52	0.45
36:RD:208:LYS:HG3	36:RD:210:GLY:H	1.82	0.45
37:RE:111:ARG:HD3	37:RE:160:TYR:CE2	2.52	0.45
39:RG:161:THR:HG22	39:RG:163:ALA:H	1.82	0.45
48:RT:118:ARG:HH11	48:RT:121:ILE:HG21	1.81	0.45
1:XA:167:G:H2'	1:XA:168:G:C8	2.52	0.45
1:XA:694:A:H2'	1:XA:695:A:O4'	2.17	0.45
3:XC:60:ALA:CB	10:XJ:91:PRO:HG2	2.45	0.45
4:XD:43:HIS:HB3	4:XD:46:LYS:HD2	1.98	0.45
10:XJ:47:PHE:CZ	14:XN:36:PHE:HB3	2.51	0.45
33:Y9:25:VAL:HG22	33:Y9:34:GLN:HB3	1.98	0.45
34:YA:574:C:C5	34:YA:2054:A:H4'	2.52	0.45
34:YA:686:G:N2	34:YA:788:A:H61	2.15	0.45
34:YA:987:G:O2'	34:YA:1000:A:N3	2.42	0.45
34:YA:1071:G:H1'	34:YA:1089:G:H3'	1.98	0.45
34:YA:2098:U:O2	34:YA:2191:G:N2	2.49	0.45
34:YA:2581:G:N2	34:YA:2581:G:OP2	2.50	0.45
37:YE:171:GLU:HB2	37:YE:185:LYS:HG3	1.98	0.45
38:YF:54:ARG:HD2	38:YF:81:PRO:HD3	1.98	0.45
1:QA:186(F):C:H2'	1:QA:186(G):C:C6	2.52	0.45
1:QA:647:C:H2'	1:QA:648:A:C8	2.51	0.45
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)
1:QA:1360:A:C2'	14:QN:17:LYS:HZ1	2.30	0.45
11:QK:57:THR:HG23	11:QK:60:ALA:H	1.81	0.45
17:QQ:59:ILE:HG22	17:QQ:73:VAL:HA	1.98	0.45
22:QV:74:C:H5''	25:R1:23:LYS:HG3	1.98	0.45
34:RA:459:U:H2'	34:RA:460:A:C8	2.50	0.45
34:RA:1056:G:H5''	34:RA:1057:A:O4'	2.17	0.45
34:RA:1525:G:H2'	34:RA:1526:G:C8	2.52	0.45
34:RA:1838:C:N4	34:RA:1899:G:O4'	2.50	0.45
34:RA:2591:C:H2'	34:RA:2592:G:C8	2.52	0.45
34:RA:2688:U:OP1	34:RA:2713:A:N6	2.50	0.45
38:RF:187:VAL:HG23	44:RP:3:LEU:HD22	1.97	0.45
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:YN:36:PHE:HB3	2.51	0.45
27:Y3:23:LEU:HD12	27:Y3:28:LEU:HB2	1.98	0.45
34:YA:662:G:H2'	34:YA:663:G:C8	2.51	0.45
34:YA:691:C:H2'	34:YA:692:C:H6	1.81	0.45
34:YA:1523:U:H2'	34:YA:1524:G:C8	2.52	0.45
34:YA:1571:A:H2'	34:YA:1572:A:C8	2.52	0.45
34:YA:1812:A:H2'	34:YA:1813:G:H8	1.81	0.45
34:YA:2373:G:H2'	34:YA:2374:C:C6	2.52	0.45
34:YA:2741:A:H61	34:YA:2763:G:H1'	1.82	0.45
34:YA:2849:U:C2	34:YA:2867:G:H1'	2.52	0.45
36:YD:44:ASN:HB3	36:YD:49:ILE:HG22	1.98	0.45
49:YU:8:VAL:HG22	49:YU:12:ARG:HE	1.82	0.45
1:QA:40:C:H2'	1:QA:41:G:C8	2.52	0.45
1:QA:115:G:H1'	1:QA:116:A:N7	2.32	0.45
1:QA:302:G:N3	1:QA:556:C:H4'	2.32	0.45
1:QA:505:G:H2'	1:QA:506:G:C8	2.52	0.45
7:QG:16:LEU:HD21	9:QI:42:ARG:HG2	0.48	0.45
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:242:G:N2	34:RA:243:U:O4	2.50	0.45
34:RA:363(C):G:H2'	34:RA:363(D):G:H8	1.82	0.45
34:RA:1012:U:OP1	49:RU:75:ASN:ND2	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
34:RA:1849:G:H2'	34:RA:1850:G:H8	1.82	0.45
34:RA:1925:C:H2'	34:RA:1926:U:C6	2.52	0.45
34:RA:1939:U:OP1	34:RA:2604:U:O2'	2.35	0.45
34:RA:2250:G:O2'	34:RA:2496:C:OP1	2.23	0.45
40:RH:86:GLU:O	40:RH:164:TYR:HB2	2.17	0.45
40:RH:126:PRO:HG2	40:RH:130:ARG:CG	2.46	0.45
41:RI:79:ILE:HG23	41:RI:142:VAL:HA	1.99	0.45
41:RI:80:PRO:HB2	41:RI:146:ALA:HB2	1.97	0.45
47:RS:23:ARG:NH2	47:RS:111:GLU:OE1	2.49	0.45
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
1:XA:1305:G:C2	1:XA:1331:G:C4	3.04	0.45
6:XF:91:VAL:CB	18:XR:34:TYR:OH	2.64	0.45
15:XO:64:ARG:HH12	15:XO:68:ARG:HH22	1.63	0.45
31:Y7:37:LYS:CE	34:YA:458:G:C8	2.99	0.45
33:Y9:27:CYS:SG	33:Y9:29:ASN:HB3	2.57	0.45
34:YA:285:C:H2'	34:YA:286:C:C6	2.52	0.45
34:YA:347:A:H2'	34:YA:348:G:H8	1.82	0.45
34:YA:779:U:H2'	34:YA:780:G:H8	1.81	0.45
34:YA:1458:C:H1'	34:YA:1459:G:C6	2.52	0.45
34:YA:1476:C:H2'	34:YA:1477:A:H8	1.82	0.45
34:YA:2036:C:H2'	34:YA:2037:G:H8	1.82	0.45
34:YA:2306:C:H2'	34:YA:2307:G:N2	2.32	0.45
34:YA:2863:C:H2'	34:YA:2864:G:C8	2.52	0.45
43:YO:78:ARG:NE	48:YT:73:GLU:OE1	2.47	0.45
1:QA:738:C:H2'	1:QA:739:C:C6	2.52	0.44
1:QA:973:G:C2'	14:QN:29:ARG:NH1	2.68	0.44
1:QA:1206:G:H2'	1:QA:1207:G:O4'	2.17	0.44
1:QA:1277:C:H4'	1:QA:1281:U:O4	2.17	0.44
6:QF:12:PRO:HD3	6:QF:58:GLY:HA2	1.99	0.44
8:QH:112:LEU:HD11	8:QH:133:LEU:HD12	1.99	0.44
34:RA:13:A:N1	34:RA:525:U:H2'	2.31	0.44
34:RA:823:G:H2'	34:RA:824:A:H8	1.82	0.44
34:RA:1399:C:H2'	34:RA:1400:G:C8	2.53	0.44
34:RA:1708:C:H2'	34:RA:1709:U:H6	1.82	0.44
34:RA:2229:C:H2'	34:RA:2230:G:H8	1.82	0.44
34:RA:2511:U:O2'	37:RE:138:PRO:O	2.30	0.44
34:RA:2567:G:H2'	34:RA:2568:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:RD:61:LEU:HD23	36:RD:61:LEU:HA	1.83	0.44
37:RE:32:PRO:HA	37:RE:90:THR:HA	1.99	0.44
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
1:XA:1119:C:H2'	1:XA:1120:G:C8	2.52	0.44
1:XA:1126:U:H3'	1:XA:1127:G:C8	2.49	0.44
1:XA:1360:A:N3	14:YN:17:LYS:HG3	2.29	0.44
1:XA:1369:C:H2'	1:XA:1370:G:C8	2.53	0.44
1:XA:1378:C:C5	1:XA:1378:C:OP1	2.70	0.44
8:XH:121:ASP:HB2	8:XH:125:ARG:HH21	1.82	0.44
12:XL:88:GLY:H	12:XL:98:TYR:HA	1.82	0.44
34:YA:318:C:H2'	34:YA:319:C:C6	2.52	0.44
34:YA:459:U:H2'	34:YA:460:A:C8	2.52	0.44
34:YA:1394:U:H4'	34:YA:1603:A:H4'	1.99	0.44
34:YA:1397:U:OP2	34:YA:1398:C:N4	2.40	0.44
34:YA:1408:C:H2'	34:YA:1409:C:C6	2.52	0.44
34:YA:1497:U:H5''	34:YA:1498:C:H5	1.82	0.44
34:YA:2059:A:C6	34:YA:2503:A:C2	3.05	0.44
34:YA:2453:A:H2'	34:YA:2454:G:C8	2.52	0.44
34:YA:2779:U:H5'	34:YA:2779:U:O2	2.16	0.44
1:QA:511:C:C6	1:QA:534:U:H1'	2.52	0.44
1:QA:981:U:C4'	14:QN:6:LEU:HD22	2.48	0.44
1:QA:1190:G:H5'	3:QC:176:HIS:HE1	1.82	0.44
1:QA:1229:A:H2'	1:QA:1230:C:H6	1.82	0.44
1:QA:1320:C:N4	19:QS:37:ARG:HD2	2.27	0.44
28:R4:34:GLU:OE1	39:RG:113:ARG:HD3	2.17	0.44
30:R6:23:THR:HG21	34:RA:2286:A:N6	2.27	0.44
34:RA:676:A:H8	34:RA:2069:G:H21	1.64	0.44
34:RA:709:U:H2'	34:RA:710:G:C8	2.53	0.44
34:RA:845:G:H21	34:RA:933:A:H61	1.65	0.44
36:RD:95:LEU:HB2	36:RD:103:ARG:O	2.17	0.44
48:RT:25:GLY:H	48:RT:49:VAL:HG13	1.82	0.44
54:RZ:97:GLU:HB3	54:RZ:125:LEU:HD11	2.00	0.44
1:XA:62:U:H2'	1:XA:63:C:H6	1.82	0.44
1:XA:388:G:C8	1:XA:388:G:O5'	2.70	0.44
1:XA:765:G:N1	1:XA:812:C:O2'	2.45	0.44
1:XA:899:C:OP1	1:XA:899:C:C5	2.70	0.44
1:XA:932:C:H2'	1:XA:933:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:947:G:H2'	1:XA:948:C:C6	2.52	0.44
1:XA:975:A:O4'	1:XA:1365:G:N2	2.49	0.44
1:XA:1305:G:H4'	1:XA:1332:A:H61	1.83	0.44
1:XA:1382:C:O5'	1:XA:1382:C:C6	2.70	0.44
1:XA:1483:A:H2'	1:XA:1484:C:O4'	2.17	0.44
12:XL:24:VAL:HG13	12:XL:98:TYR:HE1	1.82	0.44
27:Y3:40:THR:HB	27:Y3:43:ILE:HG12	1.98	0.44
32:Y8:2:PRO:O	34:YA:666:G:N2	2.49	0.44
34:YA:575:A:OP2	34:YA:2055:C:N4	2.40	0.44
34:YA:787:U:H5''	34:YA:788:A:H5'	1.99	0.44
34:YA:1362:C:H2'	34:YA:1363:C:C6	2.53	0.44
42:YN:21:LYS:HD2	42:YN:26:LEU:HD13	1.98	0.44
42:YN:91:LEU:HD23	42:YN:91:LEU:HA	1.81	0.44
45:YQ:58:PHE:HD2	45:YQ:61:GLY:HA3	1.82	0.44
48:YT:25:GLY:N	48:YT:49:VAL:O	2.42	0.44
49:YU:92:ARG:HH11	50:YV:11:GLN:HB2	1.82	0.44
1:QA:186(B):C:OP1	20:QT:82:SER:OG	2.23	0.44
1:QA:489:C:H2'	1:QA:490:G:C8	2.52	0.44
1:QA:877:C:O3'	8:QH:88:LYS:HD2	2.17	0.44
1:QA:1085:U:H3'	1:QA:1086:U:C5	2.53	0.44
1:QA:1100:C:H41	2:QB:96:ARG:HH22	0.52	0.44
3:QC:23:TYR:CD2	10:QJ:95:GLU:N	2.85	0.44
13:QM:37:THR:HG1	13:QM:55:ARG:HE	1.62	0.44
13:QM:80:ARG:HD3	19:QS:67:VAL:CG1	2.47	0.44
14:QN:6:LEU:HD23	14:QN:9:LYS:HD3	2.00	0.44
19:QS:50:ALA:HA	19:QS:58:VAL:O	2.17	0.44
34:RA:407:G:H2'	34:RA:408:G:H8	1.82	0.44
34:RA:579:G:O2'	34:RA:2019:A:OP1	2.28	0.44
34:RA:883:G:H2'	34:RA:884:C:H6	1.82	0.44
34:RA:1257:C:O2'	38:RF:84:VAL:HG23	2.17	0.44
34:RA:1728:G:H2'	34:RA:1731:G:O6	2.18	0.44
54:RZ:115:GLY:H	54:RZ:177:PRO:HG3	1.83	0.44
1:XA:728:A:H2'	1:XA:729:A:C8	2.53	0.44
1:XA:729:A:H2'	1:XA:730:G:C8	2.52	0.44
1:XA:899:C:C6	1:XA:899:C:OP2	2.70	0.44
1:XA:940:C:H2'	1:XA:941:G:C8	2.52	0.44
1:XA:1014:A:H1'	1:XA:1219:U:O2'	2.18	0.44
1:XA:1065:U:O2	1:XA:1067:A:N6	2.51	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
34:YA:244:A:C2	34:YA:245:G:H1'	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:251:A:C4	34:YA:252:G:H1'	2.52	0.44
34:YA:971:C:H2'	34:YA:972:G:O4'	2.17	0.44
34:YA:1149:G:H2'	34:YA:1150:C:C6	2.52	0.44
34:YA:1367:A:C5	34:YA:1368:G:H1'	2.52	0.44
34:YA:2096:U:H3	34:YA:2193:G:H1	1.63	0.44
34:YA:2133:G:H1'	34:YA:2158:A:N6	2.32	0.44
34:YA:2316:C:H2'	34:YA:2317:C:C6	2.52	0.44
34:YA:2546:U:H5''	34:YA:2547:U:H5'	2.00	0.44
45:YQ:12:GLN:HB2	45:YQ:73:PRO:HD2	2.00	0.44
53:YY:13:VAL:HG12	53:YY:74:PRO:HA	1.99	0.44
54:YZ:5:LEU:HB2	54:YZ:59:LEU:HD12	1.98	0.44
1:QA:24:U:O3'	1:QA:524:G:O2'	2.32	0.44
1:QA:335:C:H2'	1:QA:336:C:C6	2.53	0.44
1:QA:767:A:H2'	1:QA:768:A:C8	2.53	0.44
1:QA:1114:C:O2	14:QN:61:TRP:HA	2.18	0.44
1:QA:1318:A:C2	19:QS:37:ARG:NH1	2.84	0.44
1:QA:1331:G:OP1	13:QM:23:TYR:CD2	2.70	0.44
34:RA:312:G:H4'	34:RA:331:A:N3	2.33	0.44
34:RA:632:A:H2'	34:RA:633:A:C8	2.52	0.44
34:RA:685:A:H1'	34:RA:689:A:N6	2.33	0.44
34:RA:1441:G:H2'	34:RA:1442:G:H8	1.83	0.44
34:RA:1570:A:H2'	34:RA:1571:A:C8	2.51	0.44
34:RA:1657:C:H2'	34:RA:1658:C:C6	2.52	0.44
34:RA:1825:A:H2'	34:RA:1826:G:C8	2.52	0.44
34:RA:1972:A:H2'	34:RA:1973:G:H8	1.83	0.44
34:RA:2263:C:H2'	34:RA:2264:C:H6	1.82	0.44
34:RA:2368:C:H2'	34:RA:2369:A:C8	2.53	0.44
34:RA:2730:C:H2'	34:RA:2731:G:H8	1.83	0.44
39:RG:81:LYS:HD2	39:RG:81:LYS:HA	1.74	0.44
39:RG:81:LYS:HB3	39:RG:82:LEU:H	1.59	0.44
41:RI:4:ILE:HG23	41:RI:39:ALA:HB2	2.00	0.44
1:XA:8:A:C2	4:XD:209:ARG:NH1	2.85	0.44
1:XA:592:G:H2'	1:XA:593:G:C8	2.52	0.44
1:XA:1050:G:H2'	1:XA:1051:C:C6	2.52	0.44
1:XA:1092:A:C2	1:XA:1110:A:H5'	2.52	0.44
1:XA:1142:G:H3'	1:XA:1143:G:C8	2.52	0.44
1:XA:1157:A:N3	1:XA:1157:A:H2'	2.32	0.44
1:XA:1309:G:O4'	13:XM:77:ASN:ND2	2.49	0.44
1:XA:1405:G:H2'	1:XA:1406:U:C6	2.52	0.44
1:XA:1541:U:C2	23:XX:5:A:H2	2.34	0.44
4:XD:57:ARG:NH2	4:XD:205:GLU:OE1	2.51	0.44

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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:222:A:H61	34:YA:232:G:H1'	1.82	0.44
34:YA:1028:A:H61	34:YA:1125:G:H2'	1.83	0.44
34:YA:1178:C:H2'	34:YA:1179:C:C6	2.53	0.44
34:YA:2327:A:H2'	34:YA:2328:A:C8	2.52	0.44
38:YF:167:ALA:HB1	38:YF:173:VAL:HG11	1.99	0.44
50:YV:2:PHE:H	50:YV:42:GLY:HA3	1.82	0.44
1:QA:24:U:H2'	1:QA:25:C:C6	2.53	0.44
1:QA:607:A:H3'	1:QA:608:A:H8	1.82	0.44
1:QA:737:A:H2'	1:QA:738:C:C6	2.52	0.44
1:QA:856:C:H4'	23:QX:7:G:H21	1.83	0.44
1:QA:1290:G:O6	21:QU:26:LYS:CE	2.63	0.44
1:QA:1515:C:H2'	1:QA:1516:G:H8	1.82	0.44
2:QB:51:LEU:HD23	2:QB:201:ILE:HD12	1.99	0.44
25:R1:29:GLY:O	34:RA:2396:G:O2'	2.36	0.44
32:R8:17:THR:OG1	32:R8:21:LYS:O	2.31	0.44
34:RA:807:U:H2'	34:RA:808:G:H8	1.83	0.44
34:RA:883:G:H2'	34:RA:884:C:C6	2.52	0.44
34:RA:894:C:H2'	34:RA:895:U:C6	2.53	0.44
34:RA:1564:C:H2'	34:RA:1565:C:C6	2.52	0.44
34:RA:1660:C:H2'	34:RA:1661:G:C8	2.51	0.44
34:RA:1947:C:H2'	34:RA:1948:G:H8	1.82	0.44
34:RA:1995:U:H3'	34:RA:1996:C:H2'	1.99	0.44
34:RA:2331:G:H2'	34:RA:2332:U:C6	2.52	0.44
34:RA:2692:C:H2'	34:RA:2693:A:C8	2.52	0.44
36:RD:12:SER:HB2	36:RD:208:LYS:HB3	1.99	0.44
51:RW:65:LEU:HD12	51:RW:68:ARG:HH21	1.83	0.44
1:XA:186(F):C:O2	1:XA:186(M):G:N2	2.50	0.44
1:XA:218:C:H2'	1:XA:219:C:C6	2.53	0.44
1:XA:341:C:H2'	1:XA:342:C:H6	1.82	0.44
1:XA:486:U:H2'	1:XA:487:A:C8	2.52	0.44
1:XA:681:C:H2'	1:XA:682:G:C8	2.53	0.44
1:XA:978:A:H62	14:XN:18:VAL:HG21	1.83	0.44
2:XB:189:ASP:OD1	2:XB:189:ASP:N	2.49	0.44
26:Y2:58:ALA:O	26:Y2:62:THR:OG1	2.30	0.44
34:YA:303:U:H2'	34:YA:304:G:C8	2.51	0.44
34:YA:414:C:O2	34:YA:1864:U:O2'	2.33	0.44
34:YA:887:A:N3	34:YA:889:C:H6	2.14	0.44
34:YA:1048:A:OP2	34:YA:1110:G:N2	2.51	0.44
34:YA:1128:A:H1'	34:YA:1129:A:C5	2.53	0.44
34:YA:2108:C:C6	34:YA:2108:C:O5'	2.70	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2153:G:H2'	34:YA:2154:G:H8	1.82	0.44
34:YA:2294:C:H2'	34:YA:2295:C:H6	1.83	0.44
34:YA:2691:C:H5''	34:YA:2872:G:H5''	1.98	0.44
45:YQ:13:GLN:O	45:YQ:72:LYS:NZ	2.38	0.44
46:YR:100:LEU:HD11	46:YR:113:LEU:HG	2.00	0.44
1:QA:68:G:H1'	1:QA:151:A:H61	1.81	0.44
1:QA:437:U:H3	1:QA:495:A:H62	1.66	0.44
1:QA:641:U:H4'	8:QH:115:SER:HB2	2.00	0.44
1:QA:713:G:H2'	1:QA:714:G:C8	2.52	0.44
1:QA:956:U:H5'	19:QS:83:HIS:HA	2.00	0.44
1:QA:999:U:H2'	1:QA:1000:A:C8	2.53	0.44
1:QA:1270:C:H2'	1:QA:1271:G:C8	2.53	0.44
1:QA:1383:C:H2'	1:QA:1384:C:C6	2.52	0.44
6:QF:47:ARG:HD2	6:QF:57:GLN:HB3	2.00	0.44
11:QK:70:LYS:NZ	34:RA:2146:C:H3'	2.33	0.44
22:QV:71:C:H5''	34:RA:1892:C:O2'	2.17	0.44
30:R6:46:HIS:CE1	34:RA:2372:G:H1'	2.53	0.44
34:RA:553:U:H2'	34:RA:554:U:C6	2.53	0.44
34:RA:813:U:H2'	34:RA:814:C:C6	2.53	0.44
34:RA:848:G:H2'	34:RA:849:A:C8	2.53	0.44
34:RA:1152:C:H2'	34:RA:1153:C:C6	2.48	0.44
34:RA:1353:A:H2'	34:RA:1354:A:C8	2.53	0.44
34:RA:1380:G:H2'	34:RA:1381:G:H8	1.82	0.44
34:RA:1565:C:O2'	34:RA:1567:A:N7	2.41	0.44
40:RH:4:ILE:HD12	40:RH:6:ARG:HB2	1.99	0.44
1:XA:563:A:O2'	1:XA:566:G:O3'	2.34	0.44
1:XA:657:G:H2'	1:XA:658:G:H8	1.82	0.44
1:XA:896:C:H2'	1:XA:897:C:C6	2.52	0.44
1:XA:936:C:H3'	1:XA:936:C:H6	1.82	0.44
1:XA:951:G:O3'	1:XA:972:C:N4	2.50	0.44
1:XA:1065:U:C5	1:XA:1190:G:H1'	2.53	0.44
1:XA:1279:A:OP2	10:XJ:9:ARG:NH2	2.49	0.44
1:XA:1317:C:H3'	1:XA:1318:A:H8	1.83	0.44
2:XB:33:TYR:HB2	2:XB:43:ASP:HB2	1.99	0.44
11:XK:109:VAL:CB	18:XR:86:VAL:HG23	2.47	0.44
16:XP:19:ILE:HG13	16:XP:36:ILE:HD11	2.00	0.44
27:Y3:31:LEU:HD12	34:YA:1157:G:O2'	2.16	0.44
34:YA:807:U:H2'	34:YA:808:G:H8	1.82	0.44
34:YA:887:A:H1'	34:YA:889:C:C6	2.53	0.44
34:YA:1494:A:H2	34:YA:1579:A:H1'	1.83	0.44
34:YA:2108:C:O5'	34:YA:2108:C:H6	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2306:C:H3'	34:YA:2307:G:H5''	2.00	0.44
34:YA:2515:C:H2'	34:YA:2516:G:C8	2.51	0.44
34:YA:2587:A:H8	34:YA:2587:A:O5'	2.00	0.44
53:YY:28:LYS:N	53:YY:38:ILE:O	2.45	0.44
1:QA:403:C:H4'	4:QD:122:ARG:NE	2.33	0.44
1:QA:413:G:H4'	1:QA:414:A:H5''	1.99	0.44
1:QA:669:U:O4'	15:QO:46:HIS:CE1	2.69	0.44
1:QA:1265:G:H2'	1:QA:1266:G:C8	2.53	0.44
1:QA:1307:U:C5'	13:QM:99:ARG:CZ	2.96	0.44
1:QA:1411:C:H2'	1:QA:1412:C:C6	2.52	0.44
8:QH:82:HIS:N	8:QH:138:TRP:OXT	2.41	0.44
34:RA:144:C:H2'	34:RA:145:G:H8	1.83	0.44
34:RA:624:C:H2'	34:RA:625:G:C8	2.53	0.44
34:RA:822:U:C5	34:RA:944:G:H1'	2.52	0.44
34:RA:1251:C:OP2	49:RU:10:ARG:NH1	2.50	0.44
34:RA:1445:C:H2'	34:RA:1446:C:C6	2.51	0.44
34:RA:2290:G:N2	34:RA:2343:C:H1'	2.33	0.44
34:RA:2320:A:H1'	34:RA:2321:G:C6	2.52	0.44
34:RA:2327:A:H2'	34:RA:2328:A:C8	2.53	0.44
34:RA:2351:G:H1'	34:RA:2367:G:N2	2.32	0.44
34:RA:2619:C:H2'	34:RA:2620:C:C6	2.51	0.44
39:RG:135:LEU:HD11	39:RG:140:ILE:HD11	2.00	0.44
1:XA:130:A:H1'	1:XA:263:A:O2'	2.17	0.44
1:XA:193:C:H2'	1:XA:194:C:C6	2.52	0.44
1:XA:833:U:H2'	1:XA:834:C:C6	2.53	0.44
1:XA:907:A:H2'	1:XA:908:A:O4'	2.18	0.44
1:XA:1028(D):G:N2	1:XA:1028(H):G:N7	2.65	0.44
1:XA:1094:G:H4'	1:XA:1095:U:H5	1.83	0.44
1:XA:1240:U:H3	7:XG:38:LEU:HD22	1.60	0.44
1:XA:1318:A:H1'	19:XS:37:ARG:HH22	1.83	0.44
1:XA:1329:A:H4'	13:XM:29:ARG:HH21	1.82	0.44
1:XA:1429:C:H2'	1:XA:1430:C:C6	2.53	0.44
29:Y5:17:ASP:HB3	34:YA:16:G:OP1	2.18	0.44
34:YA:210:C:H4'	34:YA:1367:A:H1'	2.00	0.44
34:YA:524:U:H2'	34:YA:525:U:C6	2.53	0.44
34:YA:1162:G:H2'	34:YA:1163:G:C8	2.53	0.44
34:YA:1468:C:H2'	34:YA:1469:A:H8	1.82	0.44
34:YA:1574:C:H2'	34:YA:1575:C:C6	2.53	0.44
34:YA:1991:U:H2'	34:YA:1992:G:H5''	2.00	0.44
34:YA:2099:U:C4	34:YA:2190:G:N1	2.82	0.44
34:YA:2124:G:H3'	34:YA:2125:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2246:G:H2'	34:YA:2247:A:C8	2.53	0.44
34:YA:2286:A:H1'	34:YA:2287:A:C6	2.52	0.44
34:YA:2342:C:H2'	34:YA:2374:C:H5''	2.00	0.44
38:YF:102:PRO:HB2	38:YF:105:VAL:HG23	1.99	0.44
46:YR:29:LEU:HD13	46:YR:79:LEU:HD22	2.00	0.44
1:QA:191:G:O2'	20:QT:103:GLY:N	2.45	0.44
1:QA:245:C:H1'	1:QA:284:G:C2	2.53	0.44
1:QA:986:A:H4'	19:QS:55:LYS:HG2	1.94	0.44
1:QA:1092:A:C2	1:QA:1110:A:H5'	2.52	0.44
1:QA:1108:G:OP2	3:QC:174:PRO:HA	2.18	0.44
1:QA:1114:C:H2'	1:QA:1115:C:H6	1.83	0.44
1:QA:1332:A:H3'	1:QA:1333:A:H8	1.83	0.44
1:QA:1463:C:H2'	1:QA:1464:G:H8	1.83	0.44
1:QA:1479:C:H2'	1:QA:1480:G:H8	1.82	0.44
1:QA:1515:C:H2'	1:QA:1516:G:C8	2.53	0.44
3:QC:23:TYR:N	10:QJ:93:GLY:O	2.51	0.44
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
31:R7:34:ARG:NH1	34:RA:466:A:OP1	2.50	0.44
34:RA:1104:C:H2'	34:RA:1105:U:H6	1.82	0.44
34:RA:1923:U:H2'	34:RA:1924:C:C6	2.52	0.44
34:RA:2195:C:H2'	34:RA:2196:C:C6	2.53	0.44
51:RW:71:VAL:HA	51:RW:107:LEU:HD23	2.00	0.44
54:RZ:156:LYS:HE3	54:RZ:156:LYS:HB3	1.74	0.44
1:XA:186(L):G:H2'	1:XA:186(M):G:H8	1.82	0.44
1:XA:407:G:H1'	4:XD:119:GLN:HE22	1.82	0.44
1:XA:643:C:H2'	1:XA:644:G:C8	2.52	0.44
1:XA:687:A:O2'	1:XA:701:C:N4	2.50	0.44
1:XA:962:C:H2'	1:XA:963:G:C8	2.51	0.44
1:XA:974:A:P	14:XN:29:ARG:NE	2.90	0.44
1:XA:986:A:H1'	19:XS:52:TYR:HH	1.80	0.44
1:XA:1240:U:C2'	7:XG:38:LEU:HD12	2.45	0.44
14:XN:40:CYS:SG	14:XN:41:ARG:N	2.91	0.44
16:XP:22:THR:OG1	16:XP:23:ASP:N	2.50	0.44
18:XR:47:THR:O	18:XR:83:GLU:N	2.51	0.44
25:Y1:2:SER:HB3	34:YA:1366:A:OP1	2.18	0.44
34:YA:417:C:O2	34:YA:2407:G:C6	2.71	0.44
34:YA:625:G:H2'	34:YA:626:U:C6	2.53	0.44
34:YA:1242:A:H3'	34:YA:1243:G:H8	1.83	0.44
34:YA:1304:C:H2'	34:YA:1305:C:H6	1.83	0.44
34:YA:1353:A:H2'	34:YA:1354:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1362:C:H2'	34:YA:1363:C:H6	1.83	0.44
34:YA:1834:U:H1'	34:YA:1969:A:H2'	1.99	0.44
34:YA:2307:G:O6	39:YG:42:GLY:O	2.35	0.44
34:YA:2356:C:H1'	34:YA:2362:G:N2	2.33	0.44
34:YA:2447:G:H1	34:YA:2451:A:N6	2.16	0.44
34:YA:2506:U:H2'	34:YA:2507:C:C6	2.51	0.44
34:YA:2619:C:H2'	34:YA:2620:C:C6	2.53	0.44
34:YA:2747:G:H1	34:YA:2754:U:H2'	1.83	0.44
44:YP:21:ARG:HB3	44:YP:22:GLY:H	1.67	0.44
1:QA:181:G:H4'	1:QA:182:U:H5'	1.99	0.44
1:QA: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:1124:G:H2'	1:QA:1145:C:N3	2.32	0.44
1:QA:1306:A:H1'	1:QA:1332:A:C8	2.53	0.44
1:QA:1358:U:H3'	14:QN:35:ARG:HD2	1.99	0.44
1:QA:1500:A:H5''	1:QA:1508:G:H5''	1.98	0.44
1:QA:1512:U:H2'	1:QA:1513:A:C8	2.53	0.44
34:RA:448:U:C4	34:RA:583:G:H1'	2.52	0.44
34:RA:661:C:H2'	34:RA:662:G:C8	2.53	0.44
34:RA:1316:U:H2'	34:RA:1317:A:C8	2.53	0.44
34:RA:1794:U:H2'	34:RA:1795:C:H6	1.83	0.44
34:RA:2246:G:H2'	34:RA:2247:A:C8	2.53	0.44
36:RD:181:GLU:HA	36:RD:272:ALA:HB3	1.99	0.44
49:RU:91:ASP:O	49:RU:93:LYS:N	2.50	0.44
52:RX:55:ASN:HB2	52:RX:80:ILE:HG23	2.00	0.44
1:XA:150:C:H2'	1:XA:151:A:O4'	2.18	0.44
1:XA:152:A:N6	1:XA:169:C:N3	2.66	0.44
1:XA:385:C:H2'	1:XA:386:C:C6	2.52	0.44
1:XA:817:C:O2'	1:XA:1527:C:O3'	2.35	0.44
1:XA:986:A:H2'	1:XA:987:G:C8	2.53	0.44
1:XA:1106:G:C4'	3:XC:172:ARG:HG2	2.46	0.44
1:XA:1300:G:C6	1:XA:1334:G:N7	2.86	0.44
1:XA:1440(F):G:H22	1:XA:1440(P):A:H1'	1.83	0.44
10:XJ:16:LEU:CB	10:XJ:70:ARG:NH1	2.61	0.44
13:XM:2:ALA:HB3	13:XM:9:ILE:HG21	2.00	0.44
24:Y0:38:VAL:HG22	24:Y0:59:LEU:HB2	1.98	0.44
32:Y8:7:HIS:HD2	44:YP:50:ARG:HH21	1.64	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:662:G:H2'	34:YA:663:G:H8	1.81	0.44
34:YA:864:G:H1'	34:YA:914:C:H42	1.82	0.44
34:YA:2090:G:C4	34:YA:2230:G:N1	2.86	0.44
34:YA:2550:G:H2'	34:YA:2551:C:H6	1.83	0.44
34:YA:2630:G:H2'	34:YA:2631:G:H8	1.83	0.44
43:YO:44:LYS:HA	43:YO:44:LYS:HD3	1.72	0.44
51:YW:35:ILE:O	51:YW:39:THR:OG1	2.27	0.44
1:QA:231:G:H2'	1:QA:232:G:C8	2.52	0.43
1:QA:292:G:C5	1:QA:293:G:H1'	2.53	0.43
1:QA:324:G:OP1	20:QT:22:ARG:HD2	2.18	0.43
1:QA:765:G:N1	1:QA:812:C:O2'	2.44	0.43
1:QA:975:A:O4'	1:QA:1365:G:N2	2.51	0.43
1:QA:1321:C:H5''	1:QA:1322:C:H5''	1.99	0.43
27:R3:45:GLY:HA3	34:RA:851:U:O3'	2.18	0.43
33:R9:23:VAL:HG22	34:RA:1032:A:O2'	2.17	0.43
34:RA:97:C:H2'	34:RA:98:G:C8	2.53	0.43
34:RA:714:U:H1'	34:RA:717:G:N7	2.33	0.43
34:RA:1400:G:H2'	34:RA:1401:G:C8	2.53	0.43
34:RA:2771:C:H2'	34:RA:2772:C:C6	2.52	0.43
34:RA:2810:A:H62	34:RA:2891:G:H21	1.66	0.43
35:RB:9:G:OP1	47:RS:15:ARG:NH1	2.51	0.43
41:RI:79:ILE:HD12	41:RI:80:PRO:HD2	2.00	0.43
1:XA:51:A:N9	1:XA:353:A:C5	2.86	0.43
1:XA:57:G:H2'	1:XA:58:C:C6	2.53	0.43
1:XA:411:A:H2'	1:XA:413:G:C8	2.53	0.43
1:XA:643:C:H2'	1:XA:644:G:H8	1.82	0.43
1:XA:658:G:H1'	15:XO:22:THR:HG23	1.99	0.43
1:XA:878:G:H5'	8:XH:89:PRO:HG2	2.00	0.43
1:XA:1120:G:H2'	1:XA:1121:U:C6	2.53	0.43
1:XA:1230:C:C4	13:XM:105:THR:HB	2.49	0.43
11:XK:110:ASP:O	18:XR:85:LEU:N	2.51	0.43
20:XT:100:ILE:HG23	20:XT:102:GLY:H	1.81	0.43
30:Y6:3:SER:HB3	30:Y6:6:ARG:HB3	2.00	0.43
30:Y6:29:ASN:ND2	34:YA:2286:A:OP1	2.51	0.43
34:YA:274:G:H2'	34:YA:275:G:H8	1.83	0.43
34:YA:519:U:H2'	34:YA:520:G:C8	2.53	0.43
34:YA:1467:C:C5	34:YA:1546:C:H2'	2.53	0.43
34:YA:1710:C:H2'	34:YA:1711:C:C6	2.53	0.43
34:YA:1908:C:H2'	34:YA:1909:C:H6	1.83	0.43
34:YA:1953:A:C2	34:YA:2550:G:C1'	3.01	0.43
34:YA:2853:C:H2'	34:YA:2854:G:C8	2.53	0.43

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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:444:C:H2'	1:QA:445:G:C8	2.53	0.43
1:QA:608:A:C1'	16:QP:32:TYR:CE1	2.99	0.43
1:QA:1327:C:H4'	21:QU:20:LYS:NZ	2.33	0.43
3:QC:112:SER:HB3	3:QC:115:LEU:HD12	2.00	0.43
3:QC:131:ARG:HH11	3:QC:134:ILE:HG21	1.83	0.43
4:QD:61:LYS:HD2	4:QD:207:TYR:CZ	2.52	0.43
25:R1:90:ILE:HA	25:R1:94:LEU:HG	1.99	0.43
28:R4:12:ALA:H	28:R4:25:TYR:HA	1.83	0.43
34:RA:452:G:N2	34:RA:457:A:O2'	2.51	0.43
34:RA:655:A:H8	34:RA:656:G:C8	2.36	0.43
34:RA:1046:A:H5''	34:RA:1046:A:N3	2.34	0.43
34:RA:1295:C:H2'	34:RA:1296:G:C8	2.49	0.43
34:RA:1826:G:H4'	36:RD:242:ARG:NH2	2.32	0.43
34:RA:2092:U:OP2	41:RI:27:ARG:NH2	2.50	0.43
34:RA:2182:G:H2'	34:RA:2183:C:C6	2.53	0.43
34:RA:2463:C:H2'	34:RA:2464:C:H6	1.82	0.43
36:RD:50:THR:OG1	36:RD:51:VAL:N	2.50	0.43
45:RQ:34:LEU:HB2	45:RQ:118:LEU:HD12	2.00	0.43
1:XA:9:G:OP1	5:XE:122:GLU:HB2	2.17	0.43
1:XA:158:G:H2'	1:XA:159:G:C8	2.53	0.43
1:XA:936:C:H3'	1:XA:936:C:C6	2.52	0.43
1:XA:1059:C:C6	3:XC:2:GLY:HA2	2.51	0.43
1:XA:1271:G:H2'	1:XA:1272:G:C8	2.53	0.43
7:XG:116:ALA:HA	7:XG:119:ARG:HE	1.83	0.43
10:XJ:7:LYS:HD2	10:XJ:97:GLU:HB2	1.98	0.43
12:XL:33:ARG:NH2	12:XL:61:THR:OG1	2.51	0.43
34:YA:462:C:H2'	34:YA:463:G:C8	2.52	0.43
34:YA: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
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
3:QC:79:ARG:CZ	11:XK:104:GLN:HG3	2.41	0.43
5:QE:43:LEU:HD13	5:QE:109:ILE:HD11	1.99	0.43
5:QE:100:VAL:O	5:QE:107:ARG:NH1	2.48	0.43
29:R5:12:SER:O	29:R5:16:ARG:CB	2.67	0.43
34:RA:619:G:H3'	34:RA:620:G:N2	2.33	0.43
34:RA:865:C:O2	34:RA:867:C:N4	2.51	0.43
34:RA:971:C:H2'	34:RA:972:G:O4'	2.18	0.43
34:RA:1141:U:H1'	34:RA:1142(B):A:C6	2.53	0.43
34:RA:1211:U:H5''	34:RA:1212:G:N7	2.34	0.43
34:RA:1992:G:H5'	34:RA:1994:C:H41	1.83	0.43
34:RA:2250:G:C2	45:RQ:82:ARG:HB3	2.52	0.43
34:RA:2263:C:H2'	34:RA:2264:C:C6	2.54	0.43
49:RU:92:ARG:HD2	50:RV:11:GLN:HG3	1.99	0.43
1:XA:736:C:H2'	1:XA:737:A:H8	1.83	0.43
1:XA:743:U:H2'	1:XA:744:C:C6	2.53	0.43
1:XA:960:U:H1'	1:XA:1222:G:O2'	2.18	0.43
1:XA:1414:U:H2'	1:XA:1415:G:C8	2.53	0.43
14:YN:13:THR:O	14:YN:13:THR:OG1	2.36	0.43
34:YA:143:C:H2'	34:YA:144:C:C6	2.53	0.43
34:YA:242:G:N2	34:YA:254:G:H2'	2.33	0.43
34:YA:1230:C:H2'	34:YA:1231:G:C8	2.53	0.43
34:YA:1311:G:H21	34:YA:1603:A:H62	1.67	0.43
34:YA:1375:C:H2'	34:YA:1376:C:H6	1.83	0.43
34:YA:1504:C:H2'	34:YA:1505:C:C6	2.53	0.43
34:YA:1564:C:H2'	34:YA:1565:C:C6	2.53	0.43
34:YA:1930:G:H2'	34:YA:1968:G:N1	2.34	0.43
34:YA:1992:G:N2	34:YA:1996:C:O2'	2.52	0.43
34:YA:2471:C:H3'	34:YA:2472:G:H8	1.83	0.43
34:YA:2751:G:C5	40:YH:2:SER:O	2.71	0.43
37:YE:37:ARG:NH1	37:YE:44:TYR:OH	2.48	0.43
39:YG:124:SER:O	39:YG:124:SER:OG	2.35	0.43
39:YG:165:THR:OG1	39:YG:166:ASP:N	2.52	0.43
41:YI:81:VAL:HG11	41:YI:88:ILE:HD13	1.99	0.43
1:QA:24:U:H2'	1:QA:25:C:H6	1.83	0.43
1:QA:36:C:H2'	1:QA:37:U:O4'	2.18	0.43
1:QA:645:C:H2'	1:QA:646:U:C6	2.53	0.43
1:QA:1109:C:OP2	3:QC:176:HIS:CD2	2.71	0.43
1:QA:1247:U:H2'	1:QA:1248:A:C8	2.53	0.43
1:QA:1357:A:H2	1:QA:1365:G:H22	1.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1383:C:H2'	1:QA:1384:C:H6	1.82	0.43
3:QC:6:HIS:HE1	3:QC:8:ILE:HD12	1.82	0.43
34:RA:81:G:O2'	34:RA:295:G:O2'	2.23	0.43
34:RA:300:A:OP1	53:RY:86:ARG:NH2	2.47	0.43
34:RA:532:A:H4'	34:RA:533:G:C8	2.52	0.43
34:RA:779:U:H2'	34:RA:780:G:C8	2.53	0.43
34:RA:816:C:H2'	34:RA:817:C:C6	2.54	0.43
34:RA:1130:U:N3	34:RA:2025:C:H5''	2.33	0.43
34:RA:1145:C:H2'	34:RA:1146:C:C6	2.54	0.43
34:RA:1818:U:OP2	36:RD:157:ARG:NH1	2.51	0.43
34:RA:2122:U:H2'	34:RA:2123:G:C8	2.53	0.43
34:RA:2341:G:H2'	34:RA:2342:C:C6	2.53	0.43
35:RB:111:U:H2'	35:RB:112:G:H8	1.82	0.43
37:RE:171:GLU:H	37:RE:185:LYS:HB2	1.84	0.43
37:RE:176:ILE:HG13	37:RE:181:LEU:HB2	2.00	0.43
39:RG:43:LEU:HD21	39:RG:153:ARG:HB2	1.99	0.43
41:RI:84:GLY:CA	41:RI:89:TYR:OH	2.61	0.43
43:RO:15:GLY:HA3	43:RO:50:GLY:HA3	1.99	0.43
46:RR:29:LEU:HD12	46:RR:70:LEU:HD21	1.99	0.43
1:XA:355:C:H1'	1:XA:388:G:H1'	2.00	0.43
1:XA:520:A:N1	1:XA:533:A:N6	2.55	0.43
1:XA:726:C:H2'	1:XA:727:G:C8	2.53	0.43
1:XA:1308:U:H2'	1:XA:1309:G:C8	2.53	0.43
1:XA:1347:G:H4'	1:XA:1348:U:C5	2.53	0.43
22:XV:20:G:N2	22:XV:60:U:H3	2.17	0.43
33:Y9:33:LYS:NZ	34:YA:2743:C:OP1	2.43	0.43
34:YA:208:C:H2'	34:YA:209:C:C6	2.53	0.43
34:YA:270(I):C:H2'	34:YA:270(J):G:C8	2.53	0.43
34:YA:270(J):G:H2'	34:YA:270(K):G:C8	2.54	0.43
34:YA:1097:U:H3'	34:YA:1098:A:H8	1.83	0.43
34:YA:1116:C:H2'	34:YA:1117:G:C8	2.54	0.43
34:YA:1539:G:H2'	34:YA:1540:G:H8	1.84	0.43
34:YA:1782:C:H41	34:YA:2587:A:H2	1.62	0.43
34:YA:2179:C:H2'	34:YA:2180:U:C6	2.53	0.43
36:YD:143:HIS:ND1	36:YD:194:GLY:O	2.40	0.43
39:YG:106:LEU:HD12	39:YG:110:ALA:HB3	1.99	0.43
48:YT:19:LEU:HD21	48:YT:83:ILE:HD11	2.00	0.43
49:YU:55:ARG:O	49:YU:59:ARG:HG2	2.18	0.43
1:QA:218:C:H2'	1:QA:219:C:C6	2.54	0.43
1:QA:378:G:H2'	1:QA:379:C:C6	2.52	0.43
1:QA:702:A:H3'	1:QA:703:G:C8	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:831:U:H2'	1:QA:832:C:C6	2.54	0.43
1:QA:1014:A:H1'	19:QS:34:TRP:CD2	2.54	0.43
1:QA:1112:C:N3	3:QC:178:LEU:HD12	2.33	0.43
1:QA:1255:G:O6	1:QA:1279:A:H2'	2.18	0.43
1:QA:1404:C:H2'	1:QA:1405:G:C8	2.54	0.43
10:QJ:28:ARG:HE	10:QJ:34:VAL:HG12	1.83	0.43
34:RA:32:C:N4	34:RA:447:A:OP2	2.51	0.43
34:RA:873:G:H4'	45:RQ:63:LYS:NZ	2.32	0.43
34:RA:1382:G:H4'	34:RA:1573:G:C2	2.54	0.43
34:RA:1476:C:H2'	34:RA:1477:A:H8	1.83	0.43
34:RA:1796:U:H2'	34:RA:1797:C:H6	1.82	0.43
34:RA:2737:G:H2'	34:RA:2738:A:C8	2.53	0.43
34:RA:2747:G:H21	34:RA:2757:A:H62	1.65	0.43
40:RH:80:SER:O	40:RH:80:SER:OG	2.31	0.43
46:RR:35:THR:HG22	46:RR:113:LEU:HD13	2.01	0.43
1:XA:337:C:H2'	1:XA:338:A:C8	2.53	0.43
1:XA:559:A:H4'	1:XA:560:U:H5''	1.99	0.43
1:XA:1301:U:C3'	13:XM:17:VAL:HG23	2.49	0.43
1:XA:1302:U:H1'	13:XM:27:LYS:HG3	1.83	0.43
1:XA:1524:C:H2'	1:XA:1525:G:C8	2.53	0.43
5:XE:99:GLY:N	5:XE:117:ASP:OD1	2.47	0.43
9:XI:70:LYS:O	9:XI:74:ILE:HG13	2.19	0.43
27:Y3:18:ASP:HB2	27:Y3:49:LYS:HE2	1.99	0.43
28:Y4:37:SER:HA	28:Y4:41:PRO:HD2	1.99	0.43
32:Y8:18:ALA:HB2	34:YA:628:G:H5''	2.01	0.43
34:YA:358:U:H2'	34:YA:359:A:C8	2.51	0.43
34:YA:361:G:H2'	34:YA:362:U:C6	2.54	0.43
34:YA:557:U:H2'	34:YA:558:G:C8	2.53	0.43
34:YA:786:C:H2'	34:YA:787:U:H6	1.83	0.43
34:YA:994:C:OP1	49:YU:53:ARG:NH2	2.51	0.43
34:YA:1161:C:H2'	34:YA:1162:G:C8	2.53	0.43
34:YA:1189:A:C2	34:YA:1190:G:H1'	2.54	0.43
34:YA:2046:G:C6	34:YA:2623:G:O6	2.68	0.43
34:YA:2170:A:H2'	34:YA:2171:A:O4'	2.19	0.43
34:YA:2432:A:H2'	34:YA:2433:A:C8	2.53	0.43
34:YA:2758:A:C2	34:YA:2759:G:H1'	2.53	0.43
44:YP:97:PRO:O	44:YP:98:GLU:HG3	2.18	0.43
1:QA:130:A:H4'	1:QA:186(K):G:C4	2.53	0.43
1:QA:1004:A:C2	1:QA:1024:G:H2'	2.51	0.43
1:QA:1440(I):U:H4'	1:QA:1440(J):A:C2	2.53	0.43
1:QA:1497:G:H1'	1:QA:1518:A:C2	2.54	0.43

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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:300:A:OP2	53:RY:84:ARG:NH1	2.52	0.43
34:RA:1310:G:H1'	34:RA:1611:C:H5''	2.00	0.43
34:RA:1732:A:H3'	34:RA:1733:G:C8	2.53	0.43
36:RD:171:ASP:OD1	36:RD:171:ASP:N	2.48	0.43
38:RF:34:TRP:CE3	44:RP:8:PRO:HB3	2.53	0.43
44:RP:96:THR:HA	44:RP:126:VAL:HB	2.01	0.43
48:RT:6:LEU:O	48:RT:10:VAL:HG23	2.19	0.43
1:XA:404:U:H2'	1:XA:405:U:C6	2.53	0.43
1:XA:1440(D):G:H5'	1:XA:1440(E):A:H2	1.83	0.43
1:XA:1463:C:H2'	1:XA:1464:G:C8	2.53	0.43
5:XE:31:LEU:HD13	5:XE:45:PHE:HD1	1.82	0.43
12:XL:86:ARG:HH21	12:XL:99:HIS:CD2	2.37	0.43
22:XV:76:A:C6	34:YA:2421:G:H2'	2.54	0.43
34:YA:273(E):C:H2'	34:YA:273(F):U:C6	2.54	0.43
34:YA:296:C:O3'	53:YY:95:LYS:NZ	2.51	0.43
34:YA:416:C:N3	34:YA:2407:G:O6	2.51	0.43
34:YA:1141:U:H1'	34:YA:1142(B):A:C6	2.54	0.43
34:YA:1339:G:N2	34:YA:1603:A:N3	2.66	0.43
34:YA:1689:A:OP2	34:YA:1698:A:N6	2.52	0.43
34:YA:1796:U:H2'	34:YA:1797:C:H6	1.84	0.43
34:YA:1947:C:H2'	34:YA:1948:G:C8	2.54	0.43
34:YA:2110:G:H3'	34:YA:2111:C:C6	2.53	0.43
44:YP:64:LYS:O	44:YP:66:GLY:N	2.51	0.43
1:QA:25:C:H2'	1:QA:26:A:C8	2.54	0.43
1:QA:60:A:H2	1:QA:378:G:H1'	1.84	0.43
1:QA:296:U:H2'	1:QA:297:G:C8	2.54	0.43
1:QA:662:G:H2'	1:QA:663:A:H8	1.82	0.43
1:QA:689:C:P	11:QK:55:LYS:NZ	2.92	0.43
1:QA:740:U:O2'	15:QO:39:LEU:HD11	2.18	0.43
1:QA:918:A:H2'	1:QA:919:A:C8	2.54	0.43
1:QA:948:C:OP2	13:QM:106:ASN:O	2.36	0.43
1:QA:986:A:C2'	19:QS:55:LYS:HA	2.46	0.43
1:QA:1190:G:H4'	3:QC:176:HIS:CE1	2.54	0.43
2:QB:54:THR:O	2:QB:58:ILE:HG12	2.18	0.43
4:QD:191:ARG:HD2	4:QD:191:ARG:HA	1.72	0.43
7:QG:6:ARG:HA	7:QG:6:ARG:HD3	1.75	0.43
15:QO:5:LYS:HE2	15:QO:5:LYS:HB2	1.90	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:QS:39:THR:HG22	19:QS:41:VAL:HG22	2.01	0.43
32:R8:31:HIS:HE1	34:RA:2421:G:N7	2.14	0.43
34:RA:39:C:H2'	34:RA:40:C:C6	2.54	0.43
34:RA:134:C:H2'	34:RA:135:G:C8	2.54	0.43
34:RA:206:U:H2'	34:RA:207:A:C8	2.50	0.43
34:RA:807:U:O2'	34:RA:2060:A:N1	2.48	0.43
34:RA:864:G:H1'	34:RA:914:C:H42	1.83	0.43
34:RA:967:C:H2'	34:RA:968:G:C8	2.54	0.43
34:RA:1467:C:C5	34:RA:1546:C:H2'	2.54	0.43
34:RA:1952:A:N3	34:RA:2560:C:O2'	2.41	0.43
34:RA:2736:G:H2'	34:RA:2737:G:C8	2.54	0.43
49:RU:88:ILE:HD12	50:RV:47:VAL:HG22	2.01	0.43
53:RY:28:LYS:NZ	53:RY:40:GLU:OE2	2.38	0.43
54:RZ:48:PHE:HA	54:RZ:51:ALA:HB3	2.01	0.43
1:XA:186(F):C:H2'	1:XA:186(G):C:C6	2.53	0.43
1:XA:272:C:H2'	1:XA:273:A:C8	2.53	0.43
1:XA:1028(C):C:N3	1:XA:1028(H):G:N1	2.56	0.43
1:XA:1071:C:H2'	1:XA:1072:G:C8	2.54	0.43
21:XU:3:LYS:HG2	21:XU:14:TRP:CD2	2.53	0.43
27:Y3:5:LYS:HE3	27:Y3:57:GLU:HB3	1.99	0.43
34:YA:263:C:H1'	34:YA:430:G:H1'	2.00	0.43
34:YA:270(N):U:H1'	34:YA:270(O):G:C5	2.53	0.43
34:YA:296:C:H2'	34:YA:297:C:H6	1.83	0.43
34:YA:363(A):G:H2'	34:YA:363(B):A:H8	1.83	0.43
34:YA: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:1800:C:OP2	36:YD:183:ARG:NH1	2.52	0.43
34:YA:2023:G:P	34:YA:2023:G:H8	2.42	0.43
34:YA:2064:C:H2'	34:YA:2065:C:C6	2.54	0.43
34:YA:2391:G:H1'	34:YA:2429:G:N2	2.33	0.43
40:YH:152:ARG:HA	40:YH:152:ARG:HD3	1.80	0.43
53:YY:76:CYS:CB	53:YY:79:CYS:SG	3.07	0.43
1:QA:285:G:H2'	1:QA:286:G:C8	2.54	0.43
1:QA:831:U:H2'	1:QA:832:C:H6	1.84	0.43
1:QA:975:A:H3'	14:QN:32:SER:HB3	2.01	0.43
1:QA:1107:C:O2'	1:QA:1191:A:O2'	2.29	0.43
1:QA:1123:A:H2'	1:QA:1124:G:C4	2.53	0.43
1:QA:1260:C:HO2'	1:QA:1283:G:HO2'	1.63	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:34:LEU:HA	13:QM:37:THR:HG22	2.01	0.43
13:QM:84:ILE:HG13	19:QS:74:PHE:CE2	2.54	0.43
13:QM:95:GLY:HA2	13:QM:110:ARG:HH21	1.83	0.43
26:R2:16:LEU:H	26:R2:67:LYS:NZ	2.16	0.43
34:RA:29:U:H5''	49:RU:7:GLY:HA2	2.00	0.43
34:RA:210:C:H4'	34:RA:1367:A:H1'	2.00	0.43
34:RA:231:C:H3'	34:RA:232:G:C8	2.53	0.43
34:RA:259:G:H2'	34:RA:260:G:H8	1.84	0.43
34:RA:285:C:H2'	34:RA:286:C:C6	2.52	0.43
34:RA:624:C:H2'	34:RA:625:G:H8	1.83	0.43
34:RA:1258:C:H2'	34:RA:1259:G:C8	2.54	0.43
34:RA:1518:C:H2'	34:RA:1519:G:H8	1.83	0.43
34:RA:1604:C:H2'	34:RA:1605:C:C6	2.50	0.43
34:RA:1629:U:H2'	34:RA:1630(A):G:H8	1.83	0.43
34:RA:2391:G:C6	34:RA:2427:C:H1'	2.54	0.43
34:RA:2517:C:N3	34:RA:2542:A:N6	2.65	0.43
34:RA:2607:G:H2'	34:RA:2608:G:C8	2.54	0.43
34:RA:2737:G:H2'	34:RA:2738:A:H8	1.84	0.43
38:RF:152:GLU:OE1	38:RF:191:ARG:NE	2.52	0.43
53:RY:79:CYS:N	53:RY:102:CYS:SG	2.92	0.43
1:XA:186(A):C:H2'	1:XA:186(B):C:C6	2.54	0.43
1:XA:256:U:H2'	1:XA:257:G:C8	2.54	0.43
1:XA:555:C:H2'	1:XA:556:C:C6	2.53	0.43
1:XA:921:U:H2'	1:XA:922:G:C8	2.53	0.43
1:XA:936:C:C6	1:XA:936:C:C3'	3.01	0.43
1:XA:950:U:H3	1:XA:1231:G:H1	1.65	0.43
1:XA:1240:U:H5''	1:XA:1241:G:C8	2.54	0.43
1:XA:1256:A:N6	1:XA:1277:C:H5''	2.33	0.43
1:XA:1485:U:H2'	1:XA:1486:G:H8	1.82	0.43
6:XF:62:TRP:CD1	18:XR:35:ARG:NH2	2.87	0.43
11:XK:82:VAL:HB	11:XK:108:ILE:HA	2.01	0.43
12:XL:11:VAL:CG2	17:XQ:29:HIS:CD2	3.00	0.43
34:YA:141(A):A:H1'	34:YA:1408:C:H1'	2.01	0.43
34:YA:161:U:H3'	34:YA:162:U:H5''	2.00	0.43
34:YA:679:C:H2'	34:YA:680:G:C8	2.53	0.43
34:YA:1181:C:H2'	34:YA:1182:A:C8	2.54	0.43
34:YA:1662:C:H2'	34:YA:1663:C:C6	2.53	0.43
34:YA:2044:C:C2	34:YA:2625:G:N2	2.87	0.43
34:YA:2346:A:N3	34:YA:2346:A:H5''	2.34	0.43
34:YA:2735:G:H2'	34:YA:2736:G:C8	2.54	0.43
35:YB:37:C:O2	47:YS:95:HIS:NE2	2.41	0.43

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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:1099:G:O5'	2:QB:96:ARG:HD2	2.19	0.43
1:QA:1221:G:O4'	19:QS:36:ARG:NH2	2.43	0.43
1:QA:1377:A:H2'	1:QA:1377:A:N3	2.34	0.43
4:QD:100:ARG:HG3	4:QD:137:SER:HA	2.00	0.43
12:QL:76:ASN:HD21	12:QL:108:ALA:HB3	1.84	0.43
34:RA:69:C:H2'	34:RA:70:G:H8	1.83	0.43
34:RA:121:G:H4'	34:RA:149:A:H5'	1.99	0.43
34:RA:453:C:H4'	34:RA:472:A:H62	1.84	0.43
34:RA:453:C:H4'	34:RA:472:A:N6	2.34	0.43
34:RA:1044:G:H1'	34:RA:1048:A:C4	2.54	0.43
34:RA:2068:U:H3	34:RA:2430:A:H2	1.65	0.43
34:RA:2134:A:H1'	34:RA:2158:A:C2	2.54	0.43
34:RA:2250:G:C6	45:RQ:82:ARG:CD	3.00	0.43
34:RA:2260:C:H2'	34:RA:2261:C:H6	1.82	0.43
37:RE:35:GLN:HB2	37:RE:37:ARG:HH21	1.84	0.43
40:RH:46:GLU:OE1	40:RH:51:ARG:NH1	2.52	0.43
43:RO:15:GLY:HA2	43:RO:47:ILE:HG22	2.00	0.43
1:XA:164:U:H2'	1:XA:165:C:C6	2.53	0.43
1:XA:290:C:H2'	1:XA:291:C:H6	1.83	0.43
1:XA:766:A:H2'	1:XA:767:A:O4'	2.18	0.43
1:XA:964:A:O2'	10:XJ:55:LYS:NZ	2.47	0.43
5:XE:105:VAL:HG11	5:XE:132:ALA:HB2	1.99	0.43
14:XN:53:LEU:HD12	14:XN:54:PRO:HD2	2.01	0.43
17:XQ:21:VAL:N	17:XQ:42:TYR:O	2.40	0.43
18:XR:21:LYS:HE2	18:XR:21:LYS:HB3	1.81	0.43
24:Y0:72:ARG:CB	24:Y0:75:LEU:HB2	2.48	0.43
34:YA:363(A):G:H2'	34:YA:363(B):A:C8	2.54	0.43
34:YA:511:U:H4'	34:YA:1235:G:H4'	2.01	0.43
34:YA:1204:A:H1'	34:YA:1206:G:N9	2.34	0.43
34:YA:1825:A:H2'	34:YA:1826:G:C8	2.53	0.43
34:YA:1849:G:H2'	34:YA:1850:G:C8	2.52	0.43
34:YA:2077:A:C6	34:YA:2435:A:C6	3.07	0.43
34:YA:2406:U:C4	44:YP:75:ILE:CD1	3.02	0.43
34:YA:2437:U:H2'	34:YA:2438:U:C6	2.53	0.43
34:YA:2469:A:H5''	34:YA:2470:G:H8	1.84	0.43
34:YA:2550:G:H2'	34:YA:2551:C:C6	2.54	0.43
34:YA:2567:G:H2'	34:YA:2568:C:C6	2.53	0.43
48:YT:16:ARG:NH2	48:YT:83:ILE:O	2.51	0.43

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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:137:C:H2'	1:QA:138:G:C8	2.54	0.43
1:QA:359:U:H2'	1:QA:360:A:C8	2.49	0.43
1:QA:1143:G:H2'	1:QA:1144:G:C8	2.54	0.43
1:QA:1288:A:N1	1:QA:1371:G:H1'	2.33	0.43
1:QA:1379:G:H2'	1:QA:1380:U:C6	2.54	0.43
1:QA:1440(J):A:H2'	1:QA:1440(L):G:O6	2.19	0.43
1:QA:1440(O):C:H2'	1:QA:1440(P):A:H8	1.84	0.43
6:QF:78:GLU:HA	6:QF:81:ILE:HG12	2.01	0.43
11:QK:101:SER:O	11:QK:101:SER:OG	2.30	0.43
13:QM:29:ARG:HH21	13:QM:64:TRP:HE1	1.67	0.43
34:RA:288:C:H2'	34:RA:289:A:C8	2.53	0.43
34:RA:494:G:OP1	51:RW:8:ARG:NH1	2.52	0.43
34:RA:530:G:N3	34:RA:2021:C:H1'	2.34	0.43
34:RA:740:U:H2'	34:RA:741:G:C8	2.54	0.43
34:RA:746:A:H3'	34:RA:2612:C:C5	2.53	0.43
34:RA:1065:U:H3	34:RA:1069:A:H2'	1.82	0.43
34:RA:1112:G:H2'	34:RA:1113:U:O4'	2.19	0.43
34:RA:1297:C:O2'	34:RA:1302:A:N1	2.44	0.43
34:RA:2179:C:H2'	34:RA:2180:U:C6	2.54	0.43
34:RA:2374:C:H2'	34:RA:2375:G:C8	2.54	0.43
45:RQ:77:LYS:NZ	45:RQ:84:GLY:O	2.40	0.43
1:XA:458(B):G:H2'	1:XA:458(C):A:H2'	2.01	0.43
1:XA:556:C:H2'	1:XA:557:G:H8	1.83	0.43
1:XA:577:G:H1'	1:XA:816:A:H2'	2.00	0.43
1:XA:787:A:H2'	1:XA:788:U:C6	2.54	0.43
1:XA:996:A:H2'	1:XA:997:U:H6	1.84	0.43
1:XA:1253:G:C4	1:XA:1254:C:C5	3.07	0.43
1:XA:1505:G:H1'	23:XX:15:A:H2	1.83	0.43
1:XA:1525:G:H2'	1:XA:1526:G:C8	2.54	0.43
3:XC:8:ILE:HD11	3:XC:184:TYR:H	1.84	0.43
13:XM:52:GLU:HA	13:XM:55:ARG:HG2	2.00	0.43
20:XT:17:ARG:HE	20:XT:17:ARG:HB3	1.73	0.43
21:XU:3:LYS:CD	21:XU:14:TRP:CD2	3.00	0.43
24:Y0:26:TYR:N	24:Y0:29:GLN:OE1	2.52	0.43
32:Y8:56:GLU:OE1	32:Y8:59:LYS:NZ	2.36	0.43
34:YA:436:C:H2'	34:YA:438:G:C8	2.53	0.43
34:YA:635:C:H2'	34:YA:636:G:H8	1.84	0.43
34:YA:675:A:N3	34:YA:2443:C:O2'	2.47	0.43
34:YA:1660:C:H2'	34:YA:1661:G:H8	1.83	0.43
34:YA:1772:G:H21	34:YA:1774:C:H5'	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:2131:G:H1'	34:YA:2158:A:H61	1.83	0.43
34:YA:2543:G:H2'	34:YA:2544:G:C8	2.53	0.43
38:YF:48:THR:OG1	38:YF:48:THR:O	2.36	0.43
47:YS:4:LEU:HD11	47:YS:12:PHE:CE2	2.51	0.43
1:QA:186(H):C:H1'	1:QA:186(L):G:N2	2.34	0.42
1:QA: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
1:QA:1437:C:H2'	1:QA:1438:G:H8	1.83	0.42
3:QC:12:LEU:HG	3:QC:18:TRP:HE1	1.83	0.42
8:QH:10:LEU:HG	8:QH:83:ILE:HD11	1.99	0.42
13:QM:29:ARG:HD2	13:QM:29:ARG:HA	1.79	0.42
28:R4:34:GLU:OE1	39:RG:113:ARG:CD	2.66	0.42
34:RA:236:C:H2'	34:RA:237:C:H6	1.84	0.42
34:RA:272:G:H2'	34:RA:273(A):G:C8	2.54	0.42
34:RA:286:C:H2'	34:RA:287:C:C6	2.54	0.42
34:RA:1870:C:H2'	34:RA:1871:A:O4'	2.19	0.42
34:RA:1908:C:H2'	34:RA:1909:C:H6	1.84	0.42
34:RA:2161:C:H2'	34:RA:2162:G:C8	2.54	0.42
37:RE:120:TRP:CD2	37:RE:155:LYS:HB3	2.54	0.42
44:RP:65:ARG:O	44:RP:68:GLN:NE2	2.52	0.42
54:RZ:53:ILE:HG22	54:RZ:71:VAL:HG13	1.99	0.42
1:XA:7:G:H5'	1:XA:298:A:H5'	2.00	0.42
1:XA:107:G:C2	1:XA:108:G:H1'	2.54	0.42
1:XA:310:G:H5''	16:XP:31:LYS:HB2	2.00	0.42
1:XA:503:C:OP1	12:XL:119:LYS:HE2	2.19	0.42
1:XA:585:G:N3	1:XA:879:C:H4'	2.34	0.42
1:XA:639:G:H2'	1:XA:640:A:H8	1.84	0.42
1:XA:657:G:H4'	15:XO:28:GLN:HG2	2.01	0.42
1:XA:679:C:H2'	1:XA:680:C:C6	2.53	0.42
1:XA:857:C:H2'	1:XA:858:G:O4'	2.20	0.42
1:XA:1049:U:OP1	14:YN:3:ARG:NH2	2.52	0.42
1:XA:1217:C:P	14:YN:5:ALA:CB	2.98	0.42
1:XA:1361:G:C4	14:YN:18:VAL:HG12	2.54	0.42
11:XK:54:ARG:O	11:XK:57:THR:OG1	2.31	0.42
33:Y9:10:ILE:N	33:Y9:14:CYS:SG	2.84	0.42
34:YA:151:C:H2'	34:YA:152:G:C8	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:270(V):C:H2'	34:YA:270(W):G:C8	2.53	0.42
34:YA:687:C:N3	34:YA:787:U:H4'	2.34	0.42
34:YA:741:G:H2'	34:YA:742:G:C8	2.54	0.42
34:YA:1069:A:H2'	34:YA:1073:A:N7	2.34	0.42
34:YA:1278:A:H2'	34:YA:1279:G:C8	2.54	0.42
34:YA:1535:U:C4	34:YA:1537:C:H1'	2.54	0.42
34:YA:2786:U:O2'	37:YE:62:PRO:HA	2.18	0.42
34:YA:2840:C:H2'	34:YA:2841:C:C6	2.54	0.42
54:YZ:85:HIS:NE2	54:YZ:87:ASP:OD1	2.52	0.42
1:QA:157:G:H2'	1:QA:158:G:C8	2.54	0.42
1:QA:323:U:H4'	20:QT:19:SER:HA	2.01	0.42
1:QA:781:A:H4'	1:QA:1522:U:O2'	2.19	0.42
1:QA:1260:C:H2'	1:QA:1275:A:H61	1.84	0.42
1:QA:1410:G:H2'	1:QA:1411:C:C6	2.55	0.42
13:QM:28:ALA:CB	21:QU:21:TYR:OH	2.68	0.42
34:RA:807:U:H2'	34:RA:808:G:C8	2.54	0.42
34:RA:825:C:H4'	34:RA:2428:G:N7	2.34	0.42
34:RA:1711:C:H2'	34:RA:1712:C:C6	2.54	0.42
34:RA:2547:U:H2'	34:RA:2548:G:C8	2.54	0.42
34:RA:2580:U:H5'	37:RE:130:GLY:O	2.19	0.42
46:RR:11:ASN:O	46:RR:12:ARG:HG3	2.19	0.42
54:RZ:130:PRO:HA	54:RZ:133:ILE:HD11	2.01	0.42
1:XA:68(P):A:C5	1:XA:68(Q):C:H1'	2.54	0.42
1:XA:518:C:H5	1:XA:529:G:H3'	1.83	0.42
1:XA:1305:G:C6	1:XA:1331:G:N7	2.81	0.42
10:XJ:62:HIS:NE2	14:YN:61:TRP:HE3	2.16	0.42
32:Y8:4:MET:HG3	32:Y8:61:LEU:HD11	2.01	0.42
34:YA:67:U:H2'	34:YA:68:G:H8	1.83	0.42
34:YA:189:G:H2'	34:YA:205:G:N2	2.34	0.42
34:YA:335:C:H2'	34:YA:336:C:H6	1.84	0.42
34:YA:779:U:H2'	34:YA:780:G:C8	2.53	0.42
37:YE:144:ARG:HG3	37:YE:145:LYS:H	1.84	0.42
40:YH:9:ILE:HG22	40:YH:49:VAL:HB	1.95	0.42
45:YQ:141:GLN:HG3	54:YZ:123:ASP:OD1	2.19	0.42
1:QA:45:U:H4'	1:QA:306:G:N2	2.34	0.42
1:QA:125:U:H2'	1:QA:126:G:C8	2.55	0.42
1:QA:320:C:H2'	1:QA:321:A:C8	2.53	0.42
1:QA:522:C:H2'	1:QA:523:A:H8	1.84	0.42
1:QA:624:C:O2'	16:QP:10:GLY:CA	2.68	0.42
1:QA:832:C:H2'	1:QA:833:U:C6	2.54	0.42
1:QA:1086:U:H3	1:QA:1099:G:H1	1.65	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1186:G:C2	14:QN:61:TRP:O	2.66	0.42
1:QA:1530:G:H2'	1:QA:1531:A:C8	2.54	0.42
4:QD:122:ARG:HA	4:QD:122:ARG:HD2	1.90	0.42
13:QM:37:THR:O	13:QM:55:ARG:NH2	2.53	0.42
13:QM:84:ILE:O	19:QS:74:PHE:HE2	1.77	0.42
17:QQ:45:HIS:H	17:QQ:72:ARG:HA	1.84	0.42
34:RA:237:C:H2'	34:RA:238:C:C6	2.54	0.42
34:RA:636:G:C4	44:RP:115:LEU:HD11	2.54	0.42
34:RA:828:U:H4'	34:RA:831:G:C2	2.54	0.42
34:RA:1629:U:H2'	34:RA:1630(A):G:C8	2.55	0.42
34:RA:1857:G:H21	34:RA:1886:C:H42	1.67	0.42
34:RA:1909:C:H2'	34:RA:1910:G:C8	2.53	0.42
34:RA:2208:U:H2'	34:RA:2209:C:C6	2.54	0.42
34:RA:2363:C:H2'	34:RA:2364:C:H6	1.84	0.42
34:RA:2658:C:H5''	40:RH:158:HIS:NE2	2.34	0.42
37:RE:109:LYS:HG2	37:RE:191:PRO:HB3	2.00	0.42
1:XA:181:G:H4'	1:XA:182:U:H5'	2.01	0.42
1:XA:280:C:C4	17:XQ:39:SER:N	2.70	0.42
1:XA:538:G:H2'	1:XA:539:A:C8	2.54	0.42
1:XA:677:U:H2'	1:XA:678:U:C6	2.53	0.42
1:XA:684:A:H2'	1:XA:685:G:C8	2.54	0.42
1:XA:712:A:H2'	1:XA:713:G:C8	2.53	0.42
1:XA:787:A:H2'	1:XA:788:U:H6	1.84	0.42
1:XA:951:G:H1'	1:XA:971:G:H5'	2.00	0.42
1:XA:1376:U:C5	7:XG:10:ARG:HD3	2.53	0.42
1:XA:1439:C:H2'	1:XA:1440(A):C:C6	2.54	0.42
3:XC:66:VAL:HB	3:XC:101:LEU:HD13	2.00	0.42
6:XF:62:TRP:NE1	18:XR:35:ARG:NH2	2.63	0.42
6:XF:89:MET:SD	18:XR:76:LEU:HD22	2.59	0.42
7:XG:16:LEU:CD2	9:XI:45:ALA:HB2	2.47	0.42
12:XL:42:THR:HA	12:XL:53:ARG:O	2.18	0.42
14:XN:23:ARG:NH1	14:XN:24:CYS:HB3	2.34	0.42
34:YA:521:G:H2'	34:YA:522:G:H8	1.84	0.42
34:YA:532:A:N1	34:YA:2020:A:H1'	2.33	0.42
34:YA:935:C:H2'	34:YA:936:C:C6	2.54	0.42
34:YA:945:A:H62	34:YA:2448:A:N6	1.74	0.42
34:YA:1198:U:H2'	34:YA:1199:U:C6	2.54	0.42
34:YA:2014:A:H2'	34:YA:2015:A:C4	2.54	0.42
34:YA:2136:C:H2'	34:YA:2137:C:C6	2.54	0.42
34:YA:2182:G:H2'	34:YA:2183:C:C6	2.54	0.42
40:YH:159:GLU:HG2	40:YH:169:VAL:HG21	2.01	0.42

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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
1:QA:972:C:OP2	10:QJ:57:LYS:HE3	2.20	0.42
5:QE:102:ALA:H	5:QE:107:ARG:NH2	2.18	0.42
7:QG:58:PRO:HA	7:QG:61:VAL:HG12	2.01	0.42
22:QV:50:G:H2'	22:QV:51:A:H8	1.85	0.42
24:R0:29:GLN:HG3	34:RA:923:C:H4'	2.01	0.42
25:R1:2:SER:N	34:RA:1364:G:OP2	2.52	0.42
34:RA:245:G:N2	34:RA:384:U:O2'	2.37	0.42
34:RA:949:C:H2'	34:RA:950:G:C8	2.54	0.42
34:RA:1162:G:H4'	50:RV:24:LYS:HB3	2.01	0.42
34:RA:1292:U:H2'	34:RA:1293:C:C6	2.54	0.42
34:RA:1999:C:H2'	34:RA:2000:G:C8	2.50	0.42
34:RA:2513:G:N2	37:RE:143:ASN:OD1	2.52	0.42
34:RA:2863:C:H2'	34:RA:2864:G:C8	2.55	0.42
36:RD:13:ARG:HD2	36:RD:13:ARG:HA	1.80	0.42
36:RD:49:ILE:HD11	36:RD:52:ARG:HA	2.00	0.42
46:RR:8:ARG:HD2	46:RR:10:LEU:HD21	2.01	0.42
1:XA:133:U:O5'	1:XA:133:U:H6	2.03	0.42
1:XA:741:G:P	15:XO:35:ARG:HH21	1.54	0.42
1:XA:1055:A:H2'	1:XA:1056:U:O4'	2.18	0.42
33:Y9:6:SER:O	33:Y9:6:SER:OG	2.35	0.42
34:YA:11:G:H22	34:YA:2627:G:H5''	1.83	0.42
34:YA:13:A:N1	34:YA:525:U:H2'	2.34	0.42
34:YA:654(B):G:N2	34:YA:654(V):A:H1'	2.35	0.42
34:YA:665:C:H2'	34:YA:666:G:H8	1.83	0.42
34:YA:741:G:H2'	34:YA:742:G:H8	1.84	0.42
34:YA:1102:C:H2'	34:YA:1103:A:C8	2.55	0.42
34:YA:1399:C:H2'	34:YA:1400:G:H8	1.85	0.42
34:YA:1430:C:H2'	34:YA:1431:U:C6	2.55	0.42
34:YA:1820:U:O2	36:YD:202:LYS:HB3	2.19	0.42
34:YA:2014:A:H8	34:YA:2014:A:OP2	2.03	0.42
34:YA:2452:C:H2'	34:YA:2453:A:C8	2.54	0.42
44:YP:46:LYS:HB3	44:YP:46:LYS:HE3	1.78	0.42
51:YW:57:ASN:O	51:YW:61:ASN:HB2	2.19	0.42
53:YY:79:CYS:SG	53:YY:81:LYS:HE2	2.60	0.42
1:QA:129(B):G:H5'	1:QA:186(L):G:H5'	2.01	0.42
1:QA:410:G:H2'	1:QA:429:U:C4	2.55	0.42
1:QA:630:G:H2'	1:QA:631:G:C8	2.55	0.42
1:QA:953:G:H3'	1:QA:954:G:C8	2.54	0.42
1:QA:976:G:N2	1:QA:1362(A):C:H2'	2.35	0.42
1:QA:979:C:N4	1:QA:1318:A:H61	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:1014:A:N9	19:QS:34:TRP:NE1	2.50	0.42
1:QA:1271:G:H2'	1:QA:1272:G:C8	2.54	0.42
1:QA:1472:U:H2'	1:QA:1473:A:C8	2.54	0.42
2:QB:34:ALA:H	2:QB:41:ILE:HB	1.84	0.42
3:QC:43:LEU:HG	3:QC:47:LEU:HD22	2.00	0.42
4:QD:59:ARG:HH12	4:QD:66:ARG:NH2	2.16	0.42
4:QD:172:PRO:HG3	6:XF:28:ARG:HH12	1.84	0.42
5:QE:126:ARG:HA	5:QE:131:ILE:HD11	2.01	0.42
12:QL:79:GLU:OE2	12:QL:80:HIS:NE2	2.53	0.42
13:QM:47:ASP:OD1	13:QM:47:ASP:N	2.48	0.42
34:RA:528:A:C2	34:RA:2042:A:H2'	2.55	0.42
34:RA:941:A:O2'	34:RA:1190:G:O3'	2.30	0.42
34:RA:1123:C:H2'	34:RA:1124:C:H6	1.85	0.42
34:RA:2159:G:H2'	34:RA:2160:G:H8	1.82	0.42
37:RE:134:ILE:HD12	37:RE:134:ILE:HA	1.85	0.42
51:RW:13:SER:HA	51:RW:99:ARG:HB2	2.01	0.42
54:RZ:67:LEU:HD12	54:RZ:90:VAL:HB	2.02	0.42
1:XA:262:A:H2'	1:XA:263:A:C8	2.55	0.42
1:XA:400:C:H2'	1:XA:401:C:C6	2.55	0.42
1:XA:714:G:H1'	1:XA:777:A:C8	2.55	0.42
1:XA:757:U:H2'	1:XA:758:G:O4'	2.18	0.42
1:XA:821:G:H2'	1:XA:822:C:O4'	2.19	0.42
1:XA:948:C:OP2	13:XM:106:ASN:OD1	2.36	0.42
1:XA:1084:G:H21	1:XA:1102:A:H62	1.67	0.42
1:XA: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
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:YN:59:ALA:CB	2.99	0.42
32:Y8:13:ARG:NH2	34:YA:250:G:OP2	2.52	0.42
34:YA:576:U:H2'	34:YA:577:G:C8	2.55	0.42
34:YA:962:G:H2'	34:YA:963:U:C6	2.55	0.42
34:YA:1819:A:H5''	36:YD:161:THR:HG21	2.02	0.42
34:YA:2154:G:H2'	34:YA:2155:G:C8	2.54	0.42
35:YB:44:G:H1'	35:YB:47:C:H42	1.83	0.42
46:YR:35:THR:HA	46:YR:112:ALA:O	2.19	0.42
47:YS:34:HIS:O	47:YS:97:ARG:NH2	2.52	0.42
1:QA:21:G:H2'	1:QA:22:G:C8	2.55	0.42
1:QA:287:U:H2'	1:QA:288:A:H8	1.85	0.42
1:QA:358:U:H2'	1:QA:359:U:C6	2.55	0.42
1:QA:408:A:H3'	1:QA:409:G:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:766:A:H2'	1:QA:767:A:O4'	2.19	0.42
1:QA:926:G:H2'	1:QA:1505:G:N3	2.34	0.42
1:QA:987:G:H2'	1:QA:988:G:C8	2.55	0.42
1:QA:1109:C:OP2	3:QC:176:HIS:HD2	2.02	0.42
1:QA:1126:U:H3'	1:QA:1127:G:H8	1.83	0.42
1:QA:1134:G:H3'	1:QA:1135:U:C6	2.54	0.42
1:QA:1390:U:H2'	1:QA:1391:U:C6	2.54	0.42
4:QD:15:GLU:HG2	4:QD:63:LYS:HB3	2.01	0.42
7:QG:75:VAL:HA	7:QG:88:PRO:HA	2.00	0.42
34:RA:13:A:N3	34:RA:14:A:N6	2.66	0.42
34:RA:262:A:H2'	34:RA:263:C:O4'	2.19	0.42
34:RA:375:C:H2'	34:RA:376:C:C6	2.54	0.42
34:RA:672:C:H2'	34:RA:673:C:C6	2.55	0.42
34:RA:704:G:N2	34:RA:726:G:O2'	2.52	0.42
34:RA:1509:C:H3'	34:RA:1510:A:H4'	2.00	0.42
34:RA:2533:A:OP1	34:RA:2665:A:O2'	2.29	0.42
34:RA:2841:C:H2'	34:RA:2842:G:H8	1.84	0.42
36:RD:32:SER:C	36:RD:34:VAL:H	2.23	0.42
36:RD:142:VAL:HG23	36:RD:193:VAL:HA	2.02	0.42
45:RQ:7:MET:SD	45:RQ:7:MET:N	2.90	0.42
1:XA:186(Q):U:O2	20:XT:105:SER:OG	2.37	0.42
1:XA:972:C:C2'	10:XJ:55:LYS:HB2	2.49	0.42
1:XA:1086:U:H3	1:XA:1099:G:H22	1.67	0.42
1:XA:1300:G:O3'	13:XM:21:TYR:HE1	2.03	0.42
1:XA:1492:A:H1'	1:XA:1493:A:C6	2.54	0.42
2:XB:87:ARG:HH21	2:XB:219:VAL:HG13	1.84	0.42
2:XB:195:ASP:O	8:XH:74:PRO:HG2	2.20	0.42
3:XC:64:VAL:HG13	3:XC:97:LYS:HD2	2.01	0.42
7:XG:102:ARG:HA	7:XG:105:VAL:HG22	2.01	0.42
11:XK:108:ILE:O	18:XR:87:ARG:HA	2.19	0.42
18:XR:85:LEU:HD12	18:XR:85:LEU:HA	1.83	0.42
34:YA:65:C:H2'	34:YA:66:C:C6	2.55	0.42
34:YA:128:C:H2'	34:YA:129:C:C6	2.54	0.42
34:YA:373:U:H1'	34:YA:423:A:N3	2.35	0.42
34:YA:654(B):G:H22	34:YA:654(V):A:H1'	1.84	0.42
34:YA:676:A:C8	34:YA:2070:G:H1'	2.55	0.42
34:YA:689:A:H2'	34:YA:690:G:C8	2.54	0.42
34:YA:852:G:H2'	34:YA:853:G:H8	1.85	0.42
34:YA:985:C:H2'	34:YA:986:C:C6	2.55	0.42
34:YA:1012:U:O4	42:YN:25:ARG:HD3	2.19	0.42
34:YA:1303:G:H1'	34:YA:1641:A:C2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:1556:C:H2'	34:YA:1557:C:C6	2.54	0.42
34:YA:2299:G:N2	34:YA:2318:G:H1'	2.34	0.42
34:YA:2305:A:O5'	39:YG:134:GLY:HA3	2.20	0.42
34:YA:2584:U:O3'	34:YA:2602:A:H2	2.02	0.42
34:YA:2689:U:OP2	34:YA:2872:G:N2	2.41	0.42
38:YF:114:VAL:HG11	38:YF:202:PHE:CZ	2.55	0.42
44:YP:82:GLY:HA2	44:YP:113:LYS:O	2.18	0.42
1:QA:21:G:H1'	1:QA:915:A:N1	2.34	0.42
1:QA:34:C:H2'	1:QA:35:G:H8	1.83	0.42
1:QA:320:C:N4	1:QA:329:A:OP2	2.52	0.42
1:QA:740:U:O4'	15:QO:42:HIS:CD2	2.73	0.42
1:QA:821:G:H8	1:QA:821:G:P	2.43	0.42
1:QA:943:U:O2'	1:QA:1232:U:OP2	2.36	0.42
1:QA:953:G:C8	13:QM:104:ARG:NH2	2.79	0.42
1:QA:1099:G:C5'	2:QB:96:ARG:HD2	2.49	0.42
1:QA:1466:C:H2'	1:QA:1467:G:O4'	2.19	0.42
12:QL:57:LYS:HA	12:QL:67:THR:HA	2.00	0.42
34:RA:105:C:H2'	34:RA:106:C:C6	2.54	0.42
34:RA:189:G:H2'	34:RA:205:G:N2	2.34	0.42
34:RA:263:C:H2'	34:RA:264:C:O4'	2.20	0.42
34:RA:270(V):C:H2'	34:RA:270(W):G:H8	1.85	0.42
34:RA:524:U:H2'	34:RA:525:U:C6	2.54	0.42
34:RA:1041:C:H2'	34:RA:1042:G:C8	2.51	0.42
34:RA:1096:A:H2'	34:RA:1097:U:O4'	2.20	0.42
34:RA:1107:G:H2'	34:RA:1108:U:C6	2.54	0.42
34:RA:1165:U:H2'	34:RA:1166:C:C6	2.55	0.42
34:RA:1375:C:H2'	34:RA:1376:C:C6	2.55	0.42
34:RA:2065:C:H1'	34:RA:2449:U:H3	1.84	0.42
38:RF:70:THR:HG23	38:RF:72:ARG:H	1.85	0.42
1:XA:105:G:H2'	1:XA:106:C:C6	2.55	0.42
1:XA:111:G:O5'	1:XA:111:G:C8	2.70	0.42
1:XA: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
1:XA:920:U:O2'	1:XA:1081:G:O2'	2.36	0.42
1:XA:926:G:H2'	1:XA:1505:G:N2	2.35	0.42
1:XA:1330:U:C5'	13:XM:24:GLY:O	2.68	0.42
2:XB:177:ALA:HB1	2:XB:182:ILE:HB	2.01	0.42
3:XC:119:ARG:HG2	3:XC:140:ARG:HH22	1.85	0.42
33:Y9:32:HIS:CD2	33:Y9:32:HIS:N	2.87	0.42
34:YA:118:A:N3	34:YA:178:G:H1'	2.35	0.42
34:YA:134:C:H2'	34:YA:135:G:C8	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:270(S):G:H2'	34:YA:270(T):G:H8	1.85	0.42
34:YA:584:C:OP2	49:YU:10:ARG:NH2	2.53	0.42
34:YA:603:A:O4'	34:YA:655:A:N6	2.52	0.42
34:YA:654(B):G:H2'	34:YA:654(C):C:C6	2.55	0.42
34:YA:673:C:H2'	34:YA:674:G:C8	2.55	0.42
34:YA:1869:G:H2'	34:YA:1871:A:N7	2.35	0.42
34:YA:2072:G:N1	34:YA:2438:U:C2	2.88	0.42
34:YA:2109:U:H2'	34:YA:2110:G:C8	2.55	0.42
34:YA:2291:U:H5''	34:YA:2380:C:H1'	2.02	0.42
34:YA:2419:U:H2'	34:YA:2420:C:C6	2.55	0.42
34:YA:2855:C:H2'	34:YA:2856:C:C6	2.54	0.42
39:YG:18:GLU:OE1	39:YG:21:ARG:NH2	2.50	0.42
47:YS:18:ILE:HG21	47:YS:88:ASP:HA	2.02	0.42
52:YX:25:LYS:HB3	52:YX:80:ILE:HD11	2.00	0.42
1:QA:8:A:C8	4:QD:209:ARG:O	2.72	0.42
1:QA:344:A:H3'	1:QA:345:C:C6	2.55	0.42
1:QA:345:C:H5'	48:RT:41:ARG:HD2	2.02	0.42
1:QA:581:G:N1	1:QA:759:A:OP2	2.37	0.42
1:QA:822:C:H2'	1:QA:823:G:C8	2.54	0.42
1:QA:1070:U:H2'	1:QA:1071:C:C6	2.55	0.42
1:QA:1294:G:H2'	1:QA:1295:G:C8	2.55	0.42
1:QA:1437:C:H2'	1:QA:1438:G:C8	2.55	0.42
2:QB:175:ARG:O	2:QB:179:LYS:HG3	2.20	0.42
4:QD:205:GLU:CG	5:QE:107:ARG:HH12	2.33	0.42
9:QI:65:VAL:HG11	9:QI:73:GLN:HG3	2.01	0.42
12:QL:102:ARG:HB3	12:QL:109:GLY:HA2	2.01	0.42
14:QN:41:ARG:HG3	14:QN:42:ILE:HG13	2.01	0.42
32:R8:61:LEU:HD12	32:R8:62:LEU:HG	2.02	0.42
34:RA:191:A:N6	34:RA:206:U:O2	2.53	0.42
34:RA:476:G:H1'	34:RA:480:A:H61	1.84	0.42
34:RA:755:C:H2'	34:RA:756:C:C6	2.55	0.42
34:RA:1572:A:H2'	34:RA:1573:G:C8	2.55	0.42
34:RA:2333:A:H1'	34:RA:2335:A:C5	2.55	0.42
34:RA:2683:C:OP1	48:RT:53:ARG:NH1	2.42	0.42
34:RA:2735:G:H2'	34:RA:2736:G:C8	2.55	0.42
1:XA:373:A:H1'	1:XA:481:G:O4'	2.20	0.42
1:XA:477:G:H2'	1:XA:478:A:C8	2.55	0.42
1:XA:714:G:H2'	1:XA:715:A:C8	2.55	0.42
1:XA:729:A:H2'	1:XA:730:G:H8	1.84	0.42
1:XA:901:A:O5'	1:XA:901:A:C8	2.70	0.42
1:XA:946:A:OP1	13:XM:114:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1253:G:N1	1:XA:1254:C:N4	2.67	0.42
1:XA:1311:G:H3'	19:XS:5:LEU:HD11	1.31	0.42
1:XA:1313:U:C5	19:XS:4:SER:OG	2.72	0.42
1:XA:1329:A:H4'	13:XM:29:ARG:CZ	2.50	0.42
1:XA:1512:U:H2'	1:XA:1513:A:C8	2.54	0.42
30:Y6:40:CYS:HB3	30:Y6:43:CYS:CB	2.50	0.42
34:YA:610:C:H2'	34:YA:611:C:C6	2.55	0.42
34:YA:740:U:H2'	34:YA:741:G:C8	2.54	0.42
34:YA:765:G:H2'	34:YA:766:C:C6	2.55	0.42
34:YA:1119:C:H2'	34:YA:1120:G:H8	1.85	0.42
34:YA:1174:A:H2	34:YA:1176:G:H4'	1.85	0.42
34:YA:1292:U:H2'	34:YA:1293:C:C6	2.55	0.42
34:YA:1534:G:H3'	34:YA:1534:G:N3	2.34	0.42
34:YA:1812:A:H2'	34:YA:1813:G:C8	2.55	0.42
34:YA:2053:G:H2'	34:YA:2054:A:C8	2.55	0.42
34:YA:2249:U:C4	34:YA:2252:G:H5''	2.55	0.42
34:YA:2468:G:OP2	34:YA:2468:G:N2	2.51	0.42
34:YA:2554:U:H2'	34:YA:2555:U:C6	2.55	0.42
37:YE:102:VAL:HG23	37:YE:200:GLU:HA	2.02	0.42
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:163:C:H2'	1:QA:164:U:O4'	2.20	0.42
1:QA:830:G:H21	1:QA:1540:U:H5'	1.84	0.42
1:QA:1313:U:C4'	19:QS:6:LYS:HZ3	2.29	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
2:QB:197:VAL:C	8:QH:68:ARG:NH2	2.70	0.42
4:QD:18:LYS:HZ2	4:QD:18:LYS:HG2	1.69	0.42
33:R9:29:ASN:HB3	33:R9:32:HIS:CD2	2.55	0.42
34:RA:26:G:H1'	34:RA:515:A:H61	1.85	0.42
34:RA:27:G:H1'	34:RA:513:A:H61	1.84	0.42
34:RA:389:G:H1	44:RP:71:VAL:HG12	1.84	0.42
34:RA:564:C:N4	34:RA:573:G:OP1	2.49	0.42
34:RA:611:C:H2'	34:RA:612:G:C8	2.55	0.42
34:RA:730:C:H2'	34:RA:731:C:C6	2.55	0.42
34:RA:804:A:H2'	34:RA:806:C:C4	2.55	0.42
34:RA:1444(B):A:H1'	34:RA:1460:A:N3	2.35	0.42
34:RA:1629:U:O2	34:RA:2698:U:H4'	2.20	0.42
34:RA:1654:A:OP1	46:RR:2:ARG:HD3	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2651:C:H2'	34:RA:2652:C:H6	1.84	0.42
34:RA:2784:C:H2'	34:RA:2785:C:C6	2.55	0.42
34:RA:2859:G:H2'	34:RA:2860:A:C8	2.54	0.42
38:RF:8:GLN:NE2	38:RF:19:GLU:OE1	2.51	0.42
40:RH:126:PRO:HB2	40:RH:127:GLU:H	1.68	0.42
1:XA:321:A:N6	1:XA:328:C:H1'	2.35	0.42
1:XA:599:C:H2'	1:XA:600:C:C6	2.55	0.42
1:XA:1359:C:H4'	1:XA:1362(A):C:N4	2.35	0.42
19:XS:36:ARG:NH2	19:XS:72:GLY:O	2.52	0.42
22:XV:50:G:H2'	22:XV:51:A:C8	2.54	0.42
34:YA:417:C:O2	34:YA:2407:G:N1	2.52	0.42
34:YA:811:U:O4	44:YP:21:ARG:NH2	2.53	0.42
34:YA:1576:U:H2'	34:YA:1577:C:C6	2.54	0.42
34:YA:2043:C:N4	34:YA:2777:G:C5	2.87	0.42
34:YA:2108:C:H5'	34:YA:2150:U:O2'	2.19	0.42
34:YA:2233:U:H2'	34:YA:2234:G:C8	2.54	0.42
36:YD:45:ASN:O	36:YD:47:GLY:N	2.52	0.42
49:YU:94:ASN:HD22	49:YU:94:ASN:C	2.22	0.42
1:QA:5:U:H4'	1:QA:6:G:C8	2.55	0.42
1:QA:124:G:H2'	1:QA:125:U:O4'	2.20	0.42
1:QA:339:C:H2'	1:QA:340:U:C6	2.55	0.42
1:QA: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
1:QA:1085:U:H3'	1:QA:1086:U:C6	2.55	0.42
6:QF:50:TYR:CZ	18:QR:77:GLY:HA2	2.55	0.42
21:QU:3:LYS:HD3	21:QU:14:TRP:CG	2.55	0.42
31:R7:12:ARG:HH21	31:R7:44:PRO:HB3	1.84	0.42
32:R8:49:VAL:HG23	32:R8:53:PRO:HD3	2.02	0.42
34:RA:1148:A:H2'	34:RA:1149:G:C8	2.55	0.42
34:RA:1200:C:H2'	34:RA:1201:C:C6	2.55	0.42
34:RA:1333:C:H2'	34:RA:1334:G:C8	2.47	0.42
34:RA:1688:U:H1'	34:RA:1701:A:C6	2.54	0.42
34:RA:2746:U:O4	34:RA:2755:C:H4'	2.20	0.42
36:RD:76:PRO:HB3	36:RD:118:VAL:HG22	2.02	0.42
1:XA:56:U:H2'	1:XA:57:G:C8	2.55	0.42
1:XA:390:C:O5'	1:XA:390:C:H6	2.03	0.42
1:XA:728:A:C8	15:XO:54:ARG:NH1	2.84	0.42
1:XA:1187:G:C4	14:XN:61:TRP:O	2.73	0.42
1:XA:1253:G:C2	1:XA:1254:C:C6	3.08	0.42
1:XA:1256:A:C8	1:XA:1278:U:H5'	2.54	0.42
1:XA:1414:U:H3	1:XA:1486:G:H1	1.68	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:1510:U:H3	1:XA:1525:G:H1	1.68	0.42
4:XD:105:VAL:HG21	4:XD:126:ILE:HD13	2.02	0.42
10:XJ:7:LYS:HE2	10:XJ:9:ARG:CG	2.49	0.42
13:XM:84:ILE:HD11	19:XS:65:ASN:CB	2.45	0.42
34:YA:279:C:H2'	34:YA:280:C:H6	1.85	0.42
34:YA:363(C):G:H2'	34:YA:363(D):G:C8	2.54	0.42
34:YA:453:C:H4'	34:YA:472:A:H62	1.84	0.42
34:YA:635:C:H2'	34:YA:636:G:C8	2.55	0.42
34:YA:892:G:H2'	34:YA:893:C:C6	2.54	0.42
34:YA:2086:U:OP2	36:YD:263:ARG:NH1	2.52	0.42
34:YA:2138:C:H2'	34:YA:2139:C:C6	2.55	0.42
37:YE:2:LYS:HD2	37:YE:95:ILE:HG22	2.02	0.42
42:YN:28:THR:O	42:YN:32:THR:OG1	2.32	0.42
44:YP:7:ARG:HA	44:YP:8:PRO:HD2	1.97	0.42
45:YQ:34:LEU:HB2	45:YQ:118:LEU:HD22	2.01	0.42
1:QA:10:A:OP2	5:QE:126:ARG:HD3	2.20	0.41
1:QA:669:U:H2'	1:QA:670:G:C8	2.54	0.41
1:QA:801:U:H2'	1:QA:802:A:H8	1.85	0.41
1:QA:893:C:H2'	1:QA:894:G:H8	1.85	0.41
1:QA:1124:G:C4'	10:QJ:36:GLY:H	2.33	0.41
1:QA:1130:A:H62	1:QA:1144:G:H21	1.67	0.41
1:QA:1176:A:H62	1:QA:1182:G:H21	1.67	0.41
1:QA:1220:G:N2	19:QS:54:GLY:HA2	2.33	0.41
1:QA:1483:A:H1'	34:RA:1948:G:H1'	2.02	0.41
3:QC:22:TRP:HH2	3:QC:32:LEU:HD13	1.85	0.41
4:QD:109:GLY:HA3	4:QD:165:MET:HG2	2.02	0.41
7:QG:75:VAL:HG12	7:QG:88:PRO:HB3	2.01	0.41
19:QS:70:LYS:N	19:QS:73:GLU:OE1	2.52	0.41
20:QT:14:LYS:HA	20:QT:17:ARG:HG2	2.02	0.41
34:RA:557:U:H2'	34:RA:558:G:C8	2.55	0.41
34:RA: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
34:RA:2538:C:H2'	34:RA:2539:C:C6	2.55	0.41
38:RF:178:PRO:HB3	38:RF:198:ALA:HB2	2.02	0.41
39:RG:34:LEU:HD21	39:RG:172:LEU:HD21	2.02	0.41
39:RG:39:ILE:HB	39:RG:92:VAL:HG13	2.01	0.41
44:RP:84:ASN:HA	44:RP:115:LEU:O	2.20	0.41
49:RU:85:LYS:HE2	49:RU:116:ALA:HA	2.01	0.41
1:XA:51:A:H61	1:XA:314:C:H1'	1.85	0.41
1:XA:68(Y):U:H2'	1:XA:68(Z):C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:167:G:H2'	1:XA:168:G:H8	1.85	0.41
1:XA:664:G:N3	1:XA:726:C:H4'	2.35	0.41
1:XA:1073:U:OP1	5:XE:57:LYS:HE3	2.19	0.41
1:XA:1184:G:H2'	1:XA:1185:G:C8	2.52	0.41
1:XA:1188:A:H4'	14:XN:59:ALA:O	2.19	0.41
1:XA:1229:A:OP2	13:XM:104:ARG:O	2.37	0.41
1:XA:1256:A:OP2	1:XA:1279:A:N6	2.52	0.41
1:XA:1500:A:H2'	1:XA:1501:C:C6	2.55	0.41
3:XC:8:ILE:HG12	3:XC:184:TYR:HB3	2.02	0.41
9:XI:13:ALA:HB1	9:XI:73:GLN:HG3	2.01	0.41
19:XS:30:LEU:HD13	19:XS:48:THR:HG23	2.01	0.41
32:Y8:60:LEU:HD12	32:Y8:60:LEU:HA	1.82	0.41
34:YA:220:G:N2	34:YA:427:U:H2'	2.35	0.41
34:YA:852:G:H2'	34:YA:853:G:C8	2.55	0.41
34:YA:1510:A:H2'	34:YA:1510:A:N3	2.33	0.41
34:YA:1675:C:O2	37:YE:128:SER:OG	2.37	0.41
34:YA:1709:U:H2'	34:YA:1710:C:C6	2.55	0.41
34:YA:2054:A:H2	34:YA:2616:C:N3	2.01	0.41
34:YA:2651:C:H2'	34:YA:2652:C:H6	1.85	0.41
36:YD:66:ASP:OD1	36:YD:103:ARG:NH1	2.53	0.41
36:YD:83:GLU:OE1	36:YD:104:TYR:OH	2.31	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
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
9:QI:77:ILE:O	9:QI:81:ILE:HG12	2.20	0.41
26:R2:45:SER:OG	26:R2:46:GLN:N	2.53	0.41
34:RA:172:C:H2'	34:RA:173:G:C8	2.55	0.41
34:RA:242:G:H22	34:RA:254:G:H2'	1.84	0.41
34:RA:676:A:C2	34:RA:677:A:C8	3.09	0.41
34:RA:1212:G:H1'	34:RA:1236:G:N2	2.35	0.41
34:RA:1464:C:H2'	34:RA:1465:G:H8	1.85	0.41
34:RA:1511:A:H3'	34:RA:1512:G:H8	1.85	0.41
34:RA:1812:A:H2'	34:RA:1813:G:H8	1.85	0.41
34:RA:2427:C:H5'	34:RA:2429:G:H5'	2.00	0.41
34:RA:2751:G:N1	40:RH:3:ARG:CB	2.77	0.41
34:RA:2773:C:H2'	34:RA:2774:C:C6	2.55	0.41

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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:260:G:H2'	1:XA:261:U:C6	2.56	0.41
1:XA:355:C:O5'	1:XA:355:C:C6	2.70	0.41
1:XA:532:A:O5'	1:XA:532:A:H8	2.03	0.41
1:XA:576:G:N2	1:XA:760:G:OP2	2.53	0.41
1:XA:580:U:H2'	1:XA:581:G:O4'	2.19	0.41
1:XA:584:G:H1	1:XA:757:U:H3	1.68	0.41
1:XA:730:G:N3	1:XA:765:G:H4'	2.34	0.41
1:XA:960:U:H4'	1:XA:961:U:H5''	2.02	0.41
1:XA:1376:U:C4	7:XG:10:ARG:CD	3.02	0.41
4:XD:101:LEU:HD22	4:XD:138:TYR:HB3	2.01	0.41
5:XE:75:THR:HG22	5:XE:117:ASP:O	2.20	0.41
5:XE:128:PRO:HA	5:XE:131:ILE:HG12	2.02	0.41
6:XF:39:LYS:HB2	6:XF:64:GLN:HB3	2.01	0.41
6:XF:89:MET:SD	18:XR:34:TYR:CE2	3.13	0.41
6:XF:99:ALA:HB3	18:XR:29:PHE:HD1	1.71	0.41
34:YA:279:C:H2'	34:YA:280:C:C6	2.55	0.41
34:YA:486:C:H2'	34:YA:487:C:C6	2.55	0.41
34:YA:870:A:OP1	45:YQ:6:ARG:NH2	2.25	0.41
34:YA:1995:U:H2'	34:YA:1996:C:C5	2.56	0.41
34:YA:2241:A:H2'	34:YA:2242:G:C8	2.54	0.41
34:YA:2732:G:H3'	34:YA:2733:A:O4'	2.20	0.41
34:YA:2749:A:H3'	34:YA:2750:A:H2'	2.02	0.41
34:YA:2819:G:H2'	34:YA:2821:A:N7	2.35	0.41
37:YE:24:THR:HG22	37:YE:186:GLY:H	1.84	0.41
37:YE:201:THR:OG1	37:YE:202:LYS:N	2.53	0.41
44:YP:15:ARG:HD3	44:YP:15:ARG:HA	1.85	0.41
44:YP:47:ASP:OD2	44:YP:50:ARG:NH1	2.53	0.41
1:QA:99:C:H2'	1:QA:101:A:C8	2.55	0.41
1:QA:120:A:H2'	1:QA:122:G:C8	2.54	0.41
1:QA:138:G:H2'	1:QA:139:G:C8	2.54	0.41
1:QA:418:C:H2'	1:QA:419:C:H6	1.85	0.41
1:QA:736:C:H2'	1:QA:737:A:C8	2.56	0.41
1:QA:1418:A:H1'	34:RA:1959:G:H1'	2.02	0.41
8:QH:81:HIS:ND1	8:QH:138:TRP:O	2.39	0.41
27:R3:4:LEU:HD21	27:R3:56:VAL:HB	2.03	0.41
34:RA:49:A:H61	34:RA:177:G:H2'	1.84	0.41
34:RA:523:C:H5''	34:RA:541:C:O2'	2.19	0.41
34:RA:628:G:O2'	34:RA:651:G:O2'	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2524:G:H21	34:RA:2741:A:H1'	1.84	0.41
34:RA:2881:C:H2'	34:RA:2882:A:H8	1.85	0.41
45:RQ:116:GLU:O	45:RQ:120:ILE:HG12	2.20	0.41
1:XA:59:A:H1'	1:XA:354:G:N2	2.35	0.41
1:XA:196:A:N3	1:XA:222:U:H1'	2.35	0.41
1:XA:435:C:H2'	1:XA:436:C:C6	2.53	0.41
1:XA:571:U:H5''	1:XA:819:A:C5	2.56	0.41
1:XA:861:G:O2'	1:XA:874:G:O2'	2.24	0.41
1:XA:913:A:OP1	12:XL:91:LYS:HE2	2.21	0.41
1:XA:1230:C:C5	13:XM:105:THR:HB	2.55	0.41
1:XA:1301:U:H4'	13:XM:17:VAL:HG23	2.02	0.41
1:XA:1347:G:HO2'	1:XA:1373:G:H1	1.67	0.41
2:XB:115:LEU:HB2	2:XB:145:LEU:HD23	2.02	0.41
3:XC:35:GLU:HB3	3:XC:59:ARG:HH22	1.85	0.41
13:XM:3:ARG:HA	13:XM:3:ARG:HD3	1.96	0.41
14: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: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
34:YA:911:A:N1	45:YQ:9:TYR:HB3	2.35	0.41
34:YA:1187:G:N2	34:YA:1188:U:O4	2.51	0.41
34:YA:1566:A:N3	36:YD:214:TRP:CE3	2.88	0.41
41:YI:50:ARG:HA	41:YI:50:ARG:HD3	1.80	0.41
41:YI:121:LYS:HA	41:YI:121:LYS:HD3	1.67	0.41
46:YR:104:ARG:HD2	46:YR:109:ALA:HB3	2.02	0.41
53:YY:102:CYS:SG	53:YY:103:GLY:N	2.93	0.41
54:YZ:185:GLU:O	54:YZ:186:GLU:C	2.58	0.41
1:QA:108:G:N2	1:QA:108:G:OP2	2.49	0.41
1:QA:329:A:H2'	1:QA:332:G:N7	2.35	0.41
1:QA:583:A:H2'	1:QA:584:G:O4'	2.21	0.41
1:QA:777:A:H2'	1:QA:778:G:O4'	2.21	0.41
1:QA:974:A:P	14:QN:31:ARG:HB2	2.56	0.41
1:QA:1065:U:C5	1:QA:1190:G:H1'	2.56	0.41
1:QA:1332:A:H3'	1:QA:1333:A:C8	2.55	0.41
1:QA:1477:C:H2'	1:QA:1478:C:C6	2.56	0.41
1:QA:1517:G:H2'	1:QA:1518:A:O4'	2.21	0.41
3:QC:140:ARG:HA	3:QC:143:GLU:HG2	2.02	0.41
8:QH:3:THR:OG1	8:QH:4:ASP:N	2.54	0.41
29:R5:33:CYS:SG	29:R5:46:CYS:HB2	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:199:A:N1	34:RA:2433:A:H2'	2.36	0.41
34:RA:475:U:H2'	34:RA:476:G:O4'	2.21	0.41
34:RA:1046:A:H5'	34:RA:1047:G:H8	1.85	0.41
34:RA:1053:C:H2'	34:RA:1054:A:C8	2.55	0.41
34:RA:1129:A:H1'	34:RA:2516:G:H1'	2.01	0.41
34:RA:1221:C:H2'	34:RA:1222:C:H6	1.85	0.41
34:RA:2250:G:C2	45:RQ:82:ARG:HG3	2.55	0.41
34:RA:2748:A:O2'	40:RH:63:SER:O	2.20	0.41
36:RD:268:ARG:HG3	36:RD:269:PHE:CD2	2.55	0.41
46:RR:13:HIS:O	46:RR:17:ARG:HB2	2.20	0.41
50:RV:32:THR:O	50:RV:32:THR:OG1	2.37	0.41
1:XA:657:G:O2'	15:XO:23:GLY:HA2	2.20	0.41
1:XA:762:C:H2'	1:XA:763:G:C8	2.55	0.41
1:XA:1209:C:O2'	1:XA:1214:C:N4	2.53	0.41
1:XA:1499:A:H1'	1:XA:1520:G:H4'	2.03	0.41
6:XF:12:PRO:HD3	6:XF:58:GLY:HA2	2.02	0.41
22:XV:70:C:O2'	34:YA:1893:C:O2'	2.30	0.41
34:YA:409:C:H2'	34:YA:410:G:H8	1.85	0.41
34:YA:822:U:C5	34:YA:944:G:H1'	2.55	0.41
34:YA:840:C:H2'	34:YA:841:A:C8	2.55	0.41
34:YA:919:G:N1	34:YA:2268:A:C4	2.88	0.41
34:YA:1688:U:H1'	34:YA:1701:A:C6	2.55	0.41
34:YA:2103:C:H2'	34:YA:2104:G:C8	2.56	0.41
34:YA:2134:A:H3'	34:YA:2135:A:C8	2.53	0.41
34:YA:2286:A:H1'	34:YA:2287:A:C5	2.55	0.41
34:YA:2728:U:H2'	34:YA:2729:G:C8	2.55	0.41
37:YE:132:HIS:CD2	37:YE:132:HIS:O	2.73	0.41
1:QA:343:U:H2'	1:QA:345:C:C4	2.55	0.41
1:QA:782:A:H3'	1:QA:783:C:C6	2.55	0.41
1:QA:801:U:H2'	1:QA:802:A:C8	2.55	0.41
1:QA:1187:G:N2	14:QN:60:SER:HG	2.16	0.41
1:QA:1314:C:C5	19:QS:6:LYS:NZ	2.89	0.41
4:QD:28:SER:HA	4:QD:29:PRO:HD3	1.96	0.41
4:QD:169:LYS:CG	6:XF:82:ARG:HH22	2.33	0.41
13:QM:77:ASN:O	13:QM:81:LEU:HG	2.21	0.41
24:R0:43:THR:HG21	34:RA:2336:A:N6	2.36	0.41
32:R8:39:LYS:NZ	34:RA:2351:G:O6	2.49	0.41
34:RA:270(T):G:H2'	34:RA:270(U):G:C8	2.54	0.41
34:RA:797:C:H2'	34:RA:798:G:C8	2.56	0.41
34:RA:957:A:OP1	45:RQ:76:LYS:HG2	2.21	0.41
34:RA:1362:C:H2'	34:RA:1363:C:H6	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:1435:G:H2'	34:RA:1436:G:C8	2.56	0.41
34:RA:1589:C:H2'	34:RA:1590:U:C6	2.55	0.41
34:RA:1692:U:H3'	34:RA:1694:C:H41	1.86	0.41
34:RA:2544:G:H1'	34:RA:2646:C:H4'	2.02	0.41
44:RP:137:LYS:HA	44:RP:137:LYS:HD3	1.85	0.41
45:RQ:34:LEU:HD13	45:RQ:118:LEU:HD12	2.03	0.41
53:RY:99:CYS:HB3	53:RY:102:CYS:H	1.85	0.41
1:XA:40:C:H2'	1:XA:41:G:H8	1.86	0.41
1:XA:1466:C:H2'	1:XA:1467:G:O4'	2.21	0.41
5:XE:110:LEU:HB3	5:XE:115:VAL:HB	2.03	0.41
13:XM:87:TYR:OH	13:XM:91:ARG:NH1	2.53	0.41
32:Y8:4:MET:SD	34:YA:592:G:N2	2.89	0.41
34:YA:172:C:H2'	34:YA:173:G:C8	2.55	0.41
34:YA:270(D):C:H2'	34:YA:270(E):C:C6	2.55	0.41
34:YA: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
34:YA:1038:C:H2'	34:YA:1039:G:C8	2.56	0.41
34:YA:1361:G:N2	34:YA:1371:G:H1'	2.35	0.41
34:YA:1561:G:H2'	34:YA:1562:A:C8	2.55	0.41
34:YA:1790:C:H2'	34:YA:1791:A:C5	2.56	0.41
34:YA:2742:C:H2'	34:YA:2743:C:C6	2.56	0.41
39:YG:39:ILE:HG12	39:YG:157:ILE:HD12	2.02	0.41
54:YZ:6:LYS:O	54:YZ:62:PRO:HD3	2.20	0.41
1:QA:80:G:N2	1:QA:89:U:H1'	2.35	0.41
1:QA:186(A):C:C1'	20:QT:81:LYS:HE3	2.50	0.41
1:QA:553:A:O2'	12:QL:29:GLY:O	2.35	0.41
1:QA:870:U:H4'	1:QA:871:U:H3'	2.03	0.41
1:QA:1015:A:H2'	1:QA:1016:A:C8	2.56	0.41
1:QA:1203:C:H5'	14:QN:3:ARG:CZ	2.50	0.41
1:QA:1463:C:H2'	1:QA:1464:G:C8	2.56	0.41
1:QA:1479:C:H2'	1:QA:1480:G:C8	2.55	0.41
1:QA:1494:G:H4'	34:RA:1913:A:N7	2.35	0.41
3:QC:44:GLU:HA	3:QC:52:LEU:HD21	2.03	0.41
3:QC:76:VAL:HG21	3:QC:103:VAL:HG11	2.03	0.41
34:RA:576:U:H2'	34:RA:577:G:C8	2.56	0.41
34:RA:580:C:H2'	34:RA:581:C:C6	2.56	0.41
34:RA:822:U:H2'	34:RA:823:G:C8	2.56	0.41
34:RA:1588:C:H2'	34:RA:1589:C:C6	2.56	0.41
34:RA:1927:A:H2'	34:RA:1928:A:H8	1.86	0.41
34:RA:2014:A:O3'	51:RW:92:ARG:NH2	2.53	0.41
34:RA:2109:U:H2'	34:RA:2110:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2226:C:H2'	34:RA:2227:A:O4'	2.20	0.41
34:RA:2537:U:H2'	34:RA:2538:C:C6	2.56	0.41
37:RE:134:ILE:HD12	37:RE:137:HIS:HB2	2.02	0.41
39:RG:63:ILE:HD13	39:RG:141:PHE:HB3	2.02	0.41
44:RP:41:ARG:HD3	44:RP:41:ARG:HA	1.82	0.41
45:RQ:31:ASP:OD2	45:RQ:134:ARG:NH2	2.54	0.41
48:RT:66:VAL:HA	48:RT:71:GLY:HA2	2.02	0.41
49:RU:27:LEU:O	49:RU:31:SER:HB3	2.20	0.41
54:RZ:5:LEU:H	54:RZ:59:LEU:HA	1.84	0.41
1:XA:254:G:OP2	17:XQ:67:LYS:HB3	2.20	0.41
1:XA:451:A:C6	1:XA:480:U:H2'	2.55	0.41
1:XA:646:U:H2'	1:XA:647:C:C6	2.55	0.41
1:XA:649:G:H2'	1:XA:650:G:H8	1.84	0.41
1:XA:769:G:N2	1:XA:811:C:H1'	2.35	0.41
1:XA:1073:U:H3	1:XA:1102:A:H61	1.69	0.41
1:XA:1158:C:O3'	2:XB:133:LYS:HD3	2.19	0.41
4:XD:161:ASN:O	4:XD:165:MET:HB2	2.21	0.41
14:XN:47:LEU:HD22	14:XN:52:GLN:HB2	2.02	0.41
32:Y8:34:TRP:CD1	34:YA:2420:C:OP1	2.74	0.41
34:YA:6:A:H2'	34:YA:7:G:O4'	2.20	0.41
34:YA:69:C:H2'	34:YA:70:G:C8	2.55	0.41
34:YA:807:U:H2'	34:YA:808:G:C8	2.56	0.41
34:YA:1329:U:H5''	34:YA:1330:C:H5	1.86	0.41
34:YA:1336:A:H2'	34:YA:1337:G:C8	2.56	0.41
34:YA:1882:C:H3'	34:YA:1883:G:H8	1.86	0.41
35:YB:15:A:H1'	35:YB:109:G:C5	2.56	0.41
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:250:A:H1'	1:QA:252:U:C6	2.56	0.41
1:QA:581:G:H2'	1:QA:582:U:C6	2.55	0.41
1:QA:739:C:HO2'	15:QO:42:HIS:CE1	2.37	0.41
1:QA:1013:G:N2	1:QA:1017:G:O6	2.54	0.41
1:QA:1052:U:H2'	1:QA:1200:C:N4	2.36	0.41
1:QA:1061:G:H2'	1:QA:1062:U:O4'	2.20	0.41
1:QA:1117:G:N3	1:QA:1180:A:H1'	2.35	0.41
1:QA:1202:G:H2'	1:QA:1202:G:N3	2.36	0.41
1:QA:1409:C:H2'	1:QA:1410:G:C8	2.55	0.41
4:QD:8:VAL:HG13	4:QD:21:LEU:HD12	2.02	0.41
25:R1:8:SER:HB3	25:R1:66:HIS:CD2	2.55	0.41
29:R5:43:HIS:NE2	34:RA:2884:U:OP2	2.50	0.41
29:R5:51:TYR:HD1	29:R5:55:ARG:O	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:98:G:H1'	34:RA:103:A:H1'	2.03	0.41
34:RA:272:G:H2'	34:RA:273(A):G:H8	1.86	0.41
34:RA:390:A:H4'	34:RA:391:G:H5'	2.02	0.41
34:RA:678:C:H2'	34:RA:679:C:C6	2.56	0.41
34:RA:691:C:H2'	34:RA:692:C:C6	2.56	0.41
34:RA:935:C:H2'	34:RA:936:C:C6	2.55	0.41
39:RG:33:ARG:H	39:RG:162:THR:HG22	1.85	0.41
40:RH:91:GLY:HA2	40:RH:160:LYS:HG2	2.03	0.41
42:RN:97:ARG:HA	42:RN:100:GLU:HB2	2.02	0.41
48:RT:8:LYS:HB2	48:RT:8:LYS:HE2	1.86	0.41
49:RU:58:ARG:HH11	49:RU:93:LYS:NZ	2.18	0.41
54:RZ:151:HIS:HB2	54:RZ:170:THR:HA	2.02	0.41
1:XA:130:A:OP2	17:XQ:63:ARG:HD3	2.20	0.41
1:XA:587:G:O2'	8:XH:3:THR:HA	2.20	0.41
1:XA:658:G:C1'	15:XO:22:THR:OG1	2.68	0.41
1:XA:990:C:H2'	1:XA:991:U:O4'	2.20	0.41
1:XA:1004:A:H2	1:XA:1024:G:H2'	1.85	0.41
1:XA:1259:C:HO2'	1:XA:1283:G:N2	2.17	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
6:XF:22:GLU:OE2	6:XF:84:ASN:ND2	2.40	0.41
10:XJ:16:LEU:HD22	10:XJ:94:VAL:HG22	2.02	0.41
29:Y5:11:THR:HG23	29:Y5:15:ARG:HD2	2.02	0.41
34:YA:318:C:H2'	34:YA:319:C:H6	1.84	0.41
34:YA:444:C:H2'	34:YA:445:C:C6	2.56	0.41
34:YA:755:C:H2'	34:YA:756:C:C6	2.55	0.41
34:YA:1130:U:C2	34:YA:2025:C:H5''	2.55	0.41
34:YA:1843:C:H2'	34:YA:1844:C:C6	2.56	0.41
34:YA:1909:C:H2'	34:YA:1910:G:C8	2.56	0.41
34:YA:2036:C:H2'	34:YA:2037:G:C8	2.55	0.41
34:YA:2073:C:H2'	34:YA:2074:U:H6	1.86	0.41
36:YD:231:HIS:CD2	36:YD:249:PRO:HG3	2.56	0.41
37:YE:104:VAL:HG11	37:YE:188:VAL:HG12	2.03	0.41
44:YP:37:GLY:O	44:YP:40:SER:OG	2.36	0.41
48:YT:3:ARG:O	48:YT:7:ILE:HG12	2.21	0.41
50:YV:68:LYS:HD3	50:YV:68:LYS:HA	1.74	0.41
1:QA:55:A:H61	1:QA:357:G:H2'	1.86	0.41
1:QA:663:A:H2'	1:QA:664:G:C8	2.56	0.41
1:QA:958:A:N6	19:QS:77:THR:C	2.71	0.41
3:QC:73:PRO:HA	3:QC:76:VAL:HG22	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:QC:120:VAL:O	3:QC:124:ILE:HG12	2.20	0.41
4:QD:27:TYR:O	6:XF:13:ASN:ND2	2.54	0.41
4:QD:166:LYS:HG2	36:YD:135:PHE:CZ	2.55	0.41
7:QG:87:VAL:HG23	7:QG:151:TYR:HB3	2.02	0.41
10:QJ:53:PRO:CB	14:QN:42:ILE:CD1	2.99	0.41
28:R4:26:SER:OG	39:RG:143:GLU:CD	2.52	0.41
34:RA:445:C:H2'	34:RA:446:G:C8	2.55	0.41
34:RA:568:U:H2'	34:RA:570:G:N7	2.36	0.41
34:RA:740:U:H2'	34:RA:741:G:H8	1.84	0.41
34:RA:903:C:H2'	34:RA:904:C:H6	1.85	0.41
34:RA:1076:C:C4	34:RA:1077:A:H1'	2.56	0.41
34:RA:1381:G:H1'	34:RA:1571:A:N1	2.36	0.41
34:RA:1695:G:H1'	36:RD:8:PRO:O	2.20	0.41
34:RA:1908:C:H2'	34:RA:1909:C:C6	2.56	0.41
34:RA:2185:C:H2'	34:RA:2186:G:H8	1.84	0.41
46:RR:96:ARG:HB2	46:RR:117:VAL:HG12	2.02	0.41
1:XA:125:U:H2'	1:XA:126:G:C8	2.56	0.41
1:XA:309:G:H2'	1:XA:310:G:C8	2.56	0.41
1:XA:421:U:C4'	3:XC:192:THR:HG22	2.46	0.41
1:XA:954:G:H22	1:XA:1228:C:H42	1.67	0.41
1:XA:1124:G:H4'	10:XJ:36:GLY:CA	2.51	0.41
1:XA:1440(I):U:H4'	1:XA:1440(J):A:C6	2.56	0.41
2:XB:75:LYS:HA	2:XB:75:LYS:HD3	1.86	0.41
2:XB:88:ALA:O	2:XB:226:ARG:NH1	2.46	0.41
2:XB:193:ASP:N	2:XB:193:ASP:OD2	2.41	0.41
3:XC:23:TYR:CE2	10:XJ:95:GLU:CG	3.04	0.41
9:XI:10:ARG:CZ	9:XI:105:ASP:HB2	2.51	0.41
10:XJ:40:LEU:N	10:XJ:40:LEU:CD1	2.84	0.41
11:XK:108:ILE:HD13	18:XR:87:ARG:NH2	2.36	0.41
24:Y0:72:ARG:HB3	24:Y0:75:LEU:HB2	2.02	0.41
25:Y1:3:LYS:HB3	34:YA:1364:G:OP1	2.20	0.41
34:YA:7:G:H2'	34:YA:8:A:C8	2.55	0.41
34:YA:312:G:H4'	34:YA:331:A:N3	2.35	0.41
34:YA:2825:C:H2'	34:YA:2826:A:O4'	2.21	0.41
34:YA:2832:U:H1'	34:YA:2834:G:C5	2.55	0.41
36:YD:44:ASN:OD1	36:YD:44:ASN:N	2.53	0.41
43:YO:70:LYS:HE2	43:YO:70:LYS:HB3	1.81	0.41
1:QA:103:C:OP2	20:QT:14:LYS:HD2	2.21	0.41
1:QA:488:C:H2'	1:QA:489:C:C6	2.56	0.41
1:QA:573:A:H2'	1:QA:574:A:C8	2.55	0.41
1:QA:619:U:H2'	1:QA:620:C:C6	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:648:A:H2'	1:QA:649:G:H8	1.85	0.41
1:QA:684:A:H2'	1:QA:685:G:C8	2.56	0.41
1:QA:955:U:C2'	19:QS:83:HIS:CA	2.95	0.41
1:QA:1238:A:OP1	1:QA:1335:C:O2'	2.35	0.41
1:QA:1240:U:C2'	7:QG:38:LEU:CD1	2.87	0.41
1:QA:1364:U:C1'	21:QU:14:TRP:HZ2	2.34	0.41
1:QA:1407:C:H2'	1:QA:1408:A:C8	2.56	0.41
2:QB:20:GLU:HG3	2:QB:191:ASP:HB2	2.02	0.41
2:QB:231:GLU:HA	2:QB:232:PRO:HD3	1.87	0.41
3:QC:36:ASP:OD1	3:QC:59:ARG:NH2	2.53	0.41
3:QC:79:ARG:CZ	11:XK:104:GLN:CA	2.88	0.41
5:QE:11:ILE:HG21	5:QE:31:LEU:HD23	2.02	0.41
13:QM:40:ASN:HA	13:QM:41:PRO:HD3	1.92	0.41
14:QN:12:ARG:HE	14:QN:14:PRO:HD2	1.86	0.41
25:R1:80:LEU:HD12	25:R1:81:LYS:HB2	2.03	0.41
28:R4:27:THR:HG21	39:RG:62:LEU:HD13	2.03	0.41
32:R8:3:LYS:H	32:R8:3:LYS:HG2	1.71	0.41
34:RA:47:C:H2'	34:RA:48:G:H8	1.86	0.41
34:RA:256:A:H2'	34:RA:257:A:C8	2.56	0.41
34:RA:455:C:N3	34:RA:472:A:H2'	2.36	0.41
34:RA:456:C:C5	52:RX:69:TYR:CE1	3.09	0.41
34:RA:863:A:O2'	35:RB:100:G:N3	2.49	0.41
34:RA:923:C:H2'	34:RA:924:C:C6	2.55	0.41
34:RA:1303:G:H5'	34:RA:1642:G:H21	1.85	0.41
34:RA:1579:A:H2'	34:RA:1580:A:C8	2.55	0.41
34:RA:1793:C:H2'	34:RA:1794:U:C6	2.56	0.41
34:RA:1991:U:H2'	34:RA:1992:G:H5''	2.03	0.41
34:RA:2085:C:H4'	36:RD:262:ARG:NH2	2.35	0.41
34:RA:2134:A:H1'	34:RA:2158:A:N3	2.35	0.41
34:RA:2205:C:O2	34:RA:2226:C:N4	2.54	0.41
34:RA:2385:C:H2'	34:RA:2386:C:C6	2.56	0.41
34:RA: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:2470:G:OP1	45:RQ:56:ARG:NH2	2.48	0.41
34:RA:2470:G:P	45:RQ:56:ARG:HH21	2.43	0.41
34:RA:2497:A:H1'	34:RA:2498:C:H5	1.86	0.41
34:RA:2764:A:H2'	34:RA:2766:G:C8	2.56	0.41
39:RG:141:PHE:HB2	39:RG:144:ILE:HD13	2.03	0.41
40:RH:123:PHE:HD2	40:RH:123:PHE:HA	1.77	0.41
41:RI:14:ASP:HB3	41:RI:15:VAL:H	1.65	0.41
49:RU:39:LEU:HD23	49:RU:39:LEU:HA	1.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:XA:240:C:H2'	1:XA:241:C:C6	2.56	0.41
1:XA:354:G:N3	1:XA:354:G:H2'	2.35	0.41
1:XA:668:G:O2'	15:XO:46:HIS:ND1	2.47	0.41
1:XA:735:C:H2'	1:XA:736:C:C6	2.55	0.41
1:XA:802:A:H3'	1:XA:803:G:H8	1.86	0.41
1:XA:1293:G:H2'	1:XA:1294:G:C8	2.56	0.41
1:XA:1320:C:N4	19:XS:37:ARG:N	2.69	0.41
2:XB:40:HIS:HB2	2:XB:190:THR:HG21	2.01	0.41
12:XL:56:ALA:HB2	12:XL:70:ILE:HD11	2.03	0.41
14:YN:56:VAL:CG1	14:YN:57:ARG:N	2.59	0.41
15:XO:26:GLU:HG3	15:XO:81:LEU:HD22	2.03	0.41
18:XR:30:ASP:OD2	18:XR:33:ASP:N	2.54	0.41
20:XT:18:GLN:HE21	20:XT:22:ARG:NH2	2.19	0.41
28:Y4:31:ILE:HG21	39:YG:142:PRO:HB2	2.03	0.41
34:YA:375:C:H2'	34:YA:376:C:C6	2.56	0.41
34:YA:459:U:H2'	34:YA:460:A:H8	1.85	0.41
34:YA:558:G:H2'	34:YA:559:G:H8	1.85	0.41
34:YA:558:G:P	42:YN:111:PRO:HD2	2.61	0.41
34:YA:632:A:H2'	34:YA:633:A:C8	2.56	0.41
34:YA:665:C:H2'	34:YA:666:G:C8	2.56	0.41
34:YA:748:G:OP1	51:YW:88:ARG:NH2	2.40	0.41
34:YA:923:C:H2'	34:YA:924:C:C6	2.56	0.41
34:YA:1050:A:N7	34:YA:2751:G:N3	2.67	0.41
34:YA:1056:G:H5''	34:YA:1057:A:H5'	2.02	0.41
34:YA:1502:C:H2'	34:YA:1503:U:C6	2.56	0.41
34:YA:1503:U:H2'	34:YA:1504:C:C6	2.56	0.41
34:YA:1510:A:O2'	34:YA:1512:G:N7	2.50	0.41
34:YA:1914:C:H2'	34:YA:1915:U:O4'	2.21	0.41
34:YA:2059:A:C6	34:YA:2503:A:C6	3.05	0.41
34:YA:2134:A:H1'	34:YA:2158:A:C2	2.56	0.41
34:YA:2363:C:H2'	34:YA:2364:C:H6	1.86	0.41
34:YA:2402:C:H1'	34:YA:2403:C:C5	2.50	0.41
34:YA:2413:G:O2'	44:YP:70:GLN:NE2	2.48	0.41
34:YA:2503:A:O2'	34:YA:2505:G:OP2	2.23	0.41
34:YA:2820:A:H1'	46:YR:3:HIS:CE1	2.56	0.41
35:YB:111:U:H2'	35:YB:112:G:H8	1.85	0.41
36:YD:61:LEU:HD23	36:YD:61:LEU:HA	1.94	0.41
37:YE:154:LYS:HD2	37:YE:154:LYS:HA	1.86	0.41
38:YF:157:VAL:HG21	38:YF:181:LEU:HD13	2.03	0.41
40:YH:86:GLU:H	40:YH:86:GLU:HG2	1.51	0.41
44:YP:6:LEU:HD23	44:YP:6:LEU:HA	1.90	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:YQ:55:VAL:HG13	54:YZ:178:GLU:HB3	2.03	0.41
48:YT:19:LEU:HA	48:YT:20:PRO:HD3	1.91	0.41
52:YX:34:ALA:O	52:YX:77:LYS:NZ	2.54	0.41
52:YX:92:LEU:HD23	52:YX:92:LEU:HA	1.86	0.41
54:YZ:4:ARG:NH1	54:YZ:60:GLU:OE2	2.54	0.41
54:YZ:5:LEU:HB3	54:YZ:6:LYS:H	1.72	0.41
54:YZ:94:GLU:HA	54:YZ:95:PRO:HD2	1.75	0.41
1:QA:10:A:H2'	1:QA:11:G:H8	1.85	0.41
1:QA:65:U:O4'	1:QA:199:G:O2'	2.31	0.41
1:QA:254:G:OP1	17:QQ:67:LYS:O	2.39	0.41
1:QA:411:A:H2'	1:QA:413:G:C8	2.55	0.41
1:QA:692:U:H5'	1:QA:797:C:H5''	2.02	0.41
1:QA:818:G:H1'	1:QA:820:U:C4	2.55	0.41
1:QA:958:A:N7	19:QS:79:THR:HG21	2.36	0.41
1:QA:1026:G:H2'	1:QA:1027:C:O4'	2.20	0.41
1:QA:1080:A:H5'	5:QE:14:ARG:NH2	2.36	0.41
1:QA:1298:C:H6	1:QA:1298:C:H2'	1.55	0.41
3:QC:23:TYR:CD1	10:QJ:10:GLY:HA2	2.56	0.41
12:QL:93:LEU:HA	12:QL:94:PRO:HD3	1.96	0.41
25:R1:86:SER:O	25:R1:88:LYS:N	2.53	0.41
34:RA:713:G:H2'	34:RA:714:U:C6	2.56	0.41
34:RA:795:C:H2'	34:RA:796:C:C6	2.56	0.41
34:RA:1011:G:OP2	49:RU:70:ARG:NH2	2.54	0.41
34:RA:1468:C:H2'	34:RA:1469:A:C8	2.55	0.41
34:RA:1775:U:N3	34:RA:1776:G:H1'	2.36	0.41
34:RA:2345:G:H4'	34:RA:2346:A:H5'	2.03	0.41
36:RD:35:LYS:HB3	36:RD:63:ARG:HA	2.03	0.41
41:RI:143:SER:HB2	41:RI:144:VAL:H	1.64	0.41
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
50:RV:73:SER:OG	50:RV:74:LYS:N	2.53	0.41
54:RZ:24:LEU:HA	54:RZ:25:PRO:HD3	1.92	0.41
1:XA:22:G:H4'	1:XA:885:G:C8	2.56	0.41
1:XA:171:A:H2'	1:XA:172:A:C8	2.56	0.41
1:XA:299:G:H2'	1:XA:300:A:C8	2.56	0.41
1:XA:323:U:H3'	1:XA:324:G:H8	1.84	0.41
1:XA:528:C:N4	12:XL:49:ASN:CG	2.70	0.41
1:XA:1165:C:H2'	1:XA:1166:G:C8	2.55	0.41
1:XA:1314:C:H6	1:XA:1314:C:O5'	2.04	0.41
1:XA:1391:U:H2'	1:XA:1392:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:XJ:90:LEU:HD12	10:XJ:90:LEU:HA	1.90	0.41
19:XS:19:VAL:HA	19:XS:22:LEU:HB2	2.01	0.41
34:YA:709:U:H2'	34:YA:710:G:C8	2.56	0.41
34:YA:881:G:H2'	34:YA:882:G:C8	2.56	0.41
34:YA:1123:C:H2'	34:YA:1124:C:C6	2.56	0.41
34:YA:1252:G:N2	49:YU:33:ARG:HD3	2.36	0.41
34:YA:1836:C:H2'	34:YA:1837:C:C6	2.56	0.41
34:YA:1949:G:H3'	34:YA:1950:G:H21	1.86	0.41
34:YA:2850:A:H3'	34:YA:2851:A:H8	1.86	0.41
46:YR:56:LYS:NZ	46:YR:90:ARG:O	2.53	0.41
48:YT:130:ALA:HA	48:YT:133:GLU:HG2	2.03	0.41
1:QA:296:U:O2'	1:QA:556:C:O2	2.27	0.40
1:QA:542:G:P	4:QD:10:ARG:HH12	2.44	0.40
1:QA:709:G:H2'	1:QA:710:G:O4'	2.22	0.40
1:QA:756:C:H2'	1:QA:757:U:C6	2.56	0.40
1:QA:947:G:H5'	13:QM:109:THR:CG2	2.50	0.40
1:QA:956:U:H5'	19:QS:83:HIS:CA	2.51	0.40
1:QA:986:A:H2'	1:QA:987:G:H8	1.85	0.40
1:QA:996:A:N1	1:QA:1046:A:H1'	2.36	0.40
1:QA:1152:A:H3'	1:QA:1153:C:C6	2.56	0.40
1:QA:1278:U:H4'	1:QA:1279:A:C8	2.56	0.40
1:QA:1409:C:H2'	1:QA:1410:G:H8	1.86	0.40
1:QA:1498:U:H1'	1:QA:1499:A:N7	2.36	0.40
2:QB:167:PRO:O	2:QB:171:ALA:CB	2.67	0.40
13:QM:84:ILE:O	19:QS:74:PHE:CD2	2.57	0.40
20:QT:74:LYS:O	20:QT:76:ALA:N	2.55	0.40
34:RA:271(B):C:O2	34:RA:272:G:H1'	2.20	0.40
34:RA:2469:A:H2	34:RA:2481:G:H21	1.69	0.40
34:RA:2790:A:H2	34:RA:2791:C:H2'	1.86	0.40
34:RA:2820:A:C5	46:RR:4:LEU:HD12	2.56	0.40
35:RB:15:A:OP2	35:RB:69:G:N2	2.54	0.40
37:RE:144:ARG:HB3	37:RE:145:LYS:H	1.66	0.40
40:RH:126:PRO:HD2	40:RH:131:VAL:HA	2.03	0.40
44:RP:144:GLU:HA	44:RP:145:PRO:HD3	1.83	0.40
49:RU:34:LYS:HA	49:RU:34:LYS:HD3	1.72	0.40
1:XA:17:U:H2'	1:XA:18:C:C6	2.56	0.40
1:XA:864:A:H2	1:XA:918:A:H1'	1.86	0.40
1:XA:1241:G:H2'	1:XA:1242:C:C6	2.56	0.40
1:XA:1305:G:H2'	1:XA:1331:G:H21	1.74	0.40
10:XJ:5:ARG:N	10:XJ:99:LYS:O	2.54	0.40
11:XK:109:VAL:HG13	18:XR:86:VAL:HB	2.03	0.40

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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:71:A:H5''	34:YA:72:U:H3'	2.02	0.40
34:YA:363(D):G:H2'	34:YA:363(E):G:H8	1.85	0.40
34:YA:1128:A:N6	34:YA:2518:A:C6	2.89	0.40
34:YA:1166:C:H2'	34:YA:1167:U:C6	2.56	0.40
34:YA:1174:A:H61	55:YA:3192:MG:MG	1.10	0.40
34:YA:1781:C:H4'	34:YA:1782:C:C5'	2.51	0.40
34:YA:2090:G:N3	34:YA:2230:G:C2	2.89	0.40
34:YA:2859:G:H2'	34:YA:2860:A:C8	2.56	0.40
36:YD:172:TYR:HB3	36:YD:184:LYS:HG2	2.04	0.40
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: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
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
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:HA	17:QQ:75:ARG:HD2	1.88	0.40
24:R0:60:PHE:CZ	34:RA:2365:G:H4'	2.56	0.40
34:RA:234:C:H2'	34:RA:235:U:H6	1.86	0.40
34:RA:997:G:O5'	49:RU:58:ARG:NH1	2.55	0.40
34:RA:1050:A:H2'	34:RA:1051:G:O4'	2.21	0.40
34:RA:2011:U:H2'	34:RA:2012:G:O4'	2.20	0.40
36:RD:134:ARG:N	36:RD:187:GLY:O	2.54	0.40
40:RH:102:ALA:HA	40:RH:117:PRO:HD3	2.03	0.40
40:RH:103:LEU:O	40:RH:114:VAL:HA	2.22	0.40
1:XA:136:C:H42	1:XA:227:G:H1	1.68	0.40
1:XA:373:A:C2'	1:XA:374:A:H5'	2.52	0.40
1:XA:1019:C:H2'	1:XA:1020:U:C6	2.56	0.40
1:XA:1051:C:H2'	1:XA:1052:U:C6	2.56	0.40
1:XA:1300:G:N1	1:XA:1334:G:C6	2.89	0.40
2:XB:134:GLU:HG3	2:XB:137:ARG:NE	2.37	0.40

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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:HB2	27:Y3:17:LYS:HE3	1.88	0.40
34:YA:452:G:N2	34:YA:457:A:O2'	2.55	0.40
34:YA:601:C:H2'	34:YA:602:G:O4'	2.21	0.40
34:YA:620:G:H4'	34:YA:621:A:H5'	2.03	0.40
34:YA:797:C:H2'	34:YA:798:G:C8	2.57	0.40
34:YA:839:U:H2'	34:YA:840:C:H6	1.85	0.40
34:YA:844:C:H3'	34:YA:845:G:H8	1.87	0.40
34:YA:849:A:H61	34:YA:929:G:H1'	1.86	0.40
34:YA:1080:C:H2'	34:YA:1081:U:H6	1.86	0.40
34:YA:1087:G:C8	34:YA:1089:G:H1'	2.56	0.40
34:YA:1158:C:H2'	34:YA:1159:U:C6	2.57	0.40
34:YA:1169:G:H2'	34:YA:1170:G:O4'	2.21	0.40
34:YA:2091:U:H2'	34:YA:2092:U:C5	2.57	0.40
34:YA:2537:U:H2'	34:YA:2538:C:C6	2.55	0.40
35:YB:5:C:O2'	35:YB:27:C:O2	2.39	0.40
40:YH:115:VAL:HG21	40:YH:148:ILE:HD11	2.02	0.40
48:YT:80:SER:HA	48:YT:81:PRO:HD3	1.95	0.40
48:YT:96:ARG:HE	48:YT:96:ARG:HB3	1.72	0.40
53:YY:12:THR:HA	53:YY:26:LYS:HA	2.03	0.40
54:YZ:14:LYS:HA	54:YZ:15:PRO:HD3	1.93	0.40
1:QA:95:G:H2'	1:QA:96:G:C8	2.56	0.40
1:QA:728:A:H2'	1:QA:729:A:C8	2.57	0.40
1:QA:741:G:H4'	15:QO:55:GLY:HA3	2.02	0.40
1:QA:955:U:C2'	19:QS:83:HIS:HA	2.52	0.40
1:QA:1049:U:H5''	1:QA:1050:G:C8	2.55	0.40
1:QA:1123:A:C1'	10:QJ:37:PRO:HD2	2.50	0.40
3:QC:56:ASP:HB3	3:QC:67:THR:HG23	2.02	0.40
9:QI:25:LYS:O	9:QI:60:ASP:HA	2.21	0.40
24:R0:43:THR:HG21	34:RA:2336:A:H61	1.85	0.40
34:RA:151:C:H2'	34:RA:152:G:H8	1.86	0.40
34:RA:486:C:H2'	34:RA:487:C:C6	2.56	0.40
34:RA:519:U:H2'	34:RA:520:G:C8	2.56	0.40
34:RA:729:G:P	36:RD:208:LYS:HZ3	2.45	0.40
34:RA:1186:G:H2'	34:RA:1187:G:O4'	2.21	0.40
34:RA:1561:G:H2'	34:RA:1562:A:C8	2.56	0.40
34:RA:1808:U:H2'	34:RA:1809:A:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:2348:U:H2'	34:RA:2349:G:C8	2.56	0.40
47:RS:59:LYS:HA	47:RS:59:LYS:HD2	1.94	0.40
53:RY:47:LYS:HA	53:RY:47:LYS:HD2	1.94	0.40
1:XA:68(A):G:H22	1:XA:101:A:H2	1.68	0.40
1:XA:225:C:H2'	1:XA:226:G:C8	2.56	0.40
1:XA:418:C:H2'	1:XA:419:C:H6	1.85	0.40
1:XA:707:C:H2'	1:XA:708:C:C6	2.56	0.40
1:XA:922:G:H1'	5:XE:19:MET:CB	2.50	0.40
1:XA:1035:A:H2'	1:XA:1036:G:H8	1.87	0.40
1:XA:1101:A:N3	1:XA:1102:A:H1'	2.37	0.40
1:XA:1118:C:H2'	1:XA:1119:C:C6	2.56	0.40
1:XA:1302:U:O2	13:XM:27:LYS:HE2	2.21	0.40
1:XA:1320:C:N4	19:XS:37:ARG:CA	2.60	0.40
1:XA:1359:C:H4'	1:XA:1362(A):C:H42	1.86	0.40
8:XH:34:GLU:O	8:XH:38:ILE:HG12	2.22	0.40
11:XK:51:LYS:HE2	11:XK:51:LYS:HB2	1.93	0.40
12:XL:70:ILE:HG13	12:XL:100:ILE:HG13	2.03	0.40
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
34:YA:2292:C:H2'	34:YA:2293:C:C6	2.56	0.40
39:YG:95:ARG:HB3	39:YG:96:ARG:H	1.70	0.40
43:YO:67:LYS:HD2	43:YO:67:LYS:HA	1.87	0.40
50:YV:69:LYS:HA	50:YV:87:HIS:O	2.21	0.40
54:YZ:178:GLU:HB3	54:YZ:179:ASP:H	1.60	0.40
1:QA:44:G:OP1	16:QP:12:LYS:CD	2.64	0.40
1:QA:107:G:H4'	1:QA:378:G:H4'	2.02	0.40
1:QA:477:G:H2'	1:QA:478:A:C8	2.56	0.40
1:QA:668:G:O4'	15:QO:48:LYS:O	2.39	0.40
1:QA:1002:G:H3'	1:QA:1003:G:H8	1.85	0.40
1:QA:1179:A:H2'	1:QA:1180:A:H8	1.87	0.40
1:QA:1281:U:H5''	1:QA:1282:C:H5	1.87	0.40
1:QA:1285:A:N1	1:QA:1354:C:O2'	2.54	0.40
1:QA:1485:U:H2'	1:QA:1486:G:C8	2.55	0.40
2:QB:208:ILE:HA	2:QB:211:ILE:HG12	2.03	0.40
3:QC:12:LEU:HG	3:QC:18:TRP:NE1	2.36	0.40
10:QJ:14:LYS:HD3	10:QJ:15:THR:HG23	2.02	0.40
16:QP:14:ASN:OD1	16:QP:16:HIS:NE2	2.54	0.40
34:RA:67:U:H2'	34:RA:68:G:H8	1.87	0.40
34:RA:413:C:H2'	34:RA:414:C:H6	1.86	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:RA:741:G:H2'	34:RA:742:G:C8	2.56	0.40
34:RA:817:C:O2'	34:RA:932:G:N2	2.55	0.40
34:RA:1031:G:H2'	34:RA:1032:A:C8	2.57	0.40
34:RA:1556:C:H2'	34:RA:1557:C:C6	2.57	0.40
34:RA:1853:A:N1	34:RA:2087:G:H1'	2.36	0.40
34:RA:2019:A:H2	34:RA:2035:G:H22	1.68	0.40
34:RA:2453:A:H2'	34:RA:2454:G:C8	2.45	0.40
34:RA:2463:C:H2'	34:RA:2464:C:C6	2.56	0.40
34:RA:2767:C:H2'	34:RA:2768:C:C6	2.57	0.40
39:RG:132:ASN:HD22	39:RG:158:ALA:HA	1.86	0.40
46:RR:3:HIS:HB3	46:RR:4:LEU:H	1.64	0.40
53:RY:67:LEU:HD23	53:RY:67:LEU:HA	1.96	0.40
1:XA:162:A:N7	1:XA:163:C:H1'	2.36	0.40
1:XA:200:G:H2'	1:XA:201(A):C:O4'	2.22	0.40
1:XA:254:G:H5'	17:XQ:66:SER:CB	2.51	0.40
1:XA:280:C:N4	17:XQ:39:SER:H	2.15	0.40
1:XA:1424:C:H2'	1:XA:1425:U:H6	1.86	0.40
1:XA:1437:C:H2'	1:XA:1438:G:C8	2.57	0.40
10:XJ:48:THR:HG22	10:XJ:60:ARG:HD2	2.02	0.40
14:YN:7:ILE:HG22	14:YN:23:ARG:HE	1.87	0.40
14:YN:47:LEU:HA	14:YN:47:LEU:HD23	1.86	0.40
24:Y0:70:GLN:HG2	24:Y0:72:ARG:HG2	2.03	0.40
29:Y5:46:CYS:HB3	29:Y5:49:CYS:HB3	2.03	0.40
34:YA:390:A:C6	44:YP:71:VAL:HG21	2.57	0.40
34:YA:642:G:H21	34:YA:646:A:H2	1.69	0.40
34:YA:862:G:H2'	34:YA:863:A:O4'	2.20	0.40
34:YA:1689:A:H2'	34:YA:1690:A:C8	2.56	0.40
34:YA:1754:C:H5''	48:YT:113:LYS:HD3	2.03	0.40
34:YA:1820:U:N3	36:YD:202:LYS:HD2	2.37	0.40
34:YA:1830:C:H2'	34:YA:1831:G:H8	1.87	0.40
34:YA:1836:C:H2'	34:YA:1837:C:H6	1.86	0.40
34:YA:2043:C:H42	34:YA:2625:G:H1	1.69	0.40
34:YA:2096:U:C2	34:YA:2194:G:C2	3.10	0.40
34:YA:2122:U:H2'	34:YA:2123:G:C8	2.57	0.40
38:YF:195:ASP:OD1	38:YF:195:ASP:N	2.47	0.40
50:YV:100:ARG:HE	50:YV:100:ARG:HB2	1.70	0.40
53:YY:39:VAL:HG23	53:YY:42:VAL:HB	2.02	0.40
54:YZ:24:LEU:HA	54:YZ:25:PRO:HD3	1.87	0.40
54:YZ:128:VAL:HG22	54:YZ:161:VAL:HG22	2.03	0.40
1:QA:277:C:P	17:QQ:68:ARG:HH21	2.44	0.40
1:QA:343:U:H1'	1:QA:347:G:N2	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:QA:390:C:H2'	1:QA:391:G:C8	2.57	0.40
1:QA:450:G:H5''	1:QA:451:A:H3'	2.04	0.40
1:QA:912:C:H2'	1:QA:913:A:C8	2.56	0.40
1:QA:957:U:P	19:QS:80:TYR:O	2.77	0.40
1:QA:1229:A:H2'	1:QA:1230:C:C6	2.56	0.40
1:QA:1329:A:OP1	13:QM:29:ARG:HD3	2.22	0.40
2:QB:75:LYS:HA	2:QB:75:LYS:HD3	1.83	0.40
4:QD:88:VAL:CG1	5:QE:97:GLY:HA3	2.47	0.40
31:R7:7:PRO:HB2	34:RA:1309:G:H4'	2.04	0.40
32:R8:27:THR:HA	44:RP:62:LEU:HD22	2.04	0.40
33:R9:29:ASN:HA	33:R9:30:PRO:HD3	1.93	0.40
34:RA:151:C:H2'	34:RA:152:G:C8	2.57	0.40
34:RA:969:U:H2'	34:RA:970:C:C6	2.56	0.40
34:RA:1464:C:H2'	34:RA:1465:G:C8	2.57	0.40
34:RA:1509:C:H2'	34:RA:1511:A:C8	2.57	0.40
34:RA: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
41:RI:40:THR:OG1	41:RI:41:GLU:N	2.55	0.40
44:RP:64:LYS:O	44:RP:66:GLY:N	2.55	0.40
45:RQ:30:GLY:HA2	45:RQ:107:ALA:HB2	2.03	0.40
48:RT:52:ILE:HG13	48:RT:61:PHE:HB3	2.02	0.40
1:XA:59:A:H3'	1:XA:331:G:N2	2.33	0.40
1:XA:293:G:H5'	1:XA:610:G:H21	1.86	0.40
1:XA:690:G:H1'	1:XA:698:G:N2	2.36	0.40
1:XA:767:A:H1'	1:XA:1525:G:H1'	2.02	0.40
1:XA:860:A:H3'	1:XA:861:G:C8	2.54	0.40
1:XA:969:A:O2'	10:XJ:55:LYS:NZ	2.44	0.40
1:XA:978:A:HO2'	1:XA:1322:C:N4	2.19	0.40
1:XA:1114:C:H2'	1:XA:1115:C:C6	2.56	0.40
1:XA:1275:A:H2'	1:XA:1276:G:O4'	2.22	0.40
1:XA:1302:U:H1'	13:XM:27:LYS:HE2	0.96	0.40
1:XA:1332:A:H3'	1:XA:1333:A:H8	1.87	0.40
4:XD:202:LEU:HA	4:XD:205:GLU:HB2	2.03	0.40
6:XF:7:ASN:HD21	18:XR:35:ARG:CZ	2.34	0.40
8:XH:81:HIS:ND1	8:XH:138:TRP:O	2.33	0.40
22:XV:19:G:C8	34:YA:2112:G:N7	2.88	0.40
25:Y1:41:ARG:NH2	34:YA:1365:A:O5'	2.40	0.40
34:YA:197:A:C6	34:YA:2430:A:C2	3.08	0.40
34:YA:270(S):G:H2'	34:YA:270(T):G:C8	2.56	0.40
34:YA:363(F):U:H3'	34:YA:363(G):A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:YA:594:U:H2'	34:YA:595:C:C6	2.56	0.40
34:YA:1456:G:C2	34:YA:2704:C:N3	2.89	0.40
34:YA:1656:C:H2'	34:YA:1657:C:C6	2.55	0.40
34:YA:1869:G:H5'	34:YA:1870:C:OP2	2.22	0.40
34:YA:2053:G:N2	34:YA:2617:C:N3	2.69	0.40
34:YA:2065:C:H2'	34:YA:2066:C:C6	2.55	0.40
34:YA:2429:G:N7	44:YP:56:SER:OG	2.35	0.40
34:YA:2591:C:H2'	34:YA:2592:G:C8	2.56	0.40
34:YA:2746:U:O4	34:YA:2755:C:H4'	2.21	0.40
34:YA:2820:A:C6	46:YR:4:LEU:CD1	3.04	0.40
36:YD:175:LEU:O	36:YD:182:LEU:HA	2.22	0.40
39:YG:47:LYS:HD3	39:YG:81:LYS:HB2	2.04	0.40
42:YN:34:LEU:O	42:YN:49:GLY:HA3	2.21	0.40

All (35) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:QG:149:ARG:NE	3:XC:81:GLY:O[4_555]	0.51	1.69
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
6:QF:14:LEU:CA	4:XD:20:TYR:OH[4_555]	2.19	0.01
7:QG:149:ARG:NH1	3:XC:85:ARG:CG[4_555]	2.19	0.01
7:QG:149:ARG:CD	3:XC:81:GLY:C[4_555]	2.19	0.01

## 5.3 Torsion angles [i](#)

### 5.3.1 Protein backbone [i](#)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	QB	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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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 [i](#)

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

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	QB	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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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

Sometimes 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 [i](#)

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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
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	XD	301	4	0,12,12	-	-	-		
56	SF4	QD	301	4	0,12,12	-	-	-		

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

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

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 2 short contacts:

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

## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

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

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

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

### 6.3 Carbohydrates [i](#)

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

### 6.4 Ligands [i](#)

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

### 6.5 Other polymers [i](#)

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